ARCHAEOLOGY OF THE TIBETAN PLATEAU

Dr Anke Hein
School of Archaeology, University of Oxford
Oxford, Oxfordshire
United Kingdom
anke.hein@arch.ox.ac.uk

Introduction

Considering the relatively short history of archaeological research on the Tibetan Plateau, this field is remarkably contested. Major problems that vex the field are a lack of reliable dates, the dearth of archaeological material, the unevenness of research in various parts of the Plateau, and political issues. Nevertheless, recent multi-method research involving archaeology, genetics, linguistics, paleobotany, zooarchaeology, and isotope studies has thrown new light on the question of the early peopling of the Tibetan Plateau, human adaptations to local environment(s), and connections between the Plateau and surrounding regions.

Definition and Background

The term "Tibetan Plateau" (also: Qinghai-Tibet Plateau or Himalayan Plateau) refers to a geographic unit rather than the political entity of the Tibetan Autonomous Region (referred to as "Tibet" in the following) or Greater Tibet as claimed by Tibetan Exile Groups. The Tibetan Plateau encompasses parts of northern India (Ladakh, Lahaul and Spiti, northern Sikkim, parts of Arunachal Pradesh), northeast Kashmir, Bhutan, northern Nepal, parts of western China (Tibet, Qinghai, parts of western Gansu, eastern Sichuan, Northwest Yunnan). The southern border is formed by the inner Himalayan Range; the Kunlun Mountains provide the northern limits beyond which lies the Hexi corridor, the main contact route from China to the West; the East is described by the forested ridges of the foothills of the Qilian and Hengduan Mountain Ranges, and the western border is the Kashmiri Karakoram range.

The Tibetan Plateau is an elevated plateau covering an area of about 2,500,000 km^2 and has an average elevation of over 4,500 masl. The headwaters of most streams in the surrounding areas originate in this plateau and it is also rich in glaciers. Over the millennia, it has been subject to desertification and other changes, making it an important study ground for the impact of climate change. The local environment is highly varied, including deserts, steppes, forests, salt lakes, mountains of up to over 7,000 m in elevation, and a wide range of plant and animal species. The climate in the center of the Plateau is arid, the southern and eastern margins are characterized by grasslands, and on the edges forests abound. There is strong seasonal variability and climate changes have affected the region greatly, but the Plateau itself has also shaped global climate patterns due to its extreme height, influencing especially monsoonal patterns and the jet stream (Lehmkuhl & Haselein 2000).

Around 50,000 BP, the climate was colder and more arid than today and vegetation was sparse. Between 50,000-25,000 BP, temperatures increased, lake levels rose, and the climate became less dry, leading to steppe formation and greater species diversity. Conditions deteriorated during the Last Glacial Maximum (22,000-18,000 BP), starting a process of desiccation that continued into the Holocene (15,000-9,000 BP). Developments varied regionally, the east and south becoming warmer and more humid, leading to forest growths 13,000-10,000 BP. The western part became wetter and warmer only in 10,000-9,500 BP, with another arid period until 3,000 BP with two wet interludes (9,500-8,700 BP, 7,200-6,300 BP). From 6,000 BP, forests were greatly reduced, be it due to diminished rainfalls and lower temperatures, especially from 3,000 BP, or the expansion of agriculture or both (Miehe 1996). Due to the inhospitable conditions, today and probably in the past, the utmost West of the Plateau belongs to the least populated regions of the world. Overall, the Plateau is characterized by much variability and great extremes, leading to varied human responses and thus much variability in the archaeological record over space and time.

Historical Background

The Tibetan Plateau is difficult to work in, not just because of the challenging environment and variety of languages involved, but also for political reasons. The Plateau is unevenly split between different countries (mostly China, India, Nepal, Bhutan), and some areas are under dispute, most importantly Arunachal Pradesh, Kashmir, and to a certain extent Tibet.

Nevertheless, the extreme conditions and breathtaking scenery of the Plateau have attracted adventurers and scientists for centuries. Western explorers of the 1930s and 1940s remarked upon the presence of archaeological sites in various parts of Tibet. Prior to the 1980s, research in Tibet focused on environmental studies and geology. Nevertheless, related surveys of the 1960s and 1970s recorded some archaeological sites as well. While the national archaeological surveys of 1956 and 1981 covered all other Chinese provinces, it was only in 1984-1992 that a systematic survey of Tibet was conducted. The results appeared in 2010 in the series *Atlas of Chinese Cultural Relics* 中国文物地图集 (Guojia 2010), recording more Buddhist temples and historical buildings than prehistoric or early historic settlements or grave sites. The most recent Nationwide Cultural Relics Survey 第三次全国文物普查 included Tibet and lead to the discovery of many new sites, but the results are as as yet unpublished.

Archaeology in Tibet is administered by the Tibetan Bureau of Cultural Relics 西藏自治区文物局 and since 1999 also facilitated by the Tibet Museum in Lhasa, but field research is largely conducted by other institutions, such as the Academy of Social Sciences 社会科学院, Sichuan University which has a designated Center for Tibetan Studies 四川大学中国藏学研究所, Peking University, and individual researchers from other institutions, always in cooperation with the Tibetan units themselves.

