Newsletter

Royal New Zealand Institute of Horticulture (Inc.)

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Chairman's Report

This is our third Newsletter in four months. This is an indication of our determination to overcome our past difficulties by providing communication with our members and our many supporters who see the great value in having a national body representing horticulture in New Zealand.

You will have read in the previous Newsletters of our year of consolidation. This consolidation has enabled us to present a document which was tabled at the AGM in Auckland. This document called 'A Springboard to 2000 AD' consisted of four parts, which focused on what is achievable and what is needed.

Part 1 Administration & Communication

Part 2 Notable Trees New Zealand

Part 3 Publications

Part 4 Finances

Each part was divided into strengths, weaknesses, options and recommendations. From this we were able to draw a set of overall recommendations which were sound, within our budget and within our voluntary capabilities. This blueprint was readily understood and accepted by the delegates at the AGM and unanimously adopted. The single most important factor was the need to upgrade our communication equipment. Many opportunities became possible once our Lincoln office could participate and be able to respond to outside agencies and members efficiently. It would assist with Notable Trees New Zealand, publications and streamline our financial accounting.

We can now go ahead into 1999 with confidence by being reassured that we have the support of our members.

1999 presents a positive opportunity to restate our role and take our rightful place in horticulture on into the new millennium. Our next conference draft programme is already very promising and will be held in Wellington.

May we wish all our members a very happy festive season and thank you all again for your continued support.

Executive News

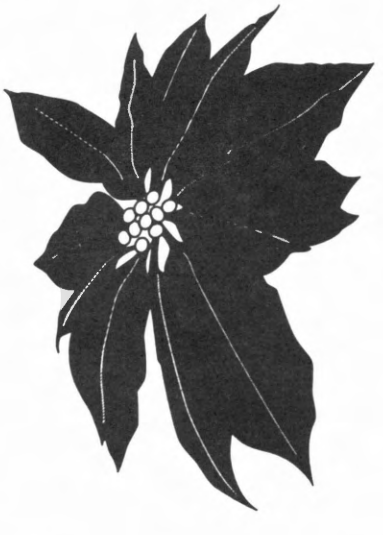
It is with regret that we have received the resignation of Annie Fullerton FRIH. Dr Ross Ferguson AHRIH, who retired from Executive at the A.G.M. was unavailable for re-election. They will be sorely missed as they have both contributed a great deal of time and energy into supporting the Institute in the very trying times we have experienced. We extend our thanks and warm wishes to them both for the future.

Two new members will join the Executive and were elected at the 1998 AGM in Auckland. David Moyle, who is Chairman of the Canterbury Branch has been involved in the Branch Committee for many years. David is also Chairman of the Christchurch Beautifying Association.

Andrew Maloy also joins the Executive. Andrew has served as Chairman of the Auckland Branch. He is a technical writer for the Consumer's Institute and for the Consumer Home and Garden magazine. His work also involves organising plant trials around the country from his Auckland base.

We look forward to working with them both in the New Year.

Ron Flook



Notice Board

NZIAS & NZSHS Agriculture/Horticulture Science Convention 1999

June 30 - July 1 1999 in Auckland
Theme: Food for thought! What will you be having for lunch next century?

The theme covers all aspects of food production in the broadest sense, and looks ahead to changes that stretch into the new millennium. Genetic engineering is just a small part of this. Consumer perceptions and reactions will also mould what will be possible. How does your work fit with changing demands? Present a paper, we want to encourage a strong debate on a number of issues

Contact: Ray Greer, Convener, Convention 99, PO Box 36 012, Auckland 1330. Fax 09 443 5142, Email SHS_IAS99@bigfoot.com

Kowhai Trees & Children

Dr Nick Smith, Conservation Minister regards a Kindergarten Association direction ordering Kindergartens to cut down Kowhai trees because their seeds are poisonous is a silly over-reation. Nelson Mail, October 21, 1998.

We have sent a letter to the Minister in support of his statement.

Bill Sykes has also responded by sending us the Landcare Research Information Sheets 1998 on "Plants in the North and in the South Islands Poisonous to Children". These sheets are available from Landcare Research Ltd., P.O. Box 69, Lincoln, Canterbury.

We are grateful to Bill Sykes and S. Luketina for their interest.

Thank You

We have been greatly encouraged by the generosity and concern of so many members who have given their early payment discount as a donation to the Institute.

Please accept the sincere thanks of National Executive.

We apologise for an error on the 1999 annual subscription forms. The current subscription dates should read 1 January 1999 to 31 December 1999

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1998 RNZIH Awards

The 1998 Awards were presented at the Annual Conference in Auckland in October

Associate of Honour (AHRIH)

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

Allan Ross Ferguson

Dr. Ferguson received his secondary education in Gisborne before completing study at Victoria University for a BSc(Hons) in Botany (1965). His subsequent degrees MSc (1st Class Hons in Microbiology (1969) and PhD in Cell Biology (1969) were from the University of Auckland where his thesis topics were on nitrogen nutrition of plants, specifically the metabolism of nitrate including related enzyme activity. He was one of the very first people to examine enzyme inductions in plants (now a basic part of molecular biology) and to show induction behaviour of nitrate reductase. During this period he was appointed as Scientist to DSIR Fruit Research Division located at the Mt. Albert Research Centre, Auckland where he has remained throughout his career apart from study periods overseas. The original DSIR Division has now been reorganised into the Horticulture and Food Research Institute of New Zealand (HortResearch).

