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C.F.I. OCCASIONAL PAPERS

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NO. 28

INTERNATIONAL WORKING GROUP ON
DETERMINATION OF AGE AND
GROWTH RATE IN TROPICAL TREES

ADDRESS LIST & SUBJECT CATEGORIES

by

J. BURLEY

1985

DEPARTMENT OF FORESTRY
COMMONWEALTH FORESTRY INSTITUTE
UNIVERSITY OF OXFORD



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Introduction

In 1980 a workshop sponsored by the US National Academy of Sciences was held at Harvard Forest, Petersham, Massachusetts, USA, on "Determination of age and growth rate in tropical trees : new directions for research". This gave rise, inter alia, to Bulletin No 94 of the Yale University School of Forestry and Environmental Studies "Age and growth rate of tropical trees", edited by F.H. Bormann and G. Berlyn; the table of contents of this Bulletin is shown as Annex 1 to this report.

In view of the rapid destruction of tropical forest and the urgent need to evaluate ecological and managerial systems for its maintenance, it is essential to develop techniques for age determination in tropical trees. The Bulletin reviewed the published information and included the expertise of the 27 scientists from 12 countries participating in the workshop. It was clear, however, that other researchers elsewhere had active interests and a small committee was established to locate these and classify them by the techniques they were using. Questionnaires were circulated in English, French, Portuguese and Spanish to some 1000 addresses. The questionnaires are included in Annex 2 and the members of the committee in Annex 3.

The present report lists 77 workers who responded up to the end of 1984. In the period since the workshop new techniques may have emerged and additional scientists may have begun research on tropical trees. However, this list provides a starting point and it is proposed to hand it over to the coordinator of Division 5 of the International Union of Forestry Research Organisations (Dr R.L. Youngs, Forest Products Laboratory, Madison, Wisconsin, USA) with a view to determining the interest in forming a Working Party within Subject Group S5.01 (Wood quality).

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF ACTIVE RESEARCHERS

DR P T ALVIM
CENTRO DE PESQUISAS DO CACAU
CEPLAC
45600 ITABUNA
BAHIA
BRAZIL

IR N R DE GRAAF
CELOS
PO BOX 1914
PARAMARIBO
SURINAM

MR J E ASH
BIOGEOGRAPHY DEPT
AUSTRALIAN NATIONAL UNIVERSITY
CANBERRA
AUSTRALIA 2600

SR H DE SALAZAR R
DEPT DE ANATOMIA VEGETAL
COMISION NAC. DE FRUTICULTURA
KM 3.5, APDO. POST. 375
XALAPA, VER.,
MEXICO

DR R K BAMBER
FORESTRY COMMISSION OF N.S.W
PO BOX 100
BEECROFT 2119
AUSTRALIA

DR M P DENNE
DEPT OF FORESTRY & WOOD SCIENCE
UNIVERSITY COLLEGE OF N.WALES
BANGOR
GWYNEDD LL57 2UW
U.K.

MR A L K BENTUM
FOREST PRODUCTS RESEARCH INST.
UNIVERSITY P.O. BOX 63
U.S.T.
KUMASI
GHANA

MR L A DONALDSON
WOOD QUALITY SECTION
FOREST PRODUCTS DIVISION
FOREST RESEARCH INSTITUTE
PRIVATE BAG, ROTORUA
NEW ZEALAND

MR J A BONINSEGNA
INSTITUTO ARGENTINO DE NIVOLOGIA
Y GLACIOLOGIA - (IANIGLA)
CASILLA DE CORREO 330
5500. MENDOZA
ARGENTINA

DR E F DOUGAL
DEPT OF FORESTRY, WILDLIFE AND
FISHERIES
UNIVERSITY OF TENNESSEE
PO BOX 1071, KNOXVILLE
TENNESSEE 37901, U.S.A.

DR H J BRAUN
INSTITUT FUR FORSTBOTANIK UND
HOLZBIOLOGIE DER UNIVERSITAT
FREIBURG
BERTOLDSTRASSE 17
WEST GERMANY

MR N C DUKE
AUSTRALIAN INSTITUTE OF MARINE
SCIENCE
PMB 3, M.S.O., TOWNSVILLE
QUEENSLAND 4810
AUSTRALIA

SA L A CABRERA
INSTITUTO DE BIOLOGIA
CIUDAD UNIVERSITARIA, COYOACAN
APARTADO POSTAL 70-233
04510 MEXICO
D.F. MEXICO

PROF DR D ECKSTEIN
UNIVERSITAT HAMBURG
ORDINARIAT FUR HOLZBIOLOGIE
205 HAMBURG 80, LEUSCHNERSTR 91d
WEST GERMANY

DR F COX
CASILLA 567
VALDIVIA
CHILE

SR C V ESPINOSA
APARTADO POSTAL NO. 1
ESCARCEGA
CAMPECHE
MEXICO

DR H DE FORESTA
LABORATOIRE DE BOTANIQUE
INSTITUT DE BOTANIQUE
163 RUE A. BROUSSONET
34000 MONTPELLIER
FRANCE

DR M T FILHO
ESCOLA SUPERIOR DE AGRICULTURA
"LUIZ DE QUEIROZ" - USP
DEPARTAMENTO DE SILVICULTURA
CAIXA POSTAL 9, 13400 PIRACICABA
SAO PAULO, BRAZIL

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF ACTIVE RESEARCHERS

DR S FINK
INSTITUT FUR FORSTBOTANIK UND
HOLZBIOLOGIE
BERTOLDSTRASSE 17
D-7800 FREIBURG I.B.R.
WEST GERMANY

MS K L FORSGARD
BOTANICAL MUSEUM
OXFORD STREET
HARVARD UNIVERSITY
CAMBRIDGE
MASS 02138, U.S.A.

