

Newsletter



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Royal New Zealand Institute of Horticulture (Inc.)

Chairman's Comments

We can only say sorry to those who were unable to register for the Wellington Conference 'NZ Plants and Their Story' October 1999. The conference was sold out 2 weeks prior to opening.

Mike Oates and his Wellington Branch team presented a stunning array of topics based on NZ plants. The speakers were drawn from a cross section of NZ specialists from plant raising through to the designer use of native plants. The most notable speakers were those whose enthusiasm for their subject riveted the attention of capacity audiences for each session. Most outstanding of these enthusiasts was Rob Lucas of the Open Polytechnic whose knowledge and photography of NZ plants provided one of the most stimulating Banks Memorial Lectures. This Banks Memorial Lecture is given in honour of Sir Joseph Banks the world famous plant collector and is the centrepiece of the RNZIH Conference each year.

Wellington is a superb venue for horticultural conferences. The Wellington Botanic Gardens and the Otari-Wilton Bush Plant Reserve have facilities and landscape features that provide memorable visits and retain lasting interest for visitors. This years conference coincided with 'Tulip Sunday' at the Wellington Botanic Gardens. The new Otari-Wilton Bush Interpretive Centre is a great example of architectural sensitivity to the bush clad surroundings. It is very sheltered and accessible to all. Another feature of the conference weekend was the superb weather which enhanced Wellington as a wonderful city prepared to take all event opportunities.

The business side of the conference was the 77th. Annual General Meeting. This was a lively affair with the usual persistent question of 'Where are WE going '? It is a commonly asked question at other environmental profession's AGMs throughout the country . Our Newsletter has regularly reported on progress this year based on the paper 'Towards 2000'. That paper was adopted by the Auckland Conference

AGM 1998, was circulated in the AGM Minutes of 1998 and was published in the Newsletter. It spelt out the range of affordable opportunities for the RNZIH. Ask any economist for a long term plan. You are very unlikely to get one. The world in 2000 is going to be an uncertain place. However it will have great appeal for the alert to grasp the many opportunities.

To take advantage of those opportunities there does have to be a financial base from which to operate. We now have that. The 'WE' Factor should come from full membership support and involvement. Those members who feel WE should do more should really look at what 'I' can do as a member to promote the RNZIH and horticulture in NZ. There is no paid Chief Executive Officer any more, therefore such support would uplift the spirits and encourage the few who do the work.

The question for the RNZIH in 2000 should be - are we open minded and receptive enough to take those opportunities as they emerge?

Progress this year 1999

1. Financial stability was achieved in 1999.
2. Our Lincoln Office now has up to date technology in place. The Lincoln office email is: rnzih@xtra.co.nz Please use it. Visit our Website at www.rnzih.org.nz
3. Our office has archived important documents and has cleared 77 years of accumulated unnecessary papers. David Shillito and Enid Reeves spent many days of their time doing this work.
4. One of our paid services is to prepare the N.Z. Alpine Garden Society Journal. This is now in it's second year.
5. The Hebe Checklist has been re-formatted in a

form compatible to modern publishing techniques. It was then checked and edited by Peter Heenan. It is now in the hands of Lawrie Metcalf and is undergoing its final edit. Mike Oates and the Wellington Botanic Gardens have kindly offered to oversee the publishing. stage of the work.

6. Our web site is installed which was generously designed this year by Keiron Simon a computer software expert. Andrew Maloy of the National Executive has undertaken to regularly edit and up date the material on the web site. Our web site address is www.rnzih.org.nz This makes our organisation visible both nationally and internationally. It needs to be interesting. Please support Andrew with items of news, articles and events. His kind effort is on our behalf.
7. Progress has been made towards the revival of a journal. An announcement will be made early in the New Year.
8. A Garden Registration Scheme was approved by the Executive and endorsed by the AGM. This is being piloted by a team including Jayson Kelly who has been co-opted on to the National Executive specifically for this purpose as well as to assist with general business. Jayson is a very skilled horticulturist proven by his NDH(Hons) 1995, and awards such as the David Tannock Memorial Prize 1992, DD Baker Award 1993, Margaret Watling Scholarship 1993, Cockayne Medal 1995. Jayson is a young man with initiative who has seen the benefits and opportunities of being a member of the RNZIH. An article follows which he has written on the proposed Garden Registration Scheme.

We are grasping opportunities without rhetoric and are moving forward. This is the spirit needed for the new millennium.

Please accept best wishes for a Happy Christmas and a fruitful New Year.

Ron Flook, Chairman.

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Summerfruit New Zealand Inc.

