Gardeners' Lives in the Long C19th

Jonathan Denby



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Somerville College

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Short Abstract (300 words)

The lives of domestic gardeners during Hobsbawm's long C19th, 1789-1914 are examined. The scope of the thesis is those parts of gardeners' lives which are relevant to themes in economic and social history, such as education, remuneration, housing, inventions innovation and discovery rather than the gardeners' daily activities and routines. The importance of gardens and gardening in the economic, social and cultural life of the C19th is established through an analysis of political and literary sources. As part of the domestic domain gardens were under the control of women, who were also concerned in their design and development

The growth in human capital is traced through the opposition to gardeners receiving an education, their limited schooling, their reliance on autodidacticism, the gradual rise of institutions such as mutual improvement societies, the apprenticeship and journeyman systems, and the growth of colleges for female gardeners.

The dismal bothies and cottages in which gardeners were housed led to a campaign for reform by Loudon and Paxton. The gradual improvement in housing is traced, together with the development of 'Bothy culture'.

Gardeners are established as amongst the healthiest occupational group. An analysis of the cases of the Ealing gardener and Joseph Allen highlights the scope for self-provisioning and the high level of perquisites.

The remuneration of all classes of gardeners is examined, showing the importance of extras such as gratuities, prize money, apprenticeship and journeymen fees, 'discounts' on plant and seed supplies. The hours and days worked, entitlement to overtime, holidays and sick pay and the use of 'characters' are analysed.

Evidence from probate records and random sampling show surprisingly high levels of wealth on death, great social mobility, Scottish over-representation and high levels of health and longevity.

The contribution of gardeners to invention, innovation and discovery is highlighted through their role in the development of public parks and case studies of the introduction of tea into India by Fortune; of cinchona plants into India by McIvor; of Saunders as head of the USDA; the plant hunters Cross and Weir; the inventors, Fry and Becket; the hybridist, Culverwell and Darwin's assistant John Scott.

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Extended Abstract (2,500 words)

The lives of domestic gardeners during Hobsbawm's long C19th, 1789-1914 are examined. The period is divided into four quartiles- 1789-1820, 1821-1845, 1846-1880 and 1880-1914, approximating to four generations. The geographical area covered is the British Isles, but the reach is worldwide as many gardeners pursued their careers overseas. The scope of the thesis is those parts of gardeners' lives which are relevant to themes in economic and social history, such as education, remuneration, housing, innovation, inventions and discovery rather than the gardeners' daily activities and routines.

The importance of gardens and gardening in the economic, social and cultural life of the C19th

This is established by making a comparison between the gardening activities of the 27 members of 1880 cabinets of Gladstone and Disraeli and the 22 members of the Thatcher cabinet of 1980. Every one of the former maintained a substantial garden and only one of the latter. The gardens of Joseph Chamberlain and Michael Heseltine are compared and contrasted. In order to illustrate the importance of gardening in cultural life, the gardening activities of the five poets laureate, during the period, Wordsworth, Southey, Pye, Tennyson and Austin are analysed. The changing pattern of the ownership of gardens, using the statistics contained in the Horticultural Register, is examined, illustrating the decline in aristocratic ownership. The different categories of gardens are described, ranging from the 'third rate' or 'small place' to the second rate or villa residence to the first rate or mansion residence. The equal treatment of women in the London Horticultural Society is observed, their admission as fellows and the prominent role which they played in the gardening world. Gardens formed part of the domestic domain and in that respect it was normal for head gardeners to report to the lady of the house.

The development of human capital

John Claudius Loudon faced a hostile response when, as editor of the Gardeners' Magazine, he proposed a system of universal education in 1830. His detailed scheme for the self-education of gardeners was also attacked. The limited access of gardeners to schooling is considered. The flexible apprenticeship system, normally of three years, is described and contrasted with that of other trades. The steps taken by gardeners to self-learn and the great importance of autodidacticism in the development of their human capital is described. The gradual rise of institutions of learning such as Gardeners' Improvement Societies is noted. The educational value of the journeyman's peripatetic life is described. The development of academic education in the fourth quartile and the beginnings of an examination system is noted. In the fourth quartile women from the middle and upper classes began to seek training as gardeners and in the face of reluctance from the gardening establishment set up their own system of colleges. In due course women gardeners came to

be employed by women, creating their own 'protected industry'. With the development of college education for gardeners a new career progression of gardener lecturers was created.

Accommodation

Most gardeners came from a rural background, in many cases from extreme poverty, being raised in a hut or a hovel. In the first two quartiles the accommodation provided to gardeners was often of a similar quality, particularly the bothies set against north facing kitchen garden walls. The campaigns led by Loudon and then by Paxton to improve the cottage accommodation is traced, and the gradual improvements, first in cottages and then in bothies is described. The advantages to gardeners over other rural occupations is discussed. The requirement for unmarried gardeners to live in bothies led to the development of 'Bothy Culture' which led to improvements in educational and networking opportunities.

Head gardeners enjoyed the greatest improvements in their living quarters. Many were provided with substantial houses with rooms for servants, in their own grounds, which conferred a right to privacy, a reflection of their enhanced status.

The health and consumption of gardeners

The chapter on the health and consumption of gardeners is focussed on the well-known cases of the Ealing gardener and Joseph Allen, also a gardener, whose expenditure on food has been taken as evidence that rural labourers such as they did not receive an adequate diet. Reports by Edwin Chadwick, Dr Edward Smith and Dr Ogle all concluded that agricultural labourers, a category which included gardeners, were amongst the healthiest occupational groups, findings reinforced by evidence to the Royal Commission on Labour, 1893. This is generally supported by Griffin's analysis of the biographies of labourers. The widespread availability of garden ground, an extension of the domestic space, and therefore in the female domain, is established. Maud Davies' report on the village of Corsley, where nearly every house had a garden, shows extensive self-provisioning and economic activity centred on the garden. This is supported by Rowntree and Kendall's investigation into rural life and the Juniper Hill narrative. Potato grounds, and later, allotments were important additional resources, especially to grow potatoes for pig-keeping which in some districts was ubiquitous. Foraging, gleaning, exchanges between neighbours, gifts and charity donations were part of an informal and sometimes cashless economy. Household consumption was boosted by livestock such as fowls and by animals caught in the wild, legally and illegally and by the additional earning of the wife and children, which included gleaning and harvest work. A close analysis of the consumption of the families Ealing gardener and Joseph Allen shows that taking account of the value of perquisites their calorie consumption was more than adequate.

Remuneration

The perception that gardeners were notoriously badly paid is corrected. Pay depended on a gardener's position on the career ladder. The pay of the various categories of gardener is considered- apprentices, journeymen, foremen and head gardeners, who are sub-divided into 'Out of position' gardeners working in a nursery and those in third-, second- and first-rate establishments. Those working in parks and botanic gardens tended to be the highest paid. In addition to their headline wage those provided with cottages benefitted from rent-

free accommodation and a garden. Head gardeners, except in third-rate establishments, frequently enjoyed a number of additional perquisites, namely gratuities, prize money, apprenticeship and journeymen fees, 'discounts' on plant and seed supplies and sometimes on the supply of capital goods and profit from the sale of produce.

Terms of engagement

A review of the terms of engagement of the gardener revealed that gardeners worked 61-63 hours a week and an average of 312 days a year, figures which remained largely unchanged throughout the period. Saturday half holidays began to be granted in the fourth quartile. Overtime was usually paid for. Holidays were infrequently taken but paid for. Gardeners were liable to instant dismissal in the case of misconduct and were otherwise entitled to one month's notice. Gardeners were entitled to full pay pay during periods of sickness if they worked for a domestic employer. There was no entitlement to sick pay for those employed by public bodies, but it was sometimes given, according to the individual contract. References, or 'characters' were largely given by nurseries or head gardeners, rather than employers, which made gardeners less likely than indoor servants to be victimised by an unfair employer. Gardeners were un-unionised and showed a strong antipathy to unionisation.

Wealth and Status

An analysis of the probate records of a database of about 2,000 gardeners disclosed 260 gardeners who left wealth of more than £ ½ m at modern values, of which more than half left more than £1m. Additional sources of wealth have been identified as writing and publishing, hybridising, specialisation in orchid growing, combining the role of head gardener with that of steward, working in botanic gardens, in parks and overseas and, usually as a career progression, owning a nursery and lecturing. Taking random samples from the horticultural register for the census years 1871 to 1911 revealed average probates at a peak of £461,290 for those working in 1871, falling rapidly after 1891, to reflect the diminished earning capacity and status of those who worked as head gardeners in the post-war years. Random samples of antecedents showed that gardeners came overwhelmingly from rural backgrounds with about 60% of fathers being either agricultural labourers or gardeners between 1871 and 1901, falling slightly thereafter. Head gardeners on the large estates, using the Armstrong classification of socio-economic status moved to Class 1-Professional. The average age of death of the head gardeners sampled ranged from 71 to 74 years, and they lived from 3 to 7 years longer than actuarial tables predicted. The status of gardeners is assessed with reference to their willingness to protect their reputations in the courts and the honours which were bestowed on them. A comparison with butlers showed that butlers had an advantage over gardeners in regard to pay until the third quartile, and then fell behind and that they were at a considerable disadvantage in regard to their perquisites and accommodation.

Statistical analysis showed that the Scots were greatly over-represented, which is attributed to their reputation for being highly educated and their dominance of networks.

Gardeners and Urban Parks

169 public parks are listed by Historic England, out of 2,177 historic parks, whose development costs before 1914 is estimated at £42.24 billion at current values. The drive for public parks was instituted by Loudon, followed by Paxton, who built the first at Birkenhead, in a style and with ornamentation to equal any private garden. This was followed by a number of commissions given to Paxton and his acolytes at Chatsworth-Kemp, Milner, Gibson, Eyles and Smith, designated the 'Chatsworth school', who together built 40% of the parks now designated Grade 1 or Garde 2* by Historic England. The designers who followed, and the park superintendents were nearly all head gardeners. The guiding principles were excellence of construction and design, free access and accessibility to all classes. Working class organisations and women's groups played a significant role in their promotion and formation. The facilities for working class recreation are described and the birth of Association Football through the parks is traced. Their importance as a hub for the recreation of women and children is noted.

Invention, Innovation and Discovery

As gardens need constant renewal change is inherent in gardening. As objects of fashion they required constant reinvention. In the social environment of gardening change was welcomed. Gardeners freely exchanged useful knowledge through journals and societies. Kew, as a department of government, headed 102 botanical gardens worldwide in which 700 gardeners and botanists who had been trained at Kew were employed. The roles of Loudon and Paxton in the development of hothouses is described. The contribution of gardeners to the gradual development of gardening tools and gadgets is illustrated by the inventions of George Fry (The West Kent Garden Pot) and Edwin Becket (The Chrysanthemum 'Cup and Tube'). The slow adoption of the lawn-mower as a labour saving device replacing the scythe illustrates that the saving of labour costs was not a priority. The consequences of the inability to patent living things such as seeds are illustrated through the example of William Culverwell's dispute with the seed firm of Carters over the Telegraph and Telephone pea varieties.

Plant hunting gardeners, of whom 154 have been identified, dispatched by Kew, the RHS, various nurseries and some private gardens, made important discoveries in all parts of the globe. The hunter-gardeners required extensive botanical knowledge together with the qualities of physical fitness, hardiness and courage required to explore remote regions. They also made significant contributions to economic development in British territories and in the United States. The case study of the introduction of tea into India from China by Robert Fortune, under the auspices of the East India Company, illustrates the qualities required and the economic contribution. The tea transfer provided for the first time, security of supply, after a century of dependence on China. Fortune's qualities as a plant hunter, entrepreneur and a man of science are also illustrated. The case of William McIvor in establishing the chinchona plantations in the Nilgiris, India, and thereby vastly increasing the supply of quinine as a prophylactic against malaria is a second case study. Two other gardeners, Robert Cross and John Weir, who assisted in the collection of the Cinchona plants in South America illustrate the qualities required in plant hunters. The careers of William Saunders and Thomas Meehan illustrate the contribution of British gardeners to economic development in the United States. Saunders, as head of the USDA from 1862 to 1900 developed new strains of wheat in an experimental garden, enhancing American wheat production. He also introduced the Navel orange into California and was responsible

for the development of Washington's parks. Meehan contributed extensively to American gardening journals and scientific papers, developed the public parks in Philadelphia and became a Professor of Vegetable Physiology. The career of John Scott, as one of 26 gardeners who helped Charles Darwin in his research illustrates the role which gardeners played in scientific research. The scientific accomplishments of gardeners were recognised by the several honorary degrees which were awarded to them. The role of the state, through the participation of Kew gardens and its worldwide network of botanic gardens, and in local authorities, by financing the development of public parks, is emphasised.

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ABBREVIATIONS

GC - Gardeners' Chronicle

GM - Loudon's Gardener's Magazine

GW - Gardening World

ODNB - Oxford Dictionary of National Biography

TG - The Garden

Introduction

> You look in your history books to see who built Westminster Abbey, who built St. Sophia at Constantinople, and they tell you Henry III, Justinian the Emperor. Did they? Or, rather, men like you and me, handicraftsmen, who have left no names behind them, nothing but their work?[1]
>
> —William Morris 'The Lesser Arts', 1878

The V&A Exhibition organised in 1975 by Marcus Binney and John Harris for Roy Strong entitled 'The Destruction of the Country House' drew attention to the loss of 1,000 country houses in the previous 100 years, one sixth of the total, and led to the formation of the pressure group SAVE.[2] Because of the actions of SAVE and others few of the remaining 5,000 country houses have been lost. Each of these houses had, in their prime, a garden whose magnificence was intended to reflect the owner's wealth and status as much as did the house itself. The rate of attrition of the gardens was much higher than that of the houses; most were lost to development or to grass. In 1983, under the English Heritage Act the first register of historic parks and gardens was completed and 1,307 sites were given a measure of legal protection. That list has since swelled to 1,617 sites.

The National Trust plays a large part in their conservation; 70% of their top attractions are gardens, with 16 million visitors a year.[3] However, there is recognition that it is impossible either to reproduce the original gardens or maintain them as they were in their heyday. This is because of the levels of staffing and expertise that would be required. Waddesdon Manor under Baron Ferdinand de Rothschild had more than 160 staff in the late C19th, today there are 14.[4] Those 14 work 40 hours a week, as opposed to their predecessors' 60, and have much more generous periods of leave, so that the loss of manpower is

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[1] Morris, W. *Hopes and Fears for Art,* https://www.marxists.org/archive/morris/works/1882/hopes/chapters/chapter1.htm, [accessed 15 Feb. 2015].

[2] Binney, M., *SAVE Britain's Heritage* (London, Scala, 2005), p. 13.

[3] Connell, J., 'Managing Gardens for Visitors in Great Britain: A Story of Continuity and Change', *Tourism Management,* v. 26 (2005), p. 190.

[4] Floud, R., *An Economic History of the English Garden* (London, Allen Lane, 2019), p. 266; Harney, M., *Gardens & Landscapes in Historic Building Conservation* (Chichester, Wiley Blackwell, 2014), p. 20.

even more severe than the numbers would imply. The main casualty at Waddesdon (as elsewhere) is in the kitchen gardens, where formerly there were 40 hothouses with an intricate system of boilers, designed to produce fruit and vegetables all year round.[5] These have disappeared, as has the skill set to grow the produce, and indeed much of the produce itself. When the BBC, in making the series The Victorian Kitchen Garden in the 1980s, restored the garden at Chilton, they were only able to trace 20 out of 253 varieties of apple which were formerly available to grow.[6]

Action to protect historic gardens went hand in hand with research into their histories. The Garden History Society was formed in 1965, since when hundreds of articles and books have been published on historic gardens and their designers, with the emphasis on the period before 1800. However, very little has been written about the men (and it was mostly men) who actually built and maintained the gardens. In the heyday of the British garden, which was the late Victorian and Edwardian period, the numbers were large. The census of 1911 recorded 263,044 gardeners in England, Scotland and Wales of whom 129,782 worked in domestic gardens.[7] But the actual figure may have been much larger. This was partly a question of nomenclature, as gardeners were skilled men, and they differentiated themselves from the labourers, who did much of the menial work. Also, the census did not include casual or seasonal workers, including the many women and children employed in gardens, nor did it include the large numbers of additional workmen brought in to expand and improve the gardens, which in some cases was a continuous process.

This thesis will examine the lives of the gardeners in the long C19th in the context of the huge changes which occurred in society during that time. In the period between 1801, the year of the first census, and 1911 the population of England and Wales increased fourfold. This unprecedented increase in

[5] Wilcox, A., 'Incidents in the Lives of Well-known Horticulturists: Mr. J. Jaques F.R.H.S' *GL,* v. 24 (1913), p. 118.

[6] Davies, J., *The Victorian Kitchen Garden* (London, BBC Books, 1987), p. 20.

[7] 1911 Census General Report, 'Occupations and Industries', http://www.visionofbritain.org.uk/census/census_page.jsp?yr=1911&show, [accessed 15 Feb. 2015].

population was accompanied, slowly, stutteringly but inexorably in improvements in health, literacy and life expectancy, about which nearly everything is a subject for argument and debate amongst economic and social historians, most notably the reasons for the change and the pace of development. This examination of the lives of gardeners is approached with a view to shedding some light on that debate.

The Parameters

The period covered will be Hobsbawm's long C19th, by which is meant 1789-1914.[8] In order to avoid the error of treating the whole period as one time frame, as conditions were very different in, say, 1890 from what they had been in 1820, it is convenient, in certain parts of the thesis, to divide the period into four cohorts - roughly four generations - and to track the changes from generation to generation.

The first quartile is from 1789 to 1820, a time during which gardens were beginning to recover from the fashion to create landscape parks, which had seen the destruction of many ancient gardens and their replacement with grounds devoted to sport and farming. However progress was slow, in part owing to the lack of manpower caused by the French wars.

The second period is from 1821 to 1845 a time characterised by economic uncertainty and political unrest. Gardening hit a low point during the economic depression of the 1830s. Joseph Paxton's duties as head gardener at Chatsworth included reporting to the Duke of Devonshire's lawyer upon the fact that he held "three hundred guns and bayonets in good condition" with enough labourers available to form a defensive force.[9]

The third period, from 1846-1880, saw the industrialisation of gardening, when there was a huge increase in the number of hothouses, following the abolition of the glass tax. It is possible that the

[8] Hobsbawm, E., *On the Edge of the New Century* (New York, New Press, 2000) & *The Age of Capital, 1845-75* (London, Abacus, 2003).

[9] Chatsworth Archives, 'Letter 84-1 Letter from Joseph Paxton to the Duke of Devonshire's Lawyer' (Aug. 24, 1839)

amount of coal consumed in the nation's 20,000 kitchen gardens exceeded that used by the trains employed on the 18,000 miles of the railway network.

The fourth period, from 1880 to 1914, covers the time when gardening was at its zenith. Employment in gardening reached its peak, and head gardeners became figures of high social status and wealth.

The gardeners under scrutiny are domestic gardeners, as opposed to those who spent their entire careers in market gardens or nurseries. There is some cross-over, as many domestic gardeners spent part of their careers in the commercial sector, and nurseries played a pivotal role in finding employment for gardeners. All categories of gardener from the garden-boy and labourer to the head gardener are considered, male and female.

The geographical area is primarily the British Isles, i.e. Great Britain and Ireland, but the reach is worldwide, as many gardeners pursued their careers overseas.

The focus is on the broader themes which are of interest to economic and social historians, such as education, remuneration, housing, innovation, inventions, and discovery rather than their daily activities and routines.[10]

Sources

The most important contemporary source of information about gardeners' lives is the gardening journals, of which 43 were published from the 1820s to the end of the century.[11] The first was John Claudius Loudon's *The Gardener's Magazine*, founded in 1826. Loudon will feature largely in the narrative as he

[10] The quotidian duties of gardeners are discussed in Morgan, J. & Richards, A., *A Paradise out of a Common Field* (London, Century, 1990) which focused on the day to day activities at Linton Park, Kent. See also Greener, R.C., *The Rise of the Professional Gardener in Nineteenth-Century Devon: A Social and Economic History* (University of Exeter, PhD Thesis, 2009).

[11] Elliott, B., 'The Royal Horticultural Society's Lindley Library: Safeguarding Britain's Horticultural Heritage', *Gresham College Lecture Series* (22 May 2013), p. 3.

wrote extensively on subjects relevant to the lives of gardeners, most notably on education, housing and agriculture, as well as gardening. He campaigned in *The Gardener's Magazine* to improve gardeners' remuneration and living conditions, and encouraged debate through his "Retrospective Criticism" column. Joseph Paxton, one of the founders of *The Gardeners' Chronicle* in 1841, shared Loudon's passion for reform. A series of biographical sketches of gardeners in *The Gardeners' Chronicle* in the 1870s contains valuable details of their education and careers.[12] In the Edwardian period, Alfred Wilcox and W.J. Chittenden for the journal *Garden Life* conducted a series of several hundred interviews with head gardeners in which details of their career progressions are revealed. News items, obituaries and profiles of living gardeners all reveal pertinent biographical information.

Diaries are also a valuable primary source. Several diaries by gardeners have survived, including those of working gardeners such as John Donaldson of Duff House, Banff and William Cresswell of Audley End.[13] There are numerous memoirs, of which many are catalogued in 'The Autobiography of the Working Class'.[14] Gardeners who become famous for reasons other than gardening, such as Alexander Somerville and the poet John Clare, provide valuable observations on labourers' housing conditions and education at the beginning of the C19th. The diaries, memoirs and letters of garden owners often give useful information on their relations with their gardeners, and their working lives. Occasionally diaries of garden visitors will provide revealing information. Thomas Jefferson, on a tour of English gardens, recorded details in his diary of the precise tips given to each of the head gardeners who showed him round.[15] Of oral histories, the series of 453 interviews made by Paul Thompson and Trevor Lummis of

[12] The series ran from 1874-7 and featured 47 biographies, written by the gardeners themselves.

[13] Donaldson, J., *Manuscript Diary of John Donaldson*; Cresswell, W., *Diary of a Victorian Gardener* (Swindon, English Heritage, 2006).

[14] Burnett, J., Vincent, D., Mayall, D., *The Autobiography of the Working Class* (Brighton, Harvestor, 1984).

[15] Jefferson, T., *Garden Book* (Philadelphia, The American Philosophical Society, 1944), http://founders.archives.gov/documents/Jefferson/01-09-02-0328 [accessed 01 Feb. 2015].

life between 1870 and 1918[16] include several with gardeners and Robertson's 'Working Life of Scottish Gardeners' is also relevant.[17] There are numerous reports of cases in the magistrate's courts against gardeners and civil disputes between gardeners and their employers, which provide valuable information regarding remuneration and terms of engagement. Files on the lives of approximately 2,000 individual gardeners have been compiled from the sources referred to above.

A most valuable resource, which has been under-utilised by garden historians, is the Horticultural Directory, published annually and first compiled in 1867, which listed all the major gardens, together with their addresses, the names of their owners and the names of their head gardeners. By taking random samples of the names in these directories and linking them to census and probate records it has been possible to glean information on wealth, longevity, the gardeners' origins and antecedents, to map the changes over time and to chart social mobility. Occasional use has been made of estate archives, although, as Greener has observed:

> [the] frustrating lack of evidence [in estate archives] of how the gardening staff was organised and paid could be a reason why many books written about Victorian servants exclude gardeners.[18]

In the chapters on Accommodation and Health and Consumption, the numerous private enquiries, beginning with Davies and Eden and ending with Rowntree and Kendall and most importantly that of Maud Davies have been important sources, together with the several parliamentary enquiries and their subsequent reports.

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[16] Lummis, T., & Thompson, P. *Family Life and Work Experience Before 1918, 1870-1973,* http://discover.ukdataservice.ac.uk/catalogue?sn=2000, [accessed 10 Nov. 2014].

[17] Robertson, F.W., 'The Working Life of Scottish Gardeners Between the Wars', *Review of Scottish Culture*, v. 10 (1997), pp. 67-85.

[18] Greener, p. 22.

The Existing Literature

A gaping lacuna in garden history has recently been filled with the publication of Professor Floud's *An Economic History of the English Garden*, which embraces the long C19th and emphatically depicts the importance of gardening in the economy.[19] There have been comprehensive histories of the main institutions of the C19th, the RHS and Kew Gardens.[20] In a wider perspective, Drayton and Endersby have described the contribution of Kew and its network of botanic gardens in the global economy.[21] As regards gardeners themselves, there have been biographies of the most prominent gardeners, such as Paxton, Robinson, and Fortune.[22] There have been two major studies of Loudon's work, one focused on his contribution to gardening, the other on his architectural work.[23] There have been several publications on the activities of the very numerous plant hunters[24] most notably the works of Alice Coats, in which their achievements are well documented.[25] There have been very few academic studies of gardeners as an occupational group. Exceptions are Musgrave's *The Head Gardeners: Forgotten Heroes of*

[19] Floud, R., *An Economic History of the English Garden* (London, Allen Lane, 2019).

[20] Desmond, R., *The History of the Royal Botanic Gardens Kew* (London, Harvill Press & Kew, 1998) & Elliott, *The Royal Horticultural Society: A History 1804-2004* (Chichester, Phillimore & Co., Ltd, 2004).

[21] Drayton, R.H., *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven, Yale University Press, 2000) & Endersby, J., *Imperial Nature: Joseph Hooker and the Practices of Victorian Science* (Chicago, University of Chicago Press, 2020).

[22] Allen, M., *William Robinson, 1838-1935: Father of the English Flower Garden* (London, Faber & Faber, 1982); Bisgrove, R., *William Robinson: The Wild Gardener* (London, Frances Lincoln Limited, 2008); Colquhoun, K., *A Thing in Disguise: The Visionary Life of Joseph Paxton* (London and New York, Fourth Estate, 2003), Watt, A., *Robert Fortune: A Plant Hunter in the Orient* (Kew, Royal Botanic Gardens, 2017).

[23] Gloag, J., *Mr. Loudon's England: The Life and Work of John Claudius Loudon, and His Influence on Architecture and Furniture* Design (Newcastle-upon-Tyne, Oriel, 1970); Simo, M.L., *Loudon and the Landscape* (New Haven, Yale University Press, 1988).

[24] The writer has identified 137.

[25] Coats, A. M., *The Plant Hunters* (New York, McGraw-Hill, 1970).

Horticulture,[26] which relies heavily on the biographical sketches published in the *Gardeners' Chronicle* in the 1870's and Greener's study of gardeners in Devon.[27]

Comparative Studies

There is an extensive literature on indoor servants, mostly concerned with their daily working lives, with some information regarding their wages and accommodation. However there are no similar studies involving a prosopography, as in this thesis, regarding any category of indoor servant, or indeed outdoor servant, such as a groom. Nor do there seem to be similar studies of other types of employee, such as a carpenter or shoemaker. For this reason it has been difficult to make direct comparisons between gardeners and other occupations, although where comparative information exists it has occasionally been used. In chapter 6 (page 246) the status of head gardeners and butlers is compared.

The Organisation and Structure of the Thesis

Chapter 1 shows the context in which the gardeners worked by demonstrating the importance of gardens in the economic, social and cultural life of the period and how differently gardens were perceived at that time compared with today. This is done by making comparisons in political and literary spheres. The chapter also analyses the changing pattern of ownership and shows how, in a patriarchal society, gardening was to a large extent under the control of women.

Chapter 2 looks at gardener's education, which was the subject of a great deal of debate amongst gardeners at the time. It examines the steps taken by gardeners to educate themselves to make up for a lack of schooling and the successful development of institutions to facilitate their further education. The

[26] Musgrave, T., *The Head Gardeners: Forgotten Heroes of Horticulture* (London, 2007).

[27] Greener. See also Davison, F., *The Hidden Horticulturists: The Untold Story of the Men Who Shaped Britain's Gardens* (London, Atlantic Books, 2019).

chapter also explores how women in the fourth quartile successfully overcame male prejudice by creating their own educational institutions and their own marketplace for work.

Chapter 3 looks at three aspects of gardeners' accommodation- the cottages provided for labourers and married gardeners, the bothies in which the unmarried gardeners lived and the head gardeners' houses. Many vivid biographical accounts describe the dismal conditions from which gardeners came and in which they were housed in the first and second quartiles. The changing conditions as the century progressed are traced, showing how much more fortunate gardeners were than many of their rural and urban contemporaries, and the reasons why this was so.

Chapter 4 uses the well-known cases of the Ealing Gardener and another gardener, Joseph Allen, as case studies to look at the calorific consumption and health of gardeners. The cases are important as the literature has suggested that these gardeners could not, based on their expenditure on food, have received sufficient calories to maintain a full day's work on a long-term basis. By the examination of patterns of consumption and by taking account of self-provisioning in a whole variety of ways and the contribution of other family members, the calorific deficit is shown to be illusory, and in the process considerable additional light is cast on the consumption habits of gardeners and of their health.

Chapter 5 examines the pay and terms of engagement of gardeners, challenging the oft-stated belief that gardeners were poorly paid and establishing that remuneration varied considerably dependent on which stage in the career ladder the gardener had reached and having regard to the other sources of income which were available to him, in addition to his headline wage. Information regarding the number of days worked in a year is contrasted with assumptions which have been made in the debate on living standards.

The findings in chapter 5 are further elaborated in Chapter 6, which confirms the status of the most successful gardeners by revealing, through probate records, that large numbers of them became wealthy

and analysing the supposed sources of that wealth. This analysis is supported by random sampling of the horticultural register, which also reveals information on ancestry, longevity, social mobility and the prevalence of Scottish gardeners. With wealth came social status, which was manifested in a variety of ways.

The final two chapters are concerned with the contribution of gardeners to innovation, invention and discovery and hence to one of the most important questions in the economic history of the industrial revolution.[28] Chapter 7 reveals the role played by Loudon and Paxton and later by their acolytes in designing public parks, in establishing their designs as templates for future development and in superintending them. In doing so they created and captured a new market which, unlike most private gardens of the time, have survived to the present day. The parks were paid for from the public purse, as was the case with many other innovative ventures which emanated from Kew in which gardeners played as leading role, as is discussed in Chapter 8, together with their other contributions to science.

The conversion of prices to their modern equivalence

There is no satisfactory way of converting C19th prices to a modern-day equivalent. The most used method is the retail price index, which makes adjustments for inflation, so that £50 in 1815 would be worth £3,940 today and £50 in 1875 would be £5,011. The comparisons are flawed because they are based on baskets of goods which have changed radically over the course of time. At the beginning of the C19th household expenditure was heavily biased towards food, especially bread, which now forms a small proportion of expenditure, with much of the balance being taken by items which formerly did not exist.

[28] 'Invention and innovation...are the basis of the economic growth that has occurred throughout human history', Floud, p. 185.

Joseph Paxton was paid £70 when he first became head gardener at Chatsworth, the equivalent of £6,257 today, using the retail price index. This is well below the modern living wage and is clearly too low, by a factor of about 10. The houses which Paxton built at Edensor (page 106) cost about £250 each to build for which the modern equivalent is £23,400, which is again too low, by a factor of about 10.

Another method of comparison is with average earnings. On the 200th anniversary of the publication of *Pride and Prejudice* in January 2013, the advance which Jane Austen received from Thomas Egerton of £110 was equated with £7,636 in 2021, using the retail price index, and it was pointed out that a comparison with average earnings would have produced a figure of £72,000, which was "right on the money for a piece of commercial genre fiction".[29]

Using the earnings index formula Paxton's wage converts to £65,360 and the Edensor houses to £224,200. These seem to be closer to the mark but it must be emphasised that this method of comparison can also be misleading because inequality in the C19th was much greater than in the present day. Readers' price intuitions today are formed by ratios to average earnings which are much lower than those in the past. There is a third method of calculation, which is by reference to GDP, but this is of most relevance to large capital projects and gives higher figures than the earnings index. Of the three, the earnings index formula seems to give the best results. It has also been used in *An Economic History of the English Garden* and this now seems to be the norm amongst garden historians.[30] However it must be emphasised that the conversions are only approximate, and in places seem to produce odd results- an example being the honorarium awarded to the head gardener Bruce Findlay of £1,000 in 1881, the modern equivalent of which is £439,500. This seems too large. At the other end of the scale small items

[29] Walters, G., 'When converting a fee paid to Jane Austen into today's terms, it is necessary to make a comparison with average earnings', *The Times* (31 January 2013) [accessed from *The Times* online archive; 10 September 2013] & Denby, J., 'As the Houses, So the People: Gardeners: Their Accommodation and Remuneration 1800-1914', *MA Dissertation* (University of Buckingham, 2013), p. 12.

[30] Floud, pp. 5, 9-13, 286 and note 7 on p. 304, The conversion rates are taken from MeasuringWorth, 2021 being the latest year figures can be calculated (www.measuringworth.com/ukearncpi/).

also seem to translate badly. The five shilling tip which Jefferson gave at Kew in 1786 translates to £433 using the earning index and £34 using the retail price index. For this reason no modern equivalents have been given for sums below £10.

The Democratisation of Public Parks

A longer version of Chapter 7, The Democratisation of Public Parks, has been accepted for publication by the *Landscape History* journal after peer review

Chapter 1 The Importance of Gardens and Gardening in C19th Social and Economic Life

'Nothing is more completely the child of art than a garden'[31]
—Sir Walter Scott

Gardening was much more important in the economic social and cultural life of the C19th than it is now and consequently gardeners had a far more significant role. This chapter establishes that fact through the perspective of the employers, taking examples from the worlds of politics and literature, in which the central role of women as employers and as the persons in overall control of the gardens is established.

1.1 The Landed Estates of the Gladstone and Disraeli Cabinets of 1880 in comparison with the Thatcher Cabinet of 1980

The relative importance of gardening in the C19th compared with the C20th can be seen from an examination of the preferences of the political elite in the two centuries. In 1880 a cabinet of 13 led by Disraeli was replaced by a cabinet of 14 led by Gladstone. Of those 27 men, 23 occupied a country seat listed in the *Horticultural Directory* as one of those places 'where a full gardening establishment is kept'. An analysis of the estates and their owners is contained in Table 2 (pages 43-4). The remaining four cabinet members occupied a country seat of equivalent size, but for one reason or another their garden was not listed in the Horticultural Directory. Thus the control, development and management of a large garden was an integral part of the life of every single member of the two administrations. Their involvement in gardening went much further than being responsible for a large estate. At Hawarden, it was a fixture of Gladstone's calendar to host the annual horticultural society show in his garden, giving an address on horticulture, which was later published as a pamphlet.[32] Disraeli coined his famous

[31] Hadfield, M., *A History of British Gardening* (London, Penguin, 1979), p. 250.

[32] Gladstone, W.E., *On Cottage Gardens and Fruit Culture* (London, Cassell & Co., 1889).

aphorism 'The palace is not safe when the cottage is not happy' at a meeting of the Wynyard Horticultural Society, correlating happiness with the cultivation of a garden and adding 'A woman is never seen to greater advantage than in the garden'.[33] John Bright, a commoner member of Gladstone's cabinet, would practise his House of Commons speeches on his gardener Benjamin Oldham and would sometimes quote him in support of his patriarchal opinions.[34] Another commoner, the newsagent W.H. Smith, a member of Disraeli's cabinet, developed the magnificent gardens of Greenlands at Henley where he employed 30 gardeners and was a frequent winner in the local horticultural shows.[35]

One hundred years later, in 1980, Mrs Thatcher's cabinet had 22 members of whom only one, Michael Heseltine, owned a country seat of the kind listed in the Horticultural Directory. Indeed Heseltine's garden, Thenford, near Banbury, had been so listed before the First World War.[36] One other, Lord Carrington, owned a garden of great merit, the Manor House at Bledlow, but this was on a much smaller scale.[37] Of his colleagues, three expressed an interest in gardening in their *Who's Who* entry, but none of those possessed a garden of any importance.[38] There were several cabinet members from old money backgrounds, notably Lord Hailsham and William Whitelaw, but Hailsham had sold his ancestral home

[33] Bousfield, J., *Pleasant Memories of Darlington and Neighbourhood* (Darlington, Bailey, 1882), p. 55.

[34] Holton, S.S., *Quaker Women: Personal Life, Memory and Radicalism in the Lives of Women Friends, 1780-1930* (London, Routledge, 2007), p. 175.

[35] Maxwell, H., *Life and Times of the Right Honourable William Henry Smith, M. P.* (Cambridge, Cambridge University Press, 1893), p. 130.

[36] Thenford was first listed in *The Horticultural Directory for 1899*.

[37] Bucks Gardens Trust, 'The Manor House, Bledlow', *Understanding Historic Parks and Gardens in Buckinghamshire* (28 May 2017), p. 4.

[38] They were Nicholas Edwards, Patrick Jenkin and Jim Prior, *WHO'S WHO & WHO WAS WHO,* https://www.ukwhoswho.com/,[accessed 02 Dec. 2019].

as the cost of upkeep was too great[39], and Whitelaw lived in a mansion house with a garden of relatively modest size.[40]

1.2 Joseph Chamberlain

Michael Heseltine went into politics after making a fortune in business, much like Joseph Chamberlain, who was President of the Board of Trade in Gladstone's cabinet. Chamberlain marked his entry into national politics by buying a large plot of agricultural land outside Birmingham on which he built a mansion, which he called Highbury, in the 'Venetian Gothic 'style, together with accompanying parkland and garden. His garden, designed by Joseph Paxton's protégé, Edward Milner (who had been a head gardener before specialising in landscape architecture) is illustrated on the ordnance survey plan of 1916 (Figure 1)[41]. This shows the various additions to the garden made over the years, namely the Dutch garden (1899), the Italian garden (1900), the Elizabethan garden (1901) the rockery (1902), a shrubbery (1902) and the tea garden (1904), all of which were designed by the Chamberlains.[42] The most striking feature of the plan is the range of glass houses which stretched for several hundred feet from the house to the kitchen garden. They numbered 25 in all, beginning at the mansion house with a 70ft Palm House from which a 240ft corridor led to 14 orchid houses and a fernery followed by houses for azaleas, primulas, carnations, begonias, rhododendrons, roses and cyclamens (Figure 2).[43] There were additional

[39] Cretney, S., 'Hogg, Quintin McGarel, second Viscount Hailsham and Baron Hailsham of St Marylebone (1907–2001), Lawyer and Politician', *ODNB* (2011), from https://ezproxy-prd.bodleian.ox.ac.uk:3030/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-76372, [accessed 02 Dec. 2019]

[40] Ennim, Cumbria set in 9 acres.

[41] Ballard, P., "Rus in Urbe': Joseph Chamberlain's Gardens at Highbury, Moor Green Birmingham, 1879-1914,' *Garden History,* v. 14 (1986), p. 72.

[42] Ibid.

[43] Ibid., p. 68.

houses in the kitchen garden, including four vineries and three peach houses, with forcing pits for melons and cucumbers.

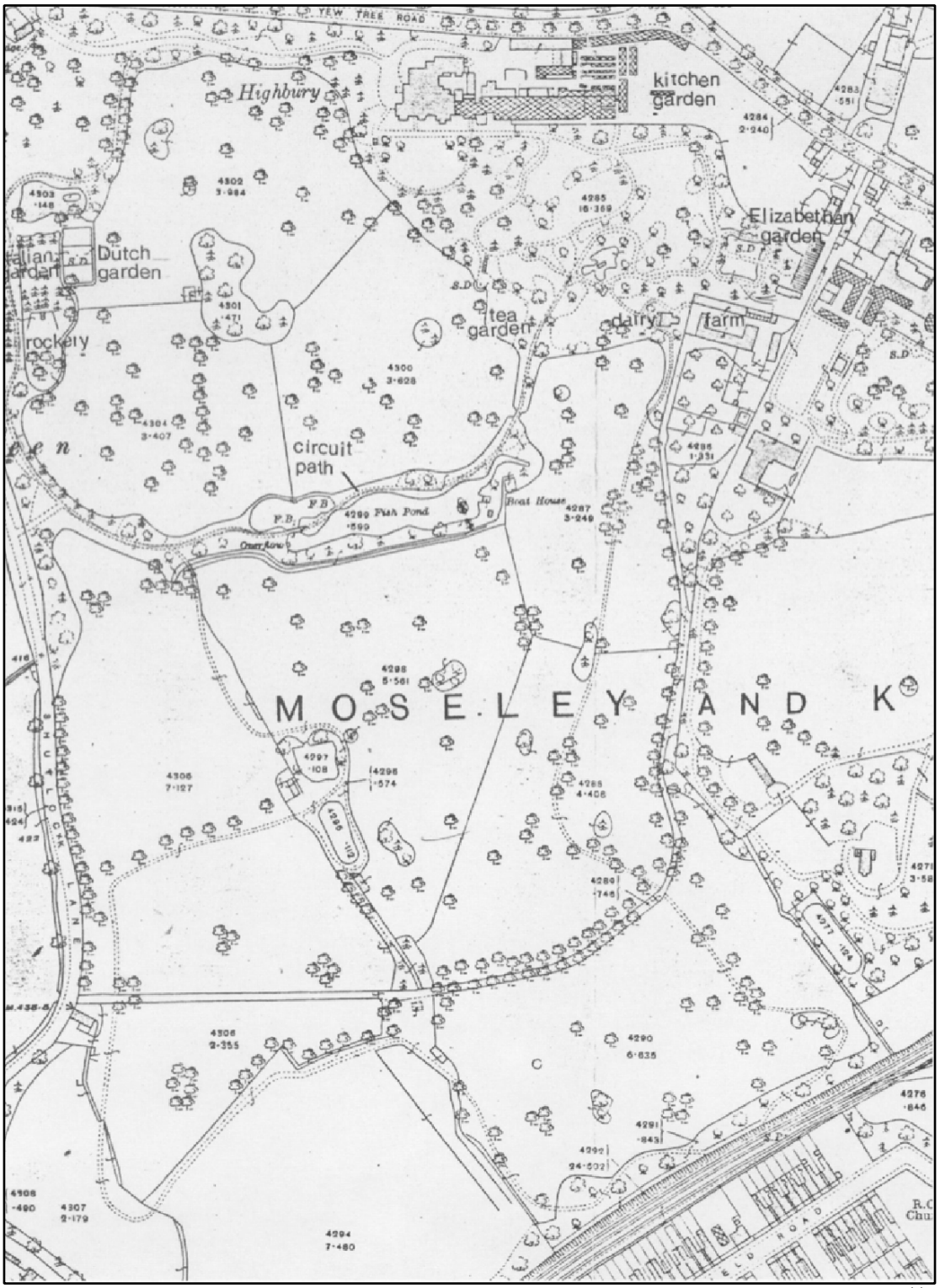

Figure 1. Survey plan of Highbury Park, with added features labelled. Adapted from 1916 OS map.[44]

[44] Ballard, p. 72.



Figure 2. The Glasshouse corridor, Highbury.[45]

The houses and pits were heated by 15,000 feet of pipes, fed by a Trentham boiler which consumed 8-10 tons of coke a week, more in the winter months.[46] Chamberlain employed 20 gardeners, including three who worked exclusively in his orchid houses. The growing of showy orchids was Chamberlain's hobby and an expensive one. In a letter to his daughter, Beatrice in 1879 he wrote: '[On] Friday I met a nursery man from York who tempted me into 'some horrid extravagance'. I gave him an order for half a dozen extremely fine orchids, of which he brought me the flower, or description and which will be very beautiful though awfully dear'.[47]

His local paper recorded in 1894 that he had placed an order with Messrs. Sanders and Co for £1,800 (£789,200).[48] His total orchid collection was estimated to be worth up to £20,000 (£8.76m). When

[45] Ballard, p. 4.

[46] The Chamberlain Highbury Trust, 'The Highbury glasshouses and Joseph Chamberlain's orchid collection', p. 11, https://chamberlainhighburytrust.co.uk/2019/11/14/the-highbury-glasshouses-and-jospeh-chamberlains-orchid-collection/ [accessed, 25 Nov. 2019].

[47] Chamberlain Highbury Trust, p. 6.
[48] Ibid, p. 6.

Chamberlain moved to Highbury, he took with him his head gardener, Edward Cooper, who had worked for him since 1875, and built a house for him in the slips of the kitchen garden, using the same architect as for the main house. Cooper was known affectionately by the family as 'Coops 'and when he died suddenly in 1892 aged 52 of a brain haemorrhage, the regard in which the family held him can be seen from this passage from a letter from Chamberlain's eldest daughter, Beatrice, to her brother Neville;

> [We] may easily get a gardener more equal to so large a place, but we shan't easily get one more willing. One hates to lose people who knew me so young, and therefore took an interest in me that new people can't be expected to take. Cooper figures in so many memories of those two beloved gardens of Southbourne and Highbury. I can't realise I shall see his familiar figure no more.[49]

Chamberlain's regard for his gardeners is evident from the fact that he established a benevolent fund for them, contributing himself an amount equal to that put in by the gardeners.[50] Cooper was replaced by John Deacon, who had been trained at Kew, but unusually a second head gardener, Harvey Burberry, was employed to look after the orchids, of which there were 4,000, kept in houses with carefully regulated night and day temperatures, to suit the conditions required for their flowering; which were designated 'warm', 'intermediate 'and 'cool', but even the 'cool 'had to be maintained between 55 and 60 degrees at night. Whilst at Highbury, Burberry was a prize winner at many horticultural shows, and also a successful cultivator, raising many hybrids including Cattleya x Miss Endicott, named after Chamberlain's wife, and Dendrobium x Burberry (1897) which was named in his honour.[51] After publishing *The Amateur Orchid Cultivator's Guide Book* in 1897, he left Highbury and set up on his own as a consultant in orchid growing.[52]

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[49] Ballard, p. 75.

[50] Ibid.

[51] Roberts, p. 11.

[52] 'Trade Notice: Mr H.A. Burberry', *GC,* s.3 v. 22 (1897), p. 375.

The gardeners at Highbury had three main functions, apart from looking after Joseph Chamberlain's orchids. First, they had to supply the household of 6 adults and 14 servants with fruit, vegetables and flowers all year round, and when the family were in London send supplies to them there, by train. Secondly, they had to maintain the various pleasure gardens, which included three rose gardens with 400 varieties of roses (for which Mary Chamberlain had a passion approaching that of her husband for orchids).[53] Thirdly they had to maintain the recreational aspects of the garden; the tennis courts, the croquet lawn, bowling green and walkways as well as the lake, which was used for boating and fishing.

Apart from the various recreational and sporting activities, the gardens at Highbury hosted numerous events. There were annual garden parties for Chamberlain's constituents, meetings of Liberal Unionist activists, sometimes attended by crowds in their thousands, as well as house parties and balls attended by up to 500 guests. He also, like Gladstone, hosted his local horticultural society show in his garden every year. The guests would, invariably, be given a tour of the Palm House and orchid houses.[54]

The gardens were thus an essential and integral part of the everyday life of the Chamberlain family. The gardeners in all departments showed great skill in looking after a valuable collection of orchids and an important garden, and had the honour of being interviewed by the gardening press and having their portraits published.[55] They were clearly highly respected by the Chamberlain family. Joseph Chamberlain was not born to this kind of life, but he chose to adopt it as a natural adjunct to his political status, as did every other commoner who rose through the ranks in the two cabinets of 1880.

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[53] Wilcox, A., 'Famous Gardeners at Home; Mr. McKay, at the Gardens, Highbury, Birmingham', *GL,* v. 1 (1901-2), p. 331.

[54] Ballard, p. 74 & Roberts, pp. 13-14.

[55] Wilcox, p. 331; 'Obituary-John Deacon', *GC,* s. 3, v. 51 (1912), p. 46; Dolman, F., 'Mr Chamberlain's Orchids', *English Illustrated Magazine,* v. 10 (1893), p. 882.

1.3 The Heseltines at Thenford

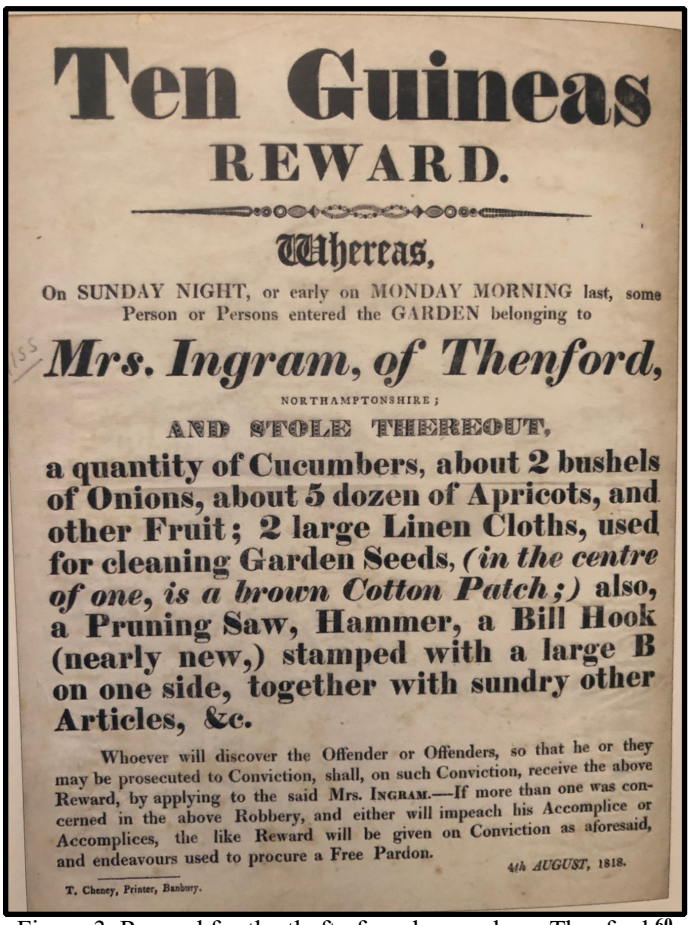
Thenford, which Michael and Anne Heseltine bought in 1976, is a Palladian mansion in a parkland setting with several lakes and a two-acre walled kitchen garden. Over a period of 45 years, the garden has been restored, developed and added to, making it one of the most important gardens of the modern age. Trees are to Michael Heseltine what orchids were to Joseph Chamberlain, his collection forming a fine arboretum of world renown. Their head gardener, Darren Webster, has the best modern qualifications, with a National Certificate in Horticulture and a Kew Diploma, which he obtained with honours, also winning the Matilda Smith Memorial prize for the best practical student.[56] He oversees a staff of 12.[57] Like Edward Cooper and John Deacon at Highbury, he looks after 400 varieties of roses, but the scope of his gardening is on a much smaller scale. This is evident in the kitchen garden, which at Thenford has been turned into an ornamental garden, with only a minor part reserved for the growing of vegetables and fruit. Formerly the kitchen garden produce was valued highly by the owner of Thenford. In 1818 the then owner, Mrs Ingram, offered a reward of 10 guineas following the theft of 'a quantity of Cucumbers, about 2 bushells of Onions, about 5 dozen of Apricots, and other Fruit', plus sundry items of equipment.[58] (Figure 3) The quantities supplied to Mrs Ingram's household have not been recorded, but an idea of the scale can be gleaned from Hatfield, the seat of Lord Salisbury, who was the Foreign Secretary in the Disraeli cabinet. Their head gardener, George Norman, was required to supply 50 pounds of forced strawberries, plus peaches and nectarines in proportion for dinner parties, for which he grew annually 7,000 strawberry plants and had the care of a Royal George peach tree which covered a roof space of 50ft x 10ft and produced 3-400 fruit annually. For the summer floral displays, he produced

[56] Heseltine, M. & A., *Thenford: The Creation of an English Garden* (London, Head of Zeus, 2016), p. 193.

[57] Edwards, C., 'Lord Heseltine Talks Gardens, Politics and his Mother's Dog Kim', *Tatler* (01 Nov. 2016), https://www.tatler.com/gallery/lord-michael-heseltine-dog-kim-gardens-interview-thenford-house, [accessed 01 Dec. 2019].

[58] Heseltine, p. 16.

30,000 bedding plants.[59] The skills required to manage hothouses and to produce fruit and vegetables out of season are beyond the scope of nearly all modern gardeners.



Ten Guineas

REWARD.

Whereas,

On SUNDAY NIGHT, or early on MONDAY MORNING last, some Person or Persons entered the GARDEN belonging to

Mrs. Ingram, of Thenford,

NORTHAMPTONSHIRE;

AND STOLE THEREOUT,

a quantity of Cucumbers, about 2 bushels of Onions, about 5 dozen of Apricots, and other Fruit; 2 large Linen Cloths, used for cleaning Garden Seeds, *(in the centre of one, is a brown Cotton Patch;)* also, a Pruning Saw, Hammer, a Bill Hook (nearly new,) stamped with a large B on one side, together with sundry other Articles, &c.

Whoever will discover the Offender or Offenders, so that he or they may be prosecuted to Conviction, shall, on such Conviction, receive the above Reward, by applying to the said Mrs. INGRAM.—If more than one was concerned in the above Robbery, and either will impeach his Accomplice or Accomplices, the like Reward will be given on Conviction as aforesaid, and endeavours used to procure a Free Pardon.

4th AUGUST, 1818.

T. Cheney, Printer, Banbury.

Figure 3. Reward for the theft of garden produce, Thenford.[60]

Table 1 records the current status of the 28 landed estates of the Disraeli and Gladstone cabinet members (there are 28 as one of the 27 cabinet members, the Duke of Richmond, occupied two estates). Three no longer exist, as the houses have been demolished, and the land redeveloped. Of the remainder, 12 of the gardens have been listed and are open to the public, two of which are run by the National Trust, and a further three are also open to public view. Most of the other houses have found an alternative use, as a hotel, a wedding venue or as flats, with a private garden attached on a much smaller scale than formerly. Of the kitchen gardens most have been destroyed or built on, but nine are either fully or partially

[59] Dyke, G., 'The Late George Norman', *GC,* s. 3, v. 39 (1906), p. 156.

[60] Heseltine, p. 16.

cultivated. Of those gardens which survive, most have a skeleton workforce; at Belvoir, there is a single head gardener and a team of volunteers.[61] This reflects the reduced scale of the gardens and the fact that the beating heart of the garden, the kitchen garden with its array of hothouses and forcing pits, no longer exists.

Thenford is very exceptional in that its owners can support a gardening staff of 12, whose cost is estimated to be about £250,000 a year. Very few private owners can afford running costs of this nature, out of taxed income, and Michael Heseltine concedes that Thenford is fortunate in being able to rely on financial support from his publishing company.[62] In most cases, and as is the case with the 12 listed gardens in the schedule, they are run with support from the paying public.

When Disraeli became a rising star of the Tory party his supporters provided him with the money to buy Hughenden, as it was considered essential for him to have a country estate.[63] A mansion in Mayfair would not do; if he was to conform with the norms of upper class society he had to have the sporting and recreational facilities of an estate to enable him to entertain in style. Similar motives impelled Joseph Chamberlain when he built his Highbury estate on virgin land. Chamberlain's closest neighbour was Richard Cadbury, the enlightened Bournville factory owner, who marked his entry into society by creating an estate similar to Highbury.[64] This was not for the most part Veblen-style conspicuous consumption, but an indication of their shared cultural identity. This shared cultural identity manifested itself in the world of arts as well as politics, as is demonstrated by the engagement of each of the five poet laureates of the long C19th in the design and practice of gardening.

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[61] 'Gardens and Lakes', *Belvoir Castle,* https://www.belvoircastle.com/plan-your-visit/gardens-and-lakes/ [accessed 20 Jan 2020].

[62] Heseltine, p. 193.

[63] Parry, J., 'Disraeli, Benjamin, Earl of Beaconsfield (1804–1881), Prime Minister and Novelist', *ODNB*, https://ezproxy-prd.bodleian.ox.ac.uk:3030/view/10.1093/ref:odnb/9780198614128.001.0001/ odnb-9780198614128-e-7689, [accessed 12 Feb. 2020].

[64] Cadbury, H.C., *Richard Cadbury of Birmingham* (London, Hodder & Stoughton, 1906), p.

1.4 Poets Laureate

1.4.1 William Wordsworth

To Lady Beaumont
Lady! the songs of spring were in the grove
While I was planting green unfading bowers,
And shrubs to hang upon the warm alcove,
And sheltering wall; and still, as fancy wove
The dream, to time and nature's blended powers
I gave this paradise for winter hours
—William Wordsworth, 1815[65]

In 1806, William Wordsworth was asked to advise on the design of a garden for the new mansion being built at Coleorton for Sir George and Lady Beaumont. Sir George was a member of the Society of Dilettanti together with Uvedale Price and Richard Payne Knight, the two leading proponents of the 'Picturesque 'movement in garden design. Price had earlier given Lady Beaumont advice on the layout of the new garden, which was to be built on an overgrown site which had been disfigured by abandoned mining works.[66] Beaumont was an avid collector of art (and became a founder of the National Gallery) including the works of Claude Lorraine, Salvator Rosa and Gaspard Poussin,[67] the painters who had inspired the 'Picturesque 'gardening style. Wordsworth, who had taken up residence on the estate, wrote to Sir George setting out his view that 'Painters and Poets have had the credit of being reckoned the Fathers of English Gardening'[68] and that '[laying] out grounds, as it is called, may be considered as a liberal art, in some sort like poetry and painting; and its object, like that of all the liberal arts, is, or ought to be, to move the affections under the control of good sense'.[69] When Lady Beaumont asked him to

[65] Wordsworth, W., 'To Lady Beaumont', *William Wordsworth Poems,* https://wordsworth.quillsliteracy.org/to-lady-beaumont-311/ [accessed 01 Aug. 2023].

[66] Anderson, A., 'Wordsworth and the Gardens of Coleorton Hall', *Garden History* v. 22 (1994), p. 206 & 208 & 'Coleorton Hall Leicestershire: Chronology of Landscape Development' clinchem.org.uk/coleorton/coleorton_hall_chronology.doc [accessed 28 Jan 2020].

[67] Anderson, p. 207.

[68] 'W.W. to Sir George Beaumont, 17 & 24 Oct. 1805', in Selincourt, E. & Shaver, C.L. (Eds), *The Collected Letters of the Wordsworths,* v. 1 (Oxford, Clarendon Press, 1967), p. 624.

[69] Ibid.

design and supervise the making of a winter garden on the site of an old quarry he responded with enthusiasm, in fact with, as he said, the longest letter which he wrote in his life, concluding: 'I am

sensible that I have written a very pretty Romance in this Letter, and when I look at the ground in its present state and think of what it must continue to be, for some years, I am afraid you will call me an Enthusiast and a Visionary'.[70]

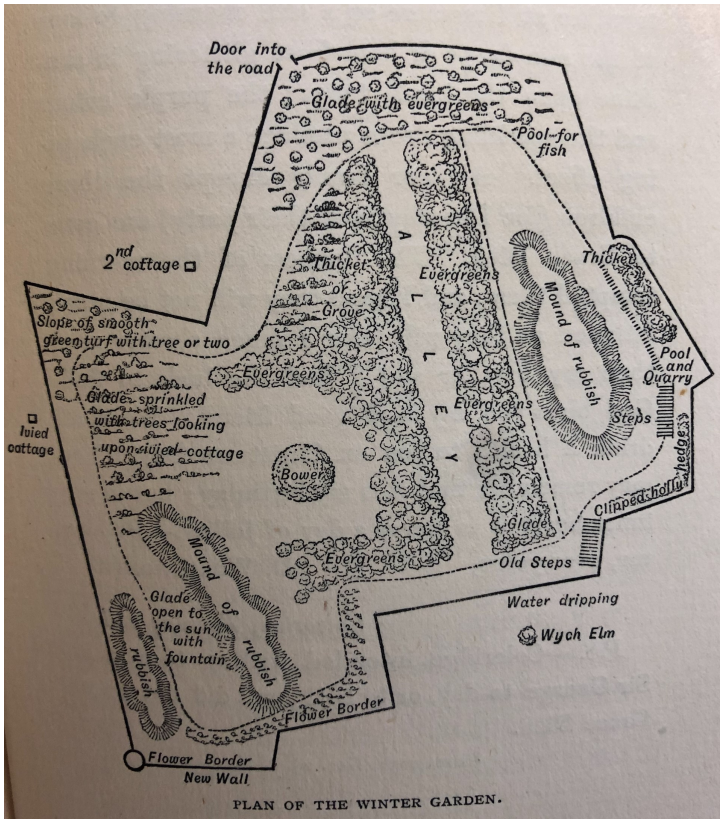

Figure 4. Plan of the proposed Winter Garden, from a redrawing of Wordsworth's plan by Bonnie Pollard.[71]

The plan which he sent her is reproduced in Figure 4. Wordsworth's biographer observed that his letters of this period gave the impression that he might have given up poetry for gardening and although this was not quite the case, it was his over-riding interest whilst staying at Coleorton.[72] He not only designed the garden, but supervised its creation and selected the plants. He created a garden which would look its

[70] 'W.W. to Lady Beaumont Dec. 1806', in Selincourt & Shaver, v. 2, p. 119.

[71] Buchanan, C. And Buchanan R., *Wordsworth's Gardens* (Texas, Texas Tech University Press, 2001), p. 96.

[72] Barker, J. R. V., *Wordsworth: A Life* (London, Viking, 2000), p. 351.

best in winter and spring, using evergreen trees and shrubs and spring-flowering bulbs. The required effect of making the scene look like a picture was achieved by adding thatched roofs to two ruined cottages and dressing them with ivy and other creepers. Coleridge, who had come to stay with them, suggested some ideas of his own, dissuading Wordsworth from adding a fountain, on the grounds that it would spoil the 'Picturesque 'effect.[73] At the same time, Lady Beaumont supervised the creation of the rest of the garden, becoming such a keen gardener that her husband worried that she 'would root herself'.[74]

Wordsworth had to tread carefully in his relations with the long-standing Scottish head gardener at Coleorton, Mr Craig, who was at first reluctant to cede his authority over the creation of the winter garden to an outsider. Craig expressed his vexation over the plans and, in Dorothy Wordsworth's words 'is very willing to give his opinion respecting the manner in which my Brother's ideas are to be executed'. Dorothy echoed Lady Beaumont's views in describing him as 'very obstinate and somewhat self conceited', albeit 'industrious, ingenious and faithful'. Clearly, Lady Beaumont did not want to lose him and a compromise was reached whereby Wordsworth would not get involved with the development of the rest of the garden and the work in the winter garden would be undertaken by Craig and his men, under Wordsworth's supervision.[75] Wordsworth averred that if he 'intermeddled 'with the other parts of the garden it would be 'like taking the whole of the intellectual part from [Craig], which would dispirit him, and be unjust and impolitic, as he has good taste, and seems a truly respectable man'.[76] In the event, the two men developed a close working relationship. As Dale and Yen have described, Wordsworth credited Craig with the idea of creating a pool in the winter garden to 'reflect beautifully the

[73] Anderson, p. 211.

[74] Ibid., p. 212.

[75] 'D.W. to Lady Beaumont, 26 Jan. 1807', v. 2, p. 128.

[76] 'W.W. to Lady Beaumont, Dec. 1806', v. 2, p. 119.

rocks of the scar above'[77] and Craig sought out Wordsworth's advice on the laying out of a path in the main garden. They went on a plant-buying expedition together, taking a gig to a nursery in Nottingham, 14 miles away.[78]

After staying for seven months at Coleorton, the Wordsworths returned to the Lake District. There, Wordsworth met with the Earl of Lonsdale and discussed his plans for remodelling Lowther Castle and its grounds, where Wordsworth's advice 'in his new found status as a landscape gardener' was found to be indispensable.[79] Wordsworth and his family made return visits to Coleorton annually, on the first occasion accompanied by Sir Walter Scott, who, it is said, devised the tournament scene from Ivanhoe when sitting in an arbour in Wordsworth's winter garden.[80] In 1823 Constable visited and sketched a monument in the garden inscribed with verses by Wordsworth.[81] The gardens became very well known, coming under the supervision in 1838 of Montgomery Henderson, another Scot, who was to be head gardener there for 44 years.[82]

In the Lake District, Wordsworth remodelled the grounds first at Allen Bank and then at Rydal Mount. Several landowners consulted him on the layout of their grounds, including Dr Thomas Arnold[83] at Fox How, Mrs Eliza Fletcher at Lancrigg, Mary de Quincey at Dove Cottage[84] and Harriet Martineau at The Knoll, where he planted a pair of stone pine trees.[85] Towards the end of his life, aged 75, he wrote: 'My

[77] Dale, P., and Yen, B. C., *Wordsworth's Gardens and Flower: The Spirit of Paradise* (Woodbridge, UK, ACC Art Books, 2018), p. 80.

[78] 'D.W. to Lady Beaumont, Feb. 1807', v. 2, p. 135.

[79] Barker, p. 362.

[80] Anderson, p. 211.

[81] Ibid., p. 217.

[82] 'British Gardeners VII: Montgomery Henderson, *GC*, n.s. v. 2 (1874), p. 719.

[83] The Headmaster of Rugby School, and father of the poet Thomas Arnold, who inherited the property.

[84] Dale and Yen, p. 112.

[85] Noyes, R., *Wordsworth and the Art of the Landscape* (Bloomington, Indiana, Indiana University Press, 1968), p. 139.

pleasures are among Birds and Flowers, and of these enjoyments, thank God, I retain enough; but my interest in Literature and books in general seem to be dying away fast.'[86]

Thus gardens and gardening were an integral part of Wordsworth's life, indeed of his family's life. As Dorothy observed 'we are all gardeners [here]'.[87] The quotidian details are evident from Dorothy Wordsworth's journals. Carol Buchanan has noted the incongruity of the fact that Wordsworth composed the opening lines of 'Intimations of Immortality 'whilst spreading manure in the garden.[88] At Rydal Mount, John Carter, the man who served as his trusted clerk for 43 years after he had been appointed Distributor of Stamps in 1813, also helped in the garden[89], and Wordsworth often worked alongside his gardener James Dixon.[90] He had such an appreciation of the value of landscape gardening that he encouraged his youngest son, Willie, to take it up as a profession, and indeed Willie studied mathematics, drawing and architecture to that end as 'the only respectable profession where [he] could enjoy the outdoor life he craved'.[91]

The garden was for Wordsworth a place of contemplation, reflection and inspiration and gardening was a form of recreation, relaxation and an outlet for his creativity. During the long C19th there were four other poet laureates, for each of whom gardens and gardening had a similar importance.

[86] Barker, p. 733.

[87] Dale and Yen, p. 104.

[88] Buchanan, C., *Wordsworth's Gardens'* (Lubbock, Texas, 2001), p. 25.

[89] Barker, pp. 448-9.

[90] Noyes, p. 133.

[91] Barker, pp. 619-20.

1.4.2 Robert Southey

> 'It may be too much to say of it, as has been said, that it is the purest of human pleasures; but it was in a garden that man was placed when he came pure from the hand of his Creator, and it is in gardens that they who are blest with means and opportunity may create an image of Eden for themselves, as far as earth is now capable of resemblance'
>
> -Southey, 'Evelyn's Memoirs'[92]

Wordsworth's immediate predecessor was Robert Southey, who also developed a garden in the Lake District. Southey remodelled the gardens at his home at Greta Hall, Keswick, writing that he had obtained great satisfaction from 'Reptonising' the garden there, enclosing it, and planting trees and shrubs.[93] He built two kitchen gardens and created a number of winding paths leading through woods and copses to the River Greta.[94] In this he was assisted by his gardener, Willy, whose company he evidently enjoyed: 'He is a very odd fish, and talks to me about truth, and allegory, and fable, and the craziness of his wife at the full of the moon'.[95]

1.4.3 Sir Henry Pye

In the letter to Sir George Beaumont in which Wordsworth set out his ideas on gardening, he referenced the observations on landscape design made by the poet laureate, Sir Henry Pye in his 1797 essay 'Some Observations on Gardening'. Sir Henry had been Southey's predecessor as laureate, taking up the post in 1790. In addition to writing about the theory of gardening he, like his successors, was an ardent practitioner, creating, in 1785, the gardens at Faringdon House which provided the then fashionable Brownian setting for a mansion which has been described as being 'as desirable a house as one could

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[92] Southey, R., 'Evelyn's Memoirs', *Quarterly Review* (19 Apr., 1818), p. 17.

[93] 'Selected Letters: To Miss Barker', *The Romantic Age. Electronic Edition. Letters of Robert Southey: a selection* (10 Apr., 1807), http://ezproxy-prd.bodleian.ox.ac.uk:2383/xtf/view?docId=romage_c/romage_c.05.xml;chunk.id=div.el.southey.letters.113;toc.depth=1;toc.id=div.el.southey.letters.110;brand=default;query=shrubs#shrubs [accessed 18 Jan 2020].

[94] Howitt, W., *Robert Southey: Homes and Haunts of the most eminent British Poets*, v. 2 (London, Richard Bentley, 1847), pp. 222-4.

[95] 'Selected Letters: To Miss Barker 10 Apr. 1807', in *Selected Letters of Roberty Southey* (London, Oxford University Press, 1912), p. 126.

wish for'.[96] This gave him the authority to lightly satirise the pretensions of those who built park-like grounds around lesser houses, in his poem 'The Parsonage Improved'.

1.4.4 Alfred Tennyson

> [No-one] has ever written of the pruned, cultured, enriched, and sheltered nature which we call a garden with more sweetness, purity and passion than he; even human nature, in Tennyson's poetry, seems to have come in some sort under the gardener's care.
>
> —A. Meynell[97]

As well as writing prolifically about gardens Tennyson was a keen botanist and practical gardener.[98] In 1856, Tennyson used the earnings from his poem 'Come into the Garden Maud' to buy Farringford at Freshwater on the Isle of Wight.[99] There, Tennyson and his wife Emily devoted their leisure hours to creating and looking after the garden. Emily recorded Tennyson's quotidian work in the garden, much as Dorothy Wordsworth had her brother's.

Typical entries are 'He digs in the garden every day',[100] 'A. plants potatoes'[101] and 'A. rolls the grass'[102]. Sometime Emily joined him in the work, but as she was a semi-invalid a more typical entry would be 'I walked in the garden while he was planting Potatoes'.[103] They employed Charles Heard as their head gardener (Emily notes 'Glad to have a first rate gardener') who took charge of the remodelling of the Farringford gardens, with the building of a terrace, new walkways, a fernery and a kitchen garden.[104]

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[96] Giroud, M., 'Faringdon House, Berkshire,', *Country Life* (12 May 1966). p. 1184.

[97] Meynell, A., 'Tennyson in his Garden', *The Irish Monthly*, v. 31 (1903), p. 590.

[98] Tennyson, E., Hutchings, R.J., and Hinton, B. (eds), *The Farringford Journal of Emily Tennyson, 1853-1864* (Isle of Wight, Isle of Wight County Press, 1986), p. 10.

[99] Rideing, W.H., 'Tennyson in the Isle of Wight', *The North American Review,* v. 165 (1897), p. 702.

[100] Tennyson, E., p. 33.

[101] Ibid., p. 35.

[102] Ibid., p. 48.

[103] Ibid., p. 35.

[104] Tennyson, pp. 88, 90, 108, 113 & 120.

As has been noted by Alice Meynell, working in the garden was Tennyson's main form of relaxation: 'No merely mechanical employment will rest my brain', he said 'The work of nailing up my trailers does not require thought, but it does require very close attention; in other words, it prevents thought. All brain-workers ought to have some such intelligent and engrossing occupation for their leisure.'[105] For the exercise of his brain, he used the summer house, where he wrote and corrected his proofs.

In 1868, the Tennysons bought some land in West Sussex where they built a second home, Aldworth and together created a new garden there.[106]

1.4.5 Alfred Austin

At the time of Alfred Austin's appointment as Poet Laureate in 1896, in succession to Tennyson, he was best known as a writer of books on gardens. *The Garden that I Love*, which he published in 1894, and which was set in his garden at Swinford Old Manor, went through five editions in two years, becoming his best selling work.[107] This was followed by *In Veronica's Garden*, 1895,[108] which recognized the fact that this was, in fact, a lady's garden. Austin had been taught how to garden by his grandfather whose 'one pleasure in life was working in his garden'.[109] After he acquired the lease of Swinford Old Manor in 1867, just outside Ashford in Kent, he transformed a park-like landscape into an attractive flower garden, following the precepts of the period, with the assistance of his head gardener, George Uden. On

[105] Meynall, p. 591.

[106] Tennyson, E., p. 1 of epilogue.

[107] Scheuerle, W.H., 'Austin, Alfred (1835-1913), Poet', *ODNB* (Oxford University Press, 2009), https://ezproxyprd.bodleian.ox.ac.uk:3030/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-30503 [accessed 10 Jan. 2020].

[108] Ibid.

[109] Austin, A., *The Autobiography of Alfred Austin, Poet Laureate 1835-1910,* v. 1 (London, MacMillan, 1911), pp. 12 & 156.

his appointment as Laureate, John Dennis noted that 'Mr Austin has himself become, in a fuller sense than most of his predecessors, a garden poet'.[110]

There is a remarkable consistency throughout the long C19th in gardening being viewed as an art, as Wordsworth said, on a par with poetry or painting. The poet laureates created their own gardens, they worked in them and they wrote essays about the art of garden-making. Both their art and their daily lives were suffused with gardening. Gardens were the themes of many of their poems. In the C20th the laureates showed a markedly diminished interest in gardening, reflecting the changing cultural norms, and it is unlikely that they considered it an art form equal to poetry. Perhaps the most symbolic poem came from John Betjeman, whose 'Pot Pourri from a Surrey Garden' took its title from the book of the same name by the eminent horticulturalist Mrs C.W. Earle. Betjeman's poem had little to do with gardens, but Mrs Earle's book, the first of a series of five, reflected the importance of gardening then, and the role of women as gardeners, by enjoying a huge success.[111]

1.5 The Changing Ownership of Gardens

In his 1806 work *A Treatise on Forming, Improving and Managing Country Residences*, John Claudius Loudon refers to 211 country estates, of which aristocrats owned 116 (55%).[112] This reflects the dominance of aristocratic ownership then. Loudon's work is a prolonged polemic against the dominant style of landscape gardening at the time, that made popular by Lancelot 'Capability 'Brown, whose clients had been predominantly aristocrats; in fact of the 125 clients identified by Brown's account

[110] Dennis, J., 'The New Poet Laureate', *The Leisure Hour*, v. 45 (Mar. 1896), p. 294.

[111] Elliott, B., 'Earle [née Villiers], (Maria) Theresa [known as Mrs C. W. Earle] (1836–1925)', *ODNB* (Oxford University Press, 2004), https://ezproxy-prd.bodleian.ox.ac.uk:3030/view/10.1093/ref:odnb/.001.0001/odnb-9780198614128-e-48832?rskey=rLYJHW&result=2 [accessed 12 Feb., 2020].

[112] Loudon, J.C., 'List of Country Residences', in *A Treatise on Forming, Improving and Managing Country Residences* (London, Longman, Hurst, Rees, and Orme, 1806), forward.

books, 57% were from the aristocracy.[113] The Brownian style favoured male aristocratic sporting pursuits, notably hunting and fishing. However, it was inimical to gardening. On hunt days gardeners would be posted at strategic points in the park hoping to divert the path of an oncoming fox to prevent the hunt from riding roughshod over cultivated areas.[114]

The decline in the dominance of aristocratic ownership throughout the C19th coincided with a change in the style of gardens from predominantly parkland to pleasure grounds with the house fronted by a terrace and ornamental gardens instead of or in addition to a park. The extent of the change of ownership is seen from the records of the Journal of Horticulture, which, from 1867, began publishing annual lists of the gardens of the 'nobility and gentry' for those places where 'a full gardening establishment is kept', or which otherwise had a reputation for some important speciality.[115] In 1871, 1,771 such establishments were recorded, of which members of the aristocracy owned 597 (34%). The clergy owned 68 (4%), members of the military 83 (5%) and plain 'esquires '934 (53%). The remaining 162 were owned by women (9%). Full details, broken down by English counties, are contained in Table 3. By 1911 the number of estates in England recorded by the Horticultural Register had grown to 5,424, of which the number owned by aristocrats was 940, an increase of 59%, but their proportion of the total had fallen to 17% (Table 4). The number of clergy owners had risen by 28% to 96, but their proportion of the whole had fallen to 2%. The number owned by the military increased more than five-fold to 469, and their proportion of the whole increased to 9%. The remaining gentry increased more than threefold to 3,229, and their ratio of the whole to 60%. Thus in the century since the publication of Loudon's work, the proportion owned by the aristocracy had fallen from 55% to 17% with plain 'esquires', not including the military and clergy, rising to 60%.

[113] Floud, R., *An Economic History of the English Garden* (Penguin, 2019), p. 63.

[114] Humphris, T., *Garden Glory: From Garden Boy to Head Gardener at Aynhoe Park* (London, Collins, 1969), p. 21.

[115] *The Horticultural Directory and Year Book, 1867-1924.*

The rise in the number of gardens owned by women is particularly striking; up from 162 in 1871 to 838 in 1911, a fivefold increase, which brought their proportion of the whole up from 9% to 15%. As 177 of the aristocratic garden owners were women in 1911, there were, in fact, more female garden owners than male aristocratic owners in that year. Most of these owners were widows, a reflection of the fact that men had a lower life expectancy than women and that they tended to marry women younger than themselves.

1.6 Garden Categories and Numbers

Loudon recognized three main categories of gardens in which gardeners would be employed. The most modest was the 'third rate establishment' which he described as a villa residence with land of between one and ten acres.[116] The gardener there would be expected to look after a kitchen garden, plus the shrubbery and lawn without any other qualified help, but sometimes, as the seasons dictated, unqualified labour. This was sometimes known colloquially as a 'small place'. The second category, designated the 'second rate establishment', comprised the majority of the gardens whose names appeared in the Horticultural Register. They consisted of two types. First, the Villa, with between ten and one hundred acres, in which there would be a pleasure garden and kitchen garden which would be looked after by a head gardener with the assistance of one or two journeymen, an apprentice, and whatever male and female labourers were required, depending on the size of the property. Secondly the country mansion and demesne of between 100 and 500 acres, which would usually include a home farm. The head gardener in that case would employ proportionately more staff and would often also undertake the role of farm bailiff.[117] An analysis of the staffing levels of the gardens reviewed by Wilcox in *Garden Life* in the Edwardian period, most of which fell into this category, showed that they had an average garden staff of 17.

[116] Loudon, *Encyclopaedia of Gardening,* pp. 1047–1049.
[117] Ibid., pp. 1047–8.

The third category was designated by Loudon as the 'first rate establishment' or the 'Mansion-residence, 'which would have an estate of between 500 and 10,000 acres. The head gardener would have under him four foremen for each of the garden departments, a forester and whatever other staff and labourers were required.[118] By 1897 there were, in the estimation of C. J. Cornish, 900 such houses, which he ranked in three sub-divisions according to the number of male staff employed in them.[119] There were 60 in the first division, of which Chatsworth and Blenheim Palace were examples, employing from 200-600 men indoors and out of doors. In the second division there were 200, employing from 90 to 170 men, and in the third division 640, with a minimum staff of 50.[120] Cornish gave as an example the staff list from a house of the second rank in Suffolk, where 50 gardeners were employed, about one third of the total.[121]

For a house in the third division, Cornish gave the following staffing list:[122]

Gardens, Parks and woods	25
Stables	6
Keepers and watchers	8
Masons, carpenters and smiths	6
Dairy and laundry	2
Indoors (men)	6
Ancillary	5
Women	20
Total	78

Table 1. Cornish' staff list

[118] Loudon, *Encyclopaedia of Gardening,* p. 1049.

[119] Cornish, C.J., 'The Cost of Country Houses', *The Cornhill Magazine*, n.s. v. 2 (1897) p. 474.

[120] Ibid., p. 475.

[121] Ibid., p. 476.

[122] Ibid., p. 481.

The total wage bill for this house was £3,450 (£1.63m) of which the garden absorbed about one third. Cornish described the gardens as 'the most expensive luxury of the country house. Their cost is out of all proportion to that of every other department'.

1.7 The Role of Women

Gardening, particularly flower gardening, was from an early time considered to be the woman's domain. In 1685 Sir William Temple in his book *Upon the Gardens of Epicurus* wrote that he would not write about flowers as this is 'more the ladies' part than the men's'.[123] The role of women in designing and caring for gardens was recognised at an early date, as is described by Floud.[124] Gardening was favoured for women because it was considered a respectable occupation, even for children. As William Cobbett observed: 'How much better, during a long and dreary winter, for daughters, and even sons, to assist, or attend, their mothers, in a greenhouse, than be seated with her at cards, or, in the blubberings over a stupid novel…'.[125]

In 1792 Mary Wollstonecraft, in making the case that women should not be dissuaded from gardening on account of their supposed frailty, cited the case of a man whose daughter accompanied him as his constant companion in the garden and who concluded: 'If women are in general feeble both in body and mind, it arises less from nature than from education'.[126]

Unlike most occupational groups, the London Horticultural Society (later the Royal Horticultural Society) had never excluded women and from the 1830s women began to be elected regularly as fellows.

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[123] King, P., *Women Rule the Plot* (London, Duckworth, 1999), p. 24.

[124] Floud, pp. 62 & 124.

[125] Cobbett, W., *The English Gardener* (London, 1833), p. 39. I am indebted to King, *Women Rule the Plot*, p. 24 for these references.

[126] Wollstonecraft, M., *Vindication of the Rights of Women,* (London, J. Johnson, 1796), p. 81.

In that regard, women were, from an early date treated on equal terms to men, in contrast to most occupations.[127] Women played a prominent role from that time onwards, not as administrators, but as participants. The fact that female garden owners enjoyed equal status with their male counterparts is seen from their equal treatment in the gardening press and horticultural shows. The Villa in Drayton Green was a garden which was reviewed at length by Loudon in *The Gardener's Magazine* in 1838. The owner was William Lawrence, who became the Surgeon-General to Queen Victoria, but it was his wife who looked after their 28-acre garden. Loudon wrote: 'The Lawrencian Villa at Drayton Green is unquestionably the most remarkable of its size in the neighbourhood of London, on account of the great variety and beauty which have been created in it, under the direction of Mrs Lawrence FHS'.[128]

Louisa Lawrence had been made a fellow of the Horticultural Society in 1830, and became a keen participant in the horticultural shows, winning 53 prizes by 1838, including the Knightian Silver medal. Her great rival was Mrs Marryatt of Wimbledon House, whose 100 acre garden Loudon also reviewed, noting: 'There are few horticultural exhibitions that have taken place since the [Horticultural] Society commenced this mode of encouraging gardening, in which Mrs Marryatt, or her gardener, Mr Redding, has not obtained a medal'.[129]

Mrs Marryatt and Mrs Lawrence were only two amongst many. Loudon, without a hint of condescension, reviewed or noted the gardens of 47 women in *The Gardener's Magazine*. The practical and scientific interests of women in the field of gardening began to be extensively provided for in the 1830's. Professor Lindley published his *Ladies Botany* in 1833, which became the standard text on

[127] This is evident from Robinson's analysis of the resistance to the employment of women in several occupations in Robinson, J., *Ladies Can't Climb Ladders* (London, Doubleday, 2020).

[128] Loudon, 'Descriptive Notice of the Villa of Mrs Lawrence, at Drayton Green', *GM,* n.s. v. 4 (1838), p. 307-8.

[129] Loudon, 'Designs for Country Mansions - Wimbledon House, Surrey, the Property of Mrs Marryatt', *The Suburban Gardener and Villa Companion* (London, Longman, Orme, Brown, Green and Longmans, 1838), p. 629-30.

botany for both sexes. Loudon's manual *The Suburban Gardener* was described on the title page as 'more particularly for the use of the ladies'.[130] This was followed in 1840 by Jane Loudon's *Instructions in Gardening for Ladies* which she described as being directed towards the 'scientific' lady who was interested in raising new kinds of flowers, fruits and culinary vegetables. Mrs Loudon encouraged women of all ranks to engage in the physical activities of gardening, as did men of the highest status.

Two courses of lectures in botany for ladies became available in London in the 1830s, the first run by Robert Sweet, a gardener who became an accomplished botanical writer, and the other by a Miss Kent.[131] In 1842 Jane Loudon launched the *Ladies Magazine of Gardening*, the first of its kind [132] and in the same year published *Botany for Ladies.*[133]

Except where a steward was employed, which became increasingly rare, it was the responsibility of the lady of the house to manage the indoor servants and the household expenses.[134] This responsibility extended to the garden and whilst the head gardener was responsible for the staff who worked under him, it was normal for him to report to the lady of the house. There were practical reasons for this. On those landed estates which grew their own fruit, vegetables and flowers, the lady of the house would make the decisions as to what would be grown, and the head gardener would report to her for instructions.

However, the role of women extended much further than the domestic household arrangements, as women were sometimes involved not only in the daily management of gardens, but in their design and

[130] Loudon, *The Suburban Gardener,* title page.

[131] Loudon, 'Domestic Notices – Lessons on Botany', *GM,* v. 6 (1830), p. 487.

[132] Loudon, J., *The Ladies' Magazine of Gardening* (London, William Smith, 1842).

[133] Loudon, J., *Botany for Ladies* (London, J. Murray, 1842).

[134] Vickery, A., *The Gentleman's Daughter: Women's Lives in Georgian England* (New Haven & London, Yale Univ. Press, 1998), p. 160.

development. At Belvoir Castle, Elizabeth, the Duchess of Rutland, took over the entire management of the estate from her husband John Henry and developed the gardens using in part plans which had been proposed by Capability Brown to a previous generation, but had not been executed.

After her death, Mrs Arbuthnot, the mistress of the Duke of Wellington, wrote: 'She will be a most dismal loss to her husband. She managed all his affairs for him; he did nothing himself, and his estates, his houses, his family, everything was under her rule'.[135]

Lady Rutland was exceptional in that she looked after the construction of the house as well as the garden. The usual division of labour was for the husband to be responsible for the house, and the wife for the garden. This was the case even at the developmental stage. At Clouds, the architect Philip Webb took all his instructions relating to the design of the house from Percy Wyndham and those relating to the garden from his wife Madeline, although all the contracts were, by convention, in the husband's name.[136] The garden which Mrs Wyndham designed included a 3-acre kitchen garden, a two-acre orchard, a wild garden and a rosery with 4,500 roses. Her achievements were acknowledged in a review of the garden two decades later: 'The gardens certainly attest, in a remarkable manner, the knowledge and the taste of Mrs Wyndham, by whom they were planned and planted twenty years ago, when her husband purchased Clouds'.[137]

It was a similar story in a review of Longford Castle, owned by the Earl and Countess of Radnor. In the words of their head gardener, S. W. Tucker: 'Lady Radnor appreciates and understands plants so well that

[135] Rutland, E, and Pruden, J., *Belvoir Castle: A Thousand Years of Family Art and Architecture* (London, Frances Lincoln, 2009), p. 13.

[136] Dakers, C., *Clouds: The Biography of a Country House* (New Haven, Yale University Press, 1993), p. 70.

[137] Wilcox, 'Famous Gardeners at Home, no. 237: Henry Brown at The Clouds, Wiltshire', *GL,* v. 10 (1906), p. 167.

she is able to give valuable advice in addition to instructions. Lady Radnor selects the places and chooses the flowers in the spring, and we plant in the autumn'.[138]

It is difficult to discern any reluctance on the part of gardeners to work for a female employee. This is in marked contrast, as will be seen in Chapter 2, to the prejudice shown to female gardeners when they began to join the workforce in the fourth quartile. Indeed, many head gardeners spoke warmly of their employment by women. David Fish was employed by Lady Cullum in 1855 as head gardener at Hardwicke Hall and after more than for twenty years of service wrote 'long since merged the authority of the mistress in the kindness of a friend'.

In the present day gardening remains a very popular leisure activity, with about half of adults participating in gardening.[139] But it is a pleasure which is often enjoyed vicariously, in the form of garden visiting. Kew Gardens is the second most popular paid visitor attraction in the UK, with 1.8m visitors a year.[140] The domestic population makes 25m weekly visits to gardens, parks or rural areas.[141] Gardens, including the fifteen which formerly belonged to cabinet ministers in 1880 and which are now open to view, have become a heritage resource. As such, they require gardeners to maintain them, but they do not need the constant renewal and change demanded by their previous owners as they followed the changing fashions. Nor do they require a highly skilled workforce to maintain them. In 2011 when the Prime Minister disparaged gardeners by grouping them together with street cleaners as unskilled

[138] Wilcox, 'The Gardens at Longford Castle, Salisbury: An Interview with Mr S. W. Tucker', *GL,* v. 10 (1906), p. 101.

[139] Oxford Economics, *The Economic Impact or Ornamental Horticulture and Landscaping in the UK* (Oxford, 2018), p. 22.

[140] Ibid.

[141] Ibid., p. 30.

workers, he was criticised by Alan Titchmarsh, a Vice-President of the RHS, but Titchmarsh conceded that gardeners had few educational opportunities and were very poorly paid, even at the highest level.[142]

One feature of contemporary gardening is that it is still dominated by women. More than 70% of the visitors to the Chelsea and Hampton Court Flower Shows every year are women.[143] Moreover, it is women in the main who are the enthusiastic organisers of the 3,700 private gardens which open to the public every year under the National Gardens Scheme.[144]

[142] Gray, L., 'Chelsea Flower Show 2011: Alan Titchmarsh hits out at Prime Minister', *The Telegraph,* online edition (23 May 2011), https://www.telegraph.co.uk/gardening/chelseaflowershow/8532770/Chelsea-Flower-Show-2011-Alan-Titchmarsh-hits-out-at-Prime-Minister.html [accessed 31 Aug. 2023].

[143] Fox, D., *Understanding Garden Visitors: The Affordances of a Leisure Environment* (Bournemouth University, PhD thesis, 2007), pp. 107-8.

[144] As observed by the author through his involvement in the scheme.