MR M FRANCO
INSTITUTO DE BIOLOGIA
CIUDAD UNIVERSITARIA, COYOACAN
APDO. POSTAL 70-233
04510 MEXICO D.F.
MEXICO

DR K FUKAZAWA
DEPT. OF FOREST PRODUCTS
FACULTY OF AGRICULTURE
HOKKAIDO UNIVERSITY
SAPPORO
JAPAN 060

DR J-L GUILLAUMET
DEPT DE ECOLOGIA
INPA, C.P. 478
69000 MANAUS AM
BRAZIL

DR C V S GUNATILLEKE
DEPT OF BOTANY
UNIVERSITY OF PERADENIYA
PERADENIYA
SRI LANKA

DR I A U N GUNATILLEKE
DEPT OF BOTANY
UNIVERSITY OF PERADENIYA
PERADENIYA
SRI LANKA

PROF DR F HALLE
INSTITUT DE BOTANIQUE
163 RUE AUGUSTE-BROUSSONNET
34000 MONTPELLIER
FRANCE

DR D L HAZLETT
APARTADO 72
CATIE
TURRIALBA
COSTA RICA
CENTRAL AMERICA

DR J F HILL
USDA FOREST SERVICE
FOREST PHYSIOLOGY LAB
ARC-WEST, BLDG 011, NO.19
BELTSVILLE, MARYLAND 20705
U.S.A.

MR G JACOBY
TREE RING LABORATORY
LAMONT-DOHERTY GEOLOGICAL
OBSERVATORY
PALISADES
N.Y. 10964, U.S.A.

ASS PROF R JAGELS
SCHOOL OF FOREST RESOURCES
UNIVERSITY OF MAINE
ORONO
MAINE 04469
U.S.A.

MR W B J JONKERS
C/O CELOS
PO BOX 1914
PARAMARIBO
SURINAM

DR C JORDAN
INSTITUTE OF ECOLOGY
UNIVERSITY OF GEORGIA
ATHENS
GEORGIA 30602
U.S.A.

MR L JOZSA
FORINTEK CANADA CORP
6620 NW MARINE DR
VANCOUVER BC
CANADA V6T 1X2

MR M Z JUSOH
DEPT OF FOREST PRODUCTION
FACULTY OF FORESTRY
UNIVERSITI PERTANIAN MALAYSIA
SERDANG, SELANGOR
MALAYSIA

DR B KAROLY
FAIPARI KUTATO INTEZET
(RES INST FOR THE WOOD INDUST.)
BUDAPEST XV
VOROSMARTY U 56
H-1204 HUNGARY

MR S LEV-YADUN
DEPARTMENT OF BOTANY
TEL-AVIV UNIVERSITY
TEL-AVIV
ISRAEL

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF ACTIVE RESEARCHERS

DR N LIPHSCHITZ
DEPARTMENT OF BOTANY
TEL-AVIV UNIVERSITY
TEL-AVIV
ISRAEL

DR S OHTA
PO BOX 16
TSUKUBA NORIN KENKYU DANCHI NAI
(INST NAT DE RECH FOR ET PROD)
IBARAKI
JAPAN

MR A E LUGO
INSTITUTE OF TROPICAL FORESTRY
PO BOX AQ
RIO PIEDRAS
PUERTO RICO 00928

MR J R PALMER
U.K. TCO (FORESTRY)
CENTRO AGRONOMOICO TROPICAL DE
INVEST. Y ENSEMANZA (CATIE)
TURRIALBA
COSTA RICA

MR H MAITRE
C T F T
45 BIS AVENUE DE LA BELLE
GABRIELLE
94130 NOGENT SUR MARNE
FRANCE

MR L A PEREZ-JIMENEZ
INSTITUTO DE BIOLOGIA, UNAM
APDO POSTAL 70-233
MEXICO 20, D.F.
MEXICO

DR M M MEGAHED
FORESTRY & WOOD TECH DEPT
FACULTY OF AGRICULTURE
ALEXANDRIA UNIVERSITY
EL-SHATBY
ALEXANDRIA EGYPT

MR C PHILLIPPS
FOREST RESEARCH CENTRE
PO BOX 1407
SANDAKAN
SABAH
EAST MALAYSIA

DR S MIO
LABORATORY OF WOOD SCIENCE
FACULTY OF AGRICULTURE
KYUSHU UNIVERSITY
FUKUOKA 812
JAPAN

MLLE M-F PREVOST
LABORATOIRE DE BOTANIQUE, ORSTOM
BOITE POSTAL 165
97305 CAYENNE CEDEX
FRENCH GUIANA

MR A MUKTAR
DEPT OF FOREST MANAGEMENT
FACULTY OF FORESTRY
UNIVERSITI PERTANIAN MALAYSIA
SERDANG, SELANGOR
MALAYSIA

DR R B PRIMACK
BIOLOGY DEPT
2 CUMMINGTON ST
BOSTON UNIVERSITY
BOSTON
MASS 02215, U.S.A.

