

The Future of Australia's Wood Collections?

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The conservation and use of the scientific collections of wood, or 'xylaria' that were built up in Australia during the twentieth century has become uncertain following institutional changes. There are two related concerns: the preservation or disposal of those collections that are not required by the institutions that now hold them; and the shortage of wood scientists who use the collections for their own research, or do so for others.

We have prepared a brief overview of the situation of the principal Australian collections as we understand it and would appreciate any corrections or further information from readers.

Xylaria are important: as important as libraries and archives, all of which hold material for use by future generations. They are however, not just repositories: their value lies in the potential access by researchers in the natural sciences, technology, archaeology, and history. As with archives and libraries, future use is not necessarily immediately explicit, but develops over time. The failure to publicly endorse xylaria, particularly those held by Government agencies, is reflected in the lack of obligation that attaches to such recognition to retain and conserve the collections, that results in Australia's wood heritage being sold to private companies, lost, or worse, destroyed.

Xylaria, in common with archives and libraries, have three key pre-requisites: collection, organisation, and conservation. It is apparent from the information gathered for this Note that both organisation and conservation is sadly lacking in all but a couple of cases. Of most concern is the failure to ensure the conservation of the National xylaria held by the CSIRO. The chart below lists known xylaria in Australia.

The information sought to assess the status of xylaria in Australia was based on two sources: the electronic version of the *Index Xylorium*, published by the International Association of Wood Anatomists and maintained by the Kew Botanical Gardens, UK in 1988; and a PhD thesis, *A Prototype Interactive*

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Identification Tool to Fragmentary Wood from Eastern Central Australia and its Application to Aboriginal Ethnographical Artefacts, by Jennifer Barker. As tools for assessing the current position of Australian xylaria, the *Index* was used to identify the known xylaria in Australia as well as to ascertain their status as at 1988, and the thesis, the situation as at 2005. The key questions asked of correspondents was where is the collection housed, has material been added, and what were the sources for material if it differed from the information supplied in the reference tools. No attempt was made to update the entries for the *Index*.

National. CSIRO.

Contact: Jugo Ilic has been appointed as a CSIRO honorary research fellow and has access to the collection at any time.

Foundation	1929 by the Council for Scientific and Industrial Research, Division of Forest Products.
Scientist/Curator	The collection is currently being assessed, and it is hoped that Jugo Ilic will be appointed as scientist/curator.
Collection	The major national collection. 47,000 specimens covering 13,000 species, representing 270 families, specialising in Australia, PNG, Malaysia and the southwest Pacific.
Situation	The Division of Forest Products passed through a variety of name changes and functions from 1971. The wood collection ceased to be maintained once Jugo Ilic retired from work at CSIRO in 2005. No current access. Collection is currently stored at the CSIRO Clayton site. Not listed on CSIRO's web site as one of their national collections.

National. Australian National University, Fenner School of Environment and Society, Canberra

Contacts: Prof. Stephen Dovers, Director; Prof. Peter Kanowski, Professor of Forestry

Foundation	1925 as teaching and research collection for the Australian Forestry School (AFS). Transferred to Department of Forestry (now Fenner School of Environment and Society) in 1965.
Scientist/Curator	None
Collections	<ol style="list-style-type: none">1. The AFS collection 7027 samples in 3118 species. It includes a Wood Library of large blocks displayed as in a library in a room in the ANU Forestry Building.2. The 'Dadswell' collection consists of 2400 samples of 500 species with microscope slides.3. The PNG collection consists of 200 species collected by the Australian Army Forestry Corps in 1942-1943.

Situation The last full-time wood scientist (Prof Phil Evans) left ANU in 2001. Wood anatomy was taught by casual staff until 2009. In 2011 the collections (except the Wood Library) were removed to a shipping container during a building and renovation program. An inventory of the material was made and the indexes to it are extant.

The Director of the Fenner School, Prof Stephen Dovers commissioned a significance assessment of the collections as a first step in deciding on their eventual future. It was conducted by Roslyn Russell Museum Services and is publicly available on the School's web site at:

URL: <http://fennerschool.anu.edu.au/about-us/wood-collection>

New South Wales. NSW Herbarium, Royal Botanic Gardens, Sydney
Foundation 1881 Forestry Commission of NSW. Transferred to NSW Herbarium in October 2011.
Scientist/Curator Dale Dixon, Manager Collections, National Herbarium of New South Wales.
Collection This is the second oldest collection in Australia. It was established by foresters and botanists, including J.H. Maiden. Large collection of Acacia and a comprehensive collection of thin section slides. The collection numbers some 30,000 specimens in 1,380 genera. Significant collections are C.E.Lane-Poole's material collected in New Guinea, and the Acacia material collected by M.Tindale.
Situation With the collection now housed at the Herbarium it is too early to ascertain whether previous policies such as providing samples for sectioning, exchange and publications, will continue.