Dr. Ferguson's earlier biochemical studies formed the basis for later broader studies on nutrition of kiwifruit including both laboratory and field research. It was a time when kiwifruit was expanding rapidly as a crop and new knowledge about the vine was eagerly sought. Results obtained were regularly communicated by Dr. Ferguson to growers by lectures and series of articles in journals. His work on plant nutrition was recognised internationally and he served as a member of the International Committee on Nutrition from 1974-92.

Later in his career Dr. Ferguson developed a long held interest in horticultural botany focusing on the biology of kiwifruit. A study of vitamin C content of *Actinidia* fruits showed the very high levels attained with some species. In cooperation with a Chinese colleague (Dr. Liang) he helped redefine the nomenclature of the genus *Actinidia* and identified *A. deliciosa*, the kiwifruit of the Western world, as a separate species from *A. chinensis*.

More recently much of Dr. Ferguson's research has supported the kiwifruit breeding programme the Institute undertakes with studies on aspects such as systematic interpretations and descriptions, identifications of ploidy levels, DNA analyses, biochemical indices for sex determination, incompatibility. He has a supervisory role for major germplasm collections held by the Institute. His background in biochemistry, plant physiology and botany has meant that he is able to make a considerable contribution to the breeding biology of the crop.

Dr. Ferguson is established as a foremost international authority on kiwifruit and has lectured widely both in New Zealand and overseas. He has taken a leading role in international symposia on the crop which are now held regularly. He is currently the International Registrar for kiwifruit cultivars and is a member of the Fruit Section of the International Horticultural Society. He has a truly international outlook and promotes regular visits to his laboratory of overseas scientists and students. A particular facet has been his efforts to strengthen scientific links with Chinese institutions having visited China several times.

Horticultural history is another interest and Dr. Ferguson has written a number of articles on the history of the development of kiwifruit as a commercial crop as well as detailed biographical studies of some of the key individuals involved. He has extended this to writing popular accounts of general plant exploration. He has an associated interest in old botanical prints and paintings, especially those with New Zealand connections. Dr. Ferguson is noted for a high level of precise scholarship in his research and his approximately 90 scientific papers testify to his major contribution to New Zealand horticultural science. In 1992 he was elected Fellow of the NZ Society for Horticultural Science.

Dr. Ferguson has taken a positive role in RNZIH affairs, as a long term member, Committee member and Chairman of the Auckland branch and since 1992 member of National Executive. He was elected a Fellow of the RNZIH in 1990. A keen gardener and avid reader he has a deep knowledge of a wide range of plants and maintains his own garden. He is an enthusiastic member of the Auckland Garden History Society.

Dr. Ferguson's distinguished research career, his broad horticultural activities in the community and his contribution to RNZIH affairs in particular make him a most worthy Associate of Honour of the Institute.

Beverley McConnell

Mrs. Beverley McConnell has developed one of New Zealand's great modern gardens at her home 'Ayrlies' at Whitford near Auckland. This is a very large garden comprising about two and a half hectares intensively planted and a further twelve hectares landscaped with lakes and plantings of trees. 'Ayrlies' is on a bold scale, much larger than most of us can ever dream of. Its importance, however, is not its size but the quality of the plantings and the design concepts used.

Mrs. McConnell is largely self-taught although she has attended lectures and courses by some of the most influential garden designers of this century. She trained at the School of Fine Arts, University of Canterbury, and this training is expressed in her plantings demonstrating her eye for colour and her feeling for foliage. She has a great empathy for plants, an empathy particularly inspired in her by Gordon Collier and the late Hugh Redgrove. She has long had professional assistance with 'Ayrlies', especially from Oliver Briers, a landscaper who has worked with her for nearly twenty-five years. She may have had assistance but there is no doubt, however, that she is a working gardener who gets her hands dirty, that 'Ayrlies' is *her* garden, that the inspiration is *hers*, that the drive is *hers*.

'Ayrlies' is widely recognised as an important garden within New Zealand and it has also gained international recognition. 'Ayrlies' is now frequently visited by overseas groups of gardeners on tour in New Zealand as well as by local societies and individuals. Christopher Lloyd in his book, *Other people's Gardens*, commented on the exuberance and boldness of the plantings, the courage with which she approached her plants and her plantings and the way in which she accepted challenges - this is no garden that is marking time. On each new visit, even the most casual observer will notice changes, new plants and new visions. More recently, Stephen Lacey, wrote in the August 1998 issue of the highly regarded *Architectural Digest*, "The marvel of 'Ayrlies' is that for all its dashing design and planting, it is a garden that connects to its landscape. It seems to belong."