DR S P NETTO
RUA BOM JESUS 650
C.P. 2959
CURITIBA PR
BRAZIL

MR H A PUIG
LABORATOIRE DE BOTANIQUE
UNIVERSITE DE TOULOUSE III
39 ALLEES JULES GUESDE
31400 TOULOUSE
FRANCE

MR D I NICHOLSON
DEPT OF FORESTRY
ATHERTON
QUEENSLAND 4883
AUSTRALIA

MR W RAZALI
FOREST RESEARCH INSTITUTE
KEPONG
SELANGOR
MALAYSIA

PROF DR P NILOUFARI
COLLEGE OF NATURAL RESOURCES
KARAJ
IRAN

MR A V REVILLA
FORESTRY CAMPUS
COLLEGE
LAGUNA
PHILIPPINES

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF ACTIVE RESEARCHERS

DR D ROSEN
DEPARTMENT OF BIOPHYSICS
AND BIOENGINEERING
CHELSEA COLLEGE
17A ONSLOW GARDENS
LONDON SW7, U.K.

DR F H SCHWEINGRUBER
SWISS FEDERAL INSTITUTE OF
FORESTRY RESEARCH
CH-8903
BIRMENSDORF
SWITZERLAND

DR R A SEITZ
UNIVERSIDADE FEDERAL DO PARANA
DEPTO DE SILVICULTURA E MANEJO
RUA BOM JESUS, 650
80.000 CURITIBA
BRAZIL

PROF DR K SHIMAJI
WOOD RESEARCH INSTITUTE
KYOTO UNIVERSITY
UJI
KYOTO 611
JAPAN

DR T SHIOKURA
DEPT OF FORESTRY
TOKYO UNIVERSITY OF AGRICULTURE
1-1 SAKURAGAOKA 1-CHOME
SETAGAYA-KU
TOKYO JAPAN

MR E SOMARRIBA
APARTADO 65
CATIE
TURRIALBA
COSTA RICA

SR H SUZAN
INSTITUTO DE BIOLOGIA
CIUDAD UNIVERSITARIA
COYOACAN, APDO POSTAL 70-233
04510 MEXICO, D.F.
MEXICO

DR J-L TANG
53 NAN-HAI ROAD
TAIPEI
TAIWAN
CHINA

SR L R TROVATI
CENA - CENTRO DE ENERGIA NUCLEAR
NA AGRICULTURA
AVENIDA CENTENARIO S/N, C.P. 96
13.400 PIRACICABA
SAO PAULO, BRAZIL

DR J TSUTSUMI
LABORATORY OF WOOD SCIENCE
FACULTY OF AGRICULTURE
KYUSHU UNIVERSITY
FUKUOKA
812 JAPAN

DR J TURNER
FORESTRY COMMISSION OF N.S.W
PO BOX 100
BEECROFT 2119
AUSTRALIA

SR T F C VALDOVINOS
ANTIQUA CARRATERA
XALAPA-COATEPEC KM 2.5
APARTADO POSTAL NO 63
XALAPA, VERACRUZ
MEXICO

SR F P VALERA
INSTITUTO NACIONAL DE
INVESTIGACIONES FORESTALES
AV. PROGRESO NO.5
COL. COYOACAN
04000 MEXICO D.F.

SR R VILLALBA
INSTITUTO ARGENTINO DE NIVOLOGIA
Y GLACIOLOGIA (IANIGLA)
CASILLA DE CORREO 330
5500. MENDOZA
ARGENTINA

MR A P VOOREN
ORSTOM - NETHERLANDS CENTRE
B.P. V51
ABIDJAN
IVORY COAST

PROF Y WASEL
DEPARTMENT OF BOTANY
TEL-AVIV UNIVERSITY
TEL-AVIV
ISRAEL

DR L J WEBB
A.E.S., GRIFFITH UNIVERSITY
NATHAN
QUEENSLAND 4111
AUSTRALIA

DR A B WELLINGTON
DEPT OF BOTANY
MONASH UNIVERSITY
CLAYTON
VICTORIA
AUSTRALIA 3168

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF INTERESTED RESEARCHERS

DR I OJATING
COLLEGE OF AGRICULTURE
DEPT OF FORESTRY
PMB 1025
JALINGO, GONGOLA STATE
NIGERIA

MS E L SMOOT
DEPARTMENT OF BOTANY
THE OHIO STATE UNIVERSITY
1735 NEIL AVE.
COLUMBUS
OHIO 43210, U.S.A.

