

Modern-day Plant Hunting

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Summary

From 1985 to 2000 I made a number of plant-collecting trips to Chile, Fiji, New Caledonia and New Zealand. This paper lists the principal introductions into Australia and in a few cases, a number of species received from other collectors overseas. Several botanic gardens hold a good range of the original introductions, as well as a large number of newly re-propagated plants. This includes the Geelong Botanic

Gardens at its Pacific Rim ‘Southern Hemisphere’ section. In addition, in a dedicated New Caledonian section adjacent to their New Zealand bed, the Royal Botanic Gardens Melbourne displays an interesting range of species mainly collected by the author. The botanic gardens of Sydney, Adelaide and Hobart also hold some valuable collections propagated from the original plant introductions.

INTRODUCTION

The great plant hunter Robert Fortune was principally sponsored in his travels in the mid-1800s by the Horticultural Society of

London (later the Royal Horticultural Society) and also by the mighty East India Com-

pany. Those who received his plant novelties were the rich and famous of British society who desired them for their new gardens. Some 150 years later, the situation was different, in Australia in particular. Very few new plants were being introduced, even into our botanic gardens. As an enthusiastic collector of conifers, I had only one possible avenue for obtaining new species and that was to go and get them!

I was lucky. By building a good case, I was able to obtain support from the IUCN specialist conifer group of which I am a member, help from the CSIRO Forestry Research section, assistance (with

quarantine etc.) and direct sponsorship from various universities and botanic gardens. The Maud Gibson Trust in Melbourne and private individuals such as the late John Silba from New York, provided a degree of funding for some expeditions.

Not only will the publication of the plant lists below allow those growing the material to have some idea of provenance, but it will also establish the date of introduction of a number of new species such as the now widely grown *Lobelia tupa* and *Astelia chathamica* (**Fig. 1**) into Australia (and some introductions sent elsewhere, e.g., the Royal Botanic Garden Edinburgh).



Figure 1. a) *Metrosideros vitiensis* introduced from Fiji, b) *Acropyle sahniana* introduced from Fiji, c) This *Astelia chathamica* introduced from New Zealand in 1991 was planted in 1995 as a single small plant is now over three metres across, d) *Geranium traversii* introduced from New Zealand.

The tables below refer essentially to my own plant collecting activities in Fiji (**Table 1**), New Caledonia (**Table 2**) and New Zealand (**Table 3**) etc., but additionally includes some of the material collected in Chile in 1985 while on expedition with staff from the RBG Sydney (**Fig. 2, Table 4**). The species which are listed on CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)

were formally cleared through Sydney's Royal Botanic Garden and the relevant Chilean authorities. The list of collections given below only represents the significant new plants and does not include repeat collections of the same species.

Table 1. Species collected in two expeditions to Fiji by Alistair and Julie Watt (1986 - AW 860001-860198 collection numbers) and by Alistair Watt and Bob Cherry (1988 - collection numbers AW 880100 to 880160)

1986	1988
<i>Acacia richii</i> *	<i>Acmopyle sahniana</i>
<i>Agapetes (as Paphia) vitiensis</i> *	<i>Balaka longirostris</i> *
<i>Agathis macrophylla</i> *	<i>Balaka macrocarpa</i> *
<i>Bulbophyllum vitiense</i> *	<i>Collospermum montanum</i>
<i>Cordia subcordata</i> *	<i>Cyathea alta</i> *
<i>Cycas seemannii</i>	<i>Cyathea lunulata</i> *
<i>Dacrycarpus imbricatus</i> var. <i>patulus</i>	<i>Dacrydium nausoriensis</i> <i>Dacrydium</i>
<i>Dendrobium mohlianum</i> *	<i>nidulum</i>
<i>Dendrobium prasinum</i> *	<i>Davallia fejeensis</i> *
<i>Gardenia hutchinsoniana</i>	<i>Dendrobium platygastrium</i> *
<i>Pittosporum rhytidocarpum</i>	<i>Homalium nitens</i> *
<i>Podocarpus neriifolius</i>	<i>Huperzia squarrosa</i> *
	<i>Metrosideros collina</i>
	<i>Podocarpus affinis</i>
	<i>Podocarpus degeneri</i>
	<i>Podocarpus hybrid</i>
	<i>Retrophyllum vitiense</i>
	<i>Saurauia rubicunda</i>
	<i>Scaevola taccada</i> *
	<i>Spathoglottis pacifica</i> *
	<i>Turrillia ferruginea</i> *