Table 2. The landed estates of the Gladstone and Disraeli Cabinets, 1880

Name	Estate	Year built	In Horticultural Directory 1885	Parks & Gardens Directory 2019	House Listed	Garden Listed	Head Gardener in 1880	Modern use of house/garden	Modern use of kitchen garden
Disraeli Cabinet									
Disraeli, Earl of Beaconsfield - First Lord of the Treasury & Leader of the House of Lords	Hughendon	Late C18, Disraeli considerably extended park from 1847 and remodelled house in 1862	Y	Y	Grade I	Grade II	John Gibbons	NT Garden Open	Fully operational
Lord Cairns - Lord Chancellor	Bolehyde, Wiltshire	C17	N	N	Grade II*	N		Private residence/ NGS garden	Partly operational
Duke of Richmond - Lord President of the Council	Gordon Castle/ Goodwood	Rebuilt 1769	Y	Y	Category A	Category B	John Webster	Private residence, open to public	Ornamental garden
	Goodwood	1600	Y	Y	Grade I	Grade I	Fred Rutland	Private residence open to the public, events	Not found
Duke of Northumberland - Lord Privy Seal	Alnwick Castle	C12, Late C18, 1854-65	Y	Y	Grade I	Grade I	George Harris	Duke of Northumberland/ Open to public	Fully operational
Richard A. Cross - Home Secretary	Red Scar House, Preston	pre-1803	N	N	N	N		Demolished 1939	Now Preston Crematorium
Sir Michael Hicks-Beach - Secretary of State for the Colonies	Williamstrip House, Glos.	Mid-C18	Y	Y	Grade II	N	J. Hendry	Available for private hire/let out as business units	Not found
Sir Stafford Northcote - Chancellor of the Exchequer & Leader of the House of Commons	Pynes House, Devon	1789	Y, 1886 onwards	N	Grade II*	N	George Dingle	Wedding venue	Not found
Sir Frederick Stanley, Earl of Derby - Secretary of State for War	Knowsley, Lancs	C13/1775-6	Y	Y	Grade II*	Grade II	F. Harrison	Weddings/Films/ Safari Park	Turfed over
Marquess of Salisbury - Foreign Secretary	Hatfield House	1611/C17	Y	Y	Grade I	Walls listed Grade II	George Norman	Private residence open to public	Fully operational
Viscount Cranbrook - Secretary of State for India	Great Glemham House, Suffolk		N	N	N	N		Private residence, garden open to select events (painting, etc)	Fully operational
William Henry Smith - First Lord of the Admiralty	Greenlands, Bucks	1810, extended 1853	Y	N	Grade II*	N	Henry Knight	Now college/hotel	No trace
Viscount Sandon - President of the Board of Trade	Sandon Hall, Staffs	1852	Y	Y	Grade II*	N	William Davidson	Wedding venue	No longer in cultivation
Lord John Manners - Postmaster General	Belvoir Castle, Leics	Rebuilt 1801	Y	Y	Grade I	Grade II	William Ingram	Private residence open to the public	Partly operational

Gladstone Cabinet									
Ewart Gladstone - First Lord of the Treasury; Leader of the House of Commons	Hawarden, Flintshire	1749	Y	Y	Grade I	Grade I	John Forsyth	Private residence open to public	Turfed over
Lord Selborne - Lord Chancellor	Blackmoor House, Hampshire	1869, extension 1882	Y	N	Grade II*	N	Robert Lock	Flats	Not found
Earl Spencer - Lord President of the Council	Althorp House, Northamptonshire	161/191	Y	Y	Grade I	Grade II*	Edmund Cole	Private residence open to public	Partly operational
William Harcourt - Home Secretary	Nuneham Park, Oxfordshire	1756	Y	Y	Grade II*	Grade I	Isaac Watson	Global retreat centre	Partly built over, other part not in use
Earl of Kimberley - Secretary of State for the Colonies	Kimberley Hall	1712	Y	Y	Grade II*	N	William Wainwright	Wedding venue, garden open to public	Partial
Earl Granville- Foreign Secretary, Leader of the House of Lords	Titsey Place, Surrey	1775-80, over existing house	Y	Y	Grade II	N	James G. Dean	Private residence	Fully operational
Duke of Argyll - Lord Privy Seal	Inverarary Castle, Argyllshire	1750-1800	Y	Y	Category A	Category B	George Taylor	Private residence open to public	Fully operational
Hugh Childers - Secretary of State for War	Cantley Hall, Yorkshire	1785 improvements	Y	N	Grade II*	N	Samuel Trott	Private residence/ NGS garden	Fully operational
John Bright - Chancellor of the Duchy of Lancaster	One Ash, Lancs	1839	Y	N	N	N	William Thompson	Demolished	Demolished
Earl of Northbrook - First Lord of the Admiralty	Stratton Park, Hampshire	1546/1803-6, new house 1963	Y	Y	New house listed Grade II	Grade II	Edward Gandy	Mostly demolished, 1963	Game rearing purposes
Joseph Chamberlain - President of the Board of Trade	Highbury Hall, Birmingham	1878	Y, 1895	Y	Grade II*	Grade II	Edward Cooper, until 1892; John Deacon, 1898	Plans to restore and open to public	Partly used for garden training for people with special needs
John George Dobson - President of the Local Government Board	Conyboro, Sussex	c1855	N	N	N	N	Edwin Bunney	Used as holiday let	Party demolished, not in use
Marquess of Hartington - Secretary of State for India	Hardwick Hall, Derbyshire	1590-7	Y	Y	Grade I	Walls listed Grade II	Edmond Wilson	NT	Partly operational
William Edward Forster - Chief Secretary for Ireland	Wharfeside, West Yorkshire	1862	Y, 1895	N	N	N	William Mackenzie, 1895	Private residence, not open to the public	Not found

Table 3. Analysis of Estate Owners, 1871

COUNTY	MALE	FEMALE	TOTAL					TOTAL	TOTAL
	ARISTOCRACY	ARISTOCRACY	ARISTOCRACY	GENTLEMEN	CLERGY	MILITARY	FEMALE	ESTATES	FEMALES
BEFORDSHIRE	3	1	4	9	2	1	3	19	*4*
	16%	5%	21%	47%	11%	5%	16%		21%
BERKSHIRE	9	3	12	27	0	3	3	45	*6*
	20%	7%	27%	60%	0%	7%	7%		13%
BUCKINGHAMPSHIRE	15	3	18	18	1	1	1	39	*4*
	38%	8%	46%	46%	3%	3%	3%		10%
CAMBRIDGESHIRE	3	0	3	7	0	0	0	10	0
	30%	0%	30%	70%	0%	0%	0%		0%
CHESHIRE	16	0	16	37	1	3	2	59	2
	27%	0%	27%	63%	2%	5%	3%		3%
CORNWALL	7	3	10	24	3	4	2	43	5
	16%	7%	23%	56%	7%	9%	5%		12%
CUMBERLAND	5	1	6	24	1	0	5	36	6
	14%	3%	17%	67%	3%	0%	14%		17%
DERBYSHIRE	11	1	12	32	0	1	4	49	5
	22%	2%	24%	65%	0%	2%	8%		10%
DEVON	24	3	27	24	2	3	2	58	5
	41%	5%	47%	41%	3%	5%	3%		9%
DORSET	12	0	12	15	0	0	2	29	2
	41%	0%	41%	52%	0%	0%	7%		7%
DURHAM	10	0	12	22	1	2	2	39	2
	26%	0%	31%	56%	3%	5%	5%		5%
ESSEX	7	1	8	32	0	0	6	46	7
	15%	2%	17%	70%	0%	0%	13%		15%
GLOUCESTERSHIRE	13	1	14	17	1	2	2	36	3
	36%	3%	39%	47%	3%	6%	6%		8%
HAMPSHIRE	21	6	27	38	2	3	6	76	12
	28%	8%	36%	50%	3%	4%	8%		16%
HEREFORDSHIRE	6	2	8	15	5	1	2	31	4
	19%	6%	26%	48%	16%	3%	6%		13%
HERTFORDSHIRE	17	2	19	41	3	1	2	66	4
	26%	3%	29%	62%	5%	2%	3%		6%
HUNTINGDONSHIRE	4	0	4	8	1	2	0	15	0
	27%	0%	27%	53%	7%	13%	0%		0%
KENT	28	1	29	42	0	4	3	78	4
	36%	1%	37%	54%	0%	5%	4%		5%
LANCASHIRE	7	1	8	37	2	4	3	54	4
	13%	2%	15%	69%	4%	7%	6%		7%
LEICESTERSHIRE	12	3	15	22	0	1	1	39	4
	31%	8%	38%	56%	0%	3%	3%		10%
LINCOLNSHIRE	14	2	16	20	5	4	2	47	4
	30%	4%	34%	43%	11%	9%	4%		9%
MIDDLESEX	11	4	15	11	1	1	2	30	6
	37%	13%	50%	37%	3%	3%	7%		20%

COUNTY	MALE	FEMALE	TOTAL					TOTAL	TOTAL
	ARISTOCRACY	ARISTOCRACY	ARISTOCRACY	GENTLEMEN	CLERGY	MILITARY	FEMALE	ESTATES	FEMALES
NORFOLK	24	1	25	22	6	2	1	56	2
	43%	2%	45%	39%	11%	4%	2%		4%
NORTHAMPTONSHIRE	18	2	20	18	1	6	0	45	2
	40%	4%	44%	40%	2%	13%	0%		4%
NORTHUMBERLAND	12	1	13	36	4	2	2	57	3
	21%	2%	23%	63%	7%	4%	4%		5%
NOTTINGHAMSHIRE	7	0	7	18	1	0	2	28	2
	25%	0%	25%	64%	4%	0%	7%		7%
OXFORDSHIRE	9	1	10	12	2	1	0	25	1
	36%	4%	40%	48%	8%	4%	0%		4%
RUTLAND	2	0	2	3	0	0	1	6	0
	33%	0%	33%	50%	0%	0%	17%		0%
SHROPSHIRE	12	3	15	23	3	1	4	46	7
	26%	7%	33%	50%	7%	2%	9%		15%
SOMERSET	11	3	14	26	2	2	1	45	4
	24%	7%	31%	58%	4%	4%	2%		9%
STAFFORDSHIRE	23	1	24	24	1	3	2	54	3
	43%	2%	44%	44%	2%	6%	4%		6%
SUFFOLK	20	3	23	19	5	1	1	49	4
	41%	6%	47%	39%	10%	2%	2%		8%
SURREY	20	5	25	43	2	2	6	78	11
	26%	6%	32%	55%	3%	3%	8%		14%
SUSSEX	16	5	21	24	0	2	1	48	6
	33%	10%	44%	50%	0%	4%	2%		13%
WARWICKSHIRE	13	1	14	23	0	2	2	41	3
	32%	2%	34%	56%	0%	5%	5%		7%
WESTMORLAND	6	0	6	10	1	4	1	22	1
	27%	0%	27%	45%	5%	18%	5%		5%
WILTSHIRE	16	1	17	15	0	4	1	37	2
	43%	3%	46%	41%	0%	11%	3%		5%
WORCESTERSHIRE	10	0	10	20	1	0	0	31	0
	32%	0%	32%	65%	3%	0%	0%		0%
YORKSHIRE	47	9	56	76	8	10	9	159	18
	30%	6%	35%	48%	5%	6%	6%		11%
TOTAL	**521**	**74**	**597**	**934**	**68**	**83**	**89**	**1771**	**162**
	87%	12%	34%	53%	4%	5%	5%		9%

Table 4. Analysis of Estate Owners, 1911

COUNTY	MALE	FEMALE	TOTAL					TOTAL	TOTAL	TOTAL
	ARISTOCRACY	ARISTOCRACY	ARISTOCRACY	GENTLEMEN	CLERGY	MILITARY	FEMALE	ESTAB.	ESTATES	FEMALES
BEFORDSHIRE	9	1	10	22	0	3	6	1	42	*7*
	21%	2%	24%	52%	0%	7%	14%	2%		17%
BERKSHIRE	35	15	50	122	4	24	32	0	232	*47*
	15%	6%	22%	53%	2%	10%	14%	0%		20%
BUCKINGHAMPSHIRE	24	7	31	80	0	13	14	0	138	*21*
	17%	5%	22%	58%	0%	9%	10%	0%		15%
CAMBRIDGESHIRE	4	2	6	26	1	0	4	1	38	6
	11%	5%	16%	68%	3%	0%	11%	3%		16%
CHESHIRE	14	5	19	110	1	14	20	4	168	25
	8%	3%	11%	65%	1%	8%	12%	2%		15%
CORNWALL	10	0	10	52	3	6	10	0	81	10
	12%	0%	12%	64%	4%	7%	12%	0%		12%
CUMBERLAND	7	1	8	44	1	3	13	0	69	14
	10%	1%	12%	64%	1%	4%	19%	0%		20%
DERBYSHIRE	13	1	14	58	1	3	14	0	90	15
	14%	1%	16%	64%	1%	3%	16%	0%		17%
DEVON	28	11	39	72	7	11	25	0	154	36
	18%	7%	25%	47%	5%	7%	16%	0%		23%
DORSET	14	1	15	41	3	12	11	0	82	12
	17%	1%	18%	50%	4%	15%	13%	0%		15%
DURHAM	17	0	17	45	1	2	11	0	76	11
	22%	0%	22%	59%	1%	3%	14%	0%		14%
ESSEX	13	5	18	80	1	11	16	0	126	21
	10%	4%	14%	63%	1%	9%	13%	0%		17%
GLOUCESTERSHIRE	19	2	21	99	2	17	21	2	160	23
	12%	1%	13%	62%	1%	11%	13%	1%		14%
HAMPSHIRE	37	10	47	174	4	43	34		302	44
	12%	3%	16%	58%	1%	14%	11%	0%		15%
HEREFORDSHIRE	7	1	8	48	2	11	8		77	9
	9%	1%	10%	62%	3%	14%	10%	0%		12%
HERTFORDSHIRE	21	4	25	149	4	7	19		204	23
	10%	2%	12%	73%	2%	3%	9%	0%		11%
HUNTINGDONSHIRE	4	4	8	10	0	3	0		21	4
	19%	19%	38%	48%	0%	14%	0%	0%		19%
KENT	37	8	45	193	6	22	45	1	312	53
	12%	3%	14%	62%	2%	7%	14%	0%		17%
LANCASHIRE	18	2	20	152	0	14	31	9	226	33
	8%	1%	9%	67%	0%	6%	14%	4%		15%
LEICESTERSHIRE	18	3	21	50	0	11	8	0	90	11
	20%	3%	23%	56%	0%	12%	9%	0%		12%

COUNTY	MALE	FEMALE	TOTAL					TOTAL	TOTAL	TOTAL
	ARISTOCRACY	ARISTOCRACY	ARISTOCRACY	GENTLEMEN	CLERGY	MILITARY	FEMALE	ESTAB.	ESTATES	FEMALES
LINCOLNSHIRE	17	4	21	43	2	10	10	0	86	14
	20%	5%	24%	50%	2%	12%	12%	0%		16%
MIDDLESEX	16	2	18	72	4	6	15	0	115	17
	14%	2%	16%	63%	3%	5%	13%	0%		15%
MONMOUTHSHIRE	7	1	8	28	0	5	2	0	43	3
	16%	2%	19%	65%	0%	12%	5%	0%		7%
NORFOLK	31	4	35	97	3	13	17	0	165	21
	19%	2%	21%	59%	2%	8%	10%	0%		13%
NORTHAMPTONSHIRE	20	6	26	48	3	8	10	0	95	16
	21%	6%	27%	51%	3%	8%	11%	0%		17%
NORTHUMBERLAND	20	2	22	47	2	10	18	1	100	20
	20%	2%	22%	47%	2%	10%	18%	1%		20%
NOTTINGHAMSHIRE	15	2	17	52	2	9	8	0	88	10
	17%	2%	19%	59%	2%	10%	9%	0%		11%
OXFORDSHIRE	18	1	19	58	1	8	10	0	96	11
	19%	1%	20%	60%	1%	8%	10%	0%		11%
RUTLAND	7	2	9	7	0	5	1	0	22	3
	32%	9%	41%	32%	0%	23%	5%	0%		14%
SHROPSHIRE	18	5	23	52	2	14	10	0	101	15
	18%	5%	23%	51%	2%	14%	10%	0%		15%
SOMERSET	18	5	23	64	6	14	15	0	122	20
	15%	4%	19%	52%	5%	11%	12%	0%		16%
STAFFORDSHIRE	26	3	29	78	2	12	11	0	132	14
	20%	2%	22%	59%	2%	9%	8%	0%		11%
SUFFOLK	27	2	29	58	1	19	8	0	115	10
	23%	2%	25%	50%	1%	17%	7%	0%		9%
SURREY	39	24	63	296	11	24	76	0	470	100
	8%	5%	13%	63%	2%	5%	16%	0%		21%
SUSSEX	31	6	37	172	2	22	26	1	260	32
	12%	2%	14%	66%	1%	8%	10%	0%		12%
WARWICKSHIRE	17	5	22	76	1	7	10	0	116	15
	15%	4%	19%	66%	1%	6%	9%	0%		13%
WESTMORLAND	6	1	7	18	1	4	6	0	36	7
	17%	3%	19%	50%	3%	11%	17%	0%		19%
WILTSHIRE	17	5	22	58	1	18	10	0	109	15
	16%	5%	20%	53%	1%	17%	9%	0%		14%
WORCESTERSHIRE	14	2	16	66	6	5	13	3	109	15
	13%	2%	15%	61%	6%	5%	12%	3%		14%
YORKSHIRE	57	13	70	240	5	31	45	8	399	58
	14%	3%	18%	60%	1%	8%	11%	2%		15%
TOTAL	**770**	**178**	**948**	**3257**	**96**	**474**	**663**	**31**	**5467**	**841**
	81%	19%	17%	60%	2%	9%	12%	4%		15%

Chapter 2 The Development of Human Capital

> The beginning, the middle and the end of all that has reference to the *beau ideal* of a perfect society is individual education, high, equal, universal.
>
> —John Claudius Loudon[145]

2.1 Introduction

In the first quartile, the education of gardeners was not highly valued; indeed, basic literacy was not a requirement even for a head gardener in a prestigious position. It was considered that gardening was a practical art whose techniques were acquired in the workplace. Thomas Andrew Knight, when President of the London Horticultural Society, observed in 1820 that his head gardener at Downton Castle was 'an extremely simple labourer'…'who knew neither a letter or a figure' but was able to grow pineapples to perfection.[146] At that time Knight was in the process of carrying out a number of scientific experiments on fruit culture, leading Professor John Lindley to observe in 1824 that 'nine-tenths of the most important discoveries that have been made in modern horticulture… are due to [his] botanical knowledge'.[147] Even at this exalted level, Knight was nevertheless able to observe that his gardener knew how to manage the plants as well as he did and he considered that within a month he could teach any moderately intelligent and attentive labourer to do the same.[148]

Gardeners, as well as employers, were dismissive of the need for gardeners to be educated. A working head gardener, James Housman, wrote in 1828 that 'many gardeners show a determined opposition to all their fellows who read and write on their profession'. He said some had abused him for even recommending that they read *The Gardener's Magazine* or the

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[145] Loudon, 'Foreign Notices: North America', *GM*, v. 6 (1830), p. 324.

[146] Knight, T.A., 'Upon the Culture of the Pine Apple, without Bark, or other Hot-bed', *Transactions of the Horticultural Society of London*, v. 4 (1822), p. 77.

[147] Stearn, W., *John Lindley 1799-1865, Gardener, Botanist and Pioneer Orchidologist* (London, Antique Collectors Club, 1999), p. 85.

[148] Loudon, 'Retrospective Criticism', *GM,* v. 5 (1829), pp. 366-7.

Encyclopaedia of Gardening.[149] The head gardener at Brixton Villa writing under the pseudonym ‘Superficial’ observed that on recommending ‘Lawrence on Gardening’ to a man who had been a head gardener for 50 years he received the reply 'Books! What can I learn from books? What can they teach me more than I already know?'[150]

These attitudes persisted in a wider context where the concept that the education of the labouring classes was a good idea was by no means universally accepted. It was widely believed in the first quartile and for much of the second that education would be against the interests of the labouring classes and detrimental to society as a whole. The work of the Society for the Diffusion of Useful Knowledge was attacked on the basis that 'the common people will cease to work if you teach them to read or to think or to take a delight in learning; that learning will puff them up and they will no longer give rank and property their due respect'[151] When Dr George Birkbeck founded the London Mechanics’ Institute in 1823, with the support of Loudon’s mentor and friend, Jeremy Bentham, he was accused of ‘scattering the seeds of evil’.[152] The prospectus for a new ‘School of Industry’ in Potton, Bedfordshire in 1830 set out the objections: 'It has been alleged, and, perhaps, not without reason, that the present system of popular education has tended to unfit the poor for those situations in which they have to move, making them aspire to preferment which they can never reach; the consequence of which has been discontent, idleness, and often, vice'.[153]

[149] Housman, J., 'Reading Necessary and Advantageous to Gardeners', *GM*, v. 4 (1828), p. 463.

[150] Superficial, 'Garden Libraries', *GM*, v. 6 (1830), p. 610.

[151] 'Review of Outline of General History, Part I: Published under the Superintendence of the Society for the Diffusion of Useful Knowledge', *Edinburgh Review,* v. 48 (1828), pp. 258-9.

[152] ‘History of Birkbeck’, https://www.bbk.ac.uk/about-us/history [accessed 20 Jan 2024].

[153] Loudon, 'A School of Industry and an Infant School', *GM*, v. 6 (1830), p. 488.

Loudon's wife Jane expressed the fears of those who opposed universal education in her 1828 satirical novel *The Mummy*, which was set in the 22nd century envisaging a time when education was available to all, but the hierarchical structure of 19th-century society remained:

> The consequences, [of universal education] may be readily conceived. It was impossible for those to study deeply who had to labour for their daily bread; and not having time to make themselves masters of any given subject, they learned only enough of all to render them disputatious and discontented…. Conceit inevitably leads to rebellion. The natural consequence of the mob thinking themselves as wise as their rulers, was that they took the first convenient opportunity that offered, to jostle these aforesaid rulers from their seats…. 'We are free' said they; 'we acknowledge no laws but those of nature; and of those we are as competent to judge as our would-be masters. In what are they superior to ourselves? Nature has been as bountiful to us as to them, and we have had the same advantages of education. Why then should we toil to give them ease? Why should we be debarred from mental enjoyments and condemned to manual labour?[154]

It was against this background of pervasive doubts about the efficacy of the education of the labouring classes that Loudon began a campaign calling for the education of gardeners, in which he argued the general principles as well as the specifics as they applied to gardeners. In 1828 Loudon embarked on a fact-finding tour of Germany and France, to study the state of education in those countries and most specifically the states of Bavaria, Wurtemburg and Baden, where systems for the compulsory education of children were in place. On his return, he wrote a pamphlet calling for universal compulsory education from infancy to the age of puberty, which was published first in Paris and then in London, with extracts appearing in *The Gardener's Magazine*.[155] Loudon noted that the 'demands of the age' had produced three very similar proposals for systems of non-sectarian education from Pestallozi, Lancaster and Bell at the same time, unknown to each other, in different parts of the world.

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[154] Loudon, J., *The Mummy,* v. 1 (London, H. Colburn, 1828), p. 4.

[155] Loudon, *Des Establissemens pour l'Education Publique en Bavarie dans le Wurtenburg et a Bade &c.* (Paris and Treutell and Wurtz, 1829).

Loudon proposed the principle that education should be available to all, rich and poor, male and female. He wrote:

> Supposing education to be a fluid, we would immerse every male and female child in it, not only for the same length of time, but in order to let the rich become acquainted with the poor, and the poor with the rich in the same vessel: in short, we would wish…. to keep the children of the rich and the poor on the same level in the public school in all respects. The subjects to be taught would be reading, writing, arithmetic, geography, anatomy, physiology, vegetable culture, the care of livestock, natural philosophy, political economy, morals and natural theology, with a knowledge of French and the rudiments of Latin.[156]

One of Loudon's findings from his tour was that in Bavaria all schools had two or three acres of land used to teach the boys vegetable culture and the girls flower growing. He proposed that each school should have a garden of not less than one acre in which there would be examples of twelve of the Linnean classes and six of each of the leading subdivisions of the Jussieuean classes. Every school would have a Master and a Mistress, each with their own house and each with an annual salary of £200 (£187,000).[157] Thus there would be equality between the sexes both in terms of the education of the boys and girls and the employment terms of the headteachers.

An article by James Stuart Menteath supported Loudon's proposal for gardens in every school. He suggested the compulsory teaching of the skills of kitchen-gardening and observed that a schoolmaster in Scotland was required by law to have a garden of at least a rood or quarter of an acre.[158] However, Loudon's proposals were not universally welcomed, particularly amongst the clergy. A vicar from Lancaster wrote that he hoped to convince him

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[156] Loudon, 'Parochial Institutions', *GM,* v. 5, (1829) p. 695.

[157] Loudon, 'Outline of a Plan for a National Education Establishment GM , suitable for Children of all Ranks' *GM*, v. 5 (1829), pp. 692-702.

[158] Menteath, J.S., 'On the Means of Inspiring a Taste for gardening among the labouring Classes of Scotland', *GM,* v. 8 (1832), p. 532.

of the folly of this 'mad scheme' by the use of the written word, hoping that 'they may render blows unnecessary'. First, he said, it would be an unfair burden on parish rates. He added:

> But it is unjust in another point of view, in as much as it would deprive sin of its sorrow, which was affixed to it in mercy by that Voice, which no less mercifully spake midst lightnings and thunder. Poverty is a most salutary check upon the evil which produces it; and it would be no mercy, but cruelty, to attempt to remove that check until it shall have prepared man to act with prudence from higher motives than the inconvenience of beggary, for we should thereby increase the evil.[159]

Loudon's campaign for educational reform was addressed to society as a whole. Still, it was for the specific benefit of aspiring gardeners in proposing a sound basis of general education and including in the curriculum subjects such as vegetable culture, which would provide a grounding for their future career. The provision of a substantial garden, even in urban schools, would allow some practical training. *The Gardener's Magazine*, founded by Loudon in 1826, was an effective medium for his campaign; as the first general-purpose magazine on gardening it had an effective monopoly in its early years, with a wide readership amongst opinion formers and an impressive circulation of 4,000.[160]

Coterminous with this, Loudon put forward proposals for the self-education of gardeners. In the first quartile, the gardener who wanted to learn the science of gardening had no access to any formal teaching. Botany was not taught in primary schools, and there were no specialist gardening academies or night schools. His only resource was learning whilst working and self-education through books. This fact was recognised in the first manual for the self-education of gardeners, which formed part of Loudon's *Encyclopaedia of Gardening*, first published in 1822. This 14,000-word section, entitled 'On the Education of Gardeners',

[159] Lancaster Clergyman, 'Treatment of Mr. Knight: The High and Equal Education Principle', *GM*, v. 6 (1830), p. 218.

[160] Dewis, S., *The Loudons and the Gardening Press* (Farnham, Surrey, Ashgate, 2014), p. 37.

began by giving a broad definition of education, which included social as well as human capital:

> By education is generally understood that portion of knowledge which is obtained at schools; but we shall here use the term in a somewhat more extended sense, and consider it as the means which may be employed to render man competent for performing the part which he undertakes to perform in life with increased satisfaction to himself and others. Education may thus be considered as extending to everything which operates on the body or mind, from the earliest period of our existence to the final extinction of life. With this object in view, we shall consider in succession the professional, intellectual, moral, religious, physical, and economical education of gardeners…[161]

Loudon asserted that education was within reach of every gardener, however rudimentary his education might have been:

> Let no young gardener…who reads this, even if he can but barely read, imagine that he may not become eminent in any of the pursuits of life or departments of knowledge, much less in that of his profession: let him never lose sight of this principle, — that to desire and apply is to attain, and that the attainment will be in proportion to the application.
>
> By the professional education of gardeners, we mean that direction of their faculties by which they will best acquire the science and manual operations of gardening: and we shall suppose the young man to be instructed, to have no other scholastic education than some knowledge of arithmetic, and the first problems of geometry and land-surveying.[162]

Loudon went on to suggest a regimen of self-learning in which he envisaged a ten-year programme, beginning at the time when the gardener started an apprenticeship at the age of about 15 and continuing until he would be ready to become a head gardener, at the age of 25. He assumed an average working day, excluding meal breaks, of eight hours per day (six in winter, ten in summer), which would allow eight hours for rest and eight for refreshment and study. He recommended that the gardener should rise at 5 am, which would give him three hours in winter and one hour in summer to study before he started work. He suggested

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[161] Loudon, 'Of the Education of Gardeners', *Encylopaedia of Gardening* (London, Longman, Hurst, Rees, Orme, and Brown, 1822) p. 1322.

[162] Ibid., p. 1324.

that this time should be spent on the study of languages, starting with Latin and English grammar, and when Latin had been mastered, moving to Greek. The study of French would begin in the fourth year, followed by German, Dutch and Italian, with one morning devoted to each. After breakfast and dinner, the spare time would be dedicated to botany; the evenings to architecture, arithmetic, mensuration and land-surveying, drawing, mechanics, and experimental philosophy. Any additional spare time should be devoted to practising the art of conversation, and to personal accomplishments such as dancing, fencing, boxing, wrestling, the infantry manual exercises, whist, backgammon, chess, the flute, and the violin.[163] The programme which Loudon proposed was clearly much more than was required to master the arts of gardening- it was designed to make the gardener fit to be a member of polite society.

Loudon added a section on morals in which he asserted that the same respect should be given to all beliefs- whether Christian, Chinese, Mohammedan or Atheist. He averred that the reason men behave morally was not the fear of eternal damnation but the dread of losing reputation, echoing the argument put forward by Adam Smith in *The Theory of Moral Sentiments*. Loudon's theory of education was secular, which in his view had two advantages- first because it gave equal educational opportunities to all, regardless of their religion, secondly because it was a counter to Sabbatarianism and the observance of Sunday as a day of rest and of worship. Expediency required young gardeners to work on a Sunday, not least because hot-houses needed continuous attention to regulate their temperatures; and Loudon's educational programme required twelve hours of study every Sunday. However, he went further than merely advocating Lancasterian principles of secular education. In a passage in 'On the Education of Gardeners' in which he advised on the development of

[163] Loudon, 'Of the Education of Gardeners', p. 1329

memory, he made a series of humorous but mocking references to religious figures.[164] In one such, on how to memorise difficult words by creating a vivid image in the mind he wrote:

> If a highlander tells me his name is Macpherson, I immediately interpret it as mac parson- son of a parson- son of a Catholic priest and a Highland maid; and I figure to myself his first parents of a former age, a Franciscan friar, 'an oiley man of God' and a bare-legged brawny wench. I see the monk receive her into his cell, take her confession, lead her from the confessional to his couch, there to kneel and join him in prayer: the straying hands of the holy father surprise the penitent, but he consoles her: 'Let us forget ourselves, daughter, 'all flesh is grass' but God is everything, and everything is permitted to his servant St Francis- let our bodies take their course'- Nine months hence, and the sun rises on the plantlet of the tree of Macpherson.[165]

Loudon had crossed a line here, as was recognised by his publishers, Longmans, who removed the offending passages after the first 500 copies of a 2,500 run had been printed. In the same year, as A. J. Lustig has observed, Jeremy Bentham, to whom Loudon had carried letters of introduction when he first came to London, and who became his friend and mentor, had published 'Analysis of the Influence of Natural Religion on the Temporal Happiness of Mankind' under a pseudonym for fear of being prosecuted for 'disseminating heretical opinions'[166] Loudon had clearly run the risk of prosecution. Although no steps were taken against him then, these passages were to have serious repercussions later.

The *Encyclopaedia of Gardening*, which may have been the first specialist encyclopaedia in English[167], sold well, running to five editions. It became the standard work of reference. Loudon thereafter had the opportunity to publicise his radical views through his magazines

[164] I am indebted to Sarah Dewis, *The Loudons and the Gardening Press* for several of the insights in this section.

[165] Loudon, 'Of the Education of Gardeners', p. 1326.

[166] Lustig, A.J., *The Creation and Uses of Horticulture in Britain and France in the Nineteenth Century* (University of California, Berkeley, DPhil dissertation, 1997), pp. 101 & 151 & Dewis, p. 18.

[167] The writer has been unable to find an earlier specialist encyclopaedia.

and pamphlets. He was outspoken on many of the day's issues; he had said that all he strove for were 'free trade, parliamentary reform and a national system of education'.[168]

This led to him being attacked vigorously by those who took an opposing view, of which the most notable instance was an article in *Blackwood's Edinburgh Magazine*. *Blackwoods* was a Tory monthly set up in opposition to the Whig *Edinburgh Review*. The article, published in May 1834, entitled 'Loudon on the Education of Gardeners' was written by Christopher North, a pseudonym for John Wilson, the Professor of Moral Philosophy and Political Economy at Edinburgh University. North, who described himself as 'something of a botanist' was the owner of Elleray, at Windermere, one of the best-known gardens in the Lake District, which had been reviewed favourably by Loudon in *The Gardener's Magazine*. North recalled that he had visited hundreds of gardeners in their own houses, remarking that 'no other class of men are so well off for wives', 'for gardeners intermarry-let us tell you, not infrequently with maidens of the middle ranks- the daughters of statesmen (cock lairds), tradesmen well to do and clergymen'. But he objected strongly to the proposals for the education of gardeners, saying 'in spite of the much-vaunted march of intellect during the last dozen years, and all the efforts of the Educationalists to enlighten the labouring classes, they seem stone-blind to the plainest and simplest truths, and hurrying headlong on the road to ruin'. North's 10,000 word attack was vituperative. He called Loudon 'desperately wicked' and a 'wretched ignoramus'.[169] He was particularly upset by Loudon's suggestion that gardeners should treat all religions and atheists with equal respect and should study for 12 hours on a Sunday 'unless [their] religion forbid'.

[168] Loudon, 'Retrospective Criticism: Education as a Check to Population', *GM*, v. 6 (1830), p. 609.

[169] North, C., 'Loudon on the Education of Gardeners', *Blackwood's Edinburgh Magazine*, v. 35 (1834), pp. 706-7.

North's article was reprinted in part in the *Magazine of Botany and Gardening* by James Rennie, the Professor of Natural History at King's College London, and an Anglican cleric, who commented:

> We have often wondered that nobody has hitherto taken the trouble to unmask the… vulgar filthy language, and utter ignorance and presumption which issue from the book manufactory of Bayswater and pollute the taste and unhinge the principles, moral and political of gardeners and others, who unthinkingly drink their poison.[170]

These attacks were disingenuous in that they were based largely on the passages which had been excised from the original edition of the *Encyclopaedia of Gardening* twelve years before, but their effect may be judged from the fact that in the next edition of the Encyclopaedia, published three months after the article appeared, the entry on education had been cut to less than a page.[171] In the same year, Rennie lost both his editorship and his Professorship.[172]

Although Loudon had been forced to temper his views on education, they nevertheless soon became widely accepted. In 1836 a committee of the House of Commons recommended a national system of universal education[173] and another the establishment of libraries and mechanics' institutes, and also botanic gardens, for the benefit of the working classes.[174]

In 1840 Loudon was able to conclude that he had won the intellectual battle for the idea of universal education. He wrote:

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[170] Rennie, J., 'Mr. Conductor Loudon on the Education of Gardeners', *Magazine of Botany and Gardening*, v. 2 (1834), p. 81.

[171] Lustig, p. 31.

[172] Ibid., p. 9.

[173] Davitt, A., *Origin and Progress of the National System of Education: its Real Principles, and Special Adaptability to the Circumstances of a Mixed Community* (Melbourne, Wilson, Mackinnon & Fairfax, 1856), p. 16.

[174] Loudon, 'Summary View of the Progress of Gardening, and of Rural Improvement Generally, during 1836', *GM,* n.s. v. 2 (1836), p. 615.

> This subject, which ten years ago we were found fault with for mentioning at all in *The Gardener's Magazine*, is now making steady progress, and those who were formerly its greatest enemies are beginning to become its friends; finding from experience that persons without this inestimable blessing are liable to be blown about by 'every wind of doctrine,' and thus to become the most dangerous enemies of civilised society. The idea, that, if common labourers were educated to a higher degree than they are at present, there would be 'no such thing as getting servants,' is a bugbear that is vanishing like the idea of ghosts and spectres.[175]

2.2 Schooling

In the first and second quartiles schooling was in the main provided by foundations, charitable institutions. and dame schools. Over England as a whole, boys received, on average, 2½ years of schooling in 1800, a figure which did not rise before 1840.[176] The male literacy rate in England has been calculated at 65% in 1800 and 66% in 1840.[177] In Scotland, from where so many gardeners came, male literacy rates were higher, (88% in 1800[178]). Scotland had the most extensive elementary educational system in Europe at the start of the long C19th[179] and the teaching tended to be good, covering a broad range of subjects, including in many cases, maths and Latin, important for a gardener.[180] John Smith, who was born in Aberdour in 1798, describes how he went to the parish school in Pittenweem when he was eight:

> [Where] I went through the usual course of education then commonly taught in the parish schools of Scotland the fee for reading, writing, and the simple rules of arithmetic being only 3s per quarter; and by paying the small extra fees, I went through the courses of geometry, mensuration, land surveying, book-keeping, and plain trigonometry, my whole school education not costing more than £5, I had

[175] Loudon, 'A Summary View of the Progress of Gardening and of Rural Improvement Generally, in Great Britain, during the Year 1840', *GM,* n.s. v. 6 (1840), p. 630.

[176] Humphries, J., *Childhood and Child Labour in the British Industrial Revolution* (Cambridge, Cambridge University Press, 2010), pp. 314-5.

[177] Ibid., p. 308.

[178] Anderson, R.D., *Education and the Scottish People, 1750-1918* (Oxford, Clarendon, 1995), p. 15.

[179] Stone, L., 'Literacy and Education in England, 1640–1900', *Past and Present*, v. 42 (1969), p. 135.

[180] Ibid.

> begun Latin, but my father's apprentice having run away before his time was completed, it was agreed that I should take his place.[181]

David Fish had attended a parochial school in Scone, Perthshire, where his curriculum had included 'mensuration, land surveying, mathematics and the ability to read Latin'.[182] His brother Robert was taught Greek at the same school. It is a feature of gardeners' memoirs that those educated in Scotland emphasised the quality of the teaching and the curriculum. It was a different matter with schools in England. William Cross went to a 'National School' in Berkshire which, he said:

> [Was] poor indeed…there was no grammar, geography, history; in short, nothing taught but the common rules of arithmetic, reading and writing. Our only two books were the New Testament and the five books of Moses, excepting a 'Dialogue' between William Walker and Thomas Brown on the subject of getting a boy christened; the one asking the favour of the other to stand godfather.[183]

In Dublin, David Pressley had a good experience. He recalled that the pupils were well taught in arithmetic, spelling and writing: 'A year previous to my leaving school,' he wrote, 'I joined a Latin class, in which, I believe, I made fair progress for the time; and I have since found it advantageous in the spelling of botanical names'.[184]

The cost of schooling was an important factor. It varied, but there was nearly always a cost. Moreover, in the rural households from which most gardeners came, there was an opportunity cost which arose from the fact that if a child was at school, he was not available to work. It was commonplace for the sons of gardeners and farm labourers to work as children. James Barnes, whose father was a gardener, was employed from the age of five in weeding walks and seed-beds and was fully employed in the garden at Eashing House,

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[181] 'John Smith: Ex-Curator of the Royal Botanic Gardens, Kew', *GC,* n.s. v. 5 (1876) p. 363.

[182] 'British Gardeners – XVIII: David T. Fish', p. 655.

[183] 'British Gardeners - William J. Cross', *GC,* n.s. v. 8 (1877), p. 301.

[184] 'British Gardeners XXXIX - D. Pressly', *GC,* n.s. v. 5 (1876), p. 757.

where his father worked, from the age of eight.[185] To the direct and opportunity costs of education should be added the fact that in the days before the mass publication of newspapers and periodicals and the provision of libraries, books were an expensive luxury. Moreover, if a rural worker was required to work during daylight hours, there was the additional expense of candles to read by. A tallow candle, with its unpleasant fumes, cannot have been a pleasant source of light, which would have been a further detriment to reading. All these factors acted as a brake on the rise of literacy. The provision of schooling was also held back by a widespread belief that the education of the working class was to be discouraged, as became evident in the reaction to the first proposals for the education of gardeners, discussed above.

Many children were required to work during the summer so that their schooling was sometimes limited to the wintertime. This is illustrated by the biographies of Alexander Somerville and John Clare. Somerville was taught to read by his mother before he went to school at the age of seven in 1816. Although a parish school was available, he attended a school two miles away, in Birnyknows which was cheaper and was run by a man who was lame and unable to do manual work but had a good reputation as a teacher. Birnyknows consisted of a series of about 20 'miserable thatched sheds', of which the school was the most decrepit, set in a square which was filled with pig-styes, dungheaps, stagnant pools of water and piles of firewood. After two winters at the Birnyknows school, he was removed, because he was being bullied, to the parish school at Oldhamstocks, where he stayed for two winters. He attended school for four years in total, in each case for three months of the year, so that in all he had 12 months of schooling spread over the four years.[186] Like Somerville, Clare only went to school in the winter months. According to his publishers, he attended

[185] 'British Gardeners VI - James Barnes', n.s. v. 2 (1874), p. 655.

[186] Somerville, A., *The Autobiography of a Working Man* (London, C. Gilpin, 1848), p. 27.

school for only three years and so the total amount of schooling he received may have been even less than Somerville's. Donald Beaton, who was to become the distinguished head gardener at Shrubland Park, was born into a Gaelic speaking family in 1802 at Strathconon in Ross-shire. His father had an itinerant job working for a cattle dealer, which meant that his school attendance was intermittent. He instead, as a child, learnt 'how to tan leather and make fishing lines, to dye worsted yarns with lichens… and to clean rifles and shoot deer'.[187] His mother taught him to read and write, but she died when he was seven, after which his father employed a tutor from time to time to teach him and his four siblings. He attended Inverness Academy for two sessions, hoping to apply for a bursary to King's College, Aberdeen, but he failed, partly because his English was far from perfect. He learned Latin before he could speak English. Beaton then obtained a job as a garden boy at Beaufort Castle, for Lord Lovat, his father's employer.

The education received by these gardeners represents the experiences of their generation; almost all of those who went on to become head gardeners received schooling which was limited, often broken, and almost invariably ended at the age of 14. Of the 412 gardeners about whom educational details are known only 10 went to grammar school, and none went to university (apart from Archibald Menzies who began working as a gardener, took a degree in medicine and became a Surgeon).[188] Formal schooling was by no means the whole of the picture, in some cases, a small part of it. The role of the mother must not be underestimated. William Roscoe recalled his mother providing his early education. 'The world, as Pestalozzi has shown, is not yet aware how much of the character of every man depends upon his mother', observed Loudon, in reviewing Roscoe's life.[189] Sometimes

[187] Beaton, D., 'My Autobiography', *Cottage Gardener,* v. 13 (185), p. 153.

[188] Baigent, E., 'Menzies, Archibald (1754–1842)', *ODNB* (Oxford University Press, 2009), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/18564, [accessed 28 Nov 2014].

[189] Loudon, 'Miscellaneous Intelligence: The Late Mr. Roscoe, Originally a Gardener', *GM*, n.s. v. 6 (1840), p. 220.

literacy came from a surprising source. Timothy Claxton related the story of Edmund Stone, the son of the gardener to the Duke of Argyle, and later an eminent mathematician and Fellow of the Royal Society. When he was 17, working in the garden, the Duke saw a copy of Newton's Principia on the grass and assuming it was his, asked for it to be returned to the library. When Stone claimed it as his, the Duke was amazed to discover that he understood geometry, Latin and Newton. When questioned, Stone replied that 'A servant taught me ten years since to read'.[190]

2.3 Apprenticeships

The recognised route for a boy who wished to train as a gardener upon leaving school was to become apprenticed to a master gardener.[191] The usual arrangement was that the master would agree to give training together with board and lodging in return for work. Loudon noted that the standard period of apprenticeship was three years, but this would vary, with the younger boys tending to be apprenticed for longer and for apprenticeships to end by the age of majority (21)[192]. Table 5 analyses the biographies of 177 gardeners, where information regarding apprenticeships is disclosed, giving the age of commencement and the years of duration. The median age of commencement was 14.5 years, within a range of between 10 and 22 (although the ten-year-old and the 22-year-old were both outliers, without whom the youngest age was 12 and the oldest, 18). The average length of apprenticeship was 3.3 years, with only 4 having an apprenticeship of 7 years, and none for six years. These figures show the great flexibility in the institution, which was reinforced by the fact that there were no legal or guild constraints. There had never been a legal

[190] Claxton, T., *Hints to Mechanics on Self-Education and Mutual Instruction* (London, Taylor and Walton, 1839), p. 6-7.

[191] Loudon, *Encyclopaedia of Gardening,* p. 1040.

[192] Ibid.

requirement for gardeners to fulfil an apprenticeship- indeed one of the arguments put forward in the debate which led to the repeal of the Statute of Artificers in 1813 (after which no-one could be prosecuted for engaging in a trade without having served as an apprentice in it) was the absurdity that gardeners were not affected by the act as they were deemed to be unskilled, whereas a pippin monger was skilled.[193] This informality might be contrasted with trade crafts, where the standard length of service was from 5 to 7 years, and the averages served varied from 4.25 years to 7.5;[194] (Weavers and bakers 4.25 years, shoemakers 5.17; carpenters 5.41; printers 6.12; engineers 6.25; saddlers and harness makers 7.5). 9.6 % of gardeners were apprenticed to their fathers, a figure which appears low when between 18% and 29% were the sons of gardeners (See Chapter 6). An explanation for the difference is that many boys will have been informally trained by their fathers, with no need for a formal apprenticeship. However, the figure of 9.6% is remarkably similar to the 9% of craftspeople who were apprenticed to their own fathers.[195]

[193] Dunlop, O.J., and Denman, R.D., *English Apprenticeship & Child Labour: A History* (London, T.F. Unwin, 1912), p. 247.

[194] Humphries, *Childhood and Child Labour in the British Industrial Revolution,* p. 268.

[195] Ibid., p. 273.

Observations	177	22% of sample
Under father	9.60%	
Uncle	1.69%	
Grandfather	0.56%	
Ages		
Average	14.5 years	
Distribution	Age	Number of occurrences
	10	1
	11	0
	12	2
	13	9
	14	11
	15	5
	16	16
	17	3
	18	1
	19	0
	20	0
	21	0
	22	1
Length		
Average	3.7 years	
Distribution	Length in Years	Number of occurrences
	1	0
	2	7
	3	30
	4	11
	5	11
	6	0
	7	4

Table 5. Analysis of Apprenticeship Details for 177 Gardeners

An explanation as to why gardening apprenticeships were shorter than in other trades or crafts may be found in the fact that their purpose was purely for training and was not influenced by other factors, which made it necessary to serve a full seven-year apprenticeship. In some towns, the right to engage in any trade or manufacture was limited, before the Municipal Corporations Act of 1834, to freemen of that town, a right which could be obtained by completing a seven-year apprenticeship. Such a right never extended to gardeners. Similarly, in some ancient boroughs, the completion of an apprenticeship conferred the right to a franchise- but again this did not extend to gardening apprenticeships.[196] Thus gardening was free from the external pressures which required an apprenticeship to last for seven years. Gardening was also not affected by the practice,

[196] Dunlop & Denman, p. 273.

carried out in many parishes, of removing pauper children by providing them with apprenticeships in another parish, thereby obtaining settlement rights for the child and preventing them from being a burden on the parish of their birth. To my knowledge there are no records of pauper children being apprenticed to gardeners.

There is a notable absence of records of disputes between apprentice children and their masters. Gardeners or their employers were never reluctant to appeal to magistrates if any dispute arose between them, but whereas there are records of many cases involving craft apprentices relating to issues such as abscondment, there is an almost complete absence of cases involving gardeners, except one relating to an apprenticeship to a florist.

Apprenticeships often carried a premium and a nominal wage would usually be paid to the apprentice. Alexander Galt, of Kew, described a typical apprenticeship, where in the first year a boy would start as a 'crock boy', doing menial jobs in the glasshouses, running errands and making himself generally useful. During this time he would form a general idea of the work which was carried on in the garden. After about a year he would be moved to the flower garden, where he would spend a year, and from there into the vegetable and hardy fruit garden.[197] However, there was no fixed practice, and indeed there seems to have been no discernible difference between the training given to apprentices where a premium was paid and those where there was none.

Loudon stated emphatically: 'No one can ever expect to attain the rank of master-gardener… who has not served an apprenticeship'. Certainly, until at least the fourth quartile apprenticeships were the norm. However, the completion of an apprenticeship, either paid or unpaid, was not a necessary condition of advancement as a gardener. In 1823, when the

[197] Galt, A.S., 'A Gardeners' Education', *GW,* v. 11 (1895), p. 522.

Horticultural Society set up the first ‘Training School for Gardeners’ at Chiswick they stipulated that applicants should have been 'previously educated as gardeners', not that they should have completed an apprenticeship. Otherwise, they only required evidence of literacy in the form of a letter in the applicant’s own hand and the endorsement of a fellow of the society.[198] Kew Gardens, which was the leading training ground following the relative decline of Chiswick, followed a similar policy. In 1898 Kew Gardens had age and height requirements for their trainees and insisted that they should have had five years’ experience in a private garden or nursery including experience in the cultivation of plants under glass.[199] Otherwise, they only required evidence of literacy in the form of a letter written by the applicant, and testimonials from previous employers or practical gardeners. Similarly, when the British Gardeners' Association was formed, with the express purpose of raising standards and creating a barrier to entry, they only required members to be at least 20 years old, to have had (if under 23 years of age) at least five years’ training in private, public or commercial establishments and to be able to produce satisfactory character references. The possession of an apprenticeship indenture was not a requirement.[200] It is also noteworthy that the completion of an apprenticeship did not feature in job advertisements placed by either gardeners or employers.

Nevertheless, the tradition survived as an apprenticeship was an indication of training and there was strong competition to be apprenticed to head gardeners working on large or prestigious estates, who could command the highest premiums. The complaint was sometimes aired that little or no training was given and that the apprentice was given to a foreman to look after. Several leading gardeners, such as Edward Molyneux and Mungo

[198] Davidson, p. 13.

[199] ‘Royal Horticultural Society’, *GC* s. 3, v. 23 (1898), p. 56.

[200] Ibid.

Temple, spoke out against the practice of taking premiums. James Mayne, the head gardener at Bicton may have been reflecting the prevailing view when he observed in 1897: 'I am not an advocate of apprentices'.

In the fourth quartile it became much more common for training to be given to 'garden boys' rather than apprentices, even though the latter had a stronger bond and were unable to leave at a week's notice. A gardener writing under the pseudonym of 'Homocea' wrote 'As far as my experience goes there is practically no difference between the work done by or the training given to the 'apprentice' or the 'garden boy'… I have known gardens where apprentices and garden boys work side by side.[201] This may be the explanation for the fact that the system of paying a premium went into decline in the fourth quartile and seems to have disappeared in Scotland where, according to C Blair, apprentices were paid a 'living wage' and could expect to receive as good a wage as a journeyman in the south of England.[202]

The importance of a formal apprenticeship declined, leading G Beaton to comment in 1888 'I know young men go through a course of gardening who never knew they were serving an apprenticeship and emerged out into life as fully qualified journeymen about the age of 18'.[203] Some of the most prominent gardeners, such as Donald Beaton, started their working lives as garden boys but did not serve an apprenticeship.[204] However, apprenticeships continued to be an important part of the training process and their decline amongst gardeners

[201] Homocea, 'To be or not to be, Apprenticed to Horticulture', *GW,* v. 22 (1905), p. 258.

[202] Blair, C., 'Garden Apprenticeships', *GW,* v. 22 (1905), p. 293.

[203] Beaton, G., 'From Apprentice to Master', *GW,* v. 4 (1888), p. 342.

[204] Waymark, J., 'Beaton, Donald (1802–1863)', *ODNB (*Oxford University Press, May 2009), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/96720, accessed 10 Nov 2014], 'The castle gardeners resented his fast track to the brotherhood of gardeners, since they had had to be apprenticed.'

seems to have been less than in craft trades, where it fell by about 50% during the C19th.[205] Thus apprenticeships, mutable, adaptable and informal, were an intrinsic part of the initial training of young gardeners.

2.4 Self-Learning

Referring to his upbringing at the start of the C19th Alexander Somerville observed: 'When I was a boy, the periodicals which are now so common, cheap, and useful in supplying young minds with information, did not exist. Such books of popular instruction as then existed, and might have been useful for me to read, were out of my reach'.[206] In fact, the resources available at that time to any young person wishing to learn the science of gardening were minimal. Botany was not taught in primary schools, and there were no specialist gardening academies or night schools. The only recourse was learning whilst working and self-education through books. Hence the regimen which Loudon recommended in his treatise on The Education of Gardeners. There is abundant evidence that gardeners took his advice seriously and tried to follow it. David Fish described how he organised an evening's study whilst an apprentice:

> First reading, then writing, composition, and finally drawing. The reason for this order was that reading, being less of a mental effort than writing, sooner led to drowsiness. As soon as that came on the book was exchanged for the pen, copying first in a book extracts, then direct composition, which acted as a powerful stimulant, and drove away sleep. The final remedy was found in drawing, which was done standing, and not till sleep mastered me with compasses in hand were the studies relinquished.[207]

There were reports of illness caused by too much studying, and perhaps a fatality. Alexander Honeyman writes that after reading the advice to gardeners in Loudon's *Encyclopaedia*

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[205] Humphries, *Childhood and Child Labour in the British Industrial Revolution,* p. 260.

[206] Somerville, p. 55.

[207] 'British Gardeners - David T. Fish', p. 655.

regarding the need to study botany, geology and chemistry: 'I studied so intently that the doctor had to be sent for'. He records that in six years he bought 'fully £45 (£29,170) worth of books, mostly gardening, but science generally as well''. He paid for this from a salary of 27s a week, supplemented by some prize money from shows, and journalism. He also had a wife to support, and when he died suddenly aged 34, she was left almost penniless. A subscription from fellow gardeners raised £144 5s 4d (£78,640) for his widow.[208] Under the headline 'Death from over-work by studying' *The Gardener's Magazine* in 1831 reported on the demise of J. Nicholles, the flower-gardener at Great Finborough Hall, Suffolk, believed to be 30 years of age. The journal's correspondent, Mr Turner, wrote: 'I have just finished a note of introduction to you for Mr Nicholles. Poor fellow! He has completely killed himself by intense study by night and hard work by day'.[209]

To overcome the problem of access to reading materials, Loudon called for the provision of libraries in every garden. 'Wherever the master has under him a single hand, whether journeyman gardener, or garden labourer, male or female, in short, wherever there is a toolhouse, there ought to be a library'.[210] He supported his campaign by publishing in each edition of *The Gardener's Magazine* a list of the new libraries which had been formed in response to his call. In 1829 he noted that a benefactor at Kirkaldy, Adam Smith's birthplace, had donated £80,000 (£74.8m) to a charitable foundation for the education of poor children in the area, but argued that because of the gross abuse of such charities in the past, in particular by religious bodies, the government should take control of such money, and use it to provide parochial schools, libraries, museums and gardens.[211]

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[208] 'Mr. Alexander Honeyman', *Journal of Horticulture and Cottage Gardener*, s. 3, v. 8 (1884), p. 150.

[209] Loudon, 'Obituary: J. Nicolles', *GM*, v. 9 (1833), p. 128.

[210] Loudon, 'A Catalogue of Books for a Garden Library', *GM*, v. 2 (1827), p. 111.

[211] Loudon, 'Education in Fifeshire', *GM*, v. 5, (1829) p. 662.

In 1839 *The Gardener's Magazine* reviewed *Hints to Mechanics, on Self-Education and Mutual Instruction,* by Timothy Claxton, who founded the Mechanics' Institute in 1817.[212] Claxton observed that when he first arrived in London in 1810, there were no family libraries, no lecture rooms, not so much as a coffee house which would be suitable for someone of his class. Nor were there any penny magazines or popular newspapers. A generation later, he wrote, there were a thousand coffee houses in London, and two thousand eating houses in all of which penny magazines and newspapers were available free of charge to their customers. One printer, he noted, said in evidence to the House of Commons that he published 360,000 copies of his magazine every Saturday morning.[213] With the enormous rise in print material targeting the working classes, there was an incentive towards literacy; for those who could already read the opportunities for self education had never been greater.

In addition to the training received from the head gardener and foremen, apprentices and garden boys had the opportunity of what was termed a 'Bothy education'. The Bothy was the shared accommodation provided for unmarried gardeners, usually in or near to the kitchen garden. In the case of Alexander Ingram at Haddo he, and a dozen or so other boys in the bothy, had the use of a collection of gardening books and periodicals, paid for by a monthly subscription of a few pence from each of the men in the bothy. Any shortfall was made up by the Earl, their employer. In the winter months, they were given evening classes in the garden rooms in botany, drawing and other subjects.[214] A. M'Intosh, the head gardener at Castlerea gave tuition to all the young gardeners in his charge for three hours every weekday evening in winter, and although not all head gardeners were as conscientious this was a typical routine.[215] James Anderson, in sharp contrast to the position in Loudon's time,

[212] Loudon, 'British Works', *GM*, n.s. v. 5 (1839), p. 179.

[213] Claxton, p. 16.

[214] 'British Gardeners XXXVII - Alexander Ingram', *GC*, s. 2, v. 5 (1876), p. 657.

[215] M'Intosh, A., 'Gardeners' Education', *GC*, v. 18 (1859), p. 910.

commented that weekly and monthly gardening journals were now so prevalent and at such reasonable prices that no gardener should feel starved of information.[216] Moreover, as J Mayne, head gardener at Bicton was to observe in recommending, as Loudon had done, that a young gardener should devote all his spare hours to self-education, there were other resources available to the gardener other than journals and books, as night or continuation schools were now available in most towns and villages.[217] *The Gardeners' Chronicle*, writing in 1889 noted that when Loudon had first suggested the formation of libraries for gardeners in 1827 books were very expensive and wages were low but that 'Happily the underpaid gardener cannot now complain of the absence of cheap literature; indeed if uttered during the past thirty or forty years such a complaint would be a manifest absurdity'.[218]

The young gardener was also greatly assisted in the third and fourth quartiles by the existence of Gardeners' Improvement Societies, or as they became known later, Debating Societies. Writing in 1894 W Swan, a head gardener at Bystock asserted that it was a notable and healthy sign of the advancement of educational opportunities that mutual improvement societies existed in 'almost every important centre' and that they were usually provided with a library.[219] The first of such societies was the West London Gardeners' Association for Mutual Instruction, formed by Robert Fish in 1836. The annual fees were 2s 6d for a head gardener, 1s 6d for a journeyman and 1s for an apprentice. Non-working amateurs could join for 5s. The society met every other fortnight on a Monday evening when a paper would be read by one of the members and then discussed at general. The purpose was solely educational- the subjects under discussion did not include matters such as working conditions or remuneration and the discussion of matters of a political or religious nature

[216] Anderson, J., 'Education of Gardeners', *GC*, s. 2, v. 11 (1879), p. 463.

[217] Mayne, J., 'The Qualifications and Duties of a Gardener', *GW,* v. 14 (1897), p. 267.

[218] 'A Library for Gardeners', *GC*, s. 3, v. 6 (1889), p. 719.

[219] 'Present Day Gardening', *GW,* v. 11 (1894), p. 106.

were specifically banned under the society's articles of association.[220] The West London Association was an immediate success and was soon copied, initially in areas close to centres of population. The range of matters discussed can be seen from the programme of the Regent's Park Gardeners' Society for Mutual Instruction, for the half-year to February 28th 1843:

> Cacti by Mr D. Maher; The Camellia by Mr E. Pigg; Training Pear Trees by Mr T. Moore; The Mushroom by Mr C. McDonald; The genus Agaricus by Mr D. Maher; The Atmosphere by Mr T. Moore; Planting Pear Trees by the same; The Willow by Mr J. Bevis; Water by Mr E. Pigg; Protecting Plants by Mr T. Moore; The drainage of Plants in Pots by Mr W. Field; Tropaeolaceae by Mr D. Maher.

In addition, during that six month period, 1,220 plant specimens were brought in for naming and 1,100 species of ferns, 900 species of grasses and allied plants and 300 species of hothouse plants were exhibited to the members.

By 1846, such was their popularity that an annual dinner of Gardeners' Improvement Societies, held at the City of London Mechanic's institute, was attended by more than 300 gardeners and was over-subscribed.[221]

2.5 Journeymen

When William Carmichael told his mother that he wanted to be a gardener, she replied: 'Dinna be a gardener Willy, as it is a poor wandering trade'.[222] At the completion of their apprenticeship or its equivalent, the next stage in the education of the young gardener was to work as a journeyman, or improver, in a variety of gardens. Loudon's advice was that the journeyman should not remain more than one year in any situation, including experience in a nursery, and that this process should continue until at least the age of 25 before applying to

[220] Fish, R., 'The West London Gardeners' Association for Mutual Instruction', *GM*, n.s. v. 3 (1837), p. 89.

[221] 'Miscellaneous - Gardeners' Soiree', *GC,* (1846), p. 135.

[222] 'People We Have Met - Mr William Carmichael', *GW,* v. 14 (1898), p. 566.

be either a foreman or a second gardener.[223] This stage of a young gardener's career was indeed peripatetic- on average gardeners would work in six different places before accepting a permanent position, sometimes travelling huge distances in order to gain the right experience. Silas Cole described how, at Althorp, Northants, he 'commenced at the bottom, in a stokehole at the modest sum of five shillings a week' before being given experience grass mowing in the pleasure grounds and then the kitchen garden.[224] He called this his 'probation'. He then moved to Mote Park in Kent to gain experience in fruit before moving to Hawkstone Park in Shropshire to work in the plant houses and conservatory. He then obtained a place at the Botanical Gardens in Regents' Park to gain experience in what he described as the 'scientific branch of gardening'. He then travelled to Carraghmore in Ireland where he added to his general experience of house and table decoration after which he returned to London to work for Simmonds Brothers, a nursery, who found him a place at Tregothnin in Cornwall.[225] Young gardeners purposefully worked in as many different geographical locations as possible to gain experience of the differing climatic and soil conditions in the various locations.[226] In the days before rail travel, such journeys involved considerable self-sacrifice. John Caie relates how the journey from Sutherland in Scotland to Chiswick, by boat, took him three weeks in 1831.[227] The 150-mile journey from Oxfordshire to Derby took John Cox two days 'and made a large hole in a five-pound note' in 1836 a trip which he wryly noted 'could be made now [1875] in one day for £1'.[228]

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[223] Loudon, *Encyclopaedia of Gardening,* p. 1040.

[224] Wilcox, A., 'Famous Gardeners at Home No. 109: Mr S. Cole, at the Gardens, Althorp Park, Northamptonshire', *GL,* v. 5 (1903), p. 101.

[225] Ibid.

[226] Q, 'Gardeners' Characters', *GC,* v. 4, (1845), p. 545.

[227] 'British Gardeners - XXVII: John Caie', *GC* n.s. v. 4 (1875), p. 453.

[228] 'British Gardeners-XXV: John Cox', *GC,* n.s. v 4 (1875), p. 325.

In 1845 John Stevens Henslow, the former Professor of Botany at Cambridge (who had persuaded Darwin to take the place offered to him on The Beagle), was given the task of recruiting a gardener for the post of curator of the new Cambridge Botanic Garden in the knowledge that the appointee would be tasked with laying out an entirely new garden from a bare 38-acre field. As the number of applications was high Henslow devised an examination designed to test the applicants' gardening knowledge, in what at the time was thought to be the first competitive examination of its kind. Although the questions were perceived to be too botanical and therefore beyond the capabilities of most practical gardeners, he was able to report that all of the six short-listed candidates answered the questions successfully, causing him to remark how impressed he was by 'the extent of intelligence and general information and …the degree of skill and education now abroad'.[229] The questions illustrate the scope and depth of knowledge required at the highest level:

1. Write down as many species of the following genera as you may remember to be under culture in England, stating their country, character of the plants, whether trees, &c, description of culture, whether stove &c, natural order: Berberis, Nymphaea, Cleome, Althaea, Pistacia, Sempervivum, Lonicera, Eupatorium, Vaccinium, Asclepias, Ajuga, Vitex, Croton, Dorstenia, Neottia, Pancratium, Ruscus, Paspalum, Stipa.
2. Name a few of the principal genera under culture, in the following orders: Tiliaceae, Rutaceae, Apocyneae, Scrophularineae, Coniferae, Irideae, Cyperaceae.
3. How do you distinguish the following orders from each other:- Papaveraceae from Nymphaeaceae, Caparideae from Cruciferae, Cyperaceae from Gramineae
4. Point out the difference in the structure of the fruit of the Mulberry, Raspberry and Strawberry
5. Describe the seed-vessels and seeds of the French Bean, Acorn and Maize
6. What are the principal causes of sterility in cultivated plants, and how would you seek to counteract them?
7. What are the conditions essential to the germination of seeds, and what are the chemical changes effected in them during the process?
8. Describe the functions of the leaf
9. Fill up the imperfect sketch of a design for the new garden, inserting the following particulars:- 1. The houses to range north and south in an open area, in the centre of the elliptic herbaceous ground. 2.Sheds in the and compost pits to the north between the entrance there, and the north approach to the houses.3. Curator's house. 4.

[229] Henslow, J.S., 'Cambridge Botanic Garden', *GC,* v. 4, (1845), p. 291.

> Separate beds for the Grasses, Ferns, and Peat-plants away from the herbaceous ground. 5. Arboretum. 6. Pond in the north-west angle. 7. Suggestions regarding the form and arrangements in the houses. 8. General remarks upon the arrangement of a botanic garden.

The candidates were also given the opportunity to propose an alternative plan for the new garden. The hand-drawn plan (Figure 5) of the winning candidate, Andrew Murray, who came from the Liverpool Botanic Garden, was adopted and planting began in the following year. As far as can be ascertained, all six candidates[230] had followed the traditional path into gardening of starting an apprenticeship at the age of 14 and gaining their knowledge through a mixture of learning whilst working and self-education.

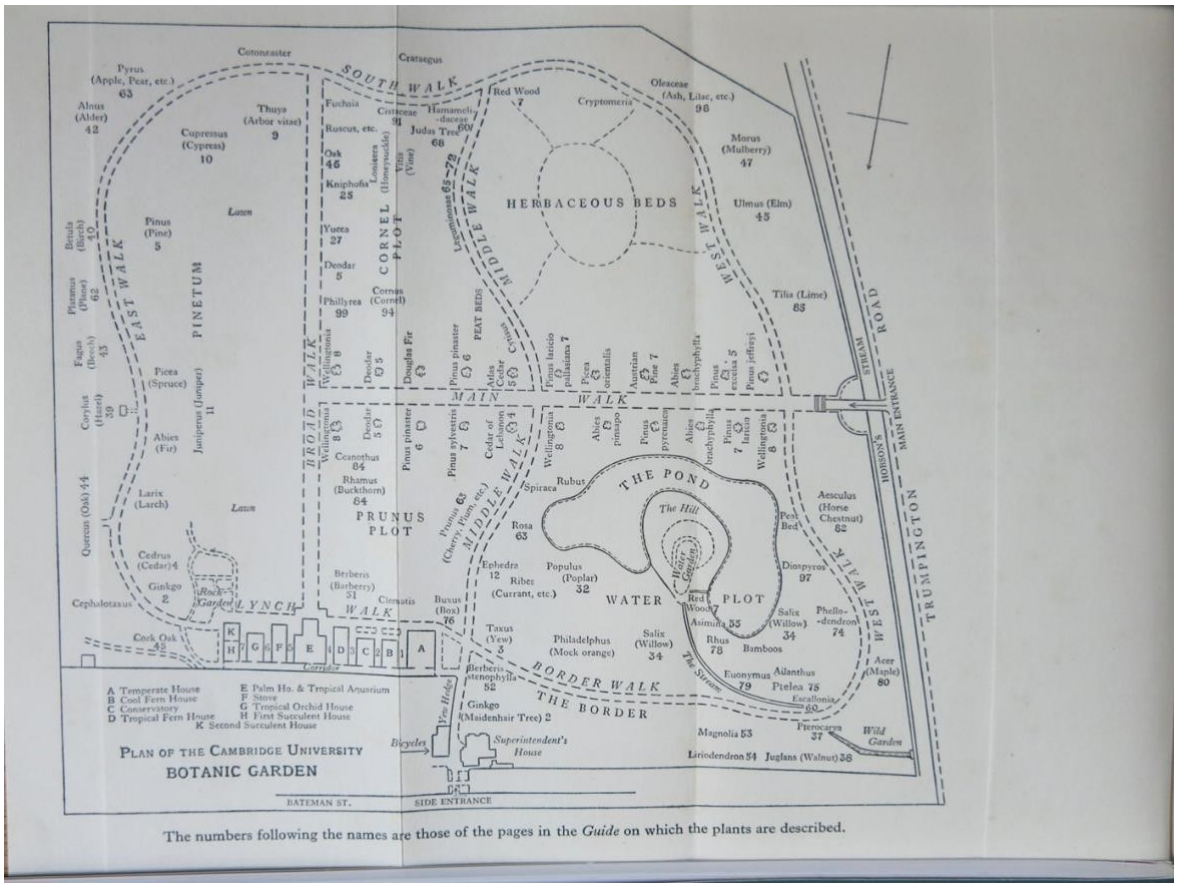

Figure 5. A plan of the western garden in Humphrey Gilbert-Carter's 1922 guide to the Botanic Garden, virtually unchanged from the hand-drawn plan by Andrew Murray, 1843.[231]

[230] The others were Gibson, Moore, Hume, Catling and Maitland.

[231] Parker, J., 'Professor John Stevens Henslow', https://agardenthroughtime.wordpress.com/themes/professor-john-steven-henslow/ [accessed 23 Jan 2021].

Andrew Murray was not able to fulfil his full potential as he died after an accident shortly after completing the construction of the new garden, but the examples of two of his successors illustrate the erudition which could be acquired by the autodidact gardener. William Mudd became the curator in 1864 at the age of 34 having by that time become Britain's foremost lichenologist entirely through self-study. He published the Manual of British Lichens, the first comprehensive British lichen flora, together with Lichenum britannicorum, made up of three fascicles of exsiccatae containing 301 specimens.[232] As J. G. Baker observed:

> If anyone would look through this [Manual] remembering that it is the production of a man who had to educate himself after reaching mature life, and who at the time that he was engaged upon it was working hard with his hands for twelve hours a day and keeping a wife and family upon a wage of something like 25s a week, he will see that the book is really a wonderful monument of energy and perseverance.[233]

Major collections of his work are now housed in the Natural History Museum, London and in other herbaria around the world.[234] Mudd's successor, Richard Lynch, was accepted at Kew as an improver-journeyman at the early age of 17 after being trained by his father at St Germans, Cornwall. He became a distinguished hybridiser of plants, especially of Campanulas and Cinerarias, producing a range of cultivars of the wild species of Gerbera from South Africa, and laying the foundation of the modern Gerbera hybrid.[235] In 1886 he translated Correvon's Les Plantes des Alpes[236] and in 1904 wrote the standard taxonomic work on the Iris. In 1907 Cambridge University awarded him an honorary MA 'in

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[232] Seaward, M.R.D., 'Unveiling Victorian Genius: Richard Spruce and William Mudd', *Lecture Delivered to The Heather Society on 6 September 2013 at Thirsk on the occasion of their 50th Anniversary.*

[233] J.G.B., 'William Mudd', *GC*, s. 2, v. 11 (1879), p. 558.

[234] Seaward, 'British Mycologists - William Mudd (1830–1879)', *Mycologist*, v. 6 (1992), p.176.

[235] Upson, T., 'Lynch, Richard Irwin (1850–1924)', *ODNB*, (Oxford University Press, 2010), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/96825, [accessed 13 Nov 2020].

[236] 'The Veitch Memorial Medalists', *GC*, s. 3, v. 29 (1901), p. 295.

recognition of services rendered to Botanical Science in the University as Curator of the Botanic Garden'.[237]

In constructing the Cambridge Botanic Garden Andrew Murray displayed skills as a designer, surveyor and engineer, as well as a gardener. In this he was self-taught, as were William Mudd and Richard Lynch as botanists and writers. The biographies show a strong tradition for self learning, from Loudon's time onwards, to bolster the institutions of school and apprenticeships. The importance of auto-didacticism to gardeners was evident from the prevalence of bothy libraries, of bothy after-school classes, and most importantly of the ubiquitous self-improvement societies whose pervasiveness amongst gardeners was, in the opinion of head gardener William Swan, 'unmatched in any other occupation,' although it should be acknowledged that there was a strong desire for knowledge and self-learning in many occupations at the time. [238]

2.6 The Development of Academic Education

In the third and fourth quartiles, the intellectual debate turned from the suitability of elementary education for gardeners and other labourers to whether gardeners should receive academic training in addition to their manual training and whether it was appropriate for there to be a system of examinations which would judge their attainments in that respect. Ancillary to this, there was a discussion as to whether training should be extended to women.

In the 1870s the Society of Arts had offered examinations, in conjunction with the RHS, in Fruit and Vegetable Culture and in Plant Culture and Flower Gardening, offering prizes for the best candidates. However, the take-up was poor, and the examinations were

[237] 'Richard Irwin Lynch', *Journal of the Kew Guild,* v. 2, (1907), p. 347.

[238] 'Present Day Gardening', *GW,* v. 11 (1894-5), p. 106.

discontinued, partly as a result of apathy, partly because of difficulty in providing examination centres in rural areas.[239] It was noted that whilst agriculture had two colleges for higher education, there were none for horticulture.[240] Frequent reference was made in the horticultural press to the need for a dedicated college of horticulture, referring to the fact that there were 33 specialist horticultural schools in Germany, others in Belgium, Denmark and the United States, and the main college in France had nine Professors and gave free tuition to 40 scholars.[241]

There were some preliminary endeavours, most notably a private college set up by Edward Milner at the Crystal Palace, and a horticultural class at Herriot-Watt College, Edinburgh. However, there was substantial opposition to the concept of academic education for gardeners, most notably from the Director of Kew Gardens, W.T. Thiselton-Dyer, who set out his thoughts in response to an approach from Montague Sharpe on behalf of Middlesex County Council for advice as to whether they should include horticulture in the provision of technical education. Thiselton-Dyer said that he had great difficulty with the concept of technical education as it applied to gardeners, as theirs was a practical art which 'cannot be taught in the lecture room any more than painting or shoe-making'. He continued: 'The mere reading of books and attendance on lectures will never, in my judgment, make anyone even a moderate gardener'. He therefore advised the County Council to drop the idea of devoting any of its funds to technical education but to apply them to secondary education instead.[242]

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[239] 'Royal Gardens, Kew', *GC*, s. 2, v. 23, (1885), pp. 214 & 312 & 'The Education of Gardeners', *GW*, v. 2 (1885), pp. 419-20.

[240] 'School of Horticulture and Landscape Gardening', *GC*, s. 2, v. 15, (1881), p. 470.

[241] 'School of Horticulture', *GC*, s. 3, v. 3, (1888), p. 528.

[242] Thiselton-Dyer, W.T., 'Technical Education', *GC*, s. 3, v. 11, (1892), p. 9

Notwithstanding the dismissive approach of its Director, Kew Gardens did combine its practical tuition with some academic study. It was their policy to take in trainees between the ages of 20 and 25 for a two-year period. They were given experience in every department, being continually moved around, their work being described as 'practical gardening pure and simple. For ten hours a day [the trainee] is employed in potting, cleaning, training, watering etc.'. However, after working hours they were given lectures in Botany (systematic, economic and geographical) and Chemistry and Physics. They also had access to a well-stocked library which was open until 10 pm every evening, where meetings of a Mutual Improvement Society were held weekly during the winter months. In defending this policy of combining practical work with academic study, Thiselton-Dyer said:

> It cannot be too often insisted that horticulture is an art which can only be learned by actual practice, like the making of boots or the building of a ship. The man who is taught in the classroom how to cultivate orchids or peaches or peas has a poor chance against the man who has learnt this work in the garden. At the same time, the man whose brains are trained as well as his hands can learn his lesson more quickly.[243]

In 1891 *The Gardeners' Chronicle* noted that it had been inundated with schemes for horticultural education, stating that 'a movement is afloat to provide our countrymen with the means of obtaining high-class technical education as can be had in Belgium or the United States'.[244] In the same year a joint committee of the RHS and the Worshipful Company of Gardeners put forward a proposal for a 'British School of Gardening'.[245] The RHS restored their scheme of examinations, but still received a sceptical comment from the editor of *The Gardeners' Chronicle* who wrote that 'no-one supposes that a good gardener is to be made listening to a lecture, reading a book, or passing an examination'.[246]

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[243] Ibid., p. 9.

[244] 'Horticultural Education', *GC,* s. 3, v. 10 (1891), p. 488.

[245] Ibid.

[246] 'Past, Present and Future', *GC*, s. 3, v. 12 (1892), p. 792.

2.7 The Development of Gardening Education for Women

It had been noted in 1878 that the examinations in Botany set by the Society of Apothecaries had attracted an unusual number of female candidates. In that year 76 women competed, of whom five were placed in the first class, and 15 in the second. This elicited favourable comment, including an editorial in *The Gardeners' Chronicle*, which read:

> There are those who dread anything like high-class education for women, under the impression that it will unsex them, impair their natural refinement, or at best turn girls into prigs and prudes; but of all the absurd notions this is one of the most absurd.[247]

In the following year, George Henslow began a course of 20 lectures in botany at London University, specifically for women.[248] The Society of Apothecaries, reflecting upon the success of female candidates instituted a series of gold and silver prize medals for the best female candidates in botany.[249] At the same time, women started to apply for formal training as gardeners. In 1880 Milner's Crystal Palace School of Landscape Gardening and Practical Horticulture announced that special arrangements had been made for the admission of females. Their first female student, Fanny Wilkinson, completed an 18-month course there in 1881.[250]

The burgeoning demand for women to train as gardeners was reflected in the fact that Kew Gardens received a large number of applications from women to be admitted as trainees even though no women had hitherto been accepted there, or indeed at the botanic gardens in Edinburgh and Dublin. In 1893, Thiselton-Dyer asked for the help of the gardening press in

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[247] 'Women's Right to Education', *GC*, ser. 2, v. 9, (1878), p. 824.

[248] 'The Education of Gardeners', *GC*, s. 2, v. 11, (1879), p. 496.

[249] 'The Education of Gardeners', p. 496.

[250] 'School of Gardening', *GC*, s. 2, v. 15, (1881), p. 437 & 'Interview - Miss Wilkinson, Landscape Gardener', *Women's Penny Paper* (08 Nov. 1890), pp. 33-4.

stemming the 'great many letters' which he received from women asking to be admitted to Kew. *The Gardeners' Chronicle* obliged by printing in full a letter which Thiselton-Dyer had written to one such applicant:

> May 15th 1893
>
> Dear Mrs — A good many young ladies at the present time seem anxious to learn gardening. There was I believe at one time a sort of institution managed by a lady who gave instruction. But I have recently heard that the whole thing has come to grief. There may be others, and possibly a note to *The Gardeners' Chronicle* might get you some information.
>
> I must confess that for my part, I think the enterprise is not very hopeful. Some parts of gardening work are suitable enough to a neat-handed woman. Striking cuttings, budding and grafting they would probably do better than men. But these are only incidents in the business. There is an immense amount of rough work which, if anyone is ever to be a practical gardener must be gone through. We reckon here that it takes five years' steady training to turn a youth into an efficient gardener, and up to that point they cannot earn more than 18s a week. No girl who has not an exceptionally strong physique could stand it.
>
> A young lady in the country pleaded very hard to be taken on here in our houses as a gardener. But in my judgment the thing would be physically impossible.[251]

Thiselton-Dyer represented the general consensus at this time, which prevented women from gaining employment as apprentices or otherwise in private and public gardens and thus in obtaining the basic training which was required for them to qualify as gardeners. The reluctance of men to employ women was ascribed to variety of reasons, not solely misogyny. It was said that employers with a small staff preferred to employ a man to do the heavy work and such work would be done by men more quickly and efficiently, and hence more cheaply. Further, it was said that head gardeners felt uncomfortable about giving orders to a woman and considered that their employment would cause discord amongst the other men.[252]

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[251] Thiselton-Dyer, 'Training of Women as Gardeners', *Gardeners' Chronicle*, s. 3, v. 13, (1893), p. 604.

[252] Wilkins, R., *The Work of Educated Women in Horticulture and Agriculture* (London, 1915), pp. 18-9. See also Meredith, A., *Middle-class women and horticultural education, 1890-1939* (PhD thesis, University of Sussex, 2001).

Women overcame these prejudices by undergoing training in private colleges which combined both academic and practical tuition. The first of these was Swanley College, which was established in 1889 by Arthur Bond, a businessman who had the idea of combining a training academy with a research station to apply scientific principles to the development of horticulture.[253] Initially, the college was for male students only, but from the outset, Mr Bond received applications from women, and he saw the opportunity of opening a women's branch of the college. It was first considered necessary to show that women were indeed capable of the hard physical labour which would be required and that it would not be injurious to their health. This was not simply to counter male prejudices, but to provide reassurance to potential applicants. In that regard, Mrs Emma Cons, London's first Alderman and Miss Gertrude Everest conducted an experiment in 1890, where they worked alongside the male trainees to demonstrate that the physical rigours of the training were within their capacity.[254] Following the success of that trial, a prospectus was drawn up for the establishment of a Women's Branch, housed in a separate building. Female students were admitted from 1891, and by 1894 the student body consisted of equal numbers of males and females.

Swanley College, based in a country house in 43 acres, 15 miles from London, provided two hours of academic study every day, in Horticultural and Agricultural Chemistry, Geology, Entomology and Botany, taught by seven lecturers under a Professor of Chemistry and Botany. From 6.30 am (9 am in winter) to 5 pm, the students worked in the garden, assisted by seven practical gardeners.[105] Although the college was privately run, it was bolstered by 25 scholarships offered by the Kent Education Committee, 15 at £60 (£30,290) per annum

[253] Opitz, D.L., 'A Triumph of Brains over Brute': Women and Science at the Horticultural College, Swanley, 1891-1910', *Isis*, v. 104,. (2013), p. 32.

[254] Opitz, p. 43.

and ten at £30, given under powers recently bestowed by the Technical Education Act.[255] In the intake for 1892, four of the female entrants held scholarships.[256] The recruitment of women was bolstered by expert medical testimony to show that far from being harmful, the physical work was beneficial to the health of the trainees. The Queen's physician-in-ordinary, Sir Edward Henry Sieveking, proclaimed that the work did not entail undue demands on a woman's physical strength and that 'the development of Swanley College may prove largely instrumental in promoting one of the most healthful occupations for women, healthful for body and mind'.[257] By 1896 the intake of female students exceeded those of men, leading to the decision in 1902 to close admissions to men.[258]

The training offered at Swanley College brought almost immediate success. In the RHS exam results for 1895 a female student, Miss A M Gulvin, scored the highest number of marks and of the 12 students who were placed in the 1st Class, three others were women from Swanley College. Similar successes were repeated in subsequent years, with women achieving up to 40% of the first-class places and a woman claiming the first place again in 1898 and in 1900 when Miss E Welthiar-Winlo was the first student ever to be awarded full marks.

At the end of the C19th, in making an assessment of the development of horticultural education for women A. Goodrich Freer described the opportunities for female gardeners as a 'protected industry'.[259] She noted that more than nine-tenths of the employers of women were themselves women and that in very many cases they thought it right to promote a new

[255] 'The Education of Gardeners', p. 496.

[256] Opitz, p. 43.

[257] Ibid., p. 39.

[258] Ibid., p. 31.

[259] Freer, A. G., 'Horticulture as a Profession for the Educated', *The Nineteenth Century*, v. 46, (1899), p. 776.

opening for women's work (although that enthusiasm was sometimes tempered when they discovered that a female gardener could not be had for the price of an under-gardener). Some frankly acknowledged that they found it difficult to manage a male gardener and cherished the idea of gaining control of their own garden. Some saw economic advantage in combining a gardener with a governess, companion, secretary or even cook. She noted that demand exceeded supply, but that the supply was much smaller than was commonly supposed. Of the first 100 students who took courses at Swanley between 1891 and 1898, only 19 finished the course and obtained their diploma. Of the 100, 38 nevertheless obtained work as gardeners.[260]

In spite of the limited success of Swanley College in its early years, there was a strong demand for new horticultural colleges exclusively for women. In 1897, Lady Warwick, as part of her campaign to provide independent careers for women, established the Lady Warwick Hostel, as part of Reading University.[261] This became Studley Castle College in 1903, by which time 225 female students had graduated from the Reading University branch. Studley Castle adopted a similar mix of academic study and outdoor work as that followed at Swanley College. Two former Swanley College students, Miss Barker and Miss Morrison established the Scottish College of Horticulture in 1900, and Miss G M Godden set up a college at Ridgfield, Wimbledon in 1902. In the same year, the Viscountess Wolseley set up the College of Gardening, exclusively for women, at Glynde, near Lewes. In 1905 Mrs Mary Crooke, FRHS, a former instructor at Studley Castle began a college at

[260] Ibid., p. 777.

[261] Opitz, D.L., 'Back to the Land': Lady Warwick and the Movement for Women's Collegiate Agricultural Education', *The Agricultural History Review,* v. 62 (2014), p. 119.

Bredons Norton, near Tewksbury. Between 1900 and 1914, two dozen schools or colleges of gardening for women were set up, as is set out in Table 6.[262]

School name	Proprietors
Swanley Horticultural College	Arthur Bond
Studley Castle	Lady Warwick
School of Nature Study & Gardening; Clapham, Worthing, West Sussex	Miss Cracknell, Miss Collins
Royal Botanic Society of London, Practical Garden School for Ladies, Regent's Park	Royal Botanic Society of London
School for Lady Gardeners, Glynde, Sussex	Hon. Frances Wolseley
Elmcroft Nursery, near Chichester, Sussex/ Reedens School of Gardening, Newick, Sussex	Miss Dixon, Miss Eve
Country and Colonial Training School, Hitchin, Hertfordshire/Strathcona School of Gardening, Over, Buckinghamshire	Miss Turner, Miss Kitson
Bredon's Norton School of Gardening, Tewksbury, Gloucestershire	Miss May Crooke
Devonshire School of Gardening, Ivybridge, Devon	Miss May Crooke
Letheringsett School of Gardening, near Holt, Norfolk	Miss Verrall
Leicester Frith School of Gardening, near Leicester, Leicestershire	Mrs Hardy Smith?
Stonehouse Training Gardens, near Gloucester, Gloucestershire	Miss Heald
St. James's Gardens, Malvern, Hereford and Worcester	Miss Baird
Greenway Court, Hollingbourne, Kent	Miss Edith Bradley
School of Gardening, Rye, Sussex	Miss Ridley, Miss Peake
Scottish College of Horticulture, Edinburgh	Miss Barker and Miss Morison
Ridgefield, Wimbledon	Miss G M Godden
Bredons Norton	Mrs Mary Crooke
Alexandra College, Dublin	Miss H M White
Wernolen, Ammanford, South Wales	The Rev T and Mrs Davidson
Henlys, Barriew, Montgomeryshire	Miss Eliza Williams
Clare House, Tiverton	Mrs Richmond
The Women's Gardening Association, London	
The Ladies Fruit and Salad Gardens, Grange Gardens, Sawley	Grace Harriman

Table 6. Private gardening schools in England, set up before 1914

The success of the women trained at these specialist colleges led to their being accepted, to a limited extent, as trainees in the botanic gardens. Thiselton-Dyer capitulated in 1896, admitting two female trainees to Kew Gardens at 10s a week, on condition that they wore

[262] Adapted from Meredith, A., 'Middle-Class Women and Horticultural Education, 1890-1939', (PhD thesis, University of Sussex, PhD Thesis, Brighton, 2001), p. 148.

masculine attire.[263] In 1898 the Royal Botanic Garden at Glasnevin, Dublin, under the curatorship of Frederick Moore admitted two female trainees, on the basis that no premium was required from them, and no payment given.[264] A dedicated training school for female gardeners was established at the Botanical Gardens at Regents Park under the superintendence of Mrs J Bryant, the wife of the garden's secretary.[265]

The 1900s saw a significant mellowing of opinion, although there remained determined opposition to women being employed as gardeners. F.W. Burbidge (who had himself won the RHS medal in 1897) said that 'not one girl in a hundred was physically fitted for the necessary hard and rough labour of the garden'.[266] In response to Burbidge's jibe, A. Dean, a former head gardener who had taught at Swanley College when it was co-educational, contrasted what he described as 'the attentive hardworking female students' with the 'careless, almost contemptuous' males, concluding: 'Many of these Swanley girls have been tenderly brought up and have rich parents. But they detest the useless, aimless lives that custom would force upon them, and live for work and for usefulness. Really, they mean business'.[267] Tellingly, Dean contrasted the facilities at Swanley with those provided by the RHS at Chiswick, which he described as the only male training school for young men- '[that] poor, old ghastly ruin- a disgrace to the Royal Horticultural Society'.[268] In 1907 this theme was taken up by D W Thomson, the President of the Scottish Horticultural Association, who pointed out the huge disadvantage under which young male gardeners now laboured compared with their female counterparts. 'The latter have their college and experimental

[263] Opitz, p. 54.

[264] Meredith, p. 76.

[265] Ibid., p. 51.

[266] F.W. Burbidge, 'The Lady Gardener', *GW,* v. 20 (1903), p. 638.

[267] Dean, A., 'Lady Gardeners', *GW,* v. 20 (1903), p. 658.

[268] Ibid.

garden. They have their lectures to attend, and examinations to pass and why is it that young journeymen gardeners of the opposite sex cannot enjoy the same privilege?' Thomson proposed the establishment of a new college and experimental garden in Edinburgh to fill this lacuna. Progress was made in England that same year with the opening of the RHS School of Horticulture at Wisley, offering scientific and practical training over a two-year period. Chiswick Garden had been closed and sold very soon after Dean had described it as a ruin.[269] Thomson referred to the failure of the horticultural establishment, but academic training was available to some extent from the nascent co-educational Technical Schools, of which three, those at Stafford, Chelmsford and Holmes Chapel provided successful candidates for the RHS examinations. The University of Reading set up a new horticultural college in 1903 with 30 students and equal numbers of each sex.[270]

In the early years, scholarships were important in putting Swanley College on a firm financial basis. By 1899 scholarships were available from Berkshire, Essex, Kent and London County Councils, but in time only a small minority of the female students relied on scholarships. The demand for a gardening career came largely from girls from well-off families. It appears that Dean was right in highlighting the privileged background of the majority of female students. The level of fees was high: at Swanley College, they were £60 a year, (£27,000) and at Studley College £50 a year, (£22,500) with additional charges for boarding and food.[271] Scholarship girls were not always encouraged or welcomed. Viscountess Wolseley, whose College of Gardening enjoyed great success, was of the view that only 'intelligent well-educated ladies' were suitable to be trained as gardeners, ruling out not only the housemaid who had ambitions to become a gardener but also the head

[269] Thomson, D.W., 'Scottish Horticulture', *Journal of Horticulture*, s. 3, v. 50 (1907), p. 284.

[270] 'Horticulture at University College Reading', *GL,* v. 21 (1912), p. 338.

[271] *Englishwoman's Yearbook and Directory* (London, Hatchards, 1899).

gardener's daughter and even 'the somewhat rough-mannered, undisciplined middle-class woman'.[272] The fact that most young male gardeners came from a labouring, rural or trade background (see Chapter 6) may go some way to explain why the education of male and female gardeners developed into two separate spheres.



Figure 6. 'We want to banish once and for all the inferior, rule-of-thumb, slow-thinking, inartistic man-gardener whom we have tolerated for so long and in his place require intelligent, educated ladies'. —Viscountess Wolseley[273]

Although the curriculum in each of the women's colleges differed, the certificate which was presented on the successful completion of a course became a recognised indicator of a candidate's qualification as a gardener. Graduates could thus move straight from college into employment, a rare occurrence with a male, with whom such a high premium was placed upon practical experience. Swanley College recorded in 1910 that they received 28 applications for head gardeners and 18 for companion and under gardeners and that they placed six head gardeners and 11 companion and under-gardeners in that year.[274]

[272] Wolseley, F.G., *In a College Garden* (London, Murray, 1916), pp. 104-5.

[273] Wolseley p. 104.

[274] 'Swanley Horticultural College', *GC*, s. 3, v. 47 (1910), p. 233.

Within a decade, women, who had been almost totally excluded from the educational opportunities available to men, had been able to establish their own training matrix, independent of men, and at the same time create their own self-contained network of employment opportunities. It was, as Goodrich-Freer had observed, a 'protected industry' entirely under their own control.

This success was a landmark in the national crusade for better educational and employment opportunities for women. One of the leading lights of the campaign was the social campaigner Frances Greville, the Duchess of Warwick, who agitated for women to be admitted into all the professions but concentrated her energies on horticulture because women had for a long time been active participants in that field, as has been described in Chapter 1.

The scientific interests of women in the field of gardening began to be extensively provided for. Although women were not permitted to train as gardeners at Kew before 1896 they were accepted at Kew's Jodrell Laboratory from its inception in 1876.[275] Ethel Sargant studied there after obtaining her degree at Girton College Cambridge, but Sara Anne Calvert was the first woman to publish a scientific paper bearing Jodrell's address, in 1886.[276] Somewhat late in the horticultural world, but ahead of most other scientific societies, the Linnean Society admitted women as fellows for the first time in 1905.[277] The first female fellows included Emilia Noel, who had completed the Swanley College course after graduating from Somerville College, Oxford and Lilian Gibbs who studied at Swanley before joining the

[275] Ayres, P., *Women and the Natural Sciences in Edwardian Britain In Search of Fellowship* (Switzerland, Springer International, 2020), pp. 44-5.

[276] Ibid., p. 45.

[277] Gates, B.T., 'Introduction to Section Seven', *In Nature's Name: An Anthology of Women's Writing and Illustration, 1780-1930* (Chicago, University of Chicago Press, 2002), p. 520.

Royal College of Science after which she became an explorer before becoming one of the first female fellows of the Royal Geographical Society when they finally admitted women in 1919.[278]

Lady Warwick and Viscountess Wolseley as powerful cultural entrepreneurs can be identified, through their founding of gardening colleges for women, as being influential in promoting the education of female gardeners, but they were not the instigators. The process was organic. As women felt the need to receive some form of higher education and earn their own living, gardening, and horticulture were natural fields of endeavour. Fanny Wilkinson was perhaps the first woman to claim a place on an all-male course when she persuaded Edward Meehan to accept her at Crystal Palace, but it was the pressure of many individuals of a like mind who persuaded Edward Bond at Swanley College and Thiselton-Dyer at Kew to accept them. They formed an irresistible tide. In so doing, gardening led the way in further educational and employment opportunities for women.

There was also a political element to the movement. Lady Warwick's campaign for greater educational and work opportunities for women was motivated by her socialist beliefs.[279] Reflecting on her association with Lina Barker and Annie Morison, the founders of the Scottish Agricultural College, Madge Elder recalled: 'I suppose the two principals would be

[278] Natural History Museum, 'Gibbs, Lilian Suzette, (1870-1925)', *Jstor Global Plants,* https://plants.jstor.org/stable/10.5555/al.ap.person.bm000002937, [accessed 31 Dec. 2020].

[279] Reynolds, K.D., 'Greville [née Maynard], Frances Evelyn [Daisy], Countess of Warwick (1861–1938), Society Beauty and Socialist', *ODNB* (Oxford University Press, 2014), https://ezproxy-prd.bodleian.ox.ac.uk:2648/view/10.1093/ref:odnb/9780198614128.001.0001/odnb9780198614128-e-33567, [accessed 31 Dec. 2020].

considered the ‘new women’ of their day, a type I had not met before. We soon discovered they were fervid suffragettes, and in me at least they had a willing convert’.[280]

Fanny Wilkinson, when interviewed about her work as a landscape gardener in London, where she was responsible for the design of 74 parks, proudly spoke of her support for votes for women.[281]

Adela Pankhurst, the youngest daughter of Emmeline Pankhurst, was welcomed at Studley Horticultural College, even though she had been imprisoned several times for her activities as a suffragette. She gained first-class honours in the 1913 RHS exams after which she worked as head gardener for Mrs Batten-Pool in Bath.[282] She was one of the many suffragettes who were welcomed by Mary Blathwayt at Eagle House, Batheaston, which operated as a recuperation centre for those suffragettes who had been imprisoned and on hunger strike. There, they shared their horticultural interests by creating an arboretum, where each suffragette planted a tree in evocation of their struggle.[283]

2.8 A National Diploma

A move towards a recognised general qualification was made in 1913 when following an agreement between the Council of the Royal Horticultural Society and the Board of Agriculture a scheme for a ‘National Diploma in Horticulture ’was announced. The word ‘National’ was approved by the government so that the diploma would be recognised throughout the British Isles. The criteria were rigorous and required all candidates to have

[280] Young, F., 'Pioneering women gardeners: visible at last’, https://fayyoung.org/pioneering-women-gardeners-visible-at-last/ [accessed 20 Dec 2020].

[281] 'Interview - Miss Wilkinson, Landscape Gardener', pp. 33-4.

[282] Crawford, E., *The Women's Suffrage Movement; A Reference Guide, 1866-1928* (London, Routledge, 2001), p. 486.

[283] Liddington, J., 'Annie Kenney's Bristol and Mary Blathwayt's Bath', *Vanishing for the vote: Suffrage, citizenship and the battle for the census* (Manchester, Manchester University Press, 2014), pp. 3-4.

served for at least four years in a private or public garden or a nursery and to pass two written exams, one preliminary and one final. All applicants had to be at least 21 years of age. Before they were permitted to take the preliminary exam they had to pass a 'qualifying test' for which they had to write an essay on a subject of general knowledge, as a test of their literacy, and to show a basic knowledge of arithmetic and geography. The preliminary examination required knowledge of the general principles of plant growing and an elementary knowledge of botany, chemistry and physics, with care being taken to ensure that the candidate was able to perform the operations of gardening with the requisite skill and that he understood the reasons why these methods were being used. Candidates who were successful in the preliminary exam were only eligible to take the final examination after they had worked for a further two years in horticulture. It consisted of practical, written and viva voce stages. Thus, although the criteria for the diploma recognised the importance of academic learning, a high priority was given to practical skills, in the examination process itself, and with the requirement that all candidates should have worked for a minimum of 6 years in gardens.[284]

The purpose of the diploma was to raise standards, not to become a requirement for entry into the profession. Had it been so, it would have been a substantial barrier to entry. However, the war intervened, and the first final examination for the National Diploma was held in 1915 with only 17 candidates.[285]

2.9 Gardeners as Educators

Two developments, the extension of government funding to horticultural education and the establishment of horticultural colleges, led to the growth in the fourth quartile of the

[284] 'National Diploma in Horticulture', *GC*, s. 3, v. 54 (1913), p. 157.

[285] 'Royal Horticultural Society - Report of the Council', *GC*, s. 3, v. 59 (1916), p. 81.

appointment of gardeners as teachers and administrators. Following the appointment of John Wright in 1892 as the first County Superintendent of Horticulture, James Udale, the head gardener at Elford Hall, and the author of several textbooks was appointed to a similar post in Worcestershire and gave 61 lectures and visited 45 towns and villages during his first year in office. A second instructor, Quintin Read, was appointed in the following year. By 1912 he was in charge of 42-day school classes and 18 evening classes and an experimental garden of 6 acres at Droitwich. His staff had by that time expanded to 31, including four women.[286] In 1902 William Williamson, who had for 30 years been the head gardener at Tarvit, Fife, became the first horticultural lecturer to be appointed in Scotland. His duties involved lecturing in the twelve counties associated with the East of Scotland Agricultural College.[287]

Opportunities for male head gardeners also arose at the new horticultural colleges for women. Charles Herrin, the head gardener at Dropmore, one of the most prestigious country estates, took the role of head gardener at Swanmore College and William Iggulden of Marston House, Somerset, was appointed head gardener at Reading College.[288] In due course women routinely filled these roles. Winifred Brenchley, after finishing her course at Swanley, went on to take a degree in botany at University College London, after which she returned to Swanley as a lecturer.[289] Another Swanleyite, Kate Barratt came second in the RHS examinations in 1904, then worked as Swanley's botany demonstrator until 1906 when she left to go to the Royal College of Science, where she obtained a BSc after which she assumed the lectureship in botany at Swanley.[290] F. M. Verral, after obtaining her diploma at

[286] Wilcox, 'What Worcestershire is doing for Horticulture', *GL,* v. 21 (1912), p. 402.

[287] 'Horticultural Lecturer in Scotland', *GC,* s. 3, v. 32 (1902), p. 139.

[288] Opitz, 'Back to the Land', p. 138.

[289] Ibid., p. 58.

[290] Opitz, 'Back to the Land', p. 59.

the Royal Botanic gardens, won the RHS silver-gilt medal before becoming a lecturer at Lady Wolsely's School of Gardening at Glynde.[291] Government teaching posts were also available to female candidates- a Swanley student, Gertrude Watkin, was appointed by the Home Office as an instructor in gardening at the Borstal Institute for Girls in Aylesbury.[292] The demand for teaching posts became so great that in 1910 Swanley College alone received notice of 26 such posts becoming available, of which 9 were filled by students of the college.[293]

In 1905 those involved in horticultural teaching formed the Horticultural Education Association as their representative body. The membership was all male, reflecting the still differing approach of men in horticultural education. Their chairman, Fred Chittenden was the principal of Wisley College, set up by the RHS to provide academic alongside practical training to a maximum of 30 male students. However, the academic training at Wisley consisted of only 9 hours a week[294] reflecting the continued priority which they gave to practical ground work. Women operated in a separate sphere, where the emphasis was on academic work, an aspect which was reflected in the fact that it was not unusual for a female gardener to have a university degree, whereas this was unknown amongst the men. In 1908 women formed their own organisation, the Women's Agricultural and Horticultural International Union, further emphasising their independence.[295]

[291] Penn, P., 'Occasional Interviews: Miss F M Verral', *GW,* v. 22 (1905), p. 615.

[292] 'Women Gardeners', *GC,* s. 3 v. 55 (1914), p. 221.

[293] Wolseley, p. 25.

[294] Wilcox, A., 'Science in the Garden: Interview with F.J. Chittenden, F.L.S., at the Laboratory, Wisley', *GL,* v. 15 (1908-9), p.7.

[295] 'Women Gardeners' Social Gathering', *GC,* s. 3, v. 49 (1911), p. 105.

Chapter 3

3.1 Cottage and Bothy Accommodation

> If you would ascertain whether a country is rich, prosperous and happy go not into the mansions of the wealthy but examine the cottages of the labourers.
> —Jean-Jacques Rousseau[296]

As a general rule young unmarried gardeners were housed in bothies, married gardeners were provided with an estate cottage and head gardeners were provided with a cottage or house in the grounds This section will discuss the first two categories.

3.1.1 Rural Housing in the Early C19th

In his autobiography, Alexander Somerville, who began his working life as a gardener, compared his accommodation in a bothy unfavourably with his experience of occupying a steerage berth on a ship with 450 people between the decks. In the bothy he and another man shared a bed in a tiny space 'hardly wide enough to have held our two coffins had we been dead', crammed between the kitchen fire and a partition alongside which ran the greenhouse stove pipes. As there was no ventilation it became insufferably hot in summer. It was, he said, 'as odiously unhealthy as it has ever been my misfortune to know a sleeping place to be.[297]'

Somerville was born in 1811 at Oldenstocks on the Scottish border, one of seven children to a mason's labourer. The nine members of his family lived in a dwelling which consisted of one room which measured 12ft by 14ft. The room had a bare clay floor, no ceiling, no partition of any kind, nor any cupboard or recess, not even a fireplace or chimney. His

[296] Robinson, W., 'Cottage Gardens at Helmingham', *TG*, v. 20 (1881), p. 67.

[297] Somerville, pp. 99-100.

parents 'possessions included a grate for the fire and a small window, which they took with them when they moved house, which was usually each year, as the father was employed on annual contracts. The house was perpetually gloomy as the window was the only source of daylight, apart from the low front door. The fire grate was placed in the centre of the room and the smoke drifted up through the thatched roof. The only source of light after dark was the fire. Their dwelling was commonly referred to as a hut, a shed, or a hovel[298]. John Clare, the poet, whose principal occupation for most of his life was as a gardener, was described by his publisher Edward Drury in 1818 as 'living in the worst hut of the meanest village I ever saw'. It had a clay floor, covered with sand and although there was a chimney it was open to the sky and let in the rain. The house was described as 'dark, damp and unventilated, altogether unfit for habitation'.[299]

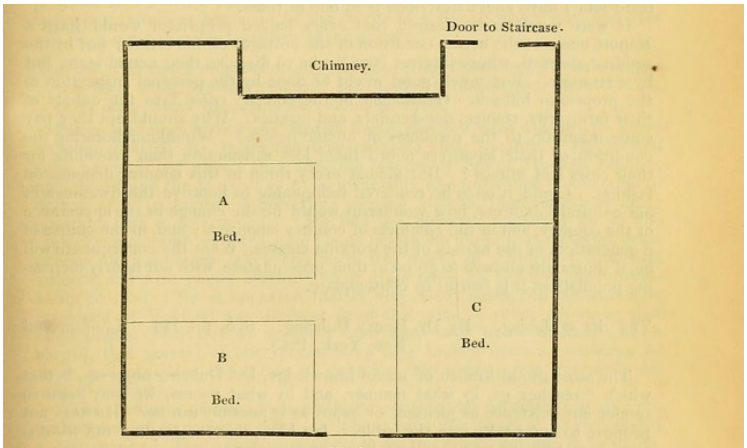
Contemporaneous surveys of accommodation show that the conditions experienced by Somerville and Clare were not untypical. A review of the housing in Norham, Northumberland, close to the Scottish border, found 174 houses occupied by rural labourers of which one third were described as deficient 'in all that is necessary to convenience and cleanliness'. 'Some of them are mere hovels, absolutely unfit for the peasantry of a civilised country and threatening to tumble down about their ears. 'The average size was found to be 24ft by 16 ft, considerably larger than that described by Somerville, but the number of occupants was on average larger, at between 8 and 12 persons.[300] A report by the Poor Law Commissioners on the employment of women and children in agriculture in 1843 commented on what they described as the deplorable state of the cottages in all but one of

[298] Somerville, p. 3.