Summerfruit NZ Inc has recently, in conjunction with Agmardt and HortResearch, launched the resource book, "Summerfruit in New Zealand - Management of Pests & Diseases". This book is written by some of New Zealand's top scientists in this field, and covers the full range of pests and diseases that affect New Zealand summerfruit.

Detailed text setting out pest life cycle, host range,

distribution, incidence, importance and management, is covered for each pest/disease and accompanied by high quality photographs. this book is a valuable resource for all those involved in or associated with the New Zealand summerfruit industry.

The cost is \$59.95 (including GST). Order form available from Bev Ruby, Personal Assistant, Summerfruit NZ Inc. PO Box 2175, Wellington.

A Database of New Zealand Gardens - A New Initiative of the Institute

Background

In October 1998, approximately 70 keen gardeners, horticultural professionals and garden administrators assembled in Dunedin to attend a three day seminar on "The Business of Gardens in the Future". This conference covered various topics to do with developing/enhancing our gardens for the purpose of being open to the Public. It was workshop based, with a highly interactive format so that all those present could share their thoughts and ideas with each other. It was also fortunate to have as its special guest, Christopher Brickell, an internationally leading horticulturist, botanist and recently retired Director General of the UK based Royal Horticultural Society.

An enthusiastic atmosphere was generated as the workshops progressed, this steadily grew, and towards the end a sense of expectation and excitement developed – something which the organisers had not quite expected. The last session, where the findings of the individual workshops were collated, soon developed into a discussion on the lack of a national body able to represent the interests of those attending. Chris Brickell, who could see the overall direction of the discussion, helped steer it towards a constructive end. Eventually a motion was put to the group to set up an investigative committee whose mandate was to:

"Investigate the feasibility of setting up a national organisation to represent the interests of garden owners"

Mick Reece, Liz Morrow, Alan Jellyman, John Wills and myself were elected by the group for this purpose, and the concept was born.

Interlude

Working via fax, email, phone calls and meeting when resources would allow, this group moved steadily down its assigned path. Determined not to be too tied up with details, the investigative committee looked into the general purposes of a

possible organisation, its funding, its direction and aims, and its membership.

At this time the investigative committee was made aware of an initiative of the New Zealand Tourism Board to establish a network of floral and garden businesses to develop a tourism focused promotion strategy for the industry in New Zealand. The committee was fortunate to have the assistance of Debra Simes, an experienced tourism professional, whose involvement in this facet of the industry included the co-ordination of the Dunedin Rhododendron Festival. Along with Mick Reece and Liz Morrow, these three attended the first meetings of the new "New Zealand Garden and Floral Marketing Group" in an attempt to foster an alliance with the tourism sector.

What soon became evident to those present at these meetings, was the lack of a credible information product for the tourism industry - something which was needed for the promotion of gardens in New Zealand. This is where our investigative committee saw the benefit of a national organisation to provide the data to the tourism sector, who would then do what they did best – promote, attract and guide visitors to this Country's unique collection of gardens. Needless to say, the New Zealand Tourism Board was excited at the prospect.

Several meetings ensued, and the concept of a database of gardens (and plant collections) steadily grew. However, there still needed to be a "Garden Association of New Zealand" to focus in this role, and the investigative committee were determined that there now existed a real need for such a body. It seemed that something would need to happen soon to take advantage of the direction being chartered by the Tourism Board's "New Zealand Garden and Floral Marketing Group".

Proposal

We were initially so focused on establishing a new body, but resource constraints, the lack of time, and the risk of losing opportunities by setting in place a

protracted programme of fund raising and seeking membership, convinced us that an approach to the Royal New Zealand Institute of Horticulture, as the only national horticultural body, was essential.

The investigative committee contacted the Institute's Chairman, Ron Flook, to see if the Institute would consider our now evolved concept – the development of a Garden Database. We felt that whilst there were details to be worked out, the overall thrust of the proposal fitted well with aim of the Institute – the promotion of horticulture. Ron was very positive, and decided that it was worth bringing to the attention of the Institute's Executive. This was done over several weeks of correspondence, and finally, at the AGM of the Institute in Wellington, a motion was adopted:

“The RNZIH endorse the idea of forming a data base of gardens”

So what is proposed

1. That a database of quality gardens be established by the Institute, which will contain a variety of objective information on member's (and non member's) gardens such as size, access, opening times, garden contents, collections of interest, catering facilities etc.
2. That the information on the database be true and correct, verified and endorsed by the reputation and credibility of the Institute.
3. That participating gardens pay administration costs to have this information stored in the database.
4. That this database then be made available, as a product, to the tourism sector for the purposes of garden promotion (both nationally and internationally) and for the setting up of specialist and general garden touring parties.