MR F W TAYLOR
MISS. FOREST PRODUCTS LAB.
P.O. DRAWER FP
MISSISSIPPI STATE
MISS. 39762
U.S.A.

MR R E VETTER
INPA/CPPF
C.P. 478
MANAUS
AMAZONAS
BRAZIL

DR L H G WIESBERG
DEPARTAMENTO DE QUIMICA
PONTIFICIA UNIVERSIDADE CATOLICA
RUA MARQUES DE SAO VICENTE 209
20.000 RIO DE JANEIRO
BRAZIL

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY COUNTRY

<u>NAME</u> ----	<u>COUNTRY</u> -----
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DR R K BAMBER	AUSTRALIA
MR N C DUKE	AUSTRALIA
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DR R A SEITZ	BRAZIL
SR L R TROVATI	BRAZIL
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DR M M MEGAHED	EGYPT
DR H DE FORESTA	FRANCE
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MLLE M-F PREVOST	FRENCH GUIANA
DR H J BRAUN	WEST GERMANY
PROF DR D ECKSTEIN	WEST GERMANY
DR S FINK	WEST GERMANY
MR A L K BENTUM	GHANA
DR B KAROLY	HUNGARY
PROF DR P NILOUFARI	IRAN
MR S LEV-YADUN	ISRAEL
DR N LIPHSCHITZ	ISRAEL
PROF Y WASEL	ISRAEL
MR A P VOOREN	IVORY COAST
DR K FUKAZAWA	JAPAN
DR S MIO	JAPAN
DR S OHTA	JAPAN
PROF DR K SHIMAJI	JAPAN
DR T SHIOKURA	JAPAN
DR J TSUTSUMI	JAPAN

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY COUNTRY

NAME ----	COUNTRY -----
MR M Z JUSOH	MALAYSIA
MR A MUKTAR	MALAYSIA
MR C PHILLIPPS	MALAYSIA
MR W RAZALI	MALAYSIA
SA L A CABRERA	MEXICO
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MR L A DONALDSON	NEW ZEALAND
DR I OJATING	NIGERIA
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DR C V S GUNATILLEKE	SRI LANKA
DR I A U N GUNATILLEKE	SRI LANKA
IR N R DE GRAAF	SURINAM
MR W B J JONKERS	SURINAM
DR F H SCHWEINGRUBER	SWITZERLAND
DR J-L TANG	TAIWAN
DR M P DENNE	U.K.
DR D ROSEN	U.K.
DR E F DOUGAL	U.S.A.
MS K L FORSGARD	U.S.A.
DR J F HILL	U.S.A.
MR G JACOBY	U.S.A.
ASS PROF R JAGELS	U.S.A.
DR C JORDAN	U.S.A.
DR R B PRIMACK	U.S.A.
MS E L SMOOT	U.S.A.
MR F W TAYLOR	U.S.A.

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP
WOOD STRUCTURE MEASUREMENT

STANDARD MICROSCOPY

(tropical)

DR P T ALVIM
DR R K BAMBER
MR A L K BENTUM
MR J A BONINSEGNA
MR N C DUKE
PROF DR D ECKSTEIN
DR M T FILHO
MS K L FORSGARD
MR G JACOBY
MR M Z JUSOH
DR M M MEGAHED
DR T SHIOKURA
DR J-L TANG
SR L R TROVATI
DR J TURNER
SR R VILLALBA
MR A P VOOREN

(temperate)

SA L A CABRERA
DR M P DENNE
MR L A DONALDSON
DR E F DOUGAL
MR M FRANCO
DR K FUKAZAWA
DR J F HILL
ASS PROF R JAGELS
DR S MIO
PROF DR P NILOUFARI
DR F H SCHWEINGRUBER
PROF DR K SHIMAJI
SR H SUZAN
DR J TSUTSUMI

(trop & temp)

MR J E ASH
DR H J BRAUN
DR S FINK
DR B KAROLY
MR S LEV-YADUN
DR N LIPHSCHITZ
PROF Y WAISEL

MICROSCOPY WITH MOVING
STAGE OR STEREOLOGY

(tropical)

MR A L K BENTUM
MS K L FORSGARD
MR M Z JUSOH
DR M M MEGAHED

(temperate)

PROF DR D ECKSTEIN
DR K FUKAZAWA
ASS PROF R JAGELS
DR S OHTA
DR D ROSEN
DR J TSUTSUMI

(trop & temp)

MR J E ASH
DR H J BRAUN
DR B KAROLY

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP
WOOD STRUCTURE MEASUREMENT

