

Botanical Society  
of Otago  
Newsletter.  
Number 17,  
March 2000.



*Late summer in Otago gardens*

**Botanical Society of Otago Meetings**

Sunday March 19<sup>th</sup> **FUNGI workshop**, David Orlovich (whom you may recall from the Profile of a Botanist in our last issue) has agreed to run a workshop on "Fabulous Fungi". Short foray to collect specimens (you can bring some already collected, but David assures me that they are easier to identify when fresh!). Then David will show us how to preserve our specimens for the herbarium (OTA) and how to go about identifying them. Then we have the entire afternoon to preserve and (hopefully) identify our specimens!!

**Meet: Botany Department car park, 464 Great King Street, 9.00am.** Contact: David, 479 9060, or Barb Barbjade@es.co.nz

Sunday April 16<sup>th</sup> **Old Man Range** field trip. A wonderful opportunity to see some of our most amazing flora - cushion plants - and the amazing views of Central! With Neil Simpson from the Wakatipu Botanical Group.

**Bring:** lunch, coat and stout walking shoes. Be prepared for sudden weather changes in mountain areas. Transport provided at 5 cents /km (4WD necessary).

Cancellation will be broadcast on Radio 4ZB and 4XO cancellation service! **Meet: Botany Department car park, 464 Great King Street, 8.00am.** Please contact Barb if you wish to come 455 0533 or Barbjade@es.co.nz

## Note from Head Office

You may have noticed that The Botanical Society of Otago has been rather busy over February, as well as individual fieldwork and the return to lectures (at least for those of us at the University). The Herbarium Workshop went well - sorry about the late notice. Our field trip to Okia Reserve had a lovely sunny day with lots of new members taking the opportunity to see some familiar (to some) weeds and a few new (to some) native species.

We would like to thank everyone who has sent in subscriptions and donations, and urge everyone else to do the same, at least the membership form, so we know you wish to continue receiving this newsletter (details on back page). Anyone is welcome to offer contributions to the Newsletter, in the form of articles, pictures, book reviews, botanical notes - basically anything interesting to botanists (both amateur and professional) will be considered.

We are planning more workshops for later in the year but no details as yet (anyone with a preference or suggestion for topics and/or offers to help run them can contact either Barbara or Bastow). Suggestions for larger projects and field trips are also welcome and offers to help run them are always appreciated.

From Barbara apologies to everyone who received the January instead of the January issue. Even bigger apologies to Jennifer Bannister, Allison Knight and (the late) Scott Thomson for spelling all their names wrong.

Last but not least: we would like to thank all those who have contributed their time and energy in the form of: articles, pictures, reviews, and trip records for the newsletter, giving talks, leading excursions and background organisation. Most of all, thanks to everyone for their support and enthusiasm as the Botanical Society of Otago approaches the third Millennium.

Barbara and Bastow

## Cover picture: *Late Summer in Otago Gardens*

Drawn by Ralf Ohlemüller. In keeping with Dr Peter Johnson's talk - "Nothing Monotonous about Monocots" – and the publication of "*Flora of New Zealand Vol V. Grasses*"; *Late Summer in Otago Gardens* features three common monocots *Phormium tenax*, *Crocasmia X crocosmiiflora* and *Holcus lanatus*.

## Plant of the month: *Crocasmia x crocosmiiflora* (Nicholson) N. E. Brown

Family: Iridaceae      Common Name: Montbretia  
Flowers; bright orange (red tinged),  
Seeds: c. 6 in long green capsules.

Spread mainly by corms and rhizomes, *Crocasmia X crocosmiiflora*, or Montbretia, is a common roadside and wasteland weed in the South Island (especially on the West Coast, but also around Dunedin). A garden escapee, its first record in New Zealand was by Allan in 1935. *Crocasmia X crocosmiiflora* is an artificial hybrid between *Crocasmia aurea* and *C. pottsii*.