One of the significant advantages recognised by the Institute's Executive was that this initiative would allow it to influence a much wider range of gardeners than its current membership, and of course, that it would significantly promote horticulture in an underdeveloped sector of the profession. This is an initiative that will assist the Institute in progressing successfully into the new millennium.

The Future

Where to from here?

Well, the Executive now requires the input from members. We would like to know if you support such a concept. We would like to hear from any

members interested in assisting in the development of a database, and we would also like to hear from members who would be interested in registering their garden on the database.

We intend to develop a partnership with the New Zealand Garden and Floral Marketing Group, and to launch the initiative nationally, so that we include all gardeners in this exciting development.

If you wish to participate or comment, please make contact with the Institutes office c/o The Administration Officer, RNZIH, P.O. Box 12, Lincoln University, Canterbury, or alternatively email the Institute at rnzih@xtra.co.nz. We look forward to your participation in this project. We need your backing and support if this is to succeed. May this be a fine feather in the Institute's distinguished and long established cap!

Jayson Kelly

to all of our
members



Seasons Greetings

and best wishes for a

Happy New Year

R.N.Z.I.H. Awards 1999

Award of Associate of Honour of The Royal New Zealand Institute of Horticulture (AHRIH)

Awarded to persons who have given distinguished service to horticulture in New Zealand. Two awards were made :

John A. Anderson

John Anderson has been farming in South Canterbury since the late 1940s. In his younger days he was a keen deerstalker and he observed the destruction to native bush brought about by this introduced animal. Thus his interest in native plants and conservation began. He has a largely unheralded influence on New Zealand botany. Together with other botanists he undertook many visits to some of the botanically unexplored regions of Fiordland which led to the discovery of several new species including *Celmisia inaccessa* and *Celmisia vespertina* and in collections of numerous poorly known plants. John's generosity and interest contributed substantially to research papers and to both herbarium and living collections.

He has accompanied many of New Zealand's notable taxonomists and ecologists into the mountains of the Southern South Island. One notable trip was to the Eyre Mountains which resulted in the collection of several scarcely known alpine species and the rediscovery, after a 50 year gap, of the exceedingly localised species, *Celmisia thompsonii*. He grew in cultivation many of these plants for a number of years.

He also established a large alpine garden at his farm near Albury, trialing many rarely grown alpine species. His ability to grow plants is outstanding. Mr. Anderson's skill in bringing newly discovered species into cultivation has been important to their further study and recognition. He has always been generous with his time and over the years has freely given plants to interested persons to promote the distribution of the plants and extend the knowledge of the species.

In relatively recent times his farming activities have

led him to the study of shelter trees and trees for timber production as well as for conservation purposes. The collecting of seed from throughout the world, particularly of conifers, has been his absorbing interest for more than 20 years. He began his first research plantings on 5 hectares of his land at Deepdale, in 1978. Some four years later on a 1.2 hectare block at Glendonald, he further extended his research plantings. These two arboretums are close to Albury in South Canterbury.

In September 1998, under the Queen Elizabeth II National Trust Act the John Anderson Arboretum Trust was set up. The management of the arboretums is now the responsibility of a Board of Trustees.

The following is a quote from the management statement of the Trust:

"The John Anderson Arboretum in South Canterbury contains a collection of conifers, some of which are not found elsewhere in the Southern Hemisphere and includes a significant number from China. As well as general botanical interest, it should have a significant impact on future species selection for general use. The arboretum is protected in perpetuity by a National Trust open space covenant."

The Royal New Zealand Institute of Horticulture, in acknowledging the great contribution that Mr. John Anderson has made to horticulture in this country, hereby awards him its highest accolade, that is of being made an Associate of Honour of the Institute.

Patricia Stuart

Mrs. Pat Stuart began her horticultural career at the Christchurch City Council Reserves Department nursery in 1944. Her first work was in the propagating section. Her natural interest in plants was intense. She enrolled for the Institute's six-year diploma course and gained the National Diploma in Horticulture with Honours. Having passed her matriculation exam she also took Botany Stage I at the University of Canterbury.

To gain commercial experience for one year she transferred to Harrison's Nursery in Palmerston North and returned to the Botanic Gardens in 1947. Besides gaining a sound overall training in general horticulture, especially mastering the skills of propagation, she became an accomplished floral artist and undertook the floral work for the

Christchurch City Council. This involved much of the floral decorations required for the Royal visit in 1954 and subsequent vice-regal visits to the city. She became a member of the Floral Art Society of New Zealand and gained a Teacher's Certificate and a Judging Certificate. Mrs. Stuart is a past president of the Southern Area of the Floral Art Society and a past president of the Eastern-Southland Floral Art Club.

Pat met her husband, Keith, who was an apprentice at the time at the Botanic Gardens. Keith returned to South Otago to manage the family farm at Waipahi. It was at Waipahi that they raised their family of three and together they built up a substantial nursery business.