HISTOCHEMISTRY

(tropical)
DR M M MEGAHED

(temperate)
DR K FUKAZAWA
ASS PROF R JAGELS
DR J TSUTSUMI

(trop & temp)
DR H J BRAUN
DR S FINK

DENSITOMETRY X-RAY

(tropical)
MR G JACOBY
DR S OHTA

(temperate)
DR E F DOUGAL
DR K FUKAZAWA
ASS PROF R JAGELS
MR L JOZSA
DR F H SCHWEINGRUBER
PROF DR K SHIMAJI

(trop & temp)
MR J E ASH

DENSITOMETRY B-RAY

(temperate)
PROF DR P NILOUFARI

PHOTOMETRY, TRANSMITTED

(temperate)
DR K FUKAZAWA
PROF DR P NILOUFARI
DR D ROSEN

PHOTOMETRY, REFLECTED

(temperate)
PROF DR P NILOUFARI

SURFACE HARDNESS

(tropical)
SR C V ESPINOSA
DR J-L TANG

SURFACE CORROSION

(tropical)
SR C V ESPINOSA
DR J-L TANG
MR A P VOOREN

(trop & temp)
DR B KAROLY

OTHER

(tropical)
DR M T FILHO
SR L R TROVATI

(temperate)
ASS PROF R JAGELS

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP
TREE MEASUREMENT

CAMBIAL MARKINGS

(tropical)
DR P T ALVIM
MR J E ASH
MR A L K BENTUM
PROF DR D ECKSTEIN
SR C V ESPINOSA
DR S OHTA
MR L A PEREZ-JIMENEZ
MR C PHILLIPPS
MR A V REVILLA
DR T SHIOKURA
SR T F C VALDOVINOS

(temperate)
DR M P DENNE
MR L A DONALDSON
DR S MIO
PROF DR P NILOUFARI
PROF DR K SHIMAJI
DR J TSUTSUMI

(trop & temp)
MR S LEV-YADUN
DR N LIPHSCHITZ
PROF Y WAISEL

DENDROMETER BANDS

(tropical)
DR P T ALVIM
SR C V ESPINOSA
DR D L HAZLETT
DR C JORDAN
MR M Z JUSOH
MR H MAITRE
MR A MUKTAR
MR L A PEREZ-JIMENEZ
MR H A PUIG
DR R A SEITZ
MR E SOMARRIBA
SR T F C VALDOVINOS

(temperate)
SR H DE SALAZAR R
DR S OHTA
MLLE M-F PREVOST
DR A B WELLINGTON

PERMANENT FIELD SAMPLE PLOTS

(tropical)
MR A L K BENTUM
IR N R DE GRAAF
DR C V S GUNATILLEKE
DR I A U N GUNATILLEKE
MR W B J JONKERS
DR C JORDAN
MR A E LUGO
MR H MAITRE
MR A MUKTAR
MR D I NICHOLSON
MR J R PALMER
MR L A PEREZ-JIMENEZ
MR C PHILLIPPS
DR R B PRIMACK
MR W RAZALI
MR A V REVILLA
DR R A SEITZ
SR T F C VALDOVINOS
MR A P VOOREN

(temperate)
DR F COX
SR H DE SALAZAR R
MR L A DONALDSON
MR L JOZSA
DR S P NETTO
DR J TSUTSUMI
DR A B WELLINGTON

(trop & temp)
SR F P VALERA

OTHER

(tropical)
DR P T ALVIM
SR C V ESPINOSA
PROF DR F HALLE
MR A E LUGO

(temperate)
MR M FRANCO
SR H SUZAN

(trop & temp)
SR F P VALERA

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP

CHEMICAL ANALYSIS

ISOTOPIC ANALYSIS

LIGNINS

(tropical)
MR M Z JUSOH
DR J-L TANG
(temperate)
DR K FUKAZAWA

14-C

(tropical)
MR J E ASH
DR R K BAMBER
DR J TURNER
PROF Y WASEL
(temperate)
MR L JOZSA

ACYLATED CELL WALL
POLYSACCHARIDES

(tropical)
DR J-L TANG

13/12-C

(temperate)
MR J E ASH

BOUND COLOURING MATTER

(tropical)
DR P T ALVIM

18/16-0

(temperate)
MR J E ASH
MR L JOZSA

OTHER

(trop & temp)
DR S FINK

D/H

(temperate)
MR J E ASH

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP

DENDROCHRONOLOGY

(tropical)

DR P T ALVIM
DR R K BAMBER
MR J A BONINSEGNA
MR N C DUKE
DR M T FILHO
MR G JACOBY
MR H A PUIG
DR J TURNER
SR T F C VALDOVINOS
SR R VILLALBA

(temperate)

SR H DE SALAZAR R
PROF DR D ECKSTEIN
MR M FRANCO
ASS PROF R JAGELS
MR L JOZSA
DR B KAROLY
DR S OHTA
MLLE M-F PREVOST
SR H SUZAN
PROF Y WAISEL

(trop & temp)

MR J E ASH

DEMOGRAPHY/POPULATION DYNAMICS

(tropical)

MR N C DUKE
DR J-L GUILLAUMET
DR C V S GUNATILLEKE
DR I A U N GUNATILLEKE
MR H MAITRE
MR L A PEREZ-JIMENEZ
MR C PHILLIPPS
DR R B PRIMACK
MR A V REVILLA
DR R A SEITZ
MR E SOMARRIBA
MR A P VOOREN
DR L J WEBB

(temperate)

SA L A CABRERA
SR H DE SALAZAR R
MR M FRANCO
DR B KAROLY
DR A B WELLINGTON

(trop & temp)

MR J E ASH

OTHER

(tropical)