The exploration of prehistoric monuments in India started in the 19th century, officially with the establishment in 1861 of the Archaeological Survey of India (ASI), which exists until the present day as part of the Ministry of Culture administering monuments and archaeological sites (ASI 2018). In 1895, the ASI consisted of five so-called circles, regional units headed by a superintending archaeologist; now there are 27 circles, four of them covering parts of the Plateau. Archaeological research in these northern territories is limited, mostly due to the volatile situation on the border and territorial disputes but also because the harsh environment makes fieldwork difficult.

Research in Nepal is likewise hampered by the harsh environment and political situation, but fieldwork at Buddhist sites there commenced in 1896. In 1953, the Department of Archaeology (DOA) was established for cultural heritage protection and archaeological work. Most work has focused on the Khatmandu Valley, the most thriving part of Nepal located on the northern foothills of the Tibetan Plateau, and most discussions revolve around four topics: the life of Buddha, historical buildings, Paleolithic populations in the lower-elevation areas of Nepal, and connections with other parts of South Asia. Since the 1980s, high-elevation sites in Mustang have been explored in international multi-disciplinary projects (e.g., a Sino-Japanese survey in 1986; excavations in Muktinath in the late 1980s and the “High Mountain Archaeology Project” 1992-1998 by Nepali-German teams; and a long-term project in Samdzong by Mark Aldenderfer and colleagues focusing on the peopling of the Plateau). Taking advantage of the good preservation, much palaeobotanical research has been conducted on remains from 1,000 BC to AD 700. Another area of research are the petroglyphs spanning a wide range of dates from the late Holocene to late historic period, studied especially by German teams.

Until recently, archaeological research in Bhutan was not permitted. However, in 2005, the former Prime Minister, supported by the king, initiated the Bhutan-Swiss Archaeology Project to record and preserve cultural heritage and establish the field of archaeology in Bhutan. So far, most research has concentrated on Buddhist buildings and other above-ground monuments of the 16th to 20th century, but it is to be hoped that in the coming years some insights will be gained into earlier local developments.

Until fairly recently, there was hardly any contact between scholars from the different countries occupying parts of the Plateau. A first step toward more international collaboration was taken in 2011 when Sichuan University, sponsored by the Harvard-Yenching Institute, organized an international conference on the Prehistory of the Tibetan Plateau in Chengdu, inviting over a hundred scholars from all countries laying claim to parts of the Plateau (mostly China but also Nepal, India, and Bhutan) and a few foreign scholars from Belgium, Germany, Korea, Taiwan, and the USA (Belleza 2018: Oct. 2011). The 2011 conference raised awareness of research across the borders and established contacts that led to the exchange of publications and unpublished information. Some of the fruits of this exchange can be seen in the 2016 special issue of *Archaeological Research in Asia* which focuses on the Tibetan Plateau.