*These species I know came into limited cultivation here in Australia, but I presently can find no evidence of whether they still survive.

Table 2. List of species collected in expeditions to New Caledonia in 1987 by Alistair Watt et al. (AW 870500 to 870581 collection numbers) and in 1993 (collection numbers AW 930100 to 930150), 1995 (collection numbers AW 950003 to 950204) and in 1996 (collection numbers AW 960001 to 960064) by Alistair and Julie Watt.

1987		1993
<i>Acropyle pancheri</i>	<i>Dubouzetia confusa</i>	<i>Alphitonia neocaledonica*</i>
<i>Agathis lanceolata</i>	<i>Libocedrus yateensis</i>	<i>Araucaria humboldtensis</i>
<i>Agathis montana</i>	<i>Myodocarpus fraxinifolius</i>	<i>Astelia neocaledonica</i>
<i>Agathis ovata</i>	<i>Neocallitropsis pancheri</i>	<i>Cordyline neocaledonica</i>
<i>Araucaria bernieri</i>	<i>Neoveitchia storckii*</i>	<i>Cunonia bullata*</i>
<i>Araucaria biramulata</i>	<i>Nepenthes vieillardii</i>	<i>Cunonia macrophylla*</i>
<i>Araucaria goroensis</i>	<i>Nothofagus aequilateralis*</i>	<i>Dacrycarpus vieillardii*</i>
<i>Araucaria laubfelsii</i>	<i>Podocarpus decumbens*</i>	<i>Dacrydium balansae</i>
<i>Araucaria luxurians</i>	<i>Podocarpus longifoliolatus</i>	<i>Dacrydium lycopodioides*</i>
<i>Araucaria muelleri</i>	<i>Podocarpus sylvestris</i>	<i>Dianella ensifolia*</i>
<i>Araucaria nemorosa</i>	<i>Podocarpus gnidioides</i>	<i>Dicksonia thyrsopteroides*</i>
<i>Araucaria scopulorum</i>	<i>Retrophyllum minor</i>	<i>Dodonaea viscosa*</i>
<i>Araucaria subulata</i>	<i>Xeronema moorei</i>	<i>Dracophyllum</i> sp.*
<i>Codiaeum peltatum</i>		<i>Falcatifolium taxoides</i>
<i>Dacrydium araucarioides</i>		<i>Gymnostoma deplancheanum</i>
<i>Dacrydium guillauminii</i>		<i>Joinvillea gaudichaudiana*</i>
		<i>Libocedrus chevalieri</i>
		<i>Melaleuca quinquenervia</i>
		<i>Metrosideros operculata</i>
		<i>Podocarpus lucienii</i>
		<i>Podocarpus sylvestris</i>
		<i>Schefflera candelabrum</i>
		<i>Xanthostemon aurantiacus</i>
1995		1996
<i>Carpolepis laurifolia</i> (dwarf form, summit Mt Humboldt)		<i>Storckiella pancheri</i>
<i>Dracophyllum humboldtensis*</i>		<i>Xanthostemon macrophyllus*</i>
<i>Gardenia aubryi*</i>		<i>Xanthostemon laurinus*</i>
<i>Grevillea exul</i>		
<i>Grevillea gillivrayi</i>		
<i>Metrosideros tetrasticha</i>		
<i>Nothofagus codonandra</i>		
<i>Podocarpus</i> <i>afin. sylvestris</i> (now <i>P. colliculatus</i>)		
<i>Stenocarpus milnei</i>		
<i>Stenocarpus umbelliferus</i>		
<i>Syzygium tripetalum</i>		
<i>Xanthostemon longipes</i>		

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Table 3. List of species collected in 1991 (collection numbers AW 910001 to 910047) and 1993 (collection numbers AW 930100 to 930092) by Alistair and Julie Watt in New Zealand.