DR H DE FORESTA
DR L J WEBB

(temperate)

DR B KAROLY

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP
RESEARCH CONCERNS AND TECHNIQUES

RESEARCH CONCERNS NATURAL FOREST

MR J E ASH
DR R K BAMBER
MR A L K BENTUM
MR J A BONINSEGNA
DR H J BRAUN
SA L A CABRERA
DR H DE FORESTA
IR N R DE GRAAF
SR H DE SALAZAR R
DR M P DENNE
MR L A DONALDSON
DR E F DOUGAL
MR N C DUKE
PROF DR D ECKSTEIN
SR C V ESPINOSA
DR S FINK
MS K L FORSGARD
MR M FRANCO
DR K FUKAZAWA
DR J-L GUILLAUMET
DR C V S GUNATILLEKE
DR I A U N GUNATILLEKE
PROF DR F HALLE
DR D L HAZLETT
DR J F HILL
MR G JACOBY
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MR W B J JONKERS
DR C JORDAN
MR L JOZSA
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DR J TSUTSUMI
DR J TURNER
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PROF Y WASEL
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DR A B WELLINGTON

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SR C V ESPINOSA
DR M T FILHO
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DR K FUKAZAWA
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DR S MIO
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DR S OHTA
MR J R PALMER
DR R B PRIMACK
MR A V REVILLA
DR D ROSEN
DR F H SCHWEINGRUBER
DR R A SEITZ
PROF DR K SHIMAJI
DR J-L TANG
SR L R TROVATI
DR J TSUTSUMI
SR T F C VALDOVINOS
SR F P VALERA
PROF Y WASEL

RESEARCH CONCERNS GROWTH CHAMBER
OR SIMILAR CONTROLLED ENVIRONMENT

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DR M P DENNE
MR S LEV-YADUN
DR N LIPHSCHITZ
DR S OHTA
DR D ROSEN
PROF DR K SHIMAJI
SR T F C VALDOVINOS
MR A P VOOREN
PROF Y WASEL

INTERNATIONAL WORKING GROUP ON DETERMINATION
OF AGE AND GROWTH RATE IN TROPICAL TREES

DIRECTORY OF RESEARCHERS BY INTEREST GROUP
RESEARCH CONCERNS AND TECHNIQUES

LABORATORY EQUIPMENT IS
INTERFACED TO A COMPUTER

DR P T ALVIM
MR J E ASH
MR J A BONINSEGNA
DR F COX
IR N R DE GRAAF
MR L A DONALDSON
DR E F DOUGAL
PROF DR D ECKSTEIN
SR C V ESPINOSA
MR G JACOBY
ASS PROF R JAGELS
MR L JOZSA
DR B KAROLY
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DR F H SCHWEINGRUBER
DR R A SEITZ
MR E SOMARRIBA
DR J-L TANG
DR J TSUTSUMI
SR T F C VALDOVINOS
SR F P VALERA
SR R VILLALBA
PROF Y WAISEL

USING UNIVARIATE
STATISTICAL ANALYSIS

MR J E ASH
MR J A BONINSEGNA
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DR F COX
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MR L A DONALDSON
DR E F DOUGAL
PROF DR D ECKSTEIN
MR M FRANCO
DR D L HAZLETT
DR J F HILL
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MR W RAZALI
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SR H SUZAN
DR J-L TANG
DR J TSUTSUMI
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SR R VILLALBA
DR A B WELLINGTON

USING MULTIVARIATE
STATISTICAL ANALYSIS

MR J A BONINSEGNA
SA L A CABRERA
SR H DE SALAZAR R
DR M P DENNE
MR N C DUKE
PROF DR D ECKSTEIN
SR C V ESPINOSA
DR M T FILHO
MR M FRANCO
MR G JACOBY
ASS PROF R JAGELS
MR A E LUGO
MR H MAITRE
DR S MIO
DR S OHTA
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DR D ROSEN
DR F H SCHWEINGRUBER
DR R A SEITZ
MR E SOMARRIBA
SR H SUZAN
DR J-L TANG
SR L R TROVATI
DR J TSUTSUMI
SR R VILLALBA
PROF Y WAISEL
DR L J WEBB

EXAMINING PREDICTIVE MODELLING

MR J E ASH
SA L A CABRERA
IR N R DE GRAAF
DR M P DENNE
MR N C DUKE
DR M T FILHO
MR M FRANCO
PROF DR F HALLE
ASS PROF R JAGELS
MR L JOZSA
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MR A E LUGO
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MR D I NICHOLSON
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MR A V REVILLA
MR E SOMARRIBA
SR L R TROVATI
SR T F C VALDOVINOS

YALE UNIVERSITY: SCHOOL OF FORESTRY AND
ENVIRONMENTAL STUDIES

BULLETIN NO. 94

AGE AND GROWTH RATE OF TROPICAL TREES:
NEW DIRECTIONS FOR RESEARCH

Proceedings of the Workshop on Age and Growth Rate
Determination for Tropical Trees held at
the Harvard Forest, Petersham, Massachusetts, April 1-3, 1980



