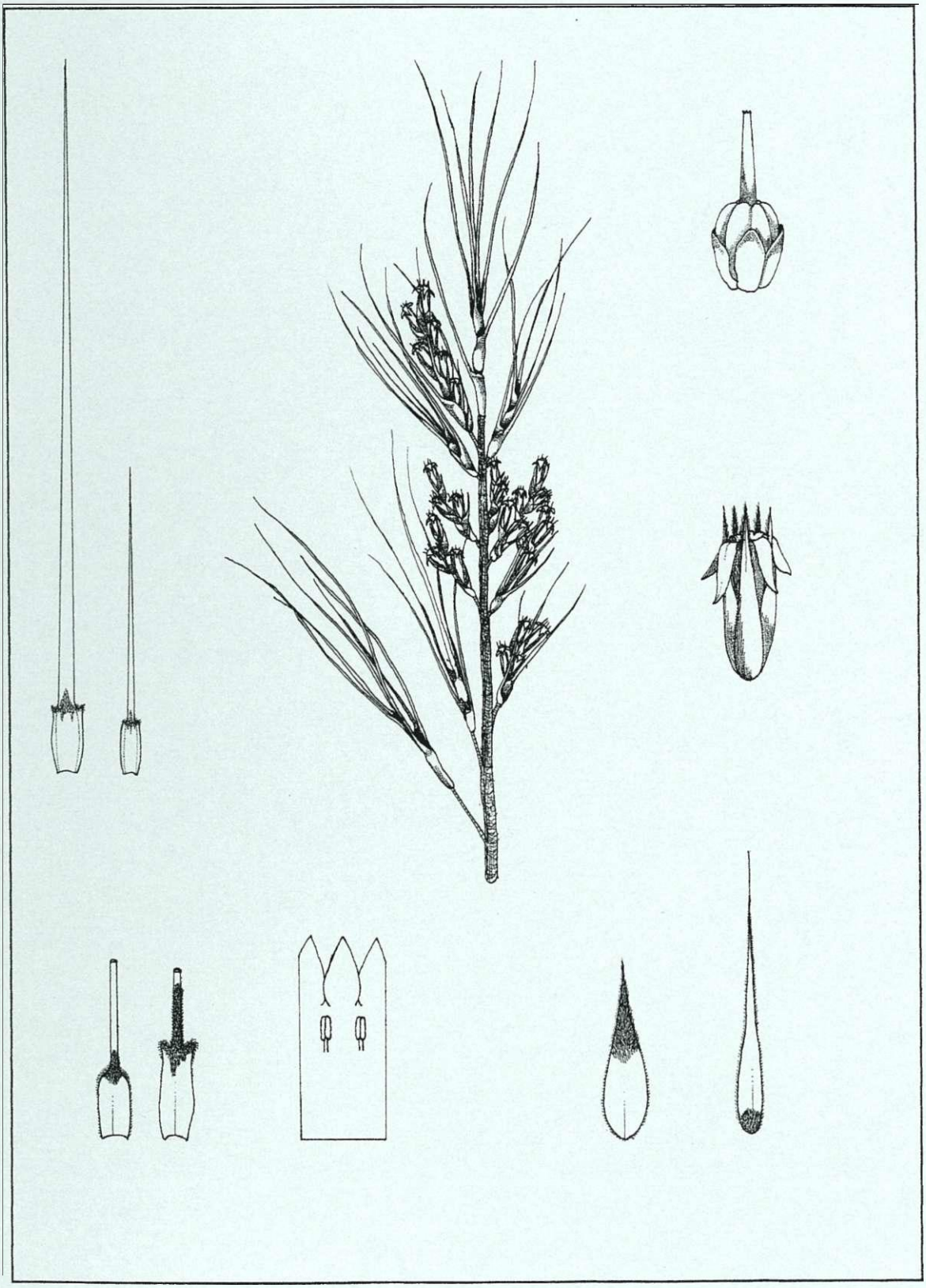
NEW ZEALAND BOTANICAL SOCIETY

NEWSLETTER

NUMBER 70 DECEMBER 2002



New Zealand Botanical Society

Subscriptions

The 2003 ordinary and institutional subscriptions are $18 (reduced to $15 if paid by the due date on the subscription invoice). The 2003 student subscription, available to full-time students, is $9 (reduced to $7 if paid by the due date on the subscription invoice).

Back issues of the *Newsletter* are available at $2.50 each from Number 1 (August 1985) to Number 46 (December 1996), $3.00 each from Number 47 (March 1997) to Number 50 (December 1997), and $3.75 each from Number 51 (March 1998) onwards. Since 1986 the *Newsletter* has appeared quarterly in March, June, September and December.

New subscriptions are always welcome and these, together with back issue orders, should be sent to the Secretary/Treasurer (address above).

Subscriptions are due by 28th February each year for that calendar year. Existing subscribers are sent an invoice with the December *Newsletter* for the next years subscription which offers a reduction if this is paid by the due date. If you are in arrears with your subscription a reminder notice comes attached to each issue of the *Newsletter.*

Deadline for next issue

The deadline for the March 2003 issue (71) is 25 February 2003.

Please post contributions to:

Joy Talbot
17 Ford Road
Christchurch 8002

Send email contributions to **joytalbot@free.net.nz** Files are preferably in MS Word (Word XP or earlier) or saved as RTF or ASCII. Graphics can be sent as Corel 5, TIF JPG, or BMP files. Alternatively photos or line drawings can be posted and will be returned if required. Drawings and photos make an article more readable so please include them if possible. Macintosh files cannot be accepted so text should simply be embedded in the email message.

Cover Illustration

Dracophyllum lessonianum A. Rich.
A shrub or tree, 0.3 - 5 m tall. Branches erect-spreading with dark grey and smooth bark. Juvenile leaves 60 - 120 × 1.6 - 1.8 mm. Adult leaves 27 - 108 × 0.5 - 1.2 mm with auricled lamina shields having pale margins and the base of the lamina covered in short hairs, with a triquetrous apex. The racemes terminate the lateral branches and the flower bracts are persistent with long narrow sheaths. Sepals are slightly longer (6 - 8 mm) than the corolla tube and with hard apices, the inside covered in white hairs.

Drawn by **Fanie Venter** as part of his PhD thesis on the revision of the genus *Dracophyllum s.l.* The end product of his study will be a full colour book on the genus and related genera.

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NEWS

New Zealand Botanical Society News

- **From the Secretary**

Allan Mere Award 2002

The NZBS Committee is pleased to announce that it has this year chosen to award the Allan Mere to Colin Webb of Wellington in recognition of his outstanding contributions to New Zealand botany. The award will be presented to Colin at a Canterbury Botanical Society function on the 7 February to be held at Canterbury University.

Peter Heenan and Peter de Lange, in nominating Colin, outlined the contribution he has made to New Zealand Botany in the following extract:

> "For nearly three decades Colin has made significant scientific contributions to New Zealand botany and provided visionary and pragmatic science leadership.
>
> Colin has authored four books, the most notable being the *"Flora of New Zealand, Volume 4, Naturalised Pteridophytes, Gymnosperms, Dicotyledons"* (1988) written with Phil Garnock-Jones and Bill Sykes and the *"Seeds of New Zealand Gymnosperms and Dicotyledons"* (2001) co-authored with Margaret Simpson. These two publications are landmark books in New Zealand botany and are key references for researchers and others interested in the botanical and ecological sciences. Colin has also written two popular books, *"Flowering Plants of New Zealand"* (1990) with Peter Johnson and Bill Sykes, and *"Wildflower City: Wellington, New Zealand"* (2000) with A. Knowles.
>
> Colin has published over 80 scientific papers on taxonomy, reproductive biology, and the evolution of plant breeding systems, with many of these papers being on the New Zealand flora. The New Zealand Apiaceae provided an important foundation for the development of many of his ideas on the evolution of plant reproductive systems. Colin is acknowledged as an international expert on reproductive biology and has worked closely with other world-renowned experts such as David Lloyd and K. Bawa. His papers with David Lloyd on "Secondary Sex Characters in Plants" *(Botanical Review,* 1977) and on herkogamy and dichogamy *(New Zealand Journal of Botany,* 1986) are regarded as internationally significant publications. Colin is committed to making science available to a wider audience and has published over 50 popular articles. He has also established as a partnership a small publishing company, Manuka Press, to publish and market high quality, low cost, botanical books.
>
> Colin joined Botany Division, DSIR, in 1975 as a scientist and for the next 13 years worked on Flora IV as senior author. From 1987 he has held important leadership positions in New Zealand science, and is held in high regard for his leadership, vision, attention to detail, and pragmatic approach to problem solving. Between 1987 and 1990 he held management positions in Botany Division, including Programme Manager, Plant Biosystematics, and in 1990 he was appointed Group Manager, Biosystematics and Ecology in DSIR Land Resources. In 1992 Colin was appointed science planner for Landcare Research and in 1995 he was appointed Manager, Public Good Science Fund at the Foundation for Science, Research and Technology.
>
> Colin's achievements in research and science management in New Zealand are considerable, and it should be acknowledged that since 1987 when he took on senior management responsibilities much of his research, and the preparation of publications have been in his own time."