Mrs. McConnell has undoubtedly made a significant contribution to horticulture in this country by developing one of the most important private gardens of this century. She has done much more, however, than simply develop a garden, no matter how great. Her most distinguished contribution to horticulture is probably her organisation with Mrs. Judy Laity of the Trinity Garden Festival. This has raised more than $500,000 towards the completion of the new Anglican Cathedral in Auckland. From the rather different viewpoint of this Institute, it is even more important that the Festival has encouraged tens of thousands of visitors to the many gardens opened. The Trinity Festival is one of the largest, if not the largest and most important single horticultural event ever organised in the Auckland region. The Festival has introduced so many new people to the enjoyment of gardens and plants and it has done much to raise the status of horticulture amongst the general public.

Mrs. O'Connell has also been an active member of many other horticultural groups such as the Iris Society, the Heritage Rose Society, the Friends of the Auckland Regional Botanic Gardens, the International Dendrology Society, Rhododendron Auckland, Pukeiti, Eastwoodhill, and our Institute, of which she is a Fellow. She was a Trustee of the Friends, Auckland Regional Botanic Gardens, and she has been actively involved in the preparation of the new landscape plan for the Auckland gardens. She was recently elected a Life Member of Pukeiti in recognition of her work and her fund raising.

The award of Associate of Honour is restricted to "those persons who have rendered distinguished service to horticulture". There is no doubt that in her contributions to horticulture and in the development of a major garden Mrs. Beverley McConnell is a most worthy Associate of Honour of this Institute.

Fellow (FRIH)

Awarded to members who have made a significant contribution to horticulture and the Institute.

Bronwen Rowse

Bronwen Rowse has had a long involvement with horticulture. After she received a NZ Certificate of Science and a National Certificate in Horticulture in Nursery Management she worked for a number of nursery firms and garden centres.

In 1992 she took up a position with the Framework Trust for which she established and now manages a commercial production nursery as a rehabilitation to work and to community life for people who have experienced mental illness. Her work there has attracted international interest and she has presented a rehabilitation case study at the Conference of the American Horticultural Therapy Association in Michigan, USA and she has advised groups in New Hampsire setting up projects similar to that she directs in Auckland.

Ms. Rowse has been a member of many horticultural groups including the Royal New Zealand Institute of Horticulture (member of the Auckland Branch Committee), the Auckland Garden History Society (currently Chairman) and the New Zealand Treecrops Association (formerly Secretary/Treasurer and President).

Bronwen Rowse is a most worthy Fellow of the Royal New Zealand Institute of Horticulture.

1998 Peter Skellerup Plant Conservation Scholarship

A scholarship granted for research, field work, publication, propagation and/or cultivation of plants and any other activity likely to promote and assist the conservation of New Zealand's idigenous and exotic plant genetic resources.

Richard Pender - Christchurch

Project Summary

The Revegetation of three locally growing species; *Leptinella nana*, *Myosotis* sp. "*australis* var *lytteltonensis*" and *Uritica linearifolia*, all of which grow in Canterbury and Banks Peninsula.

These three species will each be propagated and planted into Department of Conservation owned sites to provide a future source of plants to carry out propagation and revegetation.

Branch News

We hope to include Branch News and events in future Newsletters for members' information.

Reprinted from the Auckland Branch Newsletter

Permission by Mary Petley

Stringfellowing

Browsing through the January 1991 edition of "The Garden" (Journal of the RHS) this unusual title caught my attention. Reading on, I found that it centred upon something which I have strongly recommended to my customers during my years of nursery retailing, namely root pruning. I have considered myself as a rather vigorous 'root-pruner' to say the least but I must admit that Mr. Stringfellow's technique for planting a new orchard shocked me slightly!!

Thorough preparation of the ground and selection of high-quality, young trees are both essential. Soil compaction must be corrected by subsoiling or double digging. A stake approximately 10cm thick is then driven into the ground and withdrawn to form a planting hole. The trees are then prepared for planting by cutting off all the roots growing from the central stock, leaving stumps only 2cm long. This must be done cleanly with secateurs. The stock is then pushed carefully into the hole to a depth of approximately 7.5cm deeper than the original planting depth in the nursery. Make sure that there is at least 10cm between the soil surface and the union of the bud or graft. Air packets are then eliminated by jiggling the tree up and down. After this the soil is firmed really well around the base of the stem. Trees planted this way seldom need staking and larger, stronger roots grow, resulting in more productive trees and earlier cropping. After planting the central stem is cut back to 5-8cm above the top sideshoot. Plant from early winter to spring. Early spring is the best time for stringfellowing because the soil is warm enough for the new roots to start growing almost immediately. Mulch after the soil has warmed up in early summer.