Key Issues and Current Debates

First Peopling and Human Adaptation

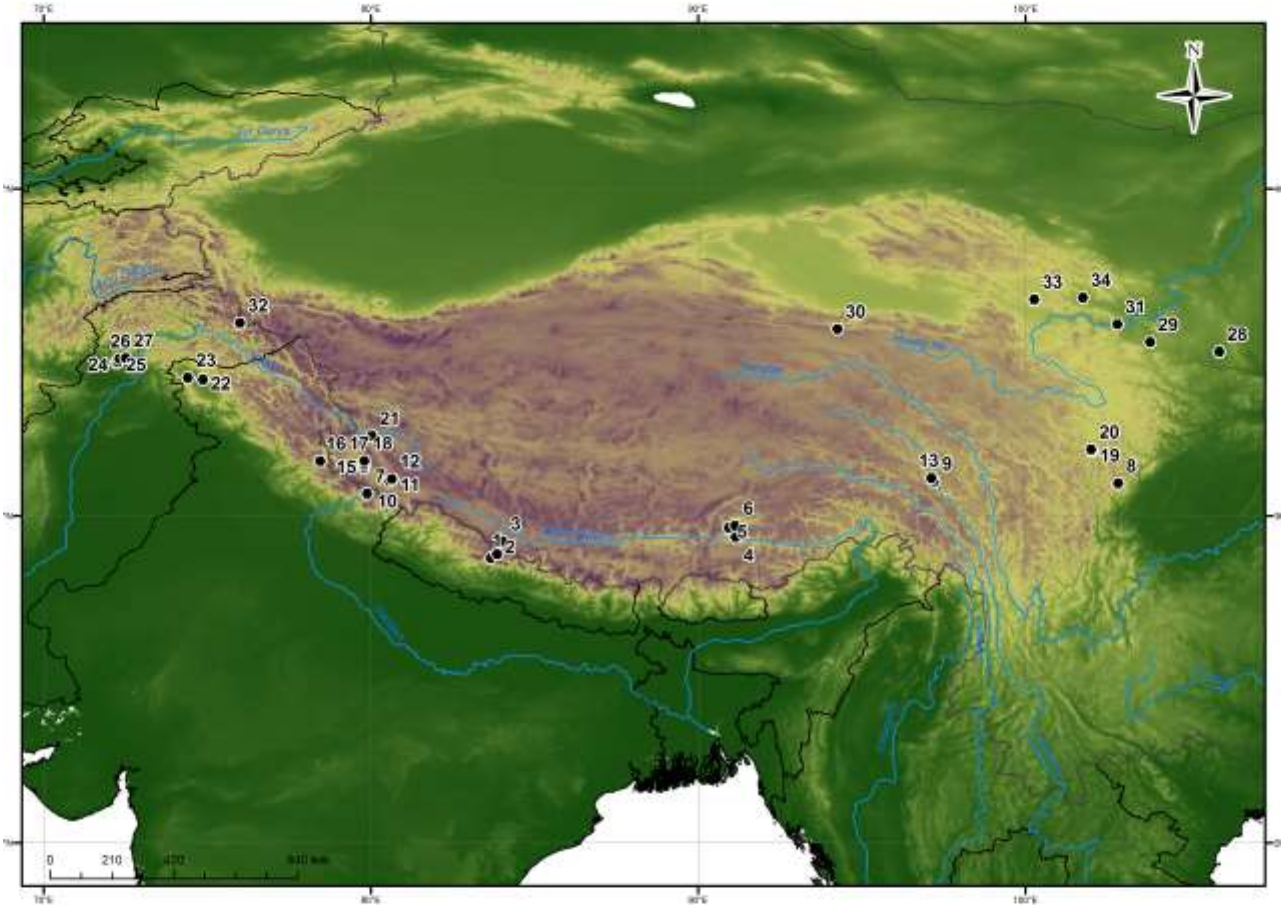

Fig. 1. Map of sites mentioned in the text: 1. Chokhopani, 2. Mebrak, 3. Samdzong, 4. Phrang Mgo, 5. Chusang, 6. Chugong, 7. Malari, 8. Yingpanshan, 9. Kharub, 10. Kyunglung, 11. Mkhar gdong, 12. Gurugyam, 13. Xiao'enda, 14. Chufthag, 15. Gebuaisailu, 16. Kanam, 17. Sasongtang, 18. Gelintang, 19. Baishe, 20. Konglong, 21. Dingzhong Zhiuzhuzi, 22. Burzahom, 23. Kanishkapura, 24. Bir-Kot-Ghwandai, 25. Ghaligai, 26. Aligrama, 27. Kalaloderay, 28. Dadiwan, 29. Majiayao, 30. Xidatan 2, 31. Lajia, 32. Gufkral, 33. Jiangxigou 2, 34. Taojiazhai.

At present, the most contested questions in the archaeology of the Tibetan Plateau revolve around the when, how, who, and why of its peopling. No homo fossils have been found on the Plateau. Absolute dates gained from ostracods on the central Qaidam Basin (c. 3,1000 masl) have been dated to 33,000 BP, but some scholars doubt the early date, instead suggesting an occupation from 22,000 BP at the earliest. Human hand and foot-prints found at Chusang (4,200 masl, NW of Lhasa; Fig. 1, 6) have been dated to 21,700-20,600 BP, but no stone tools or other human-made artifacts have been found at the site. The Dang Valley in Nepal (c. 2,500 masl) has sites with early Acheulean stone tool types; similar stone tools dating to 70,000-40,000 BP have been found in Pakistan but at lower elevations (Darnal 2016). A considerable number of sites from various parts of the Plateau associated with core and flake tools have been assigned to the Palaeolithic on typological grounds, suggesting dates of around 30,000-23,00 BP, but direct scientific dates are still lacking for most of these sites. For Xidatan 2, located at 4,300 masl in Qinghai (Fig. 1, 30), recent radiocarbon and luminescence dates have shown that the stone tool assemblages described as late Upper Palaelithic in character date to only 9,200-6,400 BP (Brantingham et al. 2013).

Another point of discussion is the direction of human migration onto the Plateau. Using mitochondrial DNA, Qian et al. (2000) suggest a north/central Asian origin of parts of the genetic pool of modern-day Tibetans but without suggesting any dates. Recently, the discussion has taken a political turn, with several scholars proposing that the ancestors of present-day Tibetans had moved from the Yellow River to the Plateau around 10,000 BP (Su et al. 2000), and that a clear genetic split between the Han Chinese and Tibetans emerged only after 2,750 BP (Yi et al. 2010). The argument for a unidirectional migration from Gansu is based on DNA, linguistic, and archaeological evidence. Su argues that a "Proto-Chinese" group moved into the Yellow River Basin between 40,000-20,000 BP, developing genetically and linguistically into "Proto-Sino-Tibetan" and moving west in 10,000 BP where around 6,000 BP they became "Proto-Tibeto-Burmans". Van Driem (2002) equates them with the archaeological remains of the Dadiwan agriculturalists in Gansu (Fig. 1, 28) which he sees as "Northern Tibeto-Burmese speakers" who brought cord-marked pottery and polished stone tools, first giving rise to the Majiayao Neolithic in Gansu and eastern Qinghai and moving further onto the Plateau (Fig. 1, 29). Diverging from Su et al., who see all human migration onto the Plateau as coming from the Yellow Rive via Gansu, van Driem sees Kashmir as a second important source of movement onto the Plateau, albeit mostly into its western reaches and its southern rim.