Increase in charges for Royal Society journals

Many people have contacted the committee about the recent increase in prices for Royal Society Journals, especially the New Zealand Journal of Botany. Because of the effect this will have on many members of our society the President (Anthony Wright) has sent a letter to the CEO of the Royal

Society, and to Hon Pete Hodgson (Minister of Research, Science and Technology) outlining member's concerns. The letter is reproduced below.

> "I am writing to you on behalf of the many members of the New Zealand Botanical Society who read, subscribe and contribute to the New Zealand Journal of Botany, as well as numerous other Royal Society Journals.
>
> We have received complaints from several of our members about the recent changes to subscription prices, and there are a number of related issues that have been causing concern to our members. The main concerns that have been raised are:
>
> - Subscription increases of ca 45%
> - Page charges being introduced of $50 per page (up to a maximum of $500)
> - A change in policy regarding subscription reductions; previously subscribers who belonged to an affiliated society (such as the New Zealand Botanical Society) received a similar discount to Royal Society members
> - The lack of any consultation or fore-warning of these price rises and changes
> - The rather cursory way those who have enquired about the price rises have been treated.
>
> I am aware that there are a number of reasons for these changes such as funding shortages, increased publishing costs, etc, but we believe they are both short-sighted and that their introduction has been poorly managed.
>
> The effect of the increased subscriptions on our members will be considerable. Many of our members are retired and on superannuation and will not be able to afford the increased rate. It is highly likely that the New Zealand Journal of Botany will lose many of its private subscribers and become a journal primarily for the minority of employed botanists that have organisational backing which can absorb the increased costs.
>
> The page charges that are being imposed will mean that the New Zealand Journal of Botany is unlikely to receive copy from anyone carrying out unpaid or non-funded research, limiting the pool of potential authors to those who can afford it. Many of the funded research projects are actually funded from the same source as the Royal Society Journals (MoRST) and page charges would, on the face of it, be merely circulating money around through a couple of layers of administration.
>
> The obvious solution to these problems is increased funding from MoRST for all the Royal Society Journals. These are the primary means of publication for most scientific disciplines in New Zealand and are a vital method of communicating new research to the community. The government often talks about New Zealand becoming a knowledge economy and these journals are a prime means for achieving that.
>
> Under-funding however, does not excuse the way the price increases have been instigated. Some advance warning or explanation of the position to affected groups and organisations would have been beneficial to all, and may well have enabled societies such as ours to lobby the government earlier for increased funding for the Royal Society journals."

Doug Rogan, c/- Canterbury Museum, Rolleston Avenue, Christchurch

Regional Botanical Society News

- **Auckland Botanical Society**

<u>September Meeting</u>

The Lucy Cranwell Student Lectures are delivered annually by students who have benefited financially from the Lucy Cranwell Fund. The speakers this year were MSc students Dave Clarke and Catia Delmiglio. Dave's study compared the invertebrate communities in the revegetated areas of

Tiritiri Matangi Island, with those in the existing forests. Catia has been studying both the effects of virus diseases on, and the taxonomic status of, the native cucumber, *Sicyos australis*.

September Trip
"Seaforth", the Hatfields Beach property of the McKenzie family, was at its springtime best for this outing. Flowering in the gumland scrub were kumarahou, clematis, mairehau, *Alseuosmia macrophylla* and *Pimelea longifolia*. Orchids in bloom were *Pterostylis graminea, P. banksii, Thelymitra carnea* and *Caladenia atradenia*. A new addition to the species list was the tiny daisy, *Lagenifera stipitata*.

October Meeting
Tristan Armstrong, from Landcare Research, first gave the members a practical demonstration on how to extract DNA from a leaf, then used *Hebe speciosa* as an example of how DNA and molecular based marker systems can be applied to the conservation of rare plant species.

October Trip
Areas of kanuka scrub in North Woodhill Forest on the South Kaipara Head contain threatened plants, *Pratia* 'woodhill', *Mazus novaezeelandica* subsp. *impolitus*, and *Cyclosorus interruptus*. Only the small size, or partiality for growing in swamps, saves these plants from being grazed by the feral deer that are devastating the indigenous enclaves still existing in the pine forest.

November Meeting
The Lucy Cranwell Lecturer for this year was Phil Garnock-Jones. Phil spoke of the relationships that have been exposed by molecular research between genera in the *Hebe* complex - *Chionohebe, Hebe, Heliohebe*, and *Parahebe*, - and also the classification of the northern hemisphere genus *Veronica*.

November Trip
Indifferent weather did not spoil the walk along the Mercer Bay and Comans Tracks, Karekare. Special plants from this area were seen - *Hebe obtusata, Sophora fulvida, Celmisia major* var. *major*, and *Myosotis petiolata* var. *pansa*, the latter being nicely in flower. Also flowering were *Scandia rosifolia* and *Clematis forsteri*.

FORTHCOMING ACTIVITIES

14 December	Pot luck dinner & workshop at the Botanic Gardens
Anniversary Weekend	Hauturu Trig Camp
15 February	Rata Track, Hunua

Maureen Young, 36 Alnwick Street, Warkworth. Email: youngmaureen@xtra.co.nz

- **Other Botanic Society Contacts**

Botanical Society of Otago
Chairman: Bastow Wilson Email: bestow@otago.ac.nz

Canterbury Botanical Society
Secretary: Roger Keey (03) 315 7510 or (03) 358 8513 P O Box 8212, Riccarton, Christchurch. Email: wrtc@cape.canterbury.ac.nz

Manawatu Botanical Society
Jill Rapson Ecology, Institute of Natural Resources, Massey University.

Nelson Botanical Society
President: Cathy Jones (03) 546 9499 Flat 2, 5 North Rd, Nelson. Email: cjones@doc.govt.nz
Treasurer: Gay Mitchell (03) 548 3351 13 Albert Rd, Nelson.

Rotorua Botanical Society
President: Willie Shaw 07 362 4315

Secretary: John Hobbs 07 348 6620 c/- The Herbarium, Forest Research, Private Bag 3020, Rotorua. See also www.wildland.co.nz/botanical.htm

Wakatipu Botanical Group

Chairman: Neill Simpson (03) 442 2035
Secretary: Lyn Clendon (03) 442 3153

Waikato Botanical Society

President: Bruce Clarkson b.clarkson@waikato.ac.nz
Secretary: Karen Denyer Karen.Denyer@ew.govt.nz c/- Department of Biological Sciences, University of Waikato, Private Bag 3105, Hamilton.

Wanganui Museum Botanical Group

Chairman: Ian Bell (06) 343 7686 115 Mt View Road, Wanganui
Secretary: Robyn Ogle (06) 347 8547 22 Forres Street, Wanganui

Wellington Botanical Society

President: Vicky Froude (04) 233 9823 (home)
Secretary: Barbara Clark (04) 233 8202 (h); (04) 233 2222 (fax)P O Box 10 412, Wellington 6036.

NEW ZEALAND'S TOP TEN MOST POPULAR PLANTS - WHAT ARE THEY?

What do you think are the most popular New Zealand native plants? Would your selection include Icon plants (such as flax and cabbage tree) or do you have a special favourite that deserves greater recognition? Let's hear your views.

The Isaac Centre for Nature Conservation (based at Lincoln University) invites everyone to contribute their suggestions as to what they feel are the most popular New Zealand native plants. This is the first of an annual countrywide survey to seek personal selections for the top ten favourite New Zealand native plants. These favourites could include a selection of trees, shrubs or wildflowers.

You are invited to select up to ten of your most favourite native plants and send your list to the address below. Please list your selection in order of preference and include either common names or scientific names. You may also like to comment on your personal selection and say why they are your favourites or why they should be in the top ten most popular native plants for New Zealand. There are some prizes to give away. After the closing date, the first three entries drawn from the nominations will be awarded prizes. Entries close on **January 4th 2003.**

The results and the winners of the prize draw will be made known in the March issue of the New Zealand Gardener. Please post or email your suggestions (with name and contact details) to:

'The top ten New Zealand Native plants', c/o The Isaac Centre for Nature Conservation, P.O. Box 84, Lincoln University, Canterbury.

Or email: Spelleri@lincoln.ac.nz

The prize draws are vouchers for New Zealand Native Plants:

1. $250 from Titoki Nursery, Palmers Rd., RD1, Brightwater, Nelson
2. $150 from the Isaac Centre for Nature Conservation
3. $100 from the Isaac Centre for Nature Conservation

Don't forget to include your name and contact details.

OBITUARY

- **Betty Molesworth Allen OBE 1913 - 2002**

Betty Molesworth, botanist at the Auckland War Memorial Museum from 1944 to 1947, died in Marbella, Spain, on 11 October. In 1995 she was awarded the H.H. Bloomer award of the Linnean Society of London, particularly for her discovery of a population of *Psilotum nudum* in Spain, the first European record. An account of her work by Andy Thomson can be found in our Newsletter for March 2002; and an obituary with photographs appeared in "The Times Register" dated 31 October.