Source: Healy, A. J. and Edgar, E. 1980. Flora of New Zealand Vol. III, Adventive Cyperaceous, Petalous and Spathaceous Monocotyledons, Government, Wellington.

## The Nature guide to New Zealand Native Orchids

Sorry we didn't put in the contact details for ordering a copy of Ian St George's new book. Contact Allison Knight 487 8265, or email [alli\\_knight@hotmail.com](mailto:alli_knight@hotmail.com) Remember orders are only sent in batches of five so there may be a delay. Be in quick; she won't do this forever!!!

# Minutes of February A.G.M. : A summary

## 1. Election of officers

President: J. Bastow Wilson

Secretary: Barbara J. Anderson

Treasurer: Paul R. Dean

Web Page Editors: Barbara J. Anderson and David Orlovich

Newsletter Editors: Barbara J. Anderson and Allison Knight

Committee: Subcommittees to be formed as needed.

## 2. Constitution:

The meeting decided that, we need to “revise” our constitution.

The meeting decided that a subcommittee should draw up a draft constitution, including a statement of aims and all tax phrases required by law.

This draft constitution will then be presented to the next A.G.M. where it can be amended and voted on by the members.

Subcommittee is to be led by Paul Dean. Members on committee: Bastow Wilson, Barbara Anderson, Kelvin Lloyd, and Jennifer Bannister.

## 3. Activities.

It was proposed that we continue to have meetings (including field trips, workshops, talks ect.) about as frequently as at present.

It was proposed that, if possible, fieldtrips/workshops should be held at the same time each month to allow members to reserve this day ahead of time. The Third Sunday in each month was suggested.

(For more details contact Barbara)

## **Peter Johnson's talk (19<sup>th</sup> February 2000): "Nothing Monotonous about monocots"**

Dr Peter Johnson, from Landcare Research, shewed two carousels of slides (we had to invent a Society rule that the speaker provides his own projector), up to his usual standard of botanical precision and visual delight. One slide contained seven monocot families, which he invited the audience to find. He illustrated the variation within the large grass, sedge and rush families, but especially emphasised New Zealand's large monocots in Liliaceae, or Asphodelaceae or Agavaceae (depending on which taxonomist you ask): cabbage trees and flaxes. He contrasted these with the monocot flora of New South Wales, where he seemed to have had a recent botanist's holiday. As well as the beauty of nature, some of Peter's slides were of works of art: collages of monocots.

Bastow Wilson

## **Loranthaceous Mistletoes Recovery Plan (2000-2010) – consultation phase.**

"A consultation plan has been prepared for six species of native and endemic loranthaceous mistletoes. All members of the Loranthaceae genus in New Zealand are declining and one of them (*Trilepidia adamsii*) is already extinct. Many factors have contributed to their decline, principal among them is loss of habitat, declines in the native animal species involved with reproduction, and browsing by mammalian pests. Active management is required to maintain existing populations and to prevent further declines and extinctions. This national recovery plan includes information on the distribution and ecology of the loranthaceous mistletoes, an outline of management options, and a work plan." (Susan Dopson, February 2000, Abstract from the recovery Plan). Submissions close on Friday 12 May 2000. Copies of this draft plan can be obtained from Phil Knightbridge, or contact Barbara to see the BSO copy.

**Book Review: *Edible and Poisonous Mushrooms*, by Ian Hall, Peter Buchanan, Wang Yun, Anthony Cole.**

Don't open this book unless you can afford to buy it. The superb photographs, two to four to an opening and about natural size, are compulsive. But it is a serious work with ingenious radial keys for identifying and all information sourced in seven pages of references.

It is not just a book for naming: there are chapters on fungus hunting, cultivating saprobic and mycorrhizal mushrooms and statistics about market values and consumption world-wide that often astonish. Are we missing a lot (apart from extra trips to the loo) by being so cautious in what we eat? It is surprising how often the sign for edibility appears and most of us will heed the warning that cooking is a safety factor and if spores are ripe that the cap is too old for the pot. Like so much else, mushrooms have been bred for appearance and shelf life and the standard of culinary excellence remains with the wild field mushrooms that you cannot buy.