Major problems here are the nature of the evidence and the underlying assumptions. From the archaeological and linguistic point of view, the notion that DNA, language, and ceramic assemblages come in one unified bundle is highly problematic. Furthermore, the model does not explore the reasons for these suggested movements, details of the routes taken, or interactions with people already living on the Plateau. Su et al. and van Driem furthermore ignore the evidence for the presence of Central Asian genes on the Plateau. Analysis on graves from the central Plateau or surrounding areas in statistically significant numbers is likewise lacking (Aldenderfer 2011).

In their argument for a recent genetic split of Tibetans and Han, Yi et al. focus on data from the Northeast with lower-elevation sites such as Lajia (4,000-3,800 BP; c. 1,800 masl; Fig. 1, 31) and Taojiazhai (1,900-1,700 BP; 2,330 masl, Fig. 1, 34) located at the edge of the Plateau and characterized by assemblages showing close connection to the neighboring Yellow River Valley. However, recent genetic data suggests a long-term genetic stability of the inhabitants of Nepal at least from 3,000 BP to the present, as shown by the greater affinity of human remains from Upper Mustang dating between 3,150-1,250 BP (Chokhopani, Mebrak, and Samdzong, Fig. 1, 1, 2, 3) to modern Tibetans and Sherpa than to low-altitude East Asian populations (Jeong et al. 2016). Further research on DNA from various periods and parts of the Plateau and surrounding areas will be needed to answer the question of the genetic origin of the people inhabiting the Plateau now and in the past.

Genetic evidence is also of interest for discussions concerning physical adaptations to high-altitude environments. Humans are not naturally suited for hypoxia but have to adapt to it. The exact form of this adaptation seems to differ, as comparative studies between the Tibetan Plateau, the Andes, and Ethiopia suggest. The reasons for those differences are unclear: they many depend on the genetic makeup prior to the movement to higher altitudes, elevation, and/or time passed since the initial move.

Based on these genetic processes combined with the archaeological evidence, Aldenderfer (2007) suggests that the movement to higher levels of the Plateau occurred prior to 10,000 BP. This date as well as the sequence and origin of these human movements are contested. Brantingham and colleagues (Brantingham et al. 2013) developed a three-step-model: 1. initial stage of occupation below 3,000 masl by mobile foragers moving higher from the Northeast around 30,000-25,000 BP; 2. movement of low-elevation foragers onto the mid-elevation areas (3,000-4,000 masl), pushed higher by agriculturalists after 25,000 BP; 3. full-scale year-round occupation at elevations over 4,000 masl on the central Tibetan Plateau after 10,000 BP with a system of movement between middle- and high-elevation areas by pastoralists.

Chen et al. (2015) model the advent of agriculture to the Plateau in a similar three-step-process: 1. pre-5,200 cal BP occasional forays of hunter-gatherers onto the Plateau; 2. 5,200-3,600 cal. BP, gradual movement of millet farmers from the Yellow River up to 2,500 m; 3. arrival of barley and wheat allowing agriculturalists to move over 4,000 masl even under a colder and drier climate.

Both Brantingham et al. (2013) and Chen et al. (2015) have been criticized for their assumption of a unidirectional movement from the northeastern lowlands to the uplands, their disregard for the contribution of local hunter-gatherers, and their extrapolation from a small number of sites in the Northeast to the whole Plateau (Lü 2016). A new set of radiocarbon dates from Chusang at 4,270 masl on the central Plateau suggests that the site may have been part of permanent pre-agricultural occupation around 8,400-7,400 BP (Meyer et al. 2017) or even 20,000 BP (Zhang & Li 2017).

The Chen et al. model has furthermore been criticized for exaggerating the altitudes at which agriculture would have been possible: d'Alpoim Guedes et al. (2015) use climatic modelling to argue that millet could not have been grown above 4,000 masl at certain sites as the required number of growing degree days at minimum temperature could not have been reached. Though it might have been possible to grow millet or barley at some sites, the risk of failure would have been high, so they suggest that barley and millet found in high-altitude sites may have been traded in. For later periods, they suggest that it was only the advent of wheat and barley that allowed for settlement at higher altitudes. In response, Dong et al. (2015) point out that historical records reflect the planting of barley at over 4,200 masl since the early 20th century. Lü (2016) points to the presence of considerable amounts of millets at the site of Kharub (Karub or Karuo in Chinese; 5,200-3,500 BP; Fig. 1, 9) in eastern Tibet, which he sees as a strong indicator that these were grown locally by settled agriculturalists. He furthermore questions the suggestion that permanent settlement was possible only after the advent of wheat in 3,600 BP, as evidence from sites such as Phrang mgo (Changguogou in Chinese; Fig. 1, 4) in Gonggar, Kharub, and Xiao'enda (Fig. 1, 13) suggest permanent settlement already between 5,000-3,600 BP. Lü argues that the models suggested so far may apply to the Northeast while in the Southeast hunter-gatherer subsistence combined with incipient agriculture was practiced as early as 5,200 BP, with increasing reliance on millets until wheat agriculture entered around 3,600 cal. BP, allowing local populations to withstand the sudden climate cooling.

