14 Avalon Crescent.
Lower Hutt

NATIVE ORCHID GROUP March 1982.

Dear friends,

This newsletter, I hope, will set the ball rolling for a fund of information on our native orchids. For several years now, I, and others, have wanted to start a native orchid group and the publication of my book has created a host of correspondence that I'm having difficulty keeping up with! Anyone who ordered my book through, the Wellington Orchid Society will automatically receive a copy of this newsletter. Anyone else interested in receiving it could drop me a line and your name will be added to the mailing list.

By using member's contributions on any aspects of our native orchids, we can circulate information throughout New Zealand to many people now interested in this section of our flora.

Questions can be answered and discussions can take place and we can communicate ideas to the benefit of all when we're so widely separated.

Perhaps a membership list could be distributed with names and addresses so that members travelling around New Zealand could contact interested people in the area.

I am envisaging 3 or 4 issues of this newsletter a year to start with. Beyond that - we may form a formal society, or a branch of the ANOS (Australasian Native Orchid Society ~ see advertisement elsewhere) - anything could happen; We may have annual field trips which our members from all over the country could attend.

So..... Could anyone wishing to become a member and thus receive future issues for this year, please send $3.50, to cover costs, with name and address, to me at the above address.

Yours hopefully!
Dorothy Cooper.

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To start suggestions: ... I think our- main aims should be the study and conservation of native orchids. Apart from some epiphytes and a few of the commoner Pterostylis species, there are few of our native orchid species that we seem to be able to grow 'permanently' at home. Even after 'saving' them from bulldozers, plants are often lost anyway. Having been on trips with Botanical Societies whose members are quite happy to study, record and perhaps photograph plants without feeling they have to try and grow them at home, I can't see why we can't have 'orchidists' all over New Zealand recording, studying and reporting without collecting the plants to the benefit of all those who will be able to read their notes and to the benefit of the orchids too. Imagine several hundred interested people collecting orchids from our bush, losing them, taking more etc. It wouldn't be very long before many species bacame loca11y extinct.

There have been suggestions that we should grow more native orchids, that they should be entered in orchid shows etc. I feel it would not be long before species disappeared in many areas, rare plants would be gathered as 'prize' specimens and would be lost to future New Zealanders. This sort of thing has already happened in England and Australia where native orchids are now strictly protected. I think for once we should, learn from other's mistakes and stop this from happening here.

Until we come up with, a viable way to grow from seeds, I suggest we should leave our native orchids to grow where they belong.

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There you are; now write in and let us know *your* views:

For those of you who are trying to grow our terrestrials we include in this first newsletter hints for cultivation from Jim Forrest of Te Puke - the only person I know of who grows terrestrials successfully.

GROWING NATIVE ORCHIDS IN NEW ZEALAND

Jim Forrest

Many people have found growing native orchids a heart-breaking process, perhaps I've been lucky as I have always had reasonable success.

Pots: Either clay or plastic seem equally suitable and lately I've been using ice cream containers. I don't think the container matters, it'sthe mix and your growing methods that are more important. If you use plastic then 10cm or 12.5cm are most suitable. Clay pots can be larger as they dry out more quickly. Very small pots are alright but you need to watch that they don't dry out.

Mix: I use what we have locally, namely pumice sand. If I had the time I'd make a different mix for each genus, but as I have so many a basic mix has to do. It's 3 parts coarse sand and 1 part of partly rotted leaf mould or very old sawdust. The main problem with sawdust is that it's difficult to wet once it's dry. If neither is available some peat will do, but most seem to grow satisfactorily in straight sand. When I pot I keep a supply of sand and leaf litter at hand and add extra of each depending on which genus I'm doing.

Potting: This can be carried out any time after the plants die down, but ideally should be complete before new growth starts as it's easy to break the new shoots. In Te Puke this can be as early as January, but will vary from place to place. Take a clean pot and cover the drainage hole(s) with some material such as sphagnum, gigi (Astelia), half-rotted leaves, tree fern or bracken.