Stringfellowing has been used mainly on apples but not all rootstocks respond well. 'M27' and 'M9' are not as reliable as others. Plums and cherries have also met with success. Mr. Stringfellow developed this technique for commercial orchards where faster planting is a big advantage, but it should be equally as useful in the home garden. However it is pointed out that stringfellowing does not always give results as spectacular as those on the Blackmoor Estates.

I have a 2m, grafted, weeping *Prunus subhirtella* which needs shifting and I'm very tempted to have a go at stringfellowing even though it is recommended for smaller, one-year-old trees. I imagine that soil type must be rather crucial but I think it could work quite well in my loamy clay in Avondale.

Notes taken from "The Garden" January 1991. 'Stringfellowing: A Fruitful Technique'

A summary by Peter Blackburne-Maze of a talk given to the RHS Fruit Group by Peter Barwick of Blackmoor Restates.

Postscript. 10 October 1998. I did stringfellow my *P. subhirtella* in 1998. Some of the roots were so thick that I had to cut them off with the heavy duty loppers. The results were excellent. No staking was required, the trunk has thickened considerably, the canopy is vigorous and healthy and there will be a good display of flowers in a few days.

From Wellington Branch Newsletter, Spring 1998

Pines and kakapo

An unusual combination? You may think so, but the kakapo on Maud Island in Pelorous Sound are declining their more normal food source of native berries and grasses in favour of pine needles. There are 20 hectares of *Pinus radiata* on Maud Island and they are attracting the kakapo family of 7 adults and 2 young. Apart from feeding on growing pine needles and developing cones, the birds are nesting on pine needles. The National Kakapo Team leader Paul Jansen says it is the first time that breeding kakapo have encountered pines, and they have quickly adapted to them.

The chicks and adults are doing well. Up to 60% of the chicks' diets are pine needles, and the 2 adult females feed on them regularly. Their diets also include the usual native plant material supplemented with nuts, kumara and apples supplied by the Department of Conservation staff.

Pines contain natural steroids that are also present in rimu and kauri leaves. One theory is the kakapo are eating pine to obtain the steroids to aid chick growth. However, kakapo are breeding elsewhere without access to pines, so DoC won't be planting pines in other breeding areas. They will sample kakapo diets in other areas as a comparison.

Outline of the Proposed Auckland Regional Botanic Gardens Godwana Arboretum

Steve Benham, ARBG Plant Records Officer.

Introduction

The Auckland Regional Botanic Gardens (ARBG) is presently embarking upon one of the most exciting and ambitious development phases since the official opening of the Gardens in 1982 *viz.* the establishment of a Gondwana Arboretum.

The ARBG is a modern and dynamic botanic garden covering 65 hectares and is administered by the Auckland Regional Council.

Situated at the northern end of the Gardens is one of the largest remaining natural broadleaf/ conifer forest remnants in the Manukau Ecological District. The area managed by the ARBG extends to approximately 10 hectares and Totara Park which is contiguous with the ARBG forest covers 20 hectares and is managed by the Manukau City Council.

The area designated for the Gondwana Arboretum lies between the indigenous forest and the established ARBG Plant Collections.

During 1997 the ARC was approached by the organisers of New Zealand's premier flower show enquiring as to whether the Ellerslie Flower Show could be accommodated on 5.5 hectares of the 24 hectares of pasture land. This severely modified landscape is interdispersed with specimens of naturally occurring totara (*Podocarpus totara*) and was originally reserved for the proposed Gondwana Arboretum.

The arrival of the Ellerslie Flower Show has proved to be the answer for providing the long awaited momentum for the redevelopment of the site and in doing so, will increase our profile as a centre of horticultural and botanical excellence.

At the time of writing the necessary infrastructure for the Show is nearing completion. A concept design for the remaining area remains at the initial planning stage. The Gondwana Arboretum will encompass the entire area and will initially focus on Gymnosperms to be followed by ecological plantings of taxa having their origins in Gondwana.

Before moving onto clarifying our visions, goals, objectives etc. I believe it would be helpful to state the ARBG Mission Statement :

" to be the regional centre for the display, study, conservation and enjoyment of plants which reflect the character of, and are capable of enhancing the Auckland environment".

In summary, the main collective objectives will be Conservation, Education and Recreation.

Progress to date

In January 1998 Philip Thomas, Scientific Officer of the Conifer Conservation Programme based at RBG. Edinburgh visited the ARBG and offered technical assistance.

The ARBG project team involved in the planning and sourcing genetic material for the Arboretum has compiled a list extant species, primarily Southern Hemisphere gymnosperms belonging to the Araucariaceae / Podocarpaceae / Taxodiaceae / Phyllocladaceae / Cupressaceae.

Seed sources are already being investigated and efforts will be made to eco - source seed wherever possible. Where taxa occur naturally in warmer latitudes than Auckland (37 deg. S.) seed will be sourced from higher altitudes to compensate for our cooler winter temperatures.

