

AUSTRALIAN
FOREST HISTORY

SOCIETY

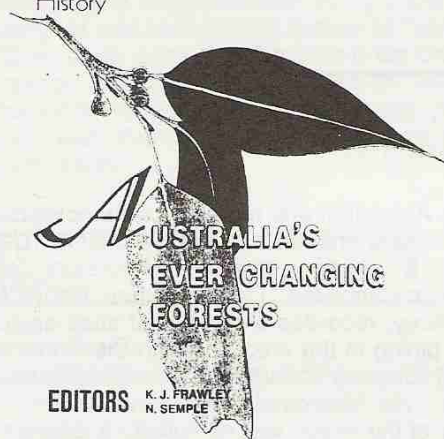
NEWSLETTER No. 3

1989

ISSN 1033-937 X

*' ... to advance historical understanding of human interactions with
Australian forest and woodland environments.'*

Proceedings
of
the
First
National
Conference
on
Australian
Forest
History



The 528 page volume containing the Proceedings of the First National Conference on Australian Forest History (May 1988) is now available.

Twenty-eight papers are included. Seven review papers contain extensive reference lists.

See page 6 for a note by L.T. Carron on the volume.

Orders may be sent to:

The Editorial Assistant
Dept Geography and Oceanography
Australian Defence Force Academy
Campbell ACT 2600
Australia

Price (incl. surface p & p Australia) : \$15

(overseas) : \$A25

Cheque/Money Order to accompany order payable to:

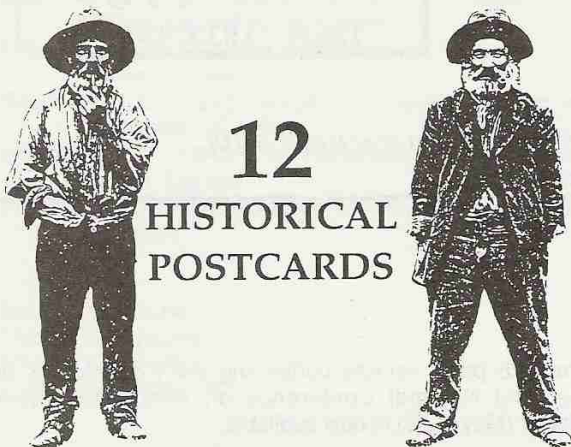
Dept Geography and Oceanography, ADFA



Editor this issue: Dr Kevin Frawley
Department of Geography & Oceanography, University College,
Australian Defence Force Academy, Campbell, ACT 2600
Ph: (062) 688309 Fax: (062) 688313

WHAT'S HAPPENING IN THE STATES

NEW SOUTH WALES



12 HISTORICAL POSTCARDS

© FORESTRY COMMISSION OF NEW SOUTH WALES 1989
95-99 YORK STREET SYDNEY AUSTRALIA 2000

The Forestry Commission of New South Wales has produced a set of historical postcards depicting early timber-getting. These are available from:

Forestry Commission (NSW)
Selling Centre
6th Floor
95 - 99 York Street
Sydney NSW 2000

or

GPO Box 2667
Sydney NSW 2001

Price: \$4.95 (\$5.95 posted)

QUEENSLAND

Posters

A new series of fine art posters has been produced depicting the timber pioneering days of Queensland. The monochromatic posters were painted by Jan Willem Rohan on behalf of the Forestry Department. Posters are available from Forestry Offices throughout Queensland for \$3 each of \$15 a set of six.

Woodworks

'Woodworks' is a Forestry and Timber Museum located at the Queensland Department of Forestry's Gympie Training Centre just north of the town. Gympie is located in one of Queensland's major timber producing districts. The museum contains displays and has 'working exhibitions' during which former timber workers demonstrate traditional methods.

Woodworks is a co-operative venture between the Department of Forestry and the Queensland Museum. A small admission charge applies.

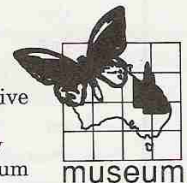
Further information:

Woodworks
The Forestry and Timber Museum
Gympie Forestry Complex
Fraser Road
Two Mile, Gympie Qld 4570

Tel: (071) 822244



WoodWorks is a co-operative
venture between the
Department of Forestry
and the Queensland Museum



TASMANIA

* The Aboriginal and historical archaeological survey of the Teepookana area, west Tasmania (Dept. Parks, Wildlife & Heritage (DPWH) and Forestry Commission), has been completed. David Bannear, Robyn Annear and Paul Airey, recorded a number of sites associated with Huon pining in the area and with the North Mount Lyell mining company and with the convict settlement at Sarah Island. No Aboriginal sites were located. A detailed history of the region was compiled. A detailed report has been produced and it is hoped that a summary, and the history will be published some time next year.