[299] Bate, p. 252.

[300] Loudon, 'Review of The Peasantry of the Border: An Appeal in their Behalf', *GM,* n.s. v. 8 (1842), p. 31.

the districts they examined. At Stourpain, a village near Blandford in Dorset, 11 members of one family slept in a room 10ft square, with no curtain or any separation between the beds (Figure 11). As was commonly found, the ground floor of the cottage was lower than the ground outside, making it continuously wet and damp during the winter months.[301] The cottage described was one of a row which fronted a street in the middle of which was an open gutter, into which flowed the effluent from the privies and pigsties, which were placed on rising ground at the back of the cottage gardens. The sewerage which flowed between the cottages into the open gutter was identified as the cause of an outbreak of typhus in the village.[302] These cottages at least had the advantage of having privies, which in some parts of the country were entirely lacking.



" Bed A was occupied by the father and mother, a little boy, Jeremiah, aged 1½ year, and an infant aged 4 months.
" Bed B was occupied by the three daughters,—the two eldest, Sarah and Elizabeth, twins, aged 20; and Mary, aged 7.
" Bed C was occupied by the four sons,—Silas, aged 17; John, aged 15; James, aged 14; and Elias, aged 10.
" There was no curtain, or any kind of separation between the beds.
" This I was told was not an extraordinary case; but that, more or less, every bed-room in the village was crowded with inmates of both sexes, of various ages, and that such a state of things was caused by the want of cottages.

Figure 7. A cottage bedroom in Stourpain, 1843.[303]

[301] Loudon, 'Catalogue of Works on Gardening…' *GM,* n.s. v. 9 (1843), p. 376.

[302] Ibid.

[303] Ibid., p. 375.

In 1832 both William Cobbett and Loudon conducted tours of the west of Scotland, reporting on the state of cottage accommodation there. Loudon remarked delicately that 'the appendage which is essential not only to cleanliness, but even to decency 'was absent throughout the whole of the area, even in substantial newly built farmhouses and first-rate gardeners 'and bailiff's houses.[304] He described one newly built cottage as consisting of one room, 14ft square, without a ceiling, open to the roof, with an earthen floor, rough walls and one fixed window with four small panes. There was no opening in either the roof or the walls for ventilation, except for the entrance door and the chimney. He noted that no improvement had been made in the standard of cottage accommodation since he had last visited the area 26 years earlier. Cobbett, examining the farmyard 'boothies 'noted that no privy was provided, or indeed appeared to have been thought of. Again, there was no ceiling or floor except for bare earth.[305]

An early recognition of the problems of rural housing was made by the architect of the Royal Crescent in Bath, John Wood the younger, in his final architectural treatise. He observed that rural housing was 'for the most part offensive both to decency and to humanity 'and that 'the greatest part of the cottages that fell within my observation, I found to be shattered, dirty, inconvenient, miserable hovels, scarcely affording a shelter for beasts of the fields, much less were they proper habitations for the human species'. Specifically, he found that they were wet and damp, as a result of them being built below ground level; and because the walls and windows let in the rain; that they were cold and cheerless, from the unsatisfactory placing of the door, windows and chimney and from the thinness of the walls; that they were unhealthy because the rooms were too small and the absence of insulation made them too hot in

[304] Loudon, 'General Results of a Gardening Tour…from Dumfries…to Paisley', *GM,* v. 8 (1832), p. 258.

[305] Cobbett, W., *Cobbett's Tour in Scotland; and in the Four Northern Counties of England: in the Autumn of the Year 1832* (London, 1833), p. 104.

summer and too cold in winter. He contrasted the absence of a privy (either inside or outside) in the majority of cottages with the fact that in New Zealand the Maori population had a privy for every house, or every cluster of three or four houses, with the result that the ground was invariably clean.[306] At this time the dictionary definition of a cottage was 'A hut, a mean habitation'.[307] These huts were devoid of any vestige of comfort in terms of light, warmth, cleanliness and privacy. Wood was the first architect to propose, on humanitarian grounds, that they should be replaced with comfortable dwellings.[308] It was a reflection of the fact that piped water to cottages was unheard of at that time that Wood recommended that new cottages should be built close to a spring of water, or failing that, a well.

After the publication of Wood's treatise a number of pattern books were published containing designs for labourer's cottages, most notably by Richard Elsam[309] in 1816 and T F Hunt in 1827[310]. Unlike Wood, these architects placed their primary emphasis on the external appearance of the building rather than the internal arrangements and the comfort of the occupants. The publication by Loudon of his seminal work, *The Encyclopaedia of Cottage, Farm and Villa Architecture* in 1833 was to provide the greatest impetus in new cottage building, with the emphasis emphatically on the internal arrangements, although, as is the nature of an encyclopaedia he showed many hundreds of external designs in a variety of styles. The purpose of the encyclopaedia was to gather together all the available knowledge on the design and construction of buildings and to make it accessible to the widest possible

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[306] Wood, J., *A Series of Plans, for Cottages or Habitations of the Labourer* (London, I. & J. Taylor, 1806), p. 5, footnote 'h'.

[307] Maudlin, D., 'Habitations of the Labourer: Improvement, Reform and the Neoclassical Cottage in Eighteenth-Century Britain', *Journal of Design History ,* v. 23, (2010),p. 15.

[308] Ibid., p. 8.

[309] Elsam, R., *Hints for Improving the Condition of the Peasantry in All Parts of the United Kingdom, by Promoting Comfort in Their Habitations* (London, R. Ackermann, 1816).

[310] Hunt, T.F., *Half a Dozen Hints on Picturesque Domestic Architecture in a Series of Designs for Gate Lodges. Gamekeepers' Cottages, and other Rural Residences,* (London, Henry G. Bohn, 1827).

audience, in the hope that this would encourage innovation and development. Loudon wished, as he wrote in the introduction, 'to show how the dwellings of the whole mass of society may be equalised in point of all essential comforts, conveniences, and beauties'.[311] The *Encyclopaedia* was the leading architectural publication for the next forty years, running to 14 editions with numerous editorial revisions. *The Times*, in 1859, wrote that 'no single work has ever effected so much good in improving the arrangement and the external appearance of country dwellings generally'.[312] It was described as 'the final and definitive work on cottages'[313] and 'one of the most comprehensive and popular architectural books of the entire nineteenth century'.[314] It is a measure of Loudon's enlightened principles that he emphasised the importance of women engaging in architectural work, noting the influence which they had had on landscape gardening through their involvement in landscape design.[315] Forty years later Dorothea in George Eliot's Middlemarch was found perusing 'Loudon's book', in her search for model cottages for the estate on which she was engaged in improving.[316]

In the year following the publication of the *Encyclopaedia of Architecture*, Loudon published the monthly magazine *The Architectural Magazine,* the first journal of its kind in English which was intended to contain all the new developments in architecture since the publication

[311] Loudon, *An Encyclopædia of Cottage, Farm, and Villa Architecture and Furniture* (London, Longman, Brown, Green & Longmans, 1833), p. 2.

[312] Archer, J., *The Literature of British Domestic Architecture, 1715-1842* (Cambridge, MA, MIT Press, 1985), p. 514.

[313] Maudlin, p. 19.

[314] Archer, p. 55.

[315] Loudon, *Encyclopaedia of Cottage, Farm & Villa Architecture,* p. 2.

[316] Eliot, G., *Works of George Eliot*, v. 6 (New York, Century Co., 1910), p. 41.

of the encyclopaedia.[317] He also published a series of designs for gardeners' cottages in *The Gardener's Magazine*, employing John Robertson as the resident architect.

Loudon recognised that there was no question of a return on investment with the new buildings. Their purpose was to enhance the comfort and health of their occupants. Gardeners, who typically made up between one-third and a half of all estate workers, would be major beneficiaries of any improvements.

In his *Encyclopaedia of Architecture* Loudon described the ideal house for a married couple with children of both sexes. 'In such dwellings every labourer ought to live and any nobleman might live'.[318] He specified three basic requirements. First, the ground floor should be built two or three feet above the surrounding ground to prevent dampness. Secondly, the chimneys should be placed on interior rather than exterior walls, in order to retain heat. Thirdly, there should be a system for collecting and storing rainwater, and likewise for human waste.[319] In addition each cottage should have a garden of at least one sixth of an acre.[320]

The design and ground plan of one of Loudon's most basic cottages was singled out for particular praise in Chadwick's Sanitary Report of 1842.[321] A similar design is illustrated at Figures 8 & 9. It is a single-storey house three bedroomed house, with separate bedrooms for

[317] Loudon, *Architectural Magazine: and Journal of Improvement in Architecture, Building, and Furnishing* (London, Longman, Rees, Orme, Brown, Green & Longman, 1834).

[318] Loudon, E*ncyclopædia of Cottage, Farm & Villa Architecture,* p. 8.

[319] Ibid.

[320] Loudon, 'Statement of the Requisites of Cottage Architecture', in Chadwick, E., *Reports of Special Assistant Poor Law Commissioners on the Employment of Women and Children in Agriculture* (1843), p. 396.

[321] Burnett, J., *A Social History of Housing, 1815-1970* (London, Routledge, 1991), p. 51.

the parents and the male and female children.[322] The house is raised from the surrounding ground level and the chimney breast is placed centrally.

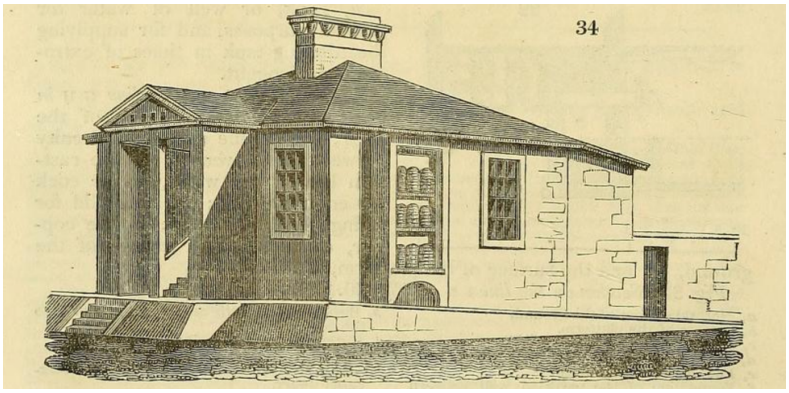

Figure 8. Loudon's plan for a basic cottage

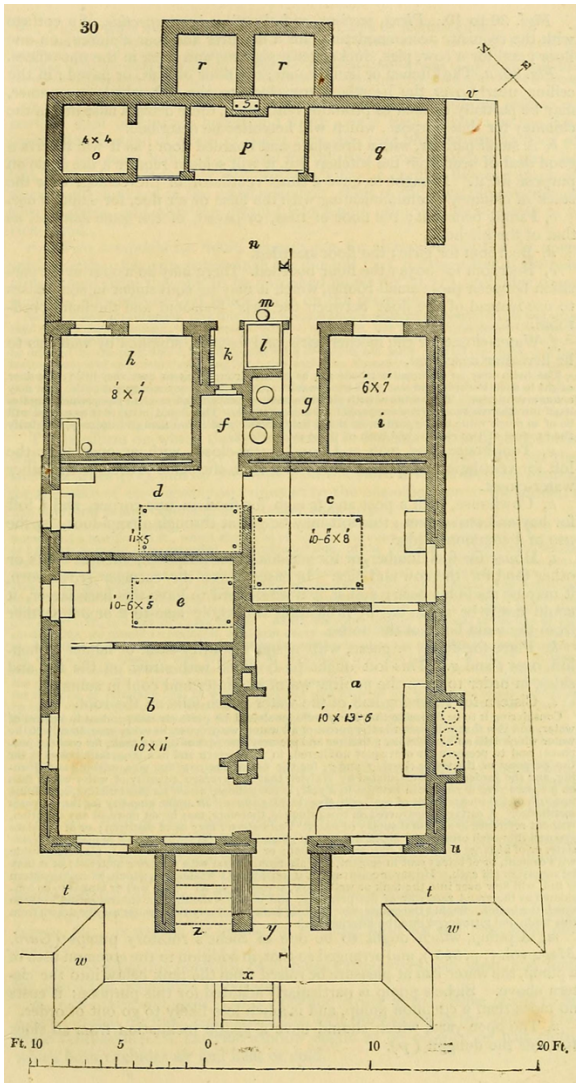

Figure 9. Loudon's floor plan for a basic cottage

[322] Loudon, 'A Model Cottage for a Country Labourer,' *GM,* v. 6 (1830), p. 160.

There are separate water closets for the male and female occupants, and in the yard a cow-house, pigsty, an area for poultry and space for bee-hives. The design includes an ingenious form of under-floor heating.

Loudon reinforced his campaign for better cottages by conducting regular tours of the leading estates, praising in print those which had made improvements and not hesitating to lambast those who had not, cognisant of the effect which his words would have on the reputation of those who did not improve their estates.

The practical effect of Loudon's endeavours can be seen in the creation of the model village of Edensor, designed by Joseph Paxton, when head gardener to the Duke of Cavendish at Chatsworth. Paxton used ten of Robertson's designs which had been published in the encyclopaedia and the architectural magazine, in creating a new village in a valley, close to the estate, demolishing the unsightly collection of hovels close to the entrance gates. The new houses were substantially built of stone, with their own water supply and a sound sewerage system.[323] Examples are shown at Figures 10 & 11.



Figure 10. Estate cottage at Edensor



Figure 11. Estate cottage at Edensor[324]

[323] Barnatt, J., & Williamson, T., *Chatsworth: A Landscape History* (Bollington, Windgather, 2005), p. 168.

[324] Figures of Edensor by author.

A contemporary review stated that 'the houses are all extremely comfortable, and fitted up in a neat and substantial manner, and are evidently the pride of their occupants'.[325] The cottages, all of which had substantial gardens, as well as the use of an allotment for livestock, were occupied by estate workers, principally gardeners. In 1843, Paxton showed Queen Victoria, Prince Albert and the Duke of Wellington round the newly built estate, which was the start of a fruitful collaboration between Paxton and the Prince, leading to the Great Exhibition, in 1851 where Prince Albert erected two model cottages for working men as examples which he hoped visiting estate owners would follow.[326] Edensor was part of an accelerating trend for estate workers to be provided with new cottages. At Tottenham Park the Marquess of Aylesbury built new thatched cottages for his outdoor workers, each with a quarter of an acre of land, some in the form of villas, which drew the comment from Loudon in 1834 that if they had been built near London they 'would be considered as fit for respectable merchants or private gentlemen'.[327] In 1836 Loudon described the group of cottages, all with gardens, which the Earl of Pembroke built for his garden workers at Wilton House as the best in Gothic architecture.[328]

The extent of the investment in cottage building can be seen from the work carried out by John Tollemarche at the Dysart estate in Cheshire. Tollemarche spent £68,000 (£62.1m) in

[325] 'Chatsworth - Concluded,' *GC,* v. 2 (1842), p. 187.

[326] 'Report on Her Majesty's Garden Reception at Chatsworth,' *GC,* v. 3 (1843), p. 859.

[327] Loudon, 'Notes on Gardens and County Seats, visited, from July 27 to September 16,' *GM,* v. 10 (1834), p. 415.

[328] Ibid., p. 507.

building a fortified castle for his family's use, and a further £280,000 (£255.7m) on building cottages and houses on the estate, each of which had three acres of land.[329]

After Loudon's time the gardening press, which had grown substantially in size, played a significant role in publicising and promoting this trend sometimes in association with voluntary societies. In 1859 the Agricultural Improvement Society held a competition in the *Gardeners' Chronicle* for the best design for a labourer's cottage. In 1867 the Central Cottage Improvement Society, in association with the Society of Arts, in a similar competition, attracted 150 entries. The winning entry, by John Birch, was for a design with three bedrooms, living room, scullery, pantry, wood-house, cesspit and privy, at a cost of £105 (£68,070).[330] He received commissions to build cottages to this design from Earl Spencer at Althorp and Earl Delawarr at Wythyham and Ringmere.[331] The village of West Ella was modernised in the Gothic style 'From a poor dingy country village he transformed that of West Ella into one of the prettiest and most picturesque in the country, every cottage, barn, or shed being changed into 'a thing of beauty'.[332] The cottages thus transformed have survived to the present day, mostly now listed Grade II by English Heritage, as are the cottages in Paxton's village at Edensor.

3.1.2 Rural Housing in the Late C19th

A Royal Commission on rural living conditions showed that rural housing had greatly improved by the last decade of the C19th.[333] Most of the hovels of the kind in which Alexander Somerville had been brought up had either fallen down or been pulled down. The

[329] Franklin, J., *The Gentleman's Country House and Its Plan, 1835-1914* (London, Routledge & Kegan Paul, 1981), p. 26.

[330] Hibberd, S., 'Obituary', *GM*, v. 13 (1870), p. 358.

[331] 'Cottage Plans,' *GC,* v. 27 (1867), p. 1327.

[332] Hibberd, p. 358.

[333] Royal Commission on Labour (RCL), *The Agricultural Labourer* (London, HM Stationery Office, 1893).

commission identified a number of reasons for the improvement in standards. First, legislation had given rural sanitary boards under the Public Health Act, 1875 and the Housing of the Working Classes Act 1890 powers to enforce higher standards. Secondly, resident landowners and the owners of large estates had built new houses of a high standard partly to attract and retain workers, partly to maintain their reputation as good estate owners and partly for philanthropic reasons. Estates with a resident agent also tended to keep their houses in good repair. Assistant commissioner Arthur W. Fox, who surveyed districts in five counties in the North-West, North-East and East of England reported that the best cottages were nearly always found in places which belonged to landed proprietors 'who build them without expecting a direct return for their money; perhaps with the object of attracting a good class of … labourer, or of improving the appearance of their property, or it may be to serve a philanthropic end'. He cited the examples of Mr Howard's estate at Greystoke, Sir Wilfred Lawson's at Brayton and the Earl of Lonsdale's at Lowther Castle.[334] Assistant Commissioner Aubrey J. Spencer, in a survey of seven counties in the south and west, observed 'In most of the large estates which I saw, cottages are exceedingly well kept up'. However he noted that those cottages belonging to independent owners of small means were frequently in very poor condition. These had often been built on waste-land by the roadside, using poor materials.[335] It was noted that whilst most cottages built in the twenty years prior to the report were of a much higher standard than those constructed before that time, there were continuing problems with drainage and the water supply, in rural areas where mains drainage and piped water did not exist. At Ampney Crucis, Nr Cirencester, water had to be carried 250 yards from the nearest available spring.[336] In Cambridgshire the residents of the village of Manca had to travel to a river half a mile away to collect water. Sometimes it was

[334] RCL, part III, p. 16.

[335] Ibid., part V, p. 15.

[336] Ibid., part V, p. 55.

collected from ditches. 'In the fens it's often not fit to drink, being green or red; it's like drinking blood'.[337] In Cottered a villager remarked 'This is a very bad place for water. I have never had a good cup of tea since I came here. The water stinks in the tea as it is only ditch water'.[338]

As regards drainage, it was noted that the number of houses without privies, or sharing a privy with neighbours had diminished over twenty years. However, in some areas the problem remained. In Truro, although the number of cottages with privies had greatly increased, it was common to find a whole row of cottages without any privy accommodation at all.[339] An analysis by the Chief Medical Officer of Health, Dr Bonar, of 1,959 households in eight Cornish villages found that 20% had no privy at all, and 50% shared a privy between two or three houses.[340] The same report noted that 20% of the cottages had no regular water supply during the whole year and that in the summer of the survey many wells had run dry.

Cottages of this standard may be compared to the tenements and cellars which characterised the slums in urban areas[341] which equally lacked sanitation and running water. However this type of rural accommodation was occupied for the most part by day labourers rather than farm servants or estate workers[342] and will therefore have been occupied by only a small minority of gardeners.

[337] RCL, part V, p. 82.

[338] Ibid., part V, p. 155.

[339] Ibid., part I, p. 34.

[340] Ibid., part II, pp. 112 & 16.

[341] Burnett, p. 58.

[342] Ibid., p. 123.

3.1.3 The First Bothies

Aspiring gardeners were recruited primarily from the socio-economic group which inhabited the comfortless cottages which predominated in the early C19th, with a disproportionate number from Scotland (See chapter 6). The standard of bothy accommodation at the beginning of the C19th mirrored that of cottages in that period. There are numerous accounts from gardeners who later rose to eminence of the poor conditions, of which that of Owen Thomas is representative. Thomas, who started work as a gardeners 'boy at the age of nine, was one of 11 children born to an estate labourer in Anglesey. At the age of 20 he had reached the rank of journeyman gardener and obtained employment at Little Aston Hall for the Hon Parker Jervis.

> I was at the outset introduced into a stoke hole, and from thence passed through the labourer's mess room, all dark and dismal, and then through some other dens, until at the end of a series of these enchanted palaces, we arrived at the bothy. It consisted of one miserable small room, with scarcely any ventilation, and practically the only furniture was a dingy bed in one corner, on which two of us had to sleep.[343]

Both the bothies and the hovels were unhealthy but the bothies could also be dangerous when they were situated next to the boilers. They were often placed on the northern aspect of a kitchen garden wall, next to the boiler house, so that the young gardeners would be on hand to stoke the boilers during cold nights. In 1843 at Hackwood Park in Hampshire three young gardeners who lived in a bothy adjacent to the stoke hole lost their lives in two separate incidents as a result of breathing in smoke from a flue which heated a conservatory behind the bothy. One of the men was found dead from causes which were unascertained and a few days later his two companions also died. It was found that they had been poisoned by hydrocyanic fumes which had been produced by burning laurel wood.[344] In 1873 an

[343] Wilcox, A., 'Incidents in the Lives of Well-known Horticulturists,' *GL,* v. 24 (1913), p. 43.

[344] H.C., 'Home Correspondence: Death from Suffocation,' *GC,* v. 33 (1873), p. 1468.

eighteen-year-old journeyman, Thomas Hayward died after being overcome by sulphurous fumes when the boiler flue was lit for the first time in the autumn. Three men were also overcome by fumes from a faulty boiler at Harefield in Middlesex in 1881, causing one of them to die. The coroner's jury found that the bothy 'was not fit for humans to sleep in'.[345]

Rough and ready working conditions were the norm across all occupations in the early C19th. One of the early influences upon Clare was the poet Robert Bloomfield, who described his work as 'garret poetry 'and who was apprenticed in the shoemaking trade in London. In 1800 he, together with his brother George, shared a 'garret 'with three others, which became the space in which they lived, worked and slept.[346] Life there was described a 'far from being clean and snug', a just reflection of the fact that the five had to share just two turn-up beds.[347] There were health implications of cobblers having to work in such cramped conditions. Bernardino Ramazzini in a medical report noted that the continuously bent posture adopted by cobblers whilst working resulted in them becoming 'round-shouldered like monkeys'. Others noted that the hours of sitting down to work resulted in poor digestion and circulation and the lack of exposure to sunlight led to sallow complexions.[348] Gardeners, and agricultural labourers generally, enjoyed the advantage of being able to separate their area of work from their place of sleep, and to enjoy a relatively healthy working environment.

[345] 'Accommodation for Gardeners,' *GC,* n.s. v. 16 (1881), p. 566.

[346] Davies, J.P., *Artisans and the City: A Social History of Bristol's Shoemakers and Tailors 1770-1800* (Bristol, University of Bristol, 2003), p.84.

[347] Ibid., p. 84.

[348] Ibid., p. 101.

The bothy had originated in the 1790's as a rudimentary form of accommodation for Scottish farm labourers. Prior to this time farm workers had routinely lodged with the farm owner, sharing the farmer's food and hearth, but as farms merged and became larger, necessitating the employment of more men, and as the desire for privacy on the part of the owners grew, the men were moved from the farmhouse to a barn or shed in which they had to fend for themselves. This system has been extensively studied and condemned as an early manifestation of how the move to a capitalist form of enterprise resulted in a diminution of the standard of life of the worker, concomitant with a rise in the comfort and privacy of the employer.[349]

It is a reflection of the fact that so many Scots became gardeners that the word 'bothy 'was adopted for their dwelling within the garden. As with the Scottish farmers, an existing building, often a storeroom or shed, was adapted for their living accommodation and as sheds were commonly built on the back walls of kitchen gardens, next to the coal store and the boilers, it was these sheds which were improvised. That this accommodation was improvised rather than planned can be ascertained from the fact that although many designs for kitchen gardens were published, none provided for living accommodation on the back walls. In a series of designs by Rutger, for kitchen gardens of various sizes and styles, which were published in the *Gardener's Magazine* in 1834, the designs included sheds on the back walls for tools, mushrooms and other purposes, but not for accommodation in any. An example is contained in Figure 12. The accommodation for the under gardeners (marked 19 on the plan) is contained inside the kitchen garden walls, facing east, opposite the head gardener's house, which faced west. In the plans of the smaller kitchen gardens, in the same series, the under gardeners 'lodging room is located above the 'fruit and onion 'room. In a

[349] Carter, I., *Farmlife in Northeast Scotland 1840-1914: The Poor Man's Country* (Edinburgh, John Donald, 1979).

larger garden plan, which showed four acres within the walls and five outside the walls, a series of rotundas are shown, built above the height of the garden walls which provided accommodation for gardeners and which also operated as look out posts, to protect the garden at night.

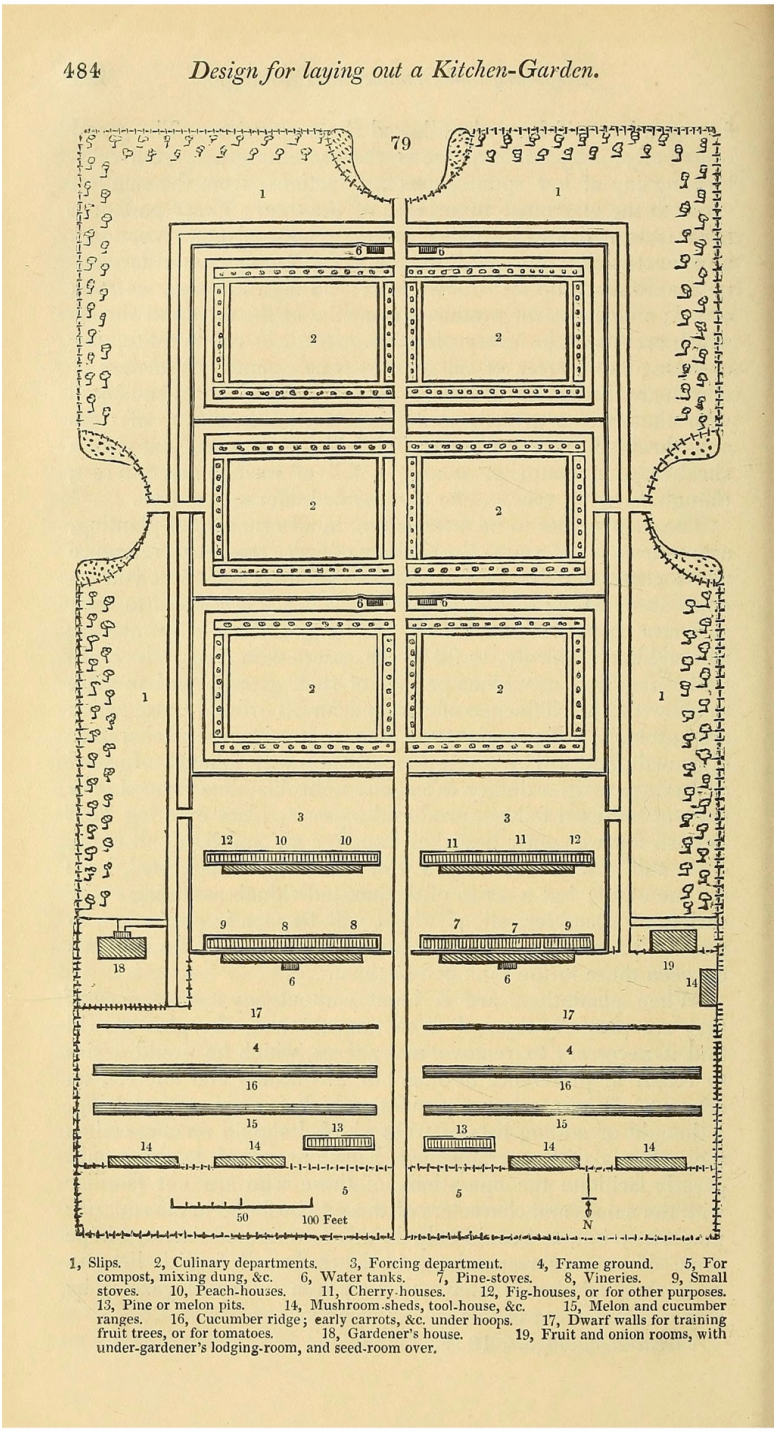

Figure 12. An example of a kitchen garden plan showing the gardeners 'accommodation[350]

[350] Rutger, T., 'A Series of Designs for laying out Kitchen-Gardens – Design 5…' *GM*, v. 10 (1834), p. 484.

The process of improvisation was succinctly described in 1832:

> It is common practice, especially in Scotland, for the young men employed in the garden to be lodged upon the premises, and yet seldom is there any place thought of for them until all the buildings are completed, and then, as a matter of course, one of the sheds behind the houses gets a sort of fit up for their reception.[351]

Although much of this accommodation was damp and unhealthy this was not always the case. The same writer acknowledged that 'there are many comfortable rooms thus formed'.[352] In a review of Lambton Castle in 1834 it was noted that four gardeners shared 'two very commodious well-furnished rooms'.[353] In the same year Juvenis, returning to Woodhall gardens, where he had served his apprenticeship, wrote:

> I was agreeably surprised to find that in addition to the gardener's lodge, or shed, in which with the rest of the young men I cooked my victuals and slept some years ago, a good sized room was built, well-lighted, with a good fireplace, and fitted up with writing desks, tables and bookshelves. There is a lobby between this and the cooking-room, so that the noise produced in that room, by those who do not read, is not heard in the reading room.[354]

This reflected a common sentiment expressed in the *Gardener's Magazine*, which was the only forum for comment at the time, that the provision of a suitable place for gardeners to study in the bothy was as important as an improvement in living conditions:

> The lodges in which he dwells are often so small as to render him very uncomfortable, and to prevent his fully profiting by the short leisure which is afforded him'… I really think that gardeners ought to have at least two rooms for their use; and there can be no doubt that such accommodation would materially accelerate their improvement.[355]

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[351] Scientiae et Justitiae Amator, 'On the disabilities experienced by young gardeners, in acquiring professional and general knowledge, *GM*, v. 9 (1833), p. 165.

[352] Ibid.

[353] G.W., 'Notice of Some Country Seats in the North-Eastern Counties of England-Lambton Castle', *GM*, v. 10 (1834), p. 122.

[354] Juvensis, 'Woodhall Gardens, Renfrewshire', *GM,* v. 10 (1834), p. 236.

[355] A Young Gardener, 'On the Professional and General Improvement of Young Gardeners', *GM*, v. 9 (1833), p. 433.

Significantly Loudon, who had himself shared a bed in cramped conditions whilst an apprentice gardener in Edinburgh in the 1790s, did not extend his campaign for better cottage accommodation to bothies, presumably because he did not think that there was a pressing need for reform.[356]

3.1.4 Early Improvements to Bothy Accommodation

Significant improvements in bothy accommodation are discernible from the 1830s. After J. Cruickshank became head gardener at Lowther Castle for Lord Lonsdale in 1837 he obtained permission to build a new bothy, which he regarded as an inducement for the young gardeners to stay out of the public house and to study.[357] One of John Fleming's first actions after his appointment as head gardener at Trentham was to move the bothy-men out of a shed into a cottage which had been reserved for an under gardener.[358] In some cases, the upper floors of garden sheds were made into comfortable rooms, as was observed at Dalkeith Palace in 1849:

> The upper storey of these sheds is divided into fruit, seed and store rooms, together with potting sheds and the living rooms for the young men. When we visited them, which was by accident, just before breakfast, they were the picture of cleanliness and comfort; one long room is set apart as a breakfast and dining room, with a long table in the centre, covered with a perfectly clean table-cloth, and there was a cheerful fire in the room; another and similar room with a good library of gardening and other books and newspapers, is set apart for study and the useful employment of evenings; this is carefully supervised by Mr M'Intosh and his son. There are two large apartments subdivided into rooms of ample capacity for two beds in each, a bed being appropriated to each man. These rooms, together with beds and linen we carefully inspected. They were in every respect clean and wholesome, and well ventilated. Some may ask, what so minute an account of these rooms have to do with gardening?

[356] Loudon's bothy life is described by D.M, 'Death of a Fellow Apprentice of the late John C. Loudon' *GC,* n.s. v. 2 (1874), p. 816.

[357] Cruikshank, J., 'Notes Made during a Horticultural Tour from Lowther Castle in Cumberland to Exeter in Devonshire', *GM,* v. 9 (1833), p. 584.

[358] Sambrook, P. *The Servants' Story: Managing a Great Country House* (Stroud, Amberley, 2016).

> We answer, everything. The moral character of the men, as well as the preservation of their mental and physical energies, depends on their being well kept.[359]

By 1871 David Fish was able to write: ‘We are glad to note that at last the tide of improvements has risen high enough to threaten to sweep away one of the most detestable of all places called a house- the 'bothie' for young men, hidden away out of sight in the back-slums of so many gardens’.[360]

3.1.5 Improvements in Bothy Accommodation after 1870

Designs for bothies are absent from Loudon’s *Encyclopaedia* and also from his magazines on gardening and architecture. However they began to appear in the 1870’s, when purpose-built bothies were first constructed. A simple single storey structure at Wimbledon House, with separate bedrooms for five men, two living rooms and a sick room as well as two bathrooms, was illustrated (Figure 13) with a floor plan (Figure 14) in the *Gardeners ̓Chronicle* in 1870.[361]

[359] R.G., 'Garden Memoranda,' *GC,* v. 9 (1849), p. 711.

[360] Fish, D.T., ‘Under-Gardener Lodgings,' *TG,* v. 1 (1872), p. 175.

[361] 'The Under-gardeners’ Cottage at Wimbledon House,’ *GC*, v. 30 (1870), p. 1215.



Figure 13. The bothy at Wimbledon House

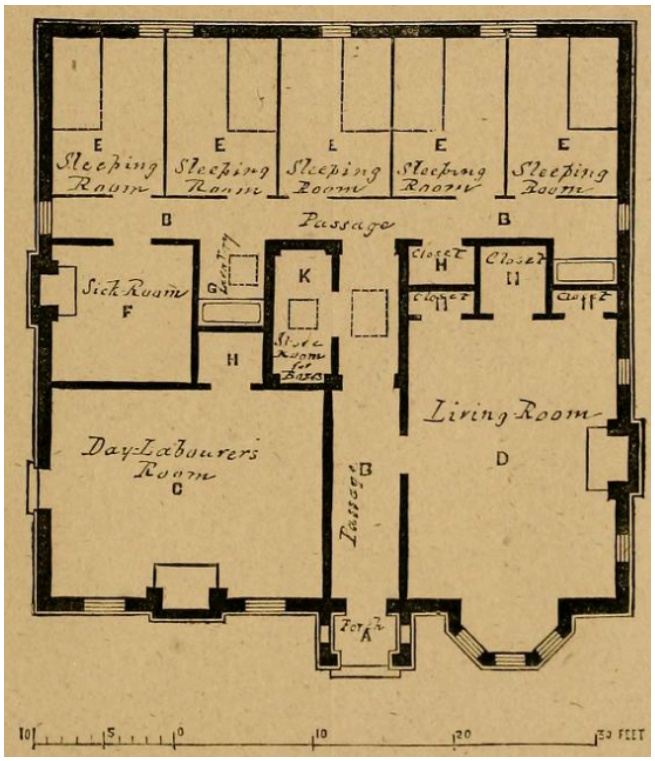

Figure 14. Plan of the bothy at Wimbledon Park. 'One of the most excellent houses for young gardeners we have seen is that in Mr. Peek's gardens at Wimbledon'.[362]

[362] Fish, 'Under-Gardener Lodgings', p. 175.

The same decade saw descriptions of new detached bothies being built at Longford Hall, Stretford, Endcliffe Hall, Sheffield, Vintner's Park, Maidstone, Lambton Castle, Durham, Clivedon, Berkshire, Belsfield, Windermere and at Park Place, Oxfordshire where it was reported:

> A picturesque building has been erected for [the young gardeners] with a large, comfortable, sitting room, kitchen, and lavatory lighted with gas, and a separate bed-room is provided for each. Adjoining this is the garden office and Grape room. There is also a garden library, and a botanical class is held here in connection with the Science and Art Department the gardener (Mr Stanton) being one of the Department Science teachers.[363]

These were only a small fraction of the number of new bothies being built, with the standard rising with each decade, even to the extent of including billiards rooms, as at Oakley Court and Frogmore, both in Windsor.[364] The building of the bothy at Frogmore (Figures 15 & 16) was organised by Owen Thomas and was the antithesis of the bothy which he had occupied at Aston Hall. In 1891, when he was 48, Thomas, after having risen to be head gardener for Sir Robert Peel at Drayton Manor and then for the Duke of Devonshire at Chatsworth was appointed head gardener to Queen Victoria at Windsor, a position which he held until the Queen's death in 1901. The building of the new bothy was one of his last tasks in the post. The two storey building, described as being in the 'Old English' style, occupied three sides of a square. On the first floor there were 20 bedrooms for single occupancy plus three more spacious foremen's rooms. The building had a hot water supply and, at a time when few country houses had such a facility, central heating through hot water pipes and radiators. Lavatory facilities, also on the first floor, consisted of two bathrooms supplied with hot water plus several water closets and wash hand basins. Steel and concrete floors were intended to make the building fire-proof. On the ground floor there was a library with extensive dining

[363] 'Country Seats and Gardens of Great Britain - Park Place', *TG,* v. 16 (1879), p. 573.

[364] Wilcox, A., 'Famous Gardeners at Home No. 251: W.C. Modral, Old Warden Park, Biggleswade,' *GL,* v. 11 (1906), p. 265.

and recreational facilities, and a sanatorium with two sick rooms. The hall, stairways and communal rooms were oak panelled, and comfortably furnished, with an extensive library and pictures supplied by Windsor Castle.[365]

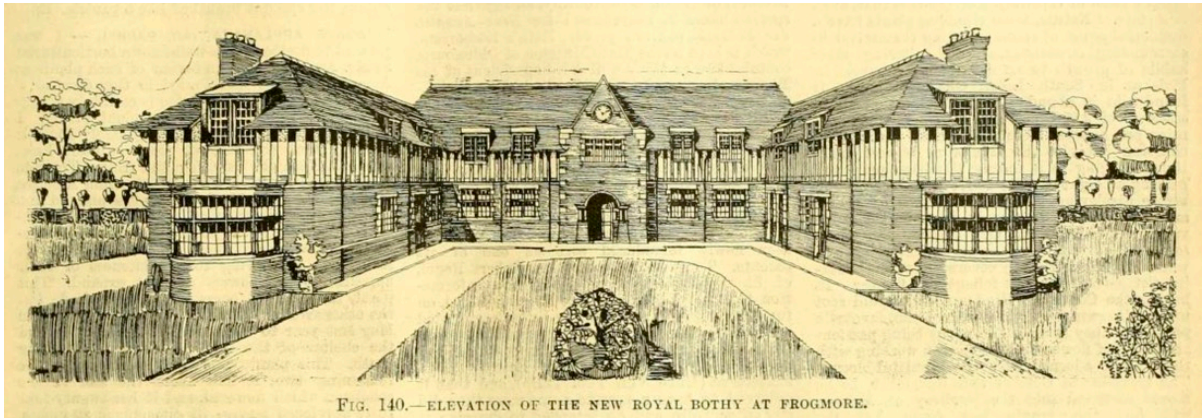

FIG. 140.—ELEVATION OF THE NEW ROYAL BOTHY AT FROGMORE.

Figure 15. Elevation of the bothy at Frogmore

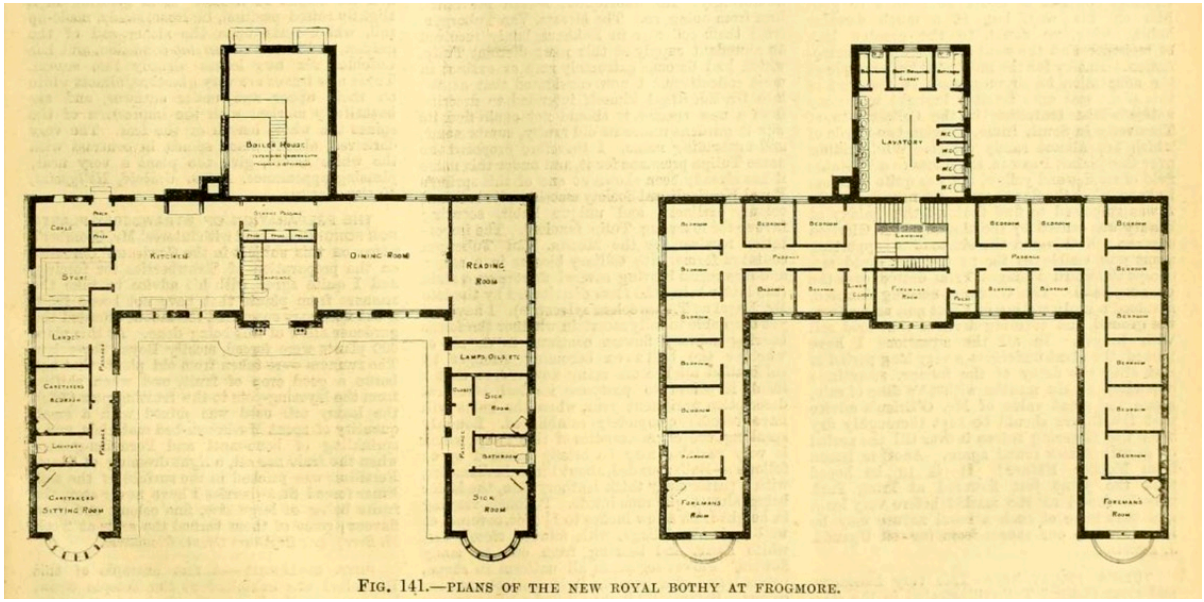

FIG. 141.—PLANS OF THE NEW ROYAL BOTHY AT FROGMORE.

Figure 16. Floor plan of the bothy at Frogmore

The bothy at Frogmore was very exceptional, as befitted a residence of the Queen, but the progression in the quality of bothy accommodation can be seen in many other examples. At Lambton Castle, where the 'two very commodious well-furnished rooms 'described in 1834 had been replaced, fifty years later, with the 'really handsome building', illustrated at Figure

[365] 'A Royal Bothy,' *GC,* s. 3, v. 33 (1903), p. 363.

18, which contained a dining room, reading room, bathroom and a separate bedroom for each gardener.[366] It was remarkably similar in appearance to the head gardener's house (Figure 17).[367] This was one of several instances of the bothy being built in a style comparable to the head gardener's house. At Trentham, John Fleming had designed his own house in 1855, submitting the plans for approval to Sir Charles Barry (the architect of the main house), who added some minor features. (Figure 19).[368] The bothy, erected in 1878 followed a kindred style (Figure 20).[369] The plan of the ground floor (Figure 21) shows an indoor lavatory, marked E with a series of wash basins and a bath. There was similar equivalence between the head gardeners 'house and the bothy at Fordell Gardens, Inverkeithing; Tring Park, Hertfordshire and Bagshot Park, Surrey. At Luton Hoo the bothy was designed as an exact replica of the head gardeners 'house, the two buildings built to face each other on the perimeter of the kitchen garden (Figures 22 & 23).

[366] 'House Accommodation for Gardeners at Lambton,' *GC,* n.s. v. 17 (1882), p. 529.

[367] Ibid., p. 532.

[368] 'Memoir of Fleming,' *Journal of Horticulture,* v. 13 (1855), p. 36.

[369] 'The Young Gardeners' Lodge at Trentham,' *GC,* n.s. v. 10 (1878), p. 721.



Figure 17. The gardener's cottage at Lambton Castle



Figure 18. The bothy at Lambton Castle

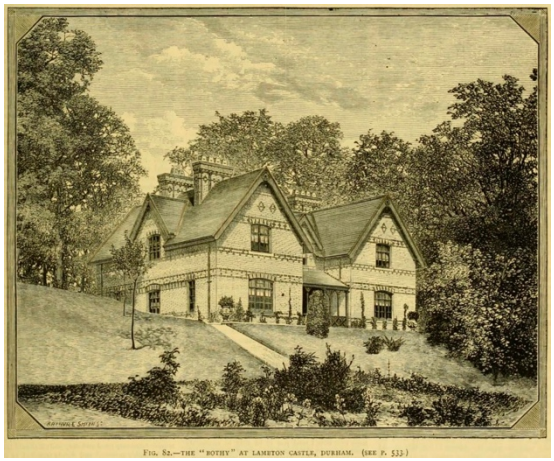

Figure 19. The gardener's cottage at Trentham



Figure 20. The bothy at Trentham

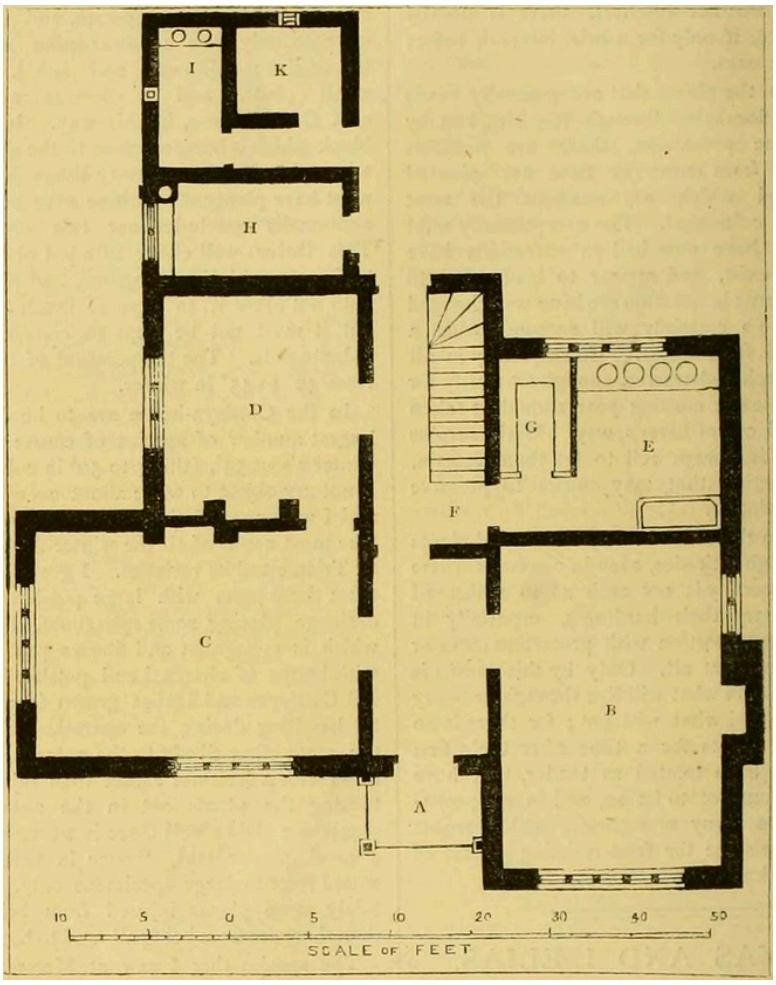

Figure 21. The plan of the ground floor of the bothy at Trentham


Figure 22. The gardener's cottage at Luton Hoo


Figure 23. The bothy at Luton Hoo

3.1.6 Bothy Culture

In the course of time the bothy came to be regarded as more than a place of accommodation. Bothy life came to be referred at as 'Bothiana 'or 'Bothydom'.[370] It was contrasted with earlier bothies where the men 'fared for themselves as best they might and endured hardships without a grumble'.[371] The men expected to have their own bed, in its own private space and for the room to be warm and well lighted. There would be separate rooms for meals and for recreation, a good water supply and a bathroom. In most cases a housekeeper, usually from the village, not the main house, would be available to clean, change the bedding and cook the evening meal. Great emphasis was placed on the need for facilities to study, by the provision of a room separate from the bedrooms and dining area. As early as 1849 it had been observed:

> Ask all the gardeners now in Great Britain how they came to be in possession of their present situations, and nine-tenth of them will reply, that is was by a course of practical study under the bothy system that they acquired that knowledge of gardening which now enables them to discharge so manfully the multifarious duties of their calling.[372]

The opportunity to learn came not just from private study but from the interaction with gardeners from neighbouring estates. It was the practice to have bothy 'mutuals 'once a week, described as 'a source of much pleasure and interest'[373] with each bothy taking it in turns to be the host. The very fact of living with other gardeners during their formative years established a bond and 'strengthened their feeling of belonging to a distinct skilled

[370] An Old Boy, 'Bothiana,' *Journal of Horticulture,* v. 30 (1895), p. 330.

[371] 'The Bothy,' *TG,* v. 61 (1902), p. 65.

[372] Smith, M., 'Garden Bothies,' *North British Agriculturist* (19 Apr., 1849), p. 154.

[373] 'The Bothy,' *TG,* p. 65.

community'.[374] The oral history research carried out by Iris Strachan, in which fourteen retired gardeners were interviewed about their experiences of bothy life established that they enjoyed comfortable, although sometimes spartan, living conditions and in spite of long arduous working hours they looked upon this time with pleasure and nostalgia. They especially valued the informal meetings which they had with gardeners from other estates, in part because of the exchange of knowledge, but also because of the sometimes long lasting friendships which developed.[375] The camaraderie of the bothy is one explanation as to why, when given a choice, the gardener would usually choose the bothy over its alternative, which was to share lodging in an estate cottage, where the cost was usually greater, as was the distance to work, which meant a loss of valuable time during meal breaks. Gardeners also complained of a lack of privacy and peace in lodgings, especially when sharing accommodation with children.[376]' Observer 'wrote: 'I think 90% of gardeners prefer the bothy to lodgings as it is proved when they get the choice between the two. My days of the bothy are a thing of the past, many years ago, still I can look back with pleasant recollections of those days'.[377]

It is apposite to compare the development of the gardening bothy and the Scottish farm bothy from which it originated. A study carried out in 1915 found that there had been few improvements to farm bothies during the whole of the C19th. They usually consisted of one or two sparsely furnished rooms with a table and benches, but rarely chairs or wardrobes. Wash-houses were rare as were privies. Sometimes the water supply was two hundred yards

[374] Robertson, F.W., 'The Working Life of Scottish Gardeners Between the Wars', *Review of Scottish Culture*, v. 10 (1997), p. 67.
[375] Robertson, p. 67. The gardeners who were interviewed worked outside the time period of this thesis, but the information is regarded as relevant as the pre-war systems were still in place.

[376] A Bothy Supporter, 'The Bothy System,' *GW,* v. 17 (1901), p. 238.

[377] Observer, 'The Bothy System, *GW,* v. 17 (1901), p. 238.

from the accommodation. As a rule the men did their own cooking and cleaning.[378] Because of a lack of adequate heating the men often shared a bed for warmth.[379] The Royal Commission on Housing in 1917 observed that little had changed from the days when the system was first roundly criticised seventy years before. 'It combines a maximum of discomfort with a minimum of civilised conditions'.[380]

In spite of the advances which took place in the second half of the C19th it was by no means the case that all the unsatisfactory bothies were replaced, or that all gardeners were housed comfortably. But the nature of problems, when they arose, changed. The emphasis shifted from complaints about dampness, overcrowding or basic matters of comfort to issues such as the lack of a suitable place for study and recreation or the absence of a housekeeper to cook or clean.[381] The latter complaint was often framed in the context that when gardeners had to fend for themselves they had inadequate time left for study. The nature of the changing environment can be ascertained from the memoir of Arthur Hooper, who wrote about his experiences of living in five bothies as he progressed from journeyman to foreman from the ages of 18 to 31.[382] Hooper had served his apprenticeship under his father who was head gardener for Sir Cecil Chubb at Bemerton Lodge with a staff of 17.[383] He found the furnishings at his first bothy, which was housed in a two storey cottage at Fonthill House, spartan compared with the head gardener's house in which he had been brought up, but clean and warm nevertheless. At his second posting, at Norman Court in Hants, he found that in the three bedroomed cottage there were only four chairs at the dining room table for the six

[378] Smith, J.D., 'The Housing of the Scottish Farm Servant,' *The Economic Journal,* v. 25 (1915), p. 470.
[379] West, G.J., *Farm, Family and Neighbourhood in Post-Improvement Perthshire: An Historical Ethnography* (PhD thesis, University of Edinburgh, 2000), p. 162.

[380] Ibid., p. 159.

[381] 'The Bothy,' *TG,* pp. 45-6.

[382] Hooper, A., *Life in the Gardeners' Bothy* (Malthouse, 2000)

[383] Ibid., p. 122.

occupants (the remainder used stools), and that the living room contained no furniture at all, but was used for storage. He was dismayed to find that there was no running water in the cottage and that buckets had to be filled from a tap on the outside wall.[384] The head gardener at Norman Court resisted the young gardeners 'complaints on the basis that hardship was character forming, but the defects were remedied when they were brought to the owner's attention.[385] Housekeepers, who cooked meals and attended to the cleaning and laundry, were provided at all the bothies which Hooper occupied. Hooper commented:

> For the most part we all enjoyed our life in the bothy. To a considerable extent it was a life which had its freedom, except perhaps during 'duty 'weeks, so we didn't really mind being kept on our toes most of the time, and the companionship was something to cherish.[386]

From a career perspective he found it very valuable to build up a network of connections which he did from the weekly meetings of the Mutual Improvement Society and from the system whereby journeymen gardeners changed jobs frequently, so that he encountered new faces on a regular basis.

3.1.7 Conclusion

The discourse on bothy accommodation has been greatly influenced by the many vivid accounts given by gardeners in their memoirs written in the second half of the C19th in which they described the hardships which they had endured several decades before in damp dirty and dangerous back sheds. There were many instances of sheds being used for accommodation in the first half of the C19th, although, as has been shown, not all were bad. For the most part, they were perceived by their occupants at the time as no worse than the

[384] Hooper., pp. 72-3, 79.

[385] Ibid., p. 90.

[386] Ibid., p. 122.

cottage accommodation from which they had come. Loudon, the great advocate of improvements in the welfare of gardeners, did not include bothies in his campaigns, which indicates that he did not consider their condition a pressing problem. He did campaign vigorously for improvements to cottage accommodation and his campaigns, supported by gardening luminaries such as Joseph Paxton, achieved visible success as hovels were replaced by model cottages on many estates. These cottages followed the precepts laid down by Wood and reinforced by Loudon by being well constructed, of durable materials, free from damp, with an adequate water supply and good drainage. At the beginning of the C19th, at the height of the 'picturesque 'movement, it had been considered acceptable, even fashionable, to have a tumbledown cottage as part of a garden vista. At a time when the very definition of a cottage was a hut or a hovel, there was no social stigma in having buildings of that kind huddled around the entrance to a country estate, as at Chatsworth. Because of the improvements which were made the word 'cottage', in a complete reversal of its earlier meaning, became a metonym for domestic comfort, whose attributes became obligatory in any new building and were seen as a right by its occupants.[387] Gardeners, whether housed in bothies or cottages enjoyed those rights and those comforts so that by 1914 they were probably the best housed of all rural workers. The fact that this was not inevitable, as a result of the general rise in living standards during the period, is evidenced by the contrast with the inhabitants of Scottish farm bothies who saw hardly any rise in housing standards during the whole of the long C19th as did a substantial proportion of farm labourers, as opposed to farm servants, as the Royal Commission had found.

Several contributing factors for the relative success of gardeners can be adduced. First, the campaign for better cottage accommodation was driven in part by the gardening community.

[387] Crowley, J.E., *The Invention of Comfort: Sensibilities and Design in Early Modern Britain and Early America* (Baltimore, JHU Press, 2003), p. 12.

Gardening journals which advocated the building of better cottages had significant reputational effects, reaching most of the relevant estates and being read by their owners and their wives. The latter, as Loudon had recognised, were important decision makers, especially if they took a philanthropic interest in the welfare of the estate and its workers. The magazines were also read by head gardeners who on the whole were interested in promoting the interests of their workers. It was the case that some head gardeners believed that harsh living conditions were character forming or that the new generation did not deserve better living conditions than the old, but the evidence is clear that many improvements were carried out at the behest of the head gardener. It was justified as a means of both retaining and attracting good quality staff and with the extensive networking between gardeners, which came into effect partly because of the bothy system, those places with poor accommodation soon became notorious and places to be avoided.

Secondly, gardens were maintained for reasons of prestige and status and so were not subject to the same budgetary constraints as an enterprise run for profit. In the Scottish farms any expenditure on workers 'accommodation was a capital item which had to be justified alongside all the other items of farm expenditure and was clearly given a low priority. The farm labourers answered directly to the farm owner and did not have an intermediary with the status of a head gardener to represent them. A similar argument applies to the cottages identified by the Royal Commission as belonging to small independent farmers. Their ability to make repairs or improvements was dependent on the market rent, which may not have been sufficient to justify expenditure on improvements.

Thirdly, a garden was often part of a larger enterprise which included a home farm and leased farms, over which a steward presided. The steward's responsibilities included keeping the estate buildings in good repair. The buildings also reflected upon the status of the owner,

so there was an incentive, which was not wholly commercial, in keeping them in good condition.

Disgruntled gardeners were often heard to say that the plants were better looked after than they were. It was certainly the case that boiler technology for hot water pipes was developed for greenhouses decades before it was applied to domestic heating. Conservatories, or winter gardens, were often the only places in mansions in the C19th to have central heating. A garden also depended on an efficient water supply and good drainage in respect of which they were also at the forefront of technological advances. Arthur Hooper was justified in complaining that there was piped water to the greenhouses but not to his bothy but he did so in the context that in other rural occupations piped water did not exist. The garden bothy, when it was first created at the start of the C19th, was as uncomfortable and unhealthy as any rural accommodation. A century later, although standards varied greatly, some bothies were at the forefront of domestic housing design and bothy life had developed into an institution which had become valuable in the gardening hierarchy.

3.2 Head Gardeners' Houses

The head gardener was almost invariably provided with a house, which was rent free, although usually unfurnished, so the gardener was expected to bring his own furniture. Very occasionally the head gardener would be expected to stay in the mansion. David Fish recalls being offered the position of head gardener in 1845 at £30 a year where he was expected to share a room with a footman, an offer which he rejected, remarking 'Why couple the knowledge and culture of professional men with the rewards of a livery servant?'[388] In the first half of the C19th many instances were noted of unsatisfactory housing for head gardeners. Loudon wrote of the 'small, low-ceilinged and often damp 'houses provided for

[388] 'British Gardeners - David T. Fish', p. 655.

head gardeners[389] and on visiting the cottage of his namesake, James Loudon, the head gardener at Ham House in London he observed:

> We entered the very picturesque thatched cottage of Mr Loudon, and were grieved to find that what was so very pretty without was so very objectionable within. The rooms are small, and so low the ceiling as to be quite disagreeable to the eye; and to a person breathing in them for any time, most unwholesome. We cannot too strongly express our disapprobation of those architects who think more of external effect than of the comfort of the occupant, and actually do not bestow half the care on a cottage for a fellow creature than they do on a design for a stable.[390]

As late as 1853 Charles McIntosh, the author of *The Book of the Garden*, wrote:

> We often find, even in gardens of high pretensions, and where great expense has been gone to in minor details, the accommodation afforded the head gardener inferior to that which ought to be provided for his assistants; while the latter are lodged in damp and ill-ventilated dens, in general forming part of the back sheds and wholly unfit for human habitation.[391]

Both Loudon and McIntosh in their publications gave examples of what they considered to be best practice in the design of head gardeners 'houses. In 1832 Loudon published a series of eight designs by John Robertson for gardeners 'houses built into the walls of a kitchen garden. An example is shown at Figure 24, a five bay house with pilastered columns. There are four bedrooms on the first floor and on the ground floor bedrooms for a servant and an apprentice.[392] Both the parlour and the 'best bedroom 'are positioned to look out on to the garden 'for the convenience of inspection by night and by day'.[393] Loudon followed this with a series of designs for detached gardener's houses set in the slips of the kitchen garden.[394]

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[389] Loudon, 'As Useful Reading for Gardeners', *GM,* n.s. v. 2 (1836), p. 105.

[390] Loudon, 'Calls at Suburban Gardens: Ham House', *GM,* n.s. v. 1 (1835), p. 684.

[391] McIntosh, C., *The Book of the Garden,* v. 1 (Edinburgh, William Blackwood and Sons, 1853), p. 475.

[392] Robertson, J., 'Design for a Gardeners' House, adapted for the South Wall of a Kitchen-garden', *GM,* v. 10 (1834), p. 25.

[393] Loudon, 'Design for a Gardeners' House, containing Five Rooms and an Office; adapted for being Connected with the Wall of a Kitchen-garden', *GM,* v. 8 (1832), p. 553.

[394] See Loudon, 'Designs for a Gardeners' House' in *GM,* v. 8 (1832), p. 659-60; v. 9 (1833), p. 46; v. 10 (1834), pp. 24, 50, 261, 313, 373, 375, 429, 484, 538; n.s. v. 1 (1835), pp. 13, 64, 242.

Some were designed to be an ornament in their own right 'so as to be an agreeable object in the general scenery'.[395] This was followed by a trend, which took hold in the 1860s, for head gardeners 'houses to be built apart from the kitchen garden and to be set in their own grounds. An early example is Henham Hall in Suffolk where the head gardener's house is approached by a private drive and is surrounded by an ornamental garden (Figure 25). Whereas previously it had been thought desirable for a head gardener to be able to keep an eye on activity in the kitchen garden from his house, it was now thought appropriate, as a matter of status, for him and his family to enjoy some privacy. In 1881 Shirley Hibberd, writing in the *Gardener's Magazine*, argued that the head gardener should, as a matter of principle, live some distance apart from the main house, so as to be: '[Free] from observation and to enjoy the scope needful for the development of his own character and domestic life and to give needful attention to his wife and children'.[396] By this time the requirement for privacy, as befitted the head gardener's status, took precedence over the need for him to live in a dwelling where he would have constant supervision of his employees.[397]

This trend was confirmed in a series of articles published between 1901 and 1914 by Alfred Wilcox for *Garden Life*, in which images of 74 head gardener's houses were illustrated, of which the great majority were substantial buildings, often in their own secluded garden grounds, illustrating that the gardener's house at Henham Hall, (1881) with its 16 rooms and substantial private gardens was no longer exceptional.[398] At Wiseton Hall, (Figure 26)

[395] Robertson, 'Design for a Gardeners' House, Adapted for the South-East Angle of a Walled Kitchen-garden', *GM,* n.s. v. 1 (1835), p. 173.

[396] Hibberd, S., 'The Residence of a Gardener', *Gardeners' Magazine,* v. 24 (1881), p. 639.

[397] This follows a trend observed by Vincent, D., in *Privacy: A Short History* (Cambridge, Polity Press, 2016).

[398] *Garden Life*, which was published between 1901 and 1928 and did not name an editor.

although it was a relatively minor estate, the head gardener, G. W. Musk, reported in 1906 that it was lit by electricity fitted with 'every possible up-to-date appliance'.[399]

These changes illustrate the enhanced status of head gardeners in the third and fourth quartiles, a subject which is further discussed in Chapter 6

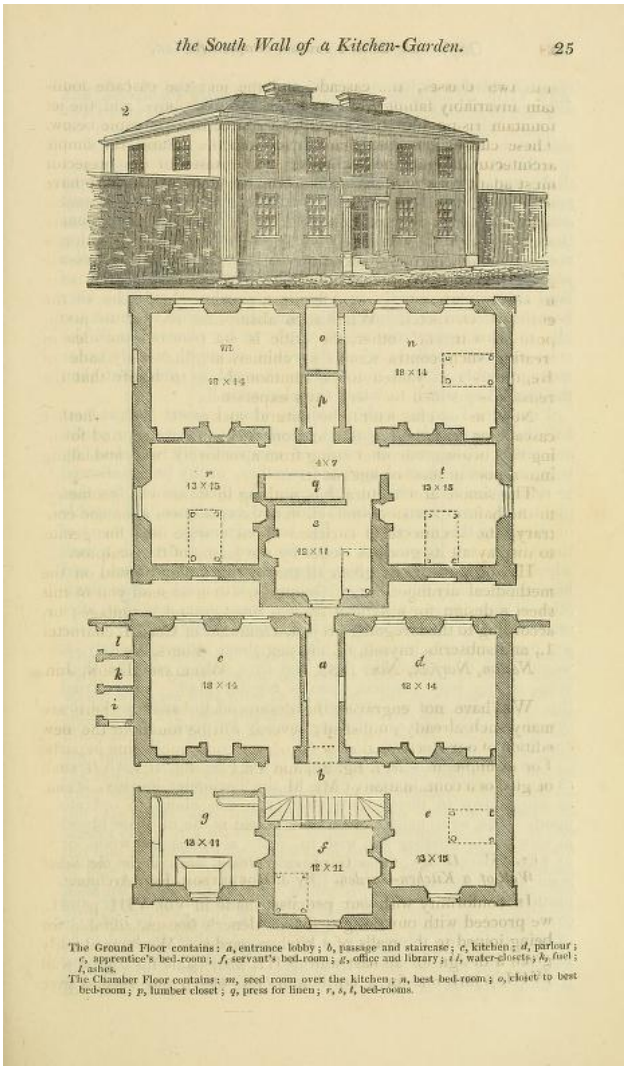

Figure 24. Design for a Gardeners' House.[400]

[399] Wilcox, A., 'Famous Gardeners at Home No. 250: Mr G.W. Musk, at the Gardens, Wiseton Hall, Bawtrey', *GL*, v. 11 (1906), p. 179.

[400] Robertson, 'Design for a Gardeners' House' (1834), p. 25.

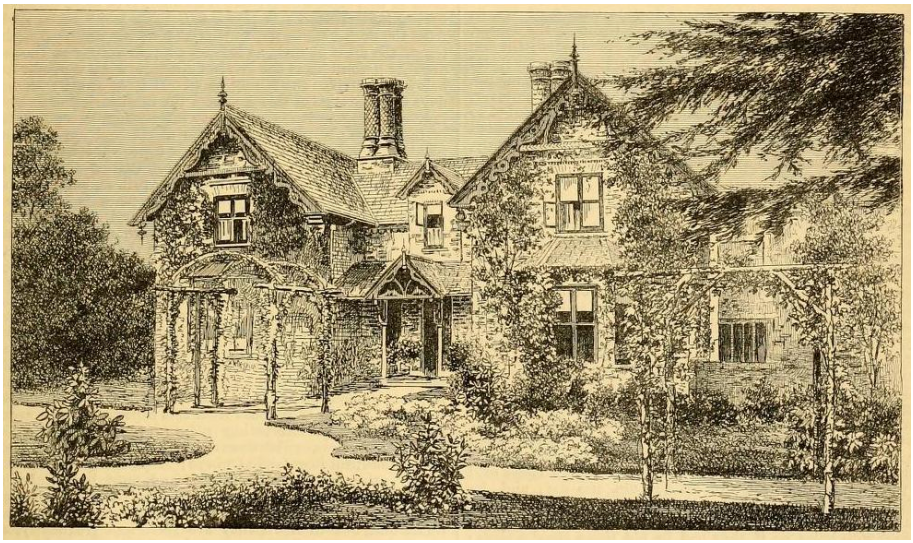

Figure 25. Gardeners' House at Henham Hall.[401]

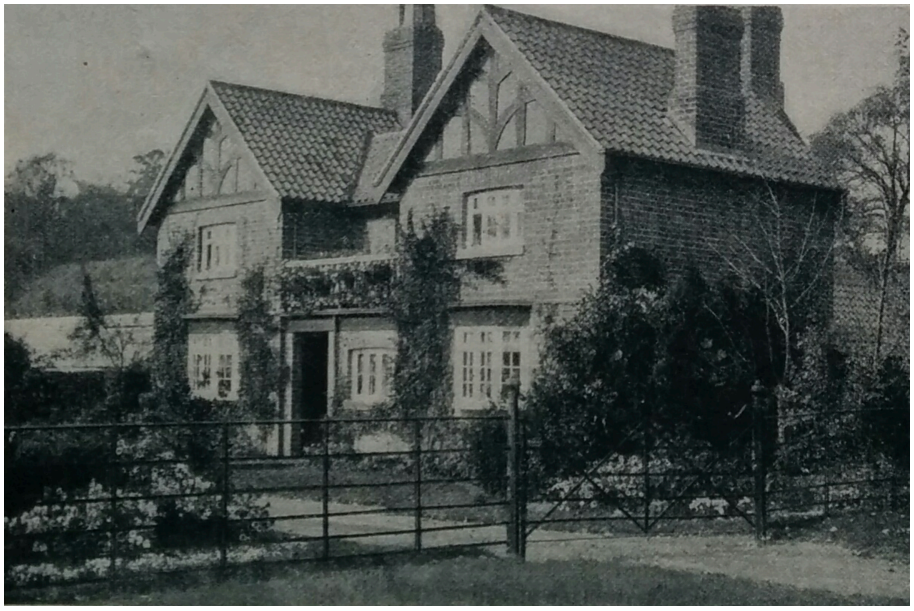

Figure 26. Gardeners' House at Wiseton Hall.[402]

[401] J.G., ‘Gardeners’ Cottages’ *TG*, v. 5 (1874), p. 435.

[402] Wilcox, ‘Mr G.W. Musk’, p. 178.

Chapter 4 Health and Consumption: A re-evaluation of the cases of the Ealing Gardener and Joseph Allen

4.1 Introduction

> It is hardly necessary to observe that the quoted wages never represent the labourer's actual income. Beyond the weekly payment-now standing at eleven or twelve shillings- he invariably receives a lump sum of £2 or £3 for harvest work. A cottage and garden is almost as invariably provided, free of rent, with, sometimes, an extra piece of ground for potatoes in some field near at hand.
>
> -Thomas Hardy, 'The Dorsetshire Labourer'[403]

There is an extensive literature and considerable controversy surrounding the question of whether the income of an agricultural labourer was sufficient to sustain an adequate diet. Two of the main exhibits in this debate are gardeners. The first, whose identity is unknown, is referred to as the Ealing gardener, the second is Joseph Allen. This chapter explores the dietary consumption and health of labouring gardeners with reference to these two well-known cases.

The Ealing gardener is an unlikely icon of Economic and Social History. Nothing is known of him except what is written in Sir Frederick Eden's report on *The State of the Poor,* published in 1797. The Ealing gardener gave details of the annual income and expenditure of his family of six and was castigated by Eden for spending 40% of his earnings on the best wheaten bread whilst leaving his wife and four children poorly clothed, and putting nothing aside for the future, in stark contrast to thrifty northerners, who ate more frugally, and lived more prudently.[404] He came to prominence when he was chosen by Robert Allen from the several dozen other workers who had supplied their details to Eden, as a 'typical' example of a high wage earner, in support of Allen's argument in the 'Great Divergence' debate, that a high wage economy was one of the factors which led to industrialisation.[405] Allen's choice of

[403] Hardy, T., 'The Dorsetshire Labourer', *Longman's Magazine*, v. 9 (1883), p. 266.

[404] Eden, F.M., *State of the Poor,* v. 2 (London, 1797), p. 434.

[405] Allen, R.C., *British Industrial Revolution* (Cambridge, Cambridge University Press, 2009), p. 29.

the Ealing gardener was criticised as being unrepresentative and his methodology and empirics were criticized,[406] but the basic facts of his income and expenditure have been more or less unchallenged, and they have formed the basis of a long running debate about the calorific intake of workers such as him. As part of that debate Meredith and Oxley examined the consumption of the family of another gardener, Joseph Allen of Bolton Percy, whose annual income and expenditure, on a more detailed basis than that of the Ealing gardener, had been attached as an appendix to Edwin Chadwick's Poor Law Report of 1843.[407] In that report Joseph Allen, although he worked as a gardener, was described as an agricultural labourer, an apt description in that labouring gardeners shared with agricultural labourers similar working conditions, in terms of hours, remuneration and accommodation. In terms of consumption there would be little difference between the two closely related occupations and for that reason it is appropriate for examples to be taken from the agricultural population as a whole to illustrate the lives of gardeners.

4.2 Health

In 1884 Dr William Ogle presented a paper at a Health Conference in which he compared the mortality rates of 80 occupations, finding that, between the ages of 25 and 65, gardeners had the second lowest mortality rate, marginally behind clergymen, and slightly ahead of agricultural labourers.[408] Their mortality rate was less than one half of that of doctors and one third that of innkeepers. In the previous year the United Horticultural and Benefit Society had reported that the rate of sickness benefit paid out during 1882 had been only 6

[406] Humphries, J., 'The Lure of Aggregates and the Pitfalls of the Patriarchal Perspective: a Critique of the High Wage Economy Interpretation of the British Industrial Revolution', *The Economic History Review,* v. 66 (2013), pp. 693-714.

[407] Meredith, D., and D. Oxley, 'Food and fodder: feeding England, 1700–1900', *Past and Present,* v. 222 (2013), p. 202.

[408] 'Health Exhibition', *GC,* n.s. v. 22 (1884), p. 20 & Executive Council of the International Health Exhibition, 'Discussion', *The Health Exhibition Literature*, v. 7 (1884), p. 127.

½d per head.[409] Gardeners were a sub-division of agricultural workers, whose comparative healthiness had been observed by Dr Edward Smith in a series of reports on the diets of various occupations carried out in the 1860s.[410] After considering the diets of 370 agricultural labouring families in 37 counties he concluded that they had a healthy diet, a finding which was supported by 'their known longevity and by the sickness records of Benefit Societies'.[411] He noted that even in Ireland, where living conditions were wretched and the diet monotonous, the labourers were well built and athletic 'with children sufficiently fleshy and rosy and bearing all the marks of health. The wife, moreover, was usually more robust and healthy looking than is observed in England'.[412] Dr Smith used agricultural labourers as the benchmark when looking at other occupations. Silk weavers he described as 'a sensitive and feeble race[413]' and of kid glove stitchers he noted 'the general state of health was not good'…'the whole of the families looked pale, and somewhat weak and dirty'.[414] He found that printers were 'commonly pale and thin with sunken features and large pupils' found that printers were 'commonly pale and thin with sunken features and large pupils'[415] and that they had exceptionally high levels of consumption and bronchitis. Rates of mortality amongst printers from the ages of 33-55 he found to be twice that of agricultural

[409] 'The United Horticultural Benefit and Provident Society', *GC* n.s. v. 19 (1883), p. 250.

[410] Smith, E., 'The Food of the Poorer Labouring Classes in England', *Sixth Report of the Medical Officer of the Privy Council. House of Commons, London, UK* (1864), pp. 216-329.

[411] 'The food of Agricultural Labourers', *The Saturday Review,* v. 18 (1864), p. 478.

[412] Smith, p. 287.

[413] Ibid., p. 220.

[414] Ibid., p. 219.

[415] Ibid., p. 286.

workers.[416] Tailors had a mortality rate 50-75% higher than that of agricultural workers, with 2/3rds of the deaths resulting from consumption.[417]

Edwin Chadwick, in a report for the Poor Law Commissioners in 1843 found evidence similar to Dr Smith's. One of several doctors who gave evidence to the commission, Mr Sutcliffe, of South Molton, who had practised there for 30 years, said that female agricultural workers were 'the most robust and healthy females we deal with'. James Flaxman, another Devon surgeon told him 'Lace makers, who earn low wages, from the poor quantity and bad quality of the food they take, suffer from diseases of the eyes and chest. In reality the agricultural labourer lives with his family in a state of luxury and comfort in comparison to a man who is married to a woman employed in manufacturing or lace making'.[418] Mr Tilley of North Pemberton, Nr Bridgewater, told the commission that female agricultural workers 'seem to be remarkably exempt from illness; for the most part they possess a ruddiness of countenance and a firmness of fibre', which he believed to be 'wholly attributable to the exercise and exposure consequent to their occupation'.[419]

The evidence to the Royal Commission on Labour in 1893 told a similar story. J. G. E. Davey, the agent to the Earl of Leicester, who managed 1,000 cottages on the Holkham Estate, Norfolk, described agricultural labourers as 'strong, vigorous, healthy'.[420] Of the agricultural workers in Northumberland, George Grey wrote:' As to physique they will

[416] Ibid, p. 401.

[417] Ibid., p. 424.

[418] Chadwick, *Report from the Poor Law Commissioners* (London, W. Clowes & Sons, 1843), p. 11.

[419] Ibid., p. 104.

[420] RCL, v. 1, part 3, p. 92.

compare favourably with any class of men in Great Britain'.[421] The commissioner in Moray, Banff and Nairn, Scotland described the agricultural worker as 'As fine a race as can be seen anywhere…Their diet and healthy work soon make them, even at 18, sturdy fellows'.[422] Whilst these expressions of opinion, albeit from doctors and other persons of authority, may be questioned individually, taken together, from so many different parts of Britain, they are authoritative.

Further support for the general good health of this class of worker is provided by the analysis of the biographies of 109 rural labourers between 1750 and 1850 made by Emma Griffin in which she identified the occasions when the narrator recorded instances of hunger.[423] There were 49 such examples, of which the great majority were in childhood or adolescence, with only eight being recorded in adulthood. The instances were for the most part non-persistent and were occasioned by an event which was specific to the family, such as the desertion of the breadwinner. Sometimes they were caused by the family life cycle, when there were a large number of small children to feed, as with James Nye, who was one of eleven. Sometimes there was an external economic shock as was experienced by John Lincoln during the 'year without a summer 'of 1816, which is now known to have been caused by the volcanic eruption of Mount Tambora.[424] This was one of the few cases where the entire rural community was affected, but the effect was temporary. After 1840 the proportion of rural biographers who wrote of hunger fell to about 5% and Griffin referred to 'the almost

[421] Ibid., p. 136.

[422] Ibid., v. 1, p. 113.

[423] Griffin, E., 'Diets, Hunger and Living Standards During the British Industrial Revolution', *Past and Present*, v. 239 (2018), pp.71-111 & Griffin, *Bread Winner*. (New Haven, Yale University Press, 2020) & Humphries, *Childhood and Child Labour in the British Industrial Revolution,* chapter 4.

[424] Griffin, 'Diets', p. 27.

complete disappearance of hunger from the countryside'.[425] Clearly she did not take account of Ireland. The biographies therefore provide little support for the conception that labourers were persistently malnourished, Ireland excepted.

4.3 Consumption

It is against this background that the extensive literature concerning the adequacy of gardeners' diets needs to be considered. The Ealing gardener and Joseph Allen both worked the standard number of hours for gardeners at that time, which was 6am to 6pm Monday to Saturday, except in winter, when it was dawn until dusk. The subject of hours of work is discussed in detail in Chapter 5, pages 204-7. It was the norm to have breaks totalling 1½ to 2 hours a day, so that the standard working day was about 10 hours long. The usual working year for gardeners was 312 days which is precisely the number of days which Joseph Allen was recorded to have worked, but the Ealing gardener worked for the equivalent of another 20 days doing piece work, presumably in the long summer evenings or on Sundays. There is no record of any days being taken off by either man for sickness, injury or holidays, but as it was the custom for gardeners to continue to be paid their wages if they were absent for any of these reasons, no firm conclusions can be drawn as to the actual number of days worked, but it is likely to have been close to the figure indicated. It is evident that both gardeners would require a substantial calorific intake to maintain their health and vigour with such a demanding and relentless work schedule. A calculation of daily calorific requirements for different tasks estimates that 5,700 calories would be needed for a 10-hour day of weeding or hoeing, 7,500 for digging or mowing with a scythe and 7,740 for cutting trees.[426] More

[425] Griffin, *Bread Winner*, p. 204.
[426] Muldrew, C., *Food, Energy and the Creation of Industriousness: Work and Material Culture in Agrarian England, 1550–1780*. (Cambridge, Cambridge University Press, 2011), p. 131.

conservatively Meredith and Oxley estimated that heavy physical work could require 5,000 calories for a typical 12-hour day.[427] These figures are all greatly in excess of those recorded in the expenditure calculations of both gardeners. For the Ealing gardener's family of six the calorie per adult equivalent was 1,441 and for the Joseph Allen family of seven it was 2,107.[428] As these values are below survival rates it is clear that the families had access to other resources, which were not recorded, but can be deduced from a close examination of their itemised expenditure.

A summary of the Allen family's expenditure was made by Frederick Purdy for an article published in the *Journal of the Statistical Society of London* and is reproduced in Table 7.[429]

Articles of Consumption	£	s.	d.
1095 1/2 lbs. of flour	20	1	1
Oatmeal	7	11 1/2	
Yeast		11	4
Meat	4	17	9
Potatoes		16	7
Butter	1	1	7 1/2
Cheese		3	
Bacon		6	8
Eggs		2	
Milk		18	
Rice	1	1	
Tea		17	4 1/2
Coffee		14	
Sugar	1	18	6
Treacle		2	9
Fruit		4	5
Salt and Pepper		1	8
Total during year	33	3	1/2

[427] Meredith & Oxley, p. 194.

[428] Meredith & Oxley, p. 203.

[429] Purdy, F., 'On the Earnings of Agricultural Labourers in England and Wales, 1860', *Journal of the Statistical Society of London*, v. 24 (1861), p. 366.

Table 7. Statement of the Yearly Expenditure for food of the Allen family of Bolton Percy, York in the year ended 28th February 1842.

It is clear that whilst this may be an accurate record of the expenditure of the family on food, it is by no means an accurate record of their consumption. First, there is no record of any expenditure on vegetables, which was one of the staples of an agricultural labourer's diet. Secondly the expenditure on fruit is unrealistically small. Fruit was purchased on only five occasions during the year. Thirdly, another staple item, potatoes, was only bought on four occasions, in March and April, months when home grown supplies were most likely to have run out. Fourthly, the expenditure on bacon, which was only one-fourteenth that of other meat, and only purchased in February and March, is unrealistically low. The Allens paid £4 a year in rent, which is in the upper margin for cottage rentals in North Yorkshire in the 1840s, according to the evidence given in the same Poor Law report. In Guisborough cottage rentals varied between £1. 10s and £4 a year. 'Very comfortable cottages with a sitting room and two or three bedrooms, with a garden attached may be had for £3'.[430] In Pocklington the usual rent was between £2 12s and £3 and in Melsonby, £3.[431] It is very likely therefore that for a rent of £4 the Allens occupied a cottage with a good-sized garden in which they grew their own vegetables and fruit. The fact that they only purchased potatoes during the months of March and April suggests that they grew their own for the rest of the year and the fact that they bought minimal amounts of bacon indicates that they fattened a pig for their own use.[432]

In the case of the Ealing gardener, again there is no record of any expenditure on vegetables, fruit or bacon, but it was acknowledged that he could have as many vegetables and potatoes as he required from his employer's garden, plus a quart of skimmed milk a day, and in

[430] Chadwick, p. 327.

[431] Ibid., p. 350.

[432] Ibid., pp. 302-6.

addition he had a small garden of his own.[433] Clearly in both cases the families consumed much more than their expenditure would suggest but the actual extent of this can only be understood in the context of a rural economy in which there was a great deal of self-provisioning, in which cash played a secondary role and in which barter and exchange were commonplace. In this, wives played the leading role, especially where, as was the case with both the Ealing gardener and Joseph Allen, the husbands were fully occupied.

Of a total income of £50 17s 4d, Joseph Allen's wife, Jane, contributed £8 13s, or 17%. The Ealing gardener's wife, who had four children aged eight and under, contributed only £1, or 2 ½ % of the family income. But this is almost certainly an underestimate of their actual contribution, as the rural economy was to a certain extent cashless at this time and women were the main participants in a shadow economy. This was partly a survival from the time when rural labourers were largely paid in kind and partly because there was a shortage of small currency and there was also a lack of trust in copper coinage.[434] This informal economy of barter and exchange had many facets and had developed forms of credit and indebtedness which enabled families to invest in capital items and to get through periods of shortage and of want. There were many aspects to the agricultural labourer's economic activity, some of which have been overlooked, understated or undervalued in the discussion of household budgets, and each of them is discussed in turn, to gain a complete picture.

[433] Eden, v. 2, p. 434.
[434] Muldrew, p. 7 & Hatcher, J., 'Seven Centuries of Unreal Wages', in *Seven Centuries of Unreal Wages* (Baskingstoke, Palgrave Macmillan, 2018), p. 167.

4.4 Land to cultivate- the garden, potato ground and allotment

> The witnesses from the rural districts gave a large mass of evidence showing that the cultivation of a plot of land attached to the dwelling was of the greatest advantage from every point of view to the labouring classes….The evidence on this point was unanimous, whether in reference to plots of earth or of pasture, of potato or of garden ground.[435]
>
> —Harcourt: Parliamentary Report into the Condition of the Working Classes

4.4.1 The Garden

In most cases agricultural labourers were provided with a garden attached to their cottage, sometimes supplemented, if the garden was not sufficiently large, by potato ground or, after 1830, by an allotment. The garden was considered to be an extension of the domestic space and was therefore the responsibility of the wife, as was the livestock, usually a pig and some hens, which shared the space.[436] The garden and its livestock were, as Bourne has observed, the repository of the family's savings- 'the glitches of bacon, the little stores of flour and home-made wine, the stack of firing, the small rick of fern or grass' were a savings bank, replenished each year as the garden was planted and the pig fattened.[437] In one of the earliest academic studies of the subject Maud Davies, in a work which has hitherto been overlooked in the debate on this subject, analysed the economic activity of the village of Corsley in

[435] Harcourt, W.V., *First Report of Her Majesty's Commissioners for Inquiring into the Housing of the Working Classes* (London, Eyre & Spottiswoode, 1889), p. 42.
[436] Humphries, 'Enclosures, Common Rights, and Women: The Proletarianization of Families in the Late Eighteenth and Early Nineteenth Centuries', *The Journal of Economic History*, v. 50, (1990), p. 39.

[437] Sturt, G., *Change in the Village* (London, Duckworth, 1912), p. 137.

Wiltshire. This was carried out at the behest of Sydney and Beatrice Webb in a project for the LSE to assess levels of poverty in the rural community.[438] Davies obtained a BSc in Economic History from the LSE in 1907.[439] It was the most rigorous investigation into diet and consumption that had hitherto been made. The survey was carried out over a period of two years and she took care to corroborate her findings- for instance by checking income figures with employers, where it was possible to do so.[440] Even so, as she recognised,' all these sources of information were liable more or less to error'.[441] Davies recorded that nearly all of the 161 houses in the village had a garden, that they were all used to self-provision and that they produced so much surplus produce, which the householders were able to sell, that in nearly every case the garden earned enough to pay the house rent. Davies gave an account from the wife of a labourer, who looked after an ordinary cottage garden in Corsley:

> I have a patch of the garden to myself; in this I have a strawberry bed, raspberry bed, goose-berry trees, currant trees (black and red), apple trees and a fowl pen. I have to look after these myself and keep it clean; the fowls enjoy all the weeds which I hoe off and throw into the pen.

[438] Davies, M.F., *Life in an English Village: An Economic and Historical Survey of the Parish of Corsley in Wiltshire* (London, Unwin, 1909).

[439] Ibid., p. 11.

[440] Davies, pp. 135-9.

[441] Ibid., p. 137.

Below is what I sold:

	£	s.	d.
Gooseberries	0	11	4
Strawberries	1	11	5
Raspberries	1	14	8
Currants (black and red)	0	9	2
Apples	0	19	5
Poultry	1	5	0
From other parts of the garden			
Young potatoes	0	8	6
French beans and peas	0	6	5
Flowers	1	2	6
Total during year	8	8	5

Table 8. Account of a labourers wife

This labourer's wife did all of the work on the garden herself, as her husband could not spare the time to help.[442] The garden had much greater value than the vegetables, fruit and herbs which it produced for the family to consume on a daily basis. It was a store of value for the future through the jams, preserves, pickles and wine which could be made from the produce. It was an independent source of profit, either by the sale or the exchange of the produce. It was also the home to livestock which in turn were a store of value and of profit and exchange.

Davies, who was a member of the Fabian society and a suffragette, had embarked on the project with a pre-conceived notion, formed over 12 years of living in the area, that the labourers of Wiltshire were the worst paid and most poverty stricken in rural England.[443]

[442] Davies, p. 170.

[443] Ibid., p. 271.

She expressed her surprise at finding that most of the inhabitants of Corsley were affluent and that only one-eighth lived in poverty. She wrote:

> First and foremost this prosperity results from the distribution of land in the parish, from the good gardens attached to each cottage, the abundance of allotment land, [and] the number of small holdings… The advantage resulting from this easy access to land cannot be overrated. Not only do many families derive a living entirely from gardening on their own account, but nearly all have one or other of these occupations as a bye-industry.[444]

Davies 'survey of a single village in 1905-6 was complemented 6 years later by Seebohm Rowntree and May Kendall's investigation of rural life in which they looked at the income and expenditure of 42 families in various parts of England during one week (there being a different week for each family) in late 1912 and early 1913. The report, although taking an overall pessimistic view of the adequacy of the labourer's diet, highlights the extent of the endeavour and enterprise of the female members of the households in making the most of the resources available to them. All but one of the households had a garden, and the one without a garden was supplied with potatoes and turnips by their employer. Of these 28 (68%) supplied potatoes during the weeks in question, of an average weight of 23.6lbs. Oddy[445] has alluded to a 'hunger gap 'experienced by labourers in late winter and early spring, when their gardens were not productive, but there is little evidence of it here. In addition to crops which could be stored such as carrots, onions and kidney beans, the gardens supplied a large variety of winter vegetables, principally parsnips, sprouts, and greens (including savoys and cabbages). There are many illustrations of thrift and enterprise. A family in Yorkshire made £2 selling gooseberries and potatoes, and in addition made six stones of plum jam. They claimed to have made £2 from selling their pig (an exceptional sum if true) and the husband made money from selling rabbits which he had shot on common land, keeping some for the

[444] Ibid., p. 272.

[445] Oddy, D., 'Food, Drink and Nutrition', in F.M.L. Thompson, ed., *The Cambridge Social History of Britain 1750-1950* (Cambridge, Cambridge University Press, 1990), p. 251.

pot.[446] Another family made 42 lbs of jam from foraged blackberries and gifted apples. They also earned 10s by selling blackberries at 1s a peck.[447] Jam making was frequently mentioned- 'there's hardly a week in the year when we don't make jam'.[448] There are numerous references to collecting firewood, keeping hens and selling eggs.

In his investigation into the diet of the labouring classes Dr Edward Smith wrote:

> The amount of food which is obtained may not be measured by the monetary income of the family since throughout the agricultural districts and in many places near small towns, vegetables are grown by the labourer at a cost much below their market value. Hence this advantage must be added to their monetary income. In many places some articles of food, such as skimmed milk and butter milk are given to the labourer. And in cases of temporary distress the hand of the philanthropist is now widely extended, but to a degree which cannot be estimated; and thus in many localities the monetary income is only a part of the usual wage obtained.[449]

Two aspects of Dr Smith's statement are illustrated in the Rowntree report, the extent to which free milk was given, even as late as 1913, and the scale of charitable support, even though none of the families were in any distress (they had been chosen on that basis). One quarter of the families received milk from their employers, with an average of 11.5 pints a week being given. A further quarter (but not the same families) received charitable donations. These were received, either in cash or in clothes, most often from a charity established in the area which made regular gifts to all parishioners at certain times of year, such as Christmas or Michaelmas.[450] A further 30% (12 families) recorded receiving gifts from relatives or neighbours of sundry items such as eggs, bacon, fruit, vegetables and rabbits.[451] Five of

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[446] Rowntree, B.S., & Kendall, M., *How the Labourer Lives: A Study of the Rural Labour Problem* (London, Nelson, 1913), pp. 98-103.

[447] Ibid., pp. 90-7.

[448] Ibid., p. 114.

[449] Smith, p. 218.

[450] Rowntree & Kendall, pp. 53-8; 69-72; 90-7; 104-12; 133-40; 155-58; 233-7; 243-54.

[451] Ibid., pp. 42-7; 64-8; 113-20; 140-65; 178-82; 209-16; 237-43; 249-54.

these families received two or more gifts and as this is a snapshot of one week, it can be surmised that donations of this kind were routine throughout the rural community at all times of year. Although the reports do not make this explicit, these gifts were probably part of the interwoven system of gifts and exchange which operated in the rural economy at his time and which has been identified by Avner Offer as an important but under-recorded part of the economy.[452]

William Bear had noted in 1892 that in Thakenham, sales of garden fruit produced enough revenue to pay the household rents.[453] This had been the case with John Clare's childhood household whose one apple tree would generate sufficient profit to pay the annual rent.[454] In Atcham, Devon, plum trees netted £2 a year.[455]

The village of Bolton Percy, where the Allen family lived, consisted in 1841 of 44 houses and a pub. It was adjacent to Nun Appleton Hall, the residence of Sir Francis Doyle, the author of the report to which the Allen family accounts were appended, and the likelihood is that he worked there. Bolton Percy is remarkably similar in size to Juniper Hill, the village portrayed by Flora Thompson as Lark Rise. Juniper Hill had 34 houses and a pub, all the houses bar five being occupied by agricultural labourers.[456] As H. J. Massingham has observed, the Juniper Hill community was largely self-supporting.[457] Every house had a garden and as a result of an enclosure settlement made by the previous generation, an

[452] Offer, A., 'Between the Gift and the Market: The Economy of Regard', *The Economic History Review,* v. 50 (1997), pp. 450-476.

[453] Tankard, D., "A Garden to Every Cottage': Cottage Gardens and the Nineteenth-Century Agricultural Labourer', *Agricultural History Review*, v. 67 (2019), p. 235.

[454] Clare, J., *John Clare by Himself* (New York, Taylor & Francis, 2002), p. 116.

[455] RCL (1893), p. 133.

[456] English, B., 'Lark Rise' and Juniper Hill: A Victorian Community in Literature and in History', *Victorian Studies*, v. 29 (1985), pp. 7-34.

[457] Thompson, F., Introduction to *Lark Rise to Candleford* (Oxford, Oxford University Press, 1957), p. xii.

allotment as well as the garden. Most houses kept a row of beehives.[458] The gardens were devoted to vegetables and fruit, the allotments to potatoes on one half and wheat or barley on the other half.[459] Very little potato seed was bought, as it was saved from year to year, exchanged with friends or relatives or gifted by one of the gardeners from the nearby estates. Flora Thompson's fictionalised account of her childhood is valuable in that the accuracy of her description of the topography of Juniper Hill and its inhabitants has been verified, and hence the size of the gardens and allotments, although her idealised account, as Barbara English observed 'resembles those memories of childhood when the sun shone all summer, and there was always snow at Christmas'.[460] Certainly, Thompson is mistaken in her assertion that the women in the village were only involved in flower and herb gardening and not in vegetable growing.

At an early stage in this debate Jane Humphries identified the numerous ways in which the women and children of rural families were able to obtain fuel and provisions by foraging.[461] This was not limited to common land as at that time the verges of roads were wide, hedgerows abounded and fields which were ploughed by horses had wide margins and fallow areas in each corner. Flora Thompson described the extent to which women and children foraged. Wild herbs were gathered in their season and dried. Yarrow, or milleflower was picked to make 'yarn beer'. In the spring there was an abundance of wild watercress. Sloes, blackberries and elderberries were picked to make wine. Jam was made from both garden

[458] Ibid., p. 12.

[459] Ibid., p. 55.

[460] English, p. 34.

[461] Humphries, pp. 37-42.

and hedgerow fruit. Crab-apples were picked from the hedge-rows to make jelly. Growing, collecting, selling, exchanging and preserving were at the heart of Juniper Hill life.[462]

Although no financial details were narrated by Thompson, accounts of foraging elsewhere shows that it could be a profitable enterprise. In Anglesey children were sent out into the countryside to collect plovers 'eggs, mushrooms, blackberries, watercress and nuts. Some families were known to make £3 in one season from selling mushrooms and plovers 'eggs fetched from 2d to 4d each.[463]

It is a feature of both the Davies and the Rowntree and Kendall surveys that they are based on interviews with women and brought to the fore the role of women in shaping the household budget. As Griffin observed 'almost all of the family budgets depict a wage earner transferring his full income to his wife who then converted money income to edible food'.[464] This emphasises the complete control which the wife had over household matters. Fred Gresswell, the son of an agricultural labourer in Digby, Lincolnshire, describes how his mother, who had been born in 1856, took all the major household decisions, to the extent that when she had put aside enough money to buy a part of a field her husband remarked 'I don't know how you've done it'.[465] In that household the husband worked a 60 hour week as a labourer to earn 15s, dropping to 12s in winter. His wife got up at 6am every day and worked for 18 hours a day, a little less on Sundays as there were two interludes then for visits to Chapel. She took whatever paid jobs were available, working the rest of the time in their garden or allotment and raising 7 children, who went out to work at the age of seven for 4d a

[462] Thompson, p. 118.