NOTES AND REPORTS

Reports

- **Invite to visit Parque Oncol**

Pablo Lepez has been appointed administrator of Parque Oncol, 29 km from Valdivia in south-central Chile. The park covers 1500 ha of virgin Valdivian rain forest, with many endemic species. He invites botanists and other scientists to visit, especially those interested in the phytogeographic relationships between New Zealand and Chile, and says that guides to the flora and fauna are being prepared. The area is well worth visiting (it is situated in the Chilean 'beech gap', which may or may not be equivalent to ours), and Pablo is a very knowledgeable young ecologist.

Peter Wardle Email: wardlep@xtra.co.nz

Research Report

- **Additions to Poor Knights Islands vascular flora**

E.K. Cameron, Auckland Museum, Private Bag 92018, Auckland

Recent databasing at Auckland Museum herbarium (AK) has 'unearthed' some adventive species not accessible electronically when Peter de Lange and I were compiling the flora for the Poor Knights Islands (refer de Lange & Cameron 1999). Although our fieldwork and the flora focused on Aorangi Island, all additional Poor Knights species were also recorded. A recent brief visit also added a new native to the list.

Additions
Coprosma rhamnoides 3 shrubs c.1.0-1.3m tall, within 20 m of each other, open kanuka (*Kunzea ericoides*) 8-10 m tall, plateau forest (E.K. Cameron 10273 & L.J. Forester, 19 July 2000, AK) Tawhiti Rahi;
Erechtites valerianifolia (B.S. Parris, Jul 1969, AK 128067), Tawhit Rahi;
Phalaris minor (L.B. Moore & L.M. Cranwell, 19 Nov 1933, AK 99429) southern island [Aorangi];
Sagina apetala (B.S. Parris, 9 Aug 1970, AK 128186), Tawhit Rahi; juvenile material collected on the same island appears to be to same species (A.E. Wright 4003, 10 Sep 1980, AK 155401).

Adventive records earlier than the dates cited
Senecio bipinnatisectus (L.M. Cranwell, 13 Feb 1937, AK 90446) southern island [Aorangi];
Geranium solanderi "coarse hairs" (A.E. Wright 3923 & 3933, 7 Sep 1980, AK 154688 & 154695), Tawhiti Rahi.

Discussion

Erechtites valerianifolia and *Phalaris* minor may have become locally extinct on the Poor Knights because there appear to be no recent records of these species. *Sagina apetala*, is small, often occurs on inaccessible cliff habitats, seasonal, and therefore is probably still present. *Coprosma rhamnoides* would appear to have arrived on the Poor Knights recently and as long as both sexes (only 1 male confirmed) are represented it should be well suited to spread and become common on at least the two main islands of the Poor Knights group. Until databasing is completed there may still be a few more additional Poor Knights records to be found in AK herbarium.

Acknowledgements

Lottery Grants Board for assisting with the databasing of AK herbarium and David Wardle and Peter Bellingham for inviting me to join them on their brief visit to Tawhiti Rahi Island.

Reference

de Lange, P.J. & Cameron, E.K. 1999: The vascular flora of Aorangi Island, Poor Knights Islands, northern New Zealand. NZ Journal of Botany 37: 433-468.

▪ *Luma apiculata* and its relatives in New Zealand

W.R. Sykes, Research Associate, Landcare Research, Lincoln

Abstract

The Chilean tree *Luma apiculata* (DC.) Burret has been discovered regenerating spontaneously at Otatara near Invercargill, Southland. This species is otherwise only known as a rather rare cultivated tree in New Zealand, although it is scattered through both North and South Islands.

Luma apiculata and its relations in Chile have often been treated under *Myrtus* but this genus is now considered to be restricted to the Mediterranean and North African region. Chilean relations of *Luma apiculata* in New Zealand are the rare cultivated *Amomyrtus luma* and the much commoner *Ugni molinae*.

Description of *Luma apiculata*

Luma apiculata (DC.) Burret, arrayán, palo Colorado (syn. *Myrtus luma* auct. non L.), *Myrceugenia apiculata* (DC.) Niedenzu, *Myrceugenella apiculata* (DC.) Kausel

Small tree to 7 or 8 m high (to *c.* 10 m in Chile). Trunks smooth and reddish-brown or orange-brown with the bark peeling in thin flakes. Shoots puberulent. Foliage in dense clusters with the leaves subsessile or very shortly petiolate, usually 1–3.5 x 0.7–1.5 cm excluding very small leaves near base of ultimate shoots, elliptic to suborbicular, dark shining green above, glabrous except for midrib beneath and margins, especially towards base; apex mucronate. Inflor. glabrous or sparsely puberulent; bracteoles linear, caducous and mostly shed before anthesis. Flowers solitary or in clusters up to *c.* 6, 4-merous; peduncles and pedicels to *c.* 2 cm long, filiform. Calyx often purplish, especially in fruit; lobes 2–3 mm diameter, rounded. Petals 5–8 mm long, suborbicular or broad ovate, white, remaining concave. Stamens < petals. Style = or > stamens. Berry 7–9 mm diameter, broad ellipsoid or suborbicular, glossy black. Seeds 2–4 mm across, flattened.

Ecology of *Luma apiculata*

Early this year Philip Simpson of the Department of Conservation sent a specimen of *Luma apiculata* from Marama Avenue South, Otatara, near Invercargill, to Landcare Research for identification, with an accompanying note saying that the species was spreading naturally and invading a mixed podocarp/hardwood stand notable for southern rata. Further information by Carol West of DOC, Invercargill has revealed that there are 20–50 large seedlings or saplings in an area of about 5 x 5 m. A putative parent is 6–8 m tall with a straight trunk *c.* 10 cm diameter. The population presumably originated from a cultivated plant in the vicinity. Some kilometres away a tree of *Luma apiculata* has been destroyed by State Highway 99 at Pahia and another one has been reported at Riverton, all these localities being in Southland. However, they seem to be unconnected and almost certainly represent three separate introductions to cultivation (Carol West pers. com.).

This is the first record of *Luma apiculata* growing spontaneously in New Zealand. It is occasionally cultivated and is widely scattered through most of the country, with most specimens reported in the South Island. One of the main reasons it is grown is because of its attractive bark, this being

reminiscent of other fleshy-fruited myrtaceous trees such as *Psidium* species (guavas) that are grown in warmer areas.

Luma apiculata is indigenous to Central Chile where it is known by several common names, notably arrayán and palo colorado. It has long been in cultivation in milder parts of the British Isles and I have collected it growing apparently spontaneously in South Kerry at Rossdohan Estate in the SW of Ireland.

Taxonomy of Chilean Myrtaceae in New Zealand

This species has often been known as *Myrceugenia apiculata*, especially during the latter half of the last century, but the genus *Myrceugenia* Berg. has now been revised for Chile by Landrum, L.R. "The myrtle family (Myrtaceae) in Chile." *Proc. Calif. Acad. Sciences 45(12):* 277–317 (1988). Landrum excludes *Myrceugenia apiculata* and treats it in the small endemic Chilean genus *Luma* A. Gray. Before the studies of Burret, in *Notizbl. Bot. Gard. Berlin. 14* (1941), most of the fleshy-fruited Myrtaceae in southern South America, as well as some in New Zealand, were treated in *Myrtus* L. This Linnaean genus is now considered to be restricted to two Mediterranean and North African species, of which the type *Myrtus communis* L., myrtle or common myrtle, is a common garden plant in this country. This species is distinguished by axillary single or paired flowers with almost patent petals and followed by oblong-ellipsoid black berries.

In Chile and elsewhere *Luma apiculata* has been wrongly known as *Myrtus luma* but the latter name correctly belongs to a similar plant that is now known as *Amomyrtus luma* (Mol.) Legrand & Kausel (Landrum, loc. cit p. 285). The latter species is a very rare cultivated small tree in New Zealand, notably at Eastwoodhill Arboretum in Poverty Bay. Like *L. apiculata*, *A. luma* has a smooth brown bark and small dark green rounded subcoriaceous leaves. However, there are four sepals and four petals in *Luma* species and five sepals and five petals in *Amomyrtus* species, whilst the fruits of the latter are bright red and only turn black with age, whereas as already stated, they are always black in *Luma apiculata*.

Finally, one other Chilean segregate from *Myrtus* deserves mention because it is not only fairly commonly cultivated in some parts of New Zealand, but is occasionally adventive, especially on Chatham Island. *Ugni molinae* Turcz. (*Myrtus ugni* Mol.), ugni or strawberry myrtle, is described in *Flora of New Zealand Vol. IV*, p. 869 (1988). The name cranberry or New Zealand cranberry is often given to this plant but cranberry refers to a mat-forming shrublet in the Ericaceae that has fruits that look, smell, and taste very differently to those of ugni. The latter is an upright shrub 1–2 m high, usually suckering and often forming thickets. Its small, pendent, bell-shaped flowers with pink, overlapping, concave petals, immediately distinguish ugni from any other myrtaceous plant in New Zealand. Ugni fruits are dark reddish-purple when mature and although very aromatic they are delicious to eat.

Acknowledgements

Thanks to Philip Simpson and Carol West of the Department of Conservation for bringing this new adventive record to my attention and providing the details of its distribution and abundance in Southland, with the latter revisiting the main site in inclement weather and carefully plotting the area of occurrence. I am also grateful to Peter Heenan of Landcare Research for reading the manuscript and suggesting improvements.