To get the best pictures the net has been widely spread but the senior author Ian Hall has contributed most. Maybe research in his student days on the mycorrhizas of rata and kamahi, which contributed much to the Otago hypothesis that mycorrhizal dependency can be assessed by measuring root hairs, turned his attention to truffles and to establishing commercial crops where we have limey soils. His success has brought many invitations to travel abroad and the book benefits with pictures of edible fungi in cultivation and much information that adds to the interest of the text.

AGMARDT (publishers) have helped to keep the price down to fifty dollars. Yes, open it!

Geoff Baylis.

## **Native Forest Stand to be Sacrificed for Proposed DCC Water Reservoir: a comment by Alan Mark**

The application by the DCC for resource consents from the Otago Regional Council to build a water reservoir for the City at the top of Abbots Road will have an unacceptably major environmental effect on a unique and irreplaceable stand of native podocarp-broadleaved forest along its northwest margin. The high ecological values of this forest stand are quite inadequately described in the application. The stand has high biodiversity and more than half of the large podocarp trees (7 rimu, 2 totara, 1 miro), that are 50-100 cm diameter and probably 500 to 800 years old, would be inundated or otherwise destroyed by the reservoir construction, as currently planned. Retention of the stand as a backdrop to the reservoir is highly desirable, as with the other reservoirs in and near the City, e.g. Ross Creek and Sullivan's Dam.

Relief sought is to lower the level of the proposed reservoir sufficiently to retain at least that part of the forest stand that contains all the emergent podocarps, perhaps a 2m lowering. Much of the storage so lost could be retrieved by excavating the base of the reservoir. The cost required, may be no more than that needed to bury the 33kW power line that currently spans the site, which is being done to satisfy the concerns of local residents.

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**Book review: Edgar, E. and H. E. Connor. 2000.  
"Flora of New Zealand Vol V. Grasses".**

At last, a comprehensive grass flora of New Zealand, that even those of us in (early) retirement have been anxiously awaiting for all of our professional lives. Its completion represents dedication beyond the normal call of duty for its co-authors Elizabeth Edgar and Henry Connor, who both retired from Botany Division, DSIR, more than a decade ago and have served as Research Fellows at Landcare and Canterbury University, respectively, to see the job through.

Compilation of this flora represents the fifth and last in the series on the New Zealand flora and clearly has been the most demanding one of all. It is a real credit to its authors, in terms of both accomplishment and determination. All of the currently known grasses in the N Z Biogeographical Region are included, comprising 157 endemics, 31 other indigenous species, naturalised grasses (226 spp.) and even "transients" (46 spp.), some 460 in all. They have all been treated equally apart from synonymy, which is complete only for the native species. There is a valuable key to the 21 tribes and to each of the genera. Each species predictably has a comprehensive taxonomic description as well as generally brief notes on distribution.

The extended preface (29 pp.) is highly informative, with some content and style that are unmistakably Henry, being both perceptive as well as provocative, even acerbic in places. It is thoroughly delightful and offers great relief in an otherwise inevitably technical production. There are sections dealing with aspects of history; the challenge of unravelling the taxonomy of many of the indigenous taxa (we are told the authors spent "no longer than necessary" on nomenclatorial matters so as to devote as much time as possible to the more demanding taxonomic studies); experimental aspects; floral dimorphism and reproductive biology; typification; biogeography; ecology (e.g.



calcicoles and weediness, including "surveillance grasses"); conservation status (of endemic species); and naturalisation (the naturalised flora exceeds the indigenous component); chromosome numbers; and lastly an insightful, more personal perspective in a section headed "*De Auctoribus*" (about the authors), which I wouldn't attempt to *précis*.

We are also told that "the names of New Zealand grasses reflect nothing of indigenous origin at generic level and there are only two Maori words, "*toetoe*" and "*unarede*" used at specific level. Thus "no political overtones, no conservation ploy, no historic person, event or place is called into commemoration, even though there were many opportunities. Our grass flora is singularly free of overtones."