The main issue in this discussion lies in the small number and uneven distribution of excavated sites, combined with a lack of an established chronology, and a disagreement on methods of modelling. Another issue is the great variability in ecological niches and human adaptations across the Plateau and continued uncertainties about overall climate patterns in prehistoric and early historic periods, combined with the tendency of scholars to claim that their results won from a limited number of sites apply to the whole Plateau. Another issue not sufficiently explored is the human and cultural component, the choice of specific crops over others, or the potential special use of certain crops in ritual context rather than subsistence, influencing demands on planting success and the amount of crops.

Local Cultures and Shared Traditions

From the material culture point of view, for the Neolithic period it is clear that there are a number of local traditions in various parts of the Plateau. The most well-researched Neolithic sites on the Plateau are Kharub (3,100 masl, eastern Tibet), and Chugong (Qugong in Chinese, Lhasa, c. 4,000-3,000 BP; 3,680 masl; Fig. 1, 6). Kharub is characterized by a considerable number of houses, large amounts of ceramics, stone and bone tools, the tool assemblages showing similarity to assemblages at lower-elevation sites in western Sichuan. The pottery resembles finds from Majiayao in Gansu, but the nature of this connection is debated. There is evidence for agriculture but also for hunting and in the later phases probably herding and possibly pig domestication. As there are several sites of similar characteristics in eastern Tibet, they are now seen as part of a Kharub culture.

Similarly, Chugong is the type site of the Chugong culture, a phenomenon associated with domesticated sheep, pig, and yak, burnished and often painted fine ware, as well as grinding stones, bone tools, and bronze arrows. The site is interpreted as a local phenomenon loosely connected with Kharub but of later date. Kharub is seen as connected with Majiayao-type sites in lower-elevations Qinghai and Gansu. The connection with lower-elevation Yangshao-or Majiayao-type sites is clear for Jiangxigou 2 (Fig. 1, 33), located at 3,310 masl in Qinghai and characterized by thin cord-marked pottery (from c. 6,900 cal BP) and millet use (from c. 5,500 cal. BP). The ceramic assemblages at the lower-elevation sites in Qinghai are either attributed to Yangshao (5,000-3,400 BC) or Majiayao (3,400-2,800 BC) influence, but this is likewise a point of contention (Aldenderfer & Zhang 2004).

On the northern Plateau, on highlands of the Qaidam Basin, he earliest sites at 2,700-4,700 masl date significantly later (3,400-2,450 cal BP) and show evidence of barley, wheat, and broomcorn millet growing as well as domestication of sheep, cattle, yak, dog, and horse. Here, too, connections with lower-elevation areas of Gansu have been suggested, in this case with Kayue (c. 900-600 BC), especially in the simple metal axes and knives and to a lesser extend in ceramic assemblages, but the differences are likewise pronounced, suggesting both outside connections and local developments.

A recent survey in Ngawa Prefecture, Southwest Sichuan, has shown an interplay between outside connections and local developments also on the eastern rim of the Plateau (d'Alpoim Guedes & Hein 2018). The earliest remains found there are settlement sites dating to 3,400-2,000 cal. BC which are exclusively located on the bottom of river valley (below 2,600 masl). They have small house features, polished stone tools, and cord-marked as well as small amounts of painted pottery with likely Yangshao or Majiayao connection (e.g., Baishe, Konglong, Yingpanshan; Fig. 1, 8, 19, 20) combined with evidence for an agricultural way of life (millet, domesticated pig). Medium elevations (2,600-2,900 masl) hold stone-cist graves dating to 1,450-800 ca. BC and lacking any identifiable associated settlement features. High elevations over 3,000 masl are scattered with fragmented pottery sherds dating to 500-1,500 cal. BC with no clear settlement layers. Previously, higher altitudes had been excluded from surveys, working under the assumption that people would avoid such high elevations – an assumption which has now been disproven at least for parts of Barkam. For decades, it has been clear that a dense network of interaction ran along the whole eastern rim of the Plateau, connecting communities living at elevations of c. 1,500-2,800 masl from Qinghai to Yunnan and probably beyond into the Steppe and Central Asia on the one end and Southeast Asia on the other, partially also connecting with lower-elevation locales at least in Qinghai and Gansu (Hein 2014). More fieldwork is needed to assess connections with higher altitude areas of the Plateau.