Queensland. Queensland Department of Employment, Economic Development and Innovation, Brisbane
Contact: Gary Hopewell, Senior Technician, Forest Product Innovations
Foundation 1922
Scientist/Curator Gary Hopewell
Collection 4,500-10,000 specimens in 200 genera, specialising in Queensland trees
Situation Bailey Collections (Qld timbers): one complete set on display in Salisbury Research Facility; duplicates are in the Eco-Sciences collection in Dutton Park; a third set is

housed at the Brisbane Herbarium at Mt Coot-tha.

A separate set of larger Qld samples is on display (and frequently used for ID in the Salisbury Research Facility visiting scientist office/lab. This is referred to as the Pettigrew Collection, after an early Brisbane sawmiller.

The samples from remaining Australian states are housed with the main collection at Dutton Park and were acquired through reciprocal exchanges with Forestry Departments. International: through reciprocal exchanges with other institutions around the world, with recent samples from Brazil, plantation hardwoods from Queensland, additional Pacific Island samples and an apparently colourful range from former French colonies in Africa.

The Department hopes to compile a database for the collection and are seeking funding.

Queensland. Queensland Herbarium, Brisbane

Contact: Alan Bolin, Principal Technical Officer, Biodiversity and Ecosystem Sciences.

Foundation 1880. Australia's oldest collection

Scientist/Curator Alan Bolin

Collection 3000 specimens including some early New Guinea Forest (NGF) collections from the 1940s (1100 specimens) and a more recent collection from North Qld of one of a staff botanists, Dr. P.Forster, in 1996 (1300 specimens). There are also 3 specimens from the Dadswell NGF from 1944. The herbarium maintains a list of collectors with the number of their wood collections held. No microscopic collections.

Situation Active. Still collecting.

South Australia.

The situation in South Australia is extremely uncertain. In 2005 Barker indicated that the wood collection, held then by Forestry South Australia, was in storage, but there were plans to 'recover' the collection, if a suitable repository could be found. All attempts to ascertain whether this has occurred have been met with silence.

The 1988 *Index Xylorium* described the collection as being about 4,000 specimens.

Tasmania

No known collections in the State.

Western Australia. Forest Products Commission (FPC)

Contact: Andrew Lyon, Acting Principal Scientist, Science and Technical Standards

Foundation: Established in the first half of the 20thC

Scientist/Curator Andrew Lyon

Collection: Approximately 700 specimens. A comprehensive collection of WA timber samples plus good collections of timber samples from other States in Australia especially eucalypts. Also held are collections from Malaysia, Indonesia & Africa. The FPC has a cellular slide collection covering most families and species from around the world collected from the first half of the 20th century by the BRE.

Situation The collection is not public and there is no comprehensive list available of all the samples.

Private Collections

Queensland: Myron Cause. About 3,000 specimens obtained from the New South Wales collection. Private Consultant.

Victoria: Ian McLaughlin. About 1,000 specimens. These are duplicates from the CSIRO collection that perambulated variously between La Trobe University, Australian National University, University of Melbourne, and Creswick, the Forestry School in Victoria.

Conclusion.

The picture painted in the chart is depressing. It would appear that the agencies responsible for collections with the exception of Queensland, and hopefully New South Wales, are potentially at risk. Indeed the lack of information from South Australia suggests that the collection in that State is lost.

Another major issue is the lack of comprehensive catalogues and listings in machine-readable form. There are two major effects of this situation. First, that potential users have no means to ascertain the coverage of wood

specimens in Australia, and as many of the collections are not publicly accessible, this information remains hidden. The second point relates to the inability of researchers, particularly in the botanical sciences, to identify gaps in the collections. This is fairly critical as deforestation is continuing around the globe and many species have the potential to be destroyed before identification and samples can be taken.

It is to be hoped that this news item may encourage a conversation amongst interested parties. It is to be hoped that Government agencies responsible for collections are made aware of the issues and by taking a national, rather than State, approach, we may see the retention, organization, and conservation of these very important xylaria.