- **Adventive dicotyledons, conifers, ferns and fern allies in New Zealand, additional to those in Flora of New Zealand Vol. 4 (Webb et al. 1988)**

Colin C Ogle, 22 Forres St, Wanganui. robcol.ogle@xtra.co.nz

The Excel database below is current to 5 August 2002 and comprises all species listed in four New Zealand Journal of Botany (NZJBot) supplements to the adventive plants listed in Flora of NZ Vol. 4 (Webb et al. 1988), namely Heenan et al. (1998, 1999, 2002) and Webb et al. (1995). In the database, Webb et al. (1988) is cited as "FNZ4" followed by a page number. To reduce space, the four NZJBot papers are identified simply by the volume number, followed by the page number in which the reference occurs.

For hard copy publication, the plants are listed firstly in alphabetical order of plant families (regardless

of whether the families are dicotyledons, gymnosperms or pteridophytes) then in alphabetical order of genera within each family. The right-hand column includes notes about some species, including cross-references to species which appear in more than one of the cited references. In several cases, the family in which certain species were placed in earlier references differs from that used in later references. Both families are included here, with notes.

Species	Family	Common name	Vol.	Page	Notes
Justicia carnea	Acanthaceae	plume flower	33	154	Also 37: 638
Mackaya bella	Acanthaceae		33	154	
Strobilanthes anisophyllus	Acanthaceae		33	155	
Thunbergia alata	Acanthaceae	black-eyed Susan	33	155	
Thunbergia coccinea	Acanthaceae		33	155	
Acer cappadocicum	Aceraceae	Caucasian maple	40	160	
Acer palmatum	Aceraceae	Japanese maple	37	634	
Lampranthus glaucus	Aizoaceae		40	171	Also FNZ4: 98
Mesembryanthemum crystallinum	Aizoaceae		33	155	
Schinus terebinthifolius	Anacardiaceae	Christmas berry	33	155	Also see 37: 638; 40: 167
Anethum graveolens	Apiaceae	dill	40	160	Listed erroneously as Anthemis graveolens
Apium prostratum subsp. prostratum var. prostratum	Apiaceae	shore celery	40	160	This variety no longer regarded as indigenous to NZ
Carum carvi	Apiaceae	caraway	36	158	
Cryptotaenia canadensis	Apiaceae	mitsuba	40	161	
Hydrocotyle leucocephala	Apiaceae	pennywort	40	157	
Oenanthe pimpinelloides	Apiaceae	parsley dropwort	40	171	Also FNZ4: 135
Anthemis(!) graveolens	Apiaceae!	dill!	40	160	Error for Anethum graveolens (q.v.)
Asclepias curassavica	Apocynaceae	blood flower	37	634	
Gomphocarpus physocarpus	Apocynaceae	swan plant	33	156	Listed under F. Asclepiadaceae; cf. G. fruticosus in FNZ4:150
Mandevilla laxa	Apocynaceae		40	161	
Schefflera arboricola	Araliaceae	miniature umbrella tree	40	161	
Tieghemopanax sambucifolius	Araliaceae		40	161	
Araucaria bidwillii	Araucariaceae	bunya pine	33	153	Also 37: 638; 40: 167
(species)	Asclepiadaceae				see F. Apocynaceae
Anthemis punctata ssp. cupaniana	Asteraceae		33	156	
Anthemis tinctoria	Asteraceae	corn chamomile	36	161	Also FNZ4: 158; & 37: 638
Artemisia annua	Asteraceae	sweet wormwood	40	161	
Artemisia dracunculus	Asteraceae	tarragon	33	156	
Brachyscome iberidifolia	Asteraceae	Swan River daisy	37	635	
Centaurea montana	Asteraceae		37	638	Also FNZ4: 304
Chrysanthemum carinatum	Asteraceae	painted daisy	36	158	
Chrysanthemum paludosum	Asteraceae	snowland	37	635	See Leucanthemum paludosum
Coreopsis lanceolata	Asteraceae		36	156	In FNZ4: 213 but reidentified as Helianthus salicifolius
Cosmos sulphureus	Asteraceae	yellow cosmos	36	161	Also FNZ4: 215; 37: 638
Eupatorium cannabinum	Asteraceae	hemp agrimony	37	630	Also FNZ4: 204
Euryops chrysamthemoides	Asteraceae	Paris daisy	37	635	Also 40: 167
Facelis retusa	Asteraceae		33	157	
Felicia amelloides	Asteraceae	blue daisy	33	157	Also 37: 638
Felicia fruticosa	Asteraceae		33	157	
Felicia petiolata	Asteraceae		33	157	
Guizotia abyssinica	Asteraceae	niger	37	635	

Gymnocoronis spilanthoides	Asteraceae	Senegal tea	33	157	Also 37: 639 (cf. Ageratum houstonianum in FNZ4: 206)
Helianthus salicifolius	Asteraceae		36	156	Recorded as Coreopsis lanceolata in FNZ4: 213
Helichrysum petiolare	Asteraceae		33	158	Also 37: 639; 40: 173
Kleinia serpens	Asteraceae		37	639	Also FNZ4: 270 (as Senecio serpens)
Lactuca sativa	Asteraceae	lettuce	40	171	Also FNZ4: 336
Leucanthemum ircutianum	Asteraceae	daisy	40	161	
Leucanthemum paludosum	Asteraceae	snowland	37	635	Also 40: 167 (also known as Chrysanthemum paludosum)
Picris hieracoides	Asteraceae	oxtongue	37	635	
Rudbeckia hirta	Asteraceae	black-eyed Susan	37	639	Also FNZ4: 225
Santolina chamaecyparissus	Asteraceae		33	156	
Senecio crassiflorus	Asteraceae		40	167	Also FNZ4: 270
Senecio macroglossus	Asteraceae		36	158	
Tithonia rotundifolia	Asteraceae		37	635	
Ursinia anthemoides ssp. versicolor	Asteraceae	star of the veld	36	158	
Impatiens balsamina	Balsaminaceae	garden balsam	37	639	Also FNZ4: 350
Impatiens walleriana	Balsaminaceae	water fuchsia, busy Lizzie	33	158	Cf. I. holstii, I sultanii.
Begonia corallina	Begoniaceae		36	158	
Campsis Xtagliabuana	Bignoniaceae	campsis	33	158	
Catalpa bignonioides	Bignoniaceae	Indian bean tree	33	158	
Jacaranda mimosaefolia	Bignoniaceae	jacaranda	37	635	
Radermachera pentandra	Bignoniaceae		37	635	
Echium wildpretii	Boraginaceae	taginaste rojo	40	161	Also FNZ4: 375
Brassica rapa ssp. chinensis	Brassicaceae	Chinese cabbage, pak choi	33	159	Cf. subsp. campestris.
Eruca vesicaria ssp. sativa	Brassicaceae	rocket	36	161	Also FNZ4: 399; & 40: 167
Heliophila coronopifolia	Brassicaceae	blue eyes	37	635	
Lepidium desvauxii	Brassicaceae	bushy peppercress	40	171	Maybe indigenous? See FNZ4: 431
Lepidium ruderale	Brassicaceae		33	159	
Malcolmia maritima	Brassicaceae	Virginian stock	40	167	Also FNZ4: 399
Sisymbrium irio	Brassicaceae		33	159	
Opuntia cylindrica	Cactaceae	cane cactus	37	639	Also FNZ4: 453; & 40: 167
Opuntia ficus-indica	Cactaceae		40	158	
Opuntia robusta	Cactaceae	robust cactus	40	161	
Campanula rapunculus	Campanulaceae	rampion	33	159	
Legousia speculum-veneris	Campanulaceae		40	162	
Wahlenbergia stricta ssp. stricta	Campanulaceae	harebell	36	158	
Abelia Xgrandiflora	Caprifoliaceae	abelia	33	159	Also 40: 168
Kolkwitzia amabilis	Caprifoliaceae	beauty bush	33	160	
Lonicera nitida	Caprifoliaceae	hedge honeysuckle	40	171	Also FNZ4: 468
Viburnum opulus 'Roseum'	Caprifoliaceae	snowball tree	33	160	Also see 37: 639; FNZ4: 472
Viburnum plicatum	Caprifoliaceae		33	160	
Weigela florida	Caprifoliaceae	weigela	33	161	
Argostemma githago	Caryophyllaceae	corn cockle	37	639	Also FNZ4: 476
Lychnis viscaria	Caryophyllaceae		33	161	
Paronychia brasiliana	Caryophyllaceae		40	171	Also FNZ4: 487
Stellaria neglecta	Caryophyllaceae	chickweed	40	162	
Euonymus pendulus	Celastraceae	spindle bush	36	159	
Maytenus boarii	Celastraceae	mayten	37	630	Also FNZ4: 512
Atriplex halimus	Chenopodiaceae	saltbush	37	631	Also FNZ4: 518
Chenopodium ambrosioides	Chenopodiaceae	Mexican tea	40	171	Also FNZ4: 525