For the western part of the Plateau, evidence for permanent agricultural settlement is lacking; what can be seen instead are surface scatters of stone tools, both microliths and polished stone tools, sometimes with heavily fragmented pottery, at altitudes of sometimes over 4,000 masl (e.g., at Dingzhong Zhuizhuzi in Gar County, Burzahom in Kashmir; Fig. 1, 21, 22). Stone-tool assemblages usually associated with agriculture have been found across the southern and western rim of the Plateau from western Nepal to Sikkim and have been dated to 1,000-200 BC, though only based on typology (Darnal 2016). In Nepal, Mustang holds sites dating from around 1,000 BC that contain evidence for barley and buckwheat, while wheat, millet, and peas appeared from around 400 BC (Knörzer 2000).

Kashmir has evidence of much earlier human habitation, albeit in its southern reaches. In Ladakh, part of Jammu and Kashmir, Neolithic sites have been found at over 3,000 masl and in great number (e.g., Kiari and Gaik), but excavations so far have been limited. An aceramic Neolithic appears around 2,700 BC. The best-researched among the sites located between 1,600-1,800 masl are Burzahom (3,000-1,000 BC), Gufkral (aceramic Neolithic 3rd mill BC, megalithic period 2nd mill. BC, and historic period; Fig. 1, 32), and Kanishkapura/Kanispur (aceramic phase 3rd-2nd mill. BC; ceramic Neolithic 2nd-1st mill. BC; and historic period; Fig. 1, 23), all close together on the foot of the Himalayas (Yatoo 2012). Since the 1980s, several scholars have remarked how different the material from these sites is compared to lower-elevation sites in northern India, while there are notable similarities with contemporary sites in Swat, Pakistan, (esp. Aligrama, Bir-Kot-Ghwandai, Ghaligai, Kalaloderay; around 1,900 masl; c. 3,000-500 BC; Fig. 1, 24, 25, 26, 27) (Dani & Masson 1992), but also around Lhasa (Phrang mgo in Gonggar; Yinba in Nedong) and even on the eastern rim of the Plateau at Kharub.

The main connections are the perforated stone knives interpreted as harvesting tools that appear in many sites in eastern Tibet, around Kashmir, the Swat Valley, and Sikkim, associated cultivars such as barley, wheat, millet, lentils, and peas, crops often seen as part of the “Near Eastern package”. Lü (2014) argues that, considering the dates of the sites in question, millet must have reached the Lhasa region coming from eastern Tibet which in turn may have received the Near Eastern crop from groups in the upper Yellow River Valley (i.e., Majiayao). Buckwheat, on the other hand, may first have been cultivated on the Plateau, probably before 6,000 BP, be it on its eastern rim or elsewhere. Other evidence for the connection is bone hairpins and jade beads of similar shapes. The ceramic assemblages from eastern Tibet, however, differ markedly from those in the other regions. The assemblages at Chugong and related areas show closer similarities with finds in far-away Kashmir than with near-by Kharub. The nature of these connections between the different regions is unclear, as are the routes that connected them.

It is also remarkable that the stone knives appear in Sikkim as well as Kashmir, but Nepal, located between the two of them, seems to have been “skipped”. Most high-elevation material from Nepal known at the present time comes from Mustang (c. 2,500 masl), an area that – in spite of its remoteness – seems to have been integrated into long-distance exchange networks from the mid-1st millennium BC at the latest. In Mebrak (c. 400 BC – AD 100), new staples appear such as wheat, millet, rice, and peas for local planting as well as imported plants and plant products such as bamboo, hemp, and lentils (Knörzer 2000). It has been suggested that the earliest inhabitants of Upper Mustang may have come from the lowlands of northern India in the prehistoric period bringing those crops with them, (Aldenderfer & Eng 2016), but later migrants may have come from the western Plateau (Lü 2016).

Burial Traditions

Much of the discussion of burial traditions on the Tibetan Plateau hinges on poorly-dated burial evidence. Huo (1995) proposed a typology of stone-construction graves, earth-pit graves, stone-mound and earth-mound graves. He sees the first long phase from the late Neolithic to the 6th c. BC,as characterized by earth-pit graves and graves with various amounts of stone installations and very few burial goods. In Huo’s second phase, stone-cist graves containing double-handled vessels and small stone-mounds then become more common from around the 5th c. BC. The third phase is characterized by mounded tombs containing ceramics, stone, bone, and metal items showing close connections to Xinjiang and dating to the 1st-6th c. AD. It is difficult to reach a coherent typochronology for the stone-construction tombs, in particular, due to the lack of absolute dates and the vast range of different grave forms. Furthermore, graves with various amounts of stone installations have been observed over large parts of the mountains of western China and beyond, ranging in date from the 2nd millennium BC to the 1st millennium AD and associated with a variety of object types and interment practices.