[463] RCL v. 1 (1893), p. 131.

[464] Griffin, 'Diets', p. 95.

[465] Gresswell, F., *Bright Boots,* (London, Robert Hale, 1956), p. 19.

day.[466] The work was relentless and whatever money was saved was invested in livestock or in acquiring more land. She was photographed at the age of 98 milking a cow, which was significant in two respects, first that she was still working at that age and secondly that she

	Eden Davies	Purdy	R.C on Labour	Rowntree/Kendal
Year	1787-96	1835-46	1893-4	1912
% of households recording an allotment, garden or growing their own potatoes	35%	17%	42%	81%

was the proud owner of a cow.[467]

Maud Davies stated that 'practically every 'cottage in Corsley had a garden, without specifying the actual number.[468] In Juniper hill every house had a garden and in Rowntree and Kendall's survey of 42 households the percentage was 98%. These figures are much higher than previous estimates of the prevalence of cottage gardens. Gazeley and Horrell looked at self-provisioning activities between 1787 and 1912 and gave the following estimates:

Table 9. Adapted from Table 1 of Gazeley and Horrell[469]

[466] Gresswell, p. 20.

[467] Ibid., frontispiece; The writer is proud to acknowledge that this remarkable lady was his great-grandmother. She lived to the age of 103 at which time six of her seven children were alive, together with 110 other direct descendants.

[468] Davies, p. 168.

[469] Gazeley, I., & Horrell S., 'Nutrition in the English Agricultural Labourer's Household over the course of the Long Nineteenth Century', *Economic History Review,* v. 66 (2013), p. 763; Eden, F.M., *State of the Poor;* Davies, D., *The Case of Labourers in Husbandry Stated & Considered* (London, R. Cruttwell, 1795)*;* Purdy, F.*,* 'On the earnings of agricultural labourers in England and Wales, 1860*', Journal of the Royal Statistical Society of London,* v. 24 (1861), pp. 328–73; Royal Commission on Labour (RCL), *The Agricultural Labourer* (1893); Rowntree, B.S., and Kendall, M., *How the Labourer Lives: A Study of the Rural Labour Problem* (1913).

The figure of 81% for 1912 is in fact an error as, as has been stated, the proportion of households with a garden in the Kendall and Rowntree study was 98%. Gazeley and Horrell postulated that the proportion of households with a garden, or access to potato ground or an allotment fluctuated wildly from 35% in 1787, down to 17% in 1835, rising to 42% in 1893 and climbing rapidly to 98% by 1912. They do not provide any explanation for the fluctuations or for the difference between the final estimation and the earlier three. To be sure, the fluctuations cover a wide time-period, in fact all four quartiles, but if it is to be argued that the provision of gardens, some of them quite substantial, ebbed and flowed as described an explanation of the mechanism which led to the change should be provided. These earlier estimates may be questioned as they are taken from reports which did not seek to record self-provisioning, but were designed to record incomes and expenditures and they only mentioned the existence of gardens, potato grounds or allotments peripherally. This will explain the wide and unrealistic range in their figures as well as their low values. Gazeley and Horrell agree that the figures from Kendall and Rowntree's study in 1912 provide a firm benchmark for the end of the period[470] and as there is clear evidence that self-provisioning was a mainstay of rural life throughout the C19th there are strong grounds for believing that it is the correct figure for the earlier periods as well.

Support is given to this proposition by parallel research carried out by Corinne Boter in the Netherlands. There she found that nearly all agricultural labourers complemented their wage income by cultivating their own land and that this was a stable and indispensable additional income to the main wage.[471] Typically the labourer rented 0.73 hectares of land on which potatoes were grown and livestock in the form of goats 'the dairy cow of the poor 'and

[470] Gazeley & Horrell, p. 762.

[471] Boter, C., 'Living Standards and the Life Cycle: Reconstructing Household Income and Consumption in the Early Twentieth-Century Netherlands', *The Economic History Review*, v. 73 (2020), p. 1051.

chickens were kept.[472] The produce thus raised was used partly to feed the family and partly for sale. Boter showed that female participation in the labour force was much greater than had been previously thought and that the additional income and produce from the labourer's land was sufficient to provide the required calorific values at all stages of the family lifecycle.[473]

4.4.2 Potato Grounds and Allotments

> As I came along the road, for the first three or four miles, I saw great numbers of labourers either digging potatoes for their Sunday's dinner, or coming home with them, or going out to dig them. The land-owners, or occupiers, let small pieces of land to the labourers and these they then cultivate with the spade for their own use.
>
> —William Cobbett, *Rural Rides*[474]

Potato grounds have been neglected as a subject of academic research and their importance has been understated. They became common all over Britain from the 1790s, principally, it is thought, as a means of attaching the labourer to the land up to and beyond hay and harvest time.[475] Potato grounds were quite distinct from allotments in that they were supplied by the farming employer, not by landowners or the clergy. They consisted of a strip of land in the

[472] Ibid., p. 1057.

[473] Ibid., p. 1070.

[474] Cobbett, W., *Rural Rides* (1830), p. 370.

[475] Burchardt, J., *The Allotment Movement in England, 1793-1873*, v. 2 (Univ. of Reading, PhD Thesis, 1997), p. 583.

farmer's own field and were usually allowed as a perquisite of employment, although sometimes a rent, often nominal, would be charged. Leigh Shaw-Taylor's finding that village labourers did not have common rights prior to enclosure has no relevance to potato grounds because of the informality of the arrangements and the fact that a sub-lease will rarely have been required.[476] Arthur Young described the system as it prevailed before enclosure in Oxfordshire in 1813:

> Potatoes have been a good deal cultivated in Deddington-field by the poor people; the farmers dung and find the land; and the labourers plant, and clean, and take up; they divide the produce. It is done on the fallows, but considered an injury to the wheat. The enclosure will do away with all this business.[477]

Young's pessimism regarding the impact of enclosure turned out to be unfounded as, after enclosure, farmers continued to allow these strips of land to their paid employees as a means of tying them to their employment.

Edwin Chadwick estimated that half an acre of potato ground would produce 160lbs of potatoes a week for the whole year and he observed that frequently corn would be grown alongside the potatoes.[478] In a typical case, the vice-chairman of the Bridgewater Union, Mr Somers, of Othery, Somersetshire, ploughed and dressed the potato ground for his labourers, who were obliged to find and plant the seed, keep the ground clean and dig the potatoes.[479] Mr Somers observed that the work was nearly all done by the labourers 'wives and children. Potato grounds had a dual purpose, first to supply the household with sufficient quantities of potatoes and wheat, and secondly to enable the raising of a pig. This latter purpose was

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[476] Shaw-Taylor, L., 'Parliamentary Enclosure and the Emergence of an English Agricultural Proletariat', *The Journal of Economic History,* v. 61 (2001), pp. 640-662.

[477] Neeson, J.M., 'English Enclosures and British Peasants: Current Debates about Rural Social Structure in Britain c. 1750-1870', *Jahrbuch für Wirtschaftsgeschichte/Economic History Yearbook*, v. 42 (2000), p. 24.

[478] Chadwick, p. 15.

[479] Ibid., p. 120.

recognised by Dr Edward Smith, who wrote: 'It is most important to the labourer to be able to grow a large quantity of potatoes and other fresh vegetables and thus convert his spare time into money directly by supplying food and indirectly by feeding a pig, and avoid the necessity for more costly food.[480]

At the time of the Royal Commission on Labour in 1893, it was found that potato grounds were given, usually free, in 22 of the 38 districts covered by the report. In places where there were no potato grounds, as in Thakenham, this was because the gardens were exceptionally large. In some cases, as in Stratford on Avon, the system was dying out and was being replaced by allotments.[481] Allotments had begun to be provided to agricultural labourers in the 1830's, given their initial impetus by the Captain Swing riots.[482] The average plot size began by being 76 perches (by comparison the modern day recreational allotment is an average of 10 perches), falling to about 50 perches later in the century.[483] Where the labourer's garden was large enough to grow vegetables the allotments were used primarily for potatoes and wheat, and like potato grounds enabled the keeping of a pig. As with potato grounds, the work was frequently carried out by women and children. In evidence to Edwin Chadwick's report to the Poor Law Commissioners of 1843, Mr Knatchbull, who controlled 100 allotments in Norfolk reported that 'the women and children invariably work on them'.[484] In Mildenhall 'The women do most of the work 'and in Suffolk Mr Clarke of Beccles gave

[480] Smith, p. 263.

[481] RCL v. 5 (1893), p. 71.

[482] Burchardt, v. 1, p. 78.

[483] Ibid., v. 2, p. 528.

[484] Chadwick, p. 260.

evidence that 'women are much employed on the allotments'.[485] In the same report it was observed that the allotment system in Suffolk had replaced the once lucrative hand spinning as employment for women and children. Yields were normally double that of agricultural land, reflecting the fact that the ground was closely tended, kept weed free and well manured by a pig, when kept.[486] By 1887 there were 344,712 allotment plots of an acre or less and by 1913, the number had risen to between 450-600,000 and it was averred that virtually all agricultural labourers who wanted an allotment could have one.[487] This was certainly the case in Oxfordshire, according to the only detailed study at this time.[488]

4.4.3 The Friend that Pays the Rent

> [The pig] is the poor man's best friend. I have often observed that nothing contributes so much towards smiling happy countenances in a cottage family as a pig in their stye; the pig becomes their household god whilst alive, and their sheet anchor when dead.
>
> —Samuel Savill[489]

The importance of potato grounds, and to a lesser extent the allotments which began to replace them after 1830, is that they enabled the agricultural labourer whose garden was not large enough to maintain a pig to do so. The economic and social significance of fattening a pig has been understated and under-appreciated when assessing household consumption. Provided that there was a good supply of potatoes and other produce from the garden a pig could be bought and fattened by a farm labourer without any cash expenditure at all. The farmer who supplied the pig would normally allow credit, to be paid, sometimes in kind,

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[485] Ibid., p. 259.

[486] Chadwick, p. 536.

[487] Burchardt, v. 2, p. 541.

[488] Ashby, A., *Allotments and Small Holdings in Oxfordshire* (Oxford, Clarendon Press, 1917) as quoted in Burchardt, v.2, p. 541.

[489] Samuel Savill in *Royal Commission on Hand Loom Weavers* (London, HMSO, 1840), quoted by Burchardt, v. 2, p. 509.

after the pig had been fattened or, if the supplier was also the employer, in stages, with the deduction of a set amount from each month's wages.[490] A farm labourer would only be allowed to keep a pig with the permission of his employer. In most cases this was given and in most parts of Britain pig keeping was commonplace except by those, a small minority, who could not afford one. If a labourer had charge of, or access to, a grain store it was the usual practice to refuse him permission to keep a pig, because of the perceived risk of theft, but in that case compensation was given- usually by allowing the labourer to buy pork or bacon from the farmer at less than the market price or by letting him have a certain quantity of pork free of charge.[491] The fact that compensation was given illustrates the importance which was attached to the right to keep a pig.

The pig was usually purchased in the spring and fattened for slaughter or sale in December, depending on local custom. In Yorkshire, Arthur Wilson Fox observed that '[agricultural labourers] almost invariably keep them and it is the exception there to go into a cottage without seeing hams and bacons in the ceiling'.[492] However in North Wales the pig was rarely killed for home use, but sold to raise the money to pay for a debt such as a tradesman's bill or the rent.[493] In Llanfyllin, it was so universal a custom for labourers to keep a pig that 'anyone who never possesses that useful animal is to some extent looked down upon by his fellow labourers and loses caste as being too poor or unthrifty to keep one'.[494] At Cranworth in Norfolk, the Rev. P. Gordon, who let out 60 allotments to agricultural labourers

[490] Chadwick, p. 89.

[491] RCL v. 1 (1893), part I, p. 38; part II, p. 38; part III, p. 81; part IV, pp. 56, 68, 81.

[492] RCL, part III, p. 71.

[493] Ibid., v. 2 (Wales), p. 26.

[494] Ibid., v. 2, p. 118.

acknowledged the status of pig keeping by making it a condition of a tenancy that the tenant should keep a pig for a least six months in the year and use the pig's manure and straw to fertilise the land. He noted that when a husband was in full employment the work would be done by his wife and children.[495]

The Rev. Gordon calculated that some of his tenants could net up to £5 a year in profit, after paying all their expenses, but that was exceptional and required the fattening of four animals.[496] Assistant Commissioner Cecil Chapman in 1893 estimated the profit of a pig to be between £1 and £1.10s in Devon,[497] whereas in the same year Assistant Commissioner R. Hunter Pringle gave a figure of 10s for Scotland.[498] A similar figure was assessed on the Duke of Bedford's estate, where he forbade the keeping of pigs, but gave compensation of 10s a year in lieu.[499] In Wales the general belief was that the pig did not generate a profit, but that keeping a pig was a form of saving, without which the labourer would not be able to put enough money aside to pay the rent.[500] The same sentiment was expressed in Ireland where 'the pigs form a bank where the savings of the summer and the harvest go and the produce of poultry with a little help from the shopkeeper in case of need, will help him pull through the winter on very little earning'.[501] On November 24th 1864, gardener Joseph

[495] Chadwick, p. 270.

[496] Ibid.

[497] RCL v. 1 (1893), part II, p. 38.

[498] Ibid., v. 3 (Scotland), part II, p. 59.

[499] Mann, P.H., 'Life in an Agricultural Village in England', *The Sociological Review*, v. 1 (1904), p. 174.

[500] RCL, v. 2 (Wales), p. 26.

[501] Ibid., v. 4 (Ireland), p. 51.

Turrill of Garsington killed a pig which weighed in at 220 lbs. This would have yielded 125 lbs of usable meat, which at 600 calories per pound would provide 205 calories per day.[502]

In Juniper Hill every family fattened a pig. Flora Thompson described the pig as an important member of the family, which was 'everybody's pride and everybody's business'.[503] The pig formed part of the elaborate credit mechanism in the village, whereby villagers would obtain credit from a tradesman or from neighbours, with part of the pig pledged as payment. It was usual for half of the pig to be mortgaged in that way.[504] That these arrangements were not confined to Juniper Hill can be seen from the words of William Youatt, writing in the 1850's:

> [In] a pig feeding village, there are all the delights and extravagances of the lending system, by which practically every pig-owner has a share in his neighbour's pig, each lending the other lights, or chitterlings, or even a spare rib, repaid as each kills his own pig. These make up to the villager the bank, the stock exchange, and the theatre, the concert rooms of Canterbury Hall and the Britannia, which town-folk monopolise.[505]

When the time came to kill the pig, it was a time for celebration, followed by the official 'pig feast' attended by all relatives who lived within walking distance.[506] Fred Gresswell recalled that in Digby, where 'every cottage labourer had one pig or more'[507] this was a continuing process and for a three month period during the winter the villagers killed their pigs in turn and provided each other with what was known as 'pig cheer'. On the first day there would be pig's fry, consisting of sweetbread, liver and pieces of pork which would be sent round to

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[502] Turrill, J., E. Dawson, and S. R. Royal., *An Oxfordshire Market Gardener: The Diary of Joseph Turrill of Garsington*, 1841-1925 (Stroud, Alan Sutton, Phoenix Mill, Far Thrupp, 1993), p. 65.

[503] Thompson, p. 9.

[504] Ibid.

[505] Youatt, p. 91.

[506] Thompson, p. 12.

[507] Ibid., p. 70.

relatives and friends, who would repay the compliment in due course. This would be followed by pork pies, strings of sausages, collared rind, bone pies and hazlitt. With this system of exchange his family would be assured of pork pies every Sunday for three months. Gresswell described the pig as the family's most important possession on which they relied for a supply of meat throughout the year.[508] A form of insurance was provided by the Pig Club 'the most important club in the village' for which the subscription was 6d a month and which provided compensation if a pig had to be put down.[509]

The keeping of fowls in the form of hens, ducks and geese was commonplace, to provide both eggs and meat for self-provisioning and sale. In Chawleigh, Devon, where the village street was reported to be 'full of poultry', the labourers would 'set a brood 'to pay the boot and clothing bill.[510] In Towersey, east of Oxford, ducks would sell for between 15s and 24s on the London market.[511] In Rowntree's survey of rural life, published in 1913, several of the families who were studied sold birds for profit, including a family in North Yorkshire who sold pullets for 1s 6d each, and a family in Oxfordshire who made a profit of £2 a year from poultry sales.[512] As with pigs, if poultry keeping was prohibited, compensation would be offered. At Haddington 6s a year was given in place of the liberty to keep hens.[513] In Ireland there was a very brisk trade in selling fowls and eggs for the English market, hundreds of thousands of eggs being sold by wives to dealers in Castlereagh.[514] At Westport,

[508] Gresswell, p. 72.

[509] Ibid., p. 71.

[510] RCL, v. 1 (England), p. 98.

[511] Ibid., p. 39.

[512] Rowntree & Kendall, pp. 255-67.

[513] RCL, v. 3 (Scotland), p. 104.

[514] Ibid, v. 4 (Ireland), pp. 93 & 131.

as late as 1893 eggs were a common form of currency in the village shop together with items such as hay and pig meat, to the extent that 'little cash passes'.[515]

The family larder could also be supplemented from the wild. Unlike poultry keeping, this was a male preserve. Joseph Turrill kept a gun, as did many gardeners because of the need to keep down garden pests such as pigeons and rabbits, and he records shooting eight dozen larks in a single day, which he sold for 6s. On another day he killed 34 rabbits and sold two of them for 4s.[516] Rabbits were also bred for meat. At Perch Hill youths would go out at night 'spadgering 'which involved using a net held by four poles to catch roosting sparrows and other small birds. These would be roasted or sold. Birds were also caught by means of traps set in the garden by children, aided sometimes by their mothers.[517]

Illegally caught game featured largely in the rural labourer's life. Francis Harker, a gardener's daughter, recalled that when she lived in Casterton, Lancashire in the 1890's everyone in their village poached except for the policeman and the parson. When her father had been spotted fishing illegally the policeman would call by the following day 'to see how the babies were- there was always one in the cradle 'and without acknowledging the fact pick up a paper parcel from the kitchen table, in which was wrapped a piece of salmon. Later on in the day the parson would do the same.[518] Gardeners had greater access to game than most labourers as the estates on which they were employed were often the location for the rearing of game, so that they were employed alongside gamekeepers. Arthur Hooper, when living in

[515] RCL, v. 4, p. 62.

[516] Turrill, p. 70.

[517] Thompson, p. 161.

[518] Lummis, T., Thompson, P., 'Interview with Mrs. Harker', *Family Life and Work Experience Before 1918* (UK Data Service, 2009), DOI: 10.5255/UKDA-SN-2000-1, [accessed 26 December 2022].

a bothy on the Fonthill estate in Wiltshire was taught by his fellow gardeners to poach without using a gun. When he at first showed some reluctance to engage in a criminal activity it was pointed out to him that he had recently enjoyed four pheasants and numerous rabbits as part of his bothy fare.[519] Game, whether poached, obtained legally or gifted, formed a regular part of his food on the various estates on which he worked.[520] There was a grey area between what was legal and what was not- to whom did a rabbit on the public highway belong?- and this ambiguity was exploited by labourers but there can be no doubt about the extent of the activity.

Another source of self-provisioning and of additional income was from the gleaning (or 'leazing 'as it was known in Juniper Hill) of the fields after harvest when women and children would pick over the stubble collecting the ears of wheat which had been left behind. In this way a single family at Juniper Hill could collect two or more bushels of wheat, the miller being paid in kind.[521] In Digby a family would expect to collect enough to feed the pig for the winter, which indicates an alternative source of pig food, where no potato ground was available.[522] In Crediton, Devon, the annual cash value attributed to gleaning was between 5s and 30s per family, rising to 50s in an exceptional year.[523] In a separate assessment, made in 1837 the value of gleanings made by 388 Norfolk and Suffolk families was £1 1s. 10d per family, and it was stated that in a good season in Royston, Norfolk, a single woman could make from 30s to 40s by gleaning.[524]

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[519] Hooper, p. 23.

[520] Ibid., pp. 23 & 53.

[521] Thompson., p. 14.

[522] Gresswell, p. 47.

[523] RCL, v. 1 (England), p. 28.

[524] Purdy, p. 330.

4.5 Perquisites, Allowances and Payments in Kind

It is known that the Ealing gardener received perquisites in the form of free vegetables, potatoes and milk but there is no information as to whether Joseph Allen received any perquisites from his employer. If he did not, he would be in a small minority, as it was usual for labourers to receive some payments in kind in lieu of wages from their employers.[525] The custom became less prevalent with the passage of time and varied from region to region but remained a normal form of payment right to the end of the long C19th. The parliamentary commission into agricultural labourers which reported in 1893 found that payment in kind, even after the passing of the Truck Acts, was very prevalent.

4.6 Resolving the Calorie Deficit Conundrum: The Ealing Gardener

An analysis of the information collected by Sir Frederick Eden on the Ealing gardener has to be considered in the context of the purpose of his report and the limitations as to the accuracy of his information, as was frankly recognised by Eden himself. Eden's report had been prompted by sharply rising prices, which were occasioned by the war against France, which led to concerns about the welfare of the poor and the possibility of civil unrest. He set out his aims clearly, as follows:

> The difficulties, which the labouring classes experienced from the high price of grain, and of provisions in general, as well as of clothing and fuel, during the years 1794 and 1795, induced me, from motives of both benevolence and personal curiosity, to investigate their condition in various parts of the kingdom.[526]

Regarding the investigation into the circumstances of the poor he wrote:

[525] Smith, p. 136 & Rowntree & Kendall, p. 137.

[526] Eden, v. 1, p. i.

> It is hardly possible to form any accurate judgment of the condition of the labouring classes …without first knowing what a labouring man can earn, and how much of the necessaries of life he can purchase by his earnings.[527]

He set about this task by sending a 'remarkably faithful and intelligent person' to tour the country to make the reports, in conjunction with some clergymen friends. He himself did some of the research in the London area, including the case of the Ealing gardener, as is apparent from the narrative which accompanies the report, and the fact that he had close connections there (he was buried in Ealing, although his country seat was in Durham). Eden was at pains to emphasise the difficulties which he experienced in obtaining accurate facts from the people who were interviewed. None of the information it seems was obtained (except in one instance) from written accounts or ledgers or diaries. For the most part the interviewers relied on the recollections of the participants without supporting written evidence. After noting that in many cases the expenditure recorded exceeded the income, Eden wrote:

> It is chiefly on the score of earnings, that (the labourer) confounds all enquiries either by taciturnity or misrepresentation. He calculates… his yearly income from the average price of day-labour in his parish. But as work is now very generally done by the **piece**, [original emphasis] it is obvious that statements formed upon such data must be extremely fallacious: they, however, are not without their use; and I have, therefore inserted them: but the Reader will, I trust, often be inclined to draw the same conclusion, which I have drawn from them; that, if the expenditure is not exaggerated, the income is, in most instances, considerably underrated.[528]

Eden has been recognised as one of the first social scientists, indeed Marx claimed that he was the only eighteenth-century disciple of Smith to produce a work of any significance, but few reports can have come with a more emphatic qualification of their accuracy.[529]

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[527] Eden, v. 1, p. viii.

[528] Ibid., p. xxvi.

[529] Winch, D., 'Eden, Sir Frederick Morton, second baronet (1766–1809), insurance company manager and writer on the state of the poor', *Oxford Dictionary of National Biography,* http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-8450, [accessed 18 Mar. 2019].

The emphasis is on the under-statement of earnings. A good example is the case of another gardener, who worked in Epsom, and who declared an income of between £45 and £50, but an expenditure of more than £75. It is evident that Eden knew this gardener personally, as he earned extra money as sexton of the parish church, whose vicar, Jonathan Boucher, was a close friend of Eden's.[530] Eden concluded that he had greatly underestimated his earnings but that 'I believe he means to tell the truth; and that if he deceives others, he is first deceived himself'.[531]

Robert Allen assessed the consumption of the Ealing gardener in the context of a welfare ratio in the form of a 'Respectability' subsistence basket of goods which he had devised, to provide 2,100 calories per day, as follows:

Item	Quantity per person/year
Bread	182kg
Beans/peas	34kg
Meat	26kg
Butter/oil	5.2kg
Cheese	5.2kg
Eggs	52 each
Beer	182l

Table 10. Allen's respectability basket of goods

[530] Bouchard, B., 'Sir Frederick Morton Eden (1766-1809)', *Epsom and Ewell History Explorer,* http://www.epsomandewellhistoryexplorer.org.uk/Eden.html, [accessed 28 Feb. 2019].

[531] Eden, v. 3, p. 711.

In this basket, vegetables, which are expressed as beans/peas, are 30% more than the weight of meat. An allowance of butter or oil is made as an essential accompaniment to bread, which is the principal food item.[532]

The table below details the daily calorific consumption of the Ealing gardener's family, as calculated by Allen.[533]

Item	Units/week	Unit	Cal/day
Bread	33 1/3	lb.	4,820
Meat	33 1/2	lb.	1,040
Beer	4	qt	206
Cheese	1	lb.	243
Tea	1/8	lb.	0
Sugar	2	lb.	493

Food provided by employer:

Skim milk	7	qt	308
Potatoes	35	lb.	1,589
Beans/peas	2	lb.	442
Total			9,141

Table 11. Caloric consumption of the Ealing gardener's family

The first six items were those described by the gardener to Eden, being 'one quarter loaf of wheat bread, about one half pound of meat, a few ounces of cheese, a pint of beer, tea and sugar'. These items provided only 6,802 calories for a family of six, correctly described as being below the rate of survival.[534] The calculations were corrected by Allen by adding in an allowance for the skimmed milk, potatoes and vegetables which were provided by the

[532] Allen, p. 4.

[533] Allen, p. 3.

[534] Meredith & Oxley, p. 204.

employer[535], bringing the total calorie count to 9,141.[536] However this was still insufficient to feed the family of six adequately, leading to questions as to whether the breadwinner was being allocated calories to allow him to maintain his work rate, at the expense of the rest of the household. Using the United Nation's Food and Agriculture Organisation figures for minimum calorific requirements this family would have required a minimum of 10,787 calories, indicating a deficit of 1,937 calories, as shown in Table 12. Their circumstances would also potentially deteriorate year by year, as the children were growing and would require 500 additional calories per year although this would be offset by the earning of the two boys, once they were old enough to work.

Family Member	1,796
Man	2,950
Woman	2,500
Boy, aged 8	1,762
Boy, aged 6	1,525
Girl, aged 4	1,200
Girl, aged 1 1/2	850
Family Requirements	10,787
(Deficit)	1,646

Table 12. The calorific requirements of the family of the Ealing gardener.

These figures imply that the family may have been severely undernourished, becoming more so as the appetites of the children increased. But there are several reasons why that was probably not the case. Firstly, there is an obvious mistake in that no expenditure has been

[535] Eden, v. 2, p. 434.

[536] The calories required for each group are taken from Schneider, E., 'Real Wages and the Family: Adjusting Real Wages to Changing Demography in Pre-Modern England', *Explorations in Economic History,* v. 50 (2013), p. 101.

recorded for butter. Butter is a staple item of Allen's 'respectability 'subsistence basket[537] and is recorded as an item of expenditure in nearly every one of Eden's cases, even for the poorest labourer. The other gardener in Eden's account (the Epsom gardener) consumed 78lbs of butter in the year (1½ lbs a week).[538] As the Epsom gardener's family was larger, we may assume a minimum consumption of 1lb a week for the Ealing gardener. The calorific value of one pound of butter is 3,252, or 464 per day.

Secondly, it may be questioned whether the allowance made by Allen of 2lbs of beans/peas a week properly reflects the gardener's permission to take 'what other vegetables he has occasion for'. The family consumed 3½ lbs of meat a week, so that an allowance of vegetables of not much more than half of that seems too small. Allen in his 'respectability ' basket allows 30% more vegetables by weight than meat. An allowance of 8lbs of vegetables a week would seem to be closer to the mark. This has a calorific value of 1,778. The Ealing gardener had his own garden and if he took whatever vegetables he required from his employer, it is reasonable to assume that he grew fruit in his own garden as well as additional vegetables. Even a modest one pound of apples has a calorific value of 236. A pig would add a further 202 calories. It also highly likely that the family consumed some eggs, some rabbit, or game, did some foraging and took advantage of whatever gifts were available. Table 13 shows the calorific intake making allowance for butter, vegetables, fruit, pork and bacon, but without any other additional items.

On this conservative measure the deficit is extinguished and is replaced by a surplus of 592 calories. Thus, even in a time of exceptionally high wheat prices, the family would have been able to obtain sufficient calories from their diet to remain healthy and work the long

[537] Allen, p. 6.

[538] Eden, v. 3, p. 710.

hours which they reputedly did.

Item	Weight	Calories
Bread	33 1/3 lb.	4,820
Meat	3 1/2 lb.	1,040
Beer	4 qt.	206
Cheese	1 lb.	243
Tea	1/8 lb.	0
Sugar	2 lb.	493
Butter	1 lb.	464
Skim milk	7 qt.	308
Potatoes	35 lb.	1,589
Vegetables	8 lb.	1,778
Fruit	1 lb.	236
Bacon/pork	1lb.	202
Total		11,379
Family Requirements		10,787
Surplus		592

Table 13. Caloric intake allowing for further items

4.7 The Joseph Allen family

Meredith and Oxley measured the calorific value of the daily expenditure on food by the Allen family at 2,107 pcu.[539] They allowed a further 800 calories having surmised that the family had potato ground of a quarter of an acre, which would produce 80 lbs of potatoes a week, the addition of which would raise the total calorific value to 2,907 per day pcu. 'On this', they concluded, 'a man could labour at ploughing for nearly four hours, if he spent the rest of his time either sleeping, eating or standing quietly'. They add 'it is to be hoped that someone in this gardener's family had time to tend vegetables and maybe fowl and a pig', but they make no calorific allowance for this possibility.[540] If, as seems likely, Joseph Allen was

[539] Meredith & Oxley, p. 205.

[540] Ibid.

employed at Nun Appleton Hall he would have received every encouragement from his employer, Sir Francis Doyle, to keep a pig as Sir Francis wrote in his report as a Poor Law Commissioner enthusiastically supporting the practice of pig keeping:

> In the meantime his pig, besides its usefulness is a real pleasure to him- it is one of his principal interests in life- he makes sacrifices to it; he exercises self-control for its sake; it prevents him from living hand to mouth, stupidly careless of the future. I am persuaded that a greater act of cruelty could hardly be perpetrated than the discontinuance of this practice, or rather amusement and enjoyment among the poor.[541]

It may be safely assumed that the Allen family, paying a rent of £4 a week had a garden of at least a half of an acre, and that they kept a pig and some fowls. By making the same assumptions in respect of the consumption of vegetables, potatoes, fruit, bacon and pork as with the Ealing gardener 3,005 calories would have been added to the family total, making good the calorific deficit.

4.8 Conclusion

> But in stating the money wages and perquisites of the labourer and of his family, we are yet short of his real income. The gleaning of his wife and younger children will produce an amount which he regards as important. In his own cottage-garden, if he has not a piece of ground especially granted him for the purpose, he will often grow potatoes enough for the year's supply. He will keep a pig, which when fatted, is for his own consumption; or sometimes, as in Sussex, his wife will rear poultry for the market; or, he has common rights, under which he cuts furze, or digs turf for fuel, or which yield an excellent run for his poultry.
>
> Now these advantages, which are incidental to the labourer's position, must be borne in mind when we attempt an estimate of his resources; especially when those resources are to be contrasted with the wages of artisans and labourers in towns. Nor should it be forgotten that for a considerable part of the year the earnings of his wife and children, who work in the fields at weekly wages, or who assist the husband when engaged at task work, augment his income'
>
> —Purdy, Rates of Wages of Agricultural Labourers. 1860[542]

[541] Chadwick, p. 294.

[542] Purdy, p. 330.

When David Davis, the Rector of Barkham Herts, embarked on his enquiry into the causes of distress amongst the labouring classes in 1787 he noted that his parishioners were 'in general but indifferently fed 'and 'badly clothed', although the children 'looked tolerably healthy'.[543] Eden makes references in his report to hunger in relation to poor law provision but not pertaining to the participants in his survey. Indeed, he notes that 'Paupers, comparatively speaking, are but rarely found among those employed in agriculture'[544] In respect of the Ealing gardener the narrative was that the family stinted on clothes and on saving for the future but not that their provisions were inadequate. Certainly, some families, those affected by underemployment, injury, illness, drink, desertion, death amongst a multitude of misfortunes will have suffered from malnutrition, but the argument which has been put forward in respect of both the Ealing gardener and Joseph Allen's family was that men in full time employment earning at or above the average wage were under-fed, or their families were.

The Allen family were not asked to record their consumption, merely their income and expenditure. Similarly Eden, albeit in a much more haphazard and inaccurate way, only set down income and expenditure, and wondered why the two never balanced, but he did not endeavour to record consumption. Robert Allen adjusted the expenditure figures by giving a cash value to the perquisites which the Ealing gardener received from his employer, but a true figure can only be reached by taking account of non-cash items and the contribution of the wife and family.

During the C19th a number of reports were produced, in a more systematic format than those of Davies and Eden, which emphasised the role of the wife and child in contributing to the

[543] Davies, p. 10.

[544] Eden, v. 1, p. vii.

family income and the importance of self-provisioning, not only in producing food for the family but also in creating an additional source of income. Edwin Chadwick's 1843 commission on female and child labour contains a wealth of evidence in this regard, as do later parliamentary commissions, in particular that of 1893, which covers the whole of the British Isles and whose brief included an investigation into the extent of perquisites, allowances, etc., allowed to farm labourers. When Maud Davies embarked upon her survey of life in Corsley, she intended to expose the extent of poverty in the village and its causes. She was surprised to find that poverty was much less prevalent than she had thought and that life there was bolstered by the enterprise and resourcefulness of the female population in exploiting to the full the land which was at their disposal, by growing, selling, exchanging and preserving. This was a hidden economy, to a large extent cashless which made up for the often meagre earnings of the breadwinner.

The evidence is compelling that in the fourth quartile the great majority of rural labourers had a productive garden and that in many cases they also had additional land in the form of an allotment or potato ground. At Corsley nearly all of the 161 houses had a garden; in Juniper Hill all 34 did; in the Rowntree and Kendall survey, nearly all did. The strong likelihood is that this was the case in the earlier quartiles, although there is little reliable evidence. Certainly, Purdy's own statement that the labourer 'In his own cottage-garden, if he has not a piece of ground especially granted him for the purpose, he will often grow enough potatoes for the year's supply. He will keep a pig..' contradicts the notion that only 17% of labourers kept a garden at that time.

The contributions to the family budget can be summarised as follows:

By the man

a. His cash wages
b. Additional cash earnings at haymaking and harvest time and from piece work

c. The value of allowances and payments in kind, such as a free house and garden and free milk (considered part of the wage)
d. Animals and birds caught in the wild, legally or illegally

By the women and children

e. Their cash earnings
f. Fruit and vegetables grown in the garden/potato ground or allotment and consumed at home or sold or exchanged
g. Livestock such as pigs and fowls for home consumption or for sale or exchange
h. Foraged food items

All except the first item are difficult to measure, some of them impossible, not least because no contemporaneous record was ever made. Formerly there was a misconception that people ate few vegetables, an error which arose because vegetables did not appear very often in account books.[545] That myth has been disproved, but it illustrates how the over-reliance on measurement can lead to error. The reality of the consumption of the rural labourer's family is that they were not just reliant on the measurable items, such as the money earned by the male breadwinner. Nor was their consumption limited to commodities which could be purchased at a shop. The meat bought from the butcher would be supplemented by pork, bacon and fowls reared at home plus rabbit, pigeon and game caught in the wild. Vegetables (including potatoes) and fruit were rarely purchased as they were either grown at home or traded for other items so grown. This chapter has endeavoured to show that previous studies have seriously underestimated the extent and scope of self-provisioning and the role played by women and their children, whose contribution was much more than their earnings. By adding in the non-cash items which they were able to contribute it becomes apparent that there were, in normal circumstances, sufficient funds or enough extra produce to satisfy fully the calorific requirements of the hardest working man or woman. It is certainly the case that in some circumstances a wife will have sacrificed calories from her own plate to give extra

[545] Muldrew, p. 106.

food to her husband[546] but any calorific deficit will in the main have been made up by the wife herself (assisted by her husband and children) expending the calories required to grow the food and raise the pig to ensure that her family was well provided for.

[546] Dr Smith's reports provide anecdotal evidence in this regard.

Chapter 5 Remuneration and Terms of Engagement

> For years we have pointed out in these columns the miserable wages received by gardeners. It is a matter quite beyond dispute that the real gardener and more especially he who is denominated the 'head gardener 'is the most inadequately remunerated for his skill, his time and his knowledge of any class of skilled labourers- poor curates not excepted
> — Editorial, *Gardeners' Chronicle*[547]

5.1. Introduction

There was a perception amongst gardeners, voiced regularly in the editorial and correspondence columns of the gardening press, that in comparison with their peers, gardeners were poorly paid. In the early days of the *Gardener's Magazine* the comparison was made with the indoor domestic staff, such as butlers and footmen; latterly with 'mechanics', such as carpenters, bricklayers and plumbers. The perception was largely unchallenged and has persisted to the present day, although largely corrected by Floud[548]. Musgrave's assertion that 'gardeners were surprisingly poorly paid' has been cited without qualification.[549] Hoyles stated: 'In 1841 even head gardeners were paid only about a tenth of a cook's salary and half that of a footman'.[550] This narrative has been reinforced by the analysis made by Jacob Field of the wages paid to domestic servants, using a dataset drawn from the wage observations from 61 households.[551] Gardeners feature largely in the survey, with 102 observations. They have a weighted mean wage of £14.8 making them the fourth largest wage earners in the household, below the bailiff, cook and butler. Comparison is made with C18th data collected by Hecht, mainly from advertisements and literary sources,

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[547] 'Editorial: Scotch Gardeners and Gardening', *GC,* v. 32 (1872), p. 462.

[548] Floud, pp. 159-83.

[549] Musgrave, T., *The Head Gardeners* (London, Aurum, 2009), p. ix & Driver, J., 'Charles Green (1826-86): Head Gardener to Sir George Macleay at Pendell Court, Surrey', *Garden History*, v. 40 (2012), p. 203.

[550] Hoyles, M., 'English Gardens and the Division of Labour', *The Cabinet*, v. 6 (2020), http://cabinetmagazine.org/issues/6/hoyles.php [accessed 01 Mar. 2015].

[551] Field, J.F., 'Domestic Service, Gender and Wages in Rural England c. 1700-1860', *Economic History Review*, v. 66 (2013) p. 251.

in which gardeners were the second highest paid, after bailiffs.[552] Errors of methodology and classification made by Field and Hecht (discussed later) cast doubt on their figures. In fact the rate of pay of the gardener, and the total remuneration received, taking account of accommodation and perquisites, depended largely on the gardener's place in the career hierarchy, with some doing very well indeed.

There were two classes of gardeners, the unskilled labourers and the career gardeners. The former were a silent majority whose voice was unheard and disregarded in the gardening journals. The latter group followed a well-recognised career path and were paid according to their place on that path. At the bottom were the garden boys and apprentices. After an apprenticeship the apprentices then continued their training as journeymen, or improvers, and worked in different departments in several gardens until they were deemed qualified to become foremen. The best of the foremen could apply for positions as head gardeners.

5.2 Apprentices

Apprenticeships, which were available on the larger estates, required the payment of a premium to the head gardener in return for training. The premium would usually be between £3 and £5 per annum, but could be as high as £15.[553] The apprentice would be given free accommodation in the bothy. A nominal wage would usually be paid to the apprentice, which in 1836 was 2s a week rising to 4s[554] and in 1894 started at about 6s a week, rising by 1s a

[552] Hecht, J., *The Domestic Servant Class in Eighteenth Century England* (London, Routledge & Paul, 1956), pp. 142-3.

[553] An Angus Lad, 'Education of Gardeners', *GC,* v. 20 (1860), p. 625.

[554] 'British Gardeners - William J. Cross', p. 301.

year[555] although the amounts would vary, within a range below 10s a week, and increasing in line with other wages over time.[556]

5.3 Journeymen

In comparison with other trades, the period of apprenticeship for gardeners was relatively short, at three years compared with the usual seven, but this did not encompass all of their training, as they continued to be learn their trade as journeymen. Their training status was reflected in the fact that some head gardeners asked for a premium of up to £10 as a condition of taking on a journeyman[557] and others took part of the journeyman's weekly wage, usually 2s a week.[558] Rates of pay in the 1820s-30s varied between 12s and 20s per week, usually including bothy accommodation, but not food, a rate which had applied since the beginning of the century.[559] This compared with the rate then paid to labourers of 11s 6d.[560] The rate of pay grew slowly, if at all, during the C19th. A survey of 75 gardens carried out in 1904 found that the average pay of journeymen, with bothy, was 17s a week.[561] The value of the bothy was estimated to be 3s a week so that the gross pay amounted to 20s.[562] It was recognised that journeymen received considerably less than workmen in other trades, but Loudon considered that they were not thereby at a disadvantage, because unlike

[555] 'Garden Apprentices', p. 638.

[556] Wilcox, A., 'Incidents in the Lives of Well-known Horticulturists: Mr William Irvine', *GL,* v. 27 (1914), p. 423-4.

[557] Ephebicus Horticultor, 'Some of the Disabilities which Enthrall Young Gardeners', *GM,* v. 9 (1833), p. 177.

[558] Angus lad, p. 625.

[559] Burnard, I.P., 'On the Remuneration of Gardeners', *GM,* v. 1 (1826), p. 141 & Forbes, J., 'Retrospective Criticism', *GM*, v. 9 (1833), p. 623.

[560] Forbes, p. 623.

[561] 'A Gardener's Association', *GC*, s. 3, v. 35 (1904), p. 136.

[562] Ibid.

the other trades they did not have to acquire capital in order to became a master-craftsman and could therefore achieve advancement at a much younger age. He wrote:

> The journeyman gardener, after he has been two or three years out of his apprenticeship, mounts at once into the condition of a master and, if he has obtained a first rate situation, he is perhaps as well off at 25 as an industrious journeyman carpenter at 45 because it would probably require that time before the latter could save sufficient money to become a master.[563]

Kew Gardens, which was supported from public funds, had its own system of instruction, recruiting men at the age of 21 who had already been trained in private gardens. Their rates of pay tended to be lower than those of other journeymen, being only 12s a week in 1827, without accommodation, as there were no bothies or staff cottages at Kew.[564] In spite of the exceptionally low rate of pay the demand for places at Kew was high, which was a reflection of their excellent reputation and the opportunities which were available in Botanic gardens worldwide after graduation, which were in the grant of the Kew directors. The rate paid by Kew had by 1904 risen to 21s, without accommodation, still below the average for journeymen,[565] but the number being trained there had more than doubled, to 60 men.[566]

5.4 Foremen

The post of foreman, which was available on the larger estates where there were several departments, was the next rank above the journeyman. A foreman would have several men under him, consisting of journeymen and labourers. As a rule of thumb foremen were paid 3s a week more than the rate of pay given to journeymen on the same estate.[567] The unmarried

[563] Loudon, 'Remarks on the Treatment Under-Gardeners receive from their Masters', *GM,* v. 1 (1826), p. 411.

[564] Loudon, 'Policy Pursued in the Management of the King's Botanic Garden at Kew', *GM,* v. 2 (1827), p. 315.

[565] 'A Gardeners' Association', p. 137.

[566] Watson, W., 'The British Gardeners' Association', *GC,* s. 3, v. 35 (1904), p. 376.

[567] Watson, p. 376 & Mayne, J., 'Journeyman Gardeners and Low Wages', *GC,* s. 3, v. 55 (1914), p. 106.

foremen would be housed in a bothy, the married men in cottages. Newly appointed head gardeners were usually chosen from the ranks of foremen with the result that there was strong competition for the posts, which kept their wages low. As a 'hard worked gardener ' wrote in 1872:

> Myself and hundreds of self-taught men entered the garden when fourteen years old and from the vegetable boy to the foreman covered a space of twelve years. For six years after that I was honoured with a foreman's duties at the munificent sum of fourteen shillings a week.[568]

This was also the wage paid to William Irvine in his first two foreman positions in the 1860s before being appointed to his first post as head gardener at the age of 26.[569] It is clear that most foremen sacrificed wages with their eye on the long-term horizon when they would have the opportunity to earn more as a head gardener. In some cases, as at Kew, heads of departments carried more responsibility than in most private gardens, and their positions were considered semi-permanent. William McNab earned a salary of 100 guineas (£99,700) a year after five years as one of the foremen, plus a house, firing and candles.[570]

5.5 Head Gardeners

5.5.1 Categories of Head Gardeners

The remuneration earned by head gardeners depended on the category in which they were placed, of which there were five:

1. 'Out of position 'gardeners working in a nursery
2. The head of a small establishment, with minimal staff, designated a 'third rate establishment'
3. The head gardener at a villa or 'second rate establishment', without departments

[568] Hard-worked Gardener, 'Correspondence', *Hibberd's Gardeners' Magazine*, v. 15 (1872), p. 281.

[569] Wilcox, 'Irvine', p. 243.

[570] Fletcher, H.R. & Brown, W.H., *The Royal Botanic Garden Edinburgh, 1670-1970* (HM Stationery Office, 1970), p. 81-2.

4. The head gardener at a 'first rate establishment, 'with a substantial staff

5. The curator of a garden dependent on public funds such as a botanic garden or a municipal garden

5.5.2 The 'Out of Position' head gardener in a Nursery

> When a gardener is in want of a situation, or a gentleman in want of a capital gardener, both apply to a London nurseryman; inferior positions may be filled from provincial nurseries, but first rate gardeners for every part of the empire are obtained from London.
>
> —John Claudius Loudon, 1826[571]

Head gardeners had a symbiotic relationship with nurseries. By custom head gardeners were acknowledged to be the agents of their employers, so that nurseries could accept orders from them without either the agreement or knowledge of the employer. This custom had become common law, after being tested several times in the courts.[572] In return for orders the nursery routinely rewarded the gardener with a cash payment of a percentage of the cost of the order, a practice which was almost universal until an attempt was made to outlaw it in 1906. As a means of cultivating this relationship the custom arose for nurseries to allow head gardeners who were between situations to work in their nursery, regardless of their staff requirements at the time. The nurseries acted as informal recruitment agencies, so that any employer who needed a head gardener could apply to the nursery, who would put forward a candidate from those who were working with them at the time. This arrangement became the principal method of filling vacancies. It also gave head gardeners the opportunity, whilst working at the nursery, of learning the latest techniques and seeing what new plants and products were being introduced to the market. As Loudon put it: 'During this time he brings forward his stock of knowledge of new plants and new modes of culture to the present standard, and goes

[571] Loudon, 'Introduction', *GM,* v. 1 (1826), p. 2.

[572] An example is found in Williams vs Vavasour, 1896, see 'Law Notes', *GC*, s. 3, v. 19 (1896), p. 528.

to his place a first class gardener as before.[573]' Nearly every head gardener, no matter how prominent, spent some time during their career working in a nursery, often on multiple occasions.

The rates of pay offered by the nurseries under this arrangement were not generous. The rate in the first half of the C19th in London, where the leading nurseries were based, was between 12s and 15s a week, without any accommodation or other perquisites. But in the north of England it was noted in 1837 that no nursery gave more than 10s 6d a week, some as little as 9s, whereas they paid their labourers from 2s to 5s more.[574] In 1865, when the Royal Exotic Nursery raised their rate from 12s to 15s a week, 15s became the norm in London, with all the major nurseries confirming that they paid the same rate.[575] These rates scarcely improved over the next fifty years. A survey by the British Gardeners 'Association in 1912 found that rates paid to head gardeners waiting for a place were between 12s and 18s a week and that the rates were held low because of an over-supply of gardeners. One such had been working in a nursery continuously for more than two years as a jobbing gardener as he had been unable to find a place.[576]

5.5.3 The Small Place or 'Third Rate Establishment'

Nurseries took little interest in small establishments (as defined on page 34) as the pickings were too small. These places tended to recruit their gardeners through advertisements placed in *The Times*, *The Field* or the horticultural press or by the gardeners themselves placing a

[573] Loudon, 'Introduction', p. 2.

[574] 'On the Treatment of Gardeners by Nurseries', *GM,* v. 2 (1827), p. 37.

[575] G.C., 'Gardeners' Wages in Nurseries', *GCs,* v. 25 (1865), p. 1109 & Veitch, J., 'Gardeners' Wages in Nurseries', *GCs,* v. 25 (1865), p. 1133.

[576] Onlooker, 'Waiting for a Place', *Journal of the British Gardeners' Association,* v. 5 (1912), p. 139.

'want 'advertisement.[577] The gardener had to be prepared to combine his gardening with other duties, as these two advertisements make clear:

> WANTED - a respectable married couple - the man will have to look after a Garden, Pony, Cow, etc., the wife will have the laundry work.[578]
>
> WANTED a GARDENER and his WIFE, without incumbrance, the former to look after the kitchen garden, greenhouses, also to milk two cows, attend to pigs and poultry, and make himself generally useful, the latter to attend to the lodge gate, must be members of the church of England, and if the man can sing, so much the better.[579]

The reference here to 'without incumbrance 'signified 'no children 'a common stipulation and an indication that this was a buyer's market. In one case a gardener received an offer letter for a post with a wage of 12s a week with cottage and garden free, with the rider 'of course, you would have to reduce your number of children before your wife moved in'.[580] Demands of this kind could be made because there was an over-supply of men applying for the positions, which kept wages low. The *Gardeners 'Chronicle* observed that wages were unlikely to improve whilst 'there are so many willing to take service at the lowest rate, and to combine the services of shoeblack, cow-keeper, pig-tender, groom and what-not with those of the gardener'.[581] The extent of the over-supply can be seen from the experience of A. E. Cresswell who noted that an advertisement in a local paper for a gardener/handyman at 18s a week elicited 97 replies. Advertisements for superior positions with a wage of 28-30s a week brought 2-300 applications.[582] The headline wage paid to the husband was not the only remuneration, as the wife would normally be paid separately for her laundry work and other

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[577] Burbidge, F.W., 'The World of Gardening', *GW,* v. 20 (1903), p. 335.

[578] 'Job Advertisement', *GC*, v. 29 (1869), opposite p. 255.

[579] Badman, S., 'Present Position and Future Prospects of Gardeners', *GC,* v. 32 (1872), p. 737.

[580] Dawes, F. V., *Not in Front of the Servants* (London, Century, 1989), p. 111.

[581] 'Wages Received by Gardeners', *GC, v.* 32 (1872), p. 462.

[582] Cresswell, A.E., 'Gardeners & Unemployment', *Journal of the British Gardeners' Association* (1913), p. 30.

duties and, as the previous chapter demonstrated, there was considerable value in the house, garden and other perquisites.

5.5.4 The Second Rate Establishment

In 1849 Jane Loudon wrote that a gardener of the calibre to be in charge of a second rate establishment (as defined on page 34) could expect to receive £75 (£65,000) a year plus a house:

> The difference in wages between a common gardener, and a man who understands his profession, is commonly about £20 or £30 a year, while for 30s a week [£75 a year], with lodging, a gardener may be obtained who understands the propagation and culture of all ordinary plants and how to keep a garden in good order. Thus those persons who wish to have a show garden, will find the best plan if their grounds are large, to employ a good gardener, and to leave everything to his direction, allowing him to employ labourers as he may think proper.[583]

At the beginning of the C20th Thomas Mawson suggested that the head gardener of a 'Villa ' property with three staff should receive £130 (£57,000) a year, plus cottage.[584] The higher figure cited by Mawson reflects in part the different approach to perquisites which took hold in the C20th, which were a vital part of the head gardener's total remuneration and which are discussed fully in the section on first rate establishments.

5.5.5 The First Rate Establishment

Loudon stated in 1822 that the head gardener of a first rate estate (as defined on page 34) would command a salary of between £150 (£152k) and £300 (£305k) a year together with a 'respectable 'house with its own garden, stable and cow-house and the use of a horse and two-wheeled chaise, kept by a boy who would also act as the house-servant.[585] In fact there

[583] Loudon, J. *The Ladies Companion to the Flower-Garden* (London, Bradbury & Evans, 1849), p. 121.

[584] Mawson, T.H., *The Art and Craft of Garden Making* (London, Batsford, 1900), p. 29.

[585] Cornish, p. 149.

appear to have been very few instances of a head gardener earning more than £150, unless he combined the role with that of steward. The usual range was between £75 and £150. Joseph Paxton observed in 1866 that there were not more than one hundred gardeners in England earning more than £100 (£72k) a year.[586] Paxton himself was paid £65 (£61k) a year when first appointed head gardener at Chatsworth in 1826.[587] His employer the Duke of Devonshire paid £150 (£140k) per annum to Thomas Knowlton, the head gardener at his other estate in Chiswick. Knowlton's successor, Charles Edmonds, received the same wage, but employed a maidservant and two outdoor servants to tend his own garden, at the Duke's expense.[588] The house and garden were invariably provided free of rent and taxes and with additional benefits, such as free coal and vegetables. Indeed Loudon recognised the value of these extras in place of cash wages. In his capacity as editor of the *Gardener's Magazine* he wrote:

> Whenever we have been consulted as to the wages of gardeners our advice has always been to increase their comforts by additions in kind, rather than by additions in money; to give them a more commodious house to live in, a proper office for seeds etc., and a good library, fuel, lights, a cow, pigs, poultry, flour or meal, potatoes and to pay for the education of one or two of the children.[589]

Loudon's reference here to the provision of livestock in the form of a cow, pigs and poultry suggests that the gardener would have sufficient land to maintain them (and a wife to look after them). This was a point emphasised by F. W. Burbidge seventy-four years later when he noted that a relatively small nominal wage could be made up for with a good gardener's

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[586] Hibberd, 'Gardeners' Wages', *Gardeners' Magazine,* v. 9 (1866), p. 21.

[587] Colquhoun, K., *A Thing in Disguise: The Visionary Life of Joseph Paxton* (London and New York, Fourth Estate, 2003), p. 35. Paxton's salary subsequently rose to £650 pa, to reflect his role as steward and his extraordinary value to the Duke of Devonshire, but no other gardener came close.

[588] Aughtie, R., Harley, B., Harley, J., *A Gardener at Chatsworth: Three Years in the Life of Robert Aughtie, 1848-1850* (Worcestershire, Self-published, 1992), p. 11.

[589] Loudon, 'Gardeners' Wages', *GM*, v. 4 (1828), p. 441.

house with a garden and 'then a good plot of land may sometimes be given for potatoes etc., and in other cases in addition to these benefits there may be allowed grass for a cow'.[590]

5.5.6 Botanic Gardens and Parks

The head gardener of a Botanic Garden, who was usually referred to as the curator, would normally command a salary equal to that of the head gardener of a first-rate establishment. As early as 1810 the curator of the Glasnevin Botanic Garden in Dublin earned £150 **(**£143k) a year and that in Liverpool £175 guineas **(**£175k) together with house, firing and other advantages.[591] Daniel Dewar was appointed curator of the Glasgow Botanic Garden with a salary of £200 (£100k) a year in 1893, and his predecessor was given a pension of the same amount per annum.[592] The rates offered in public parks also rivalled those of first rate estates. In 1845 Edward Kemp was paid £185 a year (£154k) plus a house free of rent and coals, etc., as superintendent of Birkenhead Park.[593] This was an exceptional figure, reflecting his status as a landscape designer as well as gardener. In the same year, Jeremiah Harrison as the first principal keeper of Philips Park, Manchester, received £65 (£54k) a year, plus a free lodge, coal and water. The head gardener at Peel Park, Manchester received £78 (£57k) a year, plus the usual emoluments. The superintendents at the People's Park, Grimsby and at Queens Park, Longton, received similar amounts. The wages increased substantially as the century progressed. Harrison's wage grew to £83 (£51k) in 1870 and £104 (£58k) in 1873. William Pettigrew earned £120 (£59k) a year upon his appointment in 1891 as head gardener at Roath Park in Cardiff. In Manchester at that time the Superintendent of Public

[590] 'Address by F. W. Burbidge to the Irish Gardeners' Association and Benevolent Society January 1902', printed in *GW,* v. 18 (1902), p. 398.

[591] McNab, W., 'Kew Correspondence on his Appointment as Curator of Edinburgh Botanic Garden', (Letter 19th March 1810).

[592] 'The Glasgow Parks and Botanic Garden', *GW,* v. 9 (1893), p. 372.

[593] Lee, R., 'The Challenge of Managing the First Publicly Funded Park: Edward Kemp and the 'Fixed' Superintendent of Birkenhead Park, 1843-91'. *Garden History,* v. 46 (2018)**,** p. 159.

Parks earned £200 p.a. (£98k) plus house free of charge and other emoluments. By the time William Pettigrew took over the post in 1915 the salary had increased to £500 (£174k) without house.[594] In London, park superintendents in 1899 received salaries ranging from £100 (£42k) a year in the smallest parks to £225 (£96k) a year in the largest.[595]

5.6 Perquisites

5.6.1 The House and Garden

The house and garden had considerable value, as was discussed in the previous chapter. But whereas a labourer's house and garden had a nominal value of about £5, the value of the house given to those in senior positions could be very substantially higher. The house which Edward Kemp occupied as superintendent of Birkenhead Park was valued at £30 (£25,100) a year.[596] The free provision of house-servants, as to Charles Edmonds, would add more. But the post of head gardener brought with it several other potential earning opportunities, including gratuities, prize money, apprenticeship and journeymen fees, 'discounts 'or a percentage of the value of good supplied and profits from the sale of produce, each of which will be considered in turn.

5.6.2 Gratuities

It was a usual provision in a head gardener's letter of engagement that he was entitled to any gratuities given by people who visited the garden.[597] The custom of giving gratuities was long standing. Thomas Jefferson in his tour of English country estates in 1786 made a note

[594] O'Reilly, C. A., *The Greening of the City* (New York, Routledge, 2019). pp. 69-70.

[595] All figures, except Kemp, from Lambert, D., *The Park Keeper* (Swindon, Historic England, 2005) & O'Reilly, 2019.

[596] Lee, p. 159.

[597] McNab, 'Letter' (19th March 1810).

of the amounts which he gave in each place, which included 5s at Kew and 7s at Painshill.[598] Unlike the case with tips given to servants in the country mansions, where the custom, and especially the amount given, declined with time[599] there was no falling off in the case of gardens, to the extent that in 1833 Loudon observed that '[gratuities] form the principal part of the gardener's income'.[600] At Blenheim, the Palace was open to the public on three mornings of the week, but the gardens were open all day every day. One 5s ticket would admit five people, a comparative bargain, as White Knights charged a guinea[601] but the numbers were huge. The Duke of Marlborough's son, Alfred S. Churchill, complained that it was difficult for his family to enjoy the gardens as they would be met 'at least half a dozen times by parties of fifty, under the charge of a gardener'.[602] These gardener-guides were paid by the head gardener from the visitor's receipts.[603] The entrance fee belonged to the head gardener, but under-gardeners were entitled to keep any tips when they were the guide. Robert Aughtie at Chatsworth recorded in his diary that he was 'very vexed 'at only receiving seven pence from a party of nine.[604]

There are no records of the amounts collected by head gardeners from garden visitors but the potential sums can be judged by reference to the great popularity of garden visiting once the

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[598] Jefferson, T., 'Notes of a Tour of English Gardens, [2–14 April] 1786,' *Founders Online,* National Archives, https://founders.archives.gov/documents/Jefferson/01-09-02-0328 [accessed 23 Jan 2021].

[599] Loudon, 'Gratuities to Servants at Show Houses', *GM,* n.s. v. 5 (1839), p. 437.

[600] Loudon, 'Notes and Reflections made during a Tour through part of France and Germany, in the Autumn of the Year 1828', *GM*, v. 9 (1833), p. 387.

[601] Loudon, 'Calls at Suburban Gardens – White Knights', *GM*, v. 4 (1828), p. 176.

[602] Churchill, A. S., 'Blenheim – to the Editor of the Illustrated London News', *Illustrated London News* (25 Oct. 1856), p. 17.

[603] Commissioner of Taxes, 'Letter from a Commissioner of Taxes', *Illustrated London News* (25 Oct. 1856), p. 17.

[604] Aughtie, et al., p. 114.

railways had made travel easier. Kew gardens received 2.7 million visitors in 1908[605] a figure which exceeded that of 2019 (2.3m visitors), at a time when the population was much smaller and there were very relatively few foreign visitors, whilst the gardens at Crystal Palace (whose receipts were kept by the owning company, not the gardener), averaged 1.9m visitors a year in their first thirty years, up to 1885.[606] If Alfred Churchill was correct in saying that there were six parties of fifty people a day at Blenheim, then the daily revenue at 1s per person would have been £15, or £2,730 (£2.2m) a year, assuming a six month season, which after paying the wages of the gardener-guides would have left the head gardener with a substantial addition to his wages.

5.6.3 Prize Money

> Now we have the flower show fever - in fact it has become so contagious that we cannot enter a village or hamlet - we won't write of towns- but the first thing that generally catches the eye is a large bill intimating in glowing terms that a grand flower show is to be held there in a few days, and such and such a brass band will be in attendance.[607]
>
> —W. F. Bowman, 1874

A second legitimate source of income for the head gardener was the right to the prize money won at horticultural shows. When flower and vegetable shows were in their infancy it was customary for the prizes to be awarded to the owner of the estate on which they were grown. In 1828 Loudon noted that hardly any prizes at the Herefordshire Horticultural Show were awarded to anyone below the rank of 'esquire'. He asked, 'what inward satisfaction can it be to a man to receive prizes for which he, personally, has had no hand in producing'?[608] Gradually, it became customary for the prizes to be awarded to the gardener rather than the

[605] Kew Bulletin, 'Visitors to Kew during 1908', *GC*, s. 3 v. 45 (1909), p. 121.

[606] Piggott, J., *Palace of the People: the Crystal Palace at Sydenham 1854-1936*, (Madison, WI, University of Wisconsin Press, 2004), p. 61.

[607] Bowman, W.F., 'Our Liberal Nurserymen', *GC,* n.s. v. 2 (1874), p. 591-2.

[608] Loudon, 'Herefordshire – Herefordshire Horticultural Society', *GM,* v. 6 (1830), p. 255.

owner and for the gardener to be entitled to the prize money, on condition that he bore the costs of transporting the plants and staging the exhibition. An employer would encourage his gardener to exhibit because of the prestige which his success would bring to the estate. As William Robinson commented:

> I have observed many gentlemen delighted and loquacious about 'my gardener's' success. The prizes are given for excellence of culture and in nineteen cases out of twenty that excellence is the result of the gardener's skill and brains, it is not just, it is not honourable, it is hardly honest to deprive him of the merit which attaches to victory.[609]

An owner who had in the past exhibited in his own name, but had ceased to do so, explained his reasons:

> My own gardener is content with this; he enjoys the trip free of expense to the exhibition, with his day or two's holiday, and the opportunity of seeing the specimens exhibited by the competitors. But finding myself almost alone in putting my name first, I have fallen in with the prevalent custom.[610]

The custom in time became settled law as was shown in the case of Hardisty vs Tock, which was heard in the Selby County Court in 1873. The Plaintiff, Hardisty, after being dismissed as head gardener at Drax Abbey, Selby, sued his employer, James Tock, for the balance of his wages. Tock admitted the claim for wages but sought to set off against it the value of the prizes which Hardisty had won at a local show. The judge said that he had always understood that prize money was one of the perquisites of the head gardener and found in favour of Hardisty.[611]

The prize money came from two sources. First, the nurseries, who vied with each other to offer the largest rewards, and in turn to obtain the custom of the gardeners. Leaders in the

[609] Robinson, W., 'Prize-taking at Exhibitions', *GC*, v. 25 (1865), p. 29.

[610] Vindex, 'Prize-taking at Exhibitions', *GC,* v. 25 (1865), p. 28.

[611] 'Law Notes', *GC,* v. 33 (1873), p. 1533.

field were Messrs Veitch of the Exotic Nursery, William Bull of Chelsea and the seedsmen, Messrs Carter and Sutton.[612] Secondly, the show organisers dedicated a substantial part of the anticipated gate money to the prize fund. The Manchester Horticultural Society, whose annual show at Whitsun routinely attracted 30,000 visitors, had given more than £40,000 (£20.7m) in prize money by the time of their 50th anniversary in 1877.[613] By 1903 the figure had risen to £100,000 (£43.5m).[614] Other regions also consistently gave more than £1,000 (£600k) in prize money. The Bath Exhibition of 1873 offered prizes worth £1,800 (£1.1m)[615] and the Midland Counties £1,210 (£697k) in 1874.[616] Sometimes the receipts were insufficient to cover the amount offered in prizes, as was the case with the Royal Horticultural Society in 1875, when their treasurer proclaimed: 'We owe for prizes £1,400 (£784k) and, if I were to pay these rabid prize-men, we should come to a dead stand. I would rather cut my hand off than sign a cheque to pay these prizes'.[617] Huge as the prize money was in the regional shows, their total was probably exceeded by the local shows. John Wills foresaw a time 'when a flower show will be held in every village in the kingdom'.[618]

As Shirley Hibberd observed:

> In the Horticultural Directory about 300 societies were described, but there must be thousands. A large proportion were all round societies, representing horticulture generally; but there were societies that took special cognisance of auriculas, tulips, pansies, pinks, pelargoniums, roses and other flowers and even celery, parsnips, cucumbers, gooseberries and rhubarb were not forgotten. It was one of the most

[612] Bowman, p. 592.

[613] 'Royal Manchester Botanical and Horticultural Society', *GC,* n.s. v. 7 (1877), p. 468.

[614] Wilcox, A., 'Famous Gardeners at Home: no. 73 Mr Patrick Weathers, at the Royal Botanical Gardens, Manchester', *GL* (1903), p. 354.

[615] 'Bath Exhibition of the Royal Horticultural Society', *Gardeners' Magazine,* 16 (1873), p. 86.

[616] 'Editorial: Midland Counties Grand Horticultural Exhibition', *GC,* n.s. 1 (1874), p. 573.

[617] Elliott, 'Flower Shows in Nineteenth Century England', *Garden History,* v. 29 (2001), p. 180.

[618] Ibid., p. 181.

> enjoyable things in the world to assist at a gooseberry meeting and see the berries weighed with as much care as if they were nuggets of gold.[619]

It was sometimes said that this was 'purse-gardening', which gave an unfair advantage to those with the most elaborate facilities[620] but it was by no means the case that the well-known names dominated the prize lists, and in any event they tended not to compete in the smaller shows. W. Hammond, the gardener for Mrs Carr at 'Trueloves 'Ingatestone, who had a staff of four, was the winner of 250 prizes in a ten-year period in local shows.[621] The Chrysanthemum specialist, George Mileham of Emlyn House, Leatherhead was the winner of 256 prizes.[622] James Child, whilst head gardener to Mrs Orr at Gabrand Hall, Ewell, Surrey, exhibited at the large RHS and Crystal Palace shows, as well as local shows in Brighton, Croydon, Sutton, Richmond, Kingston, Twickenham and other places, winning on average about £100 (£44k) a year.[623] The value to an individual gardener of competing for prizes can be seen from the case of Beisant vs The Caledonian Railway Company. James Beisant was the head gardener at Castle Huntly, Longforgan. He engaged a special van to carry 144 chrysanthemum blooms to the Edinburgh Chrysanthemum Show. The van was involved in an accident in which the flowers were damaged and Beisant claimed from the railway company recompense for the loss of his chance to win the Edinburgh City Cup and other prizes, as well as the damage to his professional reputation. After the negligence of the

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[619] Hibberd, 'Gardeners' Royal Benevolent Society', *Gardeners' Magazine*, v. 22 (1879), p. 333.

[620] Elliott, 'Flower Shows', p. 174.

[621] Wilcox, 'Famous Gardeners at Home No. 226: Mr W. Hammond at Trueloves', *GL,* v. 9 (1905-6), p. 313.

[622] Wilcox, 'Famous Gardeners at Home No. 275: Mr George Mileham at Emlyn House', *GL,* v. 13 (1907-08), p. 349.

[623] Child, J., *The Autobiography of a Dedicated Gardener, James Child F.R.H.S* (Unpublished manuscript), p. 7.

railway company had been established Beisant was awarded compensation of £60 (£26k) out of a £100 (£44) claim.[624]

William Barnes, for many years head gardener at Bromley Common, won over 800 prizes over a period of 18 years.[625] Although the monetary value of his prizes was large, Barnes had to fund personally a considerable outlay in order to exhibit. He recorded an expenditure of more than £60 (£37k) for horse-hire alone for six shows, to which was added the hire of vans, the wages of his assistants, payment at toll bars and incidental expenses.[626] Like the show organisers, the exhibitors took a financial risk and did not always show a profit. However, assuming that the average prize won by Barnes was a modest £5, (some of the first prizes were £25) he would have won £4,000 (£2.6m) in 18 years and presumably have seen a substantial profit when his expenses were taken into account. Thomas Weaver, who was the gardener to the warden of Winchester College for forty years and a successful exhibitor at the Southampton and other shows left probate of £3,000 (£1.68m) in 1875 of which, it may be assumed, the prize money made a substantial contribution.[627]

5.6.4 Apprenticeship and Journeymen's Fees

Where a head gardener, with the consent of his employer, took on an apprentice, any fee paid by the apprentice belonged to the gardener. The normal fee was £3-5 per annum for a period of three years.[628] On the larger and more prestigious estates, some of which were known as the universities of horticulture, the demand for apprenticeships was high and the head

[624] 'A Law Note', *GW,* v. 17 (1901), p. 796.

[625] 'Notice of Retirement: William Barnes', *Journal of Horticulture,* v. 7 (1851), p. 159.

[626] 'Obituary-William Barnes', *GC,* v. 30 (1870), p. 14.

[627] 'Obituary-Thomas Weaver', *GC,* n.s. v. 3 (1875), p. 149.

[628] Angus Lad, p. 625.

gardener would sometimes take as many as four apprentices at one time[629] and in exceptional cases the premium could be as high as £15 per annum.[630] As the actual training would be delegated to the foremen, this was a useful and unburdensome form of additional income for the head gardener.

Head gardeners also commonly took premiums from journeymen, a more controversial practice as there was no obligation to provide training in return, although this was sometimes given. As 'Ephebicus Horticultor 'observed; 'there is a gardener of celebrity in the horticultural world who, like too many others, extorts £10 from every journeyman he employs, aside from ability and qualifications'.[631]

In one case the premium was as high as £25.[632] Sometimes, instead of a premium, the head gardener took a cut from the journeyman's wages. In 1901, the head gardener at Heaton Park, Mr Dunn, agreed to take on a young gardener, Sanders, at 12s a week, on condition that he would retain 2s out of the wages. In 1860, at a garden in Preston, the head gardener accepted a premium of £3 from the journeymen and also took 1s 6d a week from a wage of 11s from those working outside and 2s a week from a wage of 12s from those working in the hot-houses.[633] These practices were often exploitative and sometimes resented, but not always so. Sanders recalled of his time at Heaton Park: 'I got a good training there and [Mr Dunn] got me a post of journeyman at Hopwood Park after two years'.[634]

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[629] Neutral, 'Conduct of Head Gardeners towards Journeymen', *GM,* v. 5 (1829), p. 101.

[630] Angus Lad, p. 625.

[631] Ephebicus Horticultor, p. 177.

[632] Thirty-Eight Years Head, 'Gardeners wages', *GC,* s. 3 v. 55 (1914), p. 151.

[633] Roaldus, 'Education of Gardeners', *GC,* v. 20 (1860), p. 694.

[634] Loudon, *Encyclopaedia of Gardening,* p. 56.

5.6.5 'Discounts'

> I think it [the giving of discounts] is the greatest cause of the low wage paid to gardeners, who accept low wages knowing they will receive an addition by commissions, whilst employers in general are quite aware of the practice, and are content to let their gardeners 'wages be supplemented in this way by tradesmen. I have it on good authority that every firm in the horticultural trade gives at least 5% and that a great many firms exceed this amount considerably.[635]
>
> —'Investigator '

There seems to be little doubt that the practice of giving head gardeners a percentage of the value of the seeds and plants which they ordered, known as the 'discount', was almost universal. One nursery said that out of their 3-4,000 customers not more than six or seven refused to take a discount.[636] Nurseries not only advertised their discounts openly but vied with each other in offering the most attractive deal to the gardener.[637] The percentage offered was usually 5% but in order to attract new customers nurserymen were reported to have offered as much as 12.5%.[638] This was potentially a substantial source of revenue to the gardener in charge of establishments of the second or first rate. It was calculated that the cost of supplying the plants required to fill the flower beds of a villa garden was between £400 and £500.[639] But for a large estate the figures were much greater. In one year the Hammersmith nursery supplied the Marquis of Blandford at White Knights with plants to the value of £15,000 (£14m).[640] At 5% the gardener's share would have been £750 (£698k). The gardener at Leslie Castle, a decidedly 2nd rate estate, spent £3,000 (£1.68m) a year with various nurseries, from which he gained a minimum of £150 (£84k), presumably greater than

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[635] Investigator, 'Commissions', *GC,* s. 3 v. 33 (1903), p. 172.

[636] A Briton, 'The Prevention of Corruption Bill', *GC,* s. 3 v. 40 (1906), p. 328.

[637] Ibid.

[638] Another Young Nurseryman, 'Gardeners' Discount', *GC,* v. 31 (1871), p. 346.

[639] An Occasional Valuer, 'Garden Expenditure', *TG,* v. 20 (1881), p. 621.

[640] Loudon, 'White Knights', *GM,* v. 9 (1833), p. 665.

his annual salary.[641] However in the smaller gardens the sums involved were relatively insignificant. One correspondent pointed out that his annual expenditure was about £18 for seeds, £20 for bulbs and £10-12 for new plants. On these sums the commission would have been only £2 10s.[642]

The strict legal position was that the practice was unlawful if the payment had not been authorised by the employer. The fact that the percentage was usually given clandestinely suggests that both the gardener and the nursery (or seed firm) were aware that it was dubious. On the other hand as the nurseries openly advertised the discounts, and the advertisements will have been seen by the employers it seems that they turned a blind eye to the practice and presumably had this in mind when contracts of engagement were negotiated. The legal position was tested in 1875 when the firm of Williams in Upper Holloway sued John Leslie MP, the owner of the Castle Leslie estate, for an unpaid account of £328 (£184k) for plants ordered by his head gardener, Hood. Leslie argued that the gardener had exceeded his authority in buying the plants, but it was held that the nursery was able to rely on the implied authority which vested with all head gardeners. In the evidence it emerged that the nursery customarily gave a 5% 'present ’to the head gardener who placed the order, and when the jury made the award in the nursery’s favour, they recognised this fact by deducting 5% from the value of the claim. This case generated considerable publicity, including letters to *The Times*[643] resulting in pressure to make the practice illegal, but it was not until the enactment

[641] ‘Law Notes’, *GC,* n.s. v. 2 (1874), p. 623.

[642] W.J.P., ‘Commissions, Secret or Corrupt’, *GC*, s. 3, v. 33 (1903), p. 204.

[643] ‘Law Notes - Williams v. Leslie’, *GC,* n.s. 4 (1875), p. 659, & ‘Williams v. Leslie, M.P.’, *The Times* (06 Nov. 1875), p. 11, Ibid. (10 Nov. 1875), p. 11 & Ibid. (18 Nov. 1875), p. 10.

of the Prevention of Corruption Bill in 1906 that the receipt of discounts which did not have the consent of the employer was made a criminal offence.[644]

The 1906 Act made the taking of all commissions, even a Christmas box or hospitality, illegal, as was confirmed by King's Counsel in advice given to the Horticultural Trades Association.[645] However, when a test case was brought by The Secret Commissions and Bribery Prevention League against the firm of Cutbush, who had given a case of whisky to Charles Kidd, the head gardener at Huntroyde, their claim failed. It was alleged that Messrs. Cutbush sent out hundreds of cases of whisky to head gardeners every Christmas disguising them as 'Cutbush's Insecticide'. Although the presiding Judge, when summing up to the jury said the Act had been designed to prevent exactly this sort of practice, the jury dismissed the claim, after only a few minutes of deliberation.[646] After this, there are no records of any further prosecutions, and the issue dropped from the public domain. The green light had effectively been given to the giving of Christmas boxes, but the extent to which other inducements were given to head gardeners after 1906 is uncertain. A year after the passing of the Act, in a case before the Greenwich County Court an unnamed Plaintiff successfully sued a firm of horticultural builders for the value of an 8% commission which they had paid to a gardener in connection with the building of a greenhouse for £67 (£28,800).[647] In the same year a High Court Judge, Sir Edward Fry commented 'I fear that bribery of gardeners has been, and is, very widespread in the trade'.[648]

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[644] *Prevention of Corruption Act 1906*, Chapter 34; 6; Edw 7.

[645] 'Prevention of Corruption Act', *GC,* s. 3, v. 40 (1906), p. 376.

[646] 'Alleged Corrupt Practice', *GC,* s. 3, v. 47 (1910), p. 267.

[647] 'Law Note-A Secret Commission', *GC*, s. 3, v. 41 (1907), p. 222.

[648] Fry, E., 'The Prevention of Corruption Act, 1906', *GC*, s. 3, v. 42 (1907), p. 439.

5.6.6 Profit From the Sale of Produce

> He is to have all the fruits and herbages for his own profit, saving only what is required for the household, but is to manure and work the garden at his own cost and charges and provide all things needful for its due cultivation. For wages, the sum of two pence each day.
>
> —Extract from the contract issued by John of Gaunt to Nichol Gardiner (nostre gardyner), 1372[649]

Philip Miller, the head gardener at the Chelsea Physic garden until 1770 was allowed to sell the produce from the garden, but he complained in his letter of resignation, at the age of 70, that he was unable to make a profit from doing so.[650] By the C19th the former tradition of allowing a gardener to sell the produce of a garden for his own profit had all but died out but the gardener was still entrusted with the task of disposing of surplus produce. Even in relatively small gardens the quantity produced could be very extensive. In a plan for making a suburban kitchen garden Alexander Forsyth proposed the planting of 14 different types of fruit, comprising 2,622 plants of 153 varieties.[651] In a large garden, the production could be immense. At Harefield Grove, the head gardener John Gough was in charge of 102 hot-houses, greenhouses, vineries and other grass structures, plus 21 acres of orchards containing 12,000 fruit trees. All the surplus stock, after catering for the needs of the proprietor's family, was sold in the fruit and vegetable markets at Covent Garden, Birmingham, Manchester and Sheffield. In 1885 Gough sold 1,200 lbs of mushrooms averaging 1s 3d a lb at Covent Garden, plus 400,000 forced French and kidney beans and 30,000 hyacinths amongst many others. He said that 'very big prices are sometimes obtained, especially at Christmas'.[652] In 1834 Loudon, in discussing the depressed state of the nursery business,

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[649] 'Wages of Gardeners Five Hundred Years Ago', *Gardeners' Magazine,* v. 19 (1876), p. 47.

[650] Field, H., & Semple, R.H., *Memoirs of the Botanic Garden at Chelsea* (Cambridge, Cambridge University Press, 2011), p. 76.

[651] Forsyth, A., 'On the Formation and Planting of a Suburban Kitchen Garden by' *GM,* n.s. 3 (1837), p. 128.

[652] Walsall Observer, 'Notes from Gardens – Harefield Grove Gardens' *GW*, v. 1 (1885), p. 423.

gave as the reason the practice of estates selling their produce and allowing their gardeners to propagate and sell their plants.[653] The difficulties faced by market gardeners had been observed by Adam Smith:

> The circumstances of [market] gardeners, generally mean, and always moderate, may satisfy us that their great ingenuity is not commonly over-recompensed. Their delightful art is practised by so many rich people for amusement, that little advantage is to be made by those who practise it for profit; because the persons who should naturally be their best customers, supply themselves with all their most precious productions.[654]

On a tour of gardens in Scotland Loudon observed that in the absence of the owners the whole of the garden produce went to market.[655] It seems that at Harefield Grove it was the intention of the owner to run the garden on a semi-commercial basis, in which case all the proceeds from the sale of produce will have belonged to the owner but the opportunities for the enrichment of the man in sole charge of the operation were not insubstantial. John Gough had, by 1890, accumulated sufficient capital to purchase a nursery of his own, the long-established Osborn's Nursery in Hampton, Middlesex.[656] But the right to dispose of surplus stock for the gardener's benefit was seen as a valid perquisite in many cases. It was recognised as legitimate by David Fish, who had campaigned against the over-enthusiastic use of perquisites, calling the taking of discounts a 'school for scandal'.[657] Fish also acknowledged that gardeners had the right of property in seedlings which they had grown

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[653] Loudon, 'Depressed State of the Nursery Business', *Loudon's GM,* v. 10 (1834), p. 520.

[654] Smith, A., *An Inquiry Into the Nature and Causes of the Wealth of Nations* (Cannan ed.), v. 1 (1776), Online Library of Liberty, https://oll.libertyfund.org/title/smith-an-inquiry-into-the-nature-and-causes-of-the-wealth-of-nations-cannan-ed-vol-1 [accessed 03 Feb 2023].

[655] Loudon, 'General Results of a Gardening Tour, during July, August, and part of September, in the Year 1831, from Dumfries, by Kirkcudbright, Ayr, and Greenock, to Paisley', *GM,* v. 9 (1833), p. 11.

[656] 'Osborn's Nursery, Hampton', *GW*, v. 6 (1890), p. 612.

[657] Fish, D.T., 'Wages of Gardeners', *GC,* v. 26 (1866), p. 317 and Fish, D.T., 'Gardeners and their Employers', *GC,* v. 30 (1870), p. 1704.

and were thus able to sell them and keep the proceeds.[658]' Viator 'ascribed the relatively low wage paid to the gardener to his right to profit from the sale of surplus produce once the house had been supplied.[659]

The right to sells plants or seedlings only existed with the express consent of the owner. Where that consent did not exist the conduct of the gardener could be construed as dishonest, sometimes criminally so. The gardener to Mrs W. Cox of Bognor was dismissed when his employer found that he had sold flowers without her knowledge. He sued her for the value of the plants, £4 15s, as well as unpaid wages. His claim was dismissed on the basis that he had acted dishonestly in selling the plants without the permission of Mrs Cox.[660] Christopher Young, the gardener to H. C. Bowden of Clapham was accused of selling flowers to Covent Garden market without the owner's consent. Whenever Mr Bowden had asked for flowers he was told there were none in bloom, the reality being that Young was clandestinely selling them. He received a criminal conviction.[661] Frederick Ketley, the gardener to Mrs Eyre of Kings Hill House, Cam, was accused of exchanging plants and cuttings with another gardener without express permission from his employer. Mrs Eyre testified that she knew it was customary to exchange cuttings, but thought that this did not apply to plants. The evidence of two other head gardeners was sufficient to persuade the court that there was a long-established custom for gardeners to exchange plants, as well as cuttings and Ketley was acquitted.[662]

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[658] Fish, 'Gardeners and their Employers', p. 1704.

[659] Viator, 'The Prevention of Corruption Bill', *GC*, s. 3, v. 40 (1906), p. 338.

[660] 'Law Notes – Sale of Plants by a Gardener', *GC,* s. 3, v. 26 (1899), p. 154.

[661] 'Lead Article', *GC,* v. 17 (1857), p. 149.

[662] 'Law Notes – Exchanging Plants', *GC*, s. 2, v. 19 (1883), p. 319.

Sometimes the gardener could make a profit not by dealing with third parties but by creative accounting with the household, as is described here:

> The cook and butler each brought their accounts, the gardener charged for seeds, each finding the money in advance and being paid periodically 'as per book'; the cook charged a good profit on her purchases, the butler was said to have produced a 2s 6d box of plate powder from a halfpenny worth of whitening, a 1s 6d bottle of Day and Martins from a penny skin of paste-blackening and so forth; and one was charged with defrauding the master of the house; but the judge decided that as the master did not look after his own business, but allowed the servants to become traders for his benefit, they had the perfect right to charge what was proper over the original cost, to cover the risk of not being paid at all if he became insolvent. In this manner the thoughtless apathy of heads of families generates the evil so universally complained of in servants of all kinds.[663]

Parallels between the indoor and outdoor staff can also be found in the right to perquisites claimed by the indoor staff and their marketing activities. The cook was entitled by custom to surplus cooking fats, ashes, bones, the fat trimmed from meat, rabbit skins and used tea leaves. In some establishments the cook could also claim, and sell worn table-cloths, rags, broken metal objects and candle ends.[664] Butlers were entitled to sell used bottles and candle ends (when not sold by the cook).[665] The potential of those indoor servants who were in charge of marketing to make a profit can be seen from the example of Mary Webster, the cook and cook-housekeeper at Erdigg in Wrexham for more than 30 years. When she died in 1875 her probate was valued at more than £1.3m (£728k), demonstrating that 'she had a good working relationship with the shopkeepers of Wrexham'.[666]

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[663] A Subscriber, 'Education of Gardeners', *GC*, v. 30 (1870), p. 1637.

[664] Wilson, A., 'Cooks, Kitchen Maids and Kitchen Helpers' in Sambrook, P. & Brears, P.C.D., *The Country House Kitchen 1650-1900: Skills and Equipment for Food Provisioning* (Stroud, Gloucestershire, A. Sutton Pub. in association with the National Trust, 1997), p. 87 & Field, 'Domestic Service', in Ibid., p. 250.

[665] Field, p. 250.

[666] Wilson, p. 87.

The extent to which these various perquisites added to income and a comparison with the income of indoor servants is made in the next chapter in which the wealth and status of gardeners is discussed.

5.7 Terms of Engagement

5.7.1 Hours of Work

The hours which a gardener was required to work depended on his place in the gardening hierarchy. These hours were determined by the head gardener in places which employed a number of staff and by the employer where the gardener was employed as a 'general factotum'. During the whole of the long nineteenth century gardeners 'hours of work were unaffected by legislation. Even the Hours of Employment Act, passed after the First World War with the intention of limiting working hours to 48 a week, specifically excluded those working in horticulture.

With minor exceptions, mainly relating to Saturday work, the hours worked by gardeners below the rank of head gardener remained remarkably static throughout the whole period. As a rule, gardeners worked for six days, Monday to Saturday from 6am to 6pm when daylight permitted and from dawn to dusk in winter, with a break of half an hour for breakfast and one hour for dinner.[667] In some cases an hour was allowed for breakfast, as at Putteridge Bury.[668] The norm was a 63 hour week except in winter, with some variations. In winter, breakfast would be taken before the start of the working day, so that the working day was 8½ hours, from 7.30am to 5pm, with one hour for dinner.[669] In the north of England and in some places where cricket was played, work on a Saturday would finish at 4pm so that the working

[667] Scientiae et Justitae Amator, 'On the Advantages which would Result from Gardeners not being Compelled to Work Longer on a Saturday than Artisans', *GM,* v. 9 (1833), p. 428.

[668] Fish, R., 'Gardeners' Hours and Holidays', *Journal of Horticulture,* v. 3 (1862), p. 209.

[669] Ibid.

week was 61 hours rather than 63.[670] However in summer, in the days before the mechanisation of lawn mowing, on some days grass cutting would begin at 4.30am to take advantage of the dew and the watering of plants would sometimes continue until dusk if the weather was dry. Junior employees would take it in turns to be on duty on Sundays and in winter to look after the furnaces at night.[671] There were reports of gardeners being made to start work at 5am and to continue outside until 7pm and then work in the greenhouse until 7pm, but such conditions were exceptional.[672] The regulations governing the gardeners at the Horticultural Society's garden at Chiswick may be considered to be typical. There, the men were summoned to duty by a bell which rang at daylight in winter and at 6am in summer, except on mowing mornings when it was rung at 5am. Breakfast was allowed between 8 and 8.30 am, dinner between twelve and one, and work ended at dusk in winter and 6pm in summer.[673] The use of a bell to signify the time draws comparison with the discipline imposed on factory workers where bells were also used, and where the working day, before legislation and union pressure intervened, was routinely 12 to 15 hours.[674] Thus gardeners, and agricultural labourers generally, had an advantage over factory workers initially, an advantage which was to disappear as factory conditions eased. However, gardeners had a continued advantage over indoor domestic workers, who were expected to be available at all times for their employer 'day-in, day-out'.[675] This could be so onerous for

[670] Scientiae et Justitae Amator, p. 428.

[671] An Old Gardener, 'Number of Men Necessary to keep a Kitchen-garden in Good Order', *GM*, v. 5 (1829), p. 108 & Loudon, 'Notes Made During a Tour to Chertsey, Woking, Bagshot, Reading, Farnham, Milford, Dorking and Epsom, between the 12th and 22nd of August, 1835', *GM*, n.s. v. 1 (1835), p. 509.

[672] Ephebicus, p. 177.

[673] 'Regulations for the Internal Administration of the Garden of the Horticultural Society of London', *GM*, n.s. v. 6 (1840), p. 320.

[674] Cunningham, H., & Richards, J., *Time, Work and Leisure* (Manchester, Manchester Univ. Press, 2014), p. 56.

[675] Field, p. 250.

junior employees that when the alternative of a 12 hour day in a factory became available many female domestic servants preferred it to being perpetually on call in a household.[676]

The working hours of gardeners, unlike agricultural workers, do not seem to have been curtailed by adverse weather. Although many gardening activities become impossible during periods of hard frost, snow or heavy rain, there were normally sufficient indoor activities to keep a gardener busy, particularly when greenhouses became more prevalent. Few gardeners, other than self-employed jobbing gardeners, were paid by the hour so it was in the interests of head gardeners and employers to keep the men occupied during inclement weather.

As in factories, discipline was enforced in gardens through a system of fines. At Chiswick a fine of 6d was levied for anyone arriving more than five minutes late and 1s if they did not arrive until after breakfast time.[677] It was the usual practice for any fines which were levied to be used for the benefit of the gardeners as a whole. At Chiswick a fund was established to purchase books.[678] At Cheshunt Cottage, which was a private garden, any fines levied were used to fund an annual party for the gardeners.[679]

In the case of the 'general factotum 'the gardener's duties and his hours were very much at the discretion of the employer. Sometimes a letter of engagement would contain a clause which read 'the gardener to give the whole of his time to the service of Mr Z 'which could be construed as meaning that he would work his ordinary hours and duties, or, that he was at his

[676] Lethbridge, L., *Life Below Stairs* (National Trust Books, 2011), p. 94.

[677] 'Regulations for the Internal Administration of the Garden of the Horticultural Society of London', p. 320.

[678] 'Regulations for the Internal Administration of the Garden of the Horticultural Society of London', p. 320.

[679] Loudon, 'Descriptive Notice – no. 13 Cheshunt Cottage', *GM*, n.s. v. 5 (1839), p. 647.

employer's beck and call, day or night.[680] Some employers took the latter interpretation, as was generally the rule with indoor servants, but in general, although there were numerous complaints to the contrary, far less control seems to have been exercised over outdoor servants than those working indoors, primarily because they were not under close observation and were given a measure of independence in organising their work schedule.[681] In many cases they made their own hours, as one employer sardonically observed:

> My gentleman walks in about a quarter before eight and by the time he has taken off his coat, opened his frame lights and turned himself around it is time for breakfast. After sitting half an hour at this meal and by the time he has taken out his tools and again turned around it is usually much nearer 10 o'clock than half past nine. He takes an hour and a half for dinner. All my neighbour's gardeners are the same.[682]

5.7.2 Overtime

The payment of overtime and compensation for working on a Sunday was a matter entirely at the discretion of the employer and whilst there were some places where no extra payments were given, they were the exception. Sometimes, as at Chatsworth, gardeners who worked on a Sunday were given time off in lieu.[683] In some places it was a term of their engagement that they must work extra time if asked to do so, but that they would receive 1d or 2d more than the usual rate when they did so. 'The extra pay is worth a new coat to some of them', observed a correspondent in the *Journal of Horticulture*.[684] William Cresswell recorded that he was paid an extra 6d for working after 6pm on a Saturday at Audley End.[685] In contrast, in 1896 'GHH 'wrote: 'I am acquainted with many places where men are obliged to be on

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[680] 'Gardeners' Agreements', *Journal of the British Gardeners' Association*, v. 1 (1907), p. 46.

[681] Field, p. 250 & G.W., 'Gardeners' Labour Hours', *GC*, v. 7 (1848), p. 685.

[682] G.W., 'Gardeners' Labour Hours', p. 685.

[683] Aughtie, et al., p. 25.

[684] A Head Gardener, 'Correspondence', *Journal of Horticulture,* v. 36 (1879), p. 346.

[685] Cresswell, p. 68.

duty all day Sunday without any thought being given to extra pay'.[686] In another, harsh discipline was imposed, with the men being required to ask permission to leave work at the end of a shift being dismissed if they failed to do so, and to work extra hours without recompense.[687] In 1904 the British Gardeners' Association carried out a survey of 75 gardens, both private and public and found that overtime was usually paid for, that in many gardens Sunday work was paid for, but that in only a few was night duty treated as overtime and recompensed.[688]

5.7.3 The Saturday Half-Holiday

The gardeners 'relatively long working week was ameliorated in two respects during the C19th. First, as the use of the scythe was gradually abandoned in favour of mechanised mowing it was no longer necessary to make an early start to take advantage of the morning dew so that the gardening day could start at six. Secondly, in the final decade of the century the practice of finishing work early on a Saturday became more widespread. This move had been opposed because Saturday afternoons were regarded as the busiest time in the garden as preparations had to be made for Sundays, when the number of staff was minimal.[689] That problem was solved by starting the day earlier on a Saturday and making the Sunday 'duty man' cover Saturday afternoons as well.[690] In 1894 Kew gardens instigated a policy of having a half day's holiday on Saturdays, a system which was adopted by the RHS gardens at Chiswick in 1896[691]. This policy gradually became the norm in private gardens so that by

[686] G.H.H., 'Working Hours', *Journal of Horticulture,* s. 3, v. 32 (1896), p. 166.

[687] A Head Gardener, p. 346.

[688] Watson, p. 376.

[689] Stirling, 'Gardeners' Half-Holiday', *GW,* v. 9 (1893), p. 561.

[690] Eavis, H., 'Saturday Half Holidays', *Journal of the British Gardeners' Association* (1910), p. 55.

[691] Gamma, 'Saturday Half-Holiday for Gardeners' *GW,* v. 11 (1895), p. 293 & 'Saturday half-holiday', *GW*, v. 12 (1896), p. 668.

1914 W. H. Divers was able to observe that 'the Saturday half-holiday is becoming general'.[692]

5.7.4 Holidays

As was the case with indoor servants, holidays were not regarded as an entitlement, either by employer or employee and were given entirely at the discretion of the employer.[693] They were taken infrequently and were measured in days rather than weeks. The recognised holidays in England were Christmas Day and Good Friday and in Scotland, New Year's Day, but these were not always allowed to gardeners, particularly the Easter holiday as it fell at a busy time in the gardening calendar.[694] In 1871 the Bank Holidays Act increased the existing holidays to include Boxing Day, Easter Monday, Whit Monday and the first Monday in August[695] but these were not a statutory requirement and were not observed in gardens. An advertiser for a head gardener for a small establishment in Liverpool stated, 'I don't give holidays but in reason I don't refuse a day off, or in the case of a man from a distance, two or three days a year'.[696] In the case of larger establishments, Robert Fish, writing in 1863 thought that it was in order for a head gardener to ask for the occasional day off and for a holiday of up to six days at most once a year, but more properly every two or three years.[697] He wrote: 'I have seldom known or heard of holidays being deducted from wages', adding

[692] Divers, W.H., 'Journeyman Gardeners' Wages', *GC'*, s. 3, v. 55 (1914), p. 241.

[693] Field, p. 250.

[694] 'Gardeners' Holidays', *GW*, v. 5 (1889), p. 544 & Robertson, F.W., p. 81.

[695] Conway, H., *The Municipal Park: Design and Development, circa 1840-1880* (Leicester Polytechnic, PhD Thesis, 1985), p. 191.

[696] Heald, J., 'The Story of an Advertisement', *Journal of the British Gardeners' Association* (1911), p. 106.

[697] Fish, R., p. 210.

that it was common for a small 'douceur 'to be paid as well as the wages.[698] In this respect gardeners seem to have had an advantage over the general working population, where holidays 'were always unpaid', at least in the first half of the C19th.[699]

Although gardeners were not entitled to any holidays as of right, there is little evidence of them being denied when requested. William Cresswell recorded in his diary that whilst working as an under-gardener at Elm Lodge in Streatham he was allowed a day off on three occasions to take an excursion with his fiancée.[700] Another under-gardener diarist, Robert Aughtie, whilst working at Chatsworth, was allowed 10 days 'compassionate leave in May 1848, was then permitted to spend a week touring gardens in September of that year and in October of the same year was absent for a further two weeks on a tour of Ireland.[701] The word 'holiday 'was often used to describe a day or two away to visit other gardens, or to attend a show, both of which were deemed to have an educational value. In the 1890s, at the same time as employers began to concede the Saturday half holiday, regular holidays became a feature of employment contracts. In 1892, a vestry committee offered Christmas Day, Good Friday and all Bank Holidays as well as one week's holiday during the summer, all on full pay.[702] In 1896 Syon House, a private garden owned by the Duke of Northumberland, granted a fortnight's holiday once a year to all their gardeners, in addition to days off as requested which were 'readily granted'.[703] However, the absence of holidays did not feature largely in the correspondence columns of the gardening journals, where gardeners did not

[698] Fish, R., p. 211.