Cistus laurifolius	Cistaceae		37	631	Also FNZ4: 535
Cistus psilosepalus	Cistaceae		40	172	Also FNZ4: 537
Cistus salvifolius	Cistaceae	rock rose	36	161	Also FNZ4: 537
Clethra arborea	Clethraceae		33	161	
Hypericum linariifolium	Clusiaceae		33	161	
Convolvulus cneorum	Convolvulaceae	silver bush	40	162	
Cuscuta planiflora	Convolvulaceae		33	161	
Aucuba japonica	Cornaceae	Japanese laurel	40	162	
Aeonium Xfloribundum	Crassulaceae		36	161	Also FNZ4: 563; & 40: 168
Bryophyllum daigremontianum	Crassulaceae	devil's backbone	36	159	
Bryophyllum 'Houghtonii'	Crassulaceae	coconut plant	33	162	
Crassula biplanata	Crassulaceae		36	159	
Crassula sarmentosa	Crassulaceae		33	162	Also see 37: 639
Echeveria multicaulis	Crassulaceae	copper roses	33	162	Also see 37: 639; FNZ4: 583
Echeveria setosa	Crassulaceae	firecracker plant	33	162	
Sedum dasyphyllum	Crassulaceae	sedum	40	158	
Sedum forsterianum	Crassulaceae		33	181	Delete from FNZ4 1988
Sedum mexicanum	Crassulaceae		33	181	
Bryonia cretica ssp. dioica	Cucurbitaceae	white bryony	33	163	
Cucumis myriocarpus	Cucurbitaceae	prickly paddymelon	33	163	
Sechium edule	Cucurbitaceae	choko	33	163	
Aphanopetalum resinosum	Cunoniaceae		36	159	
Cupressus lusitanica	Cupressaceae	Mexican cypress	33	153	
Cupressus sempervirens	Cupressaceae	Mediterranean cypress	33	153	Also 40: 170
Cyathea cooperi	Cyatheaceae		36	157	
Davallia griffithiana	Davalliaceae		33	152	
Davallia mariesii	Davalliaceae		33	152	
Dennstaedtia davallioides	Dennstaedtiaceae		36	158	
Diospyros lotus	Ebenaceae	date plum	33	163	
Equisetum fluviatile	Equisetaceae	horsetail	33	152	
Equisetum hyemale	Equisetaceae	horsetail	33	152	
Erica melanthera	Ericaceae		36	159	
Vaccinium corymbosum	Ericaceae	blueberry	37	640	Also FNZ4: 606
Escallonia Xexoniensis	Escalloniaceae		37	636	Also 40: 159
Aleurites fordii	Euphorbiaceae	tung-oil tree	37	640	Also FNZ4: 623
Drypetes deplanchei	Euphorbiaceae		37	636	
Euphorbia amygdaloides	Euphorbiaceae		33	164	
Euphorbia depauperata ssp. pubescens	Euphorbiaceae		33	164	Also see 37: 640
Euphorbia pulcherrima	Euphorbiaceae	poinsettia	40	162	
Acacia pravissima	Fabaceae	Ovens wattle	40	162	
Acacia sophorae	Fabaceae	sand wattle	37	631	Also FNZ4: 707
Albizia julibrissin	Fabaceae	silk tree	37	640	Also FNZ4: 702; 40: 159
Cercis siliquastrum	Fabaceae	Judas tree	36	159	
Dorycnium hirsutum	Fabaceae		36	159	
Erythrina caffra	Fabaceae	coral tree, kaffir broom	36	159	
Erythrina crista-galli	Fabaceae	coral tree	33	164	Also see 37: 640
Genista tinctoria	Fabaceae	dyer's greenweed	33	164	
Gleditsia triacanthos	Fabaceae	honey locust	36	159	
Indigofera decora	Fabaceae		33	165	
Lathyrus sphaericus	Fabaceae		33	165	
Lotus suaveolens	Fabaceae	hairy birdsfoot trefoil	40	172	Also FNZ4: 658
Ononis repens	Fabaceae	rest-harrow	33	165	
Piptanthus laburnifolius	Fabaceae	Himalayan pea	40	162	
Podalyria sericea	Fabaceae	satin bush	33	165	Also see 37: 640

Psophocarpus tetragonolobus	Fabaceae	princess pea, winged pea	37	640	Also FNZ4: 656
Pueraria lobata	Fabaceae	kudzu vine, Japanese arrowroot	36	159	
Sennna Xfloribunda	Fabaceae	buttercup bush	40	162	
Trifolium ambiguum	Fabaceae	Caucasian clover	40	162	
Virgilia oroboides	Fabaceae	Cape virgilia, keurboom	36	159	
Castanea sativa	Fagaceae	sweet chestnut	33	165	
Fagus sylvatica	Fagaceae	common beech	40	162	
Nothofagus antarctica	Fagaceae		37	636	
Quercus palustris	Fagaceae	pin oak	40	162	
Dovyalis hebecarpa	Flacourtiaceae	Ceylon gooseberry	40	162	
Blackstonia perfoliata	Gentianaceae	yellow wort	40	172	Also FNZ4: 720
Geranium aequale	Geraniaceae	cranesbill	40	163	
Geranium phaeum	Geraniaceae	black widow	36	159	
Myriophyllum simulans	Haloragaceae		33	166	Also 40: 168. Possibly = M. variifolium & maybe some is indigenous to NZ?
Liquidamber styraciflua	Hamamelidaceae	liquidamber	37	636	Also 40: 168
Aesculus indica	Hippocastanaceae	Indian horse chestnut	33	166	Cf. A. hippocastanum in FNZ4: 756
Deutzia crenata	Hydrangeaceae	deutzia	40	168	See FNZ4: 939, under F. Philadelphaceae
Philadelphus mexicanus	Hydrangeaceae	Mexican mock orange	36	156	Listed under F. Philadelphaceae
Philadelphus Xcymosus	Hydrangeaceae	mock orange	33	173	Cf. P. intectus; listed under F. Philadelphaceae
Wigandia caracasana	Hydrophyllaceae		40	168	See FNZ4: 758
Pterocarya Xrehderiana	Juglandaceae	wing nut	37	636	
Lamium confertum	Lamiaceae		33	166	Cf. L. amplexicaule, L. hybridum, L. purpureum in FNZ4: 772-773
Lamium maculatum	Lamiaceae	spotted dead nettle	36	161	Also FNZ4: 772; & 40: 168
Lavandula angustifolia subsp. angustifolia	Lamiaceae	English lavendar	40	163	
Leonotis nepetifolia	Lamiaceae	lion's ear	33	167	
Leonotis ocymifolia	Lamiaceae	lion's tail	33	167	Also see 37: 640
Ocimum basilicum	Lamiaceae	basil	33	167	
Phlomis fruticosa	Lamiaceae	Jerusalem sage	33	167	Cf. P. russelliana in FNZ4: 785
Plectranthus behrii	Lamiaceae		37	636	
Plectranthus ornatus	Lamiaceae		33	168	
Plectranthus saccatus	Lamiaceae		40	163	
Prunella laciniata	Lamiaceae	cut-leaved self-heal	36	161	Also FNZ4: 788
Rosmarinus officinalis	Lamiaceae	rosemary	37	636	
Salvia azurea	Lamiaceae		33	168	
Salvia farinacea	Lamiaceae	mealy sage	33	168	
Salvia guarantica	Lamiaceae		33	168	
Salvia officinalis	Lamiaceae	sage	33	169	
Salvia rutilans	Lamiaceae	pineapple sage	37	636	
Salvia sclarea	Lamiaceae	clary	33	169	
Scutellaria minor	Lamiaceae	skull-cap	40	172	Also FNZ4: 793
Tetradenia riparia	Lamiaceae		40	163	
Thymus pulegioides	Lamiaceae	creeping thyme	40	172	Also FNZ4: 798
Westringia rosmariniformis	Lamiaceae		36	160	
Cinnamomium camphora	Lauraceae	camphor tree	40	163	
Cryptocarya obovata	Lauraceae	white walnut	36	160	