The nursery business flourished. Rare and noteworthy trees, shrubs, alpines and herbaceous plants, including natives, were collected and propagated. Research became imperative and Mrs. Stuart began to specialise in Hellebores. One of the first interesting seedlings to be isolated and to be named by her was *Heleborus niger* 'White Magic'. This clear white cultivar has been sold throughout New Zealand and substantial export orders have been sent to Europe, the United States and Japan. A multi-sepalled form of 'White Magic' is now being stabilised prior to being introduced onto the market. Her breeding of hybrid Hellebores has been carried out over many years. More recently a new outstanding cultivar, 'Moonshine', which is popular among florists, has been released to the trade.

With retirement looming early in the 1980s their son took over the farm and Pat and Keith moved to Wanaka to build their new home and garden. A floral studio evolved and between them they established another production nursery.

Pat and Keith Stuart's love of plants and the desire for a beautiful garden where perfection would be a priority, has seen the Wanaka garden, on an uneven, rough, swampy piece of land become a show place for visitors from throughout the world. The garden has been featured on National Television, in N.Z. House and Garden, The New Zealand Gardener and Commercial Horticulture as well as periodically in newspapers.

Over the years Mrs. Stuart has been a guest speaker throughout Southland at all sorts of organisations where gardening is appreciated. She was a guest speaker at the Institute's conference in Dunedin in 1992.

By her complete dedication to horticulture, her willingness to assist and guide others and by the outstanding example which she has set with her leadership in so many aspects of horticulture, the Institute is proud to award her the Associate of Honour.

Award of Fellow of the Royal New Zealand Institute of Horticulture (FRIH)

Awarded to members who have made a significant contribution to horticulture and the Institute. Two awards were made :

Andrew David Maloy

Mr. Maloy has successfully transferred a broad commercial experience to a tertiary teaching role, strengthening this by extra study on educational procedures. Over a period he has extended his student teaching role by publishing a number of information articles in journals and gardening columns. His book on plant propagation is a valuable practical contribution.

Mr. Maloy has been active within the Auckland Branch of the RNZIH, serving as a committee member and chairman. In 1998 he was appointed to the National Executive of the RNZIH and provides a valuable link with the Auckland Branch committee.

Through his activities Mr. Maloy has undoubtedly made a valuable contribution to New Zealand horticulture. He is a worthy of the award of Fellow of the Royal New Zealand Institute of Horticulture.

Mary Bain Petley

In 1978 Ms Petley started a wholesale nursery, the Old Vicarage Nursery, in Te Puke, producing bulbs and perennials, supplying Garden Centres in the Bay of Plenty, Waikato and Auckland. She also ran a retail plant shop in Te Puke, in conjunction with the nursery. The nursery was later shifted to Whenuapai, then closer to Auckland, and changed to a mail order operation, supplying bulbs, perennials and seeds. Ms. Petley propagated all plants herself, either from seeds, cuttings or divisions, mostly working alone.

Since 1994 she has worked at HortResearch as a research assistant (part time) and then full time as a technician in the Sensory Science Team.

Since changing from her early training as a pharmacist, Ms. Petley has pursued her interests in horticulture, gaining a broad knowledge of plants and including NDH studies. She is a skilled, hands-on plantswoman. Many of the plants she supplied from her nursery could be classed as unusual and for specialist gardeners. She is currently carrying out a breeding programme using two strains of the tree dahlia, *Dahlia imperialis*.

Ms. Petley has taken an active role in Institute affairs. As well as carrying out Branch secretarial duties she acted as secretary/treasurer for the RNZIH conference held in Auckland in 1996 and secretary for the same conference in 1998. On each occasion her meticulous record keeping greatly assisted the organisers and participants and the two meetings ran very smoothly.

Mary Petley is a worthy candidate for Fellow of the RNZIH.

Plant Raisers' Award

Awarded to any individual or organisation who has raised in New Zealand a cultivar considered to be sufficiently meritorious.

Noel McMillan

Noel McMillan has long been interested in plants. When he was at Training College this interest was encouraged by his nature studies teachers and when he started teaching he decided to grow plants as a hobby. He continued teaching for 37 years and during that time, and since his retirement, his hobby has become more like a passion. He established a nursery, now McMillan's Greenworld Garden Centre, at Ohinewai, Waikato, and since 1961 he has been breeding polyanthus and, more recently, cyclamen.