Focusing on reliably-dated graves, Aldenderfer (2013) distinguishes two customs: 1. below-ground structures appearing from the 2nd millennium BC to the 7th c. AD and occurring over central Tibet, Upper Mustang, the southern Flank of the Himalayas, and the westernmost Plateau; 2. grave mounds appearing from around 500 BC and in increasing number over the 1st millennium AD, be it due to outside stimulation or as a local development. Aldenderfer interprets the latter as signs of growing social complexity, expressions of control over landscape and people, culminating in the tomb of the eights king of the Yarlung Dynasty (c. AD 600). All of these graves differ markedly from mortuary evidence from southern Gansu, challenging the common assumption that new developments on the Plateau mostly originated from the upper Yellow River.

The earliest below-ground burials on the Tibetan Plateau proper are known from Chugong in central Tibet, dating to 1,7000 BC. They have various amounts of stone installations, contain either primary flexed or more often secondary interments, but hardly any objects apart from a few ceramics and in one of the later graves (c. 800-500 BC) a bronze mirror pointing to Central Asian connections (Huo 1995). The tombs of Upper Mustang in Nepal – represented by Chokhopani (c. 1,200-450 BC), Mebrak (400 BC – AD 100), and Samdzong (c. AD 200-700) – show close similarities with shaft tombs in the far western part of the Plateau and neighboring parts of high-elevation India, all of them showing evidence for secondary burial and at Samdzong de-fleshing, a curious custom not seen in other parts of the Plateau and potentially related to Zoroastrian beliefs (Aldenderfer & Eng 206) and/or for-runners of sky burial practices emerging around the 9th c. AD.

In contrast to the Chugong finds, both contemporary and later graves in Nepal and the western Plateau are richly equipped. The Chokhopani graves held metal and tooth ornaments, stone tools, ceramics, and copper sheets potentially related to northern India. The Mebrak graves held glass and carnelian beads of South or Southeast Asian origin, bronze ornaments, textiles, wooden items, and sheep and goat bones. Even more animal remains (sheep, goat, caprids, bovids, horse) were found in the Samdzong graves together with metal ornaments, glass beads of Iranian/Sassanian or South Indian/Southeast Asian origin, vessels of bamboo or wood, silk, and in one grave a gold-and-silver mask, finds bearing close resemblance to the assemblages of contemporary graves in the extreme west of the Plateau (e.g., Mkhar gdong Chufthat/Quta, Gelintang, Gurugyam, Fig. 1, 11, 12, 14, 18) and in northern India (e.g., Malari, Kanam, all c. 500-100 BC; Fig. 1, 7, 16) as well as Xinjiang (Aldenderfer 2013).

For the westernmost part of the Plateau, textual evidence attests to the presence of a number of groups along the Yarlung Tsangpo prior to the emergence of the Zhangzhung polity (500 BC – AD 625). In the 1st c. BC, another political entity arose in the Yarlung Valley, the Yarlung Kingdom or Tubo/Tufan Dynasty. Yarlung and Zhanghuang fought over dominance over the region until the founding of the Tibetan Empire under Songtsen Gampo (AD 604-650). There is a plethora of evidence for this later period, both in Chinese and local text and religious architecture, but there is very little archaeological evidence for the period from c. 1,000 BC to AD 500. Bellezza collected much material for that period through extensive travels, recording hundreds of fortresses, residential and religious building, standing stones, and tombs, unfortunately without being able to date them reliably. Excavations at the Dindun settlement site and the grave sites of Gebuaisailu and Sasongtang (Fig. 1, 14, 17) provided first radiocarbon dates in western Tibet falling into the Zhangzhung period, c. 400-100 BC (Aldenderfer & Zhang 2004). These sties held various types of stone graves, stone residential structures, and a standing stone. The function and meaning of such stones are debated, especially in their potential connection with deer stones in Central Asia and Mongolia, and similarities to megalithic structures in other parts of the world (e.g., Bellezza 2018). Aldenderfer and Zhang (2004) argue that the Central Asian standing stones date to c. 2,000 BC while those on the Plateau seem to be much younger and look different; the deer stones in Mongolia, on the other hand, are closer in date (c. 1,000 BC – AD 500) as well as form and decoration, potential connections that need to be explored further.