The recording of provenance data etc. and the use of the ARBG Living Collections Database will reflect and endorse our strong conservation objectives and goals. It is envisaged that several collections of one species will be made thus ensuring that we maintain genetic diversity of each taxon with the aim of eventually creating self sustaining breeding populations within the Arboretum.

Many of the world's conifers are threatened in their natural habitats so it is envisaged that the Gondwana Arboretum will be an important genetic repository of Southern Hemisphere conifers.

Genetic material in the form of seed of *Araucaria heterophylla* of known provenance from Norfolk Island has already been sourced by Graeme Platt and accessioned by ARBG. Other taxa received include *Araucaria angustifolia* from Argentina and *Callitris endlicheri*, *C. oblonga* and *C. preissii* from Australia.

It is envisaged that sourcing of seed will be a lengthy process when taking into account the remoteness of natural populations and the infrequent

masting of specific taxa.

During the next few years we will be establishing relationships and collaborating with overseas botanic gardens and other agencies with the view of sourcing and exchanging genetic material primarily from Australia (incl. Norfolk Id.) New Caledonia, Tonga, Fiji, Vanuatu, Solomon Is., New Guinea, Indonesia, Borneo, Malay Peninsula, Philippines, Southern Africa, Madagascar and S. America. New Zealand will be represented by our rich and diverse conifer taxa and it is envisaged that a major new Native Plant Collection will sit alongside the Gondwana Arboretum.

In the meantime plant material from ex hort.sources has been acquired and accessioned in readiness for the initial planting in autumn 1999 by which time the master plan will have been completed.

The following gymnosperm taxa are presently being held at the ARBG for planting out :-

Afrocarpus falcatus, *Araucaria bidwillii*, *Athrotaxis selaginoides*, *Athrotaxis x laxifolia*, *Fitzroya cupressoides*, *Lagarstrobus franklinii*, *Podocarpus elongatus*, *P. henkelii*, *P. latifolius*, *Widdringtonia cedarbergensis*, *W. nodiflora* and *W. schwarzii*.

Summary

With a project of this magnitude and complexity we look forward to working with other botanic gardens, forestry research institutes, conservation agencies and individuals throughout the Southern Hemisphere.

Technical expertise from institutes such as RBG.Edinburgh will be vital to the success of this project.

It is envisaged that within the next few years ARBG staff will have the opportunity through sponsorship to join with other botanic gardens and biological institutes on field visits to study wild populations of conifers, establish links and collaborate with our counterparts overseas.

The ARBG has undertaken to acknowledge that any plant material received from overseas will only be used for the common good in areas of Research, Education, Conservation and to the development of the ARBG. No commercial exploitation will be allowed. This statement underpins our recognition of New Zealand's position regarding the Convention on Biological Diversity.

The Auckland Regional Botanic Gardens looks forward to forming partnerships with overseas colleagues and welcomes any assistance with this ambitious and exciting project. We also look forward to hearing from New Zealand Scientists who are working on overseas projects in the countries listed above and would be willing to help us in forming partnerships with the relevant agencies.

Contact address :- Steve Benham, Brent Torrens, Alex Gardiner, Auckland Regional Botanic Gardens, 102 Hill Road, Manurewa, 1702, New Zealand.

E.Mail sbenham@arc.govt.nz Fax 09 266 3698

Acknowledgements

I would like to thank Philip Thomas (RBG.Edin.) for encouraging me to write these notes with the view of creating an awareness within the Conifer community of our proposed Arboretum here in New Zealand, also to Jack Hobbs - Curator/ Manager of the ARBG for his support and to the ARBG Gondwana Project team members Alex Gardiner and Brent Torrens.

FloraFed Launched

We are pleased to announce the arrival of the new representative body for the New Zealand flower industry. **FloraFed** (NZ Flower Industry Federation Inc) was launched on 8 July 1998 at the Commercial Flower Growers conference in Christchurch.

Launched by Dr. Paul Reynolds, Chief Policy advisor for the Ministry of Research, Science & Technology, **FloraFed** is the result of two years hard work by the industry. Unification and a positive future for the industry are the key drivers behind this change.

FloraFed utilises a new structure that aims to include as it's Members,

- ✿ Existing floricultural product and regional groups
- ✿ Marketers of NZ flowers
- ✿ Floricultural researchers, education providers, florists, consultants and any other groups associated with the industry.

This structure effectively brings together all those involved in the production and sale of flowers in N.Z. **FloraFed** is made up of key people who,

- ✿ Are focused on promoting continued growth in this industry
- ✿ Will enable **FloraFed** to optimise opportunities
- ✿ Will work constructively with other industries and organisations
- ✿ Want to work together for a positive future

RNZIH 1998 Conference

AUCKLAND *CITY*

The delegates were given a major treat by Branch Chairman Ron Davidson and his enthusiastic team. The weather was indifferent but the hospitality exceptional. The extensive programme was carried out in full and unusually at conferences there was sufficient time to freshen up and socialise. A walk around Western Springs was available for early arrivals which was a thoughtful inclusion for arriving travellers as a leg stretching exercise.