* The investigation of the Aboriginal use of sandstone shelter sites in Eastern Tasmanian forests, undertaken by Betty Ross and funded by the Tasmanian Forest Research Council is now completed. A sample of sandstone areas was examined for Aboriginal occupation through survey and some excavation. A number of new sites were located, particularly in the north, and including a shelter with conglomerate outcrop from which there was evidence of Aboriginal quarrying.

* The regional study of the Aboriginal archaeology of Northwest Tasmania, conducted by Ingereth MacFarlane (DPWH) is still continuing. A draft report has recently been completed.

* The Forestry Commission has recently commenced a project to compile an inventory of historic sites primarily within wood-production forests, using mainly archival, other documentary, and oral sources. The project is being conducted on a regional basis and Lindy Scripps has been appointed as Project Officer for the Northwest region. It is anticipated that the Northeast regional study will commence in the New Year. The project is funded by the National Estate Grant Programme.

* In March 1989, DPWH conducted an expedition down the Dennison River, Southwest Tasmania, to investigate the Aboriginal archaeology of the Dennison valley. Several cave sites and one open site were found. Test excavations were carried out and dates ranging from about 13.8 to 17.5 thousand years have been recently obtained from two of the sites. The dates fit in well with the known occupation of this region. A report is in preparation.

* Photogrammetric recording of the Aboriginal paintings at Ballewinne in the Maxwell River valley, Southwest Tasmania was undertaken by DPWH under the direction of Angie McGowan.

* An archaeological study of the lower Gordon River (west coast) margins was undertaken by Karen Townrow (DPWH) as part of the Gordon River Erosion Study.

There is considerably more research being undertaken into the Aboriginal and post-contact history of Tasmania and Bass Strait, many parts of which were once forested. For information on this other research and on publications from research reported above please contact either Dept. Parks, Wildlife and Heritage, or the Forestry Commission.

FOREST HISTORY WORK IN PROGRESS

Suzette Searle
CSIRO Division of Forestry and Forest Products
Banks Street
Yarralumla, ACT
(PO Box 4008, Queen Victoria Tce, Canberra
ACT 2600

Writing a history of the "Rise and Demise of the Black Wattle Industry in Australia" for a graduate diploma with the A.N.U. Dept. Forestry. I would very much appreciate any information members have to hand regarding:

- the establishment of *Acacia mearnsii* syn. *A. decurrens* var. *mollissima* (Black Wattle) in plantations in New South Wales, Victoria, South Australia, Tasmania

- the tannin bark industry in Tasmania
- the use of bark stripping machine in the You Yangs, Victoria in 1928 (I have found no reference to this machine after its first year of trial, which was a success)

* * * * *

Gordon Grimwade
Senior Consultant Anthropologist
Resource Consulting Services Pty Ltd
PO Box 6638 CMC
Cairns, Qld 4870
Ph: (070) 517712 Fax: (070) 516740

Commencing field and documentary research on carved trees (dendroglyphs) in the World Heritage area north east Queensland.

I would be interested to hear from anyone with information on Aboriginal carved trees of the region. Basic documentation is to hand for 20 trees but photos, notes, recollections, possible contacts etc would be welcomed.

This is the first stage of a programme aimed at conservation of extant dendroglyphs where possible.

* * * * *

Michael Roche has sent this list of work in progress in New Zealand.

Halkett, J. and Berg, P. (eds) *A Popular History of the New Zealand Forest Service*. A collection of reminiscences about working with New Zealand Forest Service.

Halkett, J. *New Zealand's Indigenous Forests*.

MASTER THESIS IN PROGRESS 1989

Chrisp, M. *The Environmental Movement: Strategy for Change* (Waikato University).

Kane, S.J. *The Value of Wilderness* (Otago University).

Lomax, H. *Maori Use and Non-Use of National Parks* (Canterbury University).

Tonks, M.J. *The Protected Natural Areas Programme: Circumstance or Initiative?* (Otago University).

* * * * *

William J. Metcalf
Senior Teaching Fellow
Institute of Applied Environmental Research
Griffith University
Nathan, Brisbane Qld 4111

Currently working on expanding our land use history research beyond the bounds of Toohey Forest (see 'Publications'), to include nearby suburbs. We will probably be starting to put this together as a further book later in the year. It will also be a "forest history" in the sense of a history of the destruction of the forest and the subsequent agricultural developments, culminating in suburbanisation.

* * * * *

Ronald Richards
50 Tweeddale Rd
Applecross, W.A. 6153

'I wrote a local history on the Murray District of Western Australia some years ago and am currently writing a sequel for publication next year.