His work with polyanthus began with plants selected from the Pacific strain and he crossed them with Barnhaven polyanthus. The results have been described by Jack Hobbs, himself a notable plant breeder, as "quite probably the most significant development worldwide in polyanthus since the Pacific series emerged from California shortly after World War II". The plants he produced show an extraordinary array of colours and forms; the colourways include stripes, stars, picotees and multicolours, while the forms include a remarkable series of ruffled flowers. He has more than 250 distinct selections to his credit and his plants have been widely grown overseas, particularly in the United Kingdom and the United States of America.

This award is for :

Polyanthus "Waikato Series" a unique array of colours and forms (sometimes sold in the United Kingdom as Polyanthus "Paradise Series").

Polyanthus 'Pink ruffle' the first ruffled polyanthus that he produced.

ECO 2000 Events Calendar

Based in New Zealand's most easterly district it is all in the name of sustainable land management. It's part of the Gisborne-based ECO 2000 project launched in May 1996.

The events confirmed to date include sustainable land use in erodible hill lands, sustainable management systems for dairying, Integrated Fruit Production systems, an environmental integrity scheme for NZ vineyards, sustainable maize and sweetcorn production, monitor farms, sustainable hill country farming, farm/forestry farming, beekeeping beyond 2000 and the environmental, social and financial benefits of forestry.

January

31 Gisborne Grape Growers: Summer Seminar

February

1 Viticulture
1-3 HortResearch
3 Hereumu Focus
21,23,25 Farm/Forestry Group
16 MAF Policy, GDC/FED Farmers

March

6-9 Landcare Research
14 Ministry Ag & Forestry
15 Marotiri Farm Partnership
23-24 Gisborne Milk
29 Federated Farmers, Gisborne/Wairoa

April

1-2 Ngatapa Valley Experience
20 Wi Pere Trust
29-30 Eastwoodhill Arboretum

May

1 Eastwoodhill Arboretum
11 Beef Council Field Day
18 Avocado Industry Group
25-28 Olive School

June

9 (Arbor Day) Eastwoodhill Arboretum

July

16-20 Beekeepers Conference
22 Gisborne Grape Growers (Silver Secateurs)

August

4 Crop & Food Research

September

21-22 Citrus Conference

October

10-12 East Coast Forestry Industry Group
13-15 Federation of Maori Authorities
13 Gis Rural Environmental Awards
17 Mangatu Blocks Incorporation

November

3-5 NZ Future Trust
22 Tairāwhiti Pharmaceuticals

For a comprehensive summary of the project view website at www.eco2000.co.nz

ECO 2000 PO Box 404, Gisborne, Phone 06 868 9123

Fax 06 867 1475 email: info@eco2000.co.nz

Notice Board

Nursery & Garden Industry Association Annual Conference

The first NGIA conference of the new millennium is in the Garden City of Christchurch March 19-21st.

The theme "Movin' On up" continues on from the 'Passionate Partnerships' conference in Taupo. An excellent range of keynote speakers has been arranged. They include Peri Drysdale, CEO of Snowy Peak who was a keynote at the recent APEC meeting, Tony Christiansen who is a phenomenal speaker and achiever and Peter Helms from the Aoraki Corporation.

NZSHS Conference 2000

NZSHS Convention 2000 will run from June 27 to 29 and will be held at Massey University in "Knowledge City", Palmerston North. It will be convened by Prof Russell Tillman of Massey University. The theme of the 2000 Convention is "Managing the impacts of climatic variability: the Noah paradigm". Bring your arks and animals and assemble for three days of informative discussion and debate.

If you want to be really well organised and seek further information, contact Dr. Nanthi Bolan at n.x.bolan@massey.ac.nz

New Zealand Alpine Garden Society

North Meets South - Study Weekend 28-30 January 2000

Two internationally acclaimed plantsmen, **Chris Grey-Wilson** and **Ron McBeath**, will be visiting Christchurch in January 2000 to give several lectures at a weekend organised by the New Zealand Alpine Garden Society. The Study Weekend will be held at Lincoln University.

Chris Grey-Wilson will share his plant hunting experiences in Central Asia, from Afghanistan to the Tien Shan. He will also speak about plants found in the Olympic and the Cascades mountains in North America, and about the Cyclamen family.

An experienced plantsman, Chris has led expeditions to many parts of the world, including Greece, Iran, Afghanistan, Bhutan, China and parts of Africa. He is author of many books, and was until recently Principal Scientific Officer at Kew Gardens, London, and was editor of Curtis' Botanical Magazine. (The Kew Magazine).

The second speaker, Ron McBeath, has also travelled the world studying plants, and has led or participated in expeditions to such fascinating areas as Arctic Norway, Nepal, Sikkim, the Himal Pradesh in India, the Pyrenees, the Picos de Europe, and Western China.

Ron's lectures are all based on his experiences in China and the Himalaya, and he will share his extensive knowledge of gentians, the lily family, meconopsis and cobra lilies. He will also talk about the cream of alpine plants from this region.