Western Springs is well known for its Zoo and Museum of Transport and Technology. Western Springs was opened in 1923 and was developed on bare wasteland. Hard to believe today. It was the site of Auckland's first flour mill dating back to 1846. In 1923 a block of Radiata Pine was planted which today frame the Western Springs Stadium. Useful notes by Mike Wilcox were provided on the way native and exotic trees which have thrived on poor soils due to the care that they have been given. Registrations and lunch followed the walk. The afternoon lectures can only be summarised as excellent, well prepared and illustrated. Dr Keith Hammond spoke on his passion for Clivias, then Trevor Davies provided an alternative in his passion for Wisterias. The next lecture by Stephen Foster was on his favourite, Pheromones in all their many extraodinary forms. Paul Crowhurst of Rentokil followed by describing his specialist field of indoor planting. He blew some age old fallacies apart on what has been described by the sensational seeking media as the 'sick building syndrome'. Paul provided much hilarity due to his ebullient delivery.

After tea we were treated to a private tour of Government House Grounds in Epsom by Kerry Thompson whose Wellington based firm Bark maintains both of the Governor General residences in Auckland and Wellington. His comparisons of the two gardens stimulated many questions from the delegates.

The evening was held at the University of Auckland Conference Centre. The copious dinner and wine provided enhanced the lead up to the Awards Ceremony and the Banks Memorial Lecture.

The Award citations were read by Dr Ron Davidson and presented by the Chairman in the absence of our President who was not well enough to attend.

The Awards of Associate of Honour were presented to Dr Ross Ferguson and Mrs Beverley McConnell. The award of Fellow was presented to Bronwyn Rowse.

The Peter Skellerup Conservation Award recipient was Richard Pender of Christchurch following his successful application for The revegetation of three locally growing native species.

The Banks Memorial Lecture was given by Peter de Lange of the Department of Conservation Auckland. The subject 'Conservation of threatened native plants : success with newer approaches' captivated the attention of the audience. Peter elaborated his topic in an easily understood and sequential way. A precis quotes: 'As much as 20% of native vascular flora is now considered threatened to some degree. New approaches to conservation are moving away from reliance only on in situ management and to include the establishment of separate reservoirs of plants. Successes such as *Muehlenbeckia*, *Pennantia* and *Tecomanthe* were discussed as well as problems sometimes encountered eg. gene drift and hybridisation'. This was a very memorable lecture which we hope to publish in full in a future RNZIH Newsletter.

On the next day the programme continued at the Auckland Regional Botanic Gardens in Manurewa. A delicious breakfast was provided by the Conference Team and consisted of pancakes, loads of cream, jam and fresh fruit. I am sure this is a good pre AGM recipe!

The outcome of the AGM is reported separately in the Chairman's report.

The afternoon was relaxed, but most interesting and began with a guided garden tour by Jack Hobbs the Curator of Auckland Regional Botanic Gardens. Stephen Brown Landscape Architect and Jack Hobbs explained the design and management of the heavily visited landscape of the Botanic Garden. The Ellerslie Flower Show is now held on a special site in the grounds and has been a major financial resource for Jack Hobbs and his consultation team.

After a cream tea, further interest in specialist plants was stimulated by specialist speakers who also provided plant material for illustration. Karl Johnson talked about the South African succulents he grows. His wry humour endeared him to the audience. Eric Walton described his interest in Arisaemas which he shared with the delegates. John Kenyon talked about Vireya rhododendrons and showed some beautiful specimens. The interest these speakers stimulated was proved by the many questions and the keen examinations of their exhibits.

A Chinese dinner of some 20 courses rounded off a satisfactory AGM and an intriguing afternoon.

The optional day tour on Sunday was a day not to be missed. The delegates were shown an extraordinary suburban garden full of succulent plants and then taken on to Waikumete Cemetery.

We were met by Katie Periera Chairperson of the Flora and Fauna sub committee of the Friends of Waikumete Cemetery and Leslie Haines of the Unitec Landscape and Plant Science Dept. They guided us through the cemetery which is a massive undertaking and exemplifies the undying dedication of the Friends of Waikumete to protect a landscape gem of wildflowers.

We later visited Kaipara Peninsula and lunched on rare fruits grown in a tropical plantation which has been established for commercial experimentation. This venture is the hobby of two remarkable people, Rosemary Steele and John Prince, Nestle Brae, Parakai, South Head.

We can ill afford to ignore the efforts of the few with the energy to stage an enjoyable conference.

Ron Flook

Reminder

Subscription accounts are now due for payment.

Prompt payment of accounts greatly assists the Institute's cash flow. If you have any queries regarding your account contact the Administration Officer (03) 352 2811 Extension 8670 (Mondays only).

1998 Loder Cup

Supporters of Tiritiri Matangi Island in Auckland's Hauraki Gulf have received the Loder Cup, New Zealand's top award for outstanding work with native plants.