[699] Cunningham, p. 110.

[700] Cresswell, pp. 52-4.

[701] Aughtie et al, p. 64.

[702] 'Gardeners and Surveyors', s. 3, v. 12 (1892), p. 44.

[703] 'Syon House', *GW*, v. 12 (1896), p. 740.

hold back in airing their grievances, and the British Gardeners 'Association, which was established to campaign on behalf of gardeners on social and economic issues, was silent in their initial prospectus in 1904 on the subject of holidays, which suggests that extra holiday days were not a priority for gardeners at that time.[704] It was only in 1912, when holidays had begun to be more generally granted, that the granting of 'annual leave 'was added to their objectives.[705]

5.7.5 The Notice Period

All gardeners, including gardening labourers, were liable to instant dismissal in the event of their misconduct. In the absence of misconduct gardeners (but not labourers) were given an element of protection because of their status as 'domestic 'or 'menial 'servants, a status which they shared with indoor servants. All such servants were entitled under common law to one month's notice, or pay in lieu of notice. They were distinguished from 'servants in husbandry', such as a farm bailiff, who were entitled to a year's notice. In the case of Nowlan vs. Ablett (1833) Nowlan had been employed by Mr Ablett to look after a garden in Denbighshire at £100 (£93,000) a year. When he was given a month's notice four years later, he sued his employer for a year's wages arguing that as he was paid by the year and had not been guilty of any misconduct, he was entitled to a year's pay in lieu of notice. A jury decided in his favour. However their verdict was overturned by the Court of Appeal who decided that a gardener, even if not living in the main house and paid a yearly salary, was a domestic servant and therefore, like indoor servants, entitled to only a month's notice. This created the anomaly that if a gardener was also appointed the farm bailiff he would become a

[704] Watson, W., p. 376.

[705] 'The British Gardeners' Association', *Journal of the British Gardeners' Association* (1912), p. 108.

servant in husbandry and be entitled to a year's notice, or payment in lieu.[706] This remained the law until 1878 when it was decided that a bailiff should also be categorised as a domestic servant.[707] The entitlement to wages did not include the perquisites which would have accrued during the period of notice. J. W. Hurst, a foreman, sued his employer, W. G. Hodge, for £6 16s of which 16s was for the value of perquisites, after being given a month's notice to leave because of negligence. He was awarded £6 in respect of a month's wages but denied his claim of 16s for coals and vegetables.[708] In the case of Ryan vs Dunbar a claim for board wages and beer money was similarly disallowed.[709]

Employers had no obligation to pay wages in lieu of notice in the event of misconduct and this, as was made clear by the judge in Ryan vs Dunbar, included disobeying 'any reasonable demand of his master'.[710] What was reasonable was frequently contested by the gardener. Frederick Parker, the gardener to Mark Freeman of The Grange, Withycombe was told to 'clear out' when he failed to fulfil his employer's request to clear some snow. The employer called the police, who refused to take action, and then had his gardener brought before the magistrates, who dismissed the case. Parker took his claim for a month's wages to the county court and won his claim, plus costs.[711] In the case of Reeves vs McLaren, the gardener, who had been employed for 2½ years, was told to roll the lawn for tennis on a Saturday and also to roll it again on the Sunday following. When he expressed the view that

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[706] 'Nowlan v. Ablett' (1835), 2 Cr M. & R. 54, 4 LJ Ex 155 pre-SCJA 1873 circa 1835 CaseSearch, Court of Exchequer, p. 24. and 'Master and Servant', *Law Magazine and Review: Quarterly Review of Jurisprudence,* v. 14 (1835), pp. 181-82.

[707] Agricultural Gazette, 'Law Notes – Is a Bailiff Entitled to More than a Month's Notice?', *GC,* n.s. v. 10 (1878), p. 702.

[708] The Western Daily Mercury, 'Law Notes – A question of notice', *GC,* s. 3, v. 9 (1891), p. 536.

[709] 'Law Notes – A Gardener's Wages Disputed', *GC,* n.s. v. 4 (1875), p. 75.

[710] 'Law Notes – A Gardener's Wages Disputed', p. 75.

[711] Devon Weekly Times, 'Law Notes – A Claim for Wages by a Gardener', *GC*, s. 3, v. 11 (1892), p. 344.

it was unreasonable to expect him or his men to roll the lawn for the second time he was told by his employer that he was liable to instant dismissal if he refused. He was then ordered to clear out at once. The judge found that the refusal to carry out unnecessary work on a Sunday was justifiable and the gardener was awarded a month's wages in lieu of notice.[712] In the case of Boyd vs Brown a gardener who had been fined 2s 6d for being late, explained that he had been attending his wife's confinement and refused to accept the fine, in consequence of which he was dismissed without notice. The judge found in favour of the gardener on the basis that the employer had no right to impose a fine, but he noted that the employer would have had the right to dismiss him without notice for being late.[713] In a similar case a foreman gardener refused to accept a fine after being half an hour late for work owing to illness. The judge said that only a magistrate had the right to impose a fine and awarded the gardener his wages in lieu of notice.[714]

These cases illustrate how vulnerable a gardener was when faced with a capricious employer, but also that he was not unwilling to seek the support of the court when he was wronged. J. Freeman, the owner of The Grange in Withycombe, Devon had two judgments against him in the same month. His gardener, Winsley, was dismissed after a cow he had been asked to milk ran free and damaged a valuable plant.[715] A second gardener, Edward Ford, after complaining that the place was not as advertised ('Must be seen to be appreciated') was ordered off the premises. Both gardeners successfully sued for their wages and Ford was, exceptionally, also given the value of the milk and vegetables which were part of his remuneration. Freeman admitted that he had had eight or nine gardeners in the past year,

[712] 'The Sunday Lawn Rolling Case', *Journal of the British Gardeners' Association* (1911), p. 32.

[713] 'Law Notes', *GC,* n.s., v. 4 (1875), p. 692.

[714] 'Law Notes', *GC,* n.s., v. 4 (1875), p. 755.

[715] 'Law Notes-Gardener and Employer', *GC,* s. 3, v. 6 (1889), p. 573.

'They were all worthless characters. I would have nothing to do with them'.[716] In an analysis of 31 reported cases where gardeners sued for unpaid wages in the period 1875-1911 the gardeners succeeded in 77% of them. After 1880 the success rate was 90%.[717]

5.7.6 Payment during Sickness

A gardener's status as a domestic servant entitled him to the payment of his wages in full during a period of illness. This right did not extend to gardening labourers who would only receive any payment at the discretion of their employer.[718] The legal position was set out by 'A Barrister 'for the members of the British Gardeners 'Association:

> A gardener enters into a contract with his master which is terminated by a month's notice or by dismissal for improper conduct. If a gardener falls ill there is no question of improper conduct. He is incapacitated by illness but is willing and anxious to do what was required of him. There is therefore no default on his part. Until the contract is ended the employer remains liable in full for the wages. This is settled law- and a law which has been again and again laid down.[719]

The recourse to giving notice was taken by Lady Wiltshire when her head gardener, Joseph Copas, fell ill with consumption. After paying his wages for a time during his absence through illness she ended his contract of employment and gave him a week's wages. A court decided that 'according to the custom of the country 'he was entitled to a month's notice, in addition to his full wages whilst he had been off sick.[720]

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[716] 'Law Notes-Gardener and Employer', p. 573.

[717] Law Reports in *GC* 1875-1911.

[718] 'Notices to Correspondents - Wages', *GC,* v. 11 (1851), p. 136.

[719] Barrister, 'Stopping Wages of Gardener During Illness', *Journal of the British Gardeners' Association* (1911), p. 27.

[720] 'Lady Wiltshire and her Head Gardener', *Reynold's Newspaper* (22 Dec. 1872), p. 8.

Different rules applied to gardeners employed by public bodies where, as the gardeners were not domestic servants, there was no obligation under common law to pay wages during sickness. Instead it was entirely a matter of contractual obligation, if any. The policy of the Royal Horticultural Society was to give no pay for the first two days of sickness and then to give half pay until the gardener's case could be considered by a committee, who, with the benefit of a doctor's report, would decide whether to give them all, or part of their pay or to dismiss them according to the individual circumstances.[721] At Kew no sick pay was made to either gardeners or labourers who had less than three years 'service, unless they were injured in the performance of their duty. The same rule applied to those employed in the London parks by the LCC. If the illness was due to the nature of their employment they were entitled to sick pay for up to three months. Those who had served more than three years were given half pay during periods of illness.[722]

5.7.7 References

It was customary for a gardener to ask for a 'character 'or reference on leaving an engagement. This was discretionary, as there was no law which compelled a master to give a character to a servant, as had been decided in the leading case of Carroll vs Bird (1800).[723] In the event of a character being given, if it was addressed to the servant, it belonged to him, but if addressed to the new employer, the gardener had no rights over it. The problem which oppressed indoor servants of being afraid to change jobs because of the fear of not being able to obtain a satisfactory reference did not affect gardeners as much as it did indoor staff. A government inquiry into domestic service reported that 'Our attention has constantly been

[721] 'Regulations for the Internal Administration of the Garden of the Horticultural Society of London', p. 318.

[722] 'Sick Pay at Kew', *GC*, n.s., v. 25 (1886), p. 274.

[723] B.G.A. Solicitor, 'Gardeners' Characters' *Journal of the British Gardeners' Association* (1910), p. 70.

drawn to the extent to which a maid's future is at the mercy of an unjust or spiteful employer who by withholding a reference or giving an unfair or prejudiced account of her, may easily render her chances of obtaining desirable employment very small'.[724] For this reason many indoor servants remained in situations where they were ill-treated. As has been seen in the discussion on notice periods, there was no shortage of unfair or vindictive employers in the gardening community. But gardeners were not as badly affected as indoor staff for two main reasons. First, as most head gardeners were recruited through nurseries it was the nursery, rather than the previous employer who gave the recommendation. Secondly, foremen, journeymen and under-gardeners were appointed by the head gardener, not the owner and it was expected that they would move from place to place regularly. In these circumstances it was less likely that a gardener would be trapped by an unfair employer. However the gardener at a small place, who relied on answering advertisements to find a new position would normally be required to produce references from previous employers. One advantage of the relative ease with which gardeners, particularly in the early stages of their careers, could change positions, is that it facilitated their learning by mobility, as is discussed in Chapter 2.

5.8 Gardeners' Unions

The Worshipful Company of Gardeners was established by Royal Charter in 1605[725] in response to the supposed threat to gardeners in the city of London posed by Scotsmen setting up rival nurseries.[726] They were given by parliament the right to institute an apprenticeship system which gave them the power to control recruitment, but the guild proved ineffectual

[724] Dawes, p. 117.

[725] Barnes, M., *Root and Branch; A History of the Worshipful Company of Gardeners of London* (Eastbourne, Manor Park Press, 1994), p. 5.

[726] Loudon, 'Gardeners' Charter', *Encyclopaedia of Gardening*, 3rd edition (1825), p. 1132.

and although it has survived until the present day its functions have been largely ceremonial. In 1805 the Horticultural Society (later the Royal Horticultural Society) was formed at the behest of John Wedgwood, with an initial committee consisting of three estate owners, two gardeners and a nurseryman.[727] It was one of those bodies set up on enlightenment principles, whose purpose was the spread of knowledge and the development of horticultural science, but it did not represent gardeners as a profession. The idea of forming a union of gardeners was treated with great circumspection. In 1866 David Fish, writing in the *Gardeners' Chronicle*, asked readers to support his campaign for higher wages, saying that the solution may be political, but when a meeting was proposed he wrote: 'It may be as well to state that the holding of such a gathering by no means implies a combination or strike for wages'. An editorial in the journal stated 'We have grave doubts as to the expediency of such a meeting; but if the plan be carried out, great caution and tact will be required to avoid the dangers to which our correspondent alludes'.[728] A well-attended meeting organised by George Welby in Bristol did lead to the formation of a Gardeners' Union in 1872, with the intention of calling for higher wages, but they expressly declared that they disapproved of and discountenanced strike action. The union was short lived.[729] The attitude of the profession was summed up by F.W. Burbidge:

> I should shudder to think of gardeners belonging to any organisation or craft union which decreed a strike on any named date. A strike is bad enough when men who are digging up dead materials and machinery take part in it. Even then a strike is like a law suit: to win it is nearly as bad as to lose. But one cannot imagine men who are growing or managing beautiful living things- be it animals or plants- leaving them in a body to their fate, or at best in the hands of men who do not understand them.[730]

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[727] Elliott, B., *The Royal Horticultural Society: A History, 1804-2004* (Chichester, Phillimore and Co Ltd., 2004).

[728] Editor's response to Fish, D.T., 'Meeting of Gardeners', *GC,* n.s., v. 26 (1866), p. 461.

[729] Hibberd, S., 'Meeting of Gardeners at Bristol', *Gardeners' Magazine*, v. 15 (1872), p. 309.

[730] Burbidge, F.W., 'The World of Gardening', *GW*, v. 20 (1903), p. 63.

The first nationwide body to represent gardeners was the British Gardeners' Association, which was established in 1904. It was formed as a pressure group for the registration of gardeners and to campaign for higher wages and better working conditions. Within three years they had more than 1,000 members and their own journal.[731] However they were at pains to disassociate themselves from the trade union movement, in line with the sentiments of the profession as a whole.[732] At their inaugural meeting their chairman stated 'A trade union has a very bad name and the sooner they shook off and had nothing to do with anything having a bad name the better'.[733] The editor of the *Gardeners' Chronicle* wrote:

> We cannot admit any discussion in these columns as to the merits or demerits of trade unionism in general. We believe the introduction of the more objectionable features of trade unionism would be most detrimental to the prospects of the association.[734]

These sentiments did not arise from any inherent conservatism amongst gardeners. Indoor domestic staff, butlers in particular, had developed a reputation for being conservative and at times more reactionary than their employers[735] but on the whole gardeners were liberal and progressive, as is exemplified by Paxton who, when he stood for parliament, was described as 'an extreme liberal'.[736] Gardeners did not identify themselves either as domestic servants, or as manual workers. They regarded themselves as professionals, a class which did not strike. A further reason for their reticence was that they were cognisant of the fact that

[731] ''British Gardeners' Association', *GC,* s. 3, v. 41 (1907), p. 375.

[732] 'Gardeners to Organise; The British Gardeners' Association Formed', *GW,* v. 21 (1904), p. 490.

[733] Quote from Dr Masters in Ibid.

[734] Editor's Response to Weathers, J., 'Home Correspondence: British Gardeners' Association', *GC,* s. 3, v. 40 (1906), p. 377.

[735] Lethbridge, p. 117.

[736] 'Sir Joseph Paxton', *Journal of Horticulture,* n.s. v. 8 (1865), p. 449.

gardens were maintained as a luxury and that their employers would not necessarily be indulgent if they were faced with militancy.

5.9 Conclusion

Field, in categorising the various types of domestic servants erred in assuming that the descriptive term ‘gardener ’applied to one type of worker, whereas it in fact described several, from a labourer to the head of a department. No such difficulty of description applied to the butler, who may have reached his eminent position after passing through the stages of ‘boy’, ‘footman ’and ‘under-butler ’each of which is shown in a separate category in Field’s tables. Thus the wage data assembled by Field for the gardener is meaningless, without the separate categories of, at the least, under-gardener, journeyman, foreman and head gardener. Hecht is also in error in relying mainly on newspaper advertisements for her estimations of salaries, as they refer only to gardeners who worked in third rate places and entirely miss those who were recruited through the nurseries and were destined for first and second rate establishments. Further doubt may be cast on the validity of the figures assembled by both Field and Hecht because of their failure to take account of the value of perquisites.

In general, the wages of gardeners of the lower ranks, excepting the gardening labourer, whose wages were much on a par with rural labourers generally, were kept low by the large numbers wishing to enter the profession. The potential rewards in terms of housing, emoluments and status for the 900 positions of the first rank and the 4,600 of the second were so great that the competition for the places below exercised downwards pressure on wages. Wages were also suppressed by the acceptance of a sacrifice for long-term gain. The nominal wage of those who were in the first and second rank was kept low by the very substantial perquisites which could also be earned, but when these were taken into account

their remuneration could be very substantial indeed. It was only in the public sector of parks and botanic gardens, where the perquisites were fewer, that the salary, plus house, was not greatly distorted by other factors and hence tended to be among the highest.

The number of days worked by gardeners remained more or less the same throughout the period, at 312 days, assuming one day of holiday, a figure which accords with Craig Muldrew's analysis of rural workers who were in full time employment.[737] Those gardeners occupying senior roles were able to take more than one day of holiday a year (apart from Sundays) and in the final quartile the number of hours worked per week declined with the general adoption of a shorter working day on Saturdays. The high number of days worked contrasts with assumptions which have been made in the debate on living standards of an average working year of 250 days, as adopted by Robert Allen.[738] The difference may be accounted for by assumptions as to part time working, and in the present case only those in full time work are considered. Even so, the difference is substantial.

In the early part of the C19th gardeners seem to have had a shorter working week than factory workers, especially in winter. This advantage lasted until the final quartile when union pressure and legislation shortened factory hours. One advantage which gardeners seem to have enjoyed over other sectors was that they received full pay during absences arising through illness and for holidays. They also seem to have enjoyed a relatively benign position regarding their period of notice and when they perceived an injustice they did not hesitate to look for the protection of the courts, which was readily given.

[737] Muldrew, pp. 282, 289–90.

[738] Allen, p. 38.

Chapter 6 Wealth and Status

6.1 Wealth at Death

The leading head gardeners had several other sources of additional income, over and above those described in the previous chapter. The main such sources were publishing and writing, hybridisation, stewardship, specialisation in Orchid growing, working in a park or botanic garden in Britain or overseas, running a nursery and lecturing. In some cases the work was carried out in conjunction with working as a head gardener, in some as a career progression, though still concerned with gardening. This enabled large numbers of gardeners to accumulate substantial wealth, as is indicated in the probate records.

Table 14 (Appendix I) contains a list of 260 gardeners who left probate valued at more than £500,000 when converted to modern values, of whom just over half left probate valued at more than £1m at modern values. The names have been extracted from a database of about 2,000 gardeners, whose biographical details have been obtained from biographies, the gardening journals and obituaries plus those found in the randomised search of the horticultural register, as is discussed later in this chapter. The figures are biased to the period after 1858 as prior to that date there are scant records of wills and they are not searchable by occupation and moreover those that can be found do not usually reveal the amount bequeathed, except in Scotland, where inventories were usually attached. Hence only 3% of the total relate to the period before 1858.

Probate records provide a rough and ready, but recognised[739] way of assessing wealth at death. From 1858 all estates upon death above a minimum threshold required an Act of

[739] See Rubinstein, W. D., 'Probate Valuations: A Tool for The Historian', *Local Historian,* v. 11, (1974), pp. 68-72; Cummins, N., 'Where Is the Middle Class? Evidence from 60 Million English Death and Probate Records, 1892–1992', *The Journal of Economic History,* v. 81 (2021), pp. 359-404; Clark, G. & Cummins, N., 'Intergenerational Wealth Mobility in England, 1858-2012: Surnames and Social Mobility', *The Economic Journal*, v. 125 (2015), pp. 61-85.

Probate in order to enable the assets to be transferred, the details of which were kept in the Probate Register, wherein the information has, from the start, been publicly accessible. Those estates which were valued at less than £10, which were about 85% of the total, were known as 'small estates' and did not require probate, a figure which was raised to £50 in 1901 and £100 in 1932. Probate valuations were only approximate measures of wealth upon death. They did not include assets held jointly, such as with a spouse, or non-transferrable wealth such as pensions or, until 1898 the value of land or property such as houses.[740] Nor did they take account of debts or funerary expenses.[741] Wealth accumulated over a lifetime might be very different from that which remained at death because of spending patterns, philanthropic gifts and inter-vivos bequests.[742] Nevertheless, probates are deemed to be valuable and as observed by Rubinstein: 'Although imperfect in several respects the probate valuations offer comprehensive and objective information on the personal wealth of the entire British population'[743]

Column G of Table 14 (Appendix I) specifies the garden where the gardener was principally employed.[744] It shows that twenty-one worked in Botanic gardens and eleven in parks, the remainder being employed in private gardens of which only 14 of the gardens are featured more than once and of those, only two, Chatsworth and Trentham, appear three times. In all, 213 gardens appear on the list, some of them little known, so it seems that it was by no means necessary to work on one of the major estates to accumulate wealth.

[740] Floud, p. 63 & 154.

[741] Rubinstein, W. D., p. 70.

[742] Cummins, p. 365.

[743] Rubinstein, 'Wealth, Elites and the Class Structure of Modern Britain', *Past & Present,* v. 76 (1977), pp. 100-1.

[744] This is their principal place of employment, characterised as the place with which they are identified.

6.2 Additional Sources of Wealth

Column H of Table 14 identifies the source of a gardener's income, in the cases where it is apparent that money was being earned from sources other than from a private garden. Each of the main sources is discussed in turn.

6.2.1 Writing and Publishing

The growth in the popularity of gardening in the C19th was accompanied by a large demand for gardening books and journals, for which nearly all of the content was supplied by gardeners, and for which they were amply remunerated. Of the 100 wealthiest gardeners as identified in Table 14, 19% supplemented their income from writing or publishing, a figure which rises to 40% in the top 20. William Robinson, who left the modern equivalent of £16.8m, and had begun his career as a gardening boy in Northern Ireland, relinquished his position in the Royal Botanic Garden in Regents 'Park in 1866 to devote his life to journalism, commencing as a correspondent in Paris for *The Field* and *The Times*, which resulted in his first two books, which concerned the gardens and parks of Paris.[745] From this time onwards Robinson derived his income not from paid employment, but from writing and publishing on gardening and in this respect he illustrates the wealth that could be derived from this source. Between 1871 and 1903 he launched eight gardening magazines, including the highly successful *The Garden* and *Gardening Illustrated*. Between 1870 and 1912 he wrote 12 books, of which one, *The English Flower Garden* (1883) has been described as 'the most widely read and influential gardening book ever written'.[746] These endeavours provided Robinson with the means to purchase in 1885 the Gravetye Manor estate in Sussex

[745] Nelson, E.C., 'Robinson, William (1838–1935)', *ODNB* (Oxford University Press, 2004) http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/37906, [accessed 28 Jan 2023].

[746] Nelson, E.C., 'Robinson, William (1838–1935)'.

which by 1907 he had extended to more than 1,000 acres, creating from scratch one of the leading gardens in the country, the equal of any made by a brewer, banker or baronet.[747] His head gardener, Ernest Markham, who had thirty men under him, was himself the author of two books and left £3,850 (£717,300) on his death[748]

It is impossible to calculate how much of Paxton's immense wealth (£180,000 in 1865 for which the modern equivalent is £135m) was derived from publishing, but he saw the opportunities which were available at an early stage in his career. In 1831, only five years after becoming head gardener at Chatsworth, Paxton provided the first real competition for Loudon's *Gardener's Magazine* when he founded the *Horticultural Register*. He followed this with the *Magazine of Botany* in 1833 and (with others) the *Gardeners' Chronicle* in 1841, which proved to be the most successful gardening journal of the century.[749] John Spencer, who left the modern equivalent of £5.7m also did well from publishing. He owned, with Dr Hogg, *The Florist*, later renamed the *Florist and Pomologist* and became a bank director. One of the editors of the *Florist and Pomologist*, Thomas Moore who was also co-editor of the *Gardeners' Chronicle* from 1866-82, was the author of several successful books including *The Handbook of British Ferns* (1848), *Ferns of Great Britain and* Ireland (1855), *Illustrations of Orchidaceous Plants* (1857), *The Treasury of Botany* (with Robert Lindley) (1866), and *The Epitome of Gardening* (1881). Moore's authority derived from his position

[747] Robinson, p. 111.

[748] Sclater, A.A., 'Markham, Ernest (1881–1937)', *ODNB* (Oxford University Press, 2014), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/48209, [accessed 13 Jan. 2023] & Raver, A., 'English Gardeners: A Quiet Revolution Happened Here', *The New York Times* (24 Aug. 1995), https://www.nytimes.com/1995/08/24/garden/english-gardeners-a-quiet-revolution-happened-here.html, [accessed 12 Feb 2023].

[749] Kenworthy-Browne, J., 'Paxton, Sir Joseph (1803–1865)', *ODNB*, (Oxford University Press, 2004), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/21634, [accessed 28 Jan 2023].

as curator of the Chelsea Botanic Garden, a position which he held from 1848 until his death in 1887, at which time his net worth was the modern equivalent of £1.5m.[750]

David Thomson, who left the modern equivalent of £5.2m, was the editor of *The Scottish Gardener* as well as the writer of three major textbooks; *The Handy Book of the Flower Garden* (1868), *Fruits under Glass* (1881) and *A Practical Treatise on the Cultivation of the Pineapple* (1866).[751] The writing of gardening manuals was a lucrative source of revenue for many working gardeners. Paxton profited from the boom in the popularity of Dahlias in the 1830s with the publication of his book, *The Cultivation of the Dahlia* in 1838.[752] James McPhail, a Scot who came from a poor farming background, established a reputation for the successful cultivation of cucumbers, pineapples and melons at Addiscombe Place, where he was the head gardener. He capitalised on this with the publication of *A Treatise on the Culture of the Cucumber* (1794) and *The Gardeners' Remembrancer* (1803), leaving the modern equivalent of £6.8m on his death in harness, aged 51.[753] James Douglas, who worked as head gardener first at Loxford Hall and then Great Gearies for the same employer became well known through his weekly column; 'The Doings of the Past and Present Week ' in the *Journal of Horticulture* before publishing *Hardy Florist's Flowers* in 1880. This, together with earnings from hybridising, enabled him to leave the modern equivalent of £7.756m.[754] Samuel Broome, who worked at the Inner Temple for 38 years, of which 27

[750] Baker, A. P., 'Moore, Thomas (1821–1887)', *ODNB* (Oxford University Press, 2004), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/19151, [accessed 28 Jan 2023].

[751] 'David Thomson', *GC*, s. 3, v. 46 (1909), p. 297.

[752] Kenworthy-Browne.

[753] Hewins, W.A.S., 'Macphail, James (1754–1805)', rev. Baker, A.P., *ODNB* (Oxford University Press, 2004), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/17721, [accessed 20 Jan 2023] & Society of Genealogists, 'Will of James McPhail [sic]' *Bank of England Wills Extracts, 1717-1845,* https://www.findmypast.co.uk/transcript?id=GBOR%2FBOE%2F702050318%2F1, [accessed 29 Jan 2023].

[754] 'James Douglas', *GW,* v. 1 (1884), p. 266 & Ancestry.com, 'James Douglas, 1911 probate', *England & Wales, National Probate Calendar (Index of Wills and Administrations), 1858-1995* [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc., 2010.

were as head gardener, until his death in 1870 was well known as a Chrysanthemum specialist. The Chrysanthemum was described as 'the floral oracle of the working classes ' and Broome:

> Being always the same genial, warm-hearted, persevering man, he was alike respected by rich and poor, and earned for himself the reputation of being a true philanthropist- not that he was rich as the word goes, in this world's goods, but he was ever ready to give valuable counsel and assistance to the humbler classes, and to those who find riches and abundant pleasures in the cultivation of one of God's best gifts to man, the Chrysanthemum.[755]

In 1858 Broome published *The Culture of the Chrysanthemum* which ran to 18 editions, and made him rich in this world's goods, leaving an estate valued at the modern equivalent £1.13m.[756]

The Chrysanthemum craze had been prompted by Robert Fortune's introduction of the semi-double Chusan Daisy variety, from which was bred the 'Pompom'.[757] Fortune himself, who had given up his position as head gardener at the Chelsea Physic Garden in 1848 to explore in China on behalf of the East India Company, had great success with three books in which he graphically related his adventures in the Far East, culminating in his last work, *Yeddo and Peking* (1863), which will have contributed to his immense fortune of the modern equivalent of £18m.[758] Fortune's career is discussed more fully in chapter 8. Another gardener who profited from the public's appetite for tales of far eastern adventures was Frederick Burbidge, who published *Gardens in the Sun* after his plant hunting trips to North Borneo and the Sulu Archipelago. Burbidge, who had been on the staff of Robinson's *The Garden* magazine

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[755] 'Obituary-Samuel Broome', *GC,* s. 2, v. 30 (1870), p. 147.

[756] Brown, S., 'Samuel Broome-'The Floral Oracle of the Working Class'', *Inner Temple Yearbook* (2014-5), p. 53 & Ancestry.com, 'Samuel Broome probate, 1870'.

[757] Brown, p. 1.

[758] Boulger, G.S., 'Fortune, Robert (1812–1880)', *ODNB* (Oxford University Press, 2004), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/9953, [accessed 20 Jan 2023].

wrote several successful books, including *Cool Orchids* (1874) and *The Narcissus and its Culture*, before being appointed Curator of the Trinity College, Dublin Botanic Garden in 1879.[759] Burbidge left an estate valued at the modern equivalent of £657,000.[760]

Not all publishing ventures were successful. William Beattie Booth's *Camellia Britannica* was a commercial failure. Booth also sustained substantial losses when the Royal British Bank, of which he was a shareholder, failed.[761] However he still left the modern equivalent of £1.55m, derived from his position as steward and estate manager, as well as head gardener at Carlew.[762]

6.2.2 Hybridists

There were two ways in which new plants could be introduced to the market, either by introduction from abroad, or by hybridisation. A substantial part of Robert Fortune's wealth was accumulated from his plant introductions, as is shown by the sums raised by the auctions which were held of the plants which he had collected on his travels.[763]

At home, nurseries and seedsmen were eager to introduce new varieties of existing flowers and vegetables, which were provided to them by gardeners who had established a reputation in a particular field. That this was a lucrative business can be seen from the fact that four of the richest ten gardeners in the schedule made their money from hybridisation, and twelve in the top one hundred. Sometimes the new varieties were marketed in the name of the

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[759] Murphy, D., 'Burbidge, Frederick William', *Dictionary of Irish Biography* (Royal Irish Academy, 2009), https://www.dib.ie/biography/burbidge-frederick-william-a1120, [accessed 25 Jan 2023].

[760] The National Archives of Ireland, 'Burbidge, Frederick William 1905 probate' *Calendars of Wills and Administrations, 1858-1922,* http://www.willcalendars.nationalarchives.ie/search/cwa/details.jsp?id=1639417531, [accessed 23 Jan 2023].

[761] 'Death of Mr. W.B. Booth', *Journal of Horticulture*, n.s. v. 26 (1874), p. 511.

[762] Ancestry.com, 'William Beattie Booth probate, 1874'.

[763] 'Mr. Fortune's Chinese Plants' *GC*, v. 23 (1863), p. 1040.

gardener and sometimes in the name of the estate at which he worked. Seward Snow, the head gardener at Wrest Park developed a new variety of Broccoli, which was marketed as 'Snow's Superb Winter White'. He also lent his name to improved varieties of lettuce and grapes ('Snow's Muscat Hamburgh') and left an estate worth the modern equivalent of £4.5m.[764] Edwin Beckett, the head gardener at Aldenham House promoted his new varieties of celery as 'Aldenham White 'and 'Aldenham Pink'. He also produced improved hybrids of tomatoes and cucumbers, the profits from which contributed to an estate valued at just under the modern equivalent of £4m.[765] Nurserymen cultivated their relationships with leading gardeners. John Keynes of Salisbury purchased new hybrids of Dahlias from William Dodds, the head gardener at Fisherton, and Henry Eckford, the head gardener at Coleshill. Dodds acquired a fortune of the modern equivalent of £1.36m and Eckford of £1.4m, the latter boosted by his development of sweet peas and culinary peas, for which he became famous.[766] Keynes himself, as a self-made nurseryman, left £35,000 (£17.96m) at his death in 1878, eclipsing most gardeners and providing financial security for his son, John Neville and grandson, John Maynard.

6.2.3 Estate Stewards

It was commonplace for a competent head gardener to be appointed as the bailiff for the home farm, purely on the basis of his organisational skills, and in spite of his lack of farming knowledge. This was considered to be a normal career progression for the gardener. The appointment would involve an increase in salary for the gardener and a saving for the estate

[764] 'Obituary-Seward Snow', *GC,* s. 2, v. 29 (1869), p. 310 & Ancestry.com, 'Seward Snow Probate, 1869'.

[765] 'People You Hear About-Mr Edwin Beckett, V.M.H.', *GL,* v. 31 (1916), p. 110 & Ancestry.com, 'Edwin Beckett probate, 1935'.

[766] Urquhart, S., 'Eckford, Henry (1823–1905)', *ODNB* (Oxford University Press, May 2009), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/96775, [accessed 10 Jan 2023] & Ancestry.com, 'William Dodds probate, 1900', & Ancestry.com, 'Henry Eckford probate, 1905'.

owner as the increase payable to the gardener would rarely be as much as the saving of the former bailiff's salary. The next career progression available to the head gardener on large estates was to that of steward of the whole estate, which would include responsibility for tenanted farms. Paxton was promoted to the position of steward at the Chatsworth Estates in 1849, after 23 years 'service, at which time his salary rose to £500pa (£436k), which contrasts with his starting salary of £70 (£65k), although he had had several increases in the interim. Paxton's case was by no means unusual. Two others in the twenty highest earners had also been promoted to estate steward. John Spencer, who was head gardener at the Bowood estates for 45 years from 1835, was promoted to estate steward in 1862 retaining his gardening duties.[767] Spencer, as has been noted above, derived additional income from his publishing, banking and hybridisation activities which will have contributed to his estate of £5.7m However Joseph Dawson, who was head gardener and subsequently steward at Stancliffe Hall for 40 years (having previously worked with Paxton in laying out the grounds at the Crystal Palace) left a very similar sum of £5.64m. without any identifiable source of income other than the estate on which he worked.[768] Nineteen of the gardeners in the schedule, 7.3% of the total, have been identified as holding the position of estate steward. This is almost certainly an underestimate, as the biographical details for some of the entries are sketchy and would not necessarily reveal their dual role as head gardener and steward.

6.2.4 Orchidists

The fashion for growing and collecting tropical orchids began in the 1830's and within 20 years orchids were being sold in large numbers, some for very high prices. At first, the only source for new specimens was from tropical regions, but when gardeners learnt how to

[767] M., 'Obituary-John Spencer', *GC,* n.s. v. 15 (1881), p. 89 & 'Marquis of Lansdowne Appointment', *GC,* s. 2, v. 22 (1862), p. 380.

[768] 'Obituary-Joseph Dawson', *GC,* s. 3, v. 26 (1899), p. 39.

propagate and hybridise them, their skills were in great demand. As an example of the prices which could be obtained, Messrs Veitch paid Mrs Spicer of Twickenham 70 guineas for a single example of Cypripedium Spiceraneum, which she had been given by her son in Assam, and finding that it could be propagated easily the nursery sold specimens for 60 guineas each. Seeing this Mrs Spicer obtained more specimens from her son after which the price of the plant, no longer being rare or unusual, fell to one guinea.[769] High prices continued to be paid for rare examples. The collection of Mrs Lawrence of Ealing Park was sold in 1855 for nearly £1,000 (£811k),[770] the Manley collection of S. Mendel for £4,000 in 1877 (£2.072m)[771] and at the height of what was described as the 'mania 'for orchids the Day collection sold in 1881 at auction for £24,000 (£13.13m).[772] Two years later Mrs Lawrence's son, Sir Trevor, paid the highest price ever given for an orchid at auction, of £235 (£129k).[773]

One of the gardeners to profit from his expertise in growing orchids was Herbert Alexander the head gardener at Westonbirt and specialist orchid grower for Sir George Holford. During his tenure the number of orchid houses at Westonbirt expanded from four to twenty-seven. He won 30 gold medals in orchid competitions and left an estate valued at the modern equivalent of £5.630m, no doubt benefitting from his private trade in the plants.[774] Another renowned orchid specialist was Henry Ballantine who worked at The Dell in Englefield Green for Baron Schroder for nearly 50 years. Ballantine received a legacy of £1,000

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[769] Allingham, E.G., *A Romance of the Rostrum* (London, H.F. & G. Witherby, 1924), p. 101. No date is given by Allingham.

[770] Ibid., pp. 108-9.

[771] Ibid., p. 114.

[772] Ibid., p. 116.

[773] Ibid., p. 119.

[774] 'Mr. H. G. Alexander', *GC,* s. 3, v. 71 (1922), p. 284 & Ancestry.com, 'Herbert Alexander probate, 1972'.

(£425,300) from the Baron and left an estate of the modern equivalent of just under £1m.[775] Benjamin Williams, after working as a gardener, became a nurseryman at the Victoria and Paradise nurseries in Holloway, published *The Orchid Album* (with Robert Warner) and had a Dendrobium named after him. His specialism enabled him to leave an estate valued at the modern equivalent of £5.391m.[776] John Dominy was head gardener at Redruth when his skill at hybridising orchids led to his being offered a position by Veitch's nursery. He developed 29 new varieties for them of which several were named after him, including Calanthe x Dominii. After winning the Flora Gold medal from the RHS a subscription on his behalf raised the gift of a gold watch and a purse of 200 guineas (£87k).[777] Dominy left an estate valued at the modern equivalent of £2.7m.[778]

6.2.5 Botanic Gardens and Parks and Work Overseas

As has been seen in the chapter on remuneration, botanic gardens and public parks offered high rates of pay and enhanced responsibility which enabled them to attract the most talented gardeners. 20% of the gardeners in the schedule of the 100 wealthiest worked principally in botanic gardens and parks (15% botanic and 5% parks). Some spent their whole careers in one garden. One such was John Bain, who retired in 1878 after spending 40 years working in the botanic garden at Trinity College, Dublin, latterly as curator. As Bain did not publish and had no visible sources of income outside the garden, it is evident that the whole of his estate of the modern equivalent of £1.4m must have resulted from his work in the garden, indicating that the opportunities for enrichment in a public garden were equal to those in a

[775] 'Four Veteran Gardeners', *GC,* s. 3, v. 62 (1917), p. 141 & Ancestry.com, 'Henry Ballantine probate, 1929'.

[776] 'Mr. B.S. Williams', *GW,* v. 2 (1885), pp. 440-1 & Ancestry.com, 'Benjamin Samuel William probate, 1890'.

[777] 'Obituary-John Dominy', *GC,* s. 3, v. 9 (1891), p. 278.

[778] Ancestry.com, 'John Dominy probate, 1891'.

private garden.[779] Another example is found in Robert Lindsay, who held the post of curator of the Royal Botanic Gardens in Edinburgh from 1879-1896, and who had also trained there, leaving only briefly for a stint at the Botanic Garden, Chelsea. Lindsay, like Bain, had no apparent source of income outside the garden and left a similar sum to that left by Bain.[780]

Postings overseas generally carried a higher salary than was payable in Britain. Darwin's protege, John Scott, (see also pages 335-7) received a salary of £240 (£190k) a year on becoming the curator of the botanic garden in Calcutta in 1864, more than double what he would have expected to receive in Britain.[781] This was the same salary as was paid to James Duncan on his appointment as curator of the Botanic Garden in Mauritius in 1849. Duncan was dissatisfied with the salary and after a prolonged correspondence with the Director of Kew Gardens, Sir William Jackson Hooker, he obtained an increase to £400 (£313k), with the agreement that it would rise in increments of £20 a year.[782] When Duncan retired in 1864 his salary was £480 but his estate was valued in 1876 at £10,000 (£4.8m) which indicates that the posting was lucrative to him far above what he earned in salary.[783] The likelihood is that Duncan profited from his role in enlarging and improving the botanic grounds and in providing plants to growers not only in Mauritius but also other colonial countries and Britain.[784] A similar role was performed by William McIvor (see also pages 319-25) who in 1848 was given the role of creating a new botanic garden from a piece of jungle at

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[779] Burbidge, F.W., 'Obituary-John Bain, A.L.S.', *GC,* s. 3, v. 33 (1903), p. 300 & Ancestry.com, 'John Bain probate, 1903'.

[780] 'Legacies by the Late Mr. Robert Lindsay, Edinburgh', *GC*, s. 3, v. 54 (1913), pp. 257, 265-6 & Ancestry.com, 'Robert Lindsay probate, 1913'.

[781] Darwin Correspondence Project, 'Letter no. 4754', https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-4754.xml, [accessed 06 Aug. 2023].

[782] 'Letter to James Duncan', *Royal Botanic Gardens, Kew: Archives: Directors' Correspondence*, KDCAS1915 (22 Sep. 1860).

[783] Ancestry.com, 'James Duncan probate, 1876'.

[784] 'Obituary-Mr J. Duncan', *TG,* v. 10 (1876), p. 252.

Ootacamund in the Neilgherris Hills. Over a period of 28 years until his retirement he helped to develop a series of cinchona plantations which by 1871 covered 1,200 acres. In the process he accumulated wealth which in 1876 was valued at the modern equivalent of £3.8m.[785] Two brothers, David and Charles Moore, after initial training in Scotland and in Charles 'case at Kew, had distinguished careers as curators of botanic gardens, David at Glasnevin, Dublin and Charles at Sydney, Australia. They were both eminent botanists and authors and therefore had sources of income separate from the gardens of which they were in charge.[786] From very modest backgrounds they left estates valued at the modern equivalent of £1.8m and £2.29m respectively.[787]

By 1914 the number of public parks in Britain exceeded 2,000, all of which had been built since the 1840s, principally by gardeners, as is described in the following chapter. The opportunities for gardeners consisted in designing, constructing and then supervising them. Paxton was paid a total of £166 (£143k) for his work on Prince's Park, made up of a fee of £100 for his advice, £24 for eight trips to Liverpool and £42 for producing drawings.[788] In 1845 Joshua Major, after winning a prize of fifty guineas (£46k) in the competition to design Manchester's first three parks, Philips Park, Queen's Park and Peel Park, earned a fee of £200 (£177k on completion of the work, for which he was obliged to visit the sites at least once a

[785] 'Obituary-Mr. W.G. McIvor', *GC,* n.s. v. 6 (1876), p. 150 & Veale, L., 'Exploring the Historical Geography of the Nilgiri Cinchona Plantations', https://commoditiesofempire.org.uk/research/research-journeys/exploring-the-historical-geography-of-the-nilgiri-cinchona-plantations/, [accessed 17 Nov 2016].

[786] Nelson, E.C., 'Moore , David (1808–1879)', *ODNB*, (Oxford University Press, 2008, http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/19101, [accessed 28 Nov 2014] & King, C.J., 'Moore, Charles (1820–1905)', *Australian Dictionary of Biography* (National Centre of Biography, Australian National University, 2006), http://adb.anu.edu.au/biography/moore-charles-4229/text6821, [accessed 11 May 2017].

[787] The National Archives of Ireland, 'Moore, David 1879 probate' *Calendars of Wills and Administrations, 1858-1922,* http://www.willcalendars.nationalarchives.ie/search/cwa/details.jsp?id=1639565511, [accessed 23 Jan 2023] & King, 'Moore, Charles'.

[788] Chadwick, G. F., *Park and the Town: Public Landscape in the 19th and 20th Centuries* (London, Architectural Press, 1966), p. 471.

week during the period of construction.[789] Edward Kemp charged a fixed fee of three guineas a day plus travel expenses, rising to 4 guineas a day including travel for his design work.[790] For a typical contract lasting two months in 1857 he received £57 1s 3d (£46k).[791] However, for the major contract of designing and supervising the building of Stanley Park, Liverpool, he negotiated a 5% commission on all work done, earning approximately £1,450 (£940k) in a four year period.[792] In 1845 Kemp, as superintendent of Birkenhead Park, was paid £185 (£163k) a year plus a house free of rent and coals, etc., which had a rental value of £30 (£26,570) a year.[793] He also wrote a best-selling book on garden design, *How to Lay out a Small Garden* which was described as 'the best book on pure garden design in the English language 'and carried out several garden and park landscape commissions.[794] These additional sources of income go some way to explain his substantial estate of the modern equivalent of £4.8m. Several others, such as Edward Milner and Duncan McLellan also pursued careers as landscape gardeners after being park superintendents, earning substantial fortunes in the process. Some, such as George Rowbottam, the curator at Preston Park and James Whitton, the curator of the Glasgow parks became wealthy simply from their roles as curators.

[789] Conway, H., *People's Parks: The Design and Development of Victorian Parks in Britain* (Cambridge, Cambridge University Press, 1991), p. 82.

[790] Lee, p. 177.

[791] Ibid.

[792] Ibid., p. 178.

[793] Ibid., p. 159.

[794] Waymark, J., 'Kemp, Edward (1817–1891)', *ODNB* (Oxford University Press, May 2009) http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/96724, [accessed 12 Nov 2014].

6.2.6 Nurseries

As has been observed, the great majority of successful head gardeners worked in a nursery at some stage of their career, either to gain new experience or whilst waiting for a suitable position to become available.[795] Some used the capital which they acquired as head gardeners together with their experience as propagators and hybridisers to set up their own nurseries. This became the most lucrative career progression for gardeners, as is evidenced by the fact that 28% of the wealthiest 100 gardeners in Table 14 ran nurseries in the latter part of their careers. Notable amongst these are James George who for thirty years was the gardener for Miss Nicholson of Stamford Hill, during which time he developed dwarf strains of Tropaeolums in 1861 and the Ivy leafed pelargonium in 1870, which were distributed by Henderson and Co. Whilst still working at Stamford Hill he developed a side business selling plants and horticultural accessories, which he continued in his retirement, and it is likely that this contributed to his large estate of the modern equivalent of £8.2m.[796] James Kelway, after a long stint as the head gardener at Dillington House, near Ilminster, during which time he experimented with new varieties of Gladiolus, went on to establish his own nursery and was able to leave an estate valued at the modern equivalent of £7.756m.[797]

William Denning was apprenticed at Grimston Park at the age of 13, and after a period training at Kew, returned 16 years later to become the head gardener at Grimston and after working for the same family for 18 years he set up his own business,[798] eventually leaving an

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[795] One of the most prominent early gardeners was John Veitch who worked as steward at Killerton and went on to found the renowned Veitch nursery. No probate has been found for him. Baigent, E., 'Veitch family (*per.* 1768–1929)', *ODNB*, (Oxford University Press, 2004; online edn, May 2010 [http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/61986 [accessed 3 Dec 2014].

[796] 'Obituary-Mr. J. George', *GC,* s. 3, v. 49 (1911), p. 175 & Ancestry.com, 'James George probate, 1911'.

[797] 'Obituary-Mr. James Kelway', *GC,* s. 3, v. 25 (1899), p. 343 & Ancestry.com, 'James Kelway probate, 1899'.

[798] 'Obituary-William Denning', *GC,* s. 3, v. 47 (1910), p. 240.

estate of the modern equivalent of £4.157m.[799] William Miller, whose father had served three generations of the same family for 53 years, before setting up a nursery in his retirement was head gardener at Coombe Abbey for forty years and bequeathed the modern equivalent of £1.4m.[800] A similar sum was left by Samuel Woolley who after being head gardener at Cheshunt for 25 years was permitted by his employers to set up a nursery using part of the garden at Cheshunt.[801] Not all such enterprises were successful. Edward Meehan lost all his capital in a failed venture in Regent's Park, but was later able to secure a head gardener's position at St Clare's of the Isle of Wight, eventually rebuilding his capital to the extent of the modern equivalent of £1.4m.[802] The parallel careers of the brothers Thomas and Philip Frost show that it was not necessarily financially advantageous to invest in a nursery. Thomas Frost, after being head gardener at Preston Hall bought the Bower nursery in Maidstone, whilst his elder brother Philip remained at Dropmore for a period of 55 years. They both left identical sums, of the modern equivalent of just over half a million pounds in the 1880s.[803]

6.2.7 Lecturing

With the development of colleges of horticulture and the adoption of formal training in gardening by county councils, as described in Chapter 3, opportunities arose for gardeners either to supplement their income by lecturing or by taking a full-time teaching position. The latter was the role adopted by David Fish, who after the death of his long term employer,

[799] Ancestry.com, 'William Denning probate, 1910'.

[800] 'Obituary-William Miller', *GC,* s. 3, v. 45 (1909), p. 271 & 'William Denning probate, 1910'.

[801] 'Obituary-Mr. Samuel Woolley', *GC,* n.s. v. 9 (1878), p. 278 & Ancestry.com, 'Samuel Woolley probate, 1878'.

[802] 'Edward Meehan', *Gardener's Monthly and Horticulturist,* v. 24 (1882), pp. 380-1 & Ancestry.com, 'Edward Meehan probate, 1882'.

[803] 'Obituary-Mr. Thomas Frost', *GC,* n.s. v. 18 (1882), p. 695; Ancestry.com, 'Thomas Frost probate, 1882'; 'Death of Philip Frost', *TG,* v. 31 (1887), p. 478; Ancestry.com, 'Philip Frost probate, 1887'.

Lady Cullum, at Harwicke House, became a county council lecturer.[804] He left the modern equivalent of more than half a million pounds on his death in 1901, a similar sum to that which was left by Edward Luckhurst, who after forming and managing the gardens at Oldlands, Sussex lectured full time, first in Surrey and Derbyshire and ultimately at Nottingham University.[805] Thomas Slade combined his role as head gardener at Poltimore Park, Exeter with a position lecturing for Devon County Council.[806] Similarly John Odell, whilst head gardener at Grove Farm in Great Stanton held a post as lecturer in Botany at the Watford School of Science and Art, a position which as at 1903 he had held for 16 years.[807] Both Slade and Odell left the modern equivalent of in excess of £600k. It is clear that the additional income derived from teaching was not the basis of the prosperity of these gardeners, but was both a source of remuneration and an additional form of career progression.

6.3 Representative Samples from the Horticultural Register

The gardeners listed in Table 14 are some of the most successful but they cannot be said to be representative of head gardeners as a whole. In order to obtain a representative sample of the wealth of gardeners over an extended period, a sample of names has been selected at random from the *Horticultural Directory* for the five decades from 1871 to 1911 with a view to finding their probate records. The results of the samples are contained in Tables 15 to 19 (Appendix I). The year 1871 was chosen as the starting point as it is the first census year after the establishment in 1867 of the *Horticultural Directory*, which recorded the names of

[804] 'Obituary-D.T. Fish', *GC,* n.s. 3 v. 29 (1901), p. 289.

[805] 'Obituary-Mr. Edward Luckhurst', *GM,* v. 49 (1906), p. 590.

[806] Wilcox, 'Famous Gardeners at Home No. 264: Mr T.H. Slade, F.R.H.S., at the Gardens, Poltimore, Exeter' *GL*, v. 14 (1907), p. 264.

[807] Wilcox, 'Famous Gardeners at Home No. 81: Mr J.W. Odell, F.R.H.S, at The Grove Farm, Great Stanmore' *GL*, v. 5 (1903), pp. 44-5.

the head gardeners in the leading gardens, which in 1871 totalled 2,450. The census year is useful as it enables names and dates of birth to be checked against the census records. Of the 200 gardeners sampled in 1871 59% (118) left probate records. These gardeners died in the period up to 1929, when the national average of those who took probate rose from 12% (1871) to 22% (1930), so that they were consistently four times the national average, or more.[808] Of these 10 (5%) left an estate with the modern equivalent value of more than £1m and a further 23 (11.5%) with a value of more than £500,000. The average estate of those who left probate is £461,290. Allowing a value of half the threshold for each of those who did not have to register for probate the average estate of the whole sample is £279,157.[809]

Samples have been taken for each of the following four census years after 1871. The summary findings are shown in Table 20, below. The proportion who took probate in the decades following 1871 remains high, reaching a peak of 71.92% in 1901 before falling to 61% in 1911. The average probate of the entire sample reached a peak of £310,887 in 1881, falling in each of the following three decades to a low of £98,795 in 1911. The fall after 1891 reflects the fact that gardeners who were in charge of estates in 1901 and 1911 did not retire until after the first world war, and the majority died in the 1940s and 1950s. Therefore they were in charge of gardens in the 1920's and 1930's, when gardening on the large estates was in decline and their earning opportunities will have been diminished. Their wealth will also have been affected negatively by the higher inflation and taxes of the post-war period.[810] Table 20 also shows the probate figures excluding those who did not leave probate. They

[808] Rubinstein, p. 70 & Cummins, 'Table 5', p. 374.

[809] N=The allowance is £5 for 1858-1900, £25 for 1901-1931 and £50 thereafter, following the formula used by Clark & Cummins, p. 21.

[810] Clark & Cummins, p. 27.

show a peak in 1871, when the average was £461,290, falling slightly to 1881 to £448,474 and then more sharply thereafter, reaching a figure of £157,501 in 1911.

Year	Percentage of gardeners with probate	National Average with probate	Average probates of all gardeners attributing £5/25/50 value at death for those without probate (modern equivalent) see pages 239-40 and note 808	Average probates of gardeners with probate (modern equivalent)
1871	59%	12%	£279,157	£461,290
1881	60%	14%	£310,887	£448,474
1891	64%	15%	£240,073	£379,968
1901	72%	18%	£199,128	£277,288
1911	61%	16%	£98,795	£157,501

Table 20. Summary of findings from the 5 census years

Many studies of the probate calendars have been published in recent years, principally with a view to identifying differences in wealth and hence of equality and their changes over time.[811] Most of the studies have been concerned with an analysis of the wealth of the top 10% to 0.1% of the population. As none of the studies have revealed average probates for occupational groups, there are no points of comparison with the findings in respect of gardeners' probates. The most significant point of comparison is with the figures in Table 14 where the median probate is just over £1m at modern values (excluding the outlier, Paxton). In the peak years of 1871 and 1881 the average figure, for the majority who took probate, was just under half of that figure, which is still very large, and is indicative of the fact that head gardeners as a whole did very well indeed, and not just those who worked in the most prestigious estates or who had access to secondary sources of income. The figures also

[811] Atkinson, A.B. & Harrison, A.J., *Distribution of Personal Wealth in Britain* (Cambridge, Cambridge University Press, 1978); Atkinson, A.B., Gordon, J.P.F. & Harrison, A.J., 'Trends in the Shares of Top Wealth Holders in Britain, 1923-1981) *Oxford Bulletin of Economics and Statistics*, v. 51 (1989), 315-332. https://doi.org/10.1111/j.1468-0084.1989.mp51003006.x; Atkinson, A.B., 'Wealth and Inheritance in Britain from 1896 to the Present', *Centre for Analysis of Social Exclusion* (2013), pp. 1-40; Alvaredo, F., Anthony A.B., & Morelli, S., 'Top Wealth Shares in the UK over more than a Century', *Journal of Public Economics,* v. 162 (2018), pp. 26-47.

demonstrate the dramatic fall in wealth, of more than two-thirds, in the inter-war period, which in itself emphasises the advantages enjoyed by those in the earlier decades.

6.4 Antecedents

Tables 15 to 19 (Appendix I) also contain details of the occupation of the gardener's father, taken from the census reports. In each of the five years 1871-1911 the father's occupation was overwhelmingly rural, with between 29% and 35% being agricultural labourers, and a similar, but slightly lower proportion being gardeners. In the decades between 1871 and 1901 the combined proportion of agricultural labourer and gardener is remarkably consistent at between 58% and 62%,, falling to 47% in 1911. Table 21 below shows the percentages for each occupation, showing the changes which took place over the five years.

Father's Occupation	1871	1881	1891	1901	1911
Agricultural Labourer	32%	31%	29%	35%	29%
Gardener	28%	28%	29%	27%	18%
Shoemaker	7%	2%	3%		
Farmer	6%	7%	5%	4%	6%
Carpenter	4%	3%		3%	2%
Gamekeeper	3%	3%	4%		3%
Stoneworker		3%			2%
Innkeeper		2%			
Sawyer		2%			2%
Coachman			3%	3%	
Blacksmith			2%		
Cordwainer			2%		
Farm Bailiff			2%		
Miller			2%		
Shepherd				3%	2%
Coal worker				2%	
Railway Labourer					3%
Baker					2%
General Labourer					2%
Groom					2%
Joiner					2%
Nurseryman					2%
Other	20%	20%	21%	24%	21%

Table 21. Father's Occupations

Using an adaptation by Long of W. A. Armstrong's classification system of socio-economic status it would appear that the great majority of the antecedents of the gardeners were in Classes IV or V, i.e. semiskilled or unskilled labourers, as tabulated in Table 22 below.

It is apparent from Table 22 that in terms of salary, as was discussed in Chapter 5, those head gardeners who featured in the horticultural register easily met the salary criteria, especially when perquisites are taken into account, for classes I and II. Under Armstrong's classification system the employment of servants was positively correlated with high status[812] and as keepers of their own servants, head gardeners would enjoy a similar status. These factors, combined with their substantial housing and the fact that they were in charge of large numbers of workers would tend to place head gardeners in Class I: 'Professional', alongside the clergy, and above clerks. Head gardeners thus moved during their careers from Classes IV and V to Class I.

Class	Occupations for 1851–1901	1851	1881	1901
I: Professional	Clergy, high-wage government employee	£250.98	£295.33	£198.82
II: Intermediate	Clerk, teacher	158.46	203.73	217.18
III: Skilled	Skilled worker in engineering, building, shipbuilding, and textiles	66.92	85.69	95.80
IV: Semiskilled	Farm laborer, miner, railway worker, low-wage government employee	48.02	58.65	69.26
V: Unskilled	General non-agricultural laborer	44.83	55.88	68.90

Sources: Williamson (1980, 1982), OMS.

Table 22. Average annual wage by class[813]

6.5 Longevity

The grouping with clergy in Class 1 aligns with the comparisons between the longevity of gardeners and the clergy discussed in Chapter 4. Tables 15 to 19 contain details of the year of

[812] Long, J., 'The Surprising Social Mobility of Victorian Britain', *European Review of Economic History,* v. 17 (2013), p. 7 & Wrigley E.A., *Nineteenth-Century Society; Essays in the Use of Quantitative Methods for the Study of Social Data* (Cambridge, England: University Press, 1972), p. 212.

[813] Long, p. 16.

birth and of death of each of the gardeners, from which their age at death has been calculated. The age of each gardener at the date of each directory is also known, which has made it possible to compare their life expectancy at that time with the length of time which they actually lived.[814] These details are given in column H of the tables. They show that in 1871 the gardeners survived on average for 4.67 years longer than the actuarial tables predicted, with an average age at death of 71.22 years. The excess years of life in the four decades which followed ranged between 5 and 3 years, with the average age at death being consistently 73 and 74 years. This longevity is also consistent with their status as 'Class 1' 'Professionals'.

6.6 Status

The gardener's status as a 'Professional' is reflected in a memoir of the life of Harry Thrower, who was the head gardener of the Horwood estate in Buckinghamshire, where his son observed that: **'**One must remember that a head gardener of a large estate in those days was almost like the Lord of the Manor. He was looked up to in the locality and feared by most of his staff.'[815] It is also reflected in the fact that many of the gardeners, in their probate records were referred to as 'Gentleman'.[816]

A further indication of the status of gardeners can be seen from the way in which they viewed themselves and the steps which they took to safeguard their reputation. The case of Findlay vs. Armitage in 1894 illustrates the self-confidence and authority of the head gardener at the time. Bruce Findlay trained at Kew and did stints as a foreman gardener at Hull and Sheffield before being appointed as the curator of the Manchester Botanic Garden

[814] Column H (+/- Actuarial Table) in the charts at Tables 15-19 in Appendix I gives the comparison of the age at death of the gardeners compared to the ONS English Life Table, for the population as a whole.

[815] Thrower, p. 12.

[816]As an example, ancestry.com, 'Seward Snow Probate, 1869'.

in 1858 at the early age of 23. His accomplishments in the garden were recognised in 1881 when he was presented with a purse of £1,000 (£516k) together with a gold watch and chain. One of the committee members who presented him with the award was Benjamin Armitage, then the liberal MP for Salford, a justice of the peace and a close friend of Richard Cobden and John Bright. In 1894, after 17 years 'service on the committee Armitage was dropped from it, to his dismay. Armitage blamed Findlay for the slight and in revenge he wrote to the local paper criticising Findlay's management of the garden. Findlay issued proceedings for defamation. In court, where both sides were represented by Queen's Counsel, Armstrong's barrister maintained that Findlay had 'acted as a dictator, secretary, musical director, treasurer and 'boss of the whole show''. In spite of the eminence of his opponent Findlay won the case and was awarded substantial damages by the jury against both Armitage and the newspaper which had published his letter.[817]

Findlay's law-suit for defamation may be compared with that of James Barnes, who sued his former employer, Lady Rolle, for damages, following his retirement in 1869, owing to ill health, from her employ at the estate of Bicton after 30 years of service. Barnes brought an action for defamation because of uncomplimentary remarks which Lady Rolle had made in private correspondence about the standard of his work. A jury awarded him the full amount of his claim of £100 (£61k), his counsel asserting that, 'Persons in high stations were to be respected, but when they forgot what was due to those who had faithfully served them they became contemptible'.[818] This case illustrates that an employee was subject to the whim of their employer- but also that head gardeners were fiercely protective of their reputations.

[817] Brooks, pp. 124-7 & 'The Manchester Botanical Gardens: Action for Libel', *The Manchester Weekly* (13 Jul. 1894), p. 4.

[818] 'Libel: Barnes vs. Lady Rolle', *GC,* v. 29 (1869), p. 1306.

The status of gardeners can also be judged from the honours which were bestowed on them. Several gardeners who worked in botanic gardens were awarded honorary degrees by the university to which their garden was attached. The Kew gardener Richard Lynch served as curator of the Cambridge University Botanic Garden from 1879 to 1919 and in 1907 was awarded an honorary MA by the university in recognition of his services to horticultural science.[819] He was the author of several taxonomic works, including *The Book of the Iris* (1904). The plant hunter, Frederick Burbidge, became the curator of Trinity College Dublin gardens in 1880 and was the author of numerous works, including 'The Chrysanthemum, its history, culture, classification and nomenclature'. He was awarded an honorary MA in 1880.[820] David Moore, the curator of Glasnevin Botanic Gardens from 1838 to 1879 was awarded an honorary MA by Zurich University in 1863.[821] His son, Frederick took over from his father as curator and amongst his many honours, which included playing international rugby football for Ireland, he was awarded an honorary doctorate by Dublin University and, in 1911 was knighted for services to horticulture. Paxton was the only other working gardener to be knighted, but in his case it was for his success with the Great Exhibition. The former Kew gardener, the Africa specialist and prolific author, John Hutchinson was awarded an honorary LLD by St Andrews University, and later appointed OBE.[822]

[819] Upson, T., 'Lynch, Richard Irwin (1850–1924)'.

[820] Murphy, D., 'Burbidge, Frederick William'.

[821] Nelson, E.C., 'Moore , David (1808–1879)'.

[822] Green, P.S., 'Hutchinson, John (1884–1972)', *ODNB* (Oxford University Press, 2004) http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/31270 [accessed 12 Nov 2014]. Sir Harry Veitch was also knighted, and left a huge probate, but has been omitted from this thesis as he spent his entire career as a nurseryman.

6.7 Head Gardeners and Butlers Compared

In some respects the qualities required of a butler and head gardener were similar. James Hughes advised that a footman would be ready for the role of butler when he could organise a party for three or four hundred people in 24 hours.[823] Paxton displayed such skills in organising the entertainment for Queen Victoria at Chatsworth in 1843 which prompted the Duke of Wellington to exclaim to the Duke of Devonshire: 'I should have had that man of yours for one of my generals'.[824] A butler, as the head of the indoor staff, had to be authoritative and able to exercise discipline, qualities which were essential in a good head gardener. Both, because of their commanding manner and smart attire, were not infrequently mistaken for their employers.[825] For the most part the indoor and outdoor staff operated independently of each other. Gardeners did not usually eat with the indoor staff, who followed strict rules of protocol, under the control of the butler and head housekeeper. The one exception was that the head gardener or one of his foremen had an important role in the house in that they were in charge of all the floral arrangements including the table decorations. This was the exclusive preserve of the gardeners and was rarely delegated to an indoor servant, whether male or female.

Except where a house steward was employed, which became increasingly rare as the C19th progressed, the butler was in charge of the household. In that respect, as the numbers employed in each department were often similar, the heads of the indoor and outdoor departments had comparable roles. In terms of salary and perquisites in the early part of the C19th the butler may have had the advantage, as he had his clothing provided as well as his

[823] Lethbridge, p. 54.

[824] Markham, V.R., *Paxton and the Bachelor Duke* (Hodder & Stoughton, London, 1935), p. 150.

[825] Lethbridge, p. 50.

board and lodging.[826] The butler's clothing allowance included not only his formal work-wear but often one or two suits in addition, whereas the gardener had to find all his clothes from his own pocket. However, whilst the gardener's pay increased, the butler's seems not to have done and there is little evidence that butlers were paid more than a maximum of £80 but more usually £60 a year through the late Victorian and Edwardian period. Field's analysis gives an average of £31.6 between 1717-1845[827] and Lethbridge gives a range of between £50-80 in 1912.[828] Government Statistics give a figure of £60 in 1901.[829] At Tapton House where meticulous household accounts were kept over a 62 year period the butler's wage increased from only £50 to £55 between 1878 and 1910 by which time the head gardener was earning double that figure.[830] Very little information seems to be available as to the wealth on death of butlers but no doubt many accumulated a fortune, as did the cook, Mary Webster (page 203). One example is William Claridge who used the savings accumulated as a house servant to buy Mivart's Hotel in Brook St, later to become known as Claridges.[831]

The other point of comparison between butlers and gardeners is in their accommodation. Both were provided free accommodation, but whereas, as has been seen in chapter 3, gardeners were given a house, butlers had a 'pantry 'which was essentially their office and a bedroom and sometimes a sitting room in the main house as their sole accommodation. A

[826] Burnard, p. 141.

[827] Field, p. 257.

[828] Lethbridge, p. 48.

[829] Report on Changes in Rates of Wages and Hours of Labour in the UK, with Comparative statistics for 1900-1908 (1910 Cd 5324), quoted in Maloney, A., *Life Below Stairs: True Lives of Edwardian Servants* (Leicester, Thorpe, 2015), p. 43.

[830] Markham, *Return Passage: The Autobiography of Violet R. Markham* (Oxford, Oxford University Press, 1953), p. 26 & Appendix A.

[831] Baker, A.P., 'Claridge, William (1814/15–1882), hotelier.' *Oxford Dictionary of National Biography* (Oxford University Press, 2004), https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-71062 [accessed 24 Aug. 2023].

butler might be provided with a house in the grounds if he was married, but single men were preferred. The accommodation at Clouds, a mansion newly built for the Wyndham family by Philip Webb in 1886 (and rebuilt after a fire in 1891) provides an apt example. Figures 28 and 29 show the architect's plans of the layout of the accommodation, from which it can be seen that the butler had a sitting room and his pantry on the lower ground floor, conveniently next to the wine cellars (marked 1 and 10 in Figure 29) and a bedroom on the ground floor, (marked 2 in Figure 28). Webb was at pains to provide the best possible accommodation for the servants, a fact appreciated by Lady Wyndham who observed, after the family took refuge in the servant's wing after the main house had burned down: 'It is a good thing that our architect was a socialist, because we find ourselves just as comfortable in the servants ' quarters as we did in our own'.[832] The two rooms and pantry provided for the butler may be compared to the spacious four-bedroomed house, with its own walled garden, provided for the head gardener, Harry Brown. Webb converted a thatched cottage close to the house, under the supervision of Lady Wyndham. He took care to design the doorways to allow for Brown's exceptional height and wrote from Italy in 1885 to say that he was 'creating a palazzo for Signore Brown at a cost of £200' (£108k).[833] The house and its garden as it appears in 1906 is shown at Figure 27. The accommodation for the indoor servants at Clouds was exceptional, although by the end of the C19th it was usual for staff accommodation to be 'generously sized, perfectly sanitary, usually well ventilated and reasonably warm'.[834] However, that provided to Brown, which was typical of head gardener's accommodation, was altogether superior.

[832] Horn, P., *The Rise and Fall of the Victorian Servant* (Stroud, Alan Sutton Publishing, 1990), p. 81.

[833] Dakers, p. 70.

[834] Franklin, p. 103.



Figure 27. Gardener's Cottage at Clouds[835]

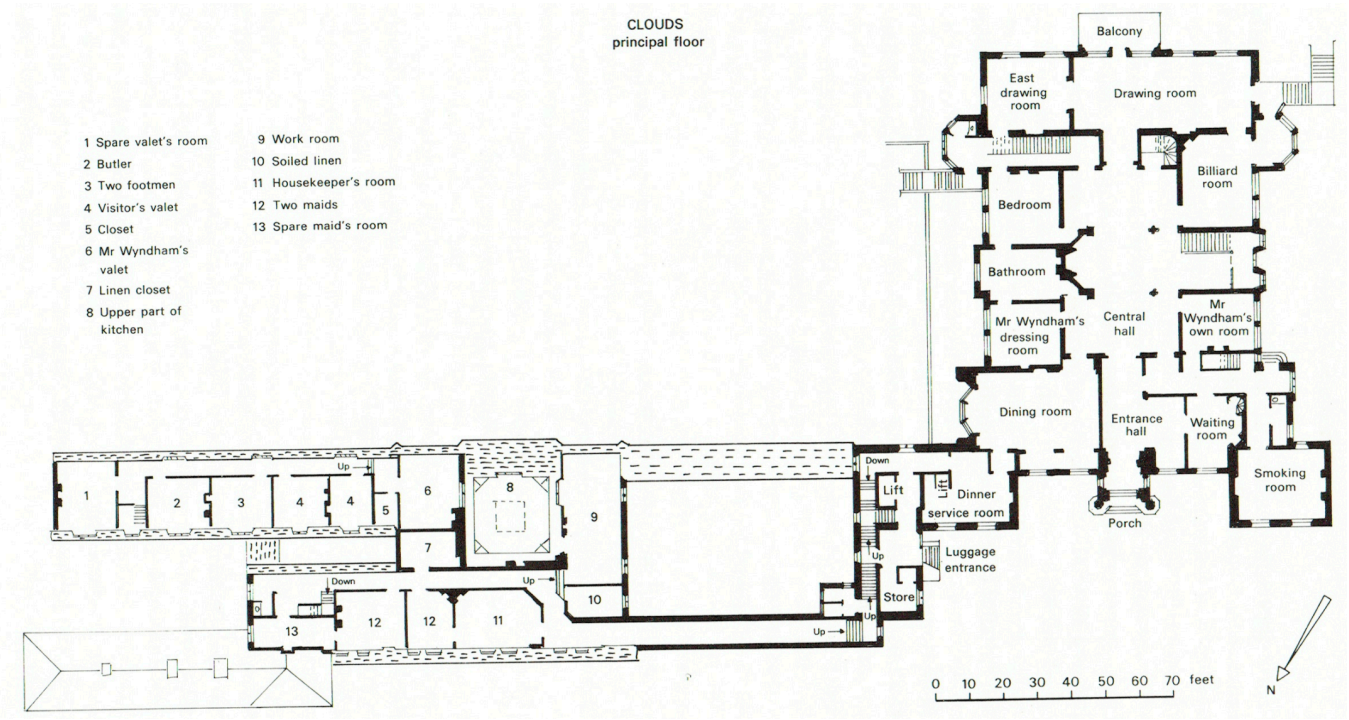

Figure 28. The ground floor at Clouds showing the Butler's room at 2.[836]

[835] Dakers, p. 71.

[836] Franklin, pp. 148-9.

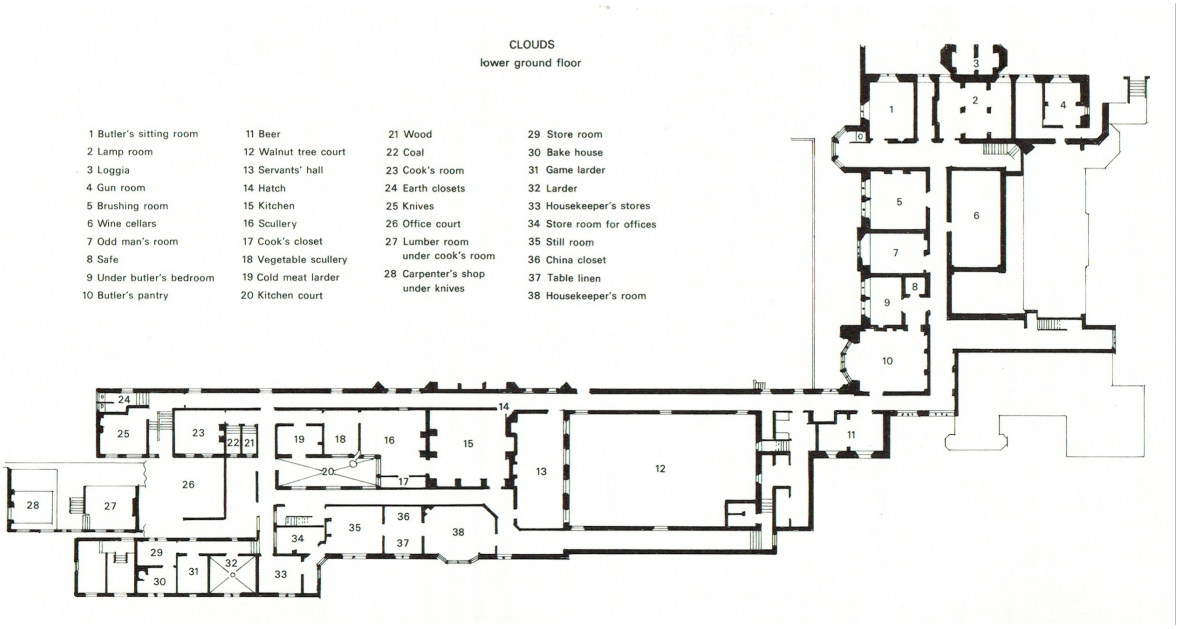

Figure 29. The lower ground floor at Clouds showing the Butler's sitting room at 1 and the Butler's pantry at 10.[837]

As has been seen, gardeners benefitted from the increasing trend to recognise the right to privacy, a benefit which was not shared by butlers, a fact which is emphasised by the requirement that butlers were expected to be 'on call' at all times, whereas head gardeners were essentially independent in organising their work schedules.

6.8 Scottish Over-Representation

> For two centuries, the Scottish peasant, compared with the same class in other situation, has been a reflecting, observing and therefore a self-governing, a moral, and a successful human being- because he has been a reading and a discussing one; and this he owes, above all other causes, to the parish schools.
>
> —J. S. Mill, 1845[838]

Tables 15 to 19 (Appendix I) also record the place of birth of the gardeners. The proportion of gardeners who were born in Scotland in 1871 and 1881 respectively was 30% and 29% (Tables 15 and 16). The proportion of gardeners born in Scotland in the 100 largest probate

[837] Franklin, pp. 148-9.

[838] Mill, J., *The Collected Works of John Stuart Mill*, *Essays on Economics and Society,* v. 4, part I (Toronto, University of Toronto Press, 1824), https://oll.libertyfund.org/title/mill-the-collected-works-of-john-stuart-mill-volume-iv-essays-on-economics-and-society-part-i, [accessed 30 Sep. 2023].

estates as set out in Table 14 was 35%. At the time of the first census in 1801 the Scots, with a population of 1.608m[839] represented 15.3% of the population of England, Scotland and Wales, a proportion which had fallen slightly to 13.7% by 1901[840], so that Scots were greatly over-represented, especially in the higher echelons of the occupational grouping. The original presence of large numbers of Scots has been attributed to economic migration.[841] The Scottish presence had been noted at an early stage. John Christian Fabricius, the Dutch entomologist, and a regular visitor to London in the late C18th observed that the nurseryman, James Lee, '...is a Scot like almost all the seedsmen and gardeners around London...The Scots have established a near monopoly in this occupation to the near exclusion of the English and businesses are handed from one Scot to another'.[842] There are several possible reasons for the Scottish dominance of the gardening trade. First, literacy was highly valued in gardens and the Scots developed a reputation for being well-educated, as their biographies confirm. That the Scots developed a reputation for being well-educated can be seen from the fact that shortly before the Act of Union a statute decreed that a school should be established in every parish, and that the teacher's salary should be met from local rates.[843] The culture of education will also have encouraged the auto-didacticism which was so essential to advancement as a gardener. Secondly, aspects of Scottish culture, as were remarked upon by Banks and Loudon may partly explain their success. Sir Joseph Banks described Scotland as

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[839] 'Census of Great Britain: Abstract of the Answers and Returns made Pursuant to an Act', Part I. England and Wales. Part II. Scotland (1801), http://www.histpop.org/ohpr/servlet/AssociatedPageBrowser?path=Browse&active=yes&mno=2&tocstate=expandnew&display=sections&display=tables&display=pagetitles&pageseq=1&assoctitle=Pre%201801-population%20estimates&assocpagelabel=, [accessed 10 Sep. 2023].

[840] 'History of Scotland's Census', *Scotland's Census* (2021), https://www.scotlandscensus.gov.uk/about/history-of-scotland-s-census/, [accessed 10 Sep. 2023] & *1901 Census of England and Wales, General Report with Appendices* (1904), https://www.visionofbritain.org.uk/census/EW1901GEN/4, [accessed 10 Sep. 2023].

[841] Floud, p. 164.

[842] Robertson, F.W., *Early Scottish Gardeners and Their Plants, 1650–1750* (East Linton, Scotland, Tuckwell Press, 2000), p. 188.

[843] Smout, T.C., *A History of the Scottish People, 1560-1830* (London, Fontana, 1998) as cited in Ibid., p. 189.

a ‘nation of gardeners ’and observed ‘so well does the serious mind of a Scottish education fit Scots men to the habits of industry, attention and frugality that they rarely abandon them at any time of life’.[844] Loudon, himself a Scot, wrote that they were 'more accustomed to frugality and labour, stubborn soil and inclement weather and having an inherent dogged nature'.[845] Both men emphasise what they perceived to be the Scottish capacity for hard work, their toughness and their frugality, a reputation which the Scots acquired and which they preserved. Thirdly, the Scots continued to feature prominently in the nursery trade, as had been observed by Fabricius, and as most gardening appointments came through nurseries, the networking advantages which that gave to Scots worked greatly in their favour, an advantage which was enhanced once they gained control of the top gardening posts. After 1881 the proportion of Scottish born gardeners fell to less than one fifth, but the Scottish influence remained high with Scottish-born fathers being replaced by their English born offspring who treasured their heritage.

6.9 Conclusion

Jesse Willard, whose name appears at No 197 in Table 14, is one of the 127 gardeners in the Table (49%) who had no obvious source of income other than the garden in which they worked. Born in Kent in 1834, Willard started as a garden boy at the age of 12 and when he was thirty one he was recommended by a local nursery to Baroness Burdett-Coutts, to be gardener at her residence, Holly Lodge, Nr Maidstone. He was head gardener there for 45

[844] McEwen, R., ‘The Northern Lads: The Migration of Scottish Gardeners with Especial Reference to the Royal Botanic Gardens, Kew’, *Sibbaldia: The International Journal of Botanic Garden Horticulture,* v. 11 (2013), p. 110.

[845] Urquhart, S., *The Scottish Gardener: Being Observations Made in a Journey through the whole of Scotland from 1998 to 2004: Chiefly Relating to the Scottish Gardener Past & Present* (Edinburgh, Birlinn, 2005), p. 159.

years, until his retirement aged 76. The esteem in which he was held is reflected in the words of Mr Burdett-Coutts at his retirement party, at which he received a number of gifts:

> I need not say anything about Willard's personal qualities. I shall miss him greatly. Willard's life and character have been an example to those who in the future, if they follow that example, may rise to better positions than they now occupy; and what is better than a high position, the appreciation, friendship and goodwill of all with whom they have been brought into contact. Willard, full of years and full of honour- such honour as comes from having done one's duty and from having deserved and received the appreciation of one's fellow men. There is one word I have inscribed on my own small memento- 'Friendship'- which perhaps illustrates better than anything else what I feel for you. There are certain men who, whatever their relations to you may be, you feel are your friends.[846]

The tribute he received was one of many such given to gardeners on their retirement, as recorded in the gardening journals. It shows the esteem in which gardeners were held and their importance in the lives of the estate owners. But the status and prestige which accrued to Willard is also reflected in monetary terms. When he died aged 85 he left an estate valued at £713,800 in modern terms.

[846] 'Retirement of Mr. Willard', *GC,* s. 3, v. 46 (1909), p. 315.

Chapter 7 Gardeners and the Democratisation of Urban Parks

7.1 Historic Public Parks: An overview of their numbers, cost and location

> Five minutes of admiration, and a few more spent in studying the manner in which art had been employed to obtain from nature so much beauty, and I was ready to admit that in democratic America there was nothing to be thought of as comparable with this People's Garden.
>
> —Frederick Law Olmsted on visiting Birkenhead Park in 1852[847]

Public parks are the great survivors of the Victorian age. Although they occupy prime city or town centre locations the temptation to sell them off for building land has been resisted and they remain for the most part intact. A comprehensive economic and social history of public parks has yet to be written[848] and their number is unknown. There is no register of public parks, but following a survey of 475 local authorities in 2001 it was estimated that in England and Wales there were 2,177 historic parks, nearly all of which were made before 1914, covering an area of 37,903 hectares, of which 169 are listed by Historic England. The parks receive 300-400 million visits annually and it is a sign of how much they are valued today that they have been supported with nearly a billion pounds of lottery funding.[849]

This chapter examines the origins and development of the parks movement, asking why the parks emerged at the time they did and in the form they did. More specifically it asks how a group of gardeners who were motivated by the ideal of creating gardens for the working classes were able to fulfil their ambitions and, in the process, create a new market for their talents.

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[847] Olmsted, F.L., *Walks and Talks of an American Farmer in England*, v. 1 (New York, G.P. Putnam, 1852), p. 79.

[848] Floud, R., *An Economic History of the English Garden* contains an overview, pp. 36-46 & Crompton provides an analysis of the funding of some early parks in Crompton J.L., 'Using Proximate Real Estate to Fund England's Nineteenth Century Pioneering Urban Parks: Viable Vehicle or Mendacious Myth?' *Studies in the History of Gardens & Designed Landscapes*, v. 40 (2020), pp.43-64.

[849] Urban Parks Forum, *Public Park Assessment: A Survey of Local Authority Owned Parks, Focusing on Parks of Historic Interest* (Urban Parks Forum (now GreenSpace) London, 2001).

There is a paucity of information on the cost of building the parks, but Table 23 gives an analysis of twelve parks for which information is available.[850] It shows that (excluding the two unusually expensive outliers) the average build cost per acre was just under £451,000 taking modern values. Applying this figure to the 93,660 acres (37,903 hectares) of historic public parks indicates a total development cost of £42.24 billion spent over 75 years. This may be an over-estimate, as many of the later parks were built on a smaller scale, but as these figures cover only the cost of development and not the cost of the purchase of the land or the ongoing costs of upkeep, it is clear that this had a significant economic impact, all paid for from the public purse.

Park	Date	Acreage	Build Cost per Acre	Modern Value per Acre	Total Build Cost	Total Build Cost (2020)
Regent's Park	1814	410	£180	£154,800	£74,045	£59,500,000
Prince's Park	1843	97	£1,555	£1,270,000	£70,000	£57,100,000
Birkenhead Park	1846	125	£613	£510,800	£76,659	£63,900,000
Newsham Park	1867	111	£468	£307,900	£52,000	£34,200,000
Stanley Park	1870	110	£1,007	£616,800	£110,828	£67,900,000
Sefton Park	1872	277	£487	£287,300	£135,000	£79,600,000
Victoria Park	1845	237	£560	£468,700	£132,763	£111,100,000
Battersea Park	1857	198	£335	£259,500	£66,373	£51,400,000
Crystal Palace	1852	181	£3,004	£2,500,000	£543,848	£457,600,000
RHS Kensington	1862	22	£4,364	£3,200,000	£100,000	£72,200,000
Roath Park	1887	130	£538	£275,500	£70,000	£35,800,000
Myatt's Field Park	1887	14	£714	£365,600	£10,000	£5,121,000
Averages			£1,152	£851,408	£120,126	£91,285,083
Averages excluding Kensington and Crystal Palace			£646	£451,690	£79,767	£56,562,100

Table 23. Analysis of the cost of building twelve parks

[850] Crompton, pp. 43-64.

Although public parks can be found today in every town and city, those of historic interest are concentrated in industrial areas. Of the 169 which are listed by Historic England 43 (25 per cent) are in Lancashire, 24 (14 per cent) in Yorkshire and 21 (12 per cent) in the industrial Midlands.[851]

7.2 The Origins of the Drive for Urban Parks

The drive to provide public parks began in the 1830s when the lack of access to green open spaces in urban areas first became a matter of public concern. Before urbanisation there had been an inalienable right for the inhabitants of a parish to use village and town greens and associated common land for their pastimes. When parishioners in the village of Steeple Bumpstead were prosecuted in 1795 for playing 'a certain game called cricket' the court held that they had the 'liberty and privilege of exercising and playing at all kinds of lawful games and pastimes at all seasonable times of the year at their free will and pleasure'.[852] These rights disappeared when the common lands were built over.

The primary argument in favour of urban green spaces was that they provided 'lungs', a clean and smoke-free area which would be free of the 'miasma' which was thought to be the progenitor of disease. A secondary reason was that they would provide a source of 'rational recreation' for the working classes- in other words an alternative to the ale house or gambling den.[853] There were also concerns that if nothing was done to ameliorate the conditions of the urban poor there would be a serious danger of unrest. In 1831, shortly after Nottingham Castle had been burned down by rioters, William Barron, who later designed several public parks, vividly described how as head gardener for the Earl of Harrington at

[851] Tabulated from Historic England's National Heritage List of Public Parks, https://historicengland.org.uk/listing/the-list/.

[852] Fitch v Rawling (1795), *Court of Common Pleas*.

[853] O'Reilly, pp. 23-4.

Elvaston Castle, (which was only ten miles from Nottingham Castle), he took charge of guarding the castle from a mob of 200, putting out fires before help arrived and being credited with saving the castle from destruction.[854]

The first tentative step towards the partial restoration of the right to access to open space was taken with the setting up in 1833 of the Select Committee on Public Walks, which examined their desirability and the measures which should be taken to enable their provision. The term 'Public Walks', suggested a rather limited provision for perambulation rather than a wider range of activities, and continued to be used in the tentative legislation which followed, even as late as the Public Health Act 1875.[855] Indeed, the first endeavours in park provision tended to follow that model. The Royal Victoria Park in Bath, which opened in 1830, was modest in scale and ornament, with a layout described by Conway as 'extremely simple'.[856] Moor Park, in Preston, which in 1833 was the first park to be created in an industrial town, was similarly laid out as a series of unsophisticated walks and drives, with areas set aside for recreation.[857] Norfolk Park in Sheffield, which opened in 1841, followed a similar pattern.[858] These parks satisfied the requirement to provide 'breathing spaces' in an urban area together with recreational facilities in an economical way and it might have been expected, at a time when local authorities were severely restricted in their spending capacity, that they would provide the model for future developments. In fact, a much more elaborate template was adopted, providing a far greater range of facilities than was originally envisaged and on a more extravagant scale- one which was to hold sway throughout the Victorian and Edwardian periods. This development resulted from the campaigns pursued by Loudon and

[854] 'William Barron', *GC*, s. 3 v. 9 (1891), p. 522-3.

[855] Pettigrew, W. W., *Municipal Parks: Layout, Management and Administration* (London, The Journal of Park Administration, 1937), p. 2.

[856] Conway, p. 15 & Whalley, R., 'The Royal Victoria Park', *Bath History*, v. 5 (1994), p. 148.

[857] Conway, p. 18.

[858] Ibid., p. 39.

Paxton and their acolytes, all of whom were gardeners.

7.3 The Campaigns for Reform led by Loudon and Paxton

Loudon and Paxton were radical in their views and did not hesitate to state them. In a letter to the editor of the *Morning Advertiser*, Loudon wrote:

> The Great Objects to be obtained by Reform: Nothing will satisfy me short of Fair Representation of the people. Election by Ballot; the gradual but entire Appropriation by Government of the Revenues of the National Church, of the Woods and Forests; and of other Crown Lands; entire Freedom of Trade, and the abolition of all Monopolies; a National Education Establishment substituted for the National Church Establishment; the abolition of the law of Primogeniture and of Hereditary Titles; the pensioning off of all the branches of the Royal Family once and forever, and a fixed income set apart for the king, or by whatever name or title the chief magistrate of the country may be distinguished.[859]

These unequivocal and decidedly radical, republican and anti-clerical opinions formed the background to Loudon's campaigns for reform. In the movement to improve the social conditions of the working class, epitomised by Edwin Chadwick's campaigns for clean water and improved sanitation, Loudon has been recognised as the first, and most prominent campaigner for urban green spaces in crowded cities. Loudon's article in the *Literary Journal* in 1803 in which he promoted open spaces in London as 'being of the greatest consequence to the health of its inhabitants' predated the parliamentary campaign by 30 years.[860] It was followed in 1811 by his 'Hints for a National Garden', an address which he gave to the Linnaean Society. His 1829 proposal for a series of 'breathing spaces and country zones' encircling London (Figure 30) has been identified as the direct precursor of

[859] Loudon, 'Letter to the editor of the Morning Advertiser' (1830), cited by Turner, T., 'John Claudius Loudon proposals for London Greenbelts and Green Infrastructure', *Landscape Architecture* (2020), https://www.youtube.com/watch?v=-UzHYTy_wQ8, [accessed 15 Oct 2020].

[860] Loudon, 'Hints for Laying Out Public Squares in London', *Literary Journal* (1803), p. 739.

Ebenezer Howard's proposals for a green belt in 1898.[861]

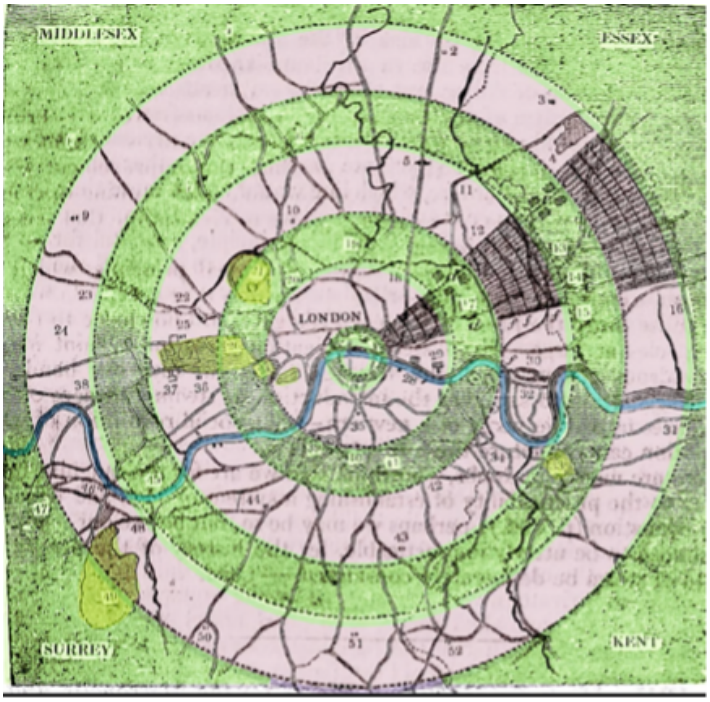

Figure 30. Loudon's Design for 'breathing Spaces and Country Zones' around London, 1829.

In the 1830s Loudon, as the foremost promoter of public parks received three commissions to design them, the plans for which he published in his *Gardener's Magazine*, together with detailed descriptions, drawings and explanations of his design principles in pursuance of his policy to share all knowledge and to ensure that it was placed in the public domain. The first was the Birmingham Botanical Garden, in 1832, a semi-public project, followed by a park in Gravesend in 1835 for which he published not only the design but also a complete list of all the trees and shrubs (505 varieties in all) which he used, together with their costings.[862] In 1835, in a 25-page article, he set out in detail his design principles for public parks.[863] His most important commission was the Derby Arboretum in 1839. Loudon's detailed report upon this scheme was reproduced, together with several drawings, in the *Westminster Review*

[861] Turner lecture, See also Bowie, D., *The Radical and Socialist Tradition in British Planning: From Puritan Colonies to Garden Cities* (Abingdon, Routledge, 2018).

[862] Loudon, 'Design for a Public Garden, made for an English Corporate Town: with a List of the Trees and Shrubs to be planted in it, and their Prices', *GM,* n.s. v. 1 (1835), pp. 13-26.

[863] Loudon, 'Remarks on Laying out Public Gardens and Promenades', *GM,* n.s. v. 2 (1836), pp. 644-69.

in 1841, and a lengthy extract was attached as an appendix to Edwin Chadwick's *Parliamentary Report on the Sanitary Condition of the Labouring Classes* in 1842 in support of Chadwick's recommendation that the provision of public parks should be greatly extended.[864] The same report also included Loudon's recommendations for model cottages, which reflects an association which had begun when Chadwick was secretary to Loudon's friend and mentor, Jeremy Bentham.[865]

The Derby Arboretum was not initially a truly public park as, because of the need to raise revenue for upkeep, a charge was made for entry. But Loudon insisted that the public should be allowed in free on two days of the week, one of which was Sunday- a significant concession, as Sabbatarians successfully prevented Sunday opening in many cases, even though this was the only free day for working class families. Within a few years the days of free entry had been extended to five. The intention that the park should be for the benefit of all the people of Derby was shown by dedicating the second of three opening days of ceremony to working people. After the first day, which was reserved for 1,500 invited guests, 9,000 of the workers of the town had their own celebration, followed on the third day by a 'children's day' attended by a further 6,000 visitors.

After Loudon's death in 1843 Paxton took over the mantle as the leading spokesman for the gardening community, taking an equally radical if perhaps less outspoken stance. Like Loudon, he believed in sharing his knowledge and he did so through his own journals, as described on page 225**.** Paxton also co-founded, in 1845, a regular newspaper, *The Daily News*, intended as a liberal rival to *The Times*, and with Charles Dickens, who shared Paxton's social reforming zeal, as the first editor at a salary of £2,000 (£1.6m). Dickens wrote the prospectus, stating that the paper would be devoted 'to the advocacy of rational

[864] Simo, M.L., *Loudon and the Landscape* (New Haven, Yale University Press, 1988), p. 194.

[865] Ibid., pp. 395-9.

social welfare and issues concerning the rights of man.'[866] Paxton enlisted the help of John Gibson, his principal gardening assistant at Chatsworth, in launching the paper.[867] In 1854 Paxton became the MP for Coventry.[868] In his vote of thanks after his election he said: 'To the working classes especially I would say that every measure calculated to promote their prosperity, and to elevate them morally, socially and intellectually shall have my most cordial support'.[869]

Paxton had radical proposals for municipal gardens, which he described in his journals. In the early days of the *Horticultural Register,* he published an article proposing a series of subscription gardens for the new industrial towns, at least three per town, 'for the different classes of society'. He proposed that just as most towns had gas and water companies they could have garden companies, and that the gardens could be organised to provide kitchen garden produce for the subscribers as well as the amenities of a park.[870] Figure 31 shows Paxton's proposal in diagrammatic form, with amenity parkland and a lake surrounded by a series of allotments. In the days before municipal authorities were permitted to raise revenue for parks the subscription model was the only viable alternative. Paxton followed this up with a proposal for a National Garden, again publishing a plan, which anticipated his work at Birkenhead (Figure 32).[871]

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[866] Colquhoun, pp. 14-1.

[867] Ibid., pp. 140-1.

[868] 'Sir Joseph Paxton', p. 449.

[869] 'Election Intelligence' *The Leader* (09 Dec., 1854), p. 1160.

[870] Paxton, J., 'Design for forming Subscription Gardens, in the vicinity of large Commercial Towns', *Horticultural Register,* v. 1 (1832), p. 58-9.

[871] Ibid.