The Murray District is situated some fifty miles south of Perth, roughly equidistant from Perth and Bunbury. It extends from the sea coast inland over the Darling Ranges to the edge of the Wheat Belt. About half of the shire was heavily timbered country, unfit for agriculture but with excellent stands of Jarrah timber.

The history of the timber and (later) Forestry settlements forms an important aspect of my historical writing, for the 'hills' region was physically removed from the rest of the district (on the coastal plain), which had been settled since the early 1830s, and had a different social, political and economic orientation as well. This led to forces which tended to split the district up rather than draw it closer together - a rather uncommon occurrence in Australia at the time.

I have recently been awarded my M.A. in history at the University of Western Australia. The thesis sought to explore some of the points mentioned above, to provide some groundwork for the sequel history book - which will develop them further. The title was: *The Murray District of Western Australia 1890-1920: Economic Change and its Social Consequences*.

During the period April to July this year, I was involved in compiling the secondary sources for a bibliography of the South West, for the Centre for Western Australian History. I understand the complete bibliography may be published next year. The listings will include a lot of material on forestry and timber milling in the South West, and should prove useful to researchers at all levels.

The first book I wrote more or less terminated at about the turn of the century; the sequel will go from about 1890 until 1970, with the post-war period being covered in

only two chapters. Therefore there will be a lot more on the milling side of things in Volume Two than there was in Volume One.'

* * * * *

John Dargavel
Centre for Resource and Environmental Studies
Australian National University
GPO Box 4
Canberra ACT 2601

I am interested in John Evelyn (1620-1706) who wrote *Sylva* in 1664. This is one of the most successful forestry books ever written as it went through 10 editions over 163 years. Evelyn revised the 4th edition in the year of his death at the age of 86. *Sylva* is an argument for creating plantations to counteract 'the waste and destruction of our woods' - still a topical issue!

Although Evelyn is most famous as a diarist and much has been written about him, little attention appears to have been given to the writing of *Sylva*. I was able to consult relevant papers in the archives of the Royal Society in London recently - Evelyn was one of its earliest members. Examining further papers in Christ College, Oxford will have to wait until my next trip to UK. My major difficulty in this research is trying to decipher his handwriting!

SOURCES FOR FOREST HISTORY

Department of Conservation, Forests and Lands, Victoria

Suzette Searle (see 'Work in Progress') recommends to members the 'knowledgeable staff and invaluable historical records' of the Registry, Dept Conservation Forests and Lands, 240 Victoria Pde, East Melbourne, Vic 3002.

CSIRO Archive

A valuable but little known resource for forest history research especially on forest products is the CSIRO Archive, Canberra.

Michael Moran (Deputy Archivist) describes the archive in the following way:

'CSIRO is one of a small number of Commonwealth bodies which maintains a professionally-staffed in-house archive in place of transferring records to the Australian Archives (this could change soon). The CSIRO Archive has a staff of four and a collection which runs from 1916, when CSIRO was founded as the Advisory Council of Science and Industry, to the present. Most of the collection is correspondence files and photos; we have very little data.

The Archive is located at Unit B, Centrecourt Warehouse Complex, Pirie Street, Fyshwick, ACT. Our telephone number is 484574. Our postal address is P.O. Box 225, Dickson, ACT 2602. Enquirers are most welcome but should give at least one week's notice. We charge for photocopying at the same rate as the Australian Archives, 30c per page.'

The following is a list of the Archive's principal sources:

Forestry and forest research

Series 721 Photos from the Forestry Bureau era. One shelf metre. Includes group photos and photos of the opening of the Australian Forestry School by Prime Minister Bruce in 1926. Series 721 is an unsorted and unlisted collection and thus relatively inaccessible.

Series 725 Photos apparently dating from the 1930s to the 1970s. Six shelf metres. May be several collections assembled as one. A register to at least part of the series was destroyed by the Division of Forest Research. Series 725 is an unlisted and unsorted collection and thus relatively inaccessible.

Forest products

Series 480 Division of Forest Products. Main correspondence series. 1928-1971. Fifteen shelf metres. Two-thirds of this major collection is listed and accessible. The list proper of over one hundred pages of file titles is available at the Repository.

Series 1 Series 1 is the main correspondence series of CSIRO's earliest organisations, the Advisory Council of Science and Industry (1916-1919) and the Institute of Science and Industry (1919-1926). Sections 32, 33 and 34 of Series 1 contain one metre of files on forest products, distillation of hardwoods, and paper pulp.

Series 9 Series 9 is the main HQ correspondence series of the Council for Scientific and Industrial Research (CSIR, 1926-1949), CSIRO's immediate predecessor. Section F is the Forest Products section. Two shelf metres.

Series 365 Notebooks of Division of Forest Products contacts with industry. 1929-1936. 37 cm. This is a valuable survey of the forest products industry. The series is listed.