1991	1993
<i>Astelia chathamica</i>	<i>Aristotelia serrata</i>
<i>Caldcluvia rosifolia</i>	<i>Ascarina lucida</i> *
<i>Cordyline indivisa</i>	<i>Astelia solandri</i>
<i>Cordyline kaspar</i> *	<i>Beilschmiedia tarairi</i>
<i>Cordyline pumilio</i>	<i>Beilschmiedia tawa</i>
<i>Dianella nigra</i>	<i>Collospermum hastatum</i>
<i>Elaeocarpus dentatus</i>	<i>Coriaria pteridoides</i>
<i>Elingamita johnsonii</i>	<i>Corynocarpus laevigatus</i>
<i>Fuchsia excorticata</i>	<i>Dracophyllum latifolium</i>
<i>Gaultheria antipoda</i>	<i>Dysoxylum spectabile</i> *
<i>Geranium traversii</i>	<i>Fuchsia procumbens</i>
<i>Griselinia lucida</i>	<i>Gunnera prorepens</i>
<i>Halocarpus biformis</i>	<i>Hibiscus trionum</i>
<i>Halocarpus kirkii</i>	<i>Laurelia novae-zelandiae</i>
<i>Knightia excelsa</i>	<i>Melicope ternata</i>
<i>Laurelia novae-zelandiae</i>	<i>Pennantia baylisiana</i> *
<i>Lepidothamnus intermedius</i>	<i>Phyllocladus alpinus</i>
<i>Leptospermum scoparium</i>	<i>Podocarpus hallii</i>
<i>Libertia pulchella</i>	<i>Pomaderris elliptica</i>
<i>Libocedrus bidwillii</i>	
<i>Libocedrus plumosa</i>	<u>Kingdon-Ward wild collected rhododendrons ex. Pukeiti gardens:</u>
<i>Lilium mackliniae</i>	<i>Rhododendron protistum</i> ‘Pukeiti’ KW 21498
<i>Macropiper excelsum</i>	<i>Rhododendron ciliicalyx</i> KW20280
<i>Manoao colensoi</i>	<i>Rhododendron crassum</i> KW 20939
<i>Nothofagus solandri</i>	<i>Rhododendron johnstoneanum</i> KW 20305
<i>Olearia ilicifolia</i> *	
<i>Ourisia macrophylla</i> *	
<i>Peperomia urvilleana</i>	
<i>Planchonella costata</i>	
<i>Pomaderris kumeraho</i>	
<i>Rhopalostylis cheesemanii</i> *	
<i>Schefflera digitata</i>	
<i>Taxus brevifolia</i>	
<i>Weinmannia silvicola</i>	
<i>Xeronema callistemon</i>	

*These species I know came into limited cultivation here in Australia, but I presently can find no evidence of whether they still survive.

Table 4. The significant species collected during an extended plant collecting expedition to Chile by Dr Ben Wallace and John Forlonge, both of the Royal Botanic Garden Sydney, and the author in 1985. These have BJW 850001 to 850354 collection numbers.