There is also a valuable 40 page section devoted to "*Annals of taxonomic research*" in New Zealand, as well as 24 very helpful whole-page figures of floral parts of indigenous and exotic grasses plus 12 high quality colour plates that range from landscapes to single specimens, or their more diagnostic parts (e.g. tiller bases of some *Chionochloa* species). There are also two superb plates of dorsal views of florets from 16 species of *Rytidosperma*.

Obviously bugged by the cladists involved in refereeing the many revisions, the authors justify their refusal to accede in terms of the still inadequate, relevant information. In a book of this size and complexity, there are inevitably a few typos and other glitches but these are quite minor and do not detract from this book of great value (which also acknowledges the generous financial support of the Hellaby Indigenous Grasslands Research Trust). I strongly commend this book to the many others who I know have been struggling for decades to acquire a better knowledge and understanding of our distinctive New Zealand grasses. Now there is no excuse!

Alan Mark.

**Note:**

Edgar, E. and H. E. Connor. 2000. "*Flora of New Zealand Vol V. Grasses*". Maanaki Whenua Press, Lincoln. 650pp. can be purchased from the University Book Store for \$54.95, or from Landcare Research for \$55 for Vol. 5 alone or \$100 for the entire set of five volumes of the Flora of New Zealand. Email: [mwpress@landcare.cri.nz](mailto:mwpress@landcare.cri.nz)

**Profile of a Botanist: Paul Guy, Plant Virologist.**

You are probably all too aware that people catch viruses. This week in Dunedin the air is filled with coughs and splutterings and sneezes which propel fine aerosols of the common cold virus towards its next victim. Most people are unaware that plants are infected with their own suite of viruses. Fungi are the most conspicuous pathogens of the plant world but, at the last count, there were some 900 well characterised plant viruses.

You may have noticed the odd tulip with colour breaking in its petals; these often stand out in mass plantings. This effect started a craze in 17<sup>th</sup> century Holland called tulipomania which saw outrageous prices paid for bags of tulip breaking virus (TBV) infected bulbs. The bulbs produced interesting feathery patterns in their blooms sure enough but with every replanting the bulbs and blooms got smaller and smaller and then finally died: a very poor investment. Next time you visit your local nursery you may notice that you have two choices of honeysuckle: one has green leaves and is labelled *Lonicera nitida* and in the next row you will find *L. nitida* subsp *aurea* with an attractive yellow net pattern in its leaves. The vein netting is caused by tobacco leaf curl virus (TLCV) and if you want to change the 'subspecies' of your green honeysuckle just graft a bit of *aurea* onto it and the virus will spread via the graft union to its new host.

One of my interests is viruses in the native flora. The New Zealand flora probably has its own native viruses (I haven't found

any yet!) and it has certainly been invaded by viruses brought unwittingly with their hosts from overseas. Unlike the common cold, most plant viruses are not spread by touch or by aerosols: they need some sort of vector (usually an insect) to inoculate their next host. TBV is spread by aphids but only infects tulips so it is not a threat to our flora. In contrast TLCV has a wide host range and is spread by a whitefly which feeds on a wide range of species. Fortunately the whitefly has been excluded from New Zealand so far. Unfortunately other viruses have spread to the flora. Barley yellow dwarf viruses have spread to our native grasses and cucumber mosaic virus has spread to a number of native dicots. A number of postgraduate students and I have been investigating the spread and are beginning to assess the impact of these virus invasions.

Paul Guy.

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## Postcard Review:

Last year saw the issue of a set of twelve postcards to commemorate the 30<sup>th</sup> Anniversary of the Bryology/Lichenology Workshop of the State Museum for Natural History in Stuttgart, Germany.