Ron McBeath has life long experience in horticulture, and was assistant Curator at the Edinburgh Botanic, in charge of all alpine, herbaceous and dwarf ericaceous plants.

With such extensive experience, both Chris and Ron will provide a wealth of information to New Zealand gardeners and plant enthusiasts.

And if that is not enough, these speakers will be supported by five New Zealand plants people. They include talks by Joe Cartman - clamatis; Hugh Wood - the megaherbs of the Subantarctic Islands, Joan Whillans - fritillarias; Lesley Cox - alpines bred in New Zealand, and Steve Newall - seed collecting.

The registration fee (including morning/afternoon teas, lunches and dinners) is \$200.

Registration forms are available from Ann Cartman, Phone/Fax 03 352 2164 or NZAGS, P.O. Box 2984, Christchurch.



Report for the 1998/99 Peter Skellerup Plant conservation Scholarship

THREE LOCALLY THREATENED PLANTS

Richard Pender

Introduction

In discussion with Nicholas Head (Botanist, Department of Conservation, Canterbury conservancy) three threatened plants suitable for basic recovery work were selected

These being :

- *Leptinella nana*
- *Urtica linearifolia*
- *Myosotis australis* var *lytteltonensis*

The reasons for selecting these three taxa were :

- all three are contained within the International Union for the Conservation of Nature Red Data book as endangered, vulnerable and endangered respectively
- all three occur locally; (Canterbury Conservancy)
- All three have had little propagation and re-establishment work carried out
- *Myosotis australis* var *lytteltonensis* and *Urtica linearifolia* have had little recovery work within the concerned ecological districts.

The goals of this work were to :

- locate wild populations
- survey population size/viability of populations
- investigate possible methods of propagation
- re-establish plants in ex-situ, protected sites.

Myosotis australis var *lytteltonensis* Laing et Wall

Introduction

As the varietal name suggests *M. australis* var *lytteltonensis* was collected in the Lyttelton harbour basin. The type specimen CHR 17637 was collected from Mt. Pleasant, November 1917, W. Robt, M. Laing. Laing and Wall described *Myosotis australis* var *lytteltonensis* as having "much more resemblance to *M. forsteri* than to *M. australis* in its exterior appearance", there after "it *M. australis* var *lytteltonensis* differs in being decumbent or prostrate in the much less elongated rachis in the long style and in the somewhat lighter colour of the nutlets" (Allan et al).

The 34 species of *Myosotis* in New Zealand are

currently under revision. *Myosotis australis* var *lytteltonensis* is to be raised to species rank within the near future. (A.W. Robertson pers. comm)

Habitat

Myosotis australis var *lytteltonensis* is a plant of rocky outcrops. These are of a south facing aspect. This habitat is likely to be dry during summer and remain permanently damp and largely shaded during winter.

Voucher specimens contained at Landcare Research Herbarium (CHR) indicate this plant's tolerance to coastal environments, for example CHR 479466, a collection from "Cabbage Tree Knob" (Pigeon Bay) 22/10/84. At 40 metres above sea level, this site is exposed directly to the sea. At least another two records are of similar situations.

Conservation Status

Myosotis australis var *lytteltonensis* is listed within the International Union for the Conservation of Nature Red Data Book as 'Endangered' (Category A).

Summary

The following conclusions can be drawn from the author's experience with this species :

- The IUCN category A (endangered) rating of this species, in the author's experience is justified.
- The factors which have led *Myosotis australis* var *lytteltonensis* to become endangered are :
 - Direct competition with introduced weeds,
 - Grazing stock/rodents, destroying habitat and consuming plants.
- Despite records for 11 sites on Banks Peninsula only 3 have been relocated.
- Weeding of introduced plants from these sites will remain a part of this species management in the future.
- A detailed survey of existing sites and potential sites is required in the near future.
- *Myosotis australis* var *lytteltonensis* is an easily propagated plant which adapts well to cultivation and has potential as a cultivated plant
- This species ability to re-establish in ex-situ sites remains to be ascertained.

Urtica linearifolia Cockayne

Introduction

Urtica linearifolia is one of five New Zealand species, four of which are endemic and two introduced (Web et al 1988).

Urtica linearifolia is the only species in New Zealand adapted to grow in a wetland habitat. The linear-lanceolate leaves and scrambling liane habit make *U. linearifolia* distinguishable from both native and introduced species.

Currently no type specimen exists for *Urtica linearifolia* (Allan, et al 1961).

Habitat

Urtica linearifolia as stated is confined to Wetlands and water course banks.

Plants may grow in open situations, but as is the case with many wetlands, are forced to grow under a canopy of willow (usually *Salix cinerea* or *S. fragilis*).