Series 482 Published and unpublished Division of Forest Products material about industry and research. 1918-1930. 50 cm. The series is unlisted.

Series 577 Collection of documents on the history of the Forest Products Laboratory. Covers the period 1916-1937. The series is listed.

Series 97 Series 97 is a large collection of photos from the CSIR period, 1926-1949. It contains a substantial Forest Products section which is fairly accessible.

THE AUSTRALIAN HISTORIC RECORDS REGISTER



The **Australian Historic Records Register** is the product of the Australian Bicentennial Historic Records Search, the major heritage project of the Australian Bicentennial Authority that was undertaken with assistance from the National Library of Australia. From May 1987 to April 1988, 37 field officers located throughout Australia were invited by owners to describe personal, family, community organisation and business records. In addition, specially targeted individuals and organisations were asked to contribute to the **Register** by describing the records they hold. As a result, thousands of people and organisations registered letters, diaries, photographs, financial records, posters, sketches, and recipe books.

The **Australian Historic Records Register** is the most comprehensive list of paper-based records held in private hands ever to be assembled in Australia

Containing several thousand entries which give an insight into colonial and contemporary life in Australia, the **Register** provides:

- . a full description of each record
- . a brief outline of their historical content
- . a comprehensive name, place and subject index for quick and easy access
- . where appropriate, location of the originals with access conditions

The **Register** consists of microfiche packaged in a folder and is available from the National Library of Australia for Aust \$30.00 (including packaging and surface freight).

The Australian Bicentennial Authority is providing a complimentary copy to major research libraries and each local Government Area for its main library.

Orders can be sent to:

Sales and Subscriptions,
National Library of Australia
Canberra ACT 2600, AUSTRALIA
Tel: (062) 62 1646

Payment must be sent with order.

Early in 1990 a companion guide to the Australian Historic Records Register will be available:

Hidden history: A guide to the Australian Historic Records Register

the guide displays the wide variety of records in the Register. Further details are available from the address above.

ABC RADIO DOCUMENTARIES

Something Unique, Something Majestic is the title of an ABC Radio documentary made by Bill Bunbury of the ABC Social History Unit. Bill is the only producer for the unit who is based outside Sydney. He produces programs from Perth which reflect Social History in this part of the continent.

This program documents in story and song, the life of the foresters, the mill-town workers and the bush railwaymen of the karri forest in the era before the chain-saw and the prime mover. Workers and their wives speak frankly about their feelings for the forest and the way of life it represents.

They Said You'd Own Your Own Farm is the story of Group Settlers in the Denmark and Northcliffe areas in the nineteen twenties - raw migrants sent to turn karri forest into profitable dairy farms, or so they thought.

As with **Something Unique, Something Majestic** the story is told by the people themselves.

Word of Mouth: Jack Thomson is a two-part series on one of WA's most experienced and respected foresters. Jack talks about his birth in the goldfields, apprenticeship as a forester under the far-sighted Lane-Poole, the practice of forestry now and then and his

concern for the future of an environment he has come to love deeply.

Although these documentaries have already been broadcast, they are still available from the Social History Unit, via its Catalogue service.

Send \$12.00 per double-sided cassette to ABC Social History Unit, PO Box 9994, Perth 6001, together with details of your postal address.

Programs prepared by the ABC Social History Unit are broadcast on 'Talking History', Saturday 1.30 pm ABC Radio National.

PUBLICATIONS

AUSTRALIA

AUSTRALIA'S EVER CHANGING FORESTS

As foreshadowed in Newsletter no. 2, *Australia's Ever Changing Forests*, the proceedings of the First National Conference on Australian Forest History held in May 1988 at the Australian National University, edited by K.J. Frawley and N.M. Semple, is now available.*

At \$15 (posted) (\$A25 overseas), this must be the book bargain of the year. The conference was an enormous success - hoped for but successful, I'm sure, beyond the organisers' best hopes. That there was a scattering of people working in or around the field of forest history in Australia was known; that there were in fact so many people covering such a wide range of interest could not have been anticipated. This width of interest and the enthusiasm of its participants are amply displayed in the more than 500 closely packed pages of this volume. The subject matter covers the ecological history of Australian forests; the forests and aboriginal society; public forestry; the forest industries and labour; regional approaches; conservation and national parks; sources for forest history; and forest history in North America. Many of the papers are of a specialised kind; but all are distinctly readable.

As a Special Publication of the Department of Geography and Oceanography of the Australian Defence Force Academy, the production is outstanding, especially considering the price. The type chosen makes for very easy reading; the layout is attractive; the diagrams are clear and the illustrations don't suffer by being black and white; it seems securely bound. The book is a valuable and comprehensive first contribution to a subject that must inevitably expand in scope and volume and, to that extent, will form a definitive reference for a long time.