Edited by
F. Herbert Bormann and Graeme Berlyn

NEW HAVEN: YALE UNIVERSITY
1981

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Address

- { (1) tropical trees
- { (2) temperate trees but I plan to study tropical species also

	Write 1 or 2		Write 1 or 2
<u>Wood structure measurement</u>		<u>Chemical analysis</u>	
Standard microscopy		Proanthocyanin and hydrolysable tannins	
Microscopy with moving stage or stereology		Lignins	
Histochemistry		Acylated cell wall polysaccharides	
Densitometry X-ray		Bound colouring matter	
Densitometry, β - ray		Other (please specify)	
Photometry, transmitted			
Photometry, reflected		<u>Isotopic analysis</u>	
Acoustic microscopy		^{14}C	
Surface hardness		$^{13}\text{C}/^{12}\text{C}$	
Surface corrosion		$^{18}\text{O}/^{16}\text{O}$	
Other (please specify)		^{210}Pb	
		D/H	
		Other (please specify)	
<u>Tree measurement</u>			
Cambial marking		<u>Dendrochronology</u>	
Dendrometer bands		Comments if required	
Permanent field sample plots			
Other (please specify)		<u>Demography/Population dynamics</u>	
		Comments if required	
		Other (please specify)	

2. I am currently working with the following tropical taxa. (List all families, genera and species)

3. My research is carried out in the following countries or regions

4. My research concerns natural forest plantations growth chamber or similar controlled enviroment Yes/No Yes/No Yes/No

5. My laboratory equipment is interfaced to a computer Yes/No

6. I am currently using standard statistical analyses - univariate Yes/No
- multivariate Yes/No

7. I am currently examining predictive modelling Yes/No

Signature Date

Please return this questionnaire to :-

Dr. J. Burley, Forestry Department, Oxford University, Commonwealth Forestry Institute,
South Parks Road, Oxford, OX1 3RB, England.

Groupe International de Travail sur la Détermination de l'Age et
du Taux de Croissance des Arbres Tropicaux

Annex 2
Page 2

Questionnaire

Nom, titre
.....
Adresse
.....
.....

1. Je poursuis actuellement des recherches dans les domaines suivants, en rapport avec la détermination de l'âge ou du taux de croissance des arbres

(1). Tropicaux

(2). Tempérés, mais je projette d'étudier aussi des espèces tropicales

	Ecrire		Ecrire
<u>Mesures anatomiques</u>	1 ou 2	<u>Analyse isotopique</u>	1 ou 2
Microscopie classique		¹⁴ C	
Microscopie avec platine à translation ou stérolgie		^{13/12} C	
Histochimie		^{18/16} O	
Densitométrie par rayons-X		²¹⁰ Pb	
Densitométrie par rayons-β		D/H	
Photométrie par transmission		Autres (Prière de préciser)	
Photométrie par réflexion			
Microscopie acoustique			
Dureté superficielle		<u>Dendrochronologie</u>	
Corrosion superficielle		(Commentaires si nécessaire)	
Autres (prière de préciser)			
		<u>Démographie/ Dynamiques des populations</u>	
<u>Mesures sur arbres</u>		(Commentaires si nécessaire)	
Marque du cambium			
Rubans dendromètres		Autres (Prière de préciser)	
Placeaux permanents			
Autres (prière de préciser)			
<u>Analyse chimique</u>			
Proanthocyanine et tanins hydrolysables			
Lignines			
Polysaccharides acétylés de la paroi cellulaire			
Matières colorantes liées			
Autres (prière de préciser)			

2. Je travaille actuellement sur les taxa tropicaux suivants (Donner la liste de toutes les familles, genres et espèces).

3. Ma recherche est menée dans les pays ou régions suivants :

4. Ma recherche concerne : Forêts naturelles oui/non
Plantations oui/non
Chambre de croissance ou milieu contrôlé
similaire oui/non
5. Mon équipement de laboratoire est collecté à un ordinateur oui/non
6. J'utilise actuellement des techniques statistiques univariables oui/non
multivariables oui/non

7. Je fais actuellement de la modélisation à but prédictif Oui/non

Signature : Date

Retourner, s'il vous plaît ce questionnaire à :

Dr. J. Burley, Department of Agriculture and Forest Sciences, Oxford University, Commonwealth Forestry Institute, South Parks Road, Oxford, OXI 3RB, England.

Questionário

Nome, Título
.....

Endereço.....
.....
.....

1. Estou atualmente conduzindo pesquisas nos seguintes campos relacionados à
determinação de idade/taxa de crescimento de:

(1) árvores tropicais

(2) árvores de zonas temperadas mas pretendo estudar também espécies
tropicais.