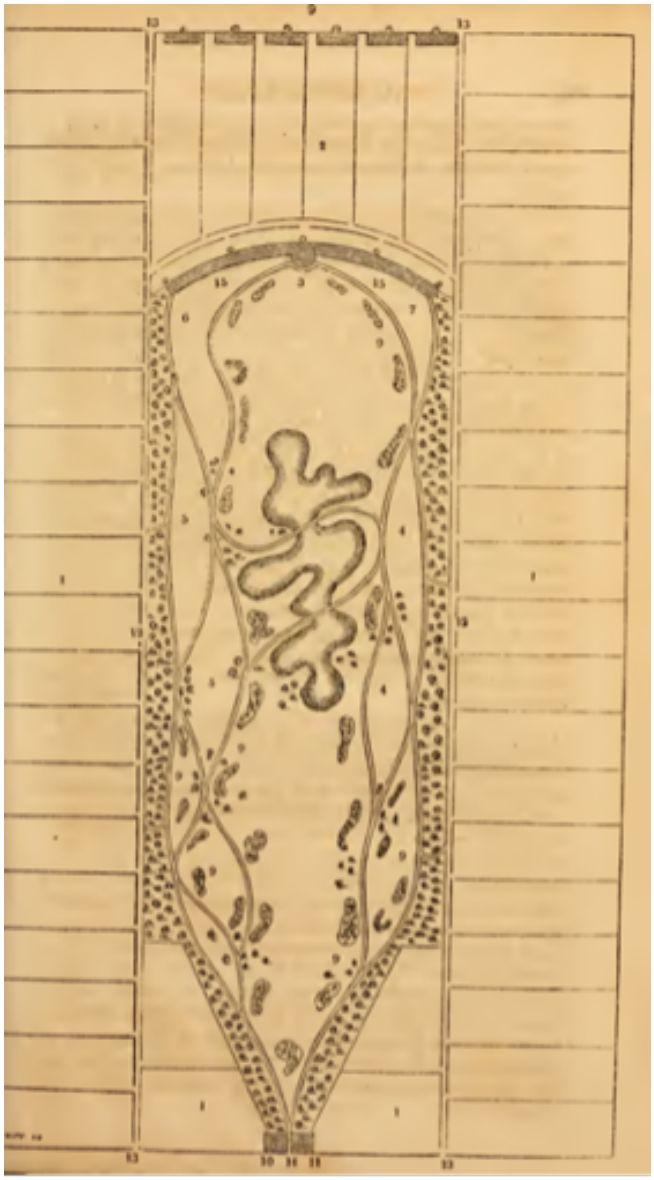

Figure 31. Plan for forming subscription gardens by Joseph Paxton (Magazine of Botany, 1834)



Figure 32. Paxton's 'National Garden' (Hort. Reg., 1832)

Paxton collaborated with Edwin Chadwick on a number of issues relating to sanitation. Chadwick was impressed with Paxton's laying out of a cemetery in Coventry and worked closely with him on the proposal for a Necropolis before the legislation was defeated, proposing that Paxton should assist the Board of Health.[872] The question of the healthy arrangement of cemeteries had been a preoccupation of Loudon's, and Chadwick attributed Loudon's early demise to his inhalation of polluted air when they inspected a vault together.[873] It was in relation to the subject of polluted air that Chadwick, in evidence to the Board of Health on the subject of 'the Drainage of Parks and Suburban Land', singled out Paxton's work at Birkenhead Park in making sanitary an area which previously had been subject to thick mists and fogs.[874] Paxton tried to emulate Loudon with his own proposal for a girdle around London, The Great Victorian Way, which he called 'a magnificent promenade- a new source of comfort and enjoyment' but which, although fully costed, failed to gain traction.[875]

As an MP Paxton achieved success in securing clean water for the quarter of a million people who used the Serpentine in Hyde Park as their only place to bathe, in the absence of domestic bathing facilities. A plan had been put in place by the Commissioner of Works for a filtration system, which Paxton could see was inadequate, so he campaigned for a Select Committee to be appointed, on which he sat, which led to Paxton's own scheme, of pumping fresh well water into the lake, being adopted.[876] Paxton achieved a second success in campaigning for a select committee to consider Joseph Bazalgette's proposal for an embankment which would carry low level sewage and create a new thoroughfare along the

[872] Chadwick, E., 'Letter to William Robinson', *RHS Lindley Library*, (GB 803 WRO/ 2/019, 1874) & Chadwick, G.F., *The Works of Sir Joseph Paxton* (London, Architectural Press, 1961), p. 204.

[873] Chadwick, 'Letter to William Robinson'.

[874] Ibid.

[875] Chadwick, G.F., *Park and the Town,* p. 208.

[876] Ibid., p. 215.

Thames. Paxton chaired the committee, whose recommendations led to the Thames Embankment Act, which came into law in 1862. Work began in 1864 and the Victoria Embankment was in use by 1870, with gardens created by Alexander McKenzie, now listed Grade 2*. It was designated at the time as 'The finest thoroughfare in Europe'.[877]

7.4 Gardeners in Waiting: Their Design and Landscaping Competence

Paxton and Loudon wrote in the certain knowledge that the skills were available to design, build and maintain the gardens which they envisaged. Gardeners on the large estates acquired this knowledge as part of their training. William Barron became head gardener of the Elvaston estate for Lord Harrington in 1830 at the age of 24 and built the garden from scratch to his own design, employing 80 men continuously over 20 years and creating one of the most famous and influential gardens of the period.[878] William Aiton, whilst head gardener at Kew landscaped 40 acres at Buckingham Palace, creating the lake and supervising many extensive alterations at Windsor. He also assisted John Nash with the planting schemes for St James' Palace.[879] Andrew Pettigrew, the head gardener to the Marquess of Bute at Cardiff Castle developed the grounds from open fields creating some of the most celebrated gardens of the time. During his 30-year tenure at Cardiff Castle he assisted in the design and laying out of several other gardens in the region.[880] At a time when gardens and their adjoining parkland were constantly being extended, altered and remodelled, landscaping skills were essential for the head gardeners of estates of any size.

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[877] 'Victoria Embankment Gardens', *Register of Historic Parks and Gardens* (1987), https://historicengland.org.uk/listing/the-list/list-entry/1000844?section=official-listing [accessed 02 Dec 2021].

[878] Elliott, B., 'Barron, William (1805–1891)', *ODNB*, (2010), [http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/37159 [accessed 10 Nov 2021] & Elliott, P., Watkins, C. & Daniels, S., (2007), 'William Barron (1805-91) and Nineteenth-Century British Arboriculture: Evergreens in Victorian Industrialising Society', *Garden History*, v.35 (2007), pp.129-48.

[879] Mabberley, D.J., 'Aiton, William (1731–1793)', *ODNB* (Oxford University Press, 2008), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/260, [accessed 10 Nov 2021].

[880] 'Cardiff Castle', *GC,* s. 3, v. 14 (1893), p. 296 & Pearson, R.H., 'Obituary', *GC,* s. 3, v. 33 (1903), p. 287.

When the demand for municipal parks arose there was thus a large body of men with the right skills ready to supply the required expertise.

7.5 The Contribution of Paxton to the Creation of Public Parks

Paxton had first become well known as the head gardener at Chatsworth who had enthused the Duke of Devonshire with a love of gardening.[881] Paxton indulged this passion with a series of hugely expensive developments at Chatsworth, including the creation of the Emperor fountain, the Great Stove and a monumental rockery, each of which was the largest in the world at the time. He showed an extraordinary skill at architecture, engineering and landscape design even though, like all his contemporaries, he had had no formal training in these disciplines but had learned his skills through self-tuition and in his day-to-day work. The Duke permitted him in 1841 to accept an invitation to design and build a new park, to be called Princes Park, as part of a private housing development in Liverpool. Paxton appointed his former apprentice, Edward Milner (1819-1884), to lay out the park and upon its completion Milner became its superintendent. The c28 hectare park which Paxton and Milner created is described by Historic England in its Grade II* listing as 'providing… an arcadian idyll within an urban context'.[882] On the successful completion of this project Paxton was commissioned to design Birkenhead Park which is recognised as the first public park to be established at public expense and is now designated Grade 1 by Historic England.[883] Paxton employed another of his former assistants, Edward Kemp, to supervise the laying out of the gardens. The modern map (Figure 33) shows the main details of the c.90-hectare site with its two lakes, the sinuous circulation paths and drives, the recreation areas and its distinctive

[881] Kenworthy-Browne, J., 'Paxton, Sir Joseph (1803–1865)'.

[882] Historic England, 'Prince's Park, Liverpool', *Register of Historic Parks and Gardens* (1986) https://historicengland.org.uk/listing/the-list/list-entry/1000998 [accessed 01 Nov. 2021].

[883] Historic England, 'Birkenhead Park', *Register of Historic Parks and Gardens* (1986), https://historicengland.org.uk/listing/the-list/list-entry/1000994 [accessed 01 Nov. 2021].

architectural features.



Figure 33. Map, Birkenhead Park

In creating Birkenhead Park from open pasture-land and badly drained commons Paxton showed the same exuberance and extravagance that he had in building projects for his employer at Chatsworth, in some cases more so. The entrance gates (Figure 34) are more magnificent than at any country estate.[884] The lakes are decorated with fine architectural

[884] As illustrated by Mowl and Earnshaw in their tribute to entrance gate in Mowl, T., *Trumpet at a Distant Gate: The Lodge as Prelude to the Country House* (London, Waterstone, 1985).

features such as the boat house (Figure 35). When the work was completed, Kemp was put in charge of the gardens and was given an ornate Italianate villa within the grounds (Figure 36) to reflect his status as curator, a post which he was to hold for 42 years.



Figure 34. The Entrance Gate, Birkenhead Park



Figure 35. The Boat House, Birkenhead Park



Figure 36. The Italian Lodge: Edward Kemp's House, Birkenhead Park

Following the success of Birkenhead Park, Paxton was given several more commissions to design and build public parks, most notably Kelvingrove Park, Glasgow (1853) Pavilion Park, Buxton (1854) Queen's Park Glasgow (1857) The People's Park, Halifax (1857), Baxter Park, Dundee, (1863) and The Public Park, Dunfermline (1864).[885]

The most substantial public garden built by Paxton and the one which, as Conway has averred, was to have the most influence on the design of municipal parks, was the garden he created for the Crystal Palace when it was moved to Sydenham in 1852 from its place in Hyde Park, as the venue for the Great Exhibition.[886] Paxton, as a director and shareholder of the Crystal Palace Company was given the role of Director of the Winter Garden, Park and Conservatory, but he also assumed the role of Director of Works.[887] The entire cost of the project was £1.3m (£1.1b) of which £340,231 (£286.2m) was allocated to the park and external works, £80,085 (£67.4m) to the hydraulics and £123,532 (£103.9m) to the towers, wings, tunnel and heating. Thus £543,848 (£457.6m) was spent on the gardens, or about £3,000 (£2.5m) per acre. The 283ft high water towers (designed by Brunel) and the hydraulics were required for a series of fountains in which 11,788 jets were played, using 120,000 gallons a minute.[888] Paxton's aim in designing these fountains was to make them as magnificent than those at Versailles, in which he succeeded (Figure 37). Once again, Paxton employed Milner to supervise the works. The Crystal Palace gardens were built on a scale and at a cost which far exceeded the gardens at Chatsworth, or of any private garden in England. They were not strictly speaking a public garden, as an admission fee was payable for entry, and they were, at least initially, closed on Sundays. Nevertheless, the enterprise, subsequently known as 'The Palace of the People' soon became the most popular attraction

[885] Chadwick, *The Park and the Town*, pp. 89-90.

[886] Conway, p. 77.

[887] Chadwick, *The Park and the Town,* p. 144.

[888] Ibid., p. 153.

in Britain, receiving 1,322,000 visitors in its first year of opening and a total of 60 million visitors in the period up to 1886, the numbers being boosted when Sunday opening was permitted after 1860.[889]

The Crystal Palace gardens were important in the development of municipal gardens because they showed what could be achieved in respect of floral decoration, garden architecture, recreational facilities and visitor attractions- which in this case was in the form of a dinosaur park.



Figure 37. Crystal Palace Gardens and Fountains

[889] Piggott, p. 61.

7.6 The Contribution of the Chatsworth School to the Creation of Public Parks

As has been observed by Conway and O'Reilly it was a characteristic of municipal park development that it continued regardless of which political party was in power and irrespective of the economic climate at the time.[890] It became a matter of civic pride for a town or city to have at least one park, but in many cases several, the only limiting factor being the legal restrictions on local authorities being able to borrow or tax to pay for them, constraints which were gradually lifted during the C19th.[891] Civic pride determined that the very high standard set initially by Paxton became the minimum standard acceptable to local dignitaries. Paxton's work was continued by what may be termed the 'Chatsworth School'- those who had been trained by him at Chatsworth and who had subsequently worked with him on his projects and were now able to continue the same work on their own account. Kemp, whilst retaining his post as superintendent of the Birkenhead Park built Hesketh Park in Southport in 1864, Newsham and Stanley Parks in Liverpool in 1868 and Saltwell Park in Gateshead in 1876.[892] Kemp became a leading landscape gardener, influencing others, such as Thomas Hayton Mawson, who designed several parks in the late Victorian and Edwardian period- his design of Hanley Park in Stoke on Trent in 1897 can be seen to have followed the design of Birkenhead 50 years earlier.[893] Kemp's book, *Landscape Gardening: How to Lay Out a Garden*, first published in 1858 ran to many editions over 50 years and became a leading text.[894]

After a long period working as Paxton's principal assistant, Edward Milner also became a

[890] O'Reilly, C.A., 'A Blot on the Landscape? Civic Memory and Municipal Public Parks in Early Twentieth-Century Manchester' *Landscape History*, v. 38 (2017), p. 66.

[891] Pettigrew, *Municipal Parks* 1929 provides an analysis.

[892] Waymark, 'Edward Kemp'.

[893] Ibid.

[894] Ibid.

professional landscape gardener. In 1852 he was appointed by Paxton as superintendent of works for the laying out of the new gardens for the Crystal Palace after which he assisted Paxton in creating the People's Park in Halifax. He then worked principally as a landscape gardener on his own account, accepting private commissions including that of creating Joseph Chamberlain's garden at Highbury Hall in Birmingham which was in due course to become a public park.[895] In 1862 he accepted a commission from the town of Preston to landscape Moor Park, which had been crudely laid out in 1832, and to create two new parks- Miller Park and Avenham Park. In 1881 he became the principal of the Crystal Palace School of Gardening, whose first female pupil was Fanny Wilkinson, who was to lay out more than 70 parks in London for the Kyrle Society and the Metropolitan Public Gardens Association before herself becoming the first female principal of Swanley Horticultural College.[896] The Chatsworth school thereby had an abiding influence.

Paxton himself had little to do with the development of London Parks, but another of his Chatsworth apprentices, John Gibson, was to play a major role. After two years plant-hunting in India, during which time he built a new garden in West Bengal for Lord Aukland,[897] Gibson rose to the position of foreman of the exotic plant department at Chatsworth under Paxton.[898] In 1849 he accepted the post of superintendent of Victoria Park in east London, then being laid out to the design of James Pennethorne 'Architect to the Commissioners of Woods and Forests', who had worked with Paxton on Princes Park in Liverpool. Gibson substantially improved upon Pennethorne's design- in the words of

[895] Historic England, 'Highbury Hall', *Register of Historic Parks and Gardens* (1982), https://historicengland.org.uk/listing/the-list/list-entry/1076076?section=official-listing [accessed 26 Dec 2021].

[896] Crawford, E., 'Fanny Rollo Wilkinson', *ODNB* (2008), https://ezproxy-prd.bodleian.ox.ac.uk:2102/10.1093/ref:odnb/97936 [accessed 21 Nov 2021].

[897] Coats, A. M., *The Plant Hunters* (New York, McGraw-Hill, 1970), p. 155.

[898] 'John Gibson', *GC*, s. 2 v. 30 (1872), p. 865.

Chadwick, he made the park 'come alive'.[899] In 1850 he also became superintendent of Greenwich Park. Gibson's main contribution to London park design was at Battersea Park, where he is credited with the first displays of 'sub-tropical' gardening, where the use of bold foliage took the place of brightly coloured summer bedding.[900] William Robinson gave support to the fashion with the publication of his book *Subtropical Gardening* in 1870, the same year that he published *Wild Gardening*, but which at the time had much greater impact. Sub-tropical gardening became a staple not only of municipal parks but of private gardens thereafter. As Gibson's reputation grew, he was also given charge of Kennington Park, the grounds of Chelsea Hospital and those of the Royal Military Asylum. In 1871 he was made superintendent of all the Royal Parks in central London- St James' Park, Green Park, Hyde Park and Kensington Gardens.[901]

The fourth member of the Chatsworth School was George Eyles, who had risen to be the superintendent of the Crystal Palace Park, after initial training at Chatsworth. He was then appointed to supervise the construction of the new gardens in Kensington for the Royal Horticultural Society, using profits generated from the Great Exhibition in a project promoted by Prince Albert who had become President of the RHS in 1858. A 22-acre site was chosen in what was to be known as 'Albertopolis' and £100,000 (£76.5m) allocated for the garden's construction- half as much again per acre as had been spent on the Crystal Palace gardens. Paxton's name was put forward as the garden's designer but was rejected as it was thought that he was not sympathetic to the rigorously Italianate style which the Prince preferred, and in any event, it was thought that he would want to take sole control. The design brief was given to a non-gardener, William Andrews Nesfield, but Eyles, who was

[899] Chadwick, *The Park and the Town,* p. 47.

[900] Elliott, 'William Barron', & 'John Gibson', p. 865.

[901] 'John Gibson', p. 865.

also made superintendent of the garden, was able to exercise his influence over the design, particularly in the addition of water in the form of canals. When the gardens opened in 1861 the magnificence of Versailles was again invoked:

> [In] these successions of terraces, in these artificial canals, in these highly ornamental flower-walks we have something of the taste and splendour of Louis Quatorze. It was of such a garden as this that Bacon must have dreamt (Figure 38).[902]

In 1857, another Chatsworth gardener, Joseph Smith, designed and laid out, together with Mr Lawson, the head gardener to Lord Londonderry, the People's Park (later renamed Mowbray Park) in Sunderland.[903] The extent of the influence of Paxton and the Chatsworth school can be seen from the fact that of the forty-two parks which are designated Grade 1 or Grade 2* in the English Heritage register they designed and built seventeen of them- 40 per cent of the total.[904]



Figure 38. The RHS Gardens and South Kensington[905]

[902] *The Athenaeum*, as quoted in The Gardens Trust, 'Andrew Murray & the Lost Gardens of Kensington', *The Gardens Trust Blog* (2020), https://thegardenstrust.blog/2020/09/12/andrew-murray-the-lost-gardens-of-kensington/, [accessed 15 Nov. 2021].

[903] Historic England, 'Mowbray Park', *Register of Historic Parks and Gardens* (1994), https://historicengland.org.uk/listing/the-list/list-entry/1001320?section=official-listing [accessed 27 Dec 2021].

[904] Tabulated by the author from *Historic England*.

[905] Murray, A., *The Book of the Royal Horticultural Society 1862-1863* (London, Bradbury and Evans, 1863), p. 180.

7.7 Gardeners as Park Designers and Superintendents

Other eminent gardeners followed in the path which had been created by Paxton and the Chatsworth school, most notably William Barron who has been described as being second only to Paxton in forming the image of a landscape gardener as an heroic figure.[906] He had created one of the greatest gardens of the early Victorian period at Elvaston Castle and he subsequently laid out, latterly in partnership with his son, West Park, Macclesfield, Locke Park, Barnsley (formerly The People's Park), Abbey Park, Leicester, the People's Park, Grimsby, Queen's Park Chesterfield, Brunswick Park, Sandwell, Victoria Park, Tipton and Bedford Park.[907]

It became commonplace for the park superintendents to be asked to design new parks, as was the case in Glasgow. In 1853, shortly after Glasgow City Corporation had asked Joseph Paxton to lay out Kelvingrove as a public park, Duncan McLellan, who had worked as a gardener on several estates in Scotland, was appointed as the City's Parks Superintendent, a post which he was to hold for 40 years. The Corporation consulted Paxton on the design of Queen's Park in 1856, but after that time they entrusted all the new park development work to McLellan. He designed and laid out Alexandra Park, which opened in 1870, and Maxwell Park (1890) and by the time he retired in 1893 he was in charge of 699 acres of parkland.[908] McLellan's place was taken by James Whitton, who had held the post of head gardener to the Earl of Strathmore at Glamis Castle for five years. During his 30 years in the post, he oversaw a great expansion in the number of parks, again being responsible for all the design and construction work so that by 1914 there were 15 parks and a further 16 minor open spaces, extending to 1,562 acres, plus the Ardgoil woodland estate of 14,650 acres where he

[906] Elliott, Watkins & Daniels, p. 29.

[907] Ibid., p. 143.

[908] Devoniensis, 'Obituary: Mr. Duncan M'Lellan', *GW,* v. 13 (1897), p. 687.

carried out a programme of afforestation.[909]

Park superintendents were nearly always former head gardeners from country estates. A notable exception was John Sexby, a former army officer who was appointed as the first Chief Officer for the London Parks in 1892, to vociferous protests from the gardening establishment. He was responsible for 5,000 acres of parks and employed a staff of 1,000, which included 503 trained gardeners and 302 park keepers.[910] William Morter was for 12 years the head gardener for Lord Avebury, Darwin's neighbour and close friend, at High Elms, Downe, in Kent, an estate of 250 acres. His experience there qualified him for the role of superintendent of Birmingham City parks, a post which he assumed in 1903. There, he had charge of 650 acres, comprising 12 large parks and 8 smaller parks and open spaces, plus 3,500 street trees.[911] The scale of operations was much greater than in any private garden. For the spring bedding he used more than half a million daffodils, plus large quantities of tulips, hyacinths, crocuses and snowdrops. In summer the large parks all had displays of summer bedding, plus carpet bedding and 'a good deal of sub-tropical work'.[912] The scope of activity was similar at Nottingham, where William Parker became superintendent in 1907, after working in the well-known private gardens of Trentham Hall, Eaton Hall and Blenheim Palace. He had charge of 16 parks with a total of 600 acres, plus all of the city's cemeteries and the street trees. As well as the usual floral displays, for which he had a dedicated nursery, Parker was in charge of an unusually large number of sporting facilities, which included 44 cricket match grounds (which he said had to be 'kept like county grounds'),

[909] Visitor, 'Public Parks and Gardens: Glasgow', *TG*, v. 60 (1901), p. 287; Maver, I., 'Glasgow's Public Parks and the Community, 1850-1914: a case study in Scottish Civic Interventionism', *Urban History,* v. 25 (1998), p. 341; 'Whitton and Ritch - Surname Studies and People from the Island of Graemsay, Orkney', http://www.robertwhitton.eu/ getperson.php?personID=I290&tree=1, [accessed 10 Oct. 2019].

[910] Jordan, H., 'Public Parks, 1885-1914', *Garden History,* v. 22 (1994), p. 111.

[911] 'Mr. William H. Morter', *Gardeners' Magazine*, v. 51 (1908), p. 450.

[912] Wilcox, 'The Gardens of a Great Public Park', *GL,* v. 13 (1908), p. 443.

which were used by 85 clubs, who played 705 matches in the 1913 season. In addition, there were 11 football match grounds, 11 bowling greens and two golf courses.[913]

It was a feature of most public gardens that they had extravagant bedding displays, which first of all mimicked those in large private gardens and later excelled them, on account of their popularity with the visiting public. George Fleming, the head gardener at Trentham is credited with popularizing the bedding system,[914] although John Caie, the head gardener at Bedford Lodge for the Dowager Duchess of Bedford also has a claim to be the originator, together with the Duchess herself. Fleming and Donald Beaton, the head gardener at Shrublands, vied with each other in their experimentation and were responsible for two innovations-the ribbon border and shading (for which Beaton gave Lady Middleton the credit for the invention), which reached its apogee under George Eyles at the Crystal Palace park. In the 1860s a second Fleming, the head gardener at Cliveden, John Fleming, introduced carpet bedding with a bed in the form of the monogram of his employer, the Duchess of Sutherland.[915] As the displays in public gardens became more and more extravagant, as one park competed with another, three-dimensional bedding emerged, of which the most flamboyant, and long lasting, was the floral clock, first developed by John M'Hattie, who had become superintendent of parks in Edinburgh after being head gardener at Stratsfieldsaye for the Duke of Wellington.[916] William Pettigrew, the superintendent of the public parks in Manchester, wrote that whilst floral clocks always attracted large crowds, he regarded them with a 'distaste almost amounting to abhorrence' but that carpet bedding, 'when tastefully designed and artistically carried out', would always provide an interesting

[913] Wilcox, 'What Nottingham is Doing for Horticulture', *GL,* v. 26 (1914), p. 107.

[914] Elliott, *Victorian Gardens,* p. 90.

[915] Ibid., p. 155.

[916] Ibid., p. 211.

feature in a public garden.[917]

Before taking charge of the parks and gardens of Brighton in 1891, George Ward had worked in seven private gardens, including Spye Park in Wiltshire and Castle Ashby in Northamptonshire, whose 35-acre gardens include a cricket ground. At Brighton he had charge of six main parks with 396 acres, plus 12 others of less than five acres, the street trees, four sets of allotment gardens and 200 acres of small-holdings. His average staff numbered between 70 and 80, plus about 50 of the unemployed. Carpet bedding was employed in all the main parks, for which in 1910 he used a total of 116,627 plants, all of them grown in the parks' nurseries.[918]

7.8 Parks for the People

When the first municipal parks were opened, they were acclaimed as 'Parks for the People', as indeed was the intention of their promotors. From the start the parks were open to all classes and no attempt was made by means of restrictive rules or regulations to deny access to members of the labouring class. In his record of his visit to Birkenhead Park in 1850 Frederick Law Olmsted observed that a large proportion of the visitors were evidently the wives and children of 'very humble labourers' and he concluded: 'This magnificent pleasure ground is entirely, unreservedly and forever the people's own. The poorest British peasant is as free to enjoy it in all its parts as the British Queen'.[919] Birkenhead Park became popularly known as 'The People's Park', and this became the official name of many parks opened in its wake- notably in Halifax (designed by Paxton) Dublin (N. Niven) Glasgow (Barron) Grimsby (Paxton) Rotherham (Albiston) Sunderland (Smith) Baildon (Gay), Darlington

[917] Pettigrew, p. 173.

[918] Wilcox, 'What Brighton is doing for Horticulture, *GL,* v. 20 (1911), p. 41.

[919] Chadwick, *Park and the Town,* p. 71.

(Barron) Scarborough (Paxton) Barnsley (Barron) and Hull (J C Niven).[920] A notice erected in Kemp's Peel Park, Salford, read 'This Park was purchased by the People, was made for the People, and is given to the People, for their protection'.[921] On the opening of Stanley Park, Liverpool, (also by Kemp) in 1870 it was asserted 'the park is for the people- the people should use it without let or hindrance; and the only conditions imposed on those who enter should be propriety of behaviour…The beggar and the Prince should be free to use it on this condition'.[922]

The enthusiasm of the general public for the new parks can be seen from the huge crowds which attended their inaugurations. William Gladstone, when Chancellor of the Exchequer in 1864 opened Farnworth Park, Bolton, before a crowd of 100,000. In his address to the crowd, he observed 'The presentation of this park…is happily not an isolated act; it is part of a great system, part of a great movement'.[923] Queen Victoria reputedly drew a crowd of 500,000 at the inauguration of Aston Park in Birmingham[924] and 200,000 at an event at Norfolk Park, Sheffield in 1897.[925] The parks were an instant success and were well patronized. At Victoria Park, London, it was estimated that 118,000 visitors attended on one June day in the year of its opening. Also, at Victoria Park it was recorded that every

[920] Compiled by author from *Historic England* website.

[921] Minutes of the Public Parks Committee 22 December 1865 quoted in Wyborn, T., 'Parks for the People: The Development of Public Parks in Manchester', *Manchester Region History Review,* v. 9 (1995), p. 12.

[922] Layton-Jones, K. & Lee, R., *Places of Health and Amusement: Liverpool's Historic Parks and Gardens* (Swindon, Historic England, 2015), p. 17.

[923] Historic England, 'Farnworth Park, *Register of Historic Parks and Gardens* (2001), https://historicengland.org.uk/listing/the-list/list-entry/1001540?section=official-listing, [accessed 28 Dec 2021] & Cunliffe, T., *Proceedings at the Opening of Farnworth Park* (Guardian Office, Bolton, 1865) p. 26.

[924] Chinn, C., 'Free to All Aston Hall and Park: People Power in Victorian Birmingham', *History West Midlands*, https://www.historywm.com/articles/free-to-all-aston-hall-and-park- people-power-in-victorian-birmingham [accessed 18 Dec. 2021], p. 9.

[925] Historic England, 'Norfolk Heritage Park', *Register of Historic Parks and Gardens* (2013), https://historicengland.org.uk/listing/the-list/list-entry/1001302?section=official-listing [accessed 29 Dec 2021].

morning, before 8am, 25,000 people bathed in the open-air lakes.[926] In relation to the Manchester parks the *Literary Times* observed 'The parks are crowded. No more beautiful scenes could be desired by man than such as are presented on the holiday time of Saturday in any one of these cheerful places of resort'.[927] The Times observed, in reference to Birmingham parks that they were 'places for ablution, fresh air and recreation' referencing the primary use of park lakes in the early years of their existence.[928]

7.9 The Role of the Working Classes in Promoting Public Parks

Working people were by no means passive bystanders in the campaigns to establish public parks and they sometimes played a crucial role in their acquisition. The radical pressure group, the East London Democratic Association, which drew its members from the poorest sections of the community, was formed in 1838 with the prime objective of forcing through the purchase of land in Hackney for a public park, which was at first called Tower Hamlets Park, and which later become Victoria Park.[929] Working people played a prominent part in the Manchester campaign for public parks in the 1840s. Following the public meeting in 1844, working men's committees were established to draw support from businesses and tradesmen, enabling the target of £30,000 (£25.7m) to be met and for a government grant of £3,000 (£2.6m) to be drawn down.[930] *The Manchester Guardian* commented on the fact that so many members of the working class 'contributed singly sums which would be considered liberal for shopkeepers'.[931] In Macclesfield, when the idea of creating a public park to

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[926] Nicholson-Lord, D., *The Greening of the Cities* (London, Routledge & Kegan Paul, 1987), p. 27.

[927] *Manchester Literary Times* (03 June 1848), as referenced by Brooks, A., *'A Veritable Eden', The Manchester Botanic Garden 1827-1907* (DPhil thesis, Univ. of Manchester, 2011), p. 179

[928] Lasdun, S. and Moenander, R., *The English Park: Royal, Private & Public* (New York, NY, Vendome Press, 1991), p. 156.

[929] Clark, F., 'Nineteenth-century Public Parks from 1830', *Garden History*, v. 1 (1973), p. 33.

[930] Conway, pp. 81-4.

[931] 'The Parks: The Public Parks Movement', *Manchester Guardian* (22 Aug. 1846), p. 9.

commemorate Sir Robert Peel was first mooted in 1850, £300 (£251,600) was speedily collected from the town's working population. This provided the catalyst for the creation of the park, which was designed by William Barron, then head gardener to Lord Harrington, who provided his services to the town.[932] Birmingham's first park, Saltley Park, opened in 1856 with support from the Working Men's Park Association, who managed the park until 1862, when the Council agreed to take it over, at which time its name was changed to Adderley Park. At the opening, it was stated that the fundamental rules upon which the park was opened were first that no profit whatever would be derived from it, and secondly, that there would be no charge for admission.[933] Working men also played a crucial role in the purchase of Aston Hall and Park, also in Birmingham, in 1857. The Working Men's Committee amalgamated with the languishing original committee, became the interim managers and succeeded in placing a deposit for the purchase of the Hall and Park. The Queen was invited to the opening ceremony, marking her first visit to Birmingham. The mayor, who the Queen knighted during the ceremony, acknowledged that a 'very large proportion of the money required for the purchase has been subscribed by the working classes' and the Queen recognized 'with pleasure the labour you have undertaken in providing thus worthily for the physical and intellectual improvement of the working classes'.[934] The £6,000 (£3.1m) cost of the first public park in the potteries, Queen's Park, Longton, which opened in 1888 was met mostly by public subscription, described by the Reverend Salt as 'the best practical solution to the problem between the landed aristocracy

[932] Historic England, 'West Park, Macclesfield', *Register of Historic Parks and Gardens* (2001), htpp://historicengland.org.uk/listing/the-list/list-entry/1001495?section=official-listing, [accessed 02 Dec. 2021].

[933] Cox, J., *City of Birmingham Public Parks and Pleasure Grounds* (Birmingham, 1892), p. 51.

[934] Chinn, p. 9.

and socialism'.[935] In Bristol the campaign for the public provision of a park was inaugurated in 1871 with the publication of a letter from 16 working men of the city, to sixteen aldermen entitled 'The Cry of the Poor', calling for urgent action in the provision of a 'People's Park'.[936]

The role of women in this process has been less well documented but can nevertheless be seen to have been significant. During the great fund-raising campaign for the first Manchester public parks, it was reported that women formed a substantial part of the crowd at the initial rally and that they 'evinced their zeal for the cause by their donations. Even families of young people gave their pocket money'.[937] Women's committees were often at the forefront of fund-raising campaigns- this was the case at Adderley Park, Birmingham in 1856 when a ladies group raised £1,000 (£760k).[938] for the park's buildings, and at Prince's Park, Liverpool where the success of the Ladies Bazaar was noted.[939]

7.10 Recreation for the People and the Birth of Association Football

The recreational facilities which were provided reflected the wish to cater for working class needs. Provision was made for games which had long been played by the working classes in streets and ale houses, such as skittles, quoits and pitch and toss.[940] Joshua Major described how he had facilities for 'archery, quoit alley, skittle ground, bowling green, climbing poles, gymnasium, marbles, see-saws, etc., for males and see-saws, balls, skipping rope, the Graces,

[935] Historic England, 'Queen's Park, Longton', *Register of Historic Parks and Gardens* (2013), https://historicengland.org.uk/listing/the-list/list-entry/1001389?section=official-listing, [accessed 12 Dec 2021].

[936] Young, C., 'The Making of Bristol's Victorian Parks', *Trans. Bristol & Gloucestershire Archaeological Society*, v. 116 (1998), p. 179.

[937] *Manchester Guardian* (22 Aug. 1846), p. 9.

[938] Cox, p. 51.

[939] Layton-Jones & Lee, p. 18.

[940] Wyborn, p. 12.

etc., for females'.[941]

In terms of regulations, because the intention was to attract families, there were almost invariably rules against profanity and drunkenness and the parks were usually locked up during hours of darkness. But the general policy was to keep rules to a minimum, so as to give the maximum encouragement to the ordinary person to make use of the facilities. H. B. Witty, the superintendent of the public parks at Kingston upon Hull, took pride in the fact that there were no restrictive notices, not even 'Keep off the grass'. He encouraged the public to walk and play on the grass, stating that 'this is all in line with the policy of getting people into the open air'. Witty, who had trained at Kew, was in charge of four parks with a total of 192 acres, all the town cemeteries, three hospital grounds, 500 acres of allotments and all the street trees.[942] He held the post from 1888 until after the First World War. In order to instil a sense of security he stationed a nurse and an ambulance at each of the recreation grounds to deal with the injuries which would inevitably occur. He provided a pool for boys under the age of 14 where they could bathe 'without restriction as to costume,' and beyond this a wading pool for girls under the supervision of a female attendant. He added 'we look after the children and do all we can to prevent molestation for which purpose we also have plain clothes policemen'. Football was encouraged with the provision of free grounds for 50 clubs.

The encouragement of the game of football, which was to become synonymous with working class entertainment, was a feature of municipal parks from the start, even though the game was then in an embryonic state. The development of the parks ran in tandem with the development of the game. It was part of the brief in the competition to design Peel Park in

[941] Chadwick, *The Park and the Town,* p. 99.

[942] Chittenden, F.J., 'The Parks and Open Spaces of Hull: Interview with Mr. H.B. Witty', *GL,* v. 42 (1922), p. 136.

Manchester that space should be provided for as many games as possible and 12 acres of land were set aside for a variety of games, including cricket (then the national sport) and football.[943] When the game took on an organized form with common rules and league tables the parks played a seminal role in its development. Crystal Palace Football Club, which was formed by the Crystal Palace Company in 1861, has a claim to be the country's oldest professional football club. It became a founder member of the Football Association in 1863 and took part in the first FA Cup competition in 1871-72.[944] Spectators to the games had first to pay the one-shilling entrance fee to the park. Crystal Palace subsequently became the home of the leading ground in England, after a lake in the park was filled in, and fountains removed to create a stadium with a capacity of more than 60,000. This became the venue for the FA Cup final from 1895 until the First World War, by which time the capacity had been increased to 112,000, by far England's largest ground.[945]

The football pitches at Battersea Park under John Gibson also played a part in the development of the game, when they hosted the first exhibition game under the rules of the newly formed Football Association on 9th January 1864. Battersea Park was also host to the game between London and Sheffield, played on 31 March 1866, which has been described as the 'first match of any importance under the auspices of the Football Association'.[946]

Several football clubs began their existence in public parks. Everton played its first games in Stanley Park, Liverpool, where 50-60% of the land had been reserved by Kemp as sporting ground. The football pitches at Wanderers Avenue, Phoenix Park, Wolverhampton, were the

[943] Chadwick, *The Park and the Town,* p. 99.

[944] Manning, P., *Palace at the Palace: A History of the Crystal Palace and its Football Club 1851-1915* (Neilson, 2018), p. 210

[945] Manning, p. 218.

[946] 'London FA v Sheffield: First Representative Game In 1866', https://historyofsoccer.info/london-fa-vs-sheffield, [accessed 15 Nov. 2021].

home of Wolverhampton Wanderers until 1889. The Nottingham Forest football team, founded in 1865, who vie with Crystal Palace for the distinction of being the oldest professional club in the English league, obtained their name, not from Sherwood Forest, as is commonly believed, but from Forest Recreation ground, where they first played. The parks under the control of William Parker, the Nottingham Parks superintendent, contained 11 match grounds, which in the 1913 season were used by 25 clubs who played 338 matches on them.[947]

7.11 The Participation of Women and Children

One of the most important aspects of the inclusivity of public parks related to the facilities offered to women and children. When Trevelyan wrote that one of the chief contributions made by the Victorians to real civilization was their 'enlarged sympathy with children' he did so in the context of the legislation which was designed to limit their exploitation in the workplace, by either preventing their employment at too young an age, restricting their hours of work or prohibiting their engagement in certain dangerous occupations.[948] Before the advent of compulsory, state-funded education the development of municipal parks with facilities directed at children was one of the first examples of public expenditure specifically on their behalf, outside of the poor law legislation. Children were part of the rhetoric for public parks from the start. Public parks would, it was said, 'secure a pleasant playground for town children'.[949] In 1844 at the first public meeting in Manchester which was held to gain support for Manchester's first parks, the audience of 5-6,000, which included a high proportion of women, were told that the parks would be for 'every woman who finds her children's sports restricted by the smallness of her house'. Joshua Major, after winning the

[947] Wilcox, 'What Nottingham is Doing for Horticulture', p. 107.

[948] Chadwick, *The Park and the Town*, p. 315 & Trevelyan, G.M., *English Social History: A Survey of Six Centuries-Chaucer to Queen Victoria* (Longmans, Green & Co., 1944), p. 522.

[949] Jordan, p. 86.

contract to build the parks, wrote, 'we took advantage of every nook or recess which was to spare for the different playgrounds'.[950] Paxton and Kemp had set the precedent at Birkenhead Park, which opened in 1847. Olmsted, on his first visit in 1852 noted how he was met at the entrance gate by 'a herd of donkeys, some saddled and bridled for ladies and children to ride'. Next to the cricket ground there was a field where 'girls and women with children were playing'.[951] Following the example of Birkenhead Park, it became routine for parks to have children's playgrounds, invariably separated by gender, as otherwise the boys would hog the swings and rides. Bathing was another popular activity for children, initially in the lake, later in bathing pools. Lakes were also important in two other respects; first for the provision of boating facilities and secondly as habitats for ducks, which were ubiquitous and being irresistible to young children proved to be a great attraction.

Crystal Palace started a second trend, that of educational attractions for children. Their display of 30 dinosaurs and other extinct prehistoric creatures became the first theme park, albeit with a didactic intent, and is now listed grade 1 by Historic England. Elliott has described the influence of the Crystal Palace attractions as 'immense': 'In every city from the 1860s onwards aviaries, zoos and conservatories for the display of exotic vegetation multiplied'.[952]

The modicum of equality which girls enjoyed with boys on the playground did not extend after puberty, when the vast majority of sports, such as cricket, football and archery were devoted to boys. In later years girls were able to make use of cycle tracks and tennis courts, but the sporting options for them were relatively limited. However, parks were transformative for women of all ages as places to walk and meet. They were a safe sanctuary

[950] Chadwick, *The Park and the Town,* p. 99.

[951] Ibid., p. 70.

[952] Elliott, *Victorian Gardens*, p. 121.

away from home and moreover contained refreshment rooms and other covered spaces, so that they could be used in all weathers. Private gardens, as an extension of the domestic domain were essentially a female sphere and so likewise in an urban setting the parks as places to promenade and meet were predominantly used by women, as is evident from contemporary illustrations and photographs.[953] As such they were immensely liberating for women and their children.

Summer houses, temples and gazebos in country estates had a dual purpose. First, they were aesthetically pleasing highlights in the landscape and secondly, they were places for discreet liaisons away from the servants and other inquisitive eyes, becoming a familiar trope in romantic fiction. One of the reasons that public parks became so popular is that they also provided opportunities for people to meet privately and discreetly, away from the crowded tenements where privacy was at a premium. The extent to which this freedom was enjoyed can be discerned from a censorious letter published in the *Liverpool Citizen*, with reference to Sefton Park, where the writer said that the park after dark was a disgrace to the city as 'a number of shop girls, servant girls and nondescript young wanderers are enticed into the place for the lowest motives…at present it is a hot bed of iniquity instead of a healthy breathing space for the community'.[954] Similar letters appeared at intervals, suggesting that little was done to curtail the new freedoms which were so widely enjoyed.

7.12 Conclusion

Put very simply, the narrative is as follows. In the 1830s members of the gardening community, most notably Loudon and Paxton, began a campaign for public parks to be provided in industrial areas. This campaign was supported by working class activists.

[953] O'Reilly, pp. 50-1.

[954] Layton-Jones & Lee, p. 42.

Paxton obtained the commission for the first public park, at Birkenhead, which contained the features common to the best country estates, creating a *rus in urbe*, together with separate recreational areas. This style, with a high standard of horticultural excellence and extravagantly rich architectural ornamentation became the model on which future parks were based, whose design and construction in the early years was dominated by Paxton and his acolytes in the Chatsworth school. Certain principles were established from the start. First that the design and the quality of the construction should be equal to that of the best landscape parks, secondly that the parks would be open to all and thirdly that they would be free to enter. Care was taken to provide recreational facilities which catered to working class tastes and needs. The parks were proclaimed as 'Parks for the People', and very often named as such. They were opened to great acclaim and enthusiastic support from all sections of the community. With few exceptions the gardens were designed by working gardeners, or by gardeners who had set themselves up as landscape designers. They were also managed by gardeners, who came from the large estates to become their superintendents and who were selected as only they had the degree of skill which was required to maintain the horticultural excellence which was required. Once the first public parks had been built it became a matter of local pride for municipal authorities to have a park which was the equal or better than that of their neighbour. Their popularity was such that the newly created seaside resorts invariably built public parks, even though the initial imperative of providing 'breathing spaces' for overcrowded areas did not have any relevance there.

The gardening community thereby created a new demand for their services, a demand which they were able to satisfy from their ranks and which gave their profession not only enhanced career opportunities but also greater status and in some cases wealth. By 1914 gardening superintendents were in charge of 2,000 municipal parks, as against 5,500 head gardeners at private estates. The superintendents controlled many thousands of under-gardeners and park-keepers- this represented a huge expansion in the overall numbers employed as

gardeners and in ancillary gardening roles. They also created a form of employment which was superior to that which they had enjoyed as head gardeners on country estates. In parks they were no longer domestic servants subject to the whims of their masters, but were in reality the masters themselves. When Paxton installed Kemp as superintendent of Birkenhead Park, he was given the Italian Lodge (Figure 36) to live in on the basis that it was 'the almost invariable custom to allow head gardeners a free residence in The Place, its advantages being so very manifest'.[955] Most park superintendents who followed were also given their own residence in their park. The difference was that there was no mansion to account to, to defer to and to take orders from. Such was Kemp's status that he moved out of the Italian Lodge having built a house for himself on the other side of the park (marked 'Kemp's House' on the map in Figure 33) where his neighbours were merchants and manufacturers.[956]

It may be said that gardeners not only created but captured this market and in assessing their achievement it is relevant to consider the counterfactuals. It was by no means inevitable that municipal parks would take the form they did and several other models existed. First, there was the simpler form of park, as was originally envisaged, and as was constructed in Bath, Preston and Sheffield in the 1830s, consisting of walkways and recreational areas, but without a lake or any significant ornamentation. Secondly, there was the botanical garden model where the park was paid for by a group of subscribers and entry to the garden was upon payment of a fee. Thirdly there was the property investment model, as in Regents' Park and Princes Park, where the development costs were paid for by selling plots of land around the perimeter of the park and entry was only free to subscribers. Finally, there was the 'municipal corporations' model, as originally mooted by Paxton, where the park would

[955] Lee, p. 157.

[956] Ibid., p. 174.

be financed on a similar basis to the early gas companies. If the first of these models had gained traction, the parks would have been simple and inexpensive and would have performed their function of providing 'breathing spaces' and recreational facilities, but would have been a very pale shadow of what eventually emerged. If any, or a mixture, of the other models had prevailed the parks would have excluded the working classes because of the necessity to make a charge for entry and would have become enclaves for the middle classes.

There are two explanations for the fact that the parks emerged in the form which they did. First, the very raison d'être for the parks as espoused by Loudon and Paxton, was to help those who were trapped in urban areas without access to green spaces. It was absolutely fundamental to their proposals that the parks should be in places which would benefit the working classes and that they should be free to all. The second explanation can be attributed to the extraordinary strength of character, one might say chutzpah, of Paxton, who in building Birkenhead Park established the precedent that the working man was entitled to something which was the equal of or better than the very best country estate. Once that exemplar had been established it became the standard for every municipality, who competed with their neighbours for horticultural distinction, which in turn strengthened the importance of the gardeners in charge. The very excellence of Paxton's design may also be the explanation as to why the parks have survived until today, adapted it is true to take account of changes in fashion, particularly as to recreation, but largely in their original form. Because they were so well designed and catered so well for the needs of the urban population, they have become well-loved and impervious to radical change.

After creating Central Park in New York, Olmsted wrote: 'It is of great importance as the

first real park made in this country- a democratic development of the highest significance'.[957] By democratic, Olmsted meant that it was a place where every citizen had the right to participate. Central Park contained the same elements as Birkenhead Park, but both were developments of the parks created by Brown a century earlier, whose origins can themselves be traced to classical times. In 1776 Mrs Lybbe Powys had written: 'The rage for laying out grounds makes every nobleman and gentleman a copier of their neighbour, till every fine place throughout England is comparatively, at least, alike'.[958] Two hundred years later, Frank Clark, in assessing C19th public parks commented 'The styles of each designer are hardly distinguishable'.[959] Both sets of styles relied on the serpentine lake, the winding walks, the mounds, the clumps of trees and the expansive lawns- a design which was found to be universally pleasing and was recognized around the world as quintessentially English. The essential difference between the private estate and the public park was that the one catered for the recreational needs of the owning family and the other for the public in general.

It is fitting in a democratic age that it is the municipal parks which have survived. A minority of the great estates of the C18th and C19th centuries still exist, in greatly truncated form, as heritage sites with high prices of admission, aptly described as the bourgeoisie at leisure. The public parks remain free and they have become a cherished institution, albeit at risk of decay because of a lack of public funding. In the present day the work of maintaining the parks has been taken over by contractors, rather than gardeners employed directly by the local authority, but the vision created by Loudon, Paxton and the Chatsworth school has been kept alive and the parks may truly be said to be the working gardeners' greatest legacy.

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[957] Clark, p. 37.

[958] Mowl, T., *Gentleman and Players: Gardeners of the English Landscape* (Stroud, Sutton, 2000), p. 162.

[959] Clark, p. 37.

Chapter 8 Innovation, Invention and Discovery

So sits enthroned in vegetable pride,
Imperial KEW by Thames 'glittering side;
Obedient sails from realms unfurrow'd bring
For her the unnam'd progeny of Spring;
Attendant Nymphs her dulcet mandates hear,
And nurse in fostering arms the tender year;
Plant the young bulb, inhume the living seed,
Prop the weak stem, the erring tendril lead;
Or fan in glass-built fanes the stranger flowers,
With milder gales, and steep with warmer showers.
Delighted Thames through tropic umbrage glides,
And flowers hybridiza, bending o'er his tides;
Drinks the new tints, the sweet unknown inhales,
And calls the sons of Science to his vales
—*The Botanic Garden*- Erasmus Darwin, 1791[960]

8.1. Introduction

Gardens by their nature need constant renewal. Plants, except for trees and some hardy shrubs, have a limited life and need to be replaced. Gardens are also objects of fashion and as such require constant reinvention. This was made easier by the temporary nature of much of the planting and was achieved in two ways, first by changes in design and secondly through the introduction of new plants. The long C19th saw numerous changes in style and form with the development of new types of garden, of which examples are the wild garden, the tropical garden and the American garden, although there were many more. The role of gardeners in instigating change in private and public gardens has been covered in earlier chapters, and will not be repeated here. By far the biggest change, which took place from the 1840s onwards in private gardens was the expansion of gardening under glass. New plants were constantly being introduced either from discoveries in the wild, or from hybridization.

[960] Darwin, E., *The Botanic Garden: A Poem* (London, J. Johnson, 1791), p. 207.

It was a characteristic of gardening that change was generally welcomed and received very little resistance. Schumpeter identified one of the sources of resistance to innovation as 'the social environment against one who wishes to do something new'.[961] In the social environment of gardening the owners, their gardeners and the nurserymen who supplied them, clamoured for novelty. Furthermore, knowledge was exchanged freely, through the gardening journals, the horticultural societies and the shows and competitions. Loudon, when he established the *Gardener's Magazine* in 1826, set out as one of his first principles that he would garner knowledge from all over the globe and share it. He wrote:

> The object of the *Gardener's Magazine* is the dissemination of useful knowledge; its subjects inexhaustible as the vegetable kingdom, and among the most interesting that concern domestic life; its plan calculated to procure information from every possible source at home and abroad its contributors belonging to every department of gardening and botany.[962]

He explicitly set out to challenge the established scientific orthodoxy stating:

> A magazine has this great advantage over collections of papers in what are called Transactions, that it admits of controversial discussion, which the latter do not; and therefore false doctrine, once admitted into such collections, stands there as true. In this respect, the Transactions of societies, in their present form, and in their present manner of publication, are behind the age.[963]

Within this framework there were few institutional barriers to change. The importation of new plants was permitted without restriction or duty. When foreign countries brought in laws restricting the export of plants it was usually after the event, as with rubber-producing plants from Brazil and Cinchona from Peru, and so had little impact. Labour institutions such as guilds and unions, which might have led to restrictive practices, had a marginal

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[961] Juma, C., *Innovation and Its Enemies: Why People Resists New Technologies* (Oxford, Oxford University Press, 2016), p. 76.

[962] Loudon, 'Preface', *GM*, v. 1 (1826), p. iii.

[963] Loudon, in reply to 'On Certain Frauds Imposed by Correspondents Upon the Readers of Transaction of Horticultural Societies', *GM,* v. 7 (1832), p. 291, as quoted by Lidwell-Durnin, J., *An Intellectual History of the Inheritance of Acquired Characteristics Before Darwin* (Univ. of Oxford, DPhil thesis, 2017), p. 2.

impact on gardening. Change was also encouraged by the non-commercial nature of gardens. Gardens, being items of luxury expenditure, were not required to make a profit. They were required to excel and in that respect new introductions, new designs and novelty in general were valued, quite apart from their economic consequences. The lengths to which some gardens would go to seek novelty is illustrated by the fact that Chatsworth funded its own plant-hunting expeditions.[964] Innovation was also encouraged by the nature of the capital investment in gardens. It was not of the 'putty-clay 'variety, which once shaped was difficult to convert to an alternative use.[965] Gardens were very adaptable to change- plants could be substituted easily and even mature trees could be transplanted successfully.[966] Similarly the contents of conservatories and hothouses could be renewed, refreshed or completely altered at will.

Unusually for the C19th many of the initiatives which took place were under the auspices of the state. In 1840 Kew Gardens was transferred from the Crown to the Office of Woods and Forests[967] after which it established an 'economic garden', whose role was to ascertain which plants would grow best in British territories throughout the world.[968] By the end of the century Kew was at the centre of a network of 102 botanical gardens in those territories,[969] which employed 700 gardeners and botanists who had been trained at Kew.[970] Government

[964] Colquhoun, pp. 67-9.

[965] Mokyr J., 'Innovation and Its Enemies: The Economic and Political Roots of Technological Inertia', In Olson M, Kähkönen S, editors, *A Not-So-Dismal Science: A Broader View of Economies and Societies* (New York, Oxford University Press, 2000), p. 71.

[966] Barron, W., *The British Winter Garden* (London, Bradbury and Evans, 1852), pp. 30-1.

[967] Desmond, R., *Kew: The History of the Royal Botanic Gardens* (London, Harvill Press & Kew, 1998), p. 344.

[968] Ibid., p. 345.

[969] 'Appendix III', *Kew Bulletin* (1899), p. 55.

[970] Bean, W.J., *The Royal Botanic Gardens, Kew: Historical and Descriptive* (London, Cassell and Co., 1908), p. 60.

initiatives, put into effect by Kew, had a wide-ranging impact on economic development of which several examples are given in this chapter.

The subject is vast and is impossible to cover comprehensively in one chapter. The approach has been taken to give examples in each field, to illustrate the scope and geographical range of the gardeners' endeavours.

8.2 Technological Change

The focus of this chapter is on the contribution to invention and discovery made by individual gardeners but it is useful to consider the broad changes which occurred during the period because of the effects which they had on the working lives of gardeners. By far the biggest change was in the expansion of indoor work, brought about by developments in hothouse design and its heating. In terms of design, Loudon and Paxton had the greatest influence on the changes. Loudon invented a wrought iron glazing bar which could be made in curvilinear sections, which he patented and published in two works in 1817 and 1818.[971] This enabled the construction for the first time of curvilinear hothouses. One of the first (1827) was commissioned by Mrs Beaumont at Bretton Hall in Yorkshire at a cost of £18,000 (£16.7m) (Figure 39).[972] An example, constructed in about 1820 survives at Bicton Hall (Figure 40), where the dome is unsupported and the structure is held together by the strength of the glazing bars.

[971] Loudon, *Remarks on the Construction of Hot-Houses* (London, J. Taylor, 1817); *A Comparative View of the Common and Curvilinear Mode of Roofing Hot-Houses* (London, 1818); *Sketches of Curvilinear Hot-Houses* (London, 1818).

[972] Marnock, R., 'Reminiscences as Regards Heating', *TG,* v. 24 (1883), p. 40.

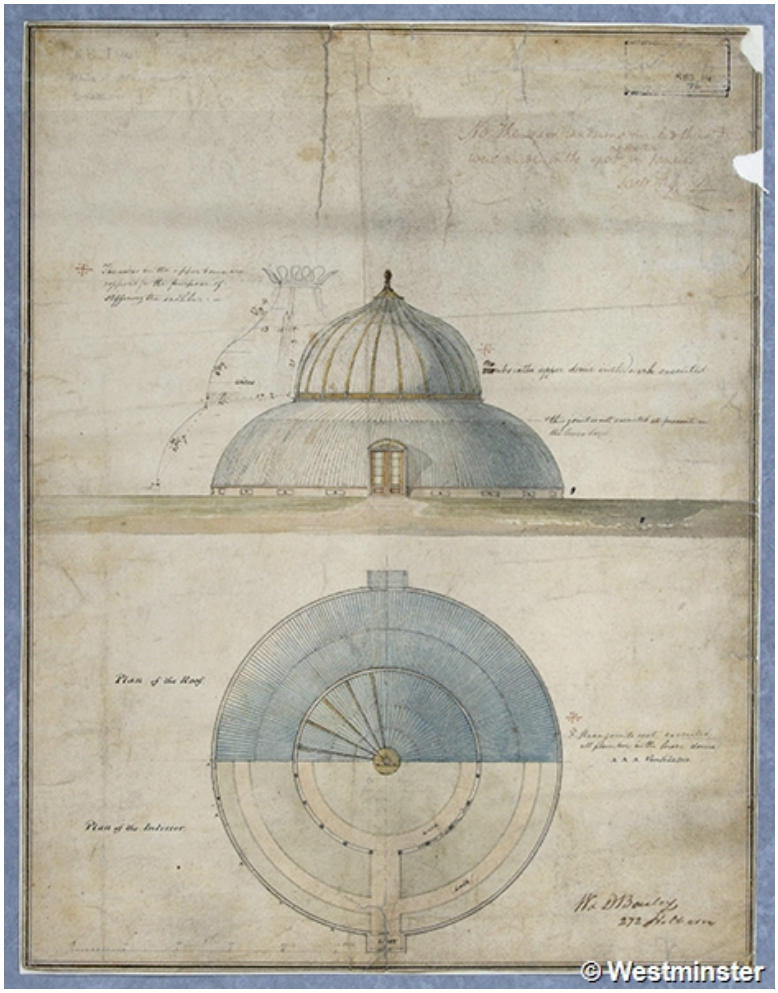


Figure 39. Loudon's design for the Hothouse at Bretton Hall.[973]


Figure 40. Loudon's Hothouse at Bicton Hall (Photo by the author)

[973] 'W & D Bailey plan of [Hothouse, Bretton]', RBSY/RBS/14/3/6, *Westminster Archive.*

The idea of a ridge and furrow form of construction was first formulated by Loudon in 1822[974] but it was put into effect by Paxton in 1835 when he built the Great Stove at Chatsworth, then the largest glass structure ever made, and it was to form the basis of every subsequent wood and glass structure which he designed, including the Crystal Palace. The ridge and furrow design maximized the amount of light available to the plants and provided a permanent rigid structure.[975] At that time the cost of glass militated against large scale construction, but the removal of the tax on glass in 1846 together with developments in glass production made the construction of large hothouses in kitchen gardens and conservatories attached to mansions affordable by the large estates, so that within 20 years they had become ubiquitous. At Enville Hall a conservatory 150 ft in length, 70 ft wide and 65 ft high was built onto the mansion (Figure 41) by the Earl of Stamford and Warrington, at the same time as a 350 ft peach house and numerous other glass structures were erected in the 6 acre kitchen garden. This work took place concomitantly with the increase in the size of the pleasure grounds from 6 acres to 100, involving a great increase in the gardening establishment, a pattern which was repeated in many estates.[976]

[974] Loudon, 'The Ridge and Furrow Roof', *Encyclopaedia of Gardening* (1822, 1st edition), pp. 358-9.

[975] Colquhon, p. 72.

[976] Ibid.

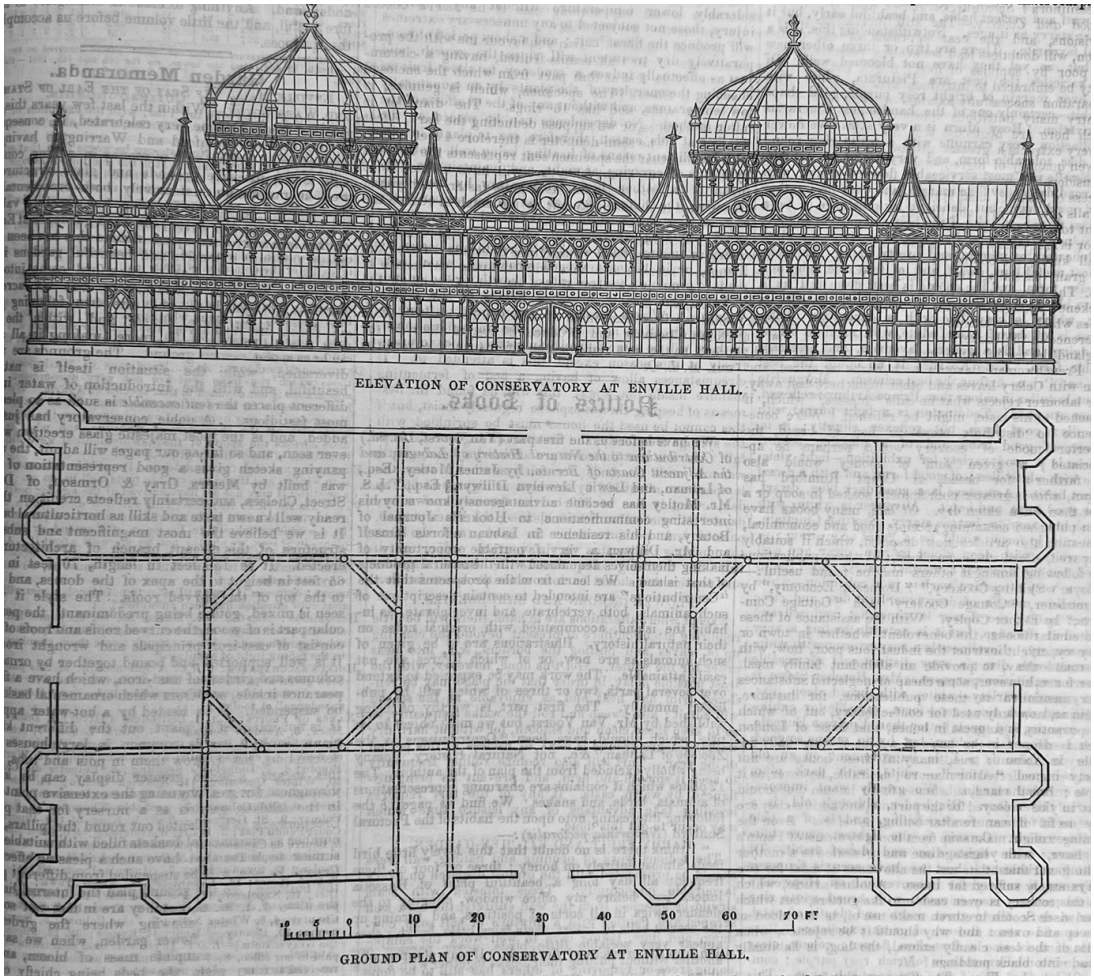


Figure 41. Elevation and ground plan of the conservatory at Enville Hall[977]

The expansion was accompanied by a concurrent advance in heating technology, in which gardeners largely played a passive role in terms of design and development, but it had a large effect on their working lives. The Bretton Hall hothouse was heated by steam from two boilers connected by a 4 inch pipe, an inefficient system which was replaced in time by hot water pipes, which were used in conservatories long before they were routinely used to heat domestic houses.[978] The kitchen garden at Harefield Grove, Rickmansworth, which contained 73 hothouses, was heated by six boilers of varying types, connected to 24,000 feet of piping.

[977] 'Garden Memoranda: Enville Hall, the Seat of the Earl of Stamford and Warrington', *GC,* v. 15 (1855), p. 791.

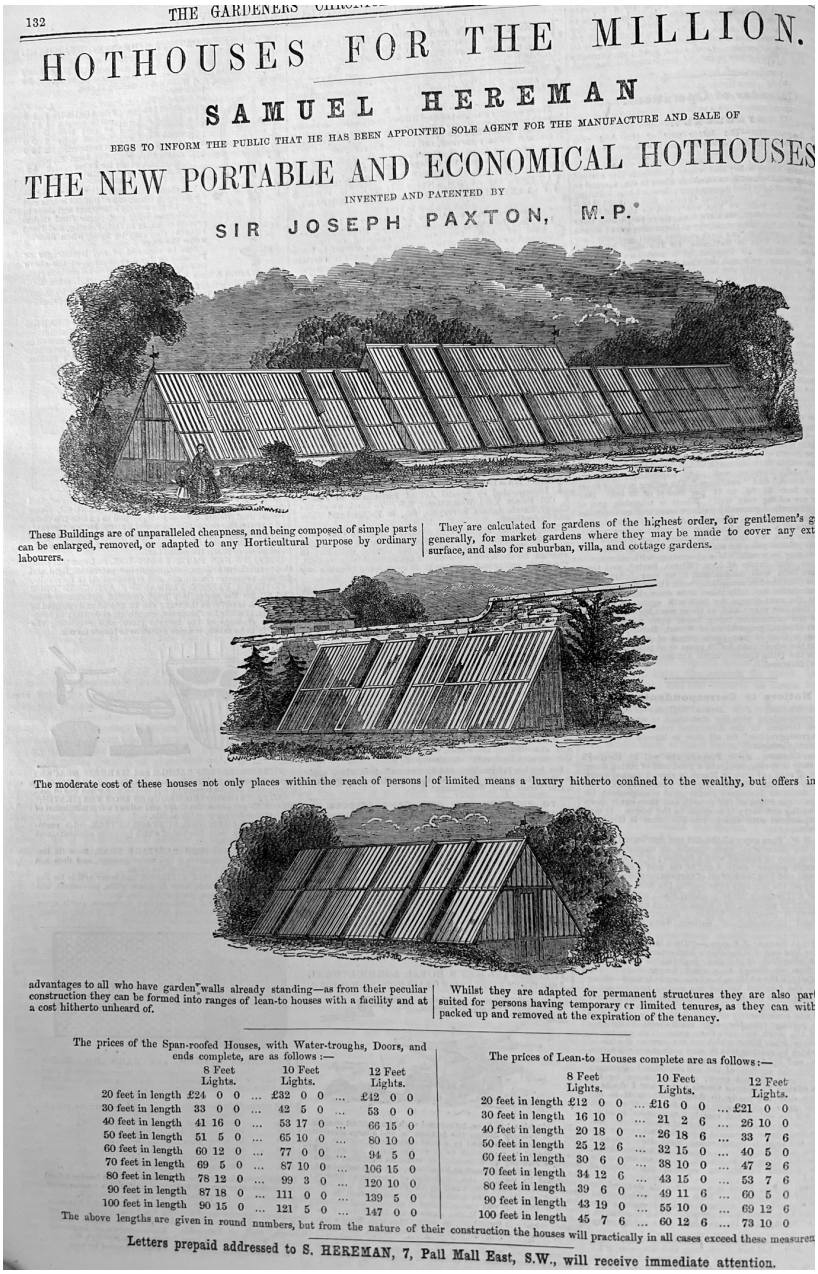
[978] Marnock, p. 40.

These boilers produced cleaner and more easily regulated heat than the steam and hot air methods which they replaced. However, they were coal fired and required manual stoking and as the case study of the Calke Abbey gardens has shown, they did not necessarily involve a reduction in the number of workmen required.[979] But although productivity may not have increased, the number of workmen needed to service the indoor operations undoubtedly did because of the huge expansion of these departments.

Paxton extended his invention of modular construction to the domestic greenhouse with his promotion of 'Hothouses for the Million 'which were intended to 'place within reach of persons of limited means a luxury hitherto confined to the wealthy' (Figure 42).[980] The greenhouses, for which Paxton registered a patent, were manufactured by Hereman and Moreton in six sites in England and Scotland.

[979] Palmer, M., & Barnwell, P.S., 'Harnessing Heat in the Kitchen Garden', in *Country House Technology* (Donington, Lincolnshire; Shaun Tyas, 2012), p. 175.

[980] Advertisement, 'Hothouse for the Million', *GC,* v. 20 (1860), p. 132.



132 THE GARDENERS

HOTHOUSES FOR THE MILLION.

SAMUEL HEREMAN

BEGS TO INFORM THE PUBLIC THAT HE HAS BEEN APPOINTED SOLE AGENT FOR THE MANUFACTURE AND SALE OF

THE NEW PORTABLE AND ECONOMICAL HOTHOUSES

INVENTED AND PATENTED BY

SIR JOSEPH PAXTON, M.P.

These Buildings are of unparalleled cheapness, and being composed of simple parts can be enlarged, removed, or adapted to any Horticultural purpose by ordinary labourers.

They are calculated for gardens of the highest order, for gentlemen's g generally, for market gardens where they may be made to cover any ext surface, and also for suburban, villa, and cottage gardens.

The moderate cost of these houses not only places within the reach of persons of limited means a luxury hitherto confined to the wealthy, but offers in

advantages to all who have garden walls already standing—as from their peculiar construction they can be formed into ranges of lean-to houses with a facility and at a cost hitherto unheard of.

Whilst they are adapted for permanent structures they are also par suited for persons having temporary or limited tenures, as they can with packed up and removed at the expiration of the tenancy.

The prices of the Span-roofed Houses, with Water-troughs, Doors, and ends complete, are as follows :—

	8 Feet Lights.	10 Feet Lights.	12 Feet Lights.
20 feet in length	£24 0 0 ...	£32 0 0 ...	£42 0 0
30 feet in length	33 0 0 ...	42 5 0 ...	53 0 0
40 feet in length	41 16 0 ...	53 17 0 ...	66 15 0
50 feet in length	51 5 0 ...	65 10 0 ...	80 10 0
60 feet in length	60 12 0 ...	77 0 0 ...	94 5 0
70 feet in length	69 5 0 ...	87 10 0 ...	106 15 0
80 feet in length	78 12 0 ...	99 3 0 ...	120 10 0
90 feet in length	87 18 0 ...	111 0 0 ...	139 5 0
100 feet in length	90 15 0 ...	121 5 0 ...	147 0 0

The above lengths are given in round numbers, but from the nature of their construction the houses will practically in all cases exceed these measure

The prices of Lean-to Houses complete are as follows:—

	8 Feet Lights.	10 Feet Lights.	12 Feet Lights.
20 feet in length	£12 0 0 ...	£16 0 0 ...	£21 0 0
30 feet in length	16 10 0 ...	21 2 6 ...	26 10 0
40 feet in length	20 18 0 ...	26 18 6 ...	33 7 6
50 feet in length	25 12 6 ...	32 15 0 ...	40 5 0
60 feet in length	30 6 0 ...	38 10 0 ...	47 2 6
70 feet in length	34 12 6 ...	43 15 0 ...	53 7 6
80 feet in length	39 6 0 ...	49 11 6 ...	60 5 0
90 feet in length	43 19 0 ...	55 10 0 ...	69 12 6
100 feet in length	45 7 6 ...	60 12 6 ...	73 10 0

Letters prepaid addressed to S. HEREMAN, 7, Pall Mall East, S.W., will receive immediate attention.

Figure 42. Paxton's Hothouses for the Millions

8.3 George Fry and Edwin Beckett- A Wave of Gadgets

Gardening throughout the long C19th was labour intensive with most of the standard operations, such as preparing the ground, sowing seeds, potting on, propagating, grafting etc. seeing only small, incremental changes. Gardening is one of those occupations in which the adage that innovation in the C19th consisted of 'a wave of gadgets 'can be said to be true.

The basic tools used by a gardener remained the same, but were continually improved in terms of materials and design, even the plant pot. The career of George Fry illustrates this.

Fry was born in 1818 and apprenticed while 'quite a boy 'at a garden in Pembury, Kent.[981] As an under-gardener at The Woodlands, Blackheath, he thought of a new design for a plant pot which would reduce the need for pots to be broken when plants were turned out for their roots to be examined. When he explained the idea to the gardener for whom he worked, who had been in his post for thirty years, he was told peremptorily to forget it. After becoming the head gardener to Mrs Dent of Lee he canvassed the idea again and on the advice of the editor of the *Gardeners' Chronicle*, in 1846 took out a patent for his invention as 'The West Kent Garden Pot 'for which he sold the rights to Joseph Pascall of Chislehurst, who manufactured and marketed the invention successfully. Fry followed this by inventing in turn a self-acting fumigator, a 'sulphurator', which spread sulphur on plants attacked by mildew, a Seakale propagating pot and Fern and seed pans, all the rights to which were again transferred to Pascall (Figure 43).[982] Fry was also an accomplished breeder of fuchsias, of which numerous new varieties, including Mrs Gladstone and Blue Boy were distributed by the Hope Nurseries, Lewisham on his behalf.[983] Fry died in 1899 leaving £381 (£171k).

Like Fry, Edwin Beckett (b. 1854) was an accomplished hybridizer, developing the pea varieties 'Quite Content 'and 'Edwin Beckett', the celeries 'Aldenham Pink 'and 'Aldenham White 'and the Tomato 'Golden Perfection 'as well as many others.[984] He also invented two garden gadgets, the 'cup and tube 'used for Chrysanthemum exhibiting, (Figure 44) and a patented 'tree-tie'. The purpose of the 'cup and tube 'was to facilitate the movement of a flower in a vase whilst keeping the stem in water. It was only useful to specialist exhibitors

[981] 'Obituary - Mr George Fry', *GW,* v. 15 (1899), p. 717.

[982] Ibid.

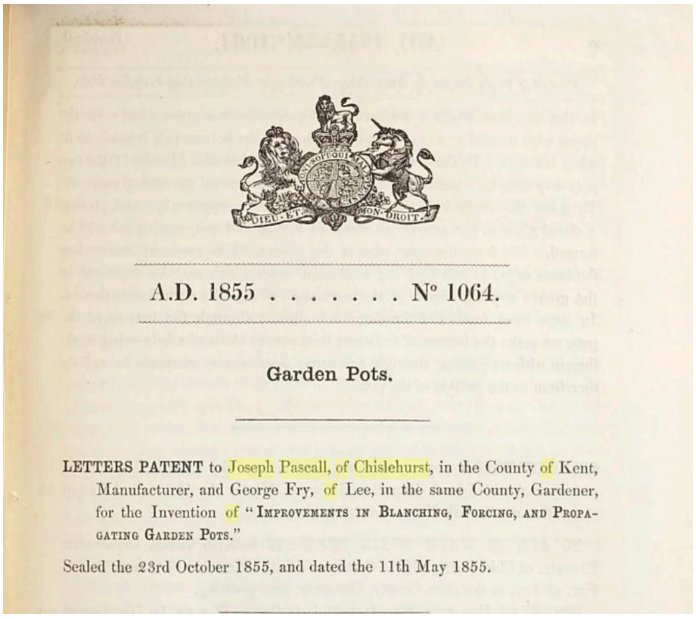
[983] 'George Fry: A Gardener of the Old School', *GW,* v.2 (1886), p. 377.

[984] 'Mr Edwin Beckett, V.M.H.', *GC,* s. 3, v. 70 (1921), p. 132.

for shows which took place in the late autumn, and yet 6,000 were sold in a single year.[985]

Beckett died in 1921 leaving £21,284 (£4.3m).

[985] Wilcox, 'Famous Gardeners at Home No. 20: Mr. E. Beckett, F.R.H.S., at the Gardens, Aldenham House, Elstree', *GL,* v. 1 (1902), p. 391.



A.D. 1855 . . . . . N° 1064.

Garden Pots.

LETTERS PATENT to Joseph Pascall, of Chislehurst, in the County of Kent, Manufacturer, and George Fry, of Lee, in the same County, Gardener, for the Invention of "IMPROVEMENTS IN BLANCHING, FORCING, AND PROPAGATING GARDEN POTS."

Sealed the 23rd October 1855, and dated the 11th May 1855.

Figure 43. Extract from the patent for George Fry's Pot for Blanching Sea Kale[986]

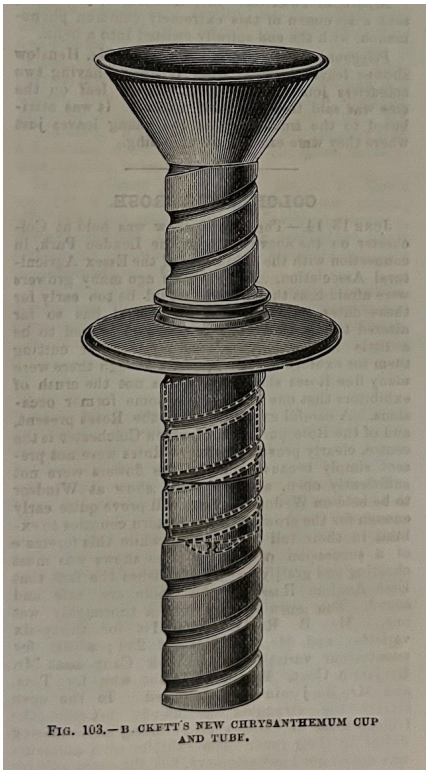


FIG. 103.—BECKETT'S NEW CHRYSANTHEMUM CUP AND TUBE.

Figure 44. Beckett's Chrysanthemum Cup and Tube[987]

[986] Obituary - Mr George Fry', p. 717.

[987] 'Beckett's Extension Chrysanthemum Cup and Tube', *GC,* s.3, v. 15 (1894), p. 791.

8.4 The Lawnmower: the slow adoption of labour-saving technology

The lawnmower was one of the few inventions designed to increase productivity and its slow adoption suggests that the saving of labour costs was not a priority. Until 1830 lawns were cut using a scythe. This could only be done when the grass was wet so that work often commenced at 4.30 am to take advantage of early morning dew. In 1830 a prototype mechanical mower was trialled by Mr Curtis, the gardener at Regent's Park Zoo[988] (Figure 45).

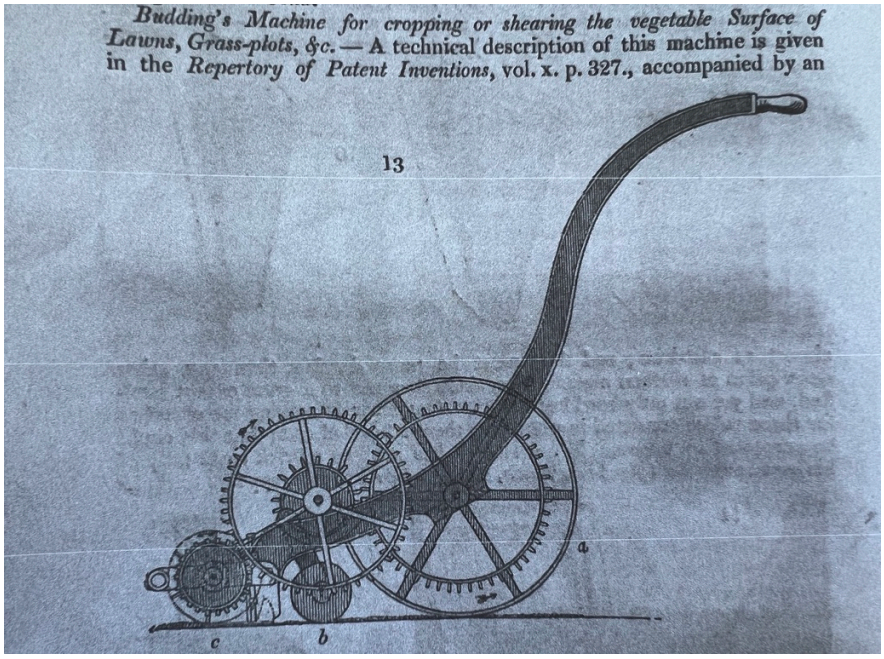


Figure 45. The Patent drawing for Budding's Grass Cutting machine[989]

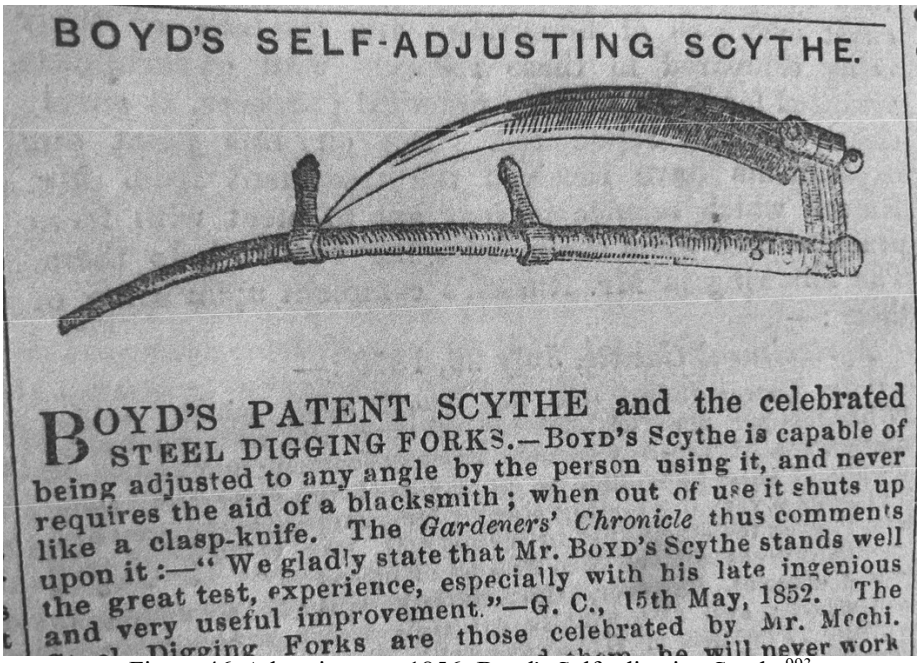
It required two men to operate it, one pushing and one pulling, but it was claimed that the one machine did the work of 6 men using scythes and brooms and moreover it could be operated when the grass was dry. In the first review of the experiment, in 1831, Loudon 'rejoiced 'at the prospect that gardeners might be freed from the oppressive need to mow in the early morning, before the dew had evaporated.[990] The machine, which was patented by

[988] Loudon, 'Budding's Machine for Cropping or Shearing the Vegetable Surface of Lawns, Grass-plots, &c', *GM*, v. 8 (1832), p. 34.

[989] Ibid., p. 34.

[990] Loudon, 'Machine for Cutting Grass on Lawns and Grass-plots', *GM,* v. 7 (1831), p. 611.

Edwin Budding in 1830, was an adaptation of a device which had long been used for the shearing of velvet. Budding stated, presciently,‘ Country gentlemen may find, in using my machine themselves, an amusing, useful and healthy exercise’.[991] It consisted of a roller, which provided the motive force attached to a series of cog-wheels and a chain which drove a fixed blade, which cut the grass. In fact only the smallest machines could be operated by one person, most required two, and a suitably shod horse or pony became the most popular means of propulsion. At first these mowers were little more than a curiosity. Sales of Budding’s machine averaged only about 180 a year for the first twenty years and the manufacturers themselves did not claim a saving of labour of more than two men for each machine employed.[992] Advertisement for scythes continued to be run alongside those for mowing machines. (Figure 46).


BOYD'S SELF-ADJUSTING SCYTHE.

BOYD'S PATENT SCYTHE and the celebrated STEEL DIGGING FORKS.—Boyd's Scythe is capable of being adjusted to any angle by the person using it, and never requires the aid of a blacksmith; when out of use it shuts up like a clasp-knife. The *Gardeners' Chronicle* thus comments upon it:—"We gladly state that Mr. Boyd's Scythe stands well the great test, experience, especially with his late ingenious and very useful improvement."—G. C., 15th May, 1852. The Digging Forks are those celebrated by Mr. Mechi.

Figure 46. Advertisement 1856- Boyd's Self-adjusting Scythe[993]

[991] Loudon., ‘Budding’s Machine’, p. 35.

[992] ‘The Improved Lawn Mowing Machine’, Advertisement in *GC,* v. 14 (1854), p. 190.

[993] ‘Boyd’s Self-adjusting Scythe’, Advertisement in *GC*, v. 12 (1852), p. 201.

The early machines were unreliable as the gearing was unprotected so that the cog-wheels were easily damaged. They were also very noisy so that they could not be operated at times when the household would be disturbed. They could also not be operated on wet grass. An improved machine emerged from Scotland through experiments carried out by William Lindsay-Carnegie on his estate at Kimblethmont, Arbroath. Lindsay-Carnegie was the embodiment of Scottish enlightenment principles, being inspired as he said, by Adam Smith's ideas on political economy, becoming a friend of George Stephenson and being involved with several discoveries and inventions.[994] After discovering that Budding's patent did not apply to Scotland he made several improvements to the machine and marketed a rival product made by Shanks.[995] Nevertheless lawn mowers encountered considerable resistance, one gardener maintaining in 1856:

> The mowing machines of the present day, intended to be worked by human labour, I consider to be an accumulation of mechanical blunders, and ought to come under the cognisance of the legislature or the Society for the Prevention of Cruelty to Animals.[996]

It was not uncommon for gardeners to report that after using a machine they had reverted to the scythe.[997] After the 1850s the patent office began to accept new designs, such as protection for the cog-wheels and the use of chains so that the mowers gradually became more reliable, lighter and cheaper and hence more popular.[998] The Archimedean lawn mower, an introduction from America in 1870 broke new ground by being usable on wet grass.[999] Prices by this time had fallen to one third of previous rates. However there were

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[994] M'Bain, J.M., *Eminent Arbroathians* (Arbroath, Brodie & Salmond, 1897), p. 162.

[995] Lindsay, W.F., 'New Mowing Machine', *GC,* v. 2 (1842), p. 316.

[996] Mackenzie, P., 'Garden Mechanics', *GC,* v. 16 (1856), p. 534.

[997] Palmam qui meruit ferat, 'Hand Mowing Machines', *GC,* v. 28 (1868), p. 268.

[998] 'Lawn Mowers', *GC*, s. 3, v. 17 (1895), p. 556 & Russell, S., 'The Lawn-mower: It's Construction and Management', *GC*, s. 3, v. 31 (1902), p. 320.

[999] 'The 'Archimedean' Lawn Mower', *GC,* v. 30 (1870), p. 311.

advocates for the scythe even after the mowing machine had become almost ubiquitous. Thomas Mawson, the landscape designer, created some controversy in 1896 by speaking in favour of the scythe over the mower, but by this time he was in a small minority and in 1902 an editorial in the *Gardeners' Chronicle* observed that the use of lawn mowers had become general, almost to the exclusion of scythes.[1000] It had taken forty years for the mechanical mower to reach a sufficient level of technical refinement, in terms of utility and reliability, to reach general acceptance and in spite of the obvious gains in terms of productivity and in terms of the welfare of the labourers, a further thirty years for the scythe to be fully replaced.

8.5 Hybridisation - William Culverwell and the Telegraph Pea

It was not possible to patent a plant or a seed, as the law of patents did not extend to living things. The absence of patent protection meant that the developer of a new variety was vulnerable to a rival creating duplicates and marketing them under a different name. In the absence of legal protection for any new variety the reputation of the supplier was paramount, especially so in the case of seeds which had, by necessity, to be sold on trust as the nature of the product was only ascertained after germination if, indeed, the seed was fertile.[1001] The element of trust was bolstered by endorsements from head gardeners who had either bred or used the product and by winning prizes in the horticultural shows, particularly those organised by the RHS.[1002] It was commonplace for the head gardeners at well-known estates to develop new varieties and then to sell the rights to seed companies, as with Seward Snow at Wrest Park, whose 'Snow's Superb Winter White Brocolli 'and 'Snow's Muscat

[1000] A Gardener, ' Lawn-mowers', *GC,* s. 3, v. 31 (1902), p. 237.

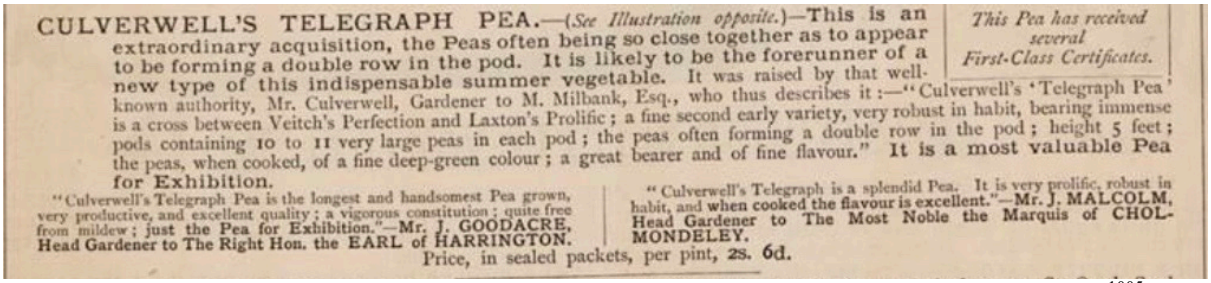
[1001] Charnely, B., 'Seeds without Patents: Science and Morality in British Plant Breeding in the Long Nineteenth Century', *Revue Economique*, v. 64 (2013), p. 70.

[1002] Ibid., p. 2.

Hamburgh ’grape became well known.[1003] William Culverwell, the head gardener for the Milbank family at Thorpe Perrow in Yorkshire, specialised in breeding varieties of peas, and he developed several new types including ‘Culverwell’s Prolific Marrow’, ‘Sharpe’s Invincible ’and ‘Telegraph’. The last named he had hybridised from two other varieties, Veitch’s Perfection and Laxton’s Prolific.[1004] In 1876 the well-known seed firm of Carters, who designated themselves as ‘The Queen’s Seedsmen’, bought the entirety of Culverwell’s stock of Telegraph seed for on-sale, which in their promotional literature (Figure 47) they referred to as 'an extraordinary acquisition' from 'that well known authority, Mr Culverwell'. Their advertisements included testimonials from two well-known head gardeners and referred to the fact that it had received several first class certificates. However, in 1879 without Culverwell’s knowledge or consent, Carters advertised a new variety, which they called ‘Telephone ’which they claimed to be a superior variety derived from Telegraph. In their advertising (Figure 48) they acknowledged its provenance, referring to Culverwell by name, no doubt to capitalise on his reputation and also stating that their new pea had been awarded a ‘First Class Certificate ’from the RHS.

[1003] ‘Obituary: Mr Seward Snow’, p. 310.

[1004] Culverwell, W., ‘Culverwell’s Telegraph and Carter’s Telephone Peas’, *GC,* n.s. v. 11 (1879), p. 180.



CULVERWELL'S TELEGRAPH PEA.—(*See Illustration opposite.*)—This is an extraordinary acquisition, the Peas often being so close together as to appear to be forming a double row in the pod. It is likely to be the forerunner of a new type of this indispensable summer vegetable. It was raised by that well-known authority, Mr. Culverwell, Gardener to M. Milbank, Esq., who thus describes it:—"Culverwell's 'Telegraph Pea' is a cross between Veitch's Perfection and Laxton's Prolific; a fine second early variety, very robust in habit, bearing immense pods containing 10 to 11 very large peas in each pod; the peas often forming a double row in the pod; height 5 feet; the peas, when cooked, of a fine deep-green colour; a great bearer and of fine flavour." It is a most valuable Pea for Exhibition.

This Pea has received several First-Class Certificates.

"Culverwell's Telegraph Pea is the longest and handsomest Pea grown, very productive, and excellent quality; a vigorous constitution; quite free from mildew; just the Pea for Exhibition."—Mr. J. GOODACRE, Head Gardener to The Right Hon. the EARL of HARRINGTON.

"Culverwell's Telegraph is a splendid Pea. It is very prolific, robust in habit, and when cooked the flavour is excellent."—Mr. J. MALCOLM, Head Gardener to The Most Noble the Marquis of CHOLMONDELEY.

Price, in sealed packets, per pint, 2s. 6d.

Figure 47. Advert for Telegraph peas from Carters' *Illustrated Vase Mecum and Seed Catalogue* 1879[1005]



FEBRUARY 1, 1879.] THE GARDENERS' CHRONICLE. 153

CARTER'S TELEPHONE—THE BEST NEW PEA.

First-class Certificate, Royal Horticultural Society.

Selected from Culverwell's "Telegraph," from which it differs in the seeds being wrinkled, whilst the quality is very superior. Like Culverwell's "Telegraph" it is an extraordinary cropper, bearing myriads of immense semi-double pods, full of very large Peas of most exquisite flavour. Highly recommended.

Awarded a First-class Certificate by the Royal Horticultural Society, after a Crucial Trial in the Society's Gardens.

In Sealed Packets, price, per pint, 2s. 6d.

THE QUEEN'S SEEDSMEN, Carters HIGH HOLBORN, LONDON, W.C.

Figure 48. Carter's Telephone[1006]

Culverwell first became aware of the Telephone pea when he read a review of it in the *Gardeners' Chronicle*, in which it was described as 'a very remarkable Pea, of enormous size, grand appearance and good quality'. He then wrote to the *Gardeners' Chronicle* arguing that it would have been impossible for Carters to develop a new hybrid and bring it to market in the short time since they had bought his peas and that therefore Telephone must be identical to Telegraph.[1007] His contention was supported by several other gardeners, but denied by Carters. The editor of the *Gardeners' Chronicle* resolved to settle the dispute by organising a blind trial and publishing the results. The trial took place at the RHS gardens in Chiswick,

[1005] Charnley, p. 129.

[1006] 'Advertisement for Carter's Seed Merchants', *GC,* n.s. v. 11 (1879), p. 153.

[1007] James Carter & Co, 'Culverwell's Telegraph and Carter's Telephone Peas' *GC,* n.s. v. 11 (1879), p. 148.

where several rows of each variety were sown on the same day and after they had grown were judged by several gardeners who were not told the identity of each. They could detect no difference between the varieties, after which it was concluded by the editor of the Chronicle: 'To Mr Culverwell belongs the credit of raising and sending out Telegraph- an undoubtedly fine Pea and it is to be hoped we shall hear no more of the name Telephone'.[1008] In fact Carters did not withdraw Telephone from sale and the seed company ignored the comment from the eminent gardener, Thomas Keetley of Darley Hall, that they were guilty of 'robbing the raiser of the full credit due to him simply for their own benefit'.[1009] Not having patent protection, Culverwell was not able to seek any legal remedy or to prevent Carter's Telephone being marketed and it continued to sell well, and has done up to the present day, as a heritage variety, whereas Telegraph has ceased to exist. However, this setback did not deter Culverwell from continuing to develop hybrids and he produced several further varieties of pea including 'Culverwell's Autumn Marrow 'which won two First Class certificates.[1010] In addition to his work on peas, he was also well known for hydridising the Polyanthus, on which he worked for thirty years, producing improvements in both the colour and the habit of the flower. Messrs. Veitch and Sons handled the sale of his Polyanthus plants. Culverwell retired in 1899 after spending 51 years at Thorpe Perrow[1011] and he died in 1910, at which time he was best known for his work in hybridising fruit varieties.[1012] He left an estate of £811 (£334k).

[1008] 'Telegraph and Telephone Peas,' *GC,* n.s. v. 12 (1879), p.146.

[1009] Keetley, T., 'Telegraph v. Telephone Peas', *GC,* n.s. v. 12 (1879), p. 277.

[1010] A Reader of the *Chronicle* of Long Standing, 'Mr. Culverwell's New Peas', *GC*, n.s. v. 12 (1879), p. 341.

[1011] 'Mr. Culverwell', *GC,* s. 3, v. 26 (1899), p. 455.

[1012] 'Obituary-William Culverwell', *GC,* s. 3, v. 47 (1910), p. 434 & 'Hybrids and their Raisers', *GC,* s. 3, v. 26 (1899), p. 42.

The Telegraph/Telephone controversy showed how easily a major seed company could effectively steal a new product from its originator. Even though Carter's deception had been exposed and publicised they did not seem to suffer any significant loss of reputation and were able to continue to promote and sell the Telephone pea as before. Culverwell was vindicated and although he did not receive any legal remedy, he enhanced his reputation as a leading hybridist. In a survey made by the *Gardeners' Chronicle* in 1899 of the three dozen major hybridists of the time, Culverwell featured alongside many other working gardeners.[1013] It would seem that Culverwell was not motivated primarily by economic considerations but by the prestige of being a recognised hybridist, alongside the best in the country. It is impossible to judge whether, had there been a legal framework for protecting new varieties, (as was to emerge in the C20th) the pace of development would have been greater, but it does seem to have been the case that the prestige which accrued to a working gardener, together with those rewards which did accrue to him in terms of prize money and sales proceeds, was sufficient incentive. As Charnley has observed this gives weight to the arguments of Boldrin and Levine against those of Dutton, North and Khan,[1014] that the lack of an opportunity to register a patent is not necessarily a discouragement to innovators.[1015]

8.6 The Development of 'Economic' Plants and the Influence of Kew and other Organisations.

At a time when large parts of the world were unexplored, expeditions to remote parts of the globe would reveal many plants which were new to British gardens. Many were introduced by amateur botanists, resident overseas, with whom Kew carried on a large correspondence.

[1013] 'Obituary-William Culverwell', p. 42.

[1014] Boldrin, M and Levine, D., *Against Intellectual Monopoly* (Cambridge, Cambridge University Press, 2008); Dutton, H., *The Patent System and Inventive Activity during the Industrial Revolution, 1750-1852* (Manchester, Manchester University Press, 1984); Khan, B. Z., *The Democratization of Invention. Patents and Copyrights in American Economic Development, 1790-1920* (Cambridge, Cambridge University Press, 2005); North, D., *Structure and Change in Economic History*, (New York, Norton, 1981).

[1015] Charnley, p. 1.

Some of the senior Botanists of the age, of whom Joseph Banks and Joseph Hooker are prime examples, established their reputations through plant hunting. Banks had been the botanist on the Endeavour for Captain Cook's first circumnavigation, and had returned with thousands of botanical specimens before becoming the de facto Director of Kew and the President of the Royal Society from 1780, a post which he held for 42 years.[1016] Hooker went plant hunting in India between and 1847 and 1851, where he discovered numerous new species of Rhododendrons, before becoming Assistant-Director at Kew, and later their Director for 20 years.[1017] However, professional gardeners, working for Kew, the RHS, various nurseries and some private gardens, formed the bulk of plant hunters in remote regions, of whom 154 have been identified. The gardeners who were chosen needed to possess two essential characteristics. First, an extensive botanical knowledge of the plants which grew in the region, so that they could distinguish between those which were of value and those which were not, and secondly the physical fitness, hardiness and courage necessary to explore remote regions. The following case studies illustrate those qualities and show the contribution which the gardeners made to economic development in British territories and in the United States.

8.7 Robert Fortune and the Tea Trade

If it is true that Britain acquired an Empire in a fit of absence of mind[1018] then it can fairly be said that it sleep-walked into its dependence on tea from a monopoly supplier, with only fragmentary knowledge of its source or mode of production. By the start of the long C19th

[1016] Gascoigne, J., 'Banks, Sir Joseph, baronet (1743–1820)', *ODNB* (Oxford University Press, 2013), http://ezproxy-prd.bodleian.ox.ac.uk:2167/view/article/1300, [accessed 16 May 2023].

[1017] Endersby, J., 'Hooker, Sir Joseph Dalton (1817–1911), Botanist', *ODNB* (Oxford University Press, 2008), https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-33970, [accessed 06 May 2023].