If you, or those about you, have the slightest interest in forest history, I strongly recommend you buy this book. It will repay you many times over.

L.T. CARRON

(Visiting Fellow formerly Reader in Forestry, Dept of Forestry, ANU, Canberra)

(*from The Editorial Assistant, Department of Geography and Oceanography, University College, Australian Defence Force Academy, Campbell, ACT 2600, Australia).

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AUSTRALIA

The Forest Record in Australian Local and Regional History : An Annotated Bibliography

Julie Kesby and Kevin Frawley

Monograph Series No. 5, 1989. Dept of Geography and Oceanography, Australian Defence Force Academy, Canberra, 196 pp.

This annotated bibliography is a by-product of a project undertaken for the First National Conference on Australian Forest History held in Canberra in May 1988. Topics addressed at the conference were preceded by review papers which assessed the current state of knowledge in that topic. One of these papers surveyed a sample of Australian local and regional histories to assess their forest history content.

More than 1,100 monographs were surveyed with the review revealing some reference to forests and woodlands in 55 per cent. These varied from significant sections or chapters, to very brief mentions. From the review it is clear that the full potential of local and regional history to play a significant role in advancing knowledge of environmental change following European settlement of Australia has yet to be realized.

The review was aimed to be indicative not exhaustive and was based primarily on the holdings of the Australian National Library, Canberra. The National Library is the primary 'legal deposit' library in Australia. (The Copyright Act 1968 and various State Acts require a copy of any work published in Australia to be deposited with (a) the National Library and (b) the appropriate State library).

Items in the annotated bibliography are presented by State and Territory, organized by place names arranged alphabetically. These are normally towns and cities but include some regions such as the 'Atherton Tableland'.

Available from:

Editorial Assistant
Dept Geography and Oceanography
Australian Defence Force Academy
Campbell ACT 2600

Currently distributed free of charge.

NEW ZEALAND

Dooley, J., 1989 Waituhi - The Vanished Village, *North and South* (July) 34-46.

Thomson, A.P., 1988 The Battle for Bowen Falls. Published by the author, 8 Nicholson Road, Khandallah, Wellington 4.

Yarwood, V., 1989 Kauri, *New Zealand Geographic* No. 2: 86-111.

Trussell, D., 1989 The Expressive Forest, *New Zealand Environment* 62: 7-9.

Hutching, G., 1989 South Pacific Conservation, *New Zealand Environment* 62: 30.

McKelvey, P., 1989 L. MacIntosh Ellis in France, *New Zealand Forestry*, 34(2): 15-18.

Forthcoming

Holm, R. *Logs to Locomotives*, Dunmore Press, Palmerston North.

QUEENSLAND

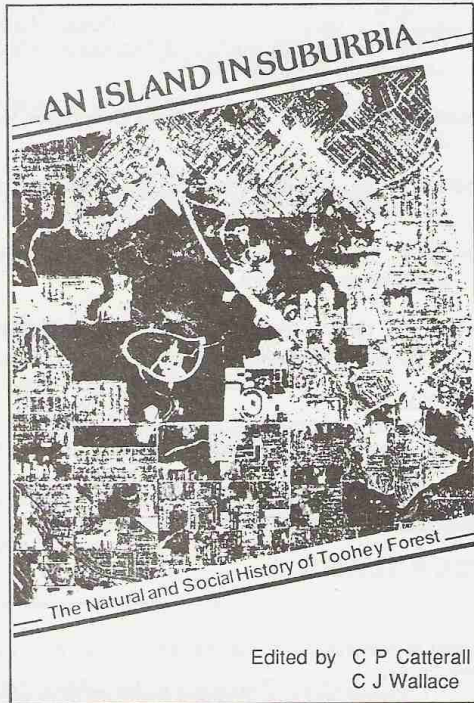
An Island in Suburbia: The Natural and Social History of Toohey Forest

Eds C.P. Catterall and C.J. Wallace (Institute of Applied Environmental Research, Griffith University, Brisbane) 205pp + App.

Queensland's third university (Griffith University) is located on 175 ha of Toohey Forest, a substantial remnant of bushland in the southern Brisbane suburb of Nathan. The area is part of the 'Green Belt' around the city adopted by the Brisbane City Council after the Second World War. However the forest has seen a precarious existence, balanced between the green belt ideal and the pressures of urban development including the whittling away of areas for various public works and the siting of facilities (South-East Freeway, Q.E. II Sports Complex). This volume is a history of that forest.