The set comprises 1 liverwort, *Radula complanata*; 6 mosses, *Hedwigia stellata*, *Cratoneuron filicinum* (in N.Z.); *Rhodobryum ontariense*, *Sphagnum subsecundum* and *S. warnstorffii*, and *Racomitrium lanuginosum* (in N.Z.); 8 lichens, *Sticta filix* (in N.Z.); *Letharia columbiana*, *Thamnolia vermicularis* (in N.Z.) *Cetaria nivalis*, *Dermaticum thunbergii*, *Ramalina menziesii*, *Caloplaca elegantissima* and *Xanthoparmelia serusiauxii*.

New Zealand is well represented with four species being found here and many of the others depicted have relatives here. The photography is excellent, highlighting much of the detail of these

small plants. My favourite would have to be the quite superb photograph of the *Ramalina*. The set costs roughly \$NZ6 but the postage pushes this up to \$NZ18. I am happy to order for those who may be interested and if there are several orders then the postage costs will be lessened accordingly. Those wishing to order direct can do so by email at [A.Kleinsteuber@t-online.de](mailto:A.Kleinsteuber@t-online.de) If anyone wishes to view them, they can contact me.

John Steel

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## Diary of upcoming events:

- 15<sup>th</sup> March, Wednesday: Ecology research Group Open Seminar. Botany School Annexe 1.30pm – 2.30pm  
Sébastien Brosse (University of Paul Sabatier): *Artificial Neural Networks in Ecology*.
- 17<sup>th</sup> March, Friday: Zoology Department Seminar. Zoology Annexe Seminar room, 3.30pm - 4.30pm  
Dr Frank Wilhelm: *Life at the Edge: the Ecology of Grammarus lacustris in Lakes of the Canadian Rockies*.
- 17<sup>th</sup> March, Friday: Otago Institute Talk. Hutton Lecture Theatre 5.00pm  
Pete Hodgkin M.P.: *Minister's vision for Science and Technology*.
- 18<sup>th</sup> March, Saturday: Friends of the Botanic Gardens: Propagation Workshop. Propagation Unit at the Botanic Gardens 9.30am
- 18<sup>th</sup> March, Saturday: Ecology research Group Open Seminar. Botany School Annexe 1.30pm – 2.30pm  
Prof. Hugh Possingham (University of Adelaide): *Why has conservation Biology failed? Decision Theory for Conservation Biology*.
- 19<sup>th</sup> March, Sunday: Bot. Soc. of Otago Fungi Workshop (see front page)**
- 21<sup>st</sup> March, Tuesday: Forest and Bird Talk. Hutton Theatre 7:45pm  
David Horne: *A Green Adventure in Oman*
- 22<sup>nd</sup> March, Wednesday: Botany Department Seminar. Botany School Annexe 12 noon – 1.00pm  
Amelia McQueen: *Dispersal, seedbanks and species pools: A metapopulation approach to grassland communities (Ph.D. Proposal)*.
- 24<sup>th</sup> March, Friday: Zoology Department Seminar. Zoology Annexe Seminar room, 3.30pm - 4.30pm