Fill with mix and tamp down firmly. Plant the tubers right way up - depth depends cn size of tuber, the bigger they are, the deeper, but I average 1-2cm of mix on top of mine. Large plants like some of the Thelymitras need to be quite deep or they'll fall out of the mix. On top of each pot I put a centimetre of chopped pine needles to prevent rain from washing the mix out of the pots.

Culture:

During the growing period I keep most of the pots in a shade house, partly to control the amount of water they receive, but mainly to keep them away from blackbirds which dig out the pots. When the plants die down they are placed in a cool airy shed for a rest. In the new year a watch must be kept to see if there is any sign of shoots,if so the pots need to be brought out and watered. Water carefully until the plants are growing freely. If you look in a pot you will see why, the tubers send up shoots first, then the roots develop at the base of the shoot.

Pests:
Aphids and thrips in particular are a pest here, slugs and snails. Thelymitras are subject to rust and leaf rot. So far I've not solved this problem, but a copper spray will hold it in check, and don't keep the pots in a closed air situation.

Manure: I do not put any fertiliser in the mix, but foliar feed with very dilute cow manure or similar organic mix during the growing season.

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Recommended: The Australasian Native Orchid Society - ANOS
Annual Membership #10.00 (Australian) which covers four issues of 'The Orchadian' - excellent reading and full of information on native orchids, mainly in Australia, but as so many of our species occur there also, of great interest to all New Zealanders.
Send Bank draft or International money order to:
The Secretary, ANOS, C/~ B & C Mailing Service Pty.Ltd.,
Box 4142, G.P.O. Sydney, N.S.W. 2001, Australia,

ODD THINGS ABOUT ORCHIDS

E.D.Hatch

Corybas orbiculatus is perhaps unusual in liking to grow in running water, and in my experience is found in no other habitat. In the Waitakeres it will be found clinging in masses to the mossed, rock faces beside small waterfalls and along the wet walls of gorges. But its most remarkable choice of a home is the sea cliff at Kaitarakihi. In seepage areas and in the little streams that tumble into the tide, the orchid grows among the rootlets of pohutukawa and the clutter and tangle of Machaerina and Astelia, exposed to the blustering south-west wind, and a mere metre or so above the breaking waves. They must live with mycorrhiza for the layer of moss and peat on the rock is not more than 4 mm deep, barely enough to cover the orchid tuber. One would imagine the environment to be too tough, but on reflection I suppose it is no worse than that endured by the Earina and Dendrobium which cling to the pohutukawa roots alongside.

Talking of toughness - I found, last November, about half way through the old diversion tunnel at Kakamatua, a single plant of Corybas aconitiflorus. In semi-darkness, with a strong cold draught constantly screaming in from the sea, and seepage water lying in little lakes on the floor, a less pleasant place to live would be hard to imagine.

The orchid seed had apparently blown in, germinated on a block of sandstone that had fallen from the roof, flowered, been pollinated, and produced a seeding peduncle 10cm tall. They do say that this species has subterranean tendencies!

I have noticed for many years that Chiloglottis cornuta is often more robust and more abundant in exotic pine plantations than in the native bush nearby.This could he due to the heavy concentration of mycorrhizal fungi associated with the pines.

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A MATTER OF EVOLUTION

Phil Tomlinson

One noticeable feature of our native orchids is the variability even within species. This may arise from both genetic and environmental factors and can make identification of some species difficult. Contact throughout the country can only increase our understanding of these plants.

On a worldwide scale, the more spectacular epiphytic orchids come mostly from the tropical regions. The so called temperate regions in which New Zealand is situated are the home of a lot of terrestrial (ground living; orchids, though there are exceptions to this broad classification. Terrestrial orchids are generally considered to be more primitive than epiphytes, and many of our native orchids produce tubers (swollen underground storage stems) rather than the pseudobulbs produced by the more evolved epiphytes.