Donated in 1926 by Lord Wakehurst (Formerly Gerald Loder), the Cup is awarded for excellence in furthering the aims and objects of the donor who wished "to encourage the protection and cultivation of the incomparable flora of the Dominion".

The 800-strong Supporters were nominated by Auckland Conservation Board in recognition of the work done over many years to make the DoC-administered island an open sanctuary.

Volunteers had been involved in reforestation of Tiritiri since 1983, formalising their work with the founding of the Supporters of Tiritiri Matangi Island in 1988.

The group's aims are "to promote and enhance the open sanctuary at Tiritiri, provide financial material and physical support for the work and heighten public awareness of the island's role and existence as an open sanctuary."

Since 1983-93 volunteers have planted more than 280,000 trees, increasing the proportion of non-grassland vegetation from six to 60 percent of the island's area.

Tiritiri received more than 10,000 visitors a year, including many school groups.

The Tiritiri nursery has helped save the kaka beak (*Clianthus puniceus*), specifically the endangered gene pool of plants on Moturemu in the Kaipara Harbour.

Seed from Moturemu has been grown in the Tiritiri nursery and planted on the island as well as a Northland offshore island and at Auckland Regional Botanic Gardens.

Subscriptions, donations and grants have funded construction of tracks, boardwalks, signs, control of noxious weeds, the nursery and assistance in bird translocation.

Commercial Horticulture, September 1998

Notable Trees New Zealand

Our trees are all looking their best in this early spring of 1998. This year's NZ Arboricultural Conference was held 19-22 November in Christchurch the city of beautiful trees. The subject of the conference was Tree Risk Management. I was asked to open the conference and accepted on behalf the RNZIH so affirming the close relationship we enjoy with their members.

It is becoming increasingly important for arborists to be able to identify and know how to locate the problems endured by trees. The days of waiting until they show signs of collapse or worse when they fall over and destroy letter boxes as one TV advert would have us believe. The NZAA's increasing influence nationally can only be admired. They put energy into their continuing education programmes. These consist of regular and well attended seminars (five this year) which is a way of ensuring the consolidation of their skills in an ever increasing role of public responsibility.

It is time for local authorities who have listed their Heritage Trees to evaluate and value their trees. Bottom line accountancy makes sure of one thing that unless we itemise and value our stocks of existing urban trees there will not be any money put aside for their maintenance.

Amenity horticulture is suffering throughout NZ for the same reasons. On going professional training is neglected and seminars for horticulturists few and far between. Even lecturers and tutors are suffering from a lack of professional publications to air their subjects and advance the necessity for continuing education.

Notable Trees NZ promotes the care and protection of worthy trees and we need those qualified arborists to ensure they get attention when they need it. Please watch out for any defects and report them to your local authority or consult an arborist. We could lose many a favourite tree in the unstable climatic conditions we are increasingly experiencing. A consultants fee is small when considering the amenity value of a major tree. A major tree failure is a tragedy.It causes panic instead of reinforcing the need for timely care as a prevention from such a loss.

Ralph Ballinger our Vice Patron has generously donated $500 as an annual gift to Notable Trees NZ. Ralph wishes to ensure that trees of merit are given public recognition by means of registration in the Notable Trees Register and the securing of an enamel plaque at the foot of the tree. He recently assisted Prince Edward to plant a commemorative tree in Blenheim. Ralph plans to register several more trees of distinction in the grounds of the Marlborough Boys College.

We are extremely grateful to him for his most welcome gift and his efforts on behalf of NTNZ. Each notch of generosity such as his, is a way of ensuring the work of registering Notable Trees continues and gains more and more credits for the protection of our great heritage.

Ron Flook, National Registrar.

RNZIH Awards and Honours

The RNZIH runs a comprehensive system of awards and honours for both members and non members. There is one major scholarship awarded annually, worth several thousand dollars. For detailed information on these please write to the RNZIH , P.O. Box 12, Lincoln University, Canterbury.
The awards are briefly as follows :

Associate of Honour (AHRIH)
Awarded to persons who have given distinguished service to horticulture in New Zealand. Only 60 people can hold the award at any one time.

Fellow (FRIH)
Awarded to members who have made a significant contribution to horticulture and the Institute.

Peter Skellerup Plant Conservation Scholarship
A scholarship granted for research, field work, publication, propagation and/or cultivation of plants and any other activity likely to promote and assist the conservation of New Zealand's idigenous and exotic plant genetic resources. Up to $5,000 is available each year.

Sir Victor Davies Award
Awarded annually to a young person who has demonstrated an outstanding plant knowledge. The recipient receives a certificate plus monetary prize.

Plant Raisers' Award
Awarded to an individual or organisation who has raised in New Zealand a cultivar(s) of outstanding merit.

Ronald Flook Award
Awarded by the New Zealand Arboricultural Association to a person who has contributed to the advancement of arboriculture in New Zealand.