In this altered habitat, *Salix* have largely replaced *Carex secta*, which *Urtica linearifolia* is commonly seen in association, subsequently many *U. linearifolia* now grow in these willow stumps.

Despite habitat degradation *Urtica linearifolia* appears to compete with introduced weeds and often ultimately provide support.

Conservation Status

Urtica linearifolia is listed in the International Union for the Conservation of Nature Red Data Book as 'Vulnerable' (Category B).

Summary

- *Urtica linearifolia* is more frequent than was once thought within the North Canterbury and Lake Ellesmere areas.
- The surveys carried out have been limited by time. Those sites alluded to are a sample of what is believed (within the author's opinion) may occur within lowland wetlands of Canterbury.
- Based on the evidence available, the IUCN Red Data Book Category "B" 'Threatened' rating given to *Urtica linearifolia* is unjust within the concerned area.
- With the methods used *Urtica linearifolia* is challenging to propagate and equally challenging to establish in ex-situ sites. Timing of planting is the likely factor in determining survival after planting.
- In total 500 plants have currently been planted with 5 wetlands, 4 are immediately to the north of Christchurch City. One reserve to the south of the city has been used also. Another 300 plants await planting in Travis wetland.

Leptinella nana Lloyd

Leptinella nana is a very small creeping herb, with flower stems no taller than 1cm long. Flower heads are greenish yellow and 0.2mm is diameter, flowering occurs during April-May and August-October. Leaves grow up to 2cm long, with 6-10 pairs of pinnae. (Wilson and Given 1989).

This endemic is only known from three localities :

- Titahi Bay, Wellington
- Rai Valley, Marlborough
- Mt. Pleasant, Port Hills near Christchurch

Leptinella nana is listed as endangered (category A) in the International Union for the conservation of Nature Red Data Book.

Reasons for decline are due to the competition of introduced weeds suppressing *Leptinella nana*. (Pers Comm, N. Head 1999).

Recovery Work

It became apparent from the on-set that little, other than a simple propagation and re-establishment project would be able to be carried out. A recovery team (administered by the Department of Conservation) oversee long term objectives for *Leptinella nana* management.

I set a goal of planting 1000-1500 plants. Dividing of plants was likely to achieve this goal within the time provided. I then investigated invitro propagation as a method of producing plants. During December 1998 Commercial invitro-culture laboratories were approached.

Plant Propagation Laboratories Limited, Havelock North were chosen to propagate the plants. A *Leptinella nana* plant acquired from D.O.C. Motukarara Nursery (propagated from Mt. Pleasant population) was used as the stock plant. The ex-plants grew quickly under culture conditions. (Pers Comm, Peter Bennett 1999)

Planting Sites

Six ex situ sites were selected. Five of these sites are on track sides within the port hills ecological district, one site is on a road cutting.

Selection of these sites was determined by :

- aspect, damp, lightly shaded
- ownership, preferably publicly owned
- use of the track, preferably high use resulting in few weeds on the track margins.

Annual Conference 1999

From the Wellington Branch Newsletter, Spring 1999

The planning effort put into the Institute's Annual Conference by our Branch's Conference organising committee paid off. A most successful conference, *New Zealand Plants and Their Story*, held from October 1 to 3 was the result. It was attended by more than 120 people from all over New Zealand.

People attending the conference included conservation workers, botanic gardens' staff, horticultural contractors, polytechnic tutors, home gardeners, and scientists. There were two visitors from Australia, one from Melbourne's Royal Botanic Garden, and the other from Sydney. There was a good number of Institute members among those attending. Hopefully some of the non-members who attended will be encouraged by the standard of the Conference they enjoyed and join the Institute.

Wellington's weather did us proud, and turned on 3 fine days. The Friday was near perfect, and many attending the Conference took the opportunity during the day to have a wander around the Wellington Botanic Garden. The tulips, just across the road from the Conference venue, were at their best (ready for Tulip Sunday on the same weekend, of course!)

It was a little cloudy and breezy on the Saturday afternoon for a visit to Otari Native Botanic Garden, but that didn't seem to dampen people's enthusiasm. The workshops held there were so successful it was hard to get people to move on from one session to the next to keep the programme on time. It was sunny and warm for the visit to the Government House grounds on the Sunday afternoon – an enjoyable way to end the Conference weekend.

Speakers in their sessions gave interesting, informative and in many cases, challenging addresses. The wide range of topics included the role of native plants in commercial and amenity horticulture, the restoration and management of native forest remnants, and current research on some of our native plants. The well attended Banks Lecture, presented by Wellington Branch member Rob Lucas, challenged us on the way native plants are used in botanic gardens.