One of the features of the orchid family is that species often have a specific pollinator. This pollinator relationship does not generally seem to have developed to the same degree amongst the terrestrials, allowing for greater exchange of genetic material resulting in greater variation between plants of the same species and less stability in species characteristics. This can make their study more difficult but also more interesting.

Some of our orchids are cleistogamic (self-pollinating) which would normally be a disadvantage in evolutionary terms as, if it happens exclusively, it restricts the exchange of new genetic material making the species less able to adjust by natural selection to changing environmental conditions. One must also wonder what evolutionary pressures caused the *Thelymitra* species to show little lip differentiate producing a somewhat 'un-orchid-1ike' flower.

It is always interesting to look at plants and ask "Why did it evolve in that way?" Often you cannot obtain an answer but it is sure to provide plenty of mental stimulation.

DISTRIBUTION OF NEW ZEALAND ORCHIDS

Gordon Sylvester

New Zealand currently has 22 genera of orchids as described in 'Flora of New Zealand' Vol.2, and 'The New Zealand Journal of Botany', but new discoveries are still being made. We do not have any genera confined to New Zealand, all are found elsewhere, from the Pacific Islands - Fiji and Samoa in the east, to Malaysia in the west, Japan in the north and Macquarie Island in the south.

E.D.Hatch published a probable line of evolution for New Zealand genera with their centres of development and movement.

writers have discussed the pros and cons of land bridge movement, west wind drift, and carried on bird's feathers, the last two for seed only. Whatever the mode of movement, there has been sufficient isolation for several distinctive species to evolve from the Australian stock, and recent discoveries of Australian orchids in New Zealand by people curious enough to try and identify them shows that there is a bright future for new discoveries in this country.

The most cosmopolitan species is Spiranthese sinensis. Other genera with a wide range are Corybas, Gastrodia, Microtis, Bulbophyllum,Dendroblum and Yoania, all recently reported as occurring in Taiwan, their northern limit. But even the most restricted range genera could turn up surprises -somewhere.

FIELD TRIP TO THE PUFFER TRACK, KAITOKE.

Dorothy Cooper

On the 12th December 1981 the Wellington Botanical Society held a field trip to the Puffer which is located at the southern end of the Tararuas, just north of Upper Hutt The trip was specifically to look at orchids and the following species were recorded:

Acianthas reniformis - leaves only, not common;
Aporostylis bifolia -- in bud, common in 2 .localities;
Caladenia catenata - in bud and flower, common;
C.lyallii - seed head, 2 plants at higher altitude;
Chiloglottis cornuta - in flower, a few large patches;
Corybas oblongus - in flower, very common;
C.trilobus - leaves only,not common;
Microtis unifolia - in flower, common;
Orthoceras strictum - in bud, green form,not common;
Prasophyllum colensoi - in flower, common at higher alt.
Pterostylis banksii - past flowering, not common;
Pterostylis graminea - in flower, common;
P.montana - in flower,higher alt.
P.plumosa - in flower,not common;
Pterostylis n.sp, described this species and submitted it to J.of Botany with the name P.cardiostigma;flowering
Thelymitra decora - in flower;
T.dentata - in lower;
T.formosa - leaf only;
T.hatchii - in flower;
T.ixioldes - in flower;
T.longifolia - in flower;
T.pauciflora - most past flowering
T.pulehella - in flower;
T.venosa - in bud;

epiphytes: Dendroblum cunninghamii
Earina autumnalis, E.mucronata, none in flower.

27 in all!

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DID YOU KNOW: Chiloglottis gunnii Lindl, an Australian species not previously recorded in New Zealand, has recently been found in Christchurch, and a few weeks later, in Nelson!
Correct name: Microtis unifolia (one leaf)
not Microtis uniflora (one flower)

genus is singular, genera is plural;
species is singular and plural.

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