[1018] Seeley, J.R., *The Expansion of England: Two Courses of Lectures* (London, Macmillan, 1886), p. 8; 'We seem, as it were, to have conquered half the world in a fit of absence of mind'.

tea had become the nation's favourite drink, consumed by every section of society. By 1801 the average consumption of tea per head in England was 2 ½ lbs and of sugar, much of it taken with tea, 17lbs.[1019] Not only was the British consumer dependent on tea (literally so, because of its mildly addictive caffeine content), but so was the exchequer. In the period 1835-1858 tea accounted for 21% of the revenue from customs duty, which was 9% of total revenues- or almost the entire cost of the British navy for a year, much more so if the revenue from tea's accompanying commodity, sugar, is taken into account.[1020] Until the middle of the C19th the sole source of supply of tea to Britain was from a wharf less than 750 metres long and 35 metres deep in the port of Canton (now Guangzhou), China.[1021]

Britain had no control over supply from that source, or any alternative source and no means of replacing it. Moreover there was considerable uncertainty amongst botanists as to which plant produced the tea and next to no knowledge as to how it was produced. Only Chinese farmers and producers possessed the relevant knowledge and skills and they were inaccessible to the rest of the world.

The dangers posed by the reliance on this single source of supply were recognized by the British government at an early stage. In 1788 the President of the Board of Trade wrote to Sir Joseph Banks, asking:

> Will it be possible by proper Premiums and Wise instructions to encourage the growth of the Tea Plant, and the Manufacture of its leaves in some Part of the British Dominions in the East or West Indies, so as to be supplied from thence with a part of the Tea consumed in this country, and not with the whole, as present from China?[1022]

[1019] Hobhouse, H., *Seeds of Change: Six Plants that Transformed Mankind* (London, Papermac, 1986), p. 143.
[1020] Mather, J., 'Botanising in a Sinocentric World: Robert Fortune's Travels in China', *Studies in Travel Writing,* v. 14 (2010), p. 262.
[1021] Hobhouse, p. 149.
[1022] Baldwin, R. C. D., 'Sir Joseph Banks and the Cultivation of Tea', *RSA Journal,* v. 141 (1993), p. 813.

He added: ‘As we cannot prevent the consumption the only object we can aim at is to provide the article ourselves’. In response Banks supported the creation of a Botanical Garden at Calcutta (now Kolkata) where it was hoped to set up trials of tea plants. In 1794-5 Banks fitted out HEICS Princess Royal with a glazed cabin to carry plants to Calcutta under the supervision of Kew gardener Peter Good, and in 1806 the HEICS Thames was similarly fitted for a voyage to Canton to carry tea plants.[1023] Banks expressed the wish that it would be possible ‘to furnish ourselves with the mode of Culture, the Art of Manufacture and plants of the best sorts; the Country which seems fittest for that experiment is that which lies between Bengal and Boutan’.[1024] Nothing came of Banks ’endeavours, which required the cooperation of the East India Company (EIC), whose interests were in opposition to the scheme.

The root of the EIC’s opposition lay in the powers given to them under the Commutation Act of 1784, which sought to address the problems which would arise if there were a sudden interruption in supplies of tea from Canton. In return for the exclusive right to buy tea from Canton the EIC, under section 5 of the Act, were obliged to import sufficient tea to supply the entire domestic market and also keep a year’s supply in reserve in its warehouses.[1025] The Act also reduced the level of tariff on tea from more than 100% to 10% which made smuggling unviable and which led to the demise of competing continental suppliers.[1026] The overall effect of the Act was to give the EIC complete control over the supply of tea into Britain. This highly lucrative business was bolstered by a second monopoly held by the EIC, which was the right to grow and process opium in India. The EIC sold the opium to

[1023] Baldwin., p. 816.

[1024] Ibid., p. 815.

[1025] Hoh-Cheung & Mui, L.H. 'The Commutation Act and the Tea Trade in Britain 1784-1793', *Economic History Review* (1963), p. 234.

[1026] Ibid., p. 237.

independent merchants in Calcutta who supplied it to the Chinese in return for silver which was then taken back to Calcutta and exchanged by the EIC for banker's drafts payable in London.[1027] This triangular trade effectively funded the trade in tea. It is clear that the introduction of a second source of supply of tea in India as had been envisaged by Banks would have potentially broken the EIC's monopoly and threatened the huge profits which they garnered. Hence no steps were taken to establish tea plantations in India until after the EIC's monopoly had been ended in 1834.

Once their monopoly had ended the EIC engaged Robert Fortune to go to China to procure tea plants and the equipment necessary to process the tea together with workers with the requisite skills with a view to establishing tea plantations on land which they controlled in India. Fortune, who had been born in Scotland in 1812, where he had served his gardening apprenticeship, had previously been engaged by the Royal Horticultural Society to hunt for plants in China with the specific brief of finding tea plants. In this earlier mission Fortune had entered China as soon as he was able to after the Treaty of Nanking in 1842 and had spent three years plant hunting in the interior beyond Canton. Having learned some Chinese he gained access to areas previously unexplored by westerners by adopting a disguise as a traveller from an outlying region of China, wearing Chinese dress, shaving his head and wearing a false pigtail. By this means he was able to gain access to the tea growing regions and observe how the tea was grown and processed. His account of his travels, published by John Murray in 1847[1028] contained detailed descriptions of the mode of growing and

[1027] Hobhouse, p. 146.

[1028] Fortune, R., *Three Year's Wanderings in the Northern Provinces of China, Including Visits to the Tea, Silk and Cotton Countries* (London, J. Murray, 1847).

processing tea, including confirmation for the first time that black and green teas came from the same plant, the difference in their colour being a product of their mode of processing.

On his return to England in 1846, Fortune had been appointed to the highly prestigious post of curator of the Chelsea Physic garden, but he was soon after selected by the EIC to head a mission to China to source tea plants and tea making equipment, for transfer to India. He was paid £500 a year, five times that paid by the RHS on his previous mission, with the freedom to collect plants on his own account.[1029] Once again Fortune shaved his head, wore Chinese dress and a tail and he returned to the tea plantations in the interior. He was able to purchase tea plants and seeds, plus all the apparatus needed for processing and to engage the services of seventeen experienced labourers. In 1851 he successfully introduced into India 2,000 mature plants and 17,000 seedlings, sending them in Wardian cases on four separate vessels to maximise the chances of them surviving the long sea voyage.[1030] This formed the basis of a fledgling tea industry in the northwest of India. Ultimately cultivation was more successful in the northeastern regions of Darjeeling and Assam, using plants which were indigenous to those regions and which had remained unexploited even though their existence was known. Fortune's main contribution was in establishing the correct methods of processing the tea leaves, using skilled labour. The results were profound, security of supply was established and by 1910 90% of all imports into Britain (a total of 290 million lbs) came from India or Ceylon, with China providing a mere 5%, or 17 m. lbs.[1031]

In 1858 Fortune was employed by the United States Patent Office (the predecessor of the USDA) to return to China with a view to supplying tea plants and equipment which would enable them to start a tea industry in America. He was paid the same annual salary as he had

[1029] Boulger, 'Fortune, Robert (1812–1880)'.

[1030] Watt, A., *Robert Fortune: A Plant Hunter in the Orient* (Kew, Royal Botanic Gardens, 2017), p. 157.

[1031] Jeffrey-Cook, J., 'William Pitt and His Taxes', *British Tax Review*, v. 4 (2010), p. 381.

received from the EIC. He sourced 50,000 plants, from which thousands more were propagated and distributed to farms in various parts of the country by an unnamed 'Scottish gardener'.[1032] The project was set back by the commencement of the American Civil War and eventually foundered because of high labour costs. In 1897 William Saunders (see page 328) calculated that labour costs on an American farm were eight times higher than those in Asia.[1033] In fact Fortune had pointed out this drawback and his objection had been countered with the optimistic assertion that 'some sort of machine that would produce good marketable Tea without human hands 'would be developed to overcome the disadvantage, hopes which were unfulfilled.[1034]

Apart from his work in developing the tea trade outside of China, Fortune is remembered as one of the great plant explorers of the C19th. After his work for the American government he had sufficient private resources to embark on a self-funded return trip to the Far East, which included Japan for the first time, where he collected many new plants to add to those he had sent to England from previous expeditions. He is credited by Bretschneider with introducing 190 species and varieties of plants, of which 120 were new, including the Japanese anemone and the Chusan palm.[1035] He was known as a botanist and entomologist[1036] and his scientific accomplishments were recognized when he was invited in 1868 to be a founder member of the RHS Scientific Committee, alongside Charles Darwin, Joseph Hooker and George Bentham.[1037] He had also made the acquaintance of Alfred

[1032] Watt, p. 192 & 'Lead Article' *GC*, v. 19 (1859), p. 967-8.

[1033] Ibid., p. 193.

[1034] 'Lead Article', p. 968.

[1035] Coats, p. 110.

[1036] Boulger, 'Fortune, Robert (1812–1880)'.

[1037] Watt, p. 282.

Russel Wallace through their joint interest in entomology, in which they had a friendly rivalry. In 1856 Wallace wrote:

> [Some] persons who have seen that portion of my collections which have already arrived in England have been much disappointed and have complained (almost as if I made the insects as well as collected them) that Mr Fortune's beetles from the North of China, though from a comparatively cold climate, were much finer.[1038]

In 1873 he became Wallace's business partner when they both joined the board of a large commercial nursery set up by Mr Augustus Mongredien.[1039]

8.8 William McIvor and the Cinchona Plantations

In the first half of the C19th the population of India was effectively controlled by disease, not famine. Every year, in a population of about 150 million, malaria killed a million babies under the age of one and a further million children under the age of ten and disabled a further two million over the age of ten with recurrent bouts of fever.[1040] There was no cure, but it had been known since the C17th that quinine, derived from the bark of the Cinchona tree, acted as a prophylactic and would also reduce the symptoms of those who had been infected. The Cinchona tree was found only in the Andes, principally in Peru, where it grew on the mountain-sides and from where it was gathered by hunters rather than farmers, who killed the tree when they removed the bark. Tens of thousands of trees were being destroyed each year and were not being replaced. In 1795 the German naturalist, Humboldt, noted that 25,000 Cinchona trees were being destroyed each year in the Loxa region alone.[1041] There were concerns that the supply of Cinchona trees would be curtailed if the natural stock was

[1038] Watt, p. 312.

[1039] Ibid., p. 283.

[1040] Hobhouse, p. 11.

[1041] Ibid., p. 17.

not replenished and there were also worries that political unrest in the region would affect supplies. In the 30 year period before 1850 there had been 43 uprisings and revolutions in the five Andean republics.[1042] The apprehensions caused by the prospect of a 'quinine famine 'were reinforced by humanitarian considerations.[1043] The Secretary of State for India wrote:

> The two first objects of the experiment [to bring Cinchona to India] are the provision of an abundant and certain supply of bark for the use of hospitals and troops, and the spread of cultivation through the hill districts in order to bring the remedy within the reach of the frequenters of jungles and the native population generally... the experiment cannot be regarded as a mere money-speculation, nor are the commercial advantages that may be derived from it to be considered as other than a secondary consideration, though, of course, a return of the outlay and the spread of cinchona cultivation by private enterprise are very desirable in themselves.[1044]

However the primary concern was with the cost. It was estimated that the expenditure on importing bark into India was £12,000 (£10.7m) a year and rising.[1045] A report prepared by John Forbes Royle spurred the British government into action. Royle, a botanist, but not a working gardener, had been appointed as Superintendent of the Botanic Garden at Saharanpur, a post which he held until 1831. He was then made Professor of Materia Medica at King's College London and became a fellow of the Royal Society. In 1852 he published a report in which he recommended the Nilgiris as a suitable site in which to grow the Cinchona tree using stock brought from the Andes.[1046] As a result Sir William Hooker organised several expeditions to South America to collect Cinchona seeds and saplings under the

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[1042] Hobhouse, p. 23.
[1043] Veale, L., *An Historical Geography of the Nilgiri Cinchona Plantations, 1860-1900* (Univ. of Nottingham, PhD Thesis, 2010), p. 140.

[1044] 'Secretary of State for India to His Excellency the Honourable the Governor in Council, Fort St. George', dated India Office, 2nd January 1868. BPP, 1868: 255, quoted in Veale, p.140.

[1045] Veale, p. 137.

[1046] Royle, J.F., *Illustrations of the Botany and Other Branches of the Natural History of the Himalayan Mountains,* v. 1-2 London, W.H. Allen & Co., 1839) and Woodward, B.B., 'Royle, John Forbes (1799-1858)', *ODNB* (1900), https://en.wikisource.org/wiki/Dictionary_of_National_Biography,_1885-1900/Royle,_John_Forbes

supervision of Peruvian expert, Ernest Markham. In fact the first tentative steps were taken with six plants which were given to Kew by the naturalised Frenchman Hugh Waddell and which were taken to the Calcutta Botanic Garden by Robert Fortune in 1860, en route to China, but they all died within a year.[1047] A second, much larger consignment arrived the following year following an expedition led by Markham, but actually collected and transported by Kew gardener John Weir, and they also perished. [1048] However, 600 plants which had been collected by another Kew gardener, Robert Cross in an expedition led by Richard Spruce, arrived at Kew in good condition, where they were propagated and then taken to the Ootacamund Botanic Garden, where its superintendent, William McIvor, had selected ground in which to grow them.[1049]

McIvor, a Scot, was working at Kew as a gardener when he was selected in 1848 at the age of 23 to create and be the first superintendent of the botanical garden at Ootacamund.[1050] Having built the garden, partly from dense jungle, McIvor set out his ambitions for the site in a memorandum of 1855 in which he wrote:

> Next in importance to the discovery and application of indigenous productions is the improvement of the resources of the country by the introduction of various useful trees, shrubs, herbs, &c., such as are indigenous to other countries similarly situated.[1051]

Favoured crops included coffee and tea, but presciently he included the Cinchona amongst those which he wished to introduce: 'Cinchona Micrantha, and other species of Cinchona

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[1047] Veale, p. 136.

[1048] 'Lead Article', *GC,* v. 19 (1860), p. 732.

[1049] Spruce, R., *Report of the Expedition to Procure Plants and Seeds of the Chinchona Succirubra* (London, George E. Eyre & William Spottiswoode, 1861), p. 83 & Cross, R., 'Notes on the Plants of Peru – No. 1' *GC*, v. 21 (1861), p. 735.

[1050] Veale, p. 120.

[1051] Ibid., p. 122.

which produces the Peruvian bark from the hills in Peru where it grows at elevations from 3,000 to 5,000 feet.'[1052]

This led to Ootacamund being selected as the preferred site for the development and propagation of the Cinchona trees, a proposal which was confirmed following a visit to the site by Markham in 1859.[1053] Spurred by the news that the governments of Peru and Ecuador had made the exportation of Cinchona trees a criminal offence and that in any event supplies there were running low, the government in January 1863 set a target of planting 150 acres annually for the next ten years.[1054] The target was easily reached. By 1865 there were 30 private plantations in the Nilgiris and between 1860 and 1865 the Ootacamund botanic garden had distributed nearly a million Cinchona plants.[1055] Ootacamund became the distribution centre for the whole of India, with large numbers being despatched to Calcutta in particular, and dozens of other sites where it was thought the Cinchona might thrive. Plants were sent not only to sites in India but worldwide. By May 1866 McIvor had supplied Cinchona plants to the Buitenzorg Gardens in Java and also to sites in Algeria, Mauritius, New Zealand, Australia and Jamaica.[1056] It was essential that the plants were properly packed for transportation and in that respect McIvor published guidance in his 'Hints on packing and conveying plants in Wardian cases 'in 1862.[1057] He entered into an extensive correspondence with a Dutch quinologist, DeVrij at Buitenzorg, as to which barks produced

[1052] Veale, p. 122

[1053] Ibid., p. 144.

[1054] Ibid., p. 160.

[1055] Ibid., p. 161.

[1056] Ibid., p. 196.

[1057] Ibid., p, 196 & McIvor, W.G., *Hints on Packing and Conveying Plants in Wardian Cases* (1865).

the highest yields, with both men sharing their findings freely.[1058] The plantations in Java, which used a superior stock purchased from the Englishman, Charles Ledger, and which benefited from superior climatic conditions, ultimately came to dominate the world market in Cinchona bark. McIvor also experimented on the best way of cultivating the trees, whether in full sunshine or shade and at what altitude. He published guidance on the siting, propagation and harvesting of the plants in his 1863 manual 'Notes on the Propagation and Cultivation of the Medicinal Cinchona's or Peruvian Bark Trees'.[1059] The manual was translated into Spanish and Portuguese.[1060] In it he gave detailed explanations of the differing methods of propagation, by taking cuttings, layering, or from buds, together with diagrams (Figure 49). In terms of harvesting he recommended that rather than fell the tree, as was done in the Andes, a system of coppicing should be adopted by encouraging the trees to branch close to the ground and cutting off branches in alternate years. However it was found that the bark on the branches yielded poor quantities of quinine compared to the main trunk, which led McIvor to develop a new system of harvesting, which he called 'mossing'. By this method, long strips of bark were removed from the main trunk, which would then be wrapped in moss to allow the bark to regenerate (Figure 50).[1061] The adoption of this method enabled multiple crops to be taken from a single tree and for the tree to be effectively harvested. McIvor tried unsuccessfully to patent the method, but it was nevertheless adopted throughout the Nilgirries region.[1062] By the time the Cinchona industry was mature in 1880 enough quinine was being produced to make India self-sufficient. The cost had been reduced

[1058] Brockway, L.H., *Science and Colonial Expansion: The Role of the British Botanic Gardens* New Haven & London, Yale University Press, 2002), p. 119.

[1059] McIvor, *Notes on the Propagation and Cultivation of the Medicinal Cinchonas, Or Peruvian Bark Trees* (Graves, Coodson, 1863).

[1060] Veale, p. 245.

[1061] Ibid., p. 222.

[1062] Ibid., p. 223.

from one shilling a dose to half a farthing.[1063] It has been estimated that 10 million people were provided with protection each day.[1064]

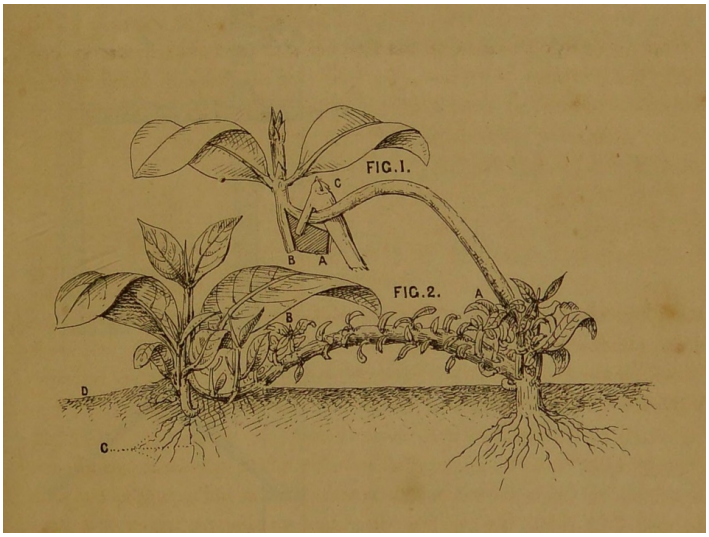

Figure 49. Propagation by layers[1065]

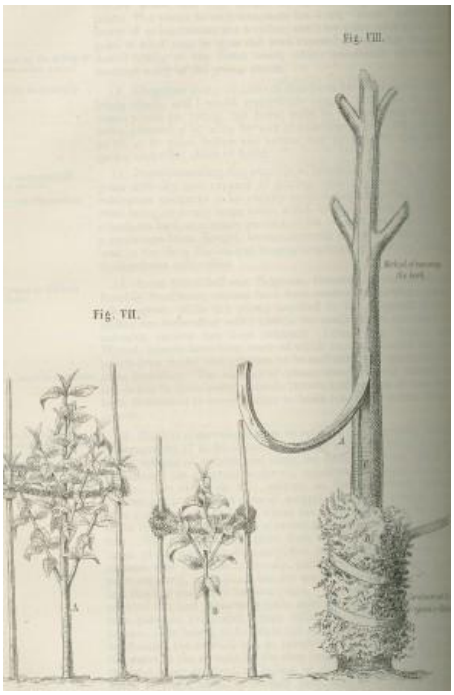

Figure 50. McIvor's Mossing Process[1066]

McIvor died suddenly in 1876, aged only 51, after 27 years in charge of the Ootacamund Botanic Garden.[1067] The achievement in establishing the Cinchona industry was undoubtedly his, although Markham received a grant of £3,000 (£2.3m) in 1861 for successfully organising the expeditions which transferred the plants to India, and he was subsequently knighted.[1068] Although McIvor did not directly benefit from the munificence of the government other than in receiving his salary he nevertheless benefited financially from the Cinchona industry. He was the principal shareholder in the Ossington Chinchona

[1063] Hobhouse, p. 28.

[1064] Ibid.

[1065] McIvor, p. 21.

[1066] Veale, p. 225.

[1067] 'Obituary - Mr W.G. McIvor', p. 150.

[1068] Veale, p. 326.

estate[1069] and on his death left a fortune valued at £8,000 (£4.4m).[1070] His successor was Marmaduke Lawson, the Professor of Botany at Oxford University, who held the post until just before his death in 1896.[1071]

8.9 Robert Cross and John Weir

The two gardeners who assisted in the collection and transportation of the cinchona plants to India, Robert Cross and John Weir, illustrate the qualities required to hunt for plants in South America. Cross was born in Scotland where he served his gardening apprenticeship and he joined the staff at Kew at the age of 21. Two years later he was selected to be the botanist Richard Spruce's assistant in searching for Cinchona plants in Ecuador. He was also mandated by John Smith, the then head gardener at Kew, to search for new plants as part of the expedition.[1072] Two accounts were given of the expedition, by Cross himself in the *Gardeners' Chronicle*[1073] and by Spruce in his 1861 *Report*[1074]. Spruce acknowledged the vital importance of Cross's practical horticultural skills in looking after the plants after they had been collected. He entrusted Cross with the plants for the voyage from Ecuador to India, writing: 'I then took leave of Mr Cross and the plants, satisfied that so long as they were under his care they were likely to go along prosperously.'[1075] Two other aspects of the voyage emerge from the narratives, which were common to most plant hunting expeditions in South America, the physical dangers which they encountered and the extensive botanical

[1069] Ibid., p. 328.

[1070] '1876 McIvor, William Graham' (Legal records, Wills and testaments Reference SC70/1/181 Edinburgh Sheriff Court Inventory).

[1071] Veale, pp. 173-4.

[1072] 'Robert MacKenzie Cross-Obituary', *GC*, s. 3, v. 49 (1911), p. 176.

[1073] Cross, 'Notes on the Plants of Peru No. 1 & No. 2', *GC,* v. 20 (1861), p. 1047

[1074] Spruce, *Report of the Expedition to Procure Plants and Seeds of the Chinchona Succirubra* (1861).

[1075] Spruce, p. 83.

knowledge which was required. Spruce wrote: 'During the performance [of the enterprise] all engaged in it had run frequent risk to life and limb'.[1076]

In addition to his role in collecting and looking after the Cinchona plants, Cross lost no opportunity to search for new or rare flowering plants. This required him to be able to recognise and know the Latin names of all the Andean plants which were in cultivation in England. The narratives of both Spruce and Cross leave little doubt that Cross held that knowledge, which enabled him to send a number of new varieties to Kew on this and subsequent voyages. He used that knowledge in a second expedition, again organised by Markham, but this time without Spruce, in 1862 when he brought back the Pitayo Cinchona from New Grenada.[1077] Amongst the plants he collected the Masdevillea racemosa (syn. M. Crossii) was named after him.[1078]

In 1875 Cross took part in what was probably Kew's most important economic intervention, the transfer of the cultivation of Hevea Brasiliensis, and hence rubber, from Brazil to the Far East. In Brazil the latex producing tree from which rubber was made, was 'hunted 'rather than cultivated, as was Cinchona. The tree grew sparsely in the Amazonian jungle, not more than three to a hectare and the latex was obtained by making incisions into the bark of the tree. Ernest Markham presented a report to the Government in 1870 in which he pointed out the increased consumption of rubber worldwide and the fragility of supplies from Brazil and recommended that the Hevea tree be cultivated in suitable sites in the Far East, following which Kew set about trying to source suitable seeds, which they planned to germinate at Kew before sending the plants to preferred sites. Cross was employed in one of the first

[1076] Spruce, p. 83.

[1077] Cross, *Report on the Pitayo Chinchona* (London, Eyre & Spottiswoode, 1865), p. 8.

[1078] 'Robert Mackenzie Cross-Obituary', p. 176.

expeditions to collect seed, travelling to Para in Brazil in 1876, after which he delivered both plants and seeds to Kew.[1079] However it was the delivery by the non-gardener Henry Wickham of 70,000 Hevea seeds to Kew in the same year which was to form the foundation of the new and highly successful rubber industry in Singapore and Malaya, promulgated by the head of the Singapore Botanic Garden, Henry Ridley, who was also a non-gardener, but had been trained at Kew. By chance the seeds supplied by Wickham were immune to South American Leaf Blight, which in time was to ruin the Brazilian rubber trade.[1080] Kew and its network of Botanic gardens was pivotal in the development of the natural rubber industry outside of Brazil. Cross retired to live in his native Scotland and died aged 76 leaving an estate of £1,568 (£669k).

John Weir, a Scot born in 1832, was chosen to assist Ernest Markham in collecting Cinchona plants because of his experience of plant collecting in Brazil on behalf of the Royal Horticultural Society. Extracts of the journals which Weir kept during his travels were published by the RHS.[1081] The journals reveal that Weir experienced extremely arduous conditions, as had Robert Cross and that he showed a similar level of botanical expertise and determination. Danger was ever present as his entry for 10th November shows: 'Rattlesnakes abound here. I killed several today. The largest was nearly 7ft long'. One remarkable episode illustrates Weir's grit and determination. On 29th January he saw a bush with beautiful white flowers growing from some decaying vegetation on a branch of a tree 50ft above ground level. In climbing the tree to reach the plant he disturbed a hornets 'nest and was badly stung on his face, neck, arms and legs. The stings resulted in swelling which

[1079] 'Robert Mackenzie Cross-Obituary' *Kew Bulletin* (1911), p. 166.

[1080] Hobhouse, p. 140.

[1081] Weir, J., 'Mr Weir's Journal', *Proceedings of the Royal Horticulture Society,* v. 1 (1859-61), pp. 626-7, 642-4, 662-3, 682-4, 722-3; v. 2 (1862), pp. 34-60, 93, 292-3, 513, 559-72, 579-96, 784-95; v. 3-5 (1863-65), pp. 67-8, 233-45, 336-44.

incapacitated him for the next 13 days. As soon as he was able, he returned to the tree, destroyed the remainder of the hornets and reached the plant, which he identified as Hillia Brasiliensis (Now Hillia parasitica Jacq.,) an epiphytic shrub.[1082] After two years collecting in Brazil during which he introduced a number of new plants, especially orchids, Weir moved to collect in New Grenada (now Colombia) in 1864 where he contracted a fever which left him paralysed from the neck down.[1083] He returned to England whereupon an appeal was launched by the RHS for his benefit, which raised £604 (£ 437k) with which an annuity was bought[1084] He survived, incapacitated, for another 32 years, until 1898.

8.10 The Contribution of Gardeners to Horticultural Science in the United States: William Saunders and Thomas Meehan

The American equivalent of the 'economic 'trial gardens at Kew was the Experimental Garden of the Department of Agriculture in Washington, which was headed by a Scottish gardener, William Saunders, from its foundation in 1862 until his death in 1900.[1085] His role was to find new and better plants and to 'ascertain, by experiment, the influence of varied cultures' and to ' investigate more thoroughly the various maladies and diseases of plants and the insects that destroy them'.[1086] In doing so his work had a significant impact on the agricultural development of the United States, much as Kew had on that of the British Empire. Saunders was born in St Andrews, Scotland in 1822, the son of a gardener.[1087] His parents wanted him to train as a minister and enrolled him into a college for that purpose, but

[1082] Weir, v. 3-5, p. 339.

[1083] 'Mr. John Weir', *GC,* s. 3, v. 23 (1898), p. 301.

[1084] 'The Weir Fund', *Proceedings of the Royal Horticultural Society,* n.s. v. 5 (1866), p. lv.

[1085] Kaplan, J., 'William Saunders: A Monumental Figure in USDA', *Agricultural Research* (September, 2013), p. 12.

[1086] Ibid., p. 15.

[1087] Barron, L., 'Foreign Correspondence: A Famous Scotch Gardener', *GC,* s. 3, v. 28 (1900), p. 245.

he ran away and entered into a four year gardening apprenticeship, after which he trained at Kew.[1088] At the age of 23 he was employed by Johns Hopkins in Baltimore to lay out the 400 acre grounds of Clifton Park, which were originally intended to be the site of the eponymous university. In 1854 he entered into partnership with his contemporary at Kew, the Englishman Thomas Meehan, in a nursery venture at Germantown in Philadelphia specialising in the native trees and shrubs of America, before being appointed the Director of the Experimental Garden at the USDA in 1862.[1089]

Saunders 'preliminary role at the USDA was to set out for the first time the standards for the evaluation of the many thousands of new plants which were being introduced into the United States and to set out the traits of a variety under differing sets of growing conditions. In the two-year period 1865-7 the Experimental Farm evaluated and propagated 120 varieties of wheat, 167 of rye, 230 types of melon, 70 types of peas, 50 grass species and more than 500 varieties of grapes, apples, pears and strawberries. The results of the experiments were published and made available to farmers.[1090] The success of the USDA experimental farm is illustrated by their development of the strain of Tappahannock wheat. In 1866 Saunders identified this strain of wheat as a superior cultivar, with high yields, early maturity, disease resistance and good flour quality. He distributed the cultivar to farmers in various locations, asking for reports on its progress and he demonstrated that the wheat was suitable for many different regions. An article in the New York Times in 1873 reported that with Tappahannock, wheat yields per acre had risen from an average of 12.1 bushels to 25. They concluded:

[1088] Barron, p. 245.

[1089] Oberle, S.G., *The Influence of Thomas Meehan on Horticulture in the United States* (Univ. of Delaware, MA thesis, 1997), p. 22.

[1090] Kaplan, p. 15.

> [The USDA department] has only now entered fairly upon its work of advancing agricultural science and elevating agricultural industry. But it promises glorious results in the near future, from which the 'lords of the soil 'will be directly and largely benefited and the national wealth increased.[1091]

One of Saunders 'most significant contributions was in the introduction of the navel orange to California. In 1869 he was shown a letter from a lady traveller in Bahia, Brazil in which reference was made to a particularly flavoursome, large and seedless orange which was unlike any which she had eaten before. He wrote to the lady for more details and in due course arranged to receive some grafted stock, 12 trees in all. Two of these he sent to a correspondent, Eliza Tibbets, who had asked for advice on which kind of orange tree to grow on a newly acquired farm in California which had an arid, Mediterranean climate. The orange, which was named the Washington Navel, became an immediate success.[1092] By the time of Saunders 'death in 1900, 1.6m boxes of the oranges were being shipped annually.[1093] Every one of the millions of the Washington Navel trees now in existence (and they were used to re-stock farms in Brazil when theirs were wiped out by disease) are grafts of the twelve originally sent to Saunders in 1870, the fruits themselves being seedless.

In addition to his role with the USDA Saunders was president of the Washington DC Parks Commission. In 1863 President Lincoln invited him to design the Soldier's National Cemetery at Gettysburg. At a presentation at the White House Lincoln approved his design, of a radial arrangement grouping the Union dead state by state, complemented by trees and shrubs many of which had been introduced to the country by Saunders himself (Figure 51). It was at the inauguration of the cemetery that Lincoln delivered what has become known as the Gettysburg Address. Saunders subsequently designed the landscaping for Lincoln's

[1091] Kaplan, p. 15.

[1092] Ibid., p. 14.

[1093] Barron, p. 246.

tomb, the west façade of the Capitol[1094] and many other important locations. In all, he organised the planting of 80,000 trees in Washington DC laying the foundation for its reputation as the 'City of Trees'.[1095]

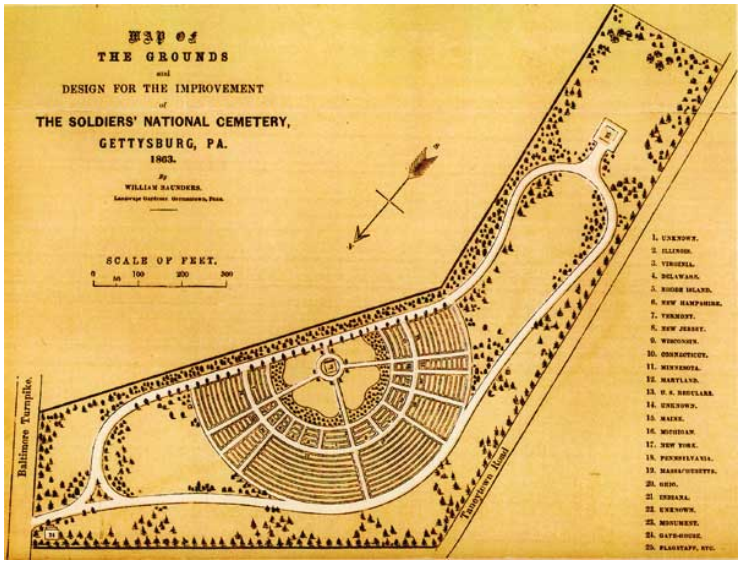

Figure 51. Saunders 'design for the Soldier's National Cemetery at Gettysburg[1096]

William Saunder's partner in the nursery firm of Meehan and Saunders, Thomas Meehan, had an equally outstanding career as a scientific botanist in America. Thomas Meehan was born in 1826 at Potter's Bar to a gardening father of Irish heritage. He was taught to read and write by his mother and did not attend school until the age of 10, when he spent two years at a Lancasterian school after which he went to work for his father in the garden at St Clare on the Isle of Wight. From then on he was entirely self-taught. He obtained the first of two head gardeners 'positions at the age of 17, after which he spent two years at Kew under Sir William Hooker. He was then, on the recommendation of the Countess of Clare, offered the very prestigious position of head gardener at Alton Towers, at the age of 20. However, the

[1094] Kaplan, p. 12.

[1095] Ibid., p. 12.

[1096] Abraham Lincoln Presidential Library and Museum.

offer was withdrawn when it was discovered that he was of the wrong religious denomination, which perceived injustice prompted him to apply for work in America.[1097]

After a brief period as the superintendent of the Rosedale Nurseries in Kingsessing, in 1849 he was made the curator of Bartram's Garden, in Philadelphia which had been founded in 1728 as America's first botanical garden, which he restored and re-modelled. Whilst there he published his first book, *The American Handbook of Ornamental Trees,* before establishing the Germantown nursery, which specialised in American trees and shrubs.[1098] He used the nursery to carry out a series of experiments and observations, which enabled him over the next 35 years to publish 121 scientific papers.[1099] Asa Briggs, in correspondence with Charles Darwin in discussing one of Meehan's papers observed '[He is] a good gardener…I tried to find exceptions to his rule, and thought I had; but he beat me down'.[1100] Darwin cited his work, referring to Meehan's 'remarkable paper'.[1101] His work was also cited on numerous occasions by George Henslow, the honorary Professor of the Royal Horticultural Society.[1102] After the publication of *On the Origin of Species* Meehan became a defender of and advocate

[1097] 'A Brief Sketch in the Life of Thomas Meehan', *Meehan's Monthly,* v. 12 (1902), p. 16.

[1098] Oberle, pp. 73-4.

[1099] 'Thomas Meehan', *Journal of Botany,* v. 40 (1902), p. 40; citing The Royal Society's Catalogue of Scientific Papers.

[1100] Darwin Correspondence Project, 'Letter no. 3637', https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-3637.xml, [accessed 12 Sep. 2023].

[1101] Darwin, C., *The Variation of Animals and Plants under Domestication,* v. 2 (London, John Murray, 1868), p. 279.

[1102] Henslow, G., *The Origin of Floral Structures through Insect and other Agencies* (London, Keegan Paul, Trench & Co., 1888), pp. 84-7, 93, 210, 234-5, 244, 248, 320.

for Darwin, producing, amongst other papers *A Contribution to the Doctrine of Evolution and the Theory of Natural Selection.*[1103]

In a letter to George Englemann, Meehan wrote: 'I begin to feel more strongly every day that life is not worth living unless we can add some little to human knowledge with every day that goes over us'.[1104] He shared his knowledge and that of other gardeners through his editorship of *The Gardeners' Monthly and Horticultural Advertiser*, a role which he held from 1859 for 30 years.[1105] During the period of his editorship the *Gardeners' Monthly* was the leading horticultural journal. He also contributed for thirty years to the Science department of the *New York Independent*.[1106] In 1878 he published *Native Flowers and Ferns of the United States.* Like William Saunders he played a significant role in the development of public parks. On becoming a city councillor in Philadelphia he organised the purchase by the city of Bartram garden, which he followed with the development of Vernon Park in Germantown[1107] In all, he was instrumental in adding 28 parks of varying sizes to the city of Philadelphia.[1108]

Meehan lectured at the University of Illinois and was for several years on the Board of Visitors of Harvard University. In 1877 he was appointed Botanist to the Pennsylvania Board

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[1103] Meehan, T., *A Contribution to the Doctrine of Evolution and the Theory of Natural Selection* (Salem, MA, Salem Press, 1883).

[1104] 'Thomas Meehan to George Englemann, 26 January 1883', *George Englemann Papers* (St. Louis, Missouri, The Missouri Botanical Garden) Cited by Oberle, p. 1.

[1105] *Brief Sketch,* p. 16.

[1106] Ibid.

[1107] Harshberger, J.W., *The Botanists of Philadelphia and their Work* (Philadelphia, T.C. Davis, 1899), p. 253.

[1108] *Brief Sketch,* p. 18.

of Agriculture and made Professor of Vegetable Physiology. He wrote the Horticultural section of the American edition of *Encyclopaedia Britannica*.[1109]

8.11 Charles Darwin and the Gardening Community

Edward Meehan was one of twenty six gardeners who lent assistance to Charles Darwin in his research.[1110] Darwin's research facilities at Down House were limited, particularly in the application of heat and so he was reliant on others for most of his basic research. He regularly published letters in the *Gardeners' Chronicle* inviting responses from gardeners on a particular problem which was taxing him. In writing *Of the Origin of Species* he had relied on the research of the German botanist Gartner in support of his argument for the basis on which new species arose, but he was conscious of the fact that Gartner's research had not been independently verified. On the advice of Daniel Oliver, Professor of Botany at London University, he requested William Crocker, then the foreman of the propagating department at Kew, to carry out some experiments for him, to verify the Gartner thesis. Crocker had the advantage of being able to read German, having worked in Germany for Victoria, the Crown Princess of Prussia. However, Crocker's work for Darwin was interrupted when he was seconded to work on the propagation of the cinchona plants which Robert Cross had delivered to Kew in 1860. As a contemporary wrote 'My friend could do nothing by halves, and, looking at the importance of the Cinchona to mankind, he entered into the work of propagation with all his native ardour'. Unfortunately, after propagating several thousand plants and readying them for despatch to India, Crocker burst a blood vessel through overwork and he was forced to retire from Kew.[1111] Crocker retired to his native Chichester.

[1109] Oberle, p. 74.

[1110] *The Darwin Correspondence Project,* https://www.darwinproject.ac.uk/.

[1111] 'The Late Mr Charles William Crocker', *The Gardener* v. 2 (1868), p. 177.

Whilst there, although unable to work as a gardener, he devoted his time to the dissemination of useful knowledge on gardening, writing regular articles for the gardening journals. He contributed to the *Journal of the Linnaean Society* and also lectured to the Mechanic's Institute and the Chichester Working Men's Club. He died in 1868 at the age of 34.[1112] By chance, upon Crocker's retirement from Kew, Darwin received a communication from a Scottish gardener, John Scott, who was able to continue with the Gartner research.

John Scott was born in 1836 in Denholm, Scotland. He attended the parish school until the age of 14 when he was apprenticed to a gardener. By the age of 23 he had become the foreman of the propagating department at the Edinburgh Botanic Garden where he developed an interest in the fertilization of orchids on which he delivered a paper to the Botanical Society of Edinburgh.[1113] In 1862 Darwin published his book *Fertilisation of Orchids* and on noticing what he perceived to be an error in that work Scott embarked on a series of experiments to test the validity of his view, after which he wrote to Darwin to point out the mistake. Darwin immediately acknowledged his error and began a correspondence with Scott during which he persuaded Scott to carry out the required experiments. Scott's research formed the basis of Darwin's paper to the Linnaean Society entitled 'Observations on the Functions and Reproductive Organs in the Primulaceae'.[1114]

Darwin wrote to Joseph Hooker about Scott: 'To my judgment I have come across no-one like him. He has interested me strangely, and I have formed a very high opinion of his

[1112] Ibid., p. 178-9.

[1113] Grout, A., 'Scott, John (1836–1880)', *ODNB* (Oxford University Press, 2004), http://ezproxyprd.bodleian.ox.ac.uk:2167/view/article/53027, [accessed 28 Nov 2022].

[1114] Darwin. C., 'Observations on the Functions and Structure of the Reproductive Organs in the Primulaceae, by Mr. John Scott, Royal Botanic Gardens, Edinburgh. Communicated by Charles Darwin, *Journal of the Linnean Society of London: Botany,* v. 8 (1865), pp. 78-126.

intellect'[1115] and this confidence is reflected in the fact that Scott went on to assist Darwin in many more projects and is referenced 92 times in nine of Darwin's publications. Veak has observed 'Aside from Joseph D. Hooker and Daniel Oliver, Scott is likely the most important correspondent in regard to Darwin's studies on plant sterility and plant varieties'.[1116] Scott forfeited his job at the Edinburgh Botanic Garden because the curator there, William McNab, objected to him carrying out experiments for Darwin, after which Darwin, through Hooker, procured a post for him as head gardener in the Cinchona plantations in Sikkim.[1117]. He was soon after appointed curator of the Calcutta Botanic Garden from where he was responsible for a continuous exchange of plants with Kew and continued to advise Darwin, in particular on his work on '*Expression* 'which was published in 1872.[1118]. During this time he was elected a fellow of the Linnaean Society and published *Notes on the Tree Ferns of Sikkim*. In 1872 he was transferred by the government of India to Darjeeling to carry out experimental work on the opium crop, in order to improve its yield and advise on disease prevention. Opium was a major crop in India at this time. It was estimated, when the East India Company had a monopoly on its production and supply, that the opium industry employed nearly a million men, women and children.[1119] Scott spent five years in Darjeeling carrying out experiments on trial beds in order to ascertain the best growing conditions and ways in which to control pests, after which he published his *Manual of Opium Husbandry* (1877), a standard work on the subject.[1120] He later prepared a report on disease in coffee plants,

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[1115] Darwin, F. (Ed)., *The Life and Letters of Charles Darwin,* v. 3 (London, London, 1887), p. 300.

[1116] Veak, T., 'Exploring Darwin's Correspondence: Some Important but Lesser Known Correspondents and Projects', *Archives of Natural History,* v. 30 (2003), p. 122.

[1117] Darwin Correspondence Project, 'Letter no. 4423 - From John Scott 10 March 1864' http://www.darwinproject.ac.uk/DCP-LETT-4423

[1118] Darwin Correspondence Project, 'Letter no. 4754 - From J.D. Hooker 26 January 1865,' accessed on 23 January 2017, http://www.darwinproject.ac.uk/DCP-LETT-4754 & Grout.

[1119] Hobhouse. p. 145.

[1120] Grout.

before developing a spleen complaint, which led to his death in 1880 at the age of 44. His probate was valued at less than £100 (£53,000).[1121]

The Superintendent of the Calcutta Botanic Garden, Sir George King wrote:

> [Scott] was certainly one of the most remarkable self-taught men I ever met, and I often regret that I did not see more of him. What struck me most about Scott was the great acuteness of his powers of observing natural phenomena, and especially of such as had any bearing on variation, natural selection or hybridity. He was quite without ambition to 'get on' in the world; he had no low or mean motives; and than John Scott, Natural Science probably had no more earnest and single- minded devotee.[1122]

8.12 Conclusion

On a Monday in August 1860, four days after Robert Fortune had returned from China to the US because the outbreak of war in America had resulted in the termination of his contract with the Patent Office, a friend said to him 'Well, surely home for good now!', to which Fortune replied 'No, I have just learned that the Japanese ports are open to Europeans, and I go there on Thursday'.[1123] By this time Fortune had set aside enough to finance his own trips and as one of the first to enter Japan he was able to bring back enough new Japanese plants, mainly purchased from nurseries, to add considerably to his already large fortune. In essence Fortune was an entrepreneur, a trait which he shared with his fellow plant hunters, and indeed with the hierarchy at Kew. It was the same entrepreneurial spirit which spurred gardeners like Beckett, Fry and Culverwell to create, patent and market their gadgets and they and countless other gardeners to create hybrids and bring them to market. Scott was an exception in loving science for its own sake, indeed becoming a gardener, as he told Darwin, in order to pursue science and as was observed by Sir George King, being 'quite without

[1121] Ibid.

[1122] Darwin, F. (Ed.), *More Letters of Charles Darwin*, v. 1 (London, Murray, 1903), p. 217.

[1123] 'Obituary Notices-Robert Fortune', *Transaction of the Botanic Society, Edinburgh*, v. 14 (1881-3), p. 162.

ambition to get on in the world'. As Schumpeter has observed[1124] there were many incentives for discovery apart from the profit motive. There was the joy of discovery, which evidently incentivised the plant hunters, such as Cross and Weir, and the exhilaration of creating, as was experienced by Fry and Beckett in creating their gadgets, and by them and Snow in producing their hybrids. No doubt they were also driven, as Mokyr has observed by 'the satisfaction of a job well done and by the triumph of getting a problem solved'[1125] A combination of these incentives will have driven Culverwell to continue his research after he had been denied the monetary rewards due to him from his development of the Telegraph pea.

Gardening, with its multiplicity of clubs, societies and shows, epitomised the networks which encouraged cooperative behaviour and supported competitive activity and the free exchange of knowledge. Gardeners could show their expertise at the numerous horticultural shows at which the prize money was generous. Their achievements at the shows were publicised in the horticultural press, which was another incentive to compete, and win. The spirit of entrepreneurship was further encouraged by the fact that no garden was expected to make a profit. The absence of strict financial controls meant that excessive expenditure on plants might go unobserved by the owner, especially if every gardener was playing the same game. Some plants, such as orchids, were luxury items on which bidding wars took place at auctions, bringing a certain normality to exceptionally high prices. These high prices gave an additional incentive to new discoveries and new hybrid creations.

[1124] Schumpeter, J.A., *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* (London, Transaction Books, 1983), pp. 92-3.

[1125] Mokyr, 'Entrepreneurship and the Industrial Revolution in Britain', Prepared for the *Entrepreneurship in History* conference (New York, 20-1 Oct., 2006), p. 27.

At the same time, the basic techniques of gardening remained substantially unchanged, which appealed to the natural conservatism of workers who have always done things the same way. To be sure, as Fry found, when he was discouraged from developing his new plant pot by an employer who was set in his ways, this conservatism could act as a brake on development, but it was only temporary and as most changes were small and incremental, they met little resistance. In a context where gardens were expanding, especially under glass, and employment was increasing, change was inevitable and on the whole it was welcomed. These then were ideal conditions for innovation to thrive and gardeners benefited as a result.

The scientific nature of much of the work should not be underestimated. Scott first won Darwin's confidence because as a result of rigorous experimentation he was able to prove Darwin wrong on a scientific point. He then provided proof of Gartner's theory through a series of scientific experiments carried out at Darwin's behest. Meehan was rigorously tested by Asa Briggs until Briggs admitted that 'he beat me down' and after writing numerous learned papers was ultimately himself made a Professor. McIvor transformed the method of collecting Cinchona bark not by chance, but by the application of scientific principles. It is perhaps a recognition of the eminence of the role which he had established as curator of the Ootacamund Botanic garden that it was considered appropriate that his replacement after his death should be a Professor of Botany from Oxford University. The scientific accomplishments of gardeners were recognised by the several honorary degrees which were awarded to them, as has been elucidated in chapter 6.

The importance of the state, whether in Britain or overseas, in encouraging innovation at this time cannot be over-emphasised. Mazzucato has established that many of the most important inventions of the C20th have come about as a result of research funded by the state.[1126] Her

[1126] Mazzucato, M., *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (Londo, Penguin, 2018).

theory has been criticised on the basis that it does not apply to the C19th, when most advances came as a result of private endeavour.[1127] Mokyr has observed: 'In Britain the public sector by and large eschewed any entrepreneurial activity [before and during the Industrial Revolution].[1128] However, the economic trial grounds at Kew and at many of the botanical gardens under their purview encouraged innovation on a huge scale, especially in the fields of rubber and cinchona production. Furthermore, Kew organised the transfer of these important products from areas where production was under threat, to alternative locations, ensuring continuity of supply, itself an innovative endeavour. They researched the best growing conditions for each product and the most effective counters to disease. As such the state played a large part in encouraging economic innovation in the field of horticulture and it was the gardeners appointed by Kew to supervise these operations who put them into effect.

[1127] McCloskey, D.N., & Mingardi, A., *The Myth of the Entrepreneurial State* (Coppell, TX, AIER, 2020), p. 51.

[1128] Mokyr, J., 'Editor's Introduction: The New Economic History and the Industrial Revolution,' in *The British Industrial Revolution: An Economic Perspective* (Boulder, CO., Westview Press, 1999), p. 46.

Chapter 9 Conclusion

Chapter 1 showed just how important gardens were in the economic, social and cultural life of the C19th, and therefore how important gardeners were to their employers. As the number of important gardens grew during the third and fourth quartiles, so did the importance of gardening as a profession. The chapter also described the changing class structure of their employers and demonstrated the central position occupied by female employers over the gardening workforce, which arose because gardens formed part of the domestic domain. Women were not passive onlookers, but took an active part in horticultural activities, in which they were treated as equals. They also contributed to the development of garden design, being credited with important innovations such as the bedding system.

Chapter 2 shows how gardeners recognised the importance of learning, far beyond mere literacy, as a fundamental precondition of advancement in their profession and how, in the absence of any institutions to provide them with knowledge, indeed some opposition to the very concept, they relied on self-learning. The extent of this is the most important finding of this chapter. A culture of auto-didacticism arose, which was very successful, to the extent that gardeners contributed hugely to horticultural literature, writing not just 'how-to ' manuals, but scientific text books, resulting in several being awarded awarded honorary degrees. Informal institutions arose to aid the development of human capital at a time when schooling was rudimentary. The flexible and adaptable apprenticeship system did not act as a barrier to recruitment. The journeyman system enabled knowledge to be acquired in multiple locations. The mutual improvement societies encouraged self-learning, as did the culture of Bothiana. Kew became an informal university of horticulture by giving tuition to the most talented young gardeners who had already had five years of training in private gardens. These self-organising, largely decentralised systems ensured a steady supply of

educated gardeners well equipped to occupy demanding head gardeners 'posts and those in botanical gardens and parks. The chapter also highlights the steps taken to side-step the reluctance of the gardening establishment to provide women with education and training by creating their own institutions and their own market-place. However this applied only to middle and upper class women. In spite of the availability of scholarships, working class women were not welcome, and the daughters of rural labourers were never given the same opportunities as the sons, either to work alongside them, or to join the new cohort of middle-class women.

The chapter on accommodation portrays graphically the rudimentary housing conditions experienced by most of those who became gardeners in the first and second quartiles. The chapter charts the gradual improvement in those conditions over time and how the accommodation provided to gardeners moved ahead of the population in general, for the reasons given. The chapter shows that bothy accommodation, contrary to the popular conception, improved markedly in the third and fourth quartiles. The accommodation provided to head gardeners improved the most, to the extent that not only were they given detached dwellings in their own grounds, with room for servants, but also that their need for privacy was recognised, in line with what was expected for those of high status.

Chapter 4 re-evaluates and repudiates the conception that gardeners were routinely undernourished in the first and second quartiles. The conclusion on pages 172-6 does not require elaboration.

The evidence on perquisites, allowances, payments in kind and other additions to consumption is built upon in chapter five with an analysis of the value of several further perquisites and thereby opportunities to add to their income. This shows that the commonly

held perception, based solely on their headline wage, that head gardeners were badly paid is incorrect. However, the wages of gardeners further down the ladder were kept low, first by an over-supply and secondly because of the acceptance of a sacrifice in anticipation of a long-term gain. It is clearly established that gardeners in full time employment worked for about 312 days per year, a figure which hardly varied throughout the period. This is substantially more than the 250-day working year assumed in the debates on living standards. The long working year of gardeners may have resulted from the fact that they were not affected by employment legislation, which itself may be a result of the fact that they did not exert union pressure, because of their aversion to unionisation. On the other hand, gardeners in private employment had the advantage of receiving sickness pay and pay during holidays (such as they were), benefits not generally available in the wider workforce.

Confirmation of the high earning capacity of head gardeners is contained in chapter 6 which lists the high number of gardeners, who worked mainly in the 3rd and 4th quartiles, known to have left probate of the modern equivalent of more than £ ½ m. The chapter also identifies several additional ways in which gardeners added to their income, either as an adjunct to their role as gardener, or as a career progression. The high probate values are confirmed by random sampling of the horticultural registers between 1871 and 1911. The sampling also contains confirmation of the longevity of gardeners, and by inference their general healthiness, alluded to in Chapter 3. The over-representation of Scots in the gardening workforce is established caused by a lack of opportunities in their home country, their perceived superior education and tough, frugal character and their dominance of the marketplace. This chapter also reveals the high social mobility of head gardeners. They considered themselves as 'Professionals' and referred to themselves as such and some justification for this attitude can be derived from the evidence that they moved from classes IV and V in Armstrong's classification system of socio-economic status, to Class 1.

In a comparison between the butler and the head gardener, both enjoyed a similar status with their workforce as men to be respected, obeyed, and sometimes feared. But in terms of pay, perquisites, the quality of their accommodation and independence it seems that gardeners had a distinct advantage.

Economic and social historians are in general agreement that innovation and inventions were the driving force behind the industrial revolution. However, there is next to no agreement as to what caused or enabled the unprecedented rise in innovation and invention. The narratives in chapters 7 and 8 provide a case study. Gardeners benefited from particularly favourable conditions for the encouragement of inventions and innovation. First, there was a wealth of available knowledge, in the dictionaries, encyclopaedias, journals and manuals dedicated to horticulture. Secondly, there was a culture of sharing that knowledge, which took place in the numerous horticultural societies, shows and mutual improvement associations, in what has been described as 'bothy culture 'and in the gardening journals. If ever there had been a culture of gardeners jealously guarding secrets and handing them down orally to the next generation, such practices had disappeared in the literate age. Information was also shared internationally, as is evidenced by McIvor sharing knowledge and plants freely with his Dutch rivals in Java. Thirdly, gardeners were given a degree of autonomy, which enabled them to embark on their own 'research and development 'following their particular interests. Fourthly, gardeners were greatly assisted by the semi-commercial world in which they worked, where they were not required to make a profit and enjoyed a good deal of freedom over their expenditure. Owners, as Robinson pointed out, basked in the reflected glory of their gardeners and were not inclined to discourage them.

One striking aspect of gardeners 'achievements in the field of innovation and discovery, is that so much of it took place in the public realm. Nearly all of their achievements in building public parks were at the public expense. Many of the plant hunting expeditions were organised and financed by Kew, which was part of a government department from 1840. Similarly, the great endeavours in transferring economic plants, to ensure security of supply, were organised by Kew, or the botanic gardens under their control, the transfer of tea being an exception. In the United States the USDA, under the control of a Scottish gardener, carried out a similar role. The state, or local government in the case of the parks, can be identified as the instigator in many of the cases cited, with the gardener being the agent.

Where the gardener was working for the state his motivation can be identified as his duty to his employer and the honour which would accrue to him. Plant hunters put their lives at risk by working in hazardous conditions but were frequently honoured by having a plant named after them and by being featured in the horticultural journals. Gardeners will certainly have been incentivised by financial rewards, which came in the several ways identified in Chapters 5,6 and 8, not least through prize money and from promoting their newly developed plants and seeds through nurseries. However, it is clear that the incentives to innovate were multifarious. There was the opportunity to engage in scientific research and the love of science as with those who helped Darwin. There was the entrepreneurial spirit as with Robert Fortune, the joy of discovery, peer recognition, the love of one's work and the satisfaction of a job well done.

Gardeners were fortunate in working in an environment which was largely shielded from economic turbulence. They were privileged and cosseted, which gave them a great advantage over other economic groups. It was this which largely led to their prosperity but it did not prevent them from being inventive and pro-active. In doing so they contributed in a

significant way to the economic sector to which they belonged, which it is hoped, this thesis has been able to elucidate.

Appendix I

Table 14. Gardeners with Probates of more than the Modern Equivalent of £500,000

A	B	C	D	E	F	G	H		
Surname	First Name	Birth	Death	Probate	Modern Equivalent	Garden	Income Sources other than Gardening	Income Sources Key	
Paxton	Joseph	1803	1865	£180 000	£117 600 000	Chatsworth	W, S, A, P, L	A	Architect
Fortune	Robert	1812	1880	£40 000	£18 800 000	Chiswick (RHS)	W, O, B, F	B	Botanic
Robinson	William	1838	1935	£95 954	£16 800 000	Regent's Park	W, O, F	F	Farmer
Taber	George	1819	1894	£21 433	£10 480 000	Braxted Park	N	GO	Gardening Only
George	James	1826	1911	£19 290	£8 234 000	Stamford Hill	H, N	H	Hybridist
Kelway	James	1815	1899	£17 237	£7 756 000	Dillington House	N, H	Le	Lecturer
Cook	Robert	1814	1880	£14 000	£7 555 000	Twyford Abbey	F	L	Landscaper
Douglas	James	1838	1911	£17 012	£7 261 000	Great Gearies, Ilford	H, W	LV	Licensed Victualler
Bethell	George	1833	1908	£18 498	£7 112 000	Chilworth Manor	GO	N	Nurseryman
Macphail	James	1754	1805	£8 350	£6 800 000	Addiscombe Place	W, H	O	Overseas
Milne	William Lindsay	1847	1905	£15 523	£6 720 000	Beau Manor	N	P	Parks
Robertson	Peter S.	1818	1879	£13 317	£5 900 000	Edinburgh Botanic	N, B	S	Steward
Weatherill	Richard	1826	1883	£10 489	£5 738 000	Hornsey	N	W	Writer
Spencer	John	1810	1881	£12 000	£5 700 000	Bowood	W, S		
Dawson	Joseph	1827	1899	£12 535	£5 640 000	Stancliffe	S		
Alexander	Herbert G.	1875	1972	£297 015	£5 630 000	Westonbirt	O		
Williams	Benjamin Samuel	1824	1890	£10 104	£5 391 000	Woodlands	W, N, O		
Aiton	William T.	1766	1849	£7 000	£5 300 000	Kew	W, B		
Thomson	David	1824	1909	£14 104	£5 200 000	Drumlanrig	W		
Duncan	James	1802	1876	£10 000	£4 800 000	Mauritius BG	O, B		
Kemp	Edward	1817	1891	£10 548	£4 800 000	Birkenhead Park	W, L, P		
Grieve	Peter	1812	1895	£11 181	£4 700 000	Culford	H		
Snow	Seward	1794	1869	£8 000	£4 500 000	Wrest Park	H		
Gibbs	Edward	1853	1918	£19 871	£4 185 000	Eythrope	S		
Denning	William	1837	1910	£10 903	£4 157 000	Kingston Hill	N		
Beckett	Edwin	1854	1935	£21 284	£3 971 000	Aldenham House	H		
Jennings	John	1846	1930	£21 784	£3 929 000	Ascott	GO		
Milner	Edward	1819	1884	£8 191	£3 900 000	Prince’s Park, Liverpool	L, P, Le		
McIvor	William G.	1825	1876	£8 000	£3 800 000	Ootacamund BG	W, H, O, B		
Murfin	William	1741	1813	£5 185	£3 800 000	Chiswick	N		
Turner	Henry	1810	1876	£8 000	£3 800 000	Bury St Edmunds BG	B		
Laing	John	1824	1901	£8 199	£3 588 000	Dysart House	N		
Shand	William	1837	1903	£8 769	£3 417 000	Lowther Castle	N, L		
Bain	John	1815	1903	£9 044	£3 400 000	Trinity College BG	B		
Montgomery	Duncan	1778	1857	£4 748	£3 400 000	Buchanan House	GO		

A	B	C	D	E	F	G	H			
Lindsay	Robert	1847	1913	£7 740	£3 231 000	Edinburgh Botanic	B			
Harris	James	1846	1923	£17 222	£3 200 000	Verandu House	N			
Downie	John	1813	1892	£6 192	£3 126 000	Canaan Bank	N			
Eyles	George	1817	1887	£6 490	£3 100 000	RHS Kensington	GO			
Davies	David	1822	1879	£6 000	£3 070 000	Cricket Chard	GO			
Featherstones	Robert	1832	1905	£6 837	£2 960 000	Windy Hill	N			
Edmonds	Charles	1811	1881	£6 000	£2 900 000	Chatsworth	W			
Dominy	John	1816	1891	£5 959	£2 700 000	Redruth	N, O, H			
Milne	John	1760	1818	£3 332	£2 700 000	Fonthill	N			
Horsefield	John	1850	1940	£17 429	£2 634 000	Heytesbury house	N			
Niven	James	1775	1827	£3 200	£2 600 000	Plant Hunter, The Cape	O			
Henderson	Archibald	1827	1879	£5 000	£2 559 000	Trentham	N			
Hill	Edwin	1850	1904	£5 845	£2 535 000	Tring Park	GO			
Gilman	Edwin	1850	1933	£12 848	£2 519 000	Alton Towers	GO			
Garland	John	1838	1916	£7 753	£2 440 000	Killerton Park	GO			
Forbes	John	1842	1909	£5 582	£2 390 000	Wilton Park	N			
Summers	George	1849	1942	£16 927	£2 358 000	Sandbeck Hall	N			
Ellis	Elam	1842	1929	£12 992	£2 325 000	Coombe Leigh	GO			
Coleman	William	1827	1908	£6 147	£2 300 000	Eastnor Castle	S			
Elmslie	Abner		1814	£3 103	£2 300 000	Colford	GO			
Middleton	Cecil H.	1886	1945	£17 560	£2 200 000	Kew	W			
Fish	Robert	1808	1873	£4 000	£2 100 000	Putteridgebury	W			
McNab	James	1810	1878	£4 656	£2 100 000	Edinburgh Botanic	W, B			
Smith	George	1825	1899	£5 263	£2 100 000	Phoenix Park	B			
Wills	John	1832	1895	£4 927	£2 100 000	Oulton Park	N			
Temple	Andrew	1839	1918	£10 066	£2 049 000	Morpeth Castle	N			
James	Joseph	1825	1890	£3 805	£2 030 000	Redlees	H			
McLellan	Duncan	1815	1897	£4 251	£2 012 000	Glasgow Parks	P, L			
Bedser	Benjamin		1823	£2 497	£2 000 000	Aldenham House	GO			
Whiting	John Bevans	1808	1869	£3 000	£1 959 000	Deepdene	GO			
Carson	Samuel M.	1814	1881	£3 982	£1 900 000	Nonsuch Park	GO			
Fleming	George	1809	1876	£4 000	£1 900 000	Trentham	S			
Davies	Charles	1849	1907	£4 236	£1 820 000	Mote Park	GO			
Bound	William P.	1865	1932	£10 080	£1 800 000	Gatton Park	N			
Henderson	Montgomery	1808	1892	£4 033	£1 800 000	Cole Orton Hall	GO			
Moore	David	1808	1879	£4 000	£1 800 000	Glasnevin	W, B			
Niven	Ninian	1799	1879	£4 000	£1 800 000	Glasnevin	B, N, L			
Nichol	William	1837	1911	£4 499	£1 722 000	Hengrave	S			
Phippen	George	1836	1885	£3 088	£1 677 000	Katesgrove	N			

A	B	C	D	E	F	G	H			
Anderson	Alexander	1820	1896	£4 002	£1 620 000	Oxenford	GO			
Brown	William	1812	1891	£3 106	£1 614 000	Merevale Hall	GO			
Jaques	John	1843	1924	£9 715	£1 600 000	Waddesdon	GO			
Cambell	Alexander	1795	1877	£3 000	£1 554 000	Manchester Botanic	B			
Ward	John	1831	1903	£3 576	£1 554 000	Newnham Paddock	N			
Baines	Thomas	1823	1895	£3 708	£1 550 000	Claughton Hall	GO			
Booth	William B.	1804	1873	£3 000	£1 550 000	Carlew	W, S			
Icke	John	1819	1874	£3 000	£1 549 000	Oakley Court	GO			
Knowles	Philip O.	1860	1940	£10 933	£1 500 000	Friar Park	S			
Marnock	Robert	1800	1889	£3 167	£1 500 000	Sheffield Botanic	B, W, L, P			
Moore	Thomas	1821	1887	£3 234	£1 500 000	Chelsea Botanic	B, W			
Niven	James	1754	1822	£1 664	£1 500 000	Tidworth	GO			
Weaver	Thomas	1804	1875	£3 000	£1 500 000	Winchester College	GO			
McKenzie	Alexander	1828	1892	£2 970	£1 499 000	Epping Forest	N, P, L			
Enstone	James	1828	1899	£3 492	£1 457 000	Weir House	L			
Carpenter	Edward Richard	1816	1887	£2 821	£1 418 000	Great Barr Hall	GO			
Eckford	Henry	1823	1905	£3 795	£1 400 000	Coleshill	H			
Miller	William	1828	1909	£3 809	£1 400 000	Coombe Abbey	N			
Thomson	William	1814	1895	£3 410	£1 400 000	Wrotham Park	N			
Chester	William	1836	1906	£3 219	£1 394 000	Chatsworth	GO			
Dodds	William	1808	1900	£2 988	£1 326 000	Fisherton	H			
Whitton	James	1851	1925	£6 955	£1 326 000	Glasgow Parks	P, L			
Donald	David	1826	1908	£3 332	£1 325 000	Knotts Green	GO			
Forbes	Alexander	1786	1861	£2 000	£1 300 000	Levens Hall	GO			
Hill	William	1824	1878	£3 000	£1 300 000	Keele Hall	GO			
Horspool	Robert A.	1869	1943	£10 945	£1 300 000	Chirk Castle	GO			
Hudson	James	1846	1932	£7 108	£1 300 000	Gunnersbury Park	W			
Searle	Arthur R.	1874	1931	£7 223	£1 300 000	Castle Ashby	GO			
Woolley	Samuel J.	1821	1878	£3 000	£1 300 000	Cheshunt	N			
Henderson	Archibald	1831	1901	£2 929	£1 282 000	Thoresby	GO			
Mills	George	1777	1871	£2 000	£1 275 000	Cranford Park	W			
Rust	William	1846	1937	£7 130	£1 256 000	Birling Manor	GO			
Batchelor	William	1862	1935	£6 981	£1 220 000	Stoke Bruen	GO			
Morland	Eleanor	1874	1959	£24 417	£1 200 000	Kew	Le			
Phillips	Thomas	1745	1819	£1 522	£1 200 000	Stoneleigh Abbey	GO			
Strathdee	Robert	1834	1901	£2 924	£1 187 000	Gadgirth	GO			
Thomson	John William	1804	1895	£2 451	£1 183 000	Sion House	N, L			
Cox	John Richard	1824	1904	£2 970	£1 155 000	Redleaf	GO			
Omant	Joseph	1828	1904	£2 963	£1 152 000	Hookfield Park	GO			

A	B	C	D	E	F	G	H			
Bean	William J.	1863	1947	£12 085	£1 140 000	Kew	W, B			
Evans	Samuel	1821	1882	£2 324	£1 140 000	Arbury Hall	N			
Chesher	William	1829	1911	£2 857	£1 131 000	Abbotswood	GO			
Broome	Samuel	1806	1870	£2 000	£1 130 000	Inner Temple	W			
Horsham	James	1821	1909	£2 873	£1 103 000	Dawlish	S			
Moore	Frederick	1857	1949	£11 107	£1 103 000	Glasnevin	B			
Woodbridge	John	1832	1888	£2 322	£1 100 000	Syon House	S			
Greaves	Benjamin	1834	1908	£2 541	£1 090 000	Broome Hall	GO			
Buchanan	Charles	1851	1935	£5 827	£1 087 000	Penicuik	S			
Cooling	Abraham	1778	1866	£1 500	£1 086 000	Beeston	GO			
Fowler	Archibald	1816	1887	£1 991	£1 079 000	Castle Kennedy	L			
Berry	Edward	1842	1903	£2 450	£1 065 000	Roehampton House	GO			
Fairgrieve	Peter Walker	1843	1900	£2 366	£1 050 000	Dunkeld House	GO			
Dawson	Thomas	1798	1867	£1 500	£1 045 000	Panshanger	GO			
Glass	Neil	1830	1907	£2 427	£1 043 000	Carbrook Larbert	GO			
Cole	William	1835	1904	£2 374	£1 029 000	The Vineyard, Feltham	GO			
Moffat	Thomas	1788	1878	£2 000	£1 026 000	Clumber	GO			
Rabone	T.H.	1833	1895	£2 118	£1 022 000	Alton Towers	GO			
Crump	William	1843	1933	£5 171	£1 014 000	Madresfield Court	GO			
Sargeson	William	1805	1886	£1 858	£1 007 000	Trafford Park	GO			
Speed	Thomas	1832	1883	£1 961	£995 100	Chatsworth	GO			
Barker	Samuel	1870	1951	£12 098	£982 900	Clumber Park	GO			
Barnes	James	1806	1877	£1 500	£979 600	Bicton	GO			
Fleming	John	1822	1883	£1 782	£974 900	Cliveden	W			
Allan	William		1926	£5 201	£971 600	Gunton Park	GO			
Allsop	John	1841	1907	£2 252	£967 500	Dalton Holme	P			
Ballantine	Henry	1833	1929	£4 978	£960 400	The Dell	O			
Harrison	Francis	1829	1913	£2 477	£959 300	Knowsley Hall	GO			
Stevens	Zadok	1835	1886	£1 959	£952 000	Trentham	GO			
Humphreys	Thomas	1858	1932	£4 604	£948 300	Birmingham Botanic	B			
Lamb	Robert	1847	1914	£2 483	£941 000	Manchester Parks	P			
Cornford	James	1857	1930	£4 799	£933 100	Quex Park	GO			
Owen	Robert	1840	1897	£1 950	£923 100	Yewden Manor	N			
Breese	William Chamberlayne	1838	1906	£2 122	£919 100	Moreton Hall	GO			
Draper	Robert	1827	1909	£2 364	£907 300	Seaham Hall	GO			
Osborn	Stephen	1834	1904	£2 074	£899 400	East Sheen Lodge	GO			
Bousie	Archibald	1821	1910	£2 329	£888 000	Over Stowey	GO			
Allan	Archibald Rockhill	1866	1953	£11 732	£884 500	Hillingdon Lodge	GO			
Rutland	Frederick Morris	1834	1902	£2 182	£881 800	Goodwood House	GO			

A	B	C	D	E	F	G	H			
Billings	Thomas Edward	1857	1937	£4 984	£878 100	Ashdown Park	GO			
Lunt	Thomas	1854	1925	£4 606	£878 100	Keir Gardens	GO			
Nicholson	George	1847	1906	£2 020	£875 000	Kew	W			
Lyon	John	1841	1903	£2 002	£870 000	Ossington Hall	S			
Fulton	James	1864	1938	£5 190	£867 000	Grim's Dyke	GO			
Laurence	John William	1828	1890	£1 617	£862 700	Newstead Abbey	GO			
Milner	Richard	1853	1931	£4 497	£848 700	Charlwood	GO			
Bakewell	William	1842	1909	£2 207	£847 000	Downing	S			
Wyness	George	1803	1872	£1 500	£839 600	Buckingham Palace	GO			
Lamb	Andrew	1846	1931	£4 438	£837 600	Dun Gardens	GO			
Reid	John	1811	1881	£1 530	£837 000	Haig Hall	N			
Smith	Thomas	1820	1904	£1 929	£836 500	Mount Stewart, Ireland	N			
Sadler	John	1837	1882	£1 527	£835 700	Edinburgh Botanic	B			
Gullick	William	1839	1925	£4 982	£834 400	Kelly, Devon	GO			
Barker	George	1857	1934	£3 931	£826 200	Hill House	GO			
Nisbett	Thomas	1850	1907	£2 071	£825 300	Fulbeck Hall	LV			
Wythes	George	1850	1916	£2 427	£823 500	Syon House	H, W			
Beattie	William	1758	1842	£946	£818 200	Scone Castle	GO			
McIntosh	Charles	1794	1864	£1 071	£816 300	Dalkeith	W, L			
Whalley	William	1837	1908	£2 119	£814 700	Addington Estate	GO			
Theobald	William	1856	1913	£2 176	£814 500	Hatchford Park	S			
McKay	Alexander	1811	1882	£1 476	£807 800	Woburn Abbey/Endsleigh	GO			
Ford	George	1820	1905	£1 845	£798 700	Wrest Park	GO			
Thomson	George	1824	1901	£1 823	£797 800	Crystal Palace	L, P			
Hallett	William	1834	1911	£2 065	£790 200	Cossington Park	GO			
Hornby	James	1840	1902	£1 942	£784 800	Heslington Hall	GO			
Webster	John	1814	1890	£1 471	£784 800	Gordon Castle	GO			
Lees	Thomas	1818	1878	£1 684	£774 700	Tynninghame	F			
Carr	Richard	1830	1887	£1 425	£772 300	Welbeck Abbey	GO			
Collinson	John	1801	1882	£1 410	£771 600	Eaton Hall	GO			
Lintott	William	1851	1932	£4 032	£770 300	Marden Park	GO			
Beaton	Donald	1802	1863	£1 000	£754 400	Shrubland Park	W, H			
Brown	William	1835	1892	£1 464	£739 100	Elmdon Hall	S			
Ingle	William	1825	1876	£1 500	£738 900	Birch Hall	S			
Kinmount	John W	1823	1876	£1 500	£738 900	Addington Park	N			
Marsh	Thomas	1842	1911	£1 854	£734 000	Frognal Park	N			
Copp	George Henry	1857	1948	£7 871	£733 600	Portaferry House	GO			
Garrett	John	1854	1910	£1 852	£730 600	Batsford Park	W			
Caie	John	1811	1879	£1 416	£724 600	Campden House	GO			

A	B	C	D	E	F	G	H
Ord	James Francis	1836	1915	£1 961	£723 100	Cheeseburn Grange	GO
Doig	David	1821	1886	£1 327	£719 300	Rossie Priory	GO
Whytock	James	1845	1926	£3 840	£717 300	Dalkeith	GO
Willard	Jesse	1834	1919	£4 201	£713 800	Holly Lodge	GO
Meehan	Edward	1798	1882	£1 304	£713 600	St Clare	N
Hislop	Thomas Kerr	1831	1909	£1 787	£709 600	Eastcourt	GO
Osborne	William		1903	£1 608	£698 800	Fota Island	L
Cliffe	Peter	1818	1885	£1 283	£696 700	Tatton Park	GO
Worraker	John	1821	1878	£1 500	£690 000	Milton Park	GO
Rust	Joseph	1826	1894	£1 514	£686 800	Eridge	GO
Grindrod	Robert	1855	1929	£3 809	£681 700	Whitfield	N
Judd	Daniel	1815	1884	£1 344	£679 600	Warwick Castle	GO
Cox	William	1822	1883	£1 239	£677 800	Madresfield Court	H, W
Herbert	Arthur	1883	1965	£18 666	£671 700	Leigh Park	GO
Cross	Robert MacKenzie	1836	1911	£1 568	£669 300	Various	O
Smith	John		1888	£1 233	£667 300	Alnwick Castle	B
Cooper	David	1859	1933	£3 130	£661 500	The Lawn, Warwick	GO
Burbidge	Frederick	1847	1905	£1 519	£657 900	Trinity College BG	W, B
Gordon	George	1842	1914	£1 734	£657 200	Norbiton Hall	S, W
Scouse	John	1853	1945	£4 998	£654 100	Foliejon	GO
Geary	Frederick	1848	1931	£3 453	£651 700	Eggesford	GO
Odell	John William	1858	1941	£4 532	£646 600	The Grove Farm	Le
Housego	Jacob	1841	1917	£2 402	£642 800	Woodcote Park	N
Strugnell	William	1860	1943	£4 812	£641 200	Rood Ashton	GO
Cramb	Alexander	1810	1871	£1 000	£637 600	Tortworth Court	GO
Shingles	Thomas	1842	1898	£1 366	£633 600	Tortworth Court	GO
Shearer	Alexander	1816	1884	£1 291	£630 900	Yester House	L
Ingram	Thomas	1796	1872	£1 000	£624 300	Royal Gardens	H
Pettigrew	Andrew Alexander		1936	£3 149	£621 200	Cardiff Parks	P
Deas	John	1815	1899	£1 480	£617 000	Lilburn Tower	GO
Ferguson	Daniel	1801	1864	£800	£609 800	Belfast Botanic	B
Thomas	Owen	1843	1927	£3 187	£608 200	Frogmore	GO
Gibson	Jacob	1842	1914	£1 700	£597 600	Brentry House	N
Harris	William	1843	1915	£1 803	£596 100	Warrens House	GO
Downing	Henry	1842	1902	£1 468	£593 200	Heythrop Park	GO
Slade	Thomas Henry	1857	1932	£3 030	£578 900	Poltimore Park	Le
Ballingall	James	1831	1894	£1 320	£578 800	Drayton Manor	GO
Findlay	Bruce	1834	1896	£1 208	£577 400	Manchester Botanic	B
Budd	James	1837	1911	£1 446	£572 500	Lockerley Hall	GO

A	B	C	D	E	F	G	H			
Kidd	James	1801	1866	£820	£570 000	Rossie Priory	GO			
Wasley	James Albert	1865	1932	£2 765	£569 500	Bedgebury Park	GO			
Clayton	Henry James	1843	1914	£1 492	£565 500	Grimston Park	GO			
Moody	Mark	1844	1913	£1 455	£563 500	South Lodge	GO			
Robson	John	1812	1886	£1 026	£556 100	Linton Park	W			
McIndoe	James	1836	1910	£1 455	£554 800	Hutton Hall	GO			
Lye	James	1830	1906	£1 277	£553 100	Clyffe Hall	S			
Parsons	Anthony	1810	1881	£1 000	£547 100	Danesbury	GO			
Folgate	Alfred George	1856	1943	£4 096	£545 800	Burhill	N			
Dawes	Robert	1855	1923	£2 718	£544 100	Temple Newsam	GO			
Frost	Philip O.	1804	1887	£1 000	£542 000	Dropmore	GO			
Mitchell	John	1814	1904	£1 245	£539 900	Escrick Hall	GO			
Downes	John	1845	1902	£1 327	£536 200	Berkswell Hall	GO			
Wainwright	William	1840	1914	£1 524	£535 800	Kimberley Park	GO			
Fish	David Taylor	1824	1901	£1 364	£535 200	Hardwicke House	W, Le			
Barnes	Nicholas Friend	1865	1950	£5 984	£534 500	Eaton Hall	GO			
Erskine	George Hope	1815	1886	£1 093	£531 200	Livermore Park	GO			
Smith	James	1837	1903	£1 315	£526 100	Mentmore	GO			
Frost	Thomas	1823	1882	£951	£520 500	Preston Hall	N			
Griffith	Henry	1832	1907	£1 349	£519 600	Samlesbury Hall	GO			
Barron	Archibald	1836	1903	£1 183	£514 100	Chiswick	W			
Bowler	John	1840	1912	£1 323	£513 300	Caldecote Hall	GO			
Fraser	William	1826	1907	£1 285	£512 100	Charlton House	N			
Cameron	George	1809	1871	£800	£510 100	Goodwood House	GO			
Blythe	John	1820	1904	£1 306	£507 800	Fairford Park	GO			
Harris	George	1849	1940	£3 351	£506 300	Alnwick Castle	N			
Hariss	A	1876	1933	£2 394	£506 000	Lockinge Park	GO			
Smoker	George	1857	1925	£2 846	£503 000	Brookwood Park	GO			
Dickson	James		1876	£915	£502 800	Arkleton	GO			
Luckhurst	Edward	1838	1906	£1 292	£501 700	Oldlands	Le			
				Average w/Paxton	£2 233 432					
				Average w/o Paxton	£1 788 001					
				Median	£1 024 000					

Table 15. Gardeners from 1871 Horticultural Directory

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1871	Probate	Modern Equivalent	Father's Occupation	Estate in 1871
Allan	Thomas	S	Berwickshire	1823	1870	48	-21	£5	£3,242	Unknown	Nenthorn, Kelso
Anderson	James	S	Perthshire	1832	1899	67	2	£5	£2,250	Unknown	Meadow Bank, Uddington
Augur	William	E	Essex	1816	1880	63	-6	£5	£2,698	Ag lab	Mount Hill, Chelmsford
Bagalley	William	E	Derbyshire	1825	1873	48	-19	£5	£2,973	Potter	Hatch Court, Taunton
Balderstone	George B.	E	Suffolk	1839	1877	36	-16	£5	£2,591	Gardener	Dell, Tonbridge Wells
Baynes	Michael	E	Yorkshire	1825	1897	72	5	£5	£2,367	Unknown	Ethel House, Leeds
Birmingham	Robert	E	Somerset	1811	1892	80	7	£5	£2,524	Gardener	Stanton Hall
Browne	George	S	Greenock	1816	1871	55	-16	£5	£3,188	Unknown	Chirk Castle, Denbighshire
Cadger	John M.D.	S	Aberdeenshire	1839	1888	47	-15	£5	£2,705	Unknown	Luton Hoo, Luton
Cupper	Isaac	E	Dorset	1827	1898	70	4	£5	£2,319	Gamekeeper	Over Compton, Sherborne
Durrant	Frederick W.	E	Suffolk	1832	1895	63	-2	£5	£2,413	Gardener	Knowle Hill, Cobham
Edwards	George	E	Suffolk	1831	1897	66	1	£5	£2,367	Ag lab	Longford Hall, Derby
Flood	John Frederick	E	Devon	1808	1876	68	-6	£5	£2,747	Unknown	Aberaman, Aberdare
Foster	James	E	Cheshire	1825	1887	62	-5	£5	£2,710	Shoemaker	Seedfield, Bury
Freeman	James	E	Surrey	1832	1890	58	-7	£5	£2,668	Ship master	Knowsley, Prescot
Froggatt	William	E	Derbyshire	1813	1895	82	10	£5	£2,413	Gardener	Wingerworth Castle, Chesterfield
Grey	John	E	Northumberland	1823	1891	68	0	£5	£2,598	Gardener	Normanton Park, Rutlandshire
Halliday	John	S	Dumfriesshire	1807	1894	86	22	£5	£2,445	Unknown	Scone Palace, Perth
Hardy	William	S	Aberdeenshire	1809	1870	61	-13	£5	£3,242	Farmer	Newton
Herrod	Francis	E	Nottinghamshire	1813	1885	71	-1	£5	£2,715	Unknown	Kirklington, Southwell
Holah	William	E	Huntingdonshire	1826	1897	71	4	£5	£2,367	Gardener	Rufford Abbey, Ollerton
Jennings	Joseph	E	Berkshire	1826	1899	73	6	£5	£2,250	Ag lab	Kingston Lisle, Wantage

Nationalities

English	68%
Scottish	30%
Welsh	2%

Father's Occupation

Ag lab	23%
Gardener	20%
Gamekeeper	3%
Shoemaker	5%
Carpenter	3%
Farmer	5%
Other	13%
Unknown	28%

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Jolly	John	E	Suffolk	1825	1900	75	8	£5	£2,219	Gardener	Nowton Park, Suffolk
Kempster	Thomas	E	Hertfordshire	1811	1889	77	4	£5	£2,694	Gardener	Stisted Hall, Braintree
Kettles	Thomas	S	Perthshire	1839	1879	42	-21	£5	£2,559	Ag lab	Archerfield, Drem
Matheson	Donald	S	Inverness	1836	1875	39	-25	£5	£2,800	Ag lab	Felix Hall, Kelvedon
McGubbin	David	E	Cumberland	1828	1878	50	-16	£5	£2,565	Gardener	Hall Santon, Whitehave
McPherson	John	S		1822	1886	64	-5	£5	£2,710	Unknown	Osborne, Ryde
Newell	George	E	Huntingdonshire	1828	1887	59	-6	£5	£2,710	Ag lab	Ryston Hall, Downham
Plummer	William	E	Norfolk	1827	1887	60	-7	£5	£2,710	Ag lab	Stoke Hall, Stoke Holy Cross
Prinsep	Francis	E	Warwickshire	1803	1872	68	-8	£5	£3,122	Farmer	Wyrley Grove, Staffordshire
Scott	John	E	Cumberland	1830	1900	70	4	£5	£2,219	Unknown	Bensham Hall, Gateshead
Sivewright	Alexander	S	Aberdeenshire	1829	1895	66	0	£5	£2,413	Stone mason	Shemfold Park, Sussex
Snelling	Thomas	E	Suffolk	1837	1883	45	-18	£5	£2,735	Shoemaker	Ampton Park, Bury St Edmunds
Spivey	Edward	E	Bedfordshire	1814	1894	80	8	£5	£2,445	Carpenter	Hallingbury Place
Stockwell	Edward	E	Buckinghamshire	1834	1899	65	1	£5	£2,250	Ag lab	East Hendred House, Berkshire
Thompson	Horatio James	E	Sussex	1806	1886	79	4	£5	£2,710	Unknown	Peper Harrow Park
Tillyard	George Benjamin	E	Middlesex	1819	1889	70	0	£5	£2,694	Publican	Brocklesbury Park
Trotter	Henry	E	Northumberland	1832	1896	64	-1	£5	£2,390	Gardener	Ford Castle, Northumberland
Umpleby	William	E	Yorkshire	1816	1891	75	4	£5	£2,598	Farmer	Nidd Hall, Ripley
Warwick	William	S	Dumfriesshire	1826	1871	45	-22	£5	£3,188	Farmer	Sandling Park, Hythe
Alexander	Hugh	S	Perthshire	1819	1907	88	18	£25	£10,740	Ag lab	Castle Eraser, Cluny
Alvey	John	E	Leicestershire	1842	1917	73	12	£25	£7,462	Unknown	Crowcombe, Taunton
Baillie	William Mann	S	Angus	1842	1923	81	19	£25	£5,395	Gardener	Beaufront, Hexham
Battersby	John	E	Derbyshire	1824	1902	78	10	£25	£10,890	Unknown	Winkburn, Southwell

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Bowie	Robert	E	Northumberland	1817	1901	83	13	£25	£10,940	Ag lab	Chillingham Castle, Alnwick
Brickell	James	E	Wiltshire	1834	1914	79	15	£25	£9,475	Ag lab	Ashwick Hall, Marshfield
Bye	Alfred	E	Cambridgeshire	1831	1915	84	19	£25	£9,219	Gardener	Hampton Court, Leominster
Capers	Thomas	E	Warwickshire	1833	1913	80	16	£25	£10,440	Gardener	Woodcote Park, Warwick
Dalrymple	Robert	S		1824	1912	88	21	£25	£10,460	Unknown	Hadzor House, Droitwich
Dawes	William	E	Surrey	1837	1909	72	8	£25	£10,700	Gamekeeper	Wotton, Dorking
Dytch	Frederick W.	E	Yorkshire	1842	1926	83	22	£25	£4,670	Unknown	Hewell Grange, Bromsgrove
Edmonds	William G.	E	Devon	1837	1923	86	23	£25	£5,395	Gardener	Moreton House
Ewart	William	S		1829	1906	77	11	£25	£10,830	Unknown	Apethorpe Hall, Wansford
Findlay	George	S	Morayshire	1839	1917	78	15	£25	£7,462	Shoemaker	Lambourne Manor
Fletcher	George	S		1827	1910	83	16	£25	£10,630	Unknown	Moreton Court, Hereford
Ford	Sydney	E	Wiltshire	1827	1913	86	19	£25	£10,440	Shoemaker	St Leonard's Lodge, Horsham
Fortune	John William	S	Berwickshire	1838	1909	70	7	£25	£10,700	Gardener	Castlemilk, Dumfries
Gaterell	George	E	Sussex	1835	1903	68	4	£25	£10,860	Gamekeeper	Bisteme Park, Ringwood
Gray	James	E	Yorkshire	1839	1916	77	14	£25	£8,482	Gardener	Langton Hall, Northallerton
Hebblethwaite	Mark	E	Yorkshire	1821	1904	83	14	£25	£10,840	Shoemaker	Acklam Hall, Yorkshire
Jenner	Henry	E	Sussex	1827	1915	88	21	£25	£9,219	Land surveyor	Quarry Hill, Battle
Kneller	Noah	E	Hampshire	1839	1925	85	23	£25	£4,766	Ag lab	Malshanger House, Basingstoke
Laurence	Abel	E	Middlesex	1840	1903	63	1	£25	£10,860	Ag lab	Wroxhall Abbey
Leslie	David	S		1827	1911	83	17	£25	£10,670	Unknown	Appleby Castle
Mann	Henry Albiston	E	Yorkshire	1844	1924	79	18	£25	£4,808	Gardener	Brampton Park
Mason	Robert	E	Cambridgeshire	1827	1908	81	14	£25	£10,720	Ag lab	Auberries, Sudbury
Miller	John	S	Argyll	1823	1911	88	20	£25	£10,670	Gardener	Worksop Manor
Nanscawen	William	E	Cornwall	1825	1908	82	15	£25	£10,720	Ag lab	Coldrenrick, Cornwall

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Pettigrew	Andrew	S		1833	1903	69	5	£25	£10,860	Wool dyer	Dumfries House
Pickersgill	Samuel	E	Yorkshire	1842	1902	59	-5	£25	£10,890	Rail labourer	Sutton Hall, Thirsk
Puzey	Charles	E	Hampshire	1841	1912	71	9	£25	£10,460	Carpenter	Scampston Hall, Malton
Spreadbury	William Albert	E	Wiltshire	1841	1912	71	9	£25	£10,460	Ag lab	Eggesford
Tait	Alexander H.	S	Kirkcudbrightshire	1836	1904	68	4	£25	£10,840	Carpenter	Eden Lodge, Carlisle
Tizzard	Zenas	E	Dorset	1837	1920	83	20	£25	£3,181	Gardener	Priory Hall, Herefordshire
Warren	James	E	Somerset	1822	1908	86	17	£25	£10,720	Unknown	Hinton St George, Taunton
Webster	Matthew	E	Lincolnshire	1833	1902	69	4	£25	£10,890	Ag lab	Tickhill Castle, Rotherham
Wight	Andrew	S	Roxburghshire	1829	1907	78	12	£25	£10,740	Ag lab	Buckden, Skipton
Woodgett (Woodgate)	John	E	Norfolk	1849	1910	60	0	£25	£10,630	Ag lab	Chequers Court, Tring, Herts
Woolsey	Peter	S	Clackmannan	1839	1903	64	1	£25	£10,860	Wool spinner	Munches, Kirkcudbrightshire
Eggleton	William Johnson	E	Gloucestershire	1845	1877	32	-29	£30	£13,940	Grocer	Sudbury Hall, Derby
Bowell	Henry	E	Sussex	1806	1886	80	5	£56	£27,210	Tailor	West Grinstead Park, Surrey
Laidlaw	William	S		1829	1907	78	12	£56	£21,570	Unknown	Castle Eden
Carter	Isaac	E	Somerset	1812	1885	74	1	£79	£38,460	Gardener	Hatch Beauchamp, Taunton
Petch	John Robert	E	Middlesex	1832	1908	76	11	£79	£30,370	Gardener	Manley Hall, Manchester
Farquharson	John	S	Midlothian	1823	1898	75	7	£82	£34,100	Unknown	Acton Park, Wrexham
Excell	Humphrey Augustus	E	Kent	1819	1886	66	-3	£87	£42,280	Carpenter	Turkey Mills, Maidstone
Barclay	Alexander B.	S	Fifeshire	1824	1900	75	13	£93	£37,000	Unknown	Streatham Castle, Barnard Castle
Parkhurst	William E.	E	Surrey	1808	1889	81	6	£96	£46,370	Unknown	Kitlands, Dorking
Bouttell	William	E	Suffolk	1808	1879	71	-3	£100	£45,880	Unknown	Redgrave Hall, Scole
Galt	Alexander	S	Perthshire	1840	1917	77	15	£100	£26,760	Ag lab	Aldermaston Court, Reading
Greenshields	John	E	Oxforshire	1803	1888	84	7	£101	£48,990	Ag lab	Sarsden House, Chipping Norton

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Gairns	James	S	Kincardineshire	1825	1902	77	10	£121	£47,260	Master gardener	Arbuthnot House, Fordoun
Adkin	James	E	Leicestershire	1825	1897	72	5	£124	£52,000	Cotton worker	Stanton-in-Peak, Derbyshire
Makepeace	John	E	Warwickshire	1836	1920	83	20	£130	£14,830	Ag lab	Dilhorn Hall, Cheadle
Beaton	George	E	Dorset	1832	1905	72	7	£139	£53,950	Gardener	Norbury Booth Hall
Silcock	George	E	Derbyshire	1828	1903	74	8	£140	£54,550	Ag lab	Somerford Park, Congleton
Pinkney	David	E	Yorkshire	1820	1886	65	-4	£148	£71,930	Unknown	Kirkham Abbey, York
Eames	John	E	Devon	1812	1897	84	12	£152	£64,510	Unknown	Powderham Castle
Luke	William	E	Kent	1821	1891	70	1	£161	£75,010	Unknown	Braxted Park, Witham
Whitton	James	S	Perthshire	1828	1896	70	3	£162	£69,420	Land steward	Thirlstane Castle
Herrin	Charles	E	Somerset	1825	1911	85	18	£176	£67,350	Unknown	Linden House, Wellington
Sibley	George	E	Buckinghamshire	1843	1912	69	7	£185	£69,370	Unknown	Colney House, St Albans
Wemyss	George	S	Roxburghshire	1820	1882	62	-7	£192	£94,120	Ag lab	Springwood Park, Roxburghshire
Austen	George	E	Staffordshire	1813	1876	63	-9	£200	£98,500	Shoemaker	Porthgwidden, Truro
Bray	John Samuel	E	Devon	1824	1875	51	-17	£200	£100,400	Gardener	Stoodleigh, Tiverton
Rabbitt	John	E	Bedfordshire	1820	1883	63	-6	£200	£98,100	Gardener	Melchbourne, Bedfordshire
Barnet	John	S	Fifeshire	1818	1901	82	12	£215	£84,350	Ag lab	Culloden, Inverness
Bayman	Edward James	E	Wiltshire	1841	1892	51	-11	£215	£97,320	Shoemaker	Holmbury, Guildford
Moffat	Adam	S	Berwickshire	1822	1904	85	15	£215	£83,590	Land steward	Hindlip Hall, Worcester
Underdown	George	E	Devon	1838	1903	64	1	£223	£86,890	Ag lab	Escot, Devon
Allis	George Richard	E	Lincolnshire	1828	1907	78	12	£224	£86,000	Farmer	Hartsholme, Lincoln
Mowl	George	E	Essex	1825	1901	76	5	£225	£143,500	Unknown	Ossington Hall, Newark
Bowen	Lewis	W	Carmarthenshire	1841	1915	73	11	£231	£76,370	Gardener	Edwinsford
Derricut	John	E	Shropshire	1836	1921	85	21	£241	£36,650	Unknown	Springfield, Ulverston

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Yare	Michael	E	Westmorland	1842	1921	78	16	£248	£37,710	Blacksmith	Croxdale Hall, Durham
Fortune	John	S	Berwickshire	1826	1905	79	12	£259	£100,500	Ag lab	Blair Adam, Kinross-shire
Mortimore	William	E	Devon	1825	1892	66	-1	£265	£119,900	Unknown	Broomford Manor
Mowbray	George	E	Northumberland	1832	1893	61	-4	£267	£119,300	Draper	Bywell Hall, Stocksfield
Ruffett	Richard	E	Middlesex	1824	1915	91	24	£267	£88,270	Ag lab	Panshanger, Hertfordshire
Buckle	Isaac	E	Norfolk	1818	1889	70	-4	£272	£131,400	Gamekeeper	Merton Hall, Thetford
Woolcock	William Henry	E	Cornwall	1836	1923	87	23	£282	£54,560	Copper mine agent	Tregrehan, St Blazey
Norman	Robert	E	Suffolk	1828	1907	79	13	£284	£109,400	Brickmaker	Stetchworth Park
Bones	William	E	Essex	1828	1906	78	12	£289	£112,000	Ag lab	Havering Park, Essex
Prodger	Josiah	W	Flintshire	1837	1886	49	-14	£295	£143,400	Shoemaker	Biyn-y-Bys, Euabon
Chapman	William H.	E	Cornwall	1836	1914	78	14	£329	£111,800	Ag lab	Millaton House, Okehampton
Narramore	William	E	Devon	1816	1886	70	-1	£345	£167,700	Unknown	Alverton, Truro
Hemming	James	W	Swansea	1842	1906	63	1	£357	£138,600	Ag lab	Plas Newydd, Aberdare
Squibbs	Robert	E	Surrey	1824	1906	82	14	£365	£141,700	Gardener	Ickworth Park, Suffolk
Cleall	Robert	E	Devon	1812	1884	71	-1	£366	£178,000	Unknown	Nutwell Court, Lympstone
Taylor	Richard	E	Yorkshire	1819	1888	68	-1	£370	£179,500	Unknown	Byram Hall, Ferry Bridge
Dalachie	Charles	S	Banffshire	1831	1898	67	2	£389	£161,000	Unknown	Troup House, Banff
Peachey	William	E	Suffolk	1829	1887	58	-8	£395	£191,900	Unknown	Quorn Lodge, Loughborough
Craggs	William	E	Devon	1835	1907	72	8	£399	£153,700	Nurseryman	Larkbeare, Exeter
Crossling	John	E	Durham	1815	1884	69	-2	£441	£215,500	Gardener	Felton Park, Acklington
Bright	Edward	E	Norfolk	1800	1873	73	-6	£450	£239,900	Unknown	Earlham Castle, Norwich
Dunkley	William Potter	E	Northamptonshire	1830	1875	44	-21	£450	£225,900	Gardener	Scampston Hall, Malton
Durrant	Elmy	E	Suffolk	1799	1872	73	-6	£450	£251,900	Unknown	Benhall Lodge, Saxmundham