<i>Acacia caven</i>	<i>Laurelia serrata</i>
<i>Aextoxicon punctatum</i>	<i>Laureliopsis philippiana</i>
<i>Araucaria araucana</i>	<i>Lepidothamnus fonkii*</i>
<i>Austrocedrus chilensis</i>	<i>Libertia sessiliflora</i>
<i>Caldcluvia paniculata</i>	<i>Lithraea caustica</i>
<i>Citronella mucronata</i>	<i>Lobelia tupa</i>
<i>Cryptocarya alba</i>	<i>Nothofagus alessandri</i>
<i>Drimys andina</i>	<i>Nothofagus betuloides</i>
<i>Empetrum rubrum*</i>	<i>Nothofagus glauca</i>
<i>Escallonia alpina</i>	<i>Nothofagus leonii</i>
<i>Escallonia pulverulenta</i>	<i>Nothofagus pumilo</i>
<i>Escallonia revoluta</i>	<i>Ovidia andina*</i>
<i>Fascicularia bicolor</i>	<i>Persea lingue</i>
<i>Fitzroya cupressoides</i>	<i>Peumus boldus</i>
<i>Gaultheria insana (as G. furiens)</i>	<i>Pilgerodendron uviferum</i>
<i>Gaultheria leucocarpa</i>	<i>Proustia pyrifolia</i>
<i>Gaultheria littoralis</i>	<i>Pseudopanax laetevirens</i>
<i>Gevuina avellana</i>	<i>Puya berteroniana</i>
<i>Gomortega keule*</i>	<i>Puya chilensis</i>
<i>Greigia sphacelata</i>	<i>Quillaja saponaria</i>
<i>Griselinia jodinifolia</i>	<i>Ribes magellanica</i>
<i>Griselinia scandens</i>	<i>Senecio candidans</i>
<i>Gunnera magellanica</i>	<i>Tepualia stipularis</i>
<i>Latua pubiflora</i>	<i>Viola rubella</i>

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Figure 2. The misery of it all! Collecting cushion plant seeds in the snow on Tierra del Fuego, Chile in a blizzard.

In addition to the above-mentioned species, *Papuacedrus papuana*, *Phyllocladus hypophyllus* and *Podocarpus rubens* were obtained in 1986 from Dr Nancy Bowers under import permit directly from Mt Hagen, Papua New Guinea. In 1988, *Pseudotaxus chienii*, *Dacrydium beccarii* and *Amentotaxus formosana* were sent under import permit directly from Pinetum Blijdenstein, Hilversum, the Netherlands and quarantined by the Adelaide Botanic Gardens. In the year 2000 we sent seeds of *Alphitonia zizyphoides*, *Fitchia speciosa* and *Fagraea berteriana* to the Brisbane Botanic Gardens (collection numbers AW 20001 to 20018).

Those last two decades of the 20th century were perhaps a golden age for plant hunting and new plant introductions. Not only were plant handling facilities well developed, but ethylene-absorbent plastic bags were available, many quarantine facilities were in existence here in Australia, and air carriage was quick and efficient. In those days it was relatively straightforward for collectors to obtain an import permit for live plant propagation material, and it was also quite legal to import a wide range of species as seeds. The recent, expensive and extremely clumsy, Nagoya Protocol to the Convention on Biological Diversity (CBD, 2011) is aimed at ‘controlling’ the movement of plants between countries and will probably now make new plant introductions in this way all but impossible.

Places To See Living Plants

At present several botanic gardens hold a good range of our original introductions, as well as a large number of newly re-

propagated plants. Including the Geelong BG with its Pacific Rim ‘Southern Hemisphere’ section. In addition, in a dedicated New Caledonian section adjacent to their New Zealand bed, the Royal Botanic Gardens Melbourne displays an interesting range of species mainly collected by the author. The botanic gardens of Sydney, Adelaide and Hobart also hold some valuable collections propagated from our original plant introductions.

Although I am growing most of the new conifer species here in our arboretum at Lavers Hill, the cool Otways climate of southern Victoria has proved to be too cold for many of the tropical low altitude plants such as *Storckiella* and the *Xanthostemon* species, for example. The latter genus, with many beautiful species, although easy from seed appears to be particularly difficult to keep growing.

