

Orchids of the Wellington District

A. P. DRUCE

The hills around Wellington have at the present time one of the richest orchid floras in New Zealand. Only the Auckland district surpasses Wellington. Yet few people are aware of this and fewer still have searched closely for these fascinating plants. It is not surprising therefore that several of the orchids growing about Wellington have remained unrecorded for a long time. Altogether forty-two orchid species and varieties are now known from this district.

For the purpose of this article the Wellington district is taken to include all the Rimutakas, all the western hills and to extend up to the tops of the Tararua Mountains. Very few orchids are found on the western hills (i.e., the hills to the west of the Hutt Valley and Wellington Harbour) from Cook Strait north to about Haywards. Mixed bush clothed these hills originally—beech was absent. The soils differ from those across the harbour and second-growth is more often tauhinu than manuka. In some way or other the conditions are not right for most of the orchids.

Over the rest of the district however, wherever manuka holds sway there are large numbers of orchids of many species. On Mrs.



Prasophyllum colensoi (left), *Adenochilus gracilis* (centre) and *Microtis unifolia* (right).



Pterostylis nana (left) and ***Pterostylis barbata*** (right).

Samson's section at Pinehaven for instance over twenty species may be found and a sample area nearby showed that at least 10,000 individual orchids grow per acre in that locality. There cannot have been anything like these numbers a century ago for most of the manuka land was in bush and the orchids of the bush, besides being different, are comparatively few in number. The dominant trees on most of the clay hills were species of beech. The soil was thin and the pastures established after clearing were soon invaded by manuka which was probably restricted to river-flats, slips and a few clearings originally. Whether the orchids were all present to start with or whether some species came in from elsewhere it is impossible to say, but the number of plants must have increased manyfold as the manuka spread. If left long enough manuka scrub would lead to forest again on these hills but every year there are numerous destructive fires. Not only do the fires prevent regeneration but they favour the spread of gorse so that manuka, after increasing rapidly, is now steadily decreasing. Orchids do not thrive on gorse-covered hillsides—neither do botanists.

For anyone wishing to search for the manuka orchids, the best area is probably between Silverstream and Upper Hutt on the low

hills immediately to the east of the Hutt Valley. But there are large areas that can be looked into right along both sides of the Rimutakas, along the eastern foothills of the Tararuas from the Puffer to Mt. Holdsworth and on the western side of the Hutt Valley from about Haywards to the lower end of the Akatarawa.

In the relatively undisturbed tussock, scrub and bush of the ranges, the orchids are probably growing much the same as they were a hundred years ago. Quite a few species are found but most of them do not occur in very great numbers.

In constructing the key to the local orchids (p. 9) care has been taken to avoid the use of technical terms as far as possible. It is hoped that by its use any plant may be tracked down with a minimum of trouble—provided of course the plant can be recognized as an orchid to start with. The key is designed for fresh material and is practically useless for dried plants. Specimens, except in the case of epiphytes, must also be in flower. Although made specifically for the Wellington district, the key can be used with reasonable safety as far north as Wanganui, Taihape and Central Hawke's Bay. If the recent volumes of the Transactions of the Royal Society of New Zealand are available, they can be consulted with benefit, for many of the orchids are illustrated there with clear drawings by Mr. E. D. Hatch. The key should not be regarded as infallible for there are doubtless other orchids still to be found in the district, especially in the genera *Thelymitra* and *Pterostylis*.

The diagram showing the flowering periods of some of the orchids (p. 8) is based on observations made in the Hutt Valley over the past four seasons. In most cases the higher the altitude at which the individuals of a species grow, the later they come into flower. The flowering periods in this diagram are only for the range, sea-level to 1,500 feet. Those species which ascend beyond 1,500 feet extend their flowering periods by amounts varying from a week to over a month. The diagram should help both in identifying an orchid in flower and in knowing when to look for a particular species.

It only remains now to indicate which orchids are typically found in manuka, which in forest, etc., and to note in parenthesis the distribution of those that are not widespread.

Orchids of Manuka Scrub

<i>Thelymitra longifolia</i>	<i>P. barbata</i> (Day's Bay, Silverstream to the Puffer)
<i>T. pauciflora</i>	<i>Acianthus reniformis oblongus</i>
<i>T. decora</i>	<i>A. fornicatus sinclairii</i>
<i>T. ixioides</i> (Wallaceville)	<i>Corybas macranthus typicus</i>
<i>T. caesia</i> (Silverstream, Upper Hutt and the Puffer)	<i>C. oblongus</i>
<i>T. venosa</i> (Tararuas)	<i>Prasophyllum colensoi</i>
<i>Pterostylis graminea</i>	<i>P. nudum</i>
<i>P. banksii typica</i>	<i>Microtis unifolia</i>
<i>P. nana</i> (Silverstream)	<i>Chiloglottis cornuta</i>

<i>P. foliata</i> (Homedale, Mangaroa and the Puffer)	<i>Orthoceras strictum</i>
<i>P. trullifolia</i>	<i>Caladenia carnea minor</i>
<i>P. montana typica</i>	<i>Gastrodia cunninghamii</i>
<i>P. venosa</i> (Tararuas)	<i>Aporostylis bifolia</i>
	<i>Calochilus paludosus</i> (Upper Hutt)

Orchids of the Bush

<i>Earina mucronata</i>	<i>Pterostylis banksii typica</i>
<i>E. autumnalis</i>	<i>P. graminea</i>
<i>Dendrobium cunninghamii</i>	<i>P. trullifolia</i>
<i>Sarcochilus adversus</i>	<i>Gastrodia cunninghamii</i>
<i>Bulbophyllum pygmaeum</i>	<i>Adenochilus gracilis</i> (Ruamahanga basin)
<i>Chiloglottis cornuta</i>	<i>Corybas trilobus</i>
<i>Acianthus reniformis oblongus</i>	<i>C. macranthus typicus</i>
<i>A. fornicatus sinclairii</i>	<i>C. rivularis</i> (Mangatainoka R.)

Orchids of Subalpine Scrub and Snow Tussock

<i>Pterostylis venosa</i> (Tararuas)	<i>Lyperanthus antarcticus</i> (Tararuas)
<i>P. banksii</i> var. (Tararuas)	<i>Aporostylis bifolia</i>
<i>Prasophyllum colensoi</i>	

Orchids of Wet Banks

<i>