The book owes its origins to the use of Toohey Forest as an 'outdoor laboratory' for courses in geology, biology and ecology at Griffith University. It is a compilation of material prepared for field classes and the results of field investigations written in such a way as to be useful to a wide range of readers - especially non-expert ones. Though the majority of the book deals with the natural history component it is a multi-disciplinary effort including a section on 'History, Land Use and Tenure'. Other sections are: Biophysical Characteristics, Terrestrial Flora and Fauna, Aquatic Flora and Fauna, Conservation and Management. The appendices detail field methods, give

descriptions of plant and animal communities and species lists.



As a local forest history *An Island in Suburbia* is an excellent reference for residents of the Mt Gravatt area and Brisbane generally. Toohey Forest (with its 400+ flowering plant species, 30 fern species, and extensive fauna list - 73 native birds, 7 native mammals, 30 reptiles) is one of those valuable remnant forest areas which often seem to be seen mainly as suitable sites for another development or roadworks. This volume which documents the conservation, educational and recreational values of the forest should help to secure its future. We could do with similar publications in many other parts of Australia.

KEVIN FRAWLEY

Available from:
Institute of Applied Environmental Research
Griffith University
Nathan, Qld 4811

\$16 + postage

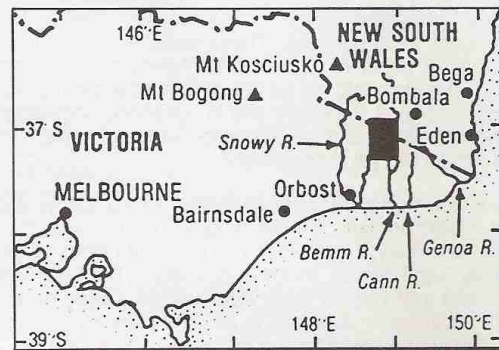
VICTORIA

Human Settlement History and Environmental Impact : The Delegate River Catchment, East Gippsland, Victoria
Peter Gell and Iain-Malcolm Stuart

Monash Publications in Geography No. 36 (Dept of Geography and Environmental Science, Monash University, Melbourne) 88 pp.

This volume explores the long history of environmental change in the Delegate River catchment of East Gippsland. Climate change, Aboriginal use of fire, European use of fire, palynological investigation (using pollen and charcoal records from swamp deposits), the impact of fire on the East Gippsland forests and the implications of the investigation for forest management are considered. The authors conclude:

'In summary, much of the vegetation of the Delegate region is a reflection of a state of recovery after widespread disturbance last century. Most importantly with respect to the fire regimes of the region, it appears certain that frequent burning is not part of the natural regime of this region, and that given sufficient protection from disturbance, the vegetation of the Delegate River catchment may reach a condition which reflects the 'natural' environmental conditions of this part of East Gippsland.'



Available from:
Dept of Geography and Environmental Science
Monash University
Clayton, Vic. 3168

\$10 + postage

CONFERENCES

AUSTRALIA

DEGRADATION OF VEGETATION IN SEMI-ARID REGIONS: CLIMATE IMPACT AND IMPLICATIONS

29-31 January, 1990 School of Earth Sciences, Macquarie University, Sydney.

(Program includes a 4 day pre-meeting excursion to Pilliga and other State Forests)

Further details:

Dr A.J. Pitman
School of Earth Sciences
Macquarie University
North Ryde NSW 2109

* * * * *

NEW ZEALAND

SCIENCE AND NATURAL HERITAGE - TIROHANGA O TE AU TUROA

(An interdisciplinary conference on New Zealand's Physical and Biological Environment)

20-25 January 1990 Massey University, Palmerston North, New Zealand

Further details:

Dr C.J. O'Kelly
Dept of Botany and Zoology
Massey University
Palmerston North
New Zealand

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IUFRO WORLD CONGRESS

5-11 August 1990
Montreal

The Forest History Group has been allocated a total of 8 hours during 3 days for papers and a business session. It will include a meeting of the Working Group on Timber and Timber Industries. Graydon Henning and John Dargavel plan to present papers on the 'Lumber export trade of the Pacific North West 1890-1914 and aspects of

nineteenth century forest history in Australia', and 'The place of timber merchant firms in the structure of the industry'.

Details of the history meeting can be obtained from:

Dr H.K. Steen
Forest History Society
701 Vickers Avenue
Durham NC 27701
USA

Conference details and registration papers are available from:

IUFRO Congress Secretariat
Box 1990
Place d'Armes
Montreal
Quebec
Canada

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LATIN AMERICAN FOREST HISTORY CONFERENCE

17-23 February 1991, San Jose, Costa Rica.

This conference will include three days of sessions and a two day field trip, overnighing at the Office of Tropical Studies in Northern Costa Rica.

Details from Dr H.K. Steen (as above).

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PACIFIC SCIENCE CONGRESS

May 27-June 4 1991 Hawaii

A seminar on the history of the timber economy of the Pacific Basin will be held during this Congress. The seminar program will be organised in two parts: the first dealing with the period up to 1945, the second dealing with the recent period and current issues.