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Lessels	James	S	Scotland	1821	1887	66	-3	£497	£241,500	Unknown	Aqualate, Newport, Shropshire
Louden	James	S	Fife	1831	1915	83	17	£508	£167,900	Ag lab	Quinton, Chirk
Greenlees	Alexander	S	Renfrewshire	1835	1898	63	-1	£532	£221,000	Unknown	Spring Kell, Dumfriesshire
Blaikie	Alexander	S		1813	1890	87	10	£580	£277,400	Paver	Revesby Abbey, Horncastle, Lincolnshire
Slarcke	Eli	E	Northamptonshire	1837	1909	72	9	£595	£228,400	Gardener	Easton Neston, Northamptonshire
Galloway	Charles	S		1820	1873	53	-16	£600	£319,000	Unknown	Halston Hall, Oswestry
Poulter	John	W	Montgomeryshire	1819	1874	55	15	£600	£309,700	Unknown	Coolhurst, Horsham
Dumble	William	E	Cornwall	1821	1907	85	15	£612	£235,700	Unknown	Chaddlewood, Plympton
Lindsay	Alexander	S	Renfreshire	1814	1888	75	3	£612	£296,800	Papermaker	Ditton Park, Slough
Cossar	William	S		1827	1903	75	9	£620	£241,000	Unknown	Caen Wood, Hampstead
Rodger	James	S		1838	1915	77	14	£667	£220,500	Ag lab	Aston Hall, Sutton Coldfield
Beddard	Henry	E	Staffordshire	1813	1889	76	4	£679	£328,000	Gardener	Streatham Hall
Rae	Robert Gordon	S	Aberdeenshire	1840	1909	69	7	£679	£260,600	Blacksmith	Eglington Castle, Irvine
Toogood	Charles	E	Somerset	1803	1883	79	2	£685	£336,000	Workhouse superintendent	Harpton Court, Radnorshire
Foggo	Alexander	S		1833	1878	45	-20	£770	£354,200	Unknown	Callander House, Falkirk
Broadbridge	William	E	Sussex	1842	1881	38	-24	£800	£392,400	Ag lab	Walton House
Cresswell	Frederick	E	Suffolk	1833	1910	77	12	£818	£311,900	Milk Man	Stoke Park, Ipswich
Weir	John	S	Fife	1840	1931	91	29	£832	£151,800	Gardener	Wakefield Lodge, Stony
Wallis	John	E	Yorkshire	1832	1919	85	21	£930	£152,700	Quarryman	Orwell Park, Ipswich
Allsop	Thomas	E	Nottinghamshire	1840	1929	89	17	£967	£167,300	Unknown	Holywell Hall, Stamford
Lumsden	David	S		1830	1895	64	-1	£1,016	£439,600	Shoemaker	Bloxham Hall, Sleaford
Erskine	George Hope	S	West Lothian	1815	1886	70	-1	£1,093	£531,200	Unknown	Lupton, Devon

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Gow	George	S		1818	1893	75	5	£1,098	£490,400	Unknown	Connington Rectory, Peterborough
Whitehead	David	S		1813	1906	93	21	£1,201	£466,400	Unknown	Bury Hill, Dorking
Pybus	Thomas	E	Yorkshire	1835	1906	70	6	£1,219	£473,400	Ag lab	Holme Hall, York
Shearer	Alexander	S	Midlothian	1816	1884	68	-3	£1,291	£630,900	Coal manager	Yester House, Haddington
Luckhurst	Edward	E	Kent	1838	1906	68	5	£1,292	£501,700	Gardener	Oldlands, Uckfield
Blythe	John	E	Cornwall	1820	1904	84	15	£1,306	£507,800	Ag lab	Fairford Park
Ballingall	James	S	Fifeshire	1831	1894	63	-2	£1,320	£578,800	Ag lab	Norman Court
Griffith	Henry	E	Surrey	1832	1907	74	-9	£1,349	£519,600	Carpenter	Samlesbury Hall, Preston
Ballingall	James	S	Fifeshire	1830	1894	63	-2	£1,394	£611,000	Unknown	Norman Court, Stockbridge
Clews	James	E	Surrey	1835	1915	80	16	£1,442	£476,000	Unknown	Rockingham, Boyle
Goodacre	John Herbert	E	Surrey	1844	1922	77	16	£1,443	£279,700	Gamekeeper	Brynkinalt, Chirk
McIndoe	James	S	Renfrewshire	1836	1910	73	10	£1,455	£554,800	Ag lab	Bishopthorpe, York
Ingle	William	E	Middlesex	1825	1876	51	-16	£1,500	£738,900	Gardener/ steward	Birch Hall, Colchester
Kinmount	John W	S		1823	1876	53	-15	£1,500	£738,900	Unknown	Addington Park
Worraker	John	E	Northamptonshire	1821	1878	58	-11	£1,500	£690,000	Carpenter	Milton Park, Peterborough
Wyness	George	S		1803	1872	69	-8	£1,500	£839,600	Unknown	Buckingham Palace, London
Lees	Thomas	S	Roxburghshire	1818	1878	60	-11	£1,684	£774,700	Ag lab	Tynninghame, Prestonkirk
Stevens	Zadok	E	Derbyshire	1835	1886	52	-12	£1,959	£952,000	Gardener	Trentham Hall, Stoke
Deuxberry	Frederick	E	Yorkshire	1840	1923	83	21	£2,009	£388,700	Unknown	Cobham Hall, Gravesend
Hallett	William	E	Somerset	1834	1911	75	11	£2,065	£790,200	Gardener	Cossington, Bridgwater
Cronk	Robert Henry	E	Kent	1838	1924	86	23	£2,114	£364,500	Ag Lab	Berkeley Castle, Glos.
Whalley	William	S	Dumfriesshire	1837	1908	71	8	£2,119	£814,700	Ag lab	
Bakewell	William	E	Middlesex	1842	1909	67	5	£2,207	£847,000	Coachman	Downing Hall, Holywell
Coomber	William	E	Kent	1840	1923	83	21	£2,213	£428,000	Ag Lab	Knole Park

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Ord	James	E	Northumberland	1836	1916	80	16	£2,241	£681,700	Weaver	Cheeseburn Grange, Newcastle
Evans	Samuel	E	Warwickshire	1821	1882	62	-7	£2,324	£1,140,000	Farmer	Arbury, Nuneaton
Bousie	Archibald	S		1821	1910	88	20	£2,329	£888,000	Ag lab	Quantock Lodge, Overstowe
Draper	Robert	E	Derbyshire	1857	1909	52	-6	£2,364	£907,300	Shoemaker	Seaham Hall, Durham
Housego	Jacob	E	Suffolk	1841	1917	76	14	£2,402	£642,800	Gardener	Woodcote Park, Epsom
Horsham	James	E	Devon	1821	1909	89	24	£2,873	£1,103,000	Ag lab	Manor House, Dawlish
Omant	Joseph	E	Bedfordshire	1828	1904	75	9	£2,963	£1,152,000	Unknown	Hookfield Park, Epsom
Cox	John R	E	Shropshire	1824	1904	80	12	£2,970	£1,155,000	Seedsman	Crown East Court
Icke	John	E	Shropshire	1819	1874	54	-15	£3,000	£1,549,000	Farmer	Oakley Park, Market Drayton
Willard	Jesse	E	Kent	1834	1919	85	21	£4,201	£689,900	Ag lab	Holly Lodge, Highgate
Nichol	William	E	Durham	1837	1911	73	10	£4,499	£1,722,000	Gardener	Drinkstone Park, Bury
Gullick	William	E	Cornwall	1839	1926	87	25	£4,982	£834,400	Ag Lab	Kelly House, Tavistock
Shand	William	S	Kincardineshire	1837	1903	66	-3	£8,769	£3,417,000	Farmer	Fetteresso Castle
Temple	Andrew	E	Northumberland	1839	1918	78	16	£10,066	£2,049,000	Farmer	Morpeth Rectory
Denning	William	E	Surrey	1837	1910	72	9	£10,903	£4,157,000	Gardener	Grimston Park, Tadcaster
Bethell	George	E	Lancashire	1833	1908	76	11	£18,498	£7,112,000	Joiner	Sedgewick House Miln
			Averages			**71.22**	**4.67**		**£279,157**		
								Percent with probate	59%		
								Average of those who left probate	£461,290		

Table 16. Gardeners from 1881 Horticultural Directory

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Amey	Stephen	E	Essex	1825	1894	69	-2	£5	£2,445	Gardener	Ponfield, Hertford
Baker	William	E	Lancashire	1828	1890	62	-8	£5	£2,668	Gardener	Winwick Hall, Lancashire
Bellis	Joseph Johnson	E	Cheshire	1816	1886	69	-6	£5	£2,710	Ag lab	Hinton Hall, Shropshire
Bembridge	James	E	Norfolk	1837	1894	56	-19	£5	£2,445	Ag lab	Belsay Castle
Coombs	George	E	Wiltshire	1846	1899	53	-11	£5	£2,250	Ag Lab	Danehurst, Uckfield
Coward	William	E	Hampshire	1813	1897	84	7	£5	£2,367	Ag lab	Basset Wood, Hampshire
Foster	James	E	Cheshire	1825	1887	61	-10	£5	£2,710	Ag lab	Seedfield, Bury
Gilby	John	E	Northamptonshire	1832	1893	51	-18	£5	£2,491	Ag lab	Norton Lindsey, Warwick
James	Vair	S	Roxburghshire	1825	1896	69	-1	£5	£2,390	Gardener	Benton Park
Luton	William	E	Gloucestershire	1816	1886	70	-5	£5	£2,710	Baker	Hilston Park, Monmouthshire
McMorran	Adam	S	Kincardineshire	1820	1888	68	-5	£5	£2,705	Gardener	Glasserton, Whithorn
Plane	John	E	Norfolk	1836	1896	60	-7	£5	£2,390	Gardener	Brymore, Bridgewater
Ross	Stephen	S	Banffshire	1829	1892	62	-7	£5	£2,524	Farmer	Highclere, Newbury
Selman	Francis	E	Wiltshire	1823	1883	59	-13	£5	£2,735	Sawyer	Grantlands, Devon
Sievwright	Alexander	S	Aberdeenshire	1829	1895	66	-4	£5	£2,413	Ag lab	Shernfold Park
Taylor	George	S	Aberdeenshire	1824	1899	75	4	£5	£2,250	Gardener	Danson Park, Kent
Thorne	Frederick	E	Wiltshire	1819	1893	73	-1	£5	£2,491	Carpenter	Ashgrove, Kent
Tillyard	George Benjamin	E	Middlesex	1819	1889	70	-4	£5	£2,694	Publican	Brocklesby Park, Lincoln
Trimmer	John	E	Hampshire	1831	1885	53	-18	£5	£2,715	Ag lab	The Cedars, Wells
Wookey	Charles	E	Somerset	1820	1884	64	-9	£5	£2,725	Cooper	The Firs, Lee, London
Woollam	John	E	Shropshire	1838	1890	52	-14	£20	£9,898	Gardener	Crosby Hall, Liverpool
Gilbert	Charles	E	Berkshire	1849	1915	66	3	£24	£8,850	Ag Lab	Belmont Hall, Northwich
Birmingham	William	E	Somerset	1838	1907	69	3	£25	£10,740	Gardener	Warfield Park, Bracknell
Button	Wallace Augustus	E	Kent	1845	1914	68	1	£25	£9,475	Ag lab	Corsham Court, Wiltshire
Cawley	Herman	E	Devon	1824	1906	82	10	£25	£10,830	Shoemaker	Castleton House, Cardiff
Coombes	Arthur	E	Oxfordshire	1851	1921	70	7	£25	£4,240	Gardener	Himley Hall, Dudley
Courtney	Charles	E	Nottinghamshire	1837	1916	79	12	£25	£8,482	Ag Lab	Hutton Hall, Malton
Deacon	William	E	Northamptonshire	1852	1923	71	9	£25	£5,395	Ag lab	Winslow Hall, Winslow
Dennis	William	E		1838	1907	68	2	£25	£10,740	Coachman	Stourhead, Frome
Evans	James	E	Shropshire	1833	1906	72	4	£25	£10,830	Shoemaker	Mereworth Castle, Maidstone
Farmer	George	E	Herefordshire	1834	1907	72	5	£25	£10,740	Ag lab	Hope End, Ledbury
Fowler	William	E	Berwickshire	1828	1909	81	15	£25	£10,700	Mason	Mertoun, St Boswells

Nationalities

English	73.50%
Scottish	23.50%
Welsh	2.00%
Irish	1.00%

Father's Occupation

Ag lab	27.50%
Gardener	25.50%
Other	17.50%
Not known	10.50%
Farmer	6.50%
Carpenter	3.00%
Gamekeeper	2.50%
Stoneworker	2.50%
Innkeeper	1.50%
Sawyer	1.50%
Shoemaker	1.50%
	100.00%

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Francis	Noah	E	Sussex	1839	1915	75	9	£25	£9,219	Farmer	Yotes Court, Mereworth
Harris	William	E	Middlesex	1822	1909	87	15	£25	£10,700	Carpenter	Hickleton Hall, Doncaster
James	Theophilus	E	Gloucestershire	1828	1915	87	17	£25	£9,219	Stone cutter	Stapleton Park
Johnston	James	S	Aberdeenshire	1854	1918	63	1	£25	£5,676	Wine merchant	Hints Hall, Tamworth
Kime	Watson	E	Lincolnshire	1836	1920	83	16	£25	£3,181	Ag lab	Ashford Hall, Bakewell
Lewendon	Charles	E	Berkshire	1850	1926	76	13	£25	£4,670	Nursery lab	Caythorpe Hall
Mardell	George	E	Hertfordshire	1835	1907	72	6	£25	£10,740	Ag lab	Aston Hall, Oswestry
Mason	James	E	Lancashire	1837	1903	65	-1	£25	£10,860	Watch tool maker	The Dales, Birmingham
McLennan	George	S	Ross-shire	1845	1928	82	18	£25	£4,825	Ag lab	Fetteresso Castle, Kincardineshire
Mein	Walter	S	Musselburgh	1823	1906	83	11	£25	£10,830	Not known	Holmrook Hall, Whitehaven
Middleton	Thomas Burnett	S	Aberdeenshire	1846	1907	60	-4	£25	£10,740	Farmer	Balgownie Lodge
Mills	John Wortley	E	Leicestershire	1838	1911	72	6	£25	£10,670	Ag lab	Minteme, Dorchester
Morris	Samuel	E	Hampshire	1834	1912	78	10	£25	£10,460	Gamekeeper	Burley Manor, Ringwood
Page	John	E	Gloucestershire	1820	1905	85	12	£25	£10,820	Not known	Cherkley Court, Leatherhead
Pearce	Edward	E	Somerset	1839	1906	67	1	£25	£10,830	Ag lab	Charlton Cottage, Malmesbury
Robbins	Robert	E	Berkshire	1842	1921	79	14	£25	£4,240	Not known	Rhydd Court, Upton-on-
Salway	Edward	E	Devon	1850	1919	68	5	£25	£4,579	Ag lab	Membland Hall, Ivybridge
Scott	Alexander	S	Roxburghshire	1840	1921	81	15	£25	£4,240	Not known	Auchdennan, Alexandria
Sharp	Joseph Henry	E	Middlesex	1829	1909	80	10	£25	£10,700	Gardener	Langley Park, Slough
Staward	John	S	Roxburghshire	1844	1903	59	-6	£25	£10,860	Householder	Anniston House, Chance
Tait	James	S	Selkirk	1848	1911	62	-1	£25	£10,670	Ag lab	Riddell House, Roxburghshire
Weaver	John	E	Somerset	1827	1905	78	8	£25	£10,820	Shoemaker	Belhus, Romford
Withyman	John	E	Somerset	1846	1918	71	7	£25	£5,676	Carpenter	Yenhall, Milborne
Warrender	Joseph	E	Shropshire	1817	1887	69	-6	£39	£21,140	Ag lab	Apley Castle, Shropshire
Allen	James Ralph	E	Kent	1860	1949	89	29	£50	£4,964	Gardener	Ashurst Park, Tunbridge Wells
Amos	John	E	Kent	1853	1939	85	23	£50	£8,877	Sawyer	St Alban's Court, Kent
Caldershead	D	S	Fifeshire	1854	1940	86	22	£50	£8,145	Farmer	Wemyss Castle
Landon	John Sylvanus	E	Warwickshire	1864	1943	79	19	£50	£7,183	Gardener	Longford Hall, Newport
Milne	George	S	Aberdeenshire	1847	1938	91	27	£50	£9,316	Farmer	Titley Court
White	William Thomas	E	Hampshire	1855	1939	84	22	£50	£8,877	Gardener	Arbury Hall, Nuneaton

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Bowell	Henry	E	Sussex	1805	1886	81	-1	£56	£28,160	Draper	West Grinstead Park
Lovell	Frederick	E	Surrey	1822	1883	60	-12	£69	£35,010	Not known	Monkhams, Woodford, Essex
Brunt	George	E	Warwickshire	1844	1892	48	-17	£70	£32,780	Ag lab	Pyrgo Park, Romford
Newman	Richard	E	Gloucestershire	1834	1910	76	9	£71	£28,010	Ag lab	Longmead, Bishopstoke
Grimsdale	William	E	Buckinghamshire	1802	1881	79	-5	£76	£41,580	Not known	Bulstrode Park, Buckinghamshire
Turner	William	E	Northumberland	1842	1914	73	8	£87	£32,970	Ag Lab	Capheaton, Northumberland
Thomas	W.B.	W	Glamorgan	1837	1902	64	-2	£90	£36,370	Ag lab	Clovelly Court, Bideford
Miller	David	S	Perthshire	1808	1882	74	-6	£95	£48,230	Not known	Brandon Grove, Helensburgh
Postles	Thomas	E	Cheshire	1851	1934	82	19	£122	£25,640	Joiner	Gawthorpe Hall, Lancashire
Salcombe	William	E	Gloucestershire	1820	1902	81	8	£127	£55,330	Ag lab	The Vineyard, Ticehurst
Stannard	William Frederick	E	Suffolk	1851	1917	66	3	£138	£41,190	Grainer	Camois Hall, Newmarket
McLeod	James	S	Midlothian	1813	1886	73	-4	£148	£74,410	Mason	Glynde Place, Lewes
Beddard	Thomas	E	Staffordshire	1838	1897	58	-8	£150	£71,010	Ag lab	Stoneleigh Abbey, Warwickshire
Hatfield	David	E	Northamptonshire	1826	1890	64	3	£150	£80,030	Ag Lab	Pipewell Hall, Kettering
Whitton	James	S	Perthshire	1826	1896	70	-1	£162	£71,820	Ag lab	Thirlstane Castle, Lander
Hodgson	John Charles	E	Yorkshire	1841	1916	75	10	£164	£55,640	Solicitor	Marton Lodge, Bridlington
McRobie	Alexander	E	Worcestershire	1833	1905	71	3	£174	£75,320	Gardener	Redmarley, Worcestershire
Strachan	William	S		1840	1907	67	4	£178	£70,940	Not known	Roddam Hall, Alnwick
Bradbrook	John William	E	Essex	1842	1912	70	5	£180	£75,280	Gardener	Ketteringham Park, Norfolk
Dilly	George Herbert	E	Somerset	1823	1913	90	18	£180	£69,170	Gardener	Owston Park, Doncaster
Tilbury	George	E	Surrey	1847	1929	81	17	£183	£35,310	Farmer	Lamer Park, St Albans
Sibley	George	E	Hertfordshire	1843	1912	69	4	£185	£77,380	Woodman	Colney House, Hertfordshire
Laird	Samuel Berrie	I	County Down	1843	1909	66	1	£190	£75,450	Ag lab	Kinnard Castle, Brechin
Cooling	Thomas	E	Nottinghamshire	1819	1894	75	1	£200	£90,730	Gardener	Coton House, Rugby
Hayter	William	E	Hampshire	1840	1912	72	6	£212	£88,670	Chair (chain?) proprieter	Homewood, Chislehurst
Talbert	Peter	S	Forfarshire	1839	1903	64	-2	£212	£92,130	Ag lab	Glenericht, Blairgowrie
Everett	Frederick Walter	E	Hertfordshire	1853	1932	78	16	£217	£44,700	Carman	Penrhos, Anglesey
McDonald	Daniel	S	Perthshire	1815	1901	85	10	£217	£88,080	Gardener	Kinfauns Castle, Perthshire

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Masterson	John Nelson	E	Warwickshire	1852	1921	68	6	£230	£39,010	Gardener	Weston House, Shipston on Stour
Boyd	Thomas	S	Linlithgowshire	1844	1900	56	-9	£232	£103,000	Mason	Callendar Park, Falkirk
Chalmers	Alexander	S	Peeblesshire	1851	1930	79	16	£242	£43,650	Farmer	Terregles, Dumfries
Gower	H	E	Kent	1842	1903	61	-4	£242	£97,550	Ag lab	Hammerfield, Penshurst
Elsley	Thomas	E	Surrey	1839	1936	95	24	£250	£45,750	Gardener	High Elms, Farn
Ormiston	Thomas	S	Roxburghshire	1833	1897	64	-4	£251	£118,800	Ag lab	Alloa Park, Clackmannanshire
Sinclair	Neil	S	Caithness	1841	1925	84	19	£252	£48,040	Farmer	Easthampstead Park, Berkshire
Dixon	John	E	Essex	1843	1925	81	16	£256	£45,270	Ag lab	Lenton Firs, Notthingham
Mann	Charles	E	Lancashire	1842	1913	71	6	£270	£112,700	Bookeeper	Killhow, Wigton, Cumberland
Chapman	William	E	Cambridgeshire	1829	1911	81	11	£275	117400	Ag Lab	Hawkesyard Park, Staffordshire
Black	Neil	S	Bute	1838	1923	84	18	£290	£62,580	Carter	Southend, Darlington
Sandy	Henry	E	Nottinghamshire	1851	1884	33	-30	£292	£147,600	Farmer	Harrington Hall, Spilsby
Weaver	James Joseph	E	Hampshire	1850	1901	51	-12	£296	£129,500	Horticulturist	The College, Winchester
Brimmell	Charles Henry	E	Cornwall	1832	1894	61	-7	£297	£145,200	Gardener	Antony House, Cornwall
Woods	Samuel Alexander Mellos	E	Middlesex	1844	1895	51	-14	£298	£133,400	Gardener	Osberton Hall, Worksop
Jackson	Frederick	E	Staffordshire	1845	1897	52	-12	£321	£141,000	Gardener	Monks Orchard, Becken…
Pender	Thomas Stephen	E	Cornwall	1840	1914	73	7	£321	£121,700	Not known	The Daison, Torquay
Sharpe	William	S	Perthshire	1805	1881	76	-6	£326	£165,400	Not known	Pitfour Castle, Perth
Pritchard	John Beresford	W	Denbighshire	1843	1915	72	7	£347	£118,700	Gardener	Galltfaenan, Denbighshire
Saul	Michael	I		1817	1892	75	0	£350	£163,900	Gardener	Stourton Park, Knaresborough
Wallis	Robert	E	Surrey	1843	1921	77	12	£354	£60,040	Butcher	Great Otterspool, Watford
Haskell	Thomas	E	Wiltshire	1828	1913	84	14	£355	£148,200	Blacksmith	Brambridge House, Hampshire
Cox	John	E	Berkshire	1814	1886	72	0	£375	£203,300	Gardener	Redleaf, Penshurst
Harris	Charles	W	Monmouthshire	1835	1916	81	14	£421	£132,500	Gardener	Hammerwood, East Grinstead
Coles	Richard	E	Hampshire	1847	1920	73	7	£423	£49,920	Ag lab	Holme Priory, Wareham
Deedman	William	S	Ross-shire	1848	1886	38	-25	£427	£231,500	Not known	
Butt	John	E	Sussex	1852	1925	73	8	£445	£78,690	Shepherd	Torry Hill, Sittingbourne
Banting	Josiah	E	Wiltshire	1836	1894	53	-11	£449	£219,600	Butler	Undermount, Bonchurch
Sensecall	Hugh Springthorpe	E	Rutland	1846	1936	90	26	£453	£89,360	Ag lab	Hams Hall, Warwickshire

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Williams	Robert	E	Hertfordshire	1833	1899	66	-2	£457	£205,600	Farmer	Sulby Hall, Northamptonshire
Mutch	Alexander	S	Aberdeenshire	1852	1925	73	11	£484	£92,270	Not known	Merlewood, Grange-over-Sands
Elworthy	Charles	E	Somerset	1805	1885	85	3	£490	£266,100	Not known	Nettlecombe, Taunton
Wilkins	Charles	E	Sussex	1838	1926	87	21	£507	£94,710	Gardener	Whitley Abbey, Warwickshire
Williams	Benjamin	W	Flintshire	1824	1889	65	-7	£521	£260,400	Not known	Bolton Abbey, Skipton
Matthison	John	S	Midlothian	1795	1884	89	0	£544	£275,100	Gardener	Bowhill, Selkirk
Prout	William	E	Devon	1819	1888	69	-5	£554	£299,700	Butcher	
Solman	Edward	E	Devon	1844	1906	62	-3	£571	£247,300	Ag lab	Cresswell Hall, Staffordshire
Blaikie	Alexander	S	Berwickshire	1813	1890	77	0	£580	£287,000	Paver	Revesby Abbey, Hom-
Barker	Henry	E	Yorkshire	1825	1894	69	-2	£588	£287,600	Baker	Settrington Hall, Yorkshire
Nightingale	William	E	Staffordshire	1844	1920	75	10	£603	£76,720	Gardener	Stretton Hall, Staffordshire
Cornelius	John	E	Devon	1811	1891	79	1	£604	£313,900	Gardener	Tregullow, Redruth
Salway	Samuel	E	Devon	1826	1908	81	11	£644	£256,200	Ag lab	Flete, Ivy Bridge
Attaway	James	E	Kent	1847	1925	77	13	£667	£127,200	Gardener	Mersham Hatch, Kent
Reid	William	E	Yorkshire	1852	1916	63	1	£694	£235,500	Gardener	Norbury Hall, Derbyshire
Cox	Frederick John	E	Hampshire	1841	1906	65	0	£696	£301,500	Innkeeper/farmer	Corhampton House, Hampshire
Lawson	Charles Richard	E	Northumberland	1832	1900	68	0	£724	£298,000	Gardener	Nunnykirk, Morpeth
Haycock	Charles	E	Warwickshire	1839	1891	51	-16	£731	£352,400	Ag lab	Barham Court
Robinson	William Daniel	E	Berkshire	1845	1922	77	13	£739	£159,800	Ag lab	Meynell Langley, Derbyshire
Blyth	John	S		1849	1931	82	18	£765	£144,400	Road labourer	Laverstoke House
Myers	Jonathan	S	Kirkcudbrightshire	1826	1908	81	10	£772	£331,100	Gamekeeper	Grove Park, Hertfordshire
Bailey	Thomas	E	Surrey	1807	1887	80	0	£816	£442,200	Not known	Shardeloes, Buckinghamshire
Hollingworth	John	E	Nottinghamshire	1845	1905	59	-12	£853	£369,300	Ag Lab	Woodseat, Uttoxeter
Kingston	Robert Creaser	E	Yorkshire	1818	1895	76	6	£878	£423,700	Not known	Brantingham, Yorkshire
Woods	Horace Sylvester	E	Devon	1848	1924	76	13	£920	£164,100	Gardener	Maindiff Court, Abergavenny
McKellar	Duncan	S	Argyllshire	1822	1904	82	10	£954	£413,700	Ag lab	Colworth Hall, Bedfordshire
Down	Joseph	E	Kent	1834	1902	68	0	£965	£420,400	Gardener	Ashdown Place, Forest Row
Swansborough	Henry	E	Surrey	1844	1917	73	8	£1,022	£283,000	Gardener	Warfield Hall, Berkshire
Gow	George	S	Isle of Mull	1818	1893	75	1	£1,098	£547,000	Not known	
Brow	William	S	Perthshire	1828	1898	60	-10	£1,102	£511,200	Innkeeper	Kilmaron Castle, Cupar

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Nunns	John	E	Staffordshire	1828	1900	71	1	£1,114	£494,400	Landscape gardener	Atherton Grange, Surrey
Trolloppe	John	E	Wiltshire	1828	1890	61	-9	£1,137	£606,600	Gardener	Haynes Park, Bedford
Brotherston	Robert Pace	S	Berwickshire	1848	1923	75	8	£1,155	£231,200	Ag lab	Tynninghame, East Lothian
Mitchell	John	E	Hampshire	1816	1904	88	13	£1,245	£539,900	Not known	Escrick Hall, Yorkshire
Marchant	Frederick	E	Worcestershire	1813	1891	77	0	£1,269	£659,400	Not known	Bradgate Park, Leicester
Fraser	William	S	Inverness	1826	1907	80	13	£1,285	£512,100	Gardener	Charlton Park, Malmesbury
Smith	James	S	Aberdeenshire	1837	1903	66	-1	£1,315	£571,500	Not known	Mentmore, Buckinghamshire
Judd	Daniel	E	Middlesex	1815	1884	69	-7	£1,344	£679,600	Gardener	Warwick Castle
Fish	David Taylor	S	Perthshire	1824	1901	76	5	£1,364	£535,200	Carpenter	Hardwick House, Bury
Sangwin	William	E	Cornwall	1835	1914	79	12	£1,366	£517,700	Gardener	Trelissick, Truro
Goodacre	John Herbert	E	Surrey	1844	1922	77	11	£1,443	£312,000	Gamekeeper	Elvaston Castle, Derbyshire
Budd	James	E	Surrey	1837	1911	73	6	£1,446	£572,500	Ag lab	Oakland Park, Stockbridge
Rust	Joseph	S	Kincardineshire	1826	1894	68	-3	£1,514	£686,800	Farmer	Eridge Castle, Tonbridge
Burgoin	Henry	E	Devon	1838	1907	69	3	£1,543	£662,900	Innkeeper	Battle Abbey, Sussex
Rowbottom	George	E	Hertfordshire	1821	1912	90	18	£1,687	£705,600	Sawyer	Gogmagog, Cambridgeshire
Gibson	Jacob	E	Kent	1842	1914	62	0	£1,700	£597,600	Ag lab	Brentry House, Bristol
Skinner	Thomas	E	Worcestershire	1832	1920	88	20	£1,780	£226,500	Ag Lab	East Sutton Park, Kent
Hislop	Thomas Kerr	S	Roxburghshire	1831	1909	78	9	£1,787	£709,600	Roadman	Eastcourt, Malmesbury
Marsh	Thomas	E	Kent	1842	1911	69	4	£1,854	£734,000	Potter	Frognal, Foots Cray
Lowen	Thomas	E	Hertfordshire	1835	1924	88	21	£1,858	£357,300	Carpenter	Catmos, Rutland
Molyneux	Edwin	E	Yorkshire	1851	1921	69	6	£1,952	£331,100	Gamekeeper	Swanmore Park, Hampshire
Speed	Thomas	E	Cambridgeshire	1832	1883	51	-17	£1,961	£995,100	Gardener	Chatsworth
Deuxberry	Frederick	E	Yorkshire	1840	1923	83	17	£2,009	£402,100	Gardener	Cobham Hall, Gravesend
Biggs	Mark	E	Middlesex	1850	1928	78	16	£2,024	£390,700	Ag lab	Garnstone Castle, Herefordshire
Whalley	William	S	Dumfriesshire	1837	1908	71	4	£2,119	£842,900	Ag lab	Addington Park, Surrey
Fraser	Roderick	S	Inverness-shire	1851	1937	85	22	£2,129	£404,400	Crofter	Upper Hall, Ledbury
Kemp	David	S	Perthshire	1850	1941	90	27	£2,372	£366,000	Ag lab	Langlee House, Galashiels
Keetley	Thomas	E	Derbyshire	1840	1912	72	6	£2,483	£1,039,000	Gardener	Darley Abbey, Derbyshire
Barker	Arthur Allen	E	Suffolk	1853	1927	74	12	£2,744	£523,700	Basket maker	Hindlip Hall, Worcester

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1881	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Carpenter	Edward Richard	E	Warwickshire	1816	1887	71	-4	£2,821	£1,418,000	Not known	Great Barr Hall, Bir
Speed	Walter	E	Cambridgeshire	1837	1921	85	18	£2,832	£445,600	Gamekeeper	Penrhyn Castle, Bangor
Smoker	George	E	Hampshire	1857	1925	68	7	£2,846	£542,500	Ag lab	Brookwood Park, Hampshire
Chesher	William	E	London	1829	1911	82	12	£2,857	£1,131,000	Not known	Abbotswood
Strathdee	Robert	S	Ayrshire	1834	1901	67	-1	£2,924	£1,187,000	Stone cutter	Gadgirth, Tarbolton
Pattinson	Thomas	E	Yorkshire	1848	1919	71	8	£2,932	£537,100	Gatekeeper	Rosebank, Hartlepool
Harris	George	E	Devon	1849	1940	91	28	£3,351	£506,300	Ag lab	Crowe Hall, Bath
Enstone	James	E	Buckinghamshire	1828	1899	71	11	£3,492	£1,457,000	Ag lab	Wear House, Exeter
Wallis	William	E	Derbyshire	1828	1903	75	5	£3,579	£1,555,000	Woodman	Kirby Hall, Yorkshire
Willard	Jesse	E	Kent	1834	1919	85	17	£4,201	£713,800	Ag lab	Holly Lodge, Highgate
Spencer	Thomas	E	Herefordshire	1850	1929	78	15	£4,538	£875,600	Gardener	Goodrich Court, Herefordshire
Wilkinson	James	E	Yorkshire	1830	1899	69	0	£4,645	£2,090,000	Carpenter	Newby Hall, Ripon
Gullick	William	E	Cornwall	1839	1925	86	18	£4,982	£881,000	Ag lab	Kelly House, Tavistock
Buchanan	C	S	Dumbartonshire	1851	1935	84	21	£5,827	£1,087,000	Farmer	Penicuik House
Rust	William	E	Sussex	1846	1937	91	27	£7,130	£1,256,000	Bailiff/Steward/ Gardener	Birling Manor, Maidstone
Hill	Henry Charles	E	Devon	1857	1936	78	17	£7,332	£1,446,000	Gardener	Heligan, Cornwall
Winkworth	Thomas	E	Hampshire	1845	1941	95	31	£8,954	£1,381,000	Engine driver	Childwall Hall, Liverpool
Temple	Andrew	E	Northumberland	1839	1918	78	12	£10,066	£2,285,000	Farmer	Morpeth Rectory, Northumberland
Ellis	Elam	E	Sussex	1842	1929	86	21	£12,992	£2,325,000	Shepherd	Coombe Leigh Kingston
Thomson	David	S		1824	1909	86	14	£14,104	£6,038,000	Steward	Drumlanrig Castle
Horsefield	John	E	Lancashire	1850	1940	90	27	£17,429	£2,634,000	Letter carrier	Heytesbury House, Wiltshire
Stephens	Charles	E	Middlesex	1824						Gardener	Theobalds Park, Hertfordshire
			Averages			**73**	**5.11**		**£310,887**		
								% with probate	69.50%		
								Average of only those with probate	£448,474		

Table 17. Gardeners from 1891 Horticultural Directory

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Adcock	Joseph R.	E	Norfolk	1834	1899	54	-22	£5	£2,250	Ag lab	The Palace, Norwich
Gilby	John	E	Northamptonshire	1832	1893	61	-11	£5	£2,491	Ag lab	Norton Lindsey, Warwick
Hainsworth	John	E	Yorkshire	1853	1898	45	-20	£5	£2,319	Blacksmith	Bonningtons, Ware
Spinks	William	E	Shropshire	1854	1899	45	-24	£5	£2,250	Farm bailiff	Beacon Place, Lichfield
Crapp	Henry John	E	Cornwall	1847	1899	52	-15	£5	£2,250	Gardener	Carnanton, Cornwall
Laverack	Edwin	E	Yorkshire	1857	1895	38	-31	£5	£2,413	Gardener	Oakroyd, Yorkshire
Mills	Henry	E	Cornwall	1834	1895	61	-11	£5	£2,413	Gardener	Enys, Cornwall
Trotter	Henry	E	Northumberland	1832	1896	63	-13	£5	£2,390	Gardener	Ford Castle, Northumberland
Keetley	Charles	E	Derbyshire	1814	1891	86	-3	£5	£2,598	Not known	Osmaston Hall, Derby
Spence	Joseph	E	Yorkshire	1818	1891	73	-7	£5	£2,598	Weaver	Ordsall House, Retford
Latta	James	S	Ayrshire	1842	1897	54	-19	£5	£2,367	Coachman	The Node, Welwyn
Walker	Robert	S	Perthshire	1812	1892	79	-4	£5	£2,524	Minister	Wormstall House
Rees	Thomas	W	Pembrokeshire	1853	1895	41	-28	£5	£2,413	Gardener	Coedmore, Cardiganshire
Jones	George	W	Flintshire	1831	1894	62	-10	£5	£2,445	Iron worker	Brymbo Hall, Wrexham
Rowland	Henry	E	Cheshire	1824	1896	72	-7	£8	£3,547	Ag lab	Carden Hall, Cheshire
Teasdale	Robert	E	Northumberland	1839	1907	68	-6	£20	£7,970	Gamekeeper	Blenkinsopp Hall
Babb	William Charles Hooper	E	Somerset	1846	1915	68	-3	£25	£9,219	Ag lab	The Grove, Gosport, Hampshire
Bayliss	William	E	Shropshire	1830	1917	86	10	£25	£7,462	Ag lab	Astley Abbots, Shropshire
Frier	George	E	Warwickshire	1846	1929	83	16	£25	£4,823	Ag lab	Woodcote Park, Warwick
Inns	John Charles	E	Northamptonshire	1851	1906	55	-15	£25	£10,830	Ag lab	Spratton Grange, Northamptonshire
Munday	Thomas Alexander	E	Oxfordshire	1855	1925	69	0	£25	£4,766	Ag lab	The Weir, Herefordshire
Warren	William	E	Devon	1840	1914	74	5	£25	£9,475	Ag lab	Pixton Park, Dulverton
Willis	George	E	Rutland	1847	1919	72	5	£25	£4,579	Ag lab	Sharow Lodge, Ripon
Ford	Samuel	E	Bedfordshire	1846	1919	72	1	£25	£4,579	Blacksmith	Wadley Park, Berkshire
Fox	William	E	Rutland	1825	1904	79	3	£25	£10,840	Clerk	Holker Hall, Cark-in-Cartmel
Brown	George	E	Staffordshire	1845	1910	65	-7	£25	£10,630	Coachman	Seaforth House, Liverpool
Reed	Walter	E	Hertfordshire	1856	1917	61	-3	£25	£7,462	Coachman	Grey Towers, Romford
Simcoe	Thomas	E	Northamptonshire	1846	1907	61	-6	£25	£10,740	Coachman	Lake House, Cheltenham
Bettesworth	Thomas	E	Hampshire	1846	1927	81	14	£25	£4,771	Cordwainer	Burton Grange

Nationalities

English	78.50%
Scottish	18.50%
Welsh	2.50%
South African	0.50%
	100.00%

Father's Occupation

Ag lab	27.00%
Gardener	27.00%
Farmer	4.50%
Gamekeeper	4.00%
Coachman	2.50%
Shoemaker	2.50%
Blacksmith	1.50%
Cordwainer	1.50%
Farm bailiff	1.50%
Miller	1.50%
Other	19.50%
Not known	7.00%
	100%

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Male	John	E	Worcestershire	1836	1914	58	-11	£25	£9,475	Cordwainer	Wassell Grove, Worcestershire
Cousens	Henry Isaac	E	Yorkshire	1851	1923	72	2	£25	£5,395	Farmer	Stourton Court, Staffordshire
Wood	John	E	Devon	1839	1911	72	-2	£25	£10,670	Fisherman	Normount, Torquay
Burgess	Francis	E	Hertfordshire	1863	1922	59	-4	£25	£5,405	Gamekeeper	Hazelwood, Watford
Chilcott	Jonathan	E	Dorset	1848	1911	62	-9	£25	£10,670	Gamekeeper	Ampton Park, Suffolk
Platford	Robert	E	Norfolk	1841	1924	83	14	£25	£4,808	Gamekeeper	Beeston Hall, Norwich
Webb	John Edward	E	Gloucestershire	1839	1912	72	-1	£25	£10,460	Gamekeeper	Bowden Park, Wiltshire
Woodhouse	Brown	E	Norfolk	1820	1902	81	0	£25	£10,890	Gamekeeper	Letheringsett Hall, Norfolk
Charlton	Robert	E	Northumberland	1820	1909	88	7	£25	£10,700	Gardener	Unthank Hall, Cumberland
Glenister	John	E	Buckinghamshire	1847	1915	67	0	£25	£9,219	Gardener	The Hollies, Hemel
Harris	Henry	E	Northamptonshire	1842	1913	70	-2	£25	£10,440	Gardener	Denne Park, Surrey
Rabbitt	Samuel	E	Bedfordshire	1852	1915	63	-7	£25	£9,219	Gardener	Edwinstone Hall, Nottinghamshire
Spooner	H	E	Essex	1841	1924	82	12	£25	£4,808	Gardener	Mistley Place, Manning
Tuke	William	E	Yorkshire	1841	1915	73	4	£25	£9,219	Gardener	Headingley House, Leeds
Uphill	James	E	Dorset	1855	1923	67	-2	£25	£5,395	Gardener	Encombe, Dorset
Wakeham	Samuel	E	Cornwall	1857	1912	54	-10	£25	£10,460	Gardener	Peplow Hall, Market
Kitchin	Richard	E	Lancashire	1840	1919	78	5	£25	£4,579	Plasterer	Coodham Hall, Ayrshire
Bryan	Charles	E	Warwickshire	1843	1924	80	8	£25	£4,808	Shepherd	Newby Grange, Cumberland
Truman	Charles Edwin	E	Devon	1858	1919	60	-4	£25	£4,579	Shoemaker	Luscombe Castle, Dawlish
Frisby	Brownlow	E	Leicestershire	1852	1902	49	-21	£25	£10,890	Victualler	Avonbank, Worcestershire
Cullimore	Daniel	E	Hampshire	1844	1911	66	-6	£25	£10,670	Woodman	Castle Malwood, Hampshire
Stirling	William	S	Angus	1855	1926	71	2	£25	£4,670	Ag lab	Invereighty, Forfar
Mercer	John	S	Roxburghshire	1860	1904	44	-19	£25	£10,840	Gardener	Beechwood, Rochdale
Shearer	Henry Sinclair	S	Caithness	1847	1929	82	15	£25	£4,823	Gardener	Forrs House, Thurso
Brown	John	S	Aberdeenshire	1854	1918	63	-2	£25	£5,676	Weaver	Delgaty Castle, Turriff
Griffiths	Thomas	W	Montgomeryshire	1850	1929	79	13	£25	£4,823	Ag lab	Wickham Court
Spiby	Joseph	E	Nottinghamshire	1825	1892	66	-12	£46	£21,540	Boatman	Sutton Bonington, Nottinghamshire
Broom	Isaac	E	Suffolk	1859	1932	73	9	£50	£10,300	Ag lab	Boulge Hall, Woodbridge
Dodd	Arthur John	E	Surrey	1865	1937	71	4	£50	£9,497	Ag lab	The Frenches, Bedhill

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Gadd	Henry	E	Kent	1861	1934	73	10	£50	£10,510	Ag lab	Eastcote Hall, Pinner
Goodill	George F.	E	Yorkshire	1857	1942	85	21	£50	£7,509	Ag lab	Henley Hall, Ludlow
Pull	Edwin Walter	E	Norfolk	1860	1944	84	21	£50	£6,884	Bricklayer	Petworth Park, Petworth
Wright	William Michael	E	Middlesex	1859	1935	76	12	£50	£10,060	Coachman	Copped Hall, Barnet
Watts	Frederick Ransome	E	Suffolk	1859	1937	78	9	£50	£9,497	Gamekeeper	Stowlangtoft Hall, Suffolk
Baxter	Archibald	E	Gloucestershire	1856	1942	86	17	£50	£7,509	Gardener	Spotborough Hall, Yorkshire
Paris	Frederick	E	Sussex	1851	1936	84	19	£50	£9,863	Gardener	The Heath, Boxmoor, Herts
Severn	Edward	E	Staffordshire	1857	1947	90	16	£50	£5,419	Gardener	Churton Lodge, Chester
Shadwell	Albert	E	Wiltshire	1858	1945	86	18	£50	£7,054	Gardener	Caldecott House, Berkshire
Uphill	William Charles	E	Wiltshire	1859	1934	75	7	£50	£10,510	Gardener	Moor Court, Gloucestershire
Waterman	Arthur	E	Hampshire	1859	1944	84	21	£50	£6,884	Gardener	Thirsk Hall
Dyke	George	E	Staffordshire	1860	1939	79	16	£50	£8,877	Gas maker	Kirklington Hall
Flood	Wilfred	E	Yorkshire	1854	1939	84	19	£50	£8,877	Joiner	Wychnor Hall, Staffordshire
Jenkins	James	E	Cornwall	1853	1940	86	17	£50	£8,145	Mariner	Tresco Abbey, Cornwall
Smale	Henry	E	Surrey	1850	1938	88	22	£50	£9,316	Sadler	Fawsley Park, Daventry
Espie	John	S	Wigtownshire	1852	1938	85	15	£50	£9,316	Farmer	Benton Park, Northumberland
Goodall	Walter	S	Berwickshire	1851	1947	95	30	£50	£5,419	Gardener	Fonthill House, Tisbury
Duff	Peter John	South Africa		1850	1940	89	23	£50	£8,145	Porter	Ballochmyle, Mauchline
Westcott	John	E	Cornwall	1835	1910	75	4	£66	£26,040	Shoemaker	Penalvern, Penzance
Partridge	Edwin Henry	E	Gloucestershire	1826	1899	73	-5	£80	£33,390	Clerk	Sneyd Park, Gloucestershire
Weeks	William	E	Dorset	1842	1927	85	12	£82	£14,680	Shepherd	Cheswardine, Shropshire
Barnet	John	S	Fifeshire	1823	1900	77	0	£126	£51,870	Ag lab	Culloden, Inverness
Fox	Freeman	E	Leicestershire	1846	1919	73	2	£133	£22,600	Gardener	The Cedars, Lee, Kent
Forsyth	John	S	Dumfriesshire	1840	1918	78	9	£134	£28,220	Gardener	Hawarden Castle, Flintshire
Lamont	John	S	Clackmannanshire	1847	1897	50	-21	£134	£58,840	Gardener	Kennet House, Clackmannanshire
Fowler	James	S	Midlothian	1830	1899	69	-4	£140	£58,430	Not known	Harewood House
Hickman	William	E	Oxfordshire	1819	1899	80	1	£145	£60,520	Ag lab	Caerynwch, Dolgelly
Grieve	Robert	S	Fifeshire	1839	1924	85	15	£149	£26,580	Ag lab	Carstairs
Foote	Alfred	E	Dorset	1835	1898	63	-12	£153	£65,830	Ag lab	Holmwood, Wimborne

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Chambers	John Thomas Hardy	E	Nottinghamshire	1846	1927	80	9	£156	£27,610	Gardener	Oxton Hall, Nottinghamshire
Webber	William	E	Somerset	1859	1932	72	4	£168	£32,100	Ag lab	Norton Hall, Northamptonshire
Corbett	James	E	Oxfordshire	1852	1931	79	14	£171	£32,270	Carpenter	Fawley Court, Henley-on-Thames
Sandford	Edwin	E	Devon	1851	1925	73	3	£173	£30,590	Ag lab	Dale Park, Sussex
Chalmers	Quintin	S	Aberdeenshire	1852	1922	70	0	£176	£35,290	Not known	Viewfield, Angus
Cossom	Edward Taylor	E	Kent	1836	1893	56	-18	£178	£82,260	Shoemaker	Gennings Park, Kent
Parrott	Henry James	E	Hampshire	1853	1947	93	24	£184	£18,500	Gardener	Wood End, Sussex
Port	James	E	Surrey	1836	1910	74	3	£192	£75,740	Ag lab	Shagbrook, Reigate
Lee	Charles	E	Buckinghamshire	1836	1929	93	22	£192	£34,360	Gardener	Boconnoc, Lostwithiel
Tegg	James	E	Berkshire	1832	1902	69	7	£195	£78,800	Gardener	Bearwood, Berkshire
Channing	George	E	Kent	1836	1903	67	-4	£211	£85,060	Ag lab	Lillesden, Hawkhurst
Stevens	Alfred	E	Kent	1855	1933	77	13	£211	£41,370	Ag lab	Northfleet House, Gravesend
Allis	George Richard	E	Lincolnshire	1827	1907	80	5	£224	£89,270	Farmer	Old Warden Park, Biggleswade
Bowen	Lewis Davis	W	Carmarthenshire	1841	1915	73	0	£231	£79,010	Gardener	Edwinsford, Carmarthenshire
Foreman	Henry	E	Suffolk	1821	1900	79	1	£239	£98,390	Ag lab	Fornham House, Bury
Chalmers	Alexander	S	Peeblesshire	1851	1930	79	13	£242	£43,650	Farmer	Terregles
Ormiston	Thomas	S	Roxburghshire	1833	1897	64	-8	£251	£110,200	Ag lab	Alloa Park
Sinclair	Neil	S	Caithness	1841	1925	84	15	£252	£44,560	Farmer	Park Hall, Oswestry
Tunnington	William	E	Worcestershire	1838	1907	68	-6	£271	£108,000	Ag lab	Calderstones Park, Liverpool
Tuck	Jesse	E	Suffolk	1843	1927	83	15	£276	£48,860	Ag lab	Hengrave Hall, Suffolk
Jupp	Benjamin	E	Surrey	1826	1897	71	-4	£279	£122,500	Not known	Felbridge Park, East Grinstead
Corbett	Henry	E	Surrey	1844	1920	75	3	£288	£33,990	Ag lab	Ashtead, Surrey
Crawford	Walter James	E	Suffolk	1858	1942	84	20	£289	£40,260	Not known	Severn House, Ironbridge
Woods	Samuel Alexander Mellows	E	Middlesex	1844	1895	51	-21	£298	£133,400	Gardener	Osberton Hall, Nottinghamshire
Richardson	Thomas	E	Northumberland	1853	1926	73	3	£302	£52,330	Road labourer	Otterspool, Hertfordshire
Colville	James	S	Fifeshire	1852	1923	71	1	£323	£64,660	Miller	Rufford Hall, Ormskirk
Forsey	Joseph	E	Dorset	1841	1916	74	5	£337	£106,100	Carpenter	Stamford Hall, Loughborough
Boniface	Richard	E	Sussex	1860	1906	46	-20	£338	£135,800	Ag lab	Coopers, Kent
Hull	William John	E	Somerset	1857	1927	70	6	£343	£60,720	Gardener	Montacute House, Ilminster
Brandrick	Thomas	E	Staffordshire	1850	1936	85	15	£354	£64,780	Ag lab	Copt Newick Hall, Yorkshire
Dickinson	Darcy	E	Yorkshire	1857	1934	76	12	£355	£69,210	Quarryman	Elm Bank, York

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Foulds	William	S	Lanarkshire	1834	1916	81	10	£377	£118,700	Gardener	Blanerne, Edrom
Small	Frank	E	Hampshire	1848	1935	87	20	£383	£71,470	Farm bailiff	Swanbourne House, Wins
Dingle	George	E	Devon	1833	1912	79	10	£389	£150,900	Blacksmith	Pynes, Exeter
Mundell	James Charles	E	Hampshire	1835	1904	69	-6	£424	£170,600	Mariner	Moor Park, Rickmansworth
Milne	William	S		1853	1897	43	-26	£428	£187,900	Not known	Levens Hall, Westmorland
Pratt	William	S	Forfarshire	1849	1892	43	-24	£430	£201,400	Shoemaker	Longleat, Warminster
Lyddiard	William John	E	Middlesex	1854	1917	62	-7	£431	£119,300	Gardener	The Rookery, Bromley
Doig	James	S	Fifeshire	1853	1912	58	-7	£433	£168,000	Ag lab	Yhys-y-Maengwyn, Towyn
Crerar	James	S		1827	1910	83	8	£433	£170,800	Not known	Shabden Park, Redhill
Robert	Glennie	S	Aberdeenshire	1836	1923	86	12	£433	£86,670	Not known	Babworth Hall, Nottinghamshire
Stoddart	Thomas Mitchell	S	Forfarshire	1848	1928	79	13	£437	£78,240	Ag lab	Plaistow Lodge, Kent
Jupp	William	E	Sussex	1855	1914	58	-6	£444	£156,100	Gardener	Torfield, Sussex
Ewart	James	S	Angus	1847	1914	66	-5	£470	£165,200	Sawyer	Powfoulis, Forfarshire
Coie	Edmund	E	Hampshire	1840	1892	52	-17	£474	£222,000	Ag lab	Althorp Park, Northamptonshire
Davies	William	W	Denbighshire	1828	1913	84	10	£486	£188,200	Farmer	Copley House, Neston
Glen	Thomas	S	East Lothian	1850	1916	65	-1	£493	£155,200	Gardener	Worth Park, Crawley
Payne	John Baker	E	Somerset	1839	1916	77	7	£516	£162,400	Ag lab	The Palace, Wells
Sharp	William	S	Perthshire	1852	1920	68	3	£520	£61,370	Ag lab	Freeland, Forgandenny
Dingwall	George	S	Ross-shire	1836	1922	86	15	£569	£114,100	Ag lab	Belmont Castle, Meigle
Blythe	David	S	Fifeshire	1856	1934	78	14	£573	£111,700	Iron worker	Kinnettles, Forfar
Trigger	James	E	Middlesex	1844	1910	66	-6	£582	£229,600	Cordwainer	Milton Park, Peterborough
Barker	Henry	E	Yorkshire	1828	1894	67	-11	£588	£266,700	Baker	Settrington Hall, Yorkshire
Green	John	E	Wiltshire	1833	1914	79	8	£640	£225,000	Tea dealer	Burton Hill, Malmesbury
Bartlett	Thomas Edmund	E	Devon	1846	1920	73	2	£668	£78,840	Ag lab	Knightleys, Exeter
Lawrey	Edward	E	Cornwall	1844	1929	85	17	£673	£120,400	Miller	Downe Hall, Bridport
Lancaster	Abner	E	Staffordshire	1847	1923	76	5	£700	£140,100	Ag lab	Holkham Hall, Norfolk
Burden	David	E	Kent	1851	1933	82	12	£721	£141,400	Ag lab	Winthorpe Hall, Lincolnshire
Stephenson	Luke	E	Yorkshire	1815	1896	81	-1	£731	£324,100	Not known	Gate Burton Hall
Hope	Benjamin	E	Yorkshire	1848	1895	46	-20	£733	£328,100	Brick maker	Middleton Park, Bicester
Dockerill	Benjamin	E	Cambridgeshire	1852	1940	88	23	£750	£113,300	Ag lab	Elmhurst, Reading

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Driver	William	E	London	1847	1914	66	4	£773	£271,700	Carman	Longford House, Minchin-
Nanscawen	John Dunstan	E	Cornwall	1847	1931	84	13	£776	£146,500	Gardener	Whiteway, Devon
Ballance	James	E	Yorkshire	1832	1900	68	-8	£865	£356,100	Gardener	Creskeld Hall, Yorkshire
Luckhurst	Charles	E	Kent	1842	1911	69	0	£875	£346,400	Gardener	Hayle Place, Maidstone
King	Alfred	E	Cornwall	1858	1933	75	11	£950	£186,200	Engine worker	Trevamo, Helston
Landon	William	E	Staffordshire	1826	1906	80	5	£983	£395,000	Gardener	Pool Bank, Birkinhead
Hayward	James	E	Wiltshire	1847	1927	75	10	£996	£176,300	Tailor	Hawksheads, Bolton le Sands
Kent	Henry Clark	E	Suffolk	1820	1902	81	3	£1,051	£424,700	Gamekeeper	Tyttenhanger Park
Vearey	James	E	Berkshire	1841	1920	79	11	£1,068	£126,000	Not known	Gogerddan Hall, Aberystwyth
Thorne	Frederick James	E	Dorset	1856	1928	71	2	£1,077	£192,800	Ag lab	Sunningdale, Berkshire
Dickson	James	S	West Lothian	1839	1929	80	9	£1,105	£197,800	Not known	Pell Well Hall, Shropshire
Austen	John	E	Herefordshire	1845	1910	65	-3	£1,111	£438,300	Gardener	Witley Court, Worcestershire
Batchelor	John	E	Warwickshire	1839	1914	74	5	£1,117	£392,700	Ag lab	Astrop House, Banbury
Brotherston	Robert Pace	S	Scottish Boarders	1848	1923	75	4	£1,155	£231,200	Ag lab	Tynninghame, East Lothian
Turk	John	E	Kent	1853	1939	85	20	£1,208	£198,900	Farm bailiff	Ponfield, Berkhamstead
Wilson	Hugh C.	S	Ayrshire	1847	1914	66	-5	£1,308	£459,800	Ag lab	Hinchelsea, Hampshire
Bowler	John	E	Derbyshire	1840	1912	71	2	£1,323	£513,300	Farmer	Caldecote Hall, Nuneaton
Downes	John	E	Shropshire	1845	1902	57	-11	£1,327	£536,200	Farmer	Berkswell Hall, Coventry
Scoble	James	E	Surrey	1853	1929	76	11	£1,397	£250,000	Gardener	Shalford Park, Guildford
Whiteman	Daniel	E	Norfolk	1852	1926	74	9	£1,432	£248,100	Gardener	Ewell Castle
Moody	Mark	E	Hampshire	1844	1913	69	-3	£1,455	£563,500	Ag lab	South Lodge, Horsham
Downing	Henry	E	Shropshire	1842	1902	60	-13	£1,468	£593,200	Not known	Heythrop Park, Oxfordshire
Deas	John	S	Fifeshire	1815	1899	84	2	£1,480	£617,000	Fisherman	Lilburn Tower, Northumberland
Wainwright	William	E	Derbyshire	1840	1914	74	1	£1,524	£535,800	Gardener	Kimberley Hall, Norfolk
Dennes	Thomas Martin	E	Surrey	1861	1943	81	13	£1,670	£222,500	Farmer	Binfield Park, Berkshire
Brownhill	Jonathan	E	Lancashire	1848	1922	73	2	£1,778	£356,500	Wheelwright	Barlow Hall, Lancashire
Stevenson	John B.	S	Roxburghshire	1849	1931	81	15	£1,795	£338,800	Grocer	Bournemouth Parks
Roger	Robert	S	Aberdeenshire	1857	1932	75	-4	£1,796	£343,100	Ag lab	Douglas House, Petersham
Foulk	Jesse	E	Bedfordshire	1836	1925	90	15	£1,871	£330,800	Not known	Huntercombe Manor, Buckinghamshire

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1891	Probate	Modern Equivalent	Father's Occupation	Estate in 1881
Hornby	James	E	Yorkshire	1840	1902	62	-9	£1,942	£784,800	Ag lab	Heslington Hall, Yorkshire
Nisbett	Thomas	E	Nottinghamshire	1850	1907	57	-9	£2,071	£825,300	Gardener	Bulwell Hall, Bulwell
Rutland	Frederick Morris	E	Bedfordshire	1834	1902	67	-4	£2,182	£881,800	Shoemaker	Goodwood, Chichester
Peters	William	E	Berkshire	1860	1931	71	8	£2,360	£445,400	Ag lab	Givons Grove, Leatherhead
Springthorpe	George	E	Rutland	1853	1924	70	5	£2,438	£434,900	Glazier	Gifford House, Putney Heath
Harrison	Francis	E	Nottinghamshire	1829	1913	84	10	£2,477	£959,300	Ag lab	Knowsley Hall, Prescot
Welch	William James	E	Berkshire	1860	1941	81	18	£2,839	£406,300	Gardener	Hartham Park, Corsham
Smoker	George	E	Hampshire	1857	1925	68	4	£2,846	£503,000	Ag lab	Brookwood Park, Hampshire
Slade	Thomas Henry	E	Hampshire	1857	1932	75	6	£3,030	£578,900	Mason	Mongeworth Park, Berkshire
Donald	David	S		1826	1908	82	7	£3,332	£1,325,000	Not known	Knotts Green House
Geary	Frederick	E	Devon	1848	1931	82	16	£3,453	£651,700	Gardener	Eggesford, Chulmleigh
Grindrod	Robert	E	Lancashire	1855	1929	74	4	£3,809	£681,700	Ag lab	Whitfield, Herefordshire
Milner	Richard	E	Leicestershire	1853	1931	77	12	£4,497	£848,700	Gardener	Pence Castle, Glamorgan
Strugnell	William	E	Gloucestershire	1860	1943	83	15	£4,812	£641,200	Gardener	Willow Vale, Somerset
Billings	Thomas Edward	E	Warwickshire	1857	1937	79	15	£4,984	£878,100	Ag lab	Ashdown Park, Shrivenham
Scouse	John	E	Berkshire	1853	1945	91	26	£4,998	£654,100	Gardener	Foliejon, Windsor
Crump	William	E	Shropshire	1843	1933	90	18	£5,171	£1,014,000	Butcher	Madresfield Court, Worcestershire
Garland	John	E	Kent	1838	1916	67	-4	£7,753	£2,440,000	Miller	Killerton, Devon
Copp	George Henry	E	Devon	1857	1948	90	32	£7,871	£733,600	Gardener	Holnest House, Devon
Summers	George	E	Gloucestershire	1849	1942	93	22	£16,927	£2,358,000	Gardener	Sandbeck Park, Yorkshire
Gibbs	Edward	E	Hampshire	1853	1918	65	0	£19,871	£4,185,000	Grocer	Eythrope, Aylesbury
Beckett	Edwin	E	Berkshire	1854	1935	81	16	£21,284	£3,971,000	Gardener	Aldenham Park, Elstree
Jennings	John	E	Cheshire	1846	1930	85	17	£21,784	£3,929,000	Gardener	Ascott, Leighton Buzzard
			Averages			**73**	**3**	**£1,083**	**£240,073**		
								% with probate	**63.50%**		
								Average of those with probate:	£379,968		

Table 18. Gardeners from 1901 Horticultural Directory

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1901	Probate	Modern Equivalent	Father's Occupation	Estate in 1901	
Tugwood	Frederick	E	Oxfordshire	1868	1935	67	2	£3	£604	Ag lab	Leighton Hall, Shropshire	
Lucking	Henry	E	Essex	1843	1912	69	-4	£20	£7,759	Ag lab	Black Hall, Ongar	
Bald	James	S	East Lothian	1846	1927	80	14	£25	£4,771	Shepherd	Canaan House, Edinburgh	
Barker	Wilfred Thomasson	E	Shropshire	1873	1916	41	-23	£25	£8,482	Butler	Brookside Hall, Sand-	
Bedford	William Butlin	E	Northamptonshire	1849	1927	78	8	£25	£4,771	Ag lab	Maids Moreton, Buckinghamshire	
Brown	Henry	E	Wiltshire	1836	1906	70	-6	£25	£10,830	Ag lab	Clouds, Salisbury	
Clutton	Charles	E	Cheshire	1868	1926	58	-7	£25	£4,670	Ag lab	Carden Park, Chester	
Coster	Samuel	E	Hampshire	1849	1921	71	1	£25	£4,240	Ag lab	The Austins, Birmingham	
Dale	Thomas	E	Yorkshire	1847	1911	63	-8	£25	£10,670	Gas labourer	Azerley Hall, Ripon	
Dee	Henry	E	Warwickshire	1834	1913	79	2	£25	£10,440	Ag lab	Ashridge Park, Berkshire	
Drew	James	E	Gloucestershire	1833	1909	78	0	£25	£10,700	Ag lab	Flaxley Abbey, Newnham	
Hutley	Thomas	E	Essex	1830	1905	75	-4	£25	£10,820	Gardener	Highlands, Redhill	
Kember	George	E	Sussex	1846	1915	68	-3	£25	£9,219	Gardener	Great Culverden	
King	Thomas	E	Berkshire	1853	1923	70	1	£25	£5,395	Engine driver	Wightwick Manor, Wolver-	
Luckhurst	Harold George	E	Kent	1872	1922	50	-15	£25	£5,405	Ag lab	Stanford Hall	
Macfarlane	John	S	Perthshire	1859	1922	62	-5	£25	£5,405	Sawyer	Oulton Hall, Leeds	
Murray	Charles	E	Yorkshire	1856	1923	66	-2	£25	£5,395	Gardener	Barncroft, Berkhamstead	
Murton	Philip Richard	E	Cornwall	1859	1927	68	1	£25	£4,771	Gardener	Penrose, Cornwall	
Owen	John Morris	W	Flintshire	1856	1906	50	-18	£25	£10,830	Schoolmaster	Bramhope Hall, Leeds	
Parrott	Arthur	E	Hampshire	1855	1930	75	8	£25	£4,861	Gardener	Crymlyn Burrows, Glamorganshire	
Puddephatt	Charley	E	Buckinghamshire	1866	1930	73	7	£25	£4,861	Ag lab	Bushey House, Hertfordshire	
Rogers	John	E	Gloucestershire	1841	1904	63	-10	£25	£10,840	Police	Whitminster House, Gloucestershire	
Rowland	Edwin	E	Cheshire	1854	1920	66	-3	£25	£3,181	Ag lab	The Mount, Waverton	
Sherman	Thomas	S	Kirkcudbrightshire	1836	1922	86	10	£25	£5,405	Not known	Barcaple, Kirkcudbrightshire	
Swansborough	William Charles	E	Berkshire	1874	1919	45	-19	£25	£4,579	Gardener	Williamstrip, Gloucestershire	
Toms	John	E	Hertfordshire	1843	1924	80	8	£25	£4,808	Paper mill lab	Furneaux Pelham Hall	
Sutherland	Thomas Cook	S	Aberdeenshire	1863	1923	60	-6	£47	£9,408	Gardener	Park Hall, Polmont	
Abrams	John	E	Surrey	1859	1938	79	12	£50	£9,316	Ag lab	Peamore, Exeter	
Baxter	Archibald	E	Gloucestershire	1856	1942	85	17	£50	£7,509	Gardener	Sprotborough Hall, Yorkshire	
Bonner	Joseph Edwin	E	Oxfordshire	1854	1931	76	7	£50	£10,170	Schoolmaster	Car Colston, Nottinghamshire	
Burcher	Walter George	E	Sussex	1860	1939	79	12	£50	£8,877	Ag lab	Castle Goring, Sussex	

Nationalities

English	84.83%
Scottish	12.41%
Welsh	2.07%
Irish	0.69%
	100.00%

Father's Occupation

Ag lab	33.79%
Gardener	26.90%
Farmer/Farm Bailiff	3.45%
Carpenter	2.76%
Coachman	2.76%
Shepherd	2.76%
Coal worker	2.07%
Other	23.45%
Not known	2.07%
	100%

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1901	Probate	Modern Equivalent	Father's Occupation	Estate in 1901	
Cole	Silas	E	Sussex	1866	1939	72	6	£50	£8,877	Gardener	Althorp Park, Northampton	
Everett	William Millar	E	Gloucestershire	1871	1941	69	4	£50	£7,714	Roadman	Prinknash Park, Gloucestershire	
Foot	William	E	Wiltshire	1858	1942	84	16	£50	£7,509	Carpenter	Feme House, Salisbury	
Hall	Thomas	E	Yorkshire	1865	1958	92	26	£50	£2,932	Butler	Charlton Park, Malmesbury	
Hawkes	Henry	E	Buckinghamshire	1859	1941	82	15	£50	£7,714	Ag lab	Thames Ditton House	
Humphries	William	E	Lancashire	1860	1934	69	3	£50	£10,510	Farrier	Holme Lacy, Hereford	
Jarvis	George	E	Surrey	1841	1933	92	19	£50	£10,570	Paper labourer	Cliff House, Hessle	
Keniston	William Henry	E	Leicestershire	1865	1945	79	13	£50	£7,054	Coachman	Ringwood Hall	
Langley	John	E	Staffordshire	1854	1933	79	11	£50	£10,570	Cordwainer	Tedsmore Hall, Shropshire	
Marsden	John	E	Yorkshire	1860	1950	90	23	£50	£4,982	Innkeeper	Tapton Hall, Yorkshire	
Oliver	John	S	Midlothian	1849	1937	88	18	£50	£9,316	Collier	Underwood, Kilmar-	
Plowright	Henry	E	Durham	1859	1939	79	12	£50	£8,877	Plate layer	Willingham House	
Robb	Alexander Batchen	S	Banffshire	1856	1940	84	16	£50	£8,145	Gardener	Brucklay Castle, Aber-	
Wright	William	E	Berkhamstead	1865	1944	79	66	£50	£6,884	Gardener	Taymouth Castle, Ken-	
Brander	Joseph	S	Morayshire	1851	1920	68	-1	£61	£7,199	Ag lab	Duff House, Banff	
Lawton	Charles	E	Lincolnshire	1845	1924	78	7	£96	£17,130	Ag lab	Welton House, Brough	
Hunt	George John	E	Hampshire	1849	1937	87	17	£99	£17,440	Carpenter	Ashtead Park, Epsom	
Davies	Ellis	W	Flintshire	1839	1913	73	-1	£105	£40,660	Ag lab	Nanhoran, Pwllheli	
Oliver	William	E	Devon	1857	1925	78	7	£109	£19,270	Dock labourer	Rothamstead, St Albans	
Jackson	Henry	E	Northamptonshire	1850	1925	74	4	£115	£20,340	Shoemaker	Edith Weston Hall, Rutland	
Almond	Frederick John	E	Sussex	1870	1928	58	-7	£120	£21,480	Ag lab	Peasmarsh Place, Rye	
Letts	Thomas	E	Surrey	1840	1923	82	8	£124	£26,760	Sawyer	Chiddingstone, Kent	
Rowbotham	Frank	E	Lincolnshire	1870	1954	83	18	£128	£8,649	Ag lab	South Park, Wadhurst	
Kettle	John	E	Staffordshire	1855	1930	75	6	£132	£23,810	Gamekeeper	Milton Ernest Hall, Bedford	
Middleton	David John	S	Forfarshire	1869	1932	63	-2	£141	£26,940	Gardener	Derwent Island	
Spink	David	E	Suffolk	1869	1926	57	-8	£179	£33,440	Gardener	Fawkham, Kent	
Tilbury	George	E	Hampshire	1848	1929	81	10	£183	£32,750	Farmer	Lamer Park, St. Albans	
Lornie	James	S	Perthshire	1865	1913	48	-16	£188	£78,490	Ag lab	South Park, Rothesay	
Barber	Ralph	E	Lancashire	1861	1934	72	5	£191	£37,240	Ag lab	Eagle Hall, Pately	
Kidd	Walter	E	Norfolk	1858	1914	56	-12	£196	£68,900	Ag lab	Woodlands, Darlington	
Clow	Robert	S	Stirlingshire	1831	1913	82	4	£199	£77,070	Gardener	Pinnacle Hill, Kelso	
Turner	George	E	Surrey	1846	1918	65	-4	£205	£43,170	Gardener	Woodhays, Wimbledon	

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1901	Probate	Modern Equivalent	Father's Occupation	Estate in 1901	
Mitchell	Samuel	E	Cheshire	1870	1930	60	-5	£215	£38,780	Brickmaker	Balcombe House	
Evans	John	E	Worcestershire	1845	1916	70	-6	£218	£68,610	Ag lab	Chaddesden Hall, Derby	
Ireland	Henry	E	Devon	1842	1924	82	9	£252	£44,960	Gardener	Wentworth Lodge, Bournemouth	
Coates	George	E	Kent	1843	1916	73	0	£260	£81,830	Gardener	Cranbury Park Winchester	
Southgate	Henry	E	Suffolk	1859	1934	74	7	£282	£54,980	Gardener	Sutton Hall, Easingwold	
Cawse	Robert	E	Devon	1855	1933	78	9	£290	£61,290	Gardener	Gnaton Hall, Devon	
Hickson	Joseph Edward	E	Hertfordshire	1864	1934	69	3	£293	£57,120	Ag lab	Newick Park, Lewes	
Drewett	Arthur Edward	E	Middlesex	1864	1951	87	21	£301	£24,460	Coachman	Canwell Hall, Staffordshire	
Parslow	Ernest Charles	E	Oxfordshire	1871	1922	51	-14	£316	£63,370	Brewer	Shadwell Court, Thet-	
Merritt	James	E	Hampshire	1857	1939	82	16	£334	£59,300	Ag lab	Watersfield Tower, Sussex	
Bryant	Edwin	E	Lancashire	1863	1951	88	22	£340	£27,620	Carpenter	Turnworth House	
Markwell	Charles	E	Suffolk	1861	1931	69	2	£362	£73,660	Gardener	Kenward, Kent	
Hammond	William	E	Essex	1863	1926	63	-3	£388	£67,230	Gardener	Eweland Hall, Ingatestone	
Bellworthy	William Charles	E	Hampshire	1869	1941	72	7	£398	£61,410	Ag lab	Horton Manor, Buckinghamshire	
Squibbs	George Jonathan	E	Surrey	1863	1935	72	6	£400	£80,460	Gardener	Llangedwyn Hall, Denbighshire	
Powell	Timothy Charles	E	Gloucestershire	1843	1912	68	-4	£416	£161,400	Carpenter	Hyde Hall, Sawbridge-	
Coles	Richard	E	Hampshire	1847	1921	74	3	£423	£66,550	Ag lab	Holme Priory, Wareham	
Dancer	William	E	Northamptonshire	1835	1902	67	-9	£424	£171,300	Ag lab	Upton House, Tetbury	
Bowers	George William	E	Middlesex	1870	1952	82	17	£444	£35,710	Joiner	Harbottle Castle, Northumberland	
Hunter	William	E	Staffordshire	1862	1930	67	0	£460	£89,440	Not known	Woodhall, Wetherby	
Winn	Frederick	E	Hertfordshire	1857	1938	81	13	£470	£87,570	Ag lab	Fanshaws, Hertfordshire	
Walker	Thomas	E	Leicestershire	1821	1903	82	-3	£513	£206,800	Farrier	Canons Ashby	
Pearson	Charles	E	Norfolk	1840	1922	82	8	£549	£118,700	Drover	Hanworth Hall, Norfolk	
Finch	Albert	E	Essex	1862	1932	69	3	£555	£106,000	Brewer's lab	Tudor Court, Cobham	
Read	Lewis George	E	Dorset	1869	1923	54	-9	£566	£113,300	Ag lab	Maperton House, Win-	
Dingwall	George	S	Ross-shire	1836	1922	86	10	£569	£114,100	Ag lab	Belmont Castle	
Turtle	Robert James	E	Middlesex	1861	1926	64	-3	£579	£100,300	Coachman	Comptons Lea, Horsham	
Everard	Edward John	E	Essex	1855	1940	84	16	£629	£102,500	Ag lab	Holford Lodge, York	
Aubertin	Henry	E	Hampshire	1854	1943	90	13	£661	£94,960	Shepherd	Bulwick Park, Northamptonshire	
Jenkins	Alfred	E	Herefordshire	1864	1921	57	-9	£669	£105,300	Gardener	Claregate, Wylde	
Oldham	Thomas	E	Nottinghamshire	1852	1925	72	3	£675	£119,400	Gardener	Stoughton Grange	
Troup	John Murray	S	Aberdeenshire	1849	1926	77	7	£691	£119,700	Stone cutter	Balmoral	

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1901	Probate	Modern Equivalent	Father's Occupation	Estate in 1901	
Jeal	George Frederick	E	Kent	1861	1928	67	0	£697	£134,500	Ag lab	Willersley Castle, Derbyshire	
Farmer	William Lumsden	S	Berwickshire	1862	1936	74	7	£704	£138,900	Gardener	Highams, Surrey	
Camp	George	E	Devon	1855	1937	81	13	£717	£126,300	Gardener	Culver, Exeter	
Lilley	George William	E	Cambridgeshire	1862	1943	81	14	£736	£98,080	Ag lab	Gaddesby Hall, Leicester	
Crowther	Robert	E	Yorkshire	1834	1909	75	-2	£760	£301,800	Collier	Meanwood Towers	
Bennett	Arthur	E	Sussex	1867	1926	59	-7	£784	£146,500	Ag lab	Tyberton Court, Hereford	
Creswell	Frederick	E	Suffolk	1833	1910	78	0	£818	£322,700	Milkman	Stoke Park, Ipswich	
Barter	William	E	Buckinghamshire	1852	1922	69	0	£820	£164,400	Coal dealer	Bourne Park, Canter-	
Massey	Peter	E	Cheshire	1854	1937	86	16	£833	£146,800	Gardener	Oakbrook, Sheffield	
Pope	William	E	Oxfordshire	1845	1932	86	15	£841	£160,700	Farm bailiff	The Willows, Wargrave	
Bosher	Charles	E	Surrey	1838	1930	91	17	£858	£154,800	Attendant on lunatics	Pleasley Vale, Mansfield	
Huckvale	John Willis	E	Oxfordshire	1862	1937	74	7	£859	£163,200	Ag lab	Wootton Court, Warwickshire	
Wallis	John	E	Yorkshire	1834	1919	95	12	£930	£158,000	Ag lab	Orwell Park, Ipswich	
Lloyd	Thomas	W	Pembrokeshire	1861	1929	68	1	£1,003	£179,500	Ag lab	Stapeley House, Nantwich	
Swansborough	Henry	E	Surrey	1844	1917	73	1	£1,022	£283,000	Gardener	Warfield House	
Thorne	Frederick James	E	Dorset	1856	1928	72	4	£1,077	£192,800	Ag lab	Sunningdale Park	
May	Phillip George	E	Kent	1873	1940	67	3	£1,082	£163,500	Gardener	Gisburne Park, Clitheroe	
Nash	William	E	Norfolk	1843	1917	74	1	£1,082	£299,600	Police officer	Badminton, Chippenham	
Maddern	George Henry	E	Cornwall	1866	1935	69	3	£1,131	£211,000	Gardener	Trewidden, Cornwall	
Stubbs	John	E	Durham	1835	1905	69	-7	£1,152	£498,700	Wool comber	Knole Park, Kent	
Mairs	Richard	E	Devon	1856	1939	82	14	£1,166	£192,000	Thatcher	Shobrook Park, Devon	
Jamieson	Charles	I	Kildare	1869	1939	69	4	£1,270	£225,500	Coachman	Longhills, Lincoknshire	
Smith	James	S	Aberdeenshire	1837	1903	66	-9	£1,305	£526,100	Not known	Mentmore, Buckinghamshire	
Andrews	Alfred	E	Essex	1859	1947	88	21	£1,360	£136,700	Ag lab	Campsea Ashe	
Dawson	James	S	Aberdeenshire	1849	1925	75	5	£1,382	£244,400	Ag lab	Beacon Hill, Aberdeen	
Foster	James	E	Yorkshire	1843	1914	71	-2	£1,409	£495,300	Tailor	Coombe Hurst, Kingston	
Howe	William	E	Hertfordshire	1850	1930	79	9	£1,458	£263,000	Gardener	Park Hill, Streatham	
Carpenter	George	E	Hampshire	1855	1935	80	11	£1,501	£280,100	Ag lab	West Hall, Byfleet	
Razzall	James	E	Sussex	1846	1923	76	5	£1,578	£340,500	Gardener	Bishopthorpe Palace, York	
Jeggo	Fred	E	Staffordshire	1869	1950	80	15	£1,610	£148,800	Gamekeeper	Clough Hall, Kidsgrove	
Grigg	George	E	Sussex	1857	1942	84	16	£1,680	£252,300	Ag lab	Ashburnham Place, Sussex	
Alderman	Robert Shelton	E	Cambridgeshire	1868	1934	66	1	£1,731	£337,500	Gardener	Abraham Hall, Cambridge	

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1901	Probate	Modern Equivalent	Father's Occupation	Estate in 1901	
Garrett	John	E	Wiltshire	1854	1910	56	-21	£1,852	£730,600	Gardener	Batsford, Gloucestershire	
Kevan	Samuel	S	Kirkcudbrightshire	1852	1918	65	-4	£1,953	£443,400	Farmer	Frensham Hall, Surrey	
Coates	William Albert	E	Gloucestershire	1866	1936	67	2	£2,043	£373,800	Ag lab	Gorddinog, Llanfairfechan	
Simmons	John Dulling	E	Devon	1852	1934	82	13	£2,207	£463,900	Gardener	Tandridge Court, Surrey	
Bousie	David Alexander	E	Buckinghamshire	1852	1929	77	8	£2,290	£409,800	Gardener	Quantock Lodge, Somerset	
Kent	George	E	Surrey	1866	1952	86	20	£2,333	£174,000	Gardener	Norbury Park, Dorking	
Cooper	James	E	Norfolk	1860	1932	72	5	£2,629	£541,500	Ag lab	Bisterne Park, Hampshire	
Dawes	Robert	E	Cumberland	1855	1923	68	-1	£2,718	£544,100	Gardener	Temple Newsam, Leeds	
McGregor	James	S	Perthshire	1858	1945	87	19	£2,771	£390,900	Plougham	Dunkeld House	
Lintott	William	E	Sussex	1851	1932	80	11	£4,032	£770,300	Ag lab	Marden Park, Surrey	
Felgate	Alfred George	E	Norfolk	1856	1943	86	18	£4,096	£545,800	Shepherd	Burhill, Walton-on-Thames	
Lamb	Andrew	S	Roxburghshire	1846	1931	64	-2	£4,438	£837,600	Gardener	Dun House, Montrose	
Odell	John William	E	Middlesex	1858	1941	83	15	£4,532	£646,600	Farm bailiff	The Grove, Stanmore	
Mutter	Walter George	E	Gloucestershire	1868	1950	82	17	£7,717	£768,900	Ag lab	Penpole, Bristol	
Bertram	William	E	Northumberland	1843	1916	72	-1	£11,449	£3,885,000	Shepherd	Cragside, Northumberland	
Barker	Samuel	E	Derbyshire	1870	1951	81	16	£12,098	£982,900	Farmer	Clumber Park, Worksop	
Oliver	Frank	E	Devonshire	1862	1934	72	5	£12,606	£2,649,000	Ag lab	Berry Hill, Mansfield	
Gilman	Edwin	E	Staffordshire	1850	1933	83	13	£12,848	£2,519,000	Ag lab	Alton Towers	
		Averages				**74**	**5**		**£199,128**			
								Average of those with probate	£255,257			
								% with probate	71.92%			

Table 19. Gardeners from 1911 Horticultural Directory

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1911	Probate	Modern Equivalent	Father's Occupation	Estate in 1911
Brunton	Alfred	E	Northumberland	1868	1941	73	5	£22	£3,043		Sea View, Sunderland
Bell	William	S	Wigtownshire	1857	1921	63	-12	£25	£5,405	Ag lab	Glasserton, Whithorn
Bond	Thomas	E	Oxfordshire	1847	1927	80	4	£25	£4,771	Ag lab	Lower Cheam House (emigrating to NZ in Dec 1912)
Ford	Herbert	E	Essex	1862	1910	49	-21	£25	£10,630	Ag lab	Langford Grove, Maldon
Howe	George	E	Somerset	1847	1922	74	-1	£25	£5,405	Ag lab	Goldney House, Bristol
Kelman	William	S	Aberdeen	1854	1925	71	-2	£25	£4,766	Ag lab	Stanhope Castle, Durham
Moore	George	E	Kent	1867	1924	56	-12	£25	£4,808	Ag lab	Prestons, Ightham
Morley	Charles	E	Suffolk	1857	1923	66	-6	£25	£5,395	Ag lab	Marsh House, Farnham
Spong	George	E	Middlesex	1861	1914	53	-17	£25	£9,475	Ag lab	Langley House, Slough
Mayo	Charles	E	Gloucestershire	1854	1925	71	-2	£25	£4,766	Baker	The Leaze, Stonehouse,
Austen	William Edward	E	Kent	1857	1928	70	-5	£25	£4,825	Carpenter	Frilsham House, Newbury
German	Nicholas	E	Devon	1854	1923	69	6	£25	£5,395	Cordwainer	Llandough Castle, Cowbridge, Glamorgan
Evans	George	W	Montgomeryshire	1859	1930	71	-5	£25	£4,861	Drainer	Gwynfryn, Criccieth
Reeve	Herbert Alfred	E	Rutland	1854	1915	64	-10	£25	£9,219	Farmer	Wellington Lodge, Harborne
Chapman	Samuel	E	Hampshire	1855	1914	59	-11	£25	£9,475	Gardener	Northridge, Boxmoor,
Wilson	John	E	Gloucestershire	1844	1915	71	-6	£25	£9,219	General Labourer	Broom House, Fulham
Warren	George	E	Hampshire	1833	1916	82	-1	£25	£8,482	Groom	Crowhurst Park, Battle
Straughan	Charles	E	Northumberland	1871	1911	40	-27	£25	£10,670	Joiner	Ynys-y-Maengwyn, Towyn
Harris	Frederick	E	Hampshire	1840	1911	65	-13	£25	£10,670		Walsingham Abbey,
Leftley	Frederick	E	Suffolk	1864	1930	64	-5	£25	£4,861		Ightham Mote, Sevenoaks
Braithwaite	John William	E	Yorkshire	1865	1936	71	2	£50	£9,863	Ag lab	Neilsland, Hamilton
Findlay	Alexander Watt	S	Aberdeenshire	1870	1932	63	-7	£50	£10,300	Ag lab	Maresfield Park, Uckfield
Lawrence	Harry John	E	Devon	1870	1962	92	23	£50	£2,381	Ag lab	Love Hill, Langley,
Lowe	John Bartholomew H.	E	Surrey	1873	1950	76	9	£50	£4,982	Ag lab	Broadoaks, West Byfleet, Surrey
Boulton	Benjamin R. P.	W	Denbighshire	1861	1945	83	13	£50	£7,054	Boulton	Cuddesdon Palace, Oxford
Batty	Arthur Burn	E	Yorkshire	1881	1945	64	-2	£50	£7,054	Bricklayer	Linton Spring, Wetherby
Bagalay	Ernest John	E	Nottinghamshire	1873	1948	76	8	£50	£5,024	Coachman	Lea Castle, Wolverley,
Kemp	Frederick James	E	Surrey	1879	1953	73	7	£50	£3,770	Coal worker	Selwood Lodge, Stanwell, Middlesex
Etheridge	William	E	Norfolk	1865	1938	73	4	£50	£9,316	Farmer	Ickleford House, Hertfordshire
Hardcastle	James	E	Yorkshire	1871	1943	71	3	£50	£7,183	Gamekeeper	Brettargh Holt, Westmorland

Nationalities

English	81%
Scottish	15%
Welsh	3%
Irish	1%

Father's Occupation

Ag lab	26%
Gardener	16%
Farmer	5%
Gamekeeper	3%
Railway lab	3%
Baker	2%
Carpenter	2%
General labourer	2%
Groom	2%
Joiner	2%
Nurseryman	2%
Sawyer	2%
Shepherd	2%
Stonemason	2%
Other	19%
Not known	10%

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1911	Probate	Modern Equivalent	Father's Occupation	Estate in 1911
Robinson	Wills	E	Westmorland	1861	1947	86	16	£50	£5,419	Gamekeeper	Rampsbeck House, Ullswater
Lumsden	William	E	Lincolnshire	1874	1938	63	-2	£50	£9,316	Gardener	Bloxholm Hall, Lincoln
Courtney	Harry	E	Middlesex	1871	1935	64	-9	£50	£10,060	Railway labourer	Quidenham Hall, Thetford
Barrett	John	E	Worcestershire	1868	1949	80	12	£50	£4,964	Salt maker	Moxhall Park, Erdington
Coutts	David	S	Kincardineshire	1868	1943	75	7	£50	£7,183	Shepherd	Grange Hall, Forres
Fowles	Thomas	E	Gloucestershire	1871	1943	72	4	£50	£7,183	Stone mason	Marcham Park, Abingdon
Prickett	Edward	E	Westmorland	1882	1961	79	13	£50	£2,683	Stone mason	Chillingham Castle, Belford, Northumberland
Arnold	Samuel	E	Dorset	1870	1948	78	10	£50	£5,024		Fontmell Parva, Dorset
Dickson	James	S	Lanarkshire	1866	1937	70	2	£50	£9,497		Wightwick Manor, Wolverhampton
Parkes	Leonard	E	Worcestershire	1850	1933	83	9	£50	£10,570		Wassel Grove, Stourbridge
Jones	Christopher	E	Isle of Wight	1876	1967	91	25	£87	£2,839	Mariner	Wood View, Watford
Harvey	Edward Walter	E	Norfolk	1852	1940	88	15	£101	£14,600	Victualler	Chartley Castle, Stafford
Hope	Robert	E	Staffordshire	1866	1937	70	1	£125	£21,290	Gardener	Bletchington Park, Oxford
MacBeath	Donald	S	Ross-shire	1870	1913	42	-26	£132	£49,410		Netherswell Manor, Stow-on-the-Wold
Duffell	Alfred	E	Surrey	1850	1927	76	-1	£180	£30,800	Ag lab	The Wells, Epsom
Nobes	William	E	Berkshire	1865	1921	55	-14	£202	£30,720	Ag lab	Allington Hall, Grantham
Bausor	Joseph	E	Nottinghamshire	1847	1921	73	-2	£202	£30,720	General labourer	The Rookery, Eccles
Bradbrook	Arthur	E	Suffolk	1868	1931	62	-6	£206	£37,580	Ag lab	Norton Curlieu, Warwick
Pottle	William	E	Hampshire	1861	1939	78	8	£250	£39,790	Gardener	Barrels Hall, Henley-on-Thames
Lott	Albert Howard	E	Worcestershire	1877	1947	70	-1	£260	£25,270	Gardener	Lovat Bank, Newport Pagnall, Bucks
Skill	George	E	Yorkshire	1867	1949	81	13	£281	£25,010	Railway lab	Elm Bank, York
Blencowe	John Thomas	E	Oxfordshire	1873	1955	83	15	£284	£17,680	Farm bailiff	Wilminster Park, Henley on Thames
Brett	William	E	Suffolk	1852	1924	72	-1	£311	£53,620	Ag lab	Gravenhurst, Haywards Heath
Paterson	James	S		1844	1916	73	-4	£340	£103,400		Holmbush, Horsham
King	Matthew	E	Yorkshire	1860	1916	55	-15	£357	£108,600	Farmer	Chesterton Lodge, Bicester
Durbin	Edwin	E	Somerset	1869	1935	66	-2	£366	£66,010	Nurseryman	Henbury Hill, Bristol
Perry	Sidney Herbert	E	Buckinghamshire	1885	1941	56	-9	£404	£55,880	Postmaster	Moreton Manor, Bucks
Ashlee	John Thomas	E	Buckinghamshire	1862	1945	82	8	£411	£51,990	Grocer	Sundorne Castle, Shrewsbury
Lawrence	William	E	Kent	1858	1941	82	13	£415	£57,410	Gardener	St. Julians, Sevenoaks
Hurst	Peter	E	Lancashire	1873	1963	89	22	£420	£17,410	Gardener	Lindley Hall, Nuneaton
Bowers	George William	E	London	1870	1952	82	9	£444	£32,010	Joiner	Harbottle Castle, Rothbury

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1911	Probate	Modern Equivalent	Father's Occupation	Estate in 1911
Stewart	Samuel	S	Kirkcudbrightshire	1853	1914	61	-12	£491	£166,800		Connington Castle, Peterborough
Fraser	John	S	Inverness-shire	1862	1946	84	14	£517	£52,750		Brambridge Park, Eastleigh
Robertson	David Donaldson	S	Perthshire	1872	1942	70	2	£597	£80,380	Ag lab	Asbridge Park, Berkhamstead, Herts
Johnston	Alfred James	S	Angus	1873	1954	81	12	£632	£41,270	Gardener	Knightshayes Court, Tiverton, Devon
Green	John	E	Wiltshire	1833	1914	80	-4	£640	£217,500	Tea dealer	Burton Hill, Malmesbury
Davidson	Roderick	S	Inverness	1867	1953	87	18	£641	£43,330	Shepherd	Polesden Lacey, Dorking
Scrivener	Walter Barnard	E	Norfolk	1873	1949	76	9	£645	£57,420	Baker	Stourton Court, Stourbridge
Morgan	Edward	E	Shropshire	1866	1942	76	7	£705	£94,920	Sawyer	Wassand Hall, Hull
Siviour	Edwin George	E	Surrey	1878	1956	79	12	£786	£44,480	Tobacco dryer	Deane Hill, Canterbury
Gillam	William Charles Sim	E	Dorset	1884	1949	64	0	£805	£71,660	Coal merchant	Ridgehurst, Shenley, Herts
Ash	Thomas	E	Buckinghamshire	1862	1945	82	13	£808	£102,200	Farmer	Swanborne House
Inglefield	Charles Ernest	E	Oxfordshire	1875	1951	75	9	£830	£65,180	Gardener	Warfield Hall, Bracknell
Goddard	Mark	E	Berkshire	1871	1945	74	5	£898	£113,600	Ag lab	Ambarrow, Sandhurst,.
Burrows	Edward	E	Somerset	1867	1953	86	17	£914	£61,780	Gardener	Woolbeding Rectory
Jones	Frederick W.	E	Herefordshire	1857	1942	84	13	£1,034	£139,200	Ag lab	Cromwell House, Mortlake
Carr	William	S	Perthshire	1851	1928	76	3	£1,066	£184,500	Ag lab	Grantully Castle, Aberfeldy,
Nind	William Charles	E	Gloucestershire	1866	1940	73	4	£1,067	£155,800	Farmer	Sunninghill Park, Ascot
Harris	William Charles	E	Gloucestershire	1871	1956	85	17	£1,110	£62,810	Engine fitter	Bricklehampton Hall,
Bayliffe	Harry	E	Yorkshire	1879	1950	71	5	£1,162	£103,800	Worsted Beamer	The Woodlands, Leeds
Newberry	William	E	Surrey	1854	1929	75	2	£1,253	£216,700	Groom	Gorhambury Park
Talbot	Frank	E	Somerset	1867	1927	60	-9	£1,272	£217,600	Glover	Harpsden Court, Henley-on-Thames
Bastin	William Lee	E	Devon	1857	1930	72	1	£1,338	£233,300	Ag lab	Buscot Park, Faringdon
Cruden	William	S	Forfarshire	1858	1936	78	6	£1,510	£267,100	Gardener	Lochinch Castle, Castle
Povey	William	E	Oxfordshire	1867	1951	83	15	£1,558	£122,300	Gardener	Down Grange, Basingstoke
Harris	William	W	Pembrokeshire	1843	1915	71	-6	£1,803	£596,100	Ag lab	Warrens, Lyndhurst, Hants
Dee	Henry	E	Warwickshire	1864	1947	83	14	£1,970	£191,400	Gardener	Boulge Hall, Woodbridge
Cooper	Daniel William	E	Oxfordshire	1870	1951	81	9	£2,014	£158,200	Gardener	Chadacre Hall, Bury St. Edmunds
Metcalfe	Thomas Arthur	E	Lancashire	1868	1948	79	11	£2,088	£188,100	Butler	Grizedale Hall, Hawkshead
Perry	Richard	E	Devon	1862	1938	76	6	£2,091	£349,300	Sawyer	Hurstborne Park, Hampshire
Onslow	Robert George	E	Surrey	1878	1962	84	18	£2,106	£89,920	Nurseryman	Dogmersfield Park, Winchfield

Surname	First Name	Nationality	Birth County	Year of Birth	Year of Death	Age at Death	+/- Actuarial table in 1911	Probate	Modern Equivalent	Father's Occupation	Estate in 1911
Theobald	William	E	Berkshire	1856	1913	56	16	£2,176	£814,500	Carpenter	Hatchford Park, Surrey
Tatton	Henry	E	Staffordshire	1844	1930	83	7	£2,338	£407,600	Gamekeeper	Petton Park, Shrewsbury
McLachlan	Dougald	S	Dumfries	1874	1951	77	10	£2,428	£190,700	Ag lab	Hamsberley Hall, Rowlands Gill
Auton	William James	E	Wiltshire	1875	1931	56	-11	£2,475	£451,500	Gardener	Brougham Hall, Penrith
Lock	Frank	E	Somerset	1872	1959	87	29	£2,521	£127,400	Railway lab	Tile Barn, Woolton Hill, Newbury
Aley	Thomas	E	Essex	1879	1957	78	12	£3,221	£178,200	Ag lab	The Knightons, East Finchley
Fulton	James	I	Tyrone	1864	1938	72	3	£5,190	£867,000	Ag lab	Grimes Dyke, Harrow
Barnes	Nicholas Friend	E	Devon	1865	1950	85	16	£5,984	£534,500	Ag lab	Eaton Park, Cheshire
Herbert	Arthur	E	Gloucestershire	1883	1965	82	16	£18,666	£671,700	Gardener	Leigh Park, Havant
			Averages			**73**	**3**	Average of all gardeners	£98,795		
								% with probate	61.00%		
								Average of those with probate	£157,501		

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