<u>Medidas de Estrutura da madeira</u>	<u>Escreva 1 ou 2</u>	<u>Análise Química</u>	<u>Escreva 1 ou 2</u>
Microscopia Padrão		Protoantocianina ou tamínicos hidrolizáveis	
Microscopia com esta gio móvel ou estereologia		Ligninas	
Histoquímica		Polissacarídeos de parede de célula acilada	
Densitometria de raios X		Materia corante ligada	
Densitometria de raios β		Outros (favor especificar)	
Fotometria, transmitida		<u>Análise (Isotópica)</u>	
Fotometria, refletida		^{14}C	
Microscopia acústica		$^{13}/^{12}\text{C}$	
Dureza superficial		$^{18}/^{16}\text{O}$	
Corrosão superficial		^{210}Pb	
Outros (favor especificar)		D/H	
<u>Medições em Árvores</u>			
Marcação do câmbio		<u>Dendrocronologia</u>	
Bandas dendrométricas		Comentários se necessários	
Gráficos permanentes de amostras de campo		<u>Demografia/Dinâmica Populacional</u>	
		Comentários se necessários	
		Outros (favor especificar)	

2. Estou trabalhando usualmente com as seguintes taxa tropicais (Liste todas
as famílias, gêneros e espécies).

3. Minhas pesquisas estão sendo realizadas nos seguintes países ou regiões.

4. Minhas pesquisas relacionam-se a - florestas naturais (sim/não)
- plantações (sim/não)
- câmara de cresci-
mento ou ambiente
controlado similar (sim/não)

5. Meu equipamento de laboratório tem interface com um computador....(sim/não)

6. Estou comumente utilizando análises estatísticas padrões -
univariável(sim/não)
Multivariável...(sim/não)

7. Estou atualmente examinando modelos para predições (sim/não)

AssinaturaData

Favor enviar este questionário para:-

Dr. J. Burley, Department of Agricultural and Forest Sciences, Oxford
University, Commonwealth Forestry Institute, South Parks Road, Oxford,
OX1 3RB, England.

Questionario

Nombre, titulo

Direccion

1. Estoy actualmente realizando investigaciones en los siguientes campos
relacionados a la determinación de la edad y rapidez de crecimiento de:
- (1) árboles tropicales
 - (2) árboles de zonas templadas; pero pretendo estudiar también especies tropicales.

<u>Medidas de Estructura</u> <u>de la madera</u>	<u>Escriba</u> <u>1 o 2</u>	<u>Análisis Química</u>	<u>Escriba</u> <u>1 o 2</u>
Microscopía Patron		Protoantocianina o taninos hidrolizables	
Microscopía con estativo movel o estereologia		Ligninas	
Histoquímica		Polisacáridos de paredi de celula acilada	
Densitometría de Rayos X		Materia colorante ligada	
Densitometría de Rayos β		Otros (favor especificar)	
Fotometría, transmitida			
Fotometría, reflejada		<u>Análisis (isotopica)</u>	
Microscopía acústica		^{14}C	
Dureza superficial		$^{13}/^{12}\text{C}$	
Corrosión superficial		$^{18}/^{16}\text{C}$	
Otros (favor especificar)		^{210}Pb	
		D/H	

Mediciones en Arboles

Marcación del cambium			
Bandas dendrométricas		<u>Dendrocronología</u>	
Gráficos permanentes de muestras de campo		Comentarios si necesario	
		<u>Demografía/Dinámica</u> <u>populacional</u>	
		Comentarios si necesario	
		Otros (favor especificar)	

2. Estoy trabajando usualmente con las siguientes plantas tropicales
(Liste todas las familias, géneros y especies).
3. Mis investigaciones están siendo realizadas en los siguientes países o regiones.
4. Mis investigacionanes se relacionan a-selvas naturales si/no
-plantaciones si/no
-cámara de crecimiento o
ambiente controlado similar si/no
5. Mi equipo de laboratorio tiene interface con un computador si/no
6. Estoy comunmente utilizando análisis estadísticos -
univariable si/no
multivariable si/no
7. Estoy actualmente examinando modelos para predicciones si/no

FirmaFecha

Por favor envíe este cuestionario para: -

Dr. J. Burley, Department of Agricultural and Forest Sciences, Oxford
University, Commonwealth Forestry Institute, South Parks Road, Oxford,
OX1 3RB, England.

Committee to establish an international working group

Dr Dieter Eckstein
Ordinariat für Holzbiologie
University of Hamburg
Leuschnerstrasse 911 d205
Hamburg 80
Germany

Dr Neil Enright
Department of Geography
McGill University
805 Sherbrooke Street
West Montreal PQ
Canada H3A 2K6

Dr Alain Mariaux
Centre Technique Forestier Tropical
45 bis Avenue de la Belle Gabrielle
94130 Nogent sur Marne
France

Dr Angela Rebello
Departamento de Quimica
Pontifica Universidad de Rio de Janeiro
Rua Marques de Sao Bicente
209-263
Rio de Janeiro ZC20
Brazil

Dr K. D. Singh
Forest Resources Division
Forestry Department
FAO
Rome 00100
Italy

Dr Tony Swain
Biological Science Centre
Boston University
2 Cummington Street
Boston Massachusetts 02215
USA

Dr G P Berlyn (Co-Chairman)
School of Forestry and Environmental
Studies
Yale University
370 Prospect Street
New Haven Connecticut
USA

Dr J Burley (Chairman)
Department of Forestry
University of Oxford
South Parks Road
Oxford
OX1 3RB
England