Details from:

John Dargavel
Centre for Resource and Environmental
Studies
Australian National University
GPO Box 4
Canberra ACT 2601

FEATURE ARTICLE

SOME EARLY NEW ZEALAND SAWMILLS

Nearly a dozen separate water or steam powered sawmills were set up in New Zealand in the years immediately before and after large scale European settlement in 1840. The first of these was Darce and Brownies' water powered Mercury Bay plant which grew out of its proprietor's long involvement in the spar and sawn timber trade. The industry developed around 1800 and was based on Kauri (*Agathis australis*), a species limited to the northern parts of the North Island of New Zealand, but ideally suited for use as spars for which prices of up to £200 might be paid. A secondary trade in handsawn timber for sale principally in New South Wales also took shape from the 1820s. The number of sawmills expanded further in the early 1840s with the imposition of imperial authority and the subsequent attempts at systematic colonisation in Wellington, New Plymouth, Nelson and Wanganui. Auckland, the other principal town, owed its origins to trade and commerce as well as being the capital until 1865.

From a number of period and secondary accounts it is possible to tabulate details of many of these early plants (Table 1) and to map their location (Figure 1), but little is known about their actual operations both technical and economic. There are, however, some tantalising snippets of information to be gleaned about some of these plants, typically those established after 1840. The exception is Martin's (1845) account of the decision to seek quick profits by speculating on saw milling rather than cattle farming in 1839 when large scale European settlement in New Zealand seemed imminent. Martin and his partner McCaskill journeyed to New Zealand from New South Wales and set up a sawmill on an extensive area of land they purchased off the Maoris in the Thames Valley. Setting up the sawmill turned out to be no simple task; the millwright brought across from New New Wales was often drunk, the waterfall where the mill was to be sited turned out to be fictitious and the expensive option of building a dam to pond water was unsuccessful in the first instance when the freshly completed earthworks gave way. A replacement designed on different lines was then built. For this work McCaskill was dependent on Maori labour. The Maori in turn sought more remuneration and as the mill took longer and longer to complete, ultimately ended up causing supply problems for McCaskill and his workers.

This was not the whole of Martin and McCaskill's difficulties, for with the pending arrival of William Hobson RN as Lieutenant Governor designate, all prior land purchases by Europeans were deemed invalid and subject to investigation of individual claims before a crown grant of a maximum of 2500 acres (1012 ha) might be forthcoming. This threatened to spell the end of

Martin and McCaskill's speculative venture before the plant was even completed and led to Martin making a special journey to the Bay of Islands to seek to be allowed to complete the sawmill. To his surprise Hobson agreed, since he felt it would be in the interest of the immediate economic development of the country. Subsequently, Martin and McCaskill's sawmill slips quietly from view, probably unable to effectively complete against other sawmills and hand sawyers cutting adjacent to Auckland township.

Established	Owner(s)	Location	Power Source
1838	Darce and Browne	Mercury Bay	Water
1839	McDonnell	Te Horeke	Water
1839	Martin and McCaskill	Hikutaia	Water
1842	Kebbell Brother	Karekare	Steam 1
1842	Manukau Steam Mills	Cornwallis	Steam
1842	Catchpool	Wellington	Steam 2
1942	Union Steam Saw & flour Co	Wellington	Steam
1843	Schultz	Wellington	Water
1845	Baigent	Wakefield	Water

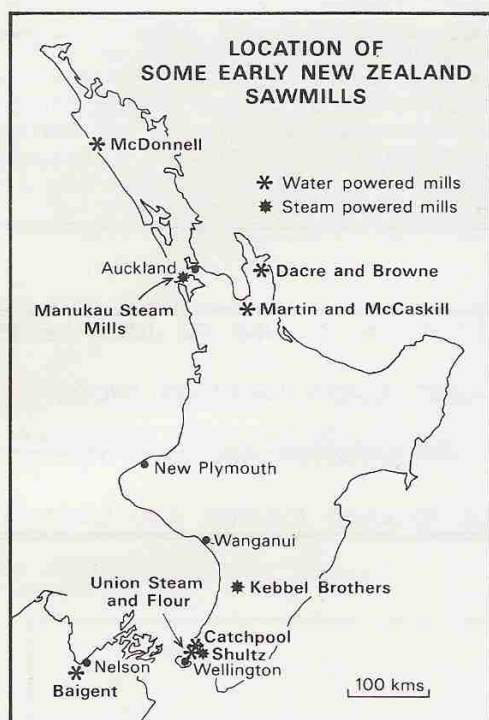
Table 1 Some early New Zealand sawmills

Sources: Simpson (1973), Ward (1928), Wakefield (1848), Martin (1845), Scott (1973).