In the research sessions there were some fascinating topics, such as the floral development of pohutukawa, tree mechanics, *Hebe* taxonomy and the development of an interactive identification key, and the genetic variation in cabbage trees.

Hebes

Hebes arrived in New Zealand after the Gondwanaland

break up. They are our largest genus, making up around 5% of our native flora with about 100 species. Many of them are alpine species. There have been several changes in the appearance of hebes during their evolution; we can see examples of this in the whipcord and "normal" forms we see in gardens. Further work on hebes may result in the whipcord types ending up in a separate genus.

The interactive identification key is computer based. The computer programme eliminates species and offers options to aid rapid identification as the programme user enters details of vegetative and floral features of the hebe to be identified. There are illustrations available to help with the process. It looks much easier than working through the couplets and their options in the normal paper based identification keys!

Pohutukawas

Pohutukawas are spectacular flowering trees in many parts of New Zealand where they occur naturally or have been planted for their summer displays. They have been studied to determine their value as flowering pot plants and potential for cut flower material. The potential to manipulate the flowering time has been part of the research.

Pohutukawas are unusual, (and probably frustrating for researchers!) in that buds remain uncommitted for months before it's apparent whether they are to be flowering or vegetative. On mature shoots the terminal bud withers and drops off about 9 months before flowering occurs on that shoot – this is late summer/autumn time. At this stage it is impossible to tell whether the axillary buds are vegetative or floral. Differentiation of the buds has been found to start about June. Microscopic examination of the stained slices taken through buds is needed to do this. By September the flowers in the buds have developed sufficiently to open any time between then and Christmas, but flowering is inhibited by cymic acid.

Experiments in controlled environments show that good flower development occurs in a cool environment (15°C) with short days. The poorest flower development occurs in a cold environment (10°C), and long days. This suggests there is an opportunity to manipulate the flowering. Work on *Metrosideros* 'Tahiti', even though this isn't a New Zealand pohutukawa, has proved it can be done. Flowering times have been changed by 3 to 4 weeks.

Metrosideros 'Tahiti' flowers are at their best for 5

days. Can this optimum flower condition be prolonged? Pohutukawa flowers are sensitive to ethylene. Manipulating the levels of this gas have extended the flower life to as long as 2 weeks.

Tree Mechanics

The session on tree mechanics looked at the external appearance of trees that may indicate internal problems leading to safety issues. Those attending this session probably go around now looking at trees in a different light, and examining them for the factors discussed. How many trees do you see that show fluting on the trunk or branches? Is this a natural feature, as occurs with some of our natives that have buttressed trunks? Or is it the trees' response to some external factors such as wind or mechanical damage that occurred many years ago?

The fluting may be vertical, or spiral. On some trees there may be a general spiralling of the trunk, as seen in patterns on the bark. On other trees of the same species the trunk may be completely straight. What has influenced these trees? Is it a result of wind at a certain stage of growth, or surrounding trees, or some other factor? Why does this spiralling suddenly start part way up the trees in some instances? What change in the tree's environment, or incident such as a storm occurred? Has it affected the strength of the tree?

The harmful stresses set up inside a tree can be apparent on the outside as well – for example, wrinkles or folds in the bark on a limb where weight, wind damage or, perhaps, mechanical damage such as being hit by a vehicle, are having an adverse effect on the strength of a limb. These suspect areas look a bit like the crumpled areas on car panels where gate posts or garage doorways got in the way! On tree limbs they may indicate a safety issue that needs

attention. The tree tissues may be weakened and eventually lead to a broken limb.

A lot of questions raised in this session! Just some of the factors people caring for trees, especially in public areas, must consider when examining trees for safety.

Cabbage Trees

All cabbage trees, *Cordyline australis* look alike, or do they? Plants of *C. australis* selected from various parts of the country have been planted at several sites and their growth studied. This has shown the importance of provenances, and the variations that occur in this *Cordyline* when seed is gathered from different parts of the country. The leaves have quite a variation in both length and width, and in the way they are carried on the plant. Also observed in these plantings is the fact that cold hardiness is especially variable. Plants selected from the more southern locations (provenances) are definitely more hardy than their northern counterparts.

It is interesting that the cold hardiness of a seedling is indicated by the colouring on the leaf bases. The darker the colour there, the greater the cold hardiness demonstrated by the seedling.

There was also comment on the topic of cabbage tree decline. It is believed to be caused by a phytoplasma that has been around for a long time. It is most likely to have caused the yellow leaf disease of flax, and has affected puriri, coproma and tree ferns. So, why the sudden effect on cabbage trees? A new vector, a leaf hopper, has caused the spread to and through cabbage trees.

Overall a very successful and enjoyable conference.

Newsletter



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