Persea americana	Lauraceae	avocado	33	169	
Limnanthes douglasii	Limnanthaceae	fried eggs	37	640	Also FNZ4: 806
Lobelia Xgerardii	Lobeliaceae		33	169	
Pratia pedunculata	Lobeliaceae		33	170	Now P. puberula(P de Lange, pers. comm.)
Pratia puberula	Lobeliaceae				See P. pedunculata
Cuphea ignea	Lythraceae	cigar flower	40	163	
Punica granatum	Lythraceae	pomegranate	33	170	
Liriodendron tulipifera	Magnoliaceae	tulip tree	33	170	Vol.33 record planted; see 36:160
Magnolia sieboldii	Magnoliaceae	red lantern magnolia	40	163	
Abutilon megapotamicum	Malvaceae	Big River abutilon, trailing abutilon	36	156	Also see 37: 640
Alcea rosea	Malvaceae	hollyhock	40	172	Also FNZ4: 825
Hibiscus mutabilis	Malvaceae	cotton rose	36	160	
Hibiscus syriaceus	Malvaceae	rose of Sharon	37	636	Also FNZ4: 825
Lagunaria patersonia ssp. patersonia	Malvaceae	Norfolk I hibiscus	36	160	Also 40: 169
Malope trifida	Malvaceae		40	163	
Heterocentron elegans	Melastomaceae	Spanish shawl	36	162	Also FNZ4: 838
Tibouchina paratropica	Melastomaceae		40	163	
Melia azedarach	Meliaceae	bead tree, Persian lilac	36	160	Also see 37: 640
Ficus macrophylla	Moraceae	Moreton Bay fig	36	160	
Eremophila debilis	Myoporaceae		33	170	Also named Myoporum debile
Myoporum debile	Myoporaceae		33	171	Also named Eremophila debilis
Ardisia crenata	Myrsinaceae	coral berry	40	163	
Agonis flexuosa	Myrtaceae	peppermint tree	40	164	
Agonis juniperina	Myrtaceae	juniper myrtle	40	169	Also FNZ4: 849
Angophora costata	Myrtaceae	smooth-barked apple	40	169	Also FNZ4: 850
Eucalyptus calophylla	Myrtaceae	marri	37	642	Corrects error of E. ficifolia in 36: 160
Eucalyptus cinerea	Myrtaceae	silver dollar gum	33	171	
Eucalyptus eugenioides	Myrtaceae	thin-leaved stringybark	33	171	
Eucalyptus fastigata	Myrtaceae	cut-tail	37	632	Also FNZ4: 855
Eucalyptus ficifolia	Myrtaceae	red flowering gum	36	160	Error: see 37: 642; but accepted in 40: 164
Eucalyptus grandis	Myrtaceae	flooded gum	33	171	
Eucalyptus leucoxylon	Myrtaceae	white ironbark	40	164	
Eucalyptus macarthurii	Myrtaceae	Camden woollybutt	40	169	Also FNZ4: 855
Eucalyptus muelleriana	Myrtaceae	yellow stringybark	40	164	
Eucalyptus nicholii	Myrtaceae	narrow-leaved black peppermint	40	164	
Eucalyptus nitens	Myrtaceae	shining gum	33	171	Also 40: 172
Eucalyptus ovata	Myrtaceae	swamp gum	40	172	Also FNZ4: 860
Eucalyptus punctata	Myrtaceae	grey gum	40	164	
Eucalyptus robusta	Myrtaceae	swamp mahogany	33	172	
Eucalyptus sideroxylon	Myrtaceae	red ironbark	40	164	
Melaleuca armillaris	Myrtaceae	bracelet honey myrtle	40	164	
Melaleuca styphelioides	Myrtaceae		33	172	Cf. M. hypericifolia
Syncarpia glomulifera	Myrtaceae	turpentine tree	36	160	
Syzygium paniculatum	Myrtaceae	lilly pilly	37	636	
Waterhousea floribunda	Myrtaceae	weeping lilly-pilly	40	164	
Nymphaea capensis	Nymphaeaceae	water lily	40	164	

Ochna serrulata	Ochnaceae	Mickey Mouse bush, carnival bush	37	632	
Fraxinus ornus	Oleaceae	manna ash	33	172	Also see 37: 641
Olea europaea ssp. europaea	Oleaceae	European olive	37	633	
Olea europaea ssp. cuspidata	Oleaceae	African olive	37	642	Called O. europaea ssp. africana in FNZ4: 881
Clarkia unguiculata	Onagraceae		37	641	Also FNZ4 884
Fuchsia paniculata	Onagraceae		36	160	Cult. as F.arborescens/F.arborea
Oenothera drummondii	Onagraceae	evening primrose	40	164	
Oenothera indecora	Onagraceae		33	172	Cf. O. stricta in FNZ4: 912 (also see O. parviflora)
Oenothera parviflora	Onagraceae		33	173	Cf. O. biennis in FNZ4: 910 (also see O. indecora)
Oxalis thompsoniae	Oxalidaceae		33	173	Cf. O. corniculata in FNZ4: 917
Eomecon chionantha	Papaveraceae		40	164	
Passiflora antioquiensis	Passifloraceae	vanilla banana passionfruit	40	169	Also FNZ4 935
(species)	Philadelphaceae				See F. Hydrangeaceae
Abies grandis	Pinaceae	giant fir	33	154	Also see 37: 638
Abies nordmanniana	Pinaceae	Caucasian fir	40	170	Also FNZ4: 47
Larix kaempferi	Pinaceae	Japanese larch	40	160	
Pinus canariensis	Pinaceae	Canary Island pine	40	160	
Pittosporum undulatum	Pittosporaceae	sweet pittosporum	40	159	
Platanus Xacerifolia	Platanaceae	London plane	40	169	Also FNZ4 955
Armeria alliacea	Plumbaginaceae	thrift, sea pink	36	160	Cultivated as A. arenaria
Limonium companyonis	Plumbaginaceae		37	637	
Plumbago auriculata	Plumbaginaceae	cape leadwort	40	165	
Gilia capitata	Polemoniaceae	Queen Anne's thimbles	40	165	
Antenoron filiforme	Polygonaceae	jumpseed	36	162	Also FNZ4: 966; & 40: 169
Fagopyrum dibotrys	Polygonaceae	perennial buckwheat	33	174	Also called Polygonum cymosum, Fagopyrum cymosum
Oxyria digyna	Polygonaceae		40	165	
Polygonum campanulatum	Polygonaceae		40	165	
Polygonum molle	Polygonaceae		33	174	Cf. P. polystachyum in FNZ4: 975
Polygonum perfoliatum	Polygonaceae		40	165	
Portulaca grandiflora	Portulacaceae	moss rose, sun plant	36	162	Also FNZ4: 991
Talinum paniculatum	Portulacaceae	jewels of Opar	33	174	Also 40: 169
Cyclamen persicum	Primulaceae	florist's cyclamen	40	165	
Lysimachia vulgaris	Primulaceae	yellow loosestrife	40	172	Also FNZ4: 995
Primula malacoides	Primulaceae	fairy primula	33	174	
Primula vulgaris	Primulaceae	primrose	33	174	
Samolus valerandi	Primulaceae		40	165	
Banksia aemula	Proteaceae	banksia	40	165	
Banksia ericifolia var. ericifolia	Proteaceae	heath banksia	40	165	
Banksia integrifolia	Proteaceae	coast banksia	33	175	
Embothrium coccineum	Proteaceae	Chilean fire bush	33	175	Also 40: 169
Grevillea aspleniifolia	Proteaceae		33	175	Cf. G. robusta in FNZ4: 997
Hakea eriantha	Proteaceae	needle bush	40	165	
Macadamia integrifolia	Proteaceae	smooth-leaved Queensland nut	40	165	
Protea subvestita	Proteaceae	protea	40	165	
Stenocarpus sinuatus	Proteaceae	firewheel tree	37	637	

Pellaea viridis	Pteridaceae		33	152	
Pteris dentata	Pteridaceae	toothed brake	37	634	
Pteris pacifica	Pteridaceae	brake	40	160	
Pteris vittata	Pteridaceae	Cheinese brake	37	634	
	Ranunculaceae		33	176	Mostly placed in C. tangutica of FNZ4: 1007
Anemone coronaria	Ranunculaceae	anemone	37	637	
Caltha palustris	Ranunculaceae	marsh marigold	40	165	
Clematis orientalis	Ranunculaceae		33	176	Most earlier records in NZ reidentified as C. tibetana subsp. vernayi
Clematis tangutica	Ranunculaceae		33	176	Most earlier records in NZ reidentified as C. tibetana subsp. vernayi
Clematis tibetana subsp. vernayi vernayi	Ranunculaceae		33	176	Correct name for most earlier NZ records of C. orientalis, C. tangutica
Delphinium cf. elatum hybrid	Ranunculaceae	delphinium	37	637	
Delphinium sp (a)	Ranunculaceae	delphinium	37	637	
Ranunculus ficaria ssp. calthifolius	Ranunculaceae		33	176	
Thalictrum minus	Ranunculaceae		40	170	Also FNZ4: 1003
Amelanchier lamarckii	Rosaceae		36	162	Also FNZ4: 1052; 37: 641
Cotoneaster adpressus	Rosaceae		40	166	
Cotoneaster cf. monopyrenus	Rosaceae		37	637	
Cotoneaster conspicuus	Rosaceae		36	157	
Cotoneaster frigidus	Rosaceae		33	176	Cf. C. horizontalis
Cotoneaster horizontalis	Rosaceae		33	176	Also see 36:157
Cotoneaster pannosus	Rosaceae		37	641	Also FNZ4: 1070; & 40: 170
Filipendula rubra	Rosaceae	meadowsweet	40	166	
Hagenia abyssinica	Rosaceae		37	637	
Kerria japonica	Rosaceae		33	176	
Photinia davidsoniae	Rosaceae		33	177	
Photinia glabra	Rosaceae		33	177	
Photinia serrulata	Rosaceae		33	177	
Prunus armeniaca	Rosaceae	apricot	37	641	Also FNZ4: 1091
Prunus spinosa	Rosaceae		37	637	Cf. FNZ4: 1290
Rosa roxburghii	Rosaceae	chestnut rose	33	177	
Rosa tomentosa	Rosaceae		37	641	Also FNZ4 1107
Rubus amplificatus	Rosaceae		36	161	
Rubus caesius	Rosaceae	dew berry	40	170	Also FNZ4 1124
Sorbus Xlatifolia	Rosaceae	Fontainbleau service tree	33	177	Cf. S. aucuparia in FNZ4: 1139
Spiraea billiardii	Rosaceae		40	170	Also FNZ4 1140
Stransvaesia davidiana	Rosaceae		40	170	Also FNZ4 1053
Asperula orientalis	Rubiaceae	woodruff	40	166	
Citrus limon	Rutaceae	lemon	33	178	
Coleonema pulchrum	Rutaceae	breath of heaven	36	161	
Correa alba	Rutaceae	white correa	40	166	
Cardiospermum grandiflorum	Sapinaceae	heartseed	40	166	
Sarracenia flava	Sarraceniaceae	pitcher plant	37	637	
Heuchera sanguinea	Saxifragaceae	coralbells	37	637	
Saxifraga stolonifera	Saxifragaceae	mother of thousands	36	157	Cf. S sarmentosa
Chaenorrhinum origanifolia	Scrophulariaceae		40	170	Also FNZ4: 1178
Halleria lucida	Scrophulariaceae	African honeysuckle	37	637	
Linaria maroccana	Scrophulariaceae		40	172	Also FNZ4: 1193