Certain species – *Astelia chathamica* (**Fig. 1c**), *Caldcluvia rosifolia*, *Metrosideros collina*, *Xeronema moorei* and *Metrosideros laurifolia* among them – are now being offered by some ‘rare plant’ nurseries. I myself believe that some of the other plants still also have much to offer. The Chilean lobelia, *L. bridgesii* (**Fig. 3a**), I consider to be better than *L. tupa*. *Sophora macrocarpa* is the most robust and best flowering of the genus. My dwarf form of *Metrosideros laurifolia* (previously *Carpolepis*), the natural bonsai-like *Metrosideros tetrasticha* and *Syzygium tripetalum* from the 1600-metre-high summit of Mt Humboldt on the central ridge of New Caledonia, are fantastic and reasonably hardy plants.



Figure 3. a) The Chilean lobelia *Lobelia bridgesii*, b) *Puya chilensis* from Chile, c) *Lomatia ferruginea* introduced from Chile, d) *Dacrycarpus imbricatus* var. *patulus* from Fiji, e) *Latua pubiflora* and (f) *Proustia pyrifolia* from Chile.



Figure 4. a) *Codia pancheri*, (b) *Xanthostemon aurianticus*, (c) *Parasitaxus usta* flower and (d) fruit and (e) *Dubouzetia confusa* all introduced from New Caledonia.

A range of very many other not so well-known species manage to do very well here in the Otways, including *Persea lingue*, *Ribes magellanica*, *Lilium mackliniae*, *Latua pubiflora*, *Drimys andina*, *Nothofagus codonandra*, *Nothofagus glaucus*,

Metrosideros pophryrea, *Amentotaxus formosana*, *Podocarpus gnidioides*, the climber *Proustia pyrifolia*, *Senecio candidans* etc., and are definitely well worth a place in the garden. On the other hand, warmer climate shrubs such as *Dubouzetia*

confusa, *Geissois hirsuta*, *Grevillea exul*, *Callistemon pancheri*, *Dacrydium nausoriensis* and *Stenocarpus milneii* are flourishing and flowering in other parts of southern Victoria.

Expedition And Plant Details

When collecting plant material in the wild, either for propagation or herbarium purposes, it is vital to provide details of the provenance of the collection locality of any specimen taken, such as the latitude/longitude, altitude and environment. As an initial step, the collector assigns his or her own unique 'collection number' to each and every specimen. Generally, this number includes an indication of the year of collection. It is the collector's numbers which tie the individual specimen to the collection records maintained for the particular plant specimen, perhaps to determine cold tolerance for example or soil requirements.

All the material listed herein was collected with the required permissions from the authorities of the countries or native landowners involved (for example, in Fiji) and processed by the Australian Quarantine Service. All of the material imported was initially handled by one or another of our major botanic gardens (identifications, quarantine etc.). Species which are listed on CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) were formally cleared through relevant authorities.

LITERATURE CITED

CBD (2011) Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity. Secretariat of the Convention on

So, What Was The Point of it All?

It should be stressed that our own ventures were never intended to be for profit. As a result of our plant collecting expeditions, for example, the Royal Botanic Garden Sydney got many new species for its 'Araucaria lawn', Melbourne Botanic Garden was able to create its New Caledonian bed, and I in return eventually obtained those rare conifer species that had never been cultivated anywhere. It was only on one early expedition that a large seed collection was made for a commercial nursery and for various reasons this was never repeated.

It is quite likely that only a few of the plants introduced between 1985 and 2000 may ever have a major commercial value but as known-provenance collections, the plants have definite value for *ex-situ* conservation (conservation outside the original habitat). The species marked with an asterisk in the tables (*) are those which I know came into limited cultivation here in Australia, but I presently can find no evidence of whether they still survive. The author would welcome any feedback from those who may have information as to whether these are still in existence in Australia. These novelties have changed my own garden and also those of several botanical institutions. And, despite the views of those who argue for the status quo – an all – 'Australian natives' garden, for example. How dull would our gardens actually be if the plants in them had never changed over the centuries! It is perhaps rather sad that these days the selection of plants for a garden is largely dictated by the nexus between TV lifestyle shows, a couple of landscape writers/designers and the ubiquitous huge garden centres.

Biological Diversity, United Nations Environmental Program, Quebec, Canada. <https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf> Downloaded on 12 September 2023.