The probable center of Zhangzhung, Kyunglung (also: Khyunglung, Qulong, or Qulongcun; Fig. 1, 10) and other residential and mortuary sites in the vicinity are undergoing investigation. In 2012-2014, two cemeteries in Ngari Prefecture dating to the 2nd c BC and the 3rd c. AD were excavated. Both sites revealed barley seeds and bones of cattle, sheep/goat and horse, indicating a mixed economy for both locales. Burial customs and contents differ markedly between the two sites. The four cave burials excavated at Chuvthag (Quta; 3,710 masl) in the extreme West of the Plateau resemble graves at other sites in Zanda both in construction and in the high-quality pottery,. The excavators argue that these wares resemblance finds in northern India and Ladakh, showing the overall integration of the various parts of the western Plateau now divided by national borders (Tong et al. 2015). The three stone-lined rectangular cave burials containing wooden coffins found at Gurugyam (Guru Jiamu; 4,300 masl) held only few pottery vessels showing some similarity to those from Chuvthag, as well as an iron sword, iron horse bits and arrowheads, bone ornaments, gilt silver ornaments, and glass beads. They have none of the riches found in the Chuvthag cemeteries such as a gold mask, silk items, intricately carved wooden ornaments and containers, complex and numerous metal ornaments and weapons, basketry, and beads made of agate and job's tear seeds. Gold masks have been found in a few other graves on the Plateau (e.g., in Mustang) and in the northern steppe, and the steppe-style handled bronze mirror, wooden-hilted iron dagger, and wooden and basketry items show close ties to Xinjiang and Central Asia, while other items point to connections with Ladhak, similar to the pottery. The beads likewise point to South Asia and the Indian Ocean, reflecting the integration of Chuvthag into a far-flung exchange network in spite of its remoteness. That Gurugyam, located close to the Zhangzhung capital of Kyunglung, should not have been integrated into that network seems strange, but this may simply be a matter of misrepresentation, considering the small number of graves excavated.

Conclusion

Overall, at present genetic as well as historical, archaeological, and linguistic evidence suggest that there were many instances of small- and large-scale movements onto the Tibetan Plateau and between its various parts, partially due to climate change, political instability, wars, or within trade networks. This led to a staggering number of different archaeological phenomena in various parts of the Plateau that are simultaneously uniquely local and closely connected to the outside world.

International Perspectives

As discussed above, the archaeology of the Tibetan Plateau is inevitably an international affair because parts of the Plateau are claimed by a number of countries. Participation in excavations has been difficult for foreigners, especially in Tibet itself. Foreigners are sometimes involved in laboratory analysis and the archaeologists of Sichuan University, especially, have granted foreign scholars access to material from Tibet. Research in collaboration with the Academy of Sciences has also been possible focusing on early periods rather than the Academy of Social Sciences usually in charge of archaeological explorations (Chinese-American projects, e.g., by P. Jeff Brantingham, Richard E. Hughes, David B. Madsen, John W. Olsen, David E. Rhode). Excavations involving foreigners are occasionally possible on the eastern rim of the Plateau in Sichuan (Jade d'Alpoim Guedes and Anke Hein). Non-Chinese areas of the Plateau have seen foreign research involvement, especially Nepal (e.g., Sino-Japanese, German, and American Teams, esp. Mark Aldenderfer). Most foreign scholars interested in the Plateau, however, either have to repair to Central Asia or lower-elevation regions in Gansu that are politically not contested, or rely on published literature. Nevertheless, discussions on the date and direction of the peopling of the Plateau and the movement of agriculture onto the Plateau mainly take place in English and with much involvement of foreign scholars.

Collaboration and indeed communication between scholars from different political entities occupying part of the Tibetan Plateau is rare, partially because of language barriers. The international conference on the Prehistory of the Tibetan Plateau held at Sichuan University in 2011 made great strides toward solving this issue. At the time, hardly anything on the archaeology of the Tibetan Plateau had been published in languages other than that of the country on whose territory the finds were made, but since the 2011 conference a large number of publications in English have appeared, many of them co-authored by scholars from a number of countries. Most of these collaborations – like most research published in English – focus on the prehistoric period, especially the Paleolithic and early Neolithic, discussing timing of the peopling of the Plateau and human adaptation to the local environment, as reflected in a recent special issue of the journal *Archaeological Research in Asia* (2016 issue 5).

Future Directions

In spite of the recent spike in interest in the Tibetan Plateau, it is difficult to predict where the field is headed. The large number of excavations, surveys, and archaeological discoveries on various parts of the Plateau over recent decades, the increasing number of available absolute dates, the considerable amount of research under way, and the improved possibilities through advancements in genetic research and various forms of scientific analysis suggest that the upcoming years will greatly enlarge the amount of material available, helping us to push forward our understandings of the prehistory and early history of the Plateau. At the same time, the increasingly tight governmental control of research in China and the limitations imposed on foreign involvement in such undertakings as well as the increasing pressure on Chinese scholars to focus on specific state-mandated topics may slow progress. Nevertheless, research in previously neglected areas has recently seen an increase in fieldwork activity such as in western Tibet, eastern India, Nepal, and recently also Bhutan. This can be expected to add much new data in upcoming years, hopefully leading to a better grasp of the chronology of sites and events throughout the Plateau. Given the current trajectory, it can be expected that the great diversity of ecological niches, forms of their exploitation, range of outside contacts, and various cultural expressions throughout space and time will become increasingly more apparent. With such progress, the old tendencies to propose mono-causal, mono-directional models based on observations made at a few sites in a single region of the Plateau will hopefully make way for complex, multi-causal models that initially limit their explanation to small, well-researched areas and groups of material with good chronological control, and only then engage in multi-regional comparisons.

Cross-References

→ The Archaeological Survey of India

→ India: Historical Archaeology

→ Early Buddhist Sites in Nepal

→ Altitude Environments in Archaeology

→ Agriculture in Early China

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