Linaria pelisseriana	Scrophulariaceae	Pelisser's flax, Jersey toadflax	37	638	
Maurandya barclaiana	Scrophulariaceae		33	178	Also see 37: 641
Mimulus luteus	Scrophulariaceae	monkey musk	37	641	Also FNZ4: 1197
Nemesia strumosa	Scrophulariaceae	garden nemesia	33	178	Cf. N. floribunda in FNZ4: 1198
Penstemon cobaea X P.hartwegii	Scrophulariaceae	penstemon	37	638	
Veronica catenata	Scrophulariaceae	pink water speedwell	40	172	Also FNZ4: 1209
Selaginella martensii	Selaginellaceae		37	642	Also FNZ4: 5; & 40:166
Brunsfelsia pauciflora	Solanaceae	morning-noon & night	33	179	
Capsicum annum	Solanaceae	chilli pepper	36	161	
Cestrum Xcultum	Solanaceae		36	161	
Iochroma grandiflorum	Solanaceae		33	179	
Nicotiana Xsanderae	Solanaceae	flowering tobacco	40	170	Also FNZ4: 1230
Nierembergia repens	Solanaceae		33	179	Also 40: 170
Schizanthus pinnatus	Solanaceae		33	179	
Solandra maxima	Solanaceae	cup of gold, golden chalice	40	166	
Solanum melongena	Solanaceae	egg plant	40	166	
Solanum muricatum	Solanaceae	pepino	33	180	
Solanum torvum	Solanaceae	devil's fig	33	180	
Vestia foetida	Solanaceae		33	180	Cf. V. lycioides of NZ authors
Myricaria germanica	Tamaricaceae	false tamarisk	37	633	Included in Tamarix chinensis in FNZ4: 1255
Tamarix chinensis	Tamaricaceae	tamarisk	37	634	Part of this in FNZ4: 1255 was Myricaria germanica
Cunninghamia lanceolata	Taxodiaceae	Chinese fir	33	154	
Camellia japonica	Theaceae	camellia	33	180	Also 40: 170
Daphne oleoides	Thymelaeaceae		37	638	
Celtis australis	Ulmaceae	Mediterranean hackberry	36	157	
Ulmus glabra	Ulmaceae	wych elm, scotch elm	36	161	
Callicarpa rubella	Verbenaceae	beauty berry	40	166	
Verbena tenuisecta	Verbenaceae	verbena	40	166	
Viscum album	Viscaceae	mistletoe	33	181	
Parthenocissus tricuspidata	Vitaceae	Boston ivy	37	641	Also FNZ4 1286

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Herbarium Reports

- **Auckland University herbarium (AKU) gifted to AK**

On 2 September 2002 the Auckland University herbarium (AKU) was officially gifted to the Auckland Museum to be incorporated into their herbarium (AK). The gift includes the Lindauer herbarium of marine algae that has been on long-term loan to the Museum for several years. The University collection of nearly 53,000 specimens was the largest University herbarium in New Zealand. The collection is now housed in the Auckland Museum herbarium but has yet to be incorporated. This gift swells the AK herbarium to over 310,000 specimens, with little duplication of specimens.

Most of the AKU vascular plant collection (c.22,000) had been databased on a similar system to the Museum's database (AREV), and these records are currently being electronically transferred onto the AK database and being given new AK numbers. The balance is not databased and will require an outside funding source.

Any outstanding AKU loans please now return to AK, and note that AKU material is available on loan.

Ewen K. Cameron, Curator of Botany, Auckland Museum, Private Bag 92018, Auckland; ecameron@akmuseum.org.nz

- **Auckland Museum Herbarium (AK) report: 1 July 2001 to 30 June 2002**

The highlight of the year was participating in an 8-day Auckland Botanical Society fieldtrip to Molesworth Station in Marlborough based at 1000 m asl in an old Electricity hut at Sedgemere. Nearly 500 specimens were collected, including many lichens by Anthony Wright (old habits die hard!).

Public Relations
During the year herbarium staff led five field trips and gave eight talks to various Auckland groups. A memorable trip was leading the Auckland Anniversary weekend Botanical Society trip of 35 people on Great Barrier Island. Telephone and email inquiries now average over 5/day.

Lottery Board Grants
Four gifted herbaria (LEV, Sexton, Townson, and lichens from MCD) totaling over 9000 specimens accessioned over last 2 years during a previous grant took much of the volunteer's time to complete the mounting and filing. In fact the Auckland University funded Rhys Gardner to file the 5000 LEV herbarium to make way to house the in-coming AKU herbarium. John Braggins continued 2 days/week to identify and database his gifted liverwort collection, adding 2,000 specimens during the year. In June Tim Martin, funded by a new 5-month grant, began databasing the remainder of the undatabased cultivated New Zealand specimens. They are a mix of historical importance, scientifically unusual, source of new naturalisations, and part of the diversity of the NZ cultivated exotic flora.

Fieldwork/Research
Fieldwork was local trips, Botanical Society trips (Molesworth, Great Barrier) and collecting while on holiday (Rotorua, Oakura). Herbarium staff published 15 articles; four were coauthored with Department of Conservation, Landcare Research or University staff, and covered weeds, natives, taxonomy, natural North Island areas, an obituary (E.B. Bangerter), and one book review. The one-year exhibit 'Ferns & Folk' opened in August and featured the works of Herbert B. Dobbie, the fern enthusiast.

Acquisitions and donated specimens
Staff collecting numbers totalled: 500 by Ewen Cameron and c.150 by Rhys Gardner. Specimens were also received from: Patricia Aspin, Jessica and Ross Beever, Steve Benham, Gillian Crowcroft, Pat Enright, Peter de Lange, Lisa Forester, Steve McCraith, Colin Ogle, Barbara Parris, Graeme Platt, Matt Renner, Nick Singers, Bec Stanley, Graeme Taylor, Mike Wilcox, George Wilson, Anthony Wright, Shane Wright, Maureen Young and Biosecurity Officers of Auckland and Northland Regional Councils. Herbarium vouchers for University research (staff & students) now number several hundred per year, and many specimens identified for Auckland City's vegetation survey of Waiheke Island

were retained. In February the balance of Auckland University herbarium (AKU) had been frozen and moved to AK as a potential gift.

Staff

Curator	Ewen K. Cameron
Honorary Research Associate	Rhys O. Gardner
Technician	Mei Nee Lee
Contract staff	John Braggins (part-time), Tim Martin (since June)

Volunteers

Chris Ashton, Joan Dow, Kay Haslett, Wendy Patterson and Meryl Wright again contributed over 1300 hours. We couldn't function without this volunteer input. Rhys Gardner and Peter de Lange assisted with difficult vascular plant identifications, Jessica Beever and John Braggins with bryophytes.

Visitors

There were 32 visiting researchers, including Heidi Meudt from Texas studying *Ourisia,* and Auckland University students working on liverworts (Matt Renner & Matt von Konrat) and *Sicyos* (Catia Delmiglio). Seven interest groups visited including over 30 descendants of Thomas F. Cheeseman, and 40 stage III Pacific Biogeography students from University of Auckland who carried out a research project in pairs mapping the distribution of native mistletoe specimens in the herbarium.

Statistics

Over half of the new 3,611 specimens were from John Braggins gifted herbarium of mainly liverworts. The low number of backlog specimens databased (= 490), is a reflection of the lack of outside grants for this purpose.

New accessions:		(2000-2001)
30 June 2000	257,219	
30 June 1999	253,608	
	3,611	(5,412)
Records on AKILLES database:		
30 June 2000	161,671	
30 June 1999	157,570	
	4,101	(15,276)
Loans of specimens		
Inwards:	19[500 spec.] from 13 institutions	(14[557] from 9)
Outwards:	54[934] to 24 institutions	(49[1,184] to 19)
Exchange specimens		
Inwards:	240 specimens from 6 institutions	(57 from 3)
Outwards:	114 specimens to 4 institutions	(223 to 12)
Total number of specimens out on loan = 7,917 to 38 institutions		(7,563 to 41)

E.K. Cameron, Botany Department, Auckland Museum, Private Bag 92018, Auckland.