Notes

1. Eventually turned over to flour milling
2. Flour and Sawmill

Another early Kauri sawmill was the Manukau Steam Sawmill set up in 1842 east of the township of Cornwallis on the Manukau Harbour south of Auckland. This venture was one of several schemes devised by the promoters of the New Zealand Manukau and Waitemata Company to further prosper from their endeavours which principally involved purchasing land to establish immigrants from Britain on a site by the Manukau Harbour (Scott, 1973, 21-31). With abundant forests adjacent to the town, the sawmill was an attempt to utilise the local settler workforce by selling on the growing Auckland market where buildings were virtually all constructed of wood and to recoup some monies to the principals of the land settlement company. The mill was powered by a 14 horse power Cornish beam engine imported from England and equipped with frame and circular saws, lathe and shingle cutter. Shipments to Australia were unprofitable and the presence of other local and imported timbers meant that the mill failed to compete on the Auckland market, leading to its closure in 1843 (Diamond and Haywood, 1980, 4).



Other mills about which some details survive were situated in proximity to the settlements of Wellington and Nelson. Edward Jerningham Wakefield visited the Kebbell brothers' sawmill to set up in 1842 some 17 miles (27 km) up the Manawatu River, on the northern bank side amongst the Totara (*Podocarpus totara*) forest some 120 km north of Wellington and penned a lucid description of the 20 horse power plant, from a time when steam power was still a comparatively new technology.

Gable after gable, and roof after roof almost all comprised of thatch on wooden framework were added to the irregular building, as different parts of the machinery were erected and required. At long last the cast iron chimney, forty feet high, rose from the midst of the heaps of angles and the steam was set going (Wakefield, 1848, 119)

The Kebbells paid rent to local Maori for the mill site and envisaged supplying the Wellington settlement with sawn timber. As with Martin and McCaskill's plant and the Manukau Steam Mills, they were too distant from their market to be competitive. The plant was subsequently burnt to the ground, a not uncommon occurrence for early sawmills, and when rebuilt was adapted to grind flour as well as cut timber.

Edward Baigent's water powered mill constructed at Wakefield near Nelson in 1845 has been described in

considerable detail by a descendent (Baigent, 1942). The family is also notable for continuing in the timber industry until the present day. Edward Baigent had commenced saw milling with the establishment of the Nelson settlement in 1842. In 1845 he resided at Wakefield adjacent to an extensive stand of forest and a stream. The original plant was simply constructed:

a water-wheel, driving a vertical single-bladed frame for breaking down, and a primitive roller bench for ripping out, the mill being housed in a shingle roofed mill shed (Baigent, 1942, 55).

Apart from the actual saws and other iron articles, the mill was constructed entirely out of materials found onsite. The water-wheel, built around a Totara axle, the arms being held in place by mortice joints and wooden pins, was constructed without nails. The bearings were also made of wood, Akeake (*Dodonea viscosa*) or Black Mairie (*Olea cunninghamii*) being the two suitable species. Where iron bolts were required they had to be laboriously made by hand and the nuts were "definitely not interchangeable" (Baigent, 1942, 55).

Belting for the plant was made from bullock hide and lubricated with tallow while bearings were oiled. Both lubricants tended to go rancid in the summer. The circular saws in the mills were made of 1/4 inch thick untensioned plate with 1/2 inch to 3/4 inch teeth. The need to protect them from damage meant that some logs were discarded and other timber was wasted. The sawblade itself also revolved slowly.

The breaking down bench table top was wooden, ran on rollers and moved by a windlass mounted at each end of the bench. Logs on the bench had spikes driven into both ends and by hand cranking, log and bench were moved to the side and back. The breaking down bench was of similar construction. The average working week consisted of six 10 hour days and wages varied from 4/- to 6/- per day for adults and 1/6 to 2/- for boys. This was paid both in food and cash. Sawn timber was taken by bullock cart to Nelson where it sold for 7/6 to 14/- per 100 superficial feet depending on species. Rimu (*Dacrydium cupressinum*) was the least valued while Totara returned the most.

The expansion in the number of sawmills after 1840 is significant in that it signalled a reorientation in the timber industry. From about 1810 to 1840 the forests of New Zealand have been regarded by Sydney entrepreneurs as an abundant and accessible source of spars and sawn timber. By the 1840s timber cutting and saw milling was continuing to expand but became increasingly geared towards supplying the needs of the new settlements in New Zealand. Even so, timber exports remained a significant revenue earner until the mid 1850s. Local demand was sufficient to make the construction of water and steam powered mills feasible, although, as the experience of Manukau Steam Mills and Kebbell Brothers demonstrated, not all the early ventures succeeded.

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