- Dr Kevin Simon: *Organic Matter Dynamics and Trophic Structure in Cave Streams*.
- 25<sup>th</sup> March, Saturday Dunedin Naturalists' Field Club: Field Trip. Leaves 9.00am Railway Station, \$15  
Geology Fossils and Beach - Wangaloa
- 25<sup>th</sup> March, Saturday: Forest and Bird Field Trip. Meet Logan Park H.S. car park 1pm.  
Land Management and Ecological Processes on Signal Hill. Leader Ralph Allen, contact John Dawson 477-7190.
- 29<sup>th</sup> March, Wednesday: Botany Department Seminar. Botany School Annexe 12 noon – 1.00pm  
Kate Neill: *Reproductive Phenology of the Red Seaweed Gigartina lanceata: Population Density, Growth and Chemistry at Two sites in Otago* (M.Sc. Proposal).
- 2<sup>nd</sup> April, Sunday: Forest and Bird Field Trip. Leave from Otago Museum 9am. Otago Skinks at Macraes. Leader Graeme Loh.
- 3<sup>rd</sup> April, Monday: Dunedin Field Naturalists Club Talk. Red Lecture theatre Great King Street (opposite the A. and E. entrance to the hospital) 7.30pm  
Paul Coffey: *DCC tracks strategy*  
Rodney and Caroline Hogg: *Proposed Arboretum on Signal Hill*.
- 5<sup>th</sup> April, Wednesday: Botany Department Seminar. Botany School Annexe 12 noon – 1.00pm  
Dr Catriona Hurd: *Kelp and Waves: a Stormy Relationship*.
- 7<sup>th</sup> April, Friday: Zoology Department Seminar. Zoology Annexe Seminar room, 3.30pm - 4.30pm  
Dr Reglindis Zehrer: *Metazoan-protzoan plankton interactions in a biomanipulated reservoir – an example for direct and indirect interactions within the planktonic food web*.
- 8<sup>th</sup> April, Saturday: Dunedin Naturalists' Field Club: Field Trip. Leaves 10.30am Railway Station, \$10  
Tunnel beach and Blackhead beach
- 12<sup>th</sup> April, Wednesday: Botany Department Seminar. Botany School Annexe 12.30– 1.30pm  
Dr David Eldridge (University of NSW): *The Ecology of Cryptogams in Semi-Arid Rangelands*.
- 14<sup>th</sup> April, Friday: Zoology Department Seminar. Zoology Annexe Seminar room, 3.30pm - 4.30pm  
Rau Kirikiri (Treaty Responsibilities Manager, Manaaki Whenua, Lincoln): *More Maori in Science*
- 16<sup>th</sup> April, Sunday: Bot. Soc. of Otago Field Trip**
- 18<sup>th</sup> April, Saturday: Forest and Bird Talk. Hutton Theatre 7:45pm  
Lloyd Davis: *The Oddball Penguin*

- 19<sup>th</sup> April, Wednesday: Botany Department Seminar. Botany School Annexe  
12noon – 1.00pm  
Ralf Ohlemüller: *Reconstructing the Potential Natural Forest  
Vegetation of the Dunedin Area (Ph.D. Proposal)*.
- 19<sup>th</sup> April, Wednesday: Friends of the Botanic Gardens Talk. Upper Botanic  
Gardens Seminar room 7.30pm  
Michael Finlay: *The Botanical influence in the Decorative Arts and  
Design*.
- 22<sup>nd</sup> April, Saturday: Dunedin Naturalists' Field Club: Field Trip. Leaves  
1.00pm from the Railway Station, \$10  
Harword and Tairaroa Heads (Peninsula)
- 16<sup>th</sup> May, Tuesday: Forest and Bird Talk. Hutton Theatre 7:45pm  
Sue Maturin: *Escaping Aliens in Your Garden*
- 13<sup>th</sup> June, Tuesday: Forest and Bird Talk. Hutton Theatre 7:45pm  
Bill Gillbertson: *The West Coast Forests*
- 13<sup>th</sup> June, Tuesday: Forest and Bird A. G. M. Hutton Theatre 7:45pm
- 18<sup>th</sup> July, Tuesday: Forest and Bird Talk. Hutton Theatre 7:45pm  
Steve Broni: Title to be announced.

## Membership form:

Title: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: (    ) \_\_\_\_\_

**Family** (2 adults + children) / **Waged** (salary)

    / **Student** (unwaged)

Please **e-mail** / **mail** my newsletter to me.

Donations are welcome (donations equivalent to the subscription rate will be treated as such after the General Meeting in February). Subscriptions are:

    \$15 Family (2 adults + children) / \$10 waged (salary)

    / \$5 Student (unwaged).

Cheques to "Botanical Society of Otago".

## **Botanical Society of Otago: whom to contact**

Information for the Newsletter to:

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For information on activities:

The trip leader  
or Barbara Anderson (contact above),  
or see our webpage: <http://www.botany.otago.ac.nz/bs>

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