BIOGRAPHY/BIBLIOGRAPHY

- **Biographical Notes (48) : Robert Ingpen Kingsley (1846-1912)**

E. J. Godley, Research Associate, Landcare Research, PO Box 69 Lincoln.

At the conclusion of Cheeseman's *History of Botanical Discovery in New Zealand* (*Manual* 1906) there is a list of 11 "other recent workers" which includes the name "R.J. (sic) Kingsley". The initials here should be "R.I." and not "R.J.", but the error is understandable. Although Kingsley wrote a good hand, as befitted a Secretary and Treasurer of the Anglican Diocese of Nelson, the second initial of his signature is joined to the surname in such a way that the "I" resembles a "J". Cheeseman was not the only one to be misled by this embellishment. In the *Transactions of the New Zealand Institute* for 1886 there is a paper read to the Nelson Philosophical Society by "R.J." Kingsley, while, later in the volume, the only Kingsley in the Society's membership list has the initials "R.T."

Robert Kingsley was born at Sandon, Hertfordshire, England, in January 1846. He came to New Zealand in 1881 to look after an old friend, Mr Harry Ralfe, at Okarito. In 1883 he went to Nelson and on 30 September 1884 became Diocesan Secretary and Treasurer, a position that he held until his death (1,2).

On 2 March 1885, Kingsley was elected a member of the newly formed Nelson Philosophical Society (first meeting 22 September 1883); and on 1 November 1886 he was elected to the Council and appointed Honorary Curator of the Museum (*TNZI 17*, 1885; *19*, 1887). He read his first paper to the Society on 18 April, 1885, a detailed description of the butterfly *Diadema nerina*; and a further 17 papers were read between 5 November 1889 and 30 August 1897 (all published in *TNZI*). They dealt with insects, fishes, birds, mammals, Maori artefacts and plants. Five of the six botanical papers were derived from the following excursions with his friend W.H. Bryant, the Brightwater school teacher. The other paper (*TNZI 27,* 1895) reported three weeds from Nelson streets or the surrounding countryside that could become pests.

1892	(1-2 January): Little Ben (884 m) south of Brightwater; an overnight excursion with W.H. Bryant (*TNZI 25*, 1893).
1892	(Jan? Feb?): Takaka district; "a recent trip [read 28 March] with W.H. Bryant. We carried our tents and provisions ourselves without the aid of a horse, and could therefore stop where and when we chose. For real enjoyment and effective work this method, although somewhat laborious, has many advantages over the customary trap or pack-horse. On our trip we touched at the Tata Islands, and walked from Waitapu by Rangihaeata Point and Anahau to Puramahoi, thence back to Motupipi, thence up the Takaka Valley over the range to Motueka." (*TNZI 25*, 1893).
1894	(Feb): West Wanganui Inlet via Collingwood and Pakawau with W.H. Bryant and T.M. Melhuish (*TNZI 27*, 1895)
1895	(Feb): Torrent Bay (north of Motueka) (*TNZI 28*, 1896); western side of Blind Bay with W.H. Bryant (*ibid*).
1895	(Nov): Sandy Bay (north of Motueka); (*TNZI 28*, 1896)
1897	(Feb): dividing range between Wangapeka and Karamea Rivers, including Mounts Luna and Patriarch, with W.H. Bryant and D. Grant (*TNZI 30*, 1898).

After each trip Kingsley sent specimens and notes to Thomas Kirk in Wellington and often published Kirk's comments in the resulting paper; and in his unfinished *Students' Flora of New Zealand* (1899) Kirk cited four of Kingsley's locality records, chosen, no doubt, because they extended the known species range or for their novelty. They are:

1. *Entelea arborescens*: "Collingwood, and islands near Cape Farewell, *Hector, Kingsley!"*
2. *Ligusticum politum* new species: "Ben Nevis, Mt. Starveall, and Mt Lunar, *Gibbs*! *Bryant*! *Kingsley*! Dec. Jan."
3. *Aciphylla colensoi*: "Whangapeka, Nelson, *Kingsley*!"
4. *Senecio monroi*: "Whangapeka, *Kingsley*!"

On 15 August 1899, at age 53, Kingsley married Ellen Margaret Bryant (b. 1867), one of W.H. Bryant's younger sisters. In (1) and (2) Miss Bryant is described as the daughter of Mr. R. Bryant; but Robert Bryant was not her father but her eldest brother (by 18 years) (3).

By 1898 the Nelson Philosophical Society had been in existence for 16 years but was now in trouble. At the AGM on 24 January it was reported that there had only been two meetings in the year and that the membership was "small" [16]. At the same meeting it was moved "that the Nelson Philosophical Society propose to amalgamate with the Nelson Institute" (in other words that a specialised Scientific Society be amalgamated with an Institute with a much more general agenda). "After considerable discussion, consideration of the resolution was postponed for 6 months." (*TNZI 30*, 1898). The resolution is not mentioned in the report of the next AGM, but Kingsley's position is made clear. "The thanks of the Society were tendered to the Hon. Secretary, Mr. R.I. Kingsley, for the important services rendered and persistent loyalty to the aims and objects of the Society" (*TNZI 31*, 1899).

Kingsley continued as Hon. Secretary of the Society and Hon. Curator of the Museum during 1900 and 1901. But during 1901 amalgamation took place, with the Institute taking over the Library and Museum and forming a "scientific branch". The 1902 Committee of this expanded Nelson Institute lacks Kingsley or any of his colleagues (an Acting Curator was elected for the Museum); and on

18 March 1903, Kingsley joined the Wellington Philosophical Society, although continuing to live in Collingwood Street, Nelson (*TNZI 35*, 1903).

Thomas Kirk died on 18 January 1898, and on 11 November Kingsley wrote to Thomas Cheeseman, Curator of the Auckland Museum, sending specimens for identification. This is the first of Kingsley's 11 letters to his new mentor. They are preserved in the Library of the Auckland War Memorial Museum, and are distributed as follows: 1898 (3); 99 (1); 1900 (1); 01 (1); 05 (1); 06 (1); 08 (1); 09 (2).

On 30 January 1905, Kingsley told Cheeseman that a chronic heart condition now prevented him from climbing hills, and that official duties gave him no spare time for easier field work. Again, 2 years later, he was ill for 5-6 weeks with the same condition and complications (letter of 31 December 1906, while staying with Bryant). But earlier in 1906 he would have been heartened by the publication of Cheeseman's *Manual of the New Zealand Flora* where he is cited in the locality records for 20 species (12 ferns, 8 seed plants). Most of these localities can be related to Kingsley's excursions with Bryant, as listed above, with the exception of Dun Mountain and Mount Starveall, close to home. Almost all would have come from Kirk's herbarium which Cheeseman used. The only citation from Cheeseman's herbarium appears to be that for *Metrosideros parkinsonii*: "Buller Valley, Nine-mile Creek, *R.J. [sic] Kingsley*!" This is referred to in Kingsley's letters of 30 November 1898 and 8 December 1900 and is *AK 5546*. There are only four other Kingsley specimens in Cheeseman's herbarium and three can be related to Kingsley's letters as follows: *Veronica hulkeana* (AK 8310) and *Poranthera microphylla* (AK 5053) are mentioned on 30 November 1898, and *Scleropogon rigida* (AK 99517) is mentioned on 15 January 1908. I cannot find mention of *Cynodon dactylon* (AK 197630).

Although Kingsley's bad health persisted, he carried out his duties until his last few days. He died at his home on 6 May 1912, survived by his wife and son. He was buried in St Paul's churchyard, Brightwater, after a funeral service at the Nelson Cathedral. Tributes were paid to his good works as Superintendent of the Port Sunday School and as a lay reader. He was also Secretary of the Nelson Aid Society, Treasurer of the Harmonic Society, and a keen philatelist (2,4). A memorial plaque in the Nelson Cathedral gives his age as only 64, but he was 66 as his tombstone confirms. Buried also at Brightwater is Kingsley's friend and brother-in-law, William Henderson Bryant (1864–1948) whom I shall write about in the next newsletter.

Eponymy

Kingsley Place, Richmond, is possibly an eponym.

Acknowledgments

I am indebted to Mr Ewen Cameron (Auckland War Memorial Museum) for information on Kingsley's specimens and letters; and for other very useful information I am grateful to Ms Anita Mackay (The Anglican Centre, Nelson), Dr D.G. Drury and Mr R. Gordon (both of Richmond), and Mrs L. Ladley (Wakefield). Mrs Wendy Weller kindly typed the note.

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(1) Mr Robert Ingpen Kingsley. *The Cyclopedia of NZ 5: Nelson, Marlborough and West Coast.*1906; (2) R.I. Kingsley. *Nelson Evening Mail*, 6 May, 1912; (3) Marion J. Stringer 1999: *Just another row of spuds. A pioneer history of Waimea South*; (4) In Memoriam. Mr R.I. Kingsley. *Nelson Diocesan Gazette*, June 1912.

PUBLICATIONS

Journal Received

New Zealand Native Orchid Group Journal No. 85 – December 2002
Edited by Ian St George [ISSN 1170-4543]

Original papers is in this issue are: Bruce Irwin – *Nematoceras longipetala* from two sites; Bruce Irwin – On the Road to Whakahoro; Mark Moorhouse – Nelson *Nematoceras triloba* trials.

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