Report for the 1997/98 Peter Sellerup Plant Conservation Scholarship

Soil bioassays associated with targeted herbicidal control of grey willow saplings and trees in the Whangamarino wetlands

Dr. Ron Henzell and Shirley Miller
Ruakura Research Centre, HortResearch

Introduction

Grey willow (*Salix cinerea*) is an exotic invasive weed in the Whangamarino wetlands, a designated world heritage area, where it grows extensively around the perimeter of all lakes in the area. Trials initiated by HortResearch in 1995/96 have shown that targeted application (gel pruning and stem pressure injection) with picloram potassium salt, metsulfuron-methyl, or glyphosate herbicides can be highly effective at killing grey willow trees up to about 15cm trunk diameter (Ward and Henzell, 1998). These technologies are likely to be suitable for use in environmentally sensitive areas where spraying may lead to unacceptable non-target effects or contamination of waterways. Some of the devices being developed should become commercially available within the next few years.

This project looked at defining limitations to re-establishment of natural species diversity in the Whangamarino wetlands following targeted herbicidal treatment of grey willow. Manuka and kanuka are predominant native colonising species which begin the process of restoration of natural vegetation. Establishment of a dense canopy of early colonisers is important to prevent the return of invasive weeds. At the present time there is little or no information on the effects of residual herbicides on the germination and growth of native plant species.

Within the 1997/98 season we aimed to :

- develop a bioassay to determine the efficacy and longevity of metsulfuron-methyl and picloram potassium salt (picloram K+) in Whangamarino soils within the root zone and decaying tissues (roots) of treated grey willow trees.
- use the soil bioassay to assess the sensitivity of the primary coloniser manuka to the metsulfuron-methyl and picloram potassium salt residues.

Discussion and Conclusions

For the targeted gel treatments used to kill saplings and trees the expected residue levels of picloram in roots and the surrounding soil, can be estimated from the amount of active ingredient applied and the number of assumptions related to root length, extent and distribution of residues exuded from roots.

Estimations highlight the fact that very low residues are likely to be associated with targeted treatments particularly when they involve herbicides which are metabolised readily within plants. In this respect picloram is more likely to lead to soil residues than metsulfuron-methyl. As picloram (K+) is readily translocated and stable within plants the expected initial residue concentrations in the roots of treated saplings would be substantially higher than the soil residue concentrations.

Herbicide tests involving manuka were carried out in winter when the sensitivity of the assay was lowest. Nevertheless manuka appeared to be more sensitive than radish at the germination stage. Once seedlings were established there were no differences in growth rates between the two species. Manuka seeds are considerably smaller than radish which could explain their increased sensitivity to herbicide residues at germination.

In conclusion, work carried out in this project has highlighted the need for a better understanding of the ecology of the wetlands environment with respect to weed control. Targeted technologies are likely to be a useful option in the future for controlling weeds in environmentally sensitive areas. Soil bioassays can be used to detect herbicide residues and for monitoring effects on plants. However, when using herbicidal control of willows in the Whangamarino wetlands, the growth of desired species, such as manuka or kanuka, is just as likely to be affected by natural exudates from treated willow trees as it is by chemical residues from the herbicide itself. More work in this area is needed.

New Zealand Plants and their Story

1999 Conference

8 - 10 October

Leonard Cockayne, one of New Zealand's foremost botanists, was instrumental in the development of Otari Native Botanic Garden, New Zealand's foremost collection of native plants. To celebrate a major redevelopment of Otari, a symposium is planned with a focus on native plants

The symposium is organised by the Royal New Zealand Institute of Horticulture and Wellington City Council

Conference Programme

Friday

- Opening
- Restoration of native ecosystems in association with Wellington Regional Council
- Revegetation techniques in cluding new research
- Pest plant and animal management
- Threatened species management
- Site visit to revegetation sites including Otari and Town Belt
- Wellington Plant Conservation network - the way ahead Local or not? What is the dif ference?

  Sir Michael Hardie Boys
  Roger May - Wellington Town Belt
  Wildlands Consultants
  Geoff Park

Friday evening

Banks Lecture

"The Story of New Zealand Plants"

Saturday morning

- Native Plants in the public landscape in association with Naturally Native
- Native plants in the public landscape including multiple uses (conservation, seed banks etc) breeding/ selection, and native trees with landscape potential
- Bioprospecting - Future man agement of our native flora. Partnerships. Specialist plant uses - the botanic collection
- Effects of native plantings on natural populations- fact or fantasy

  Anita Benbrook
  Jack Hobbs
  Lawrie Metcalf
  Maui Solomon

Saturday afternoon

- Field trips
  Native plantings and collections including Otari and Percy's Reserve, Denches

Saturday evening

- Awards and annual dinner

Sunday morning

- "Natives in the Garden"
  A series of workshops for gardeners keen to learn more about natives, and their use in the garden. In association with Wellington City Council
- The native garden
- Hebes for every situation
- Outstanding garden plants
- Natives in containers

  Isobel Gabites
  Lawrie Metcalf
  Jack Hobbs

Sunday afternoon

- Optional Tour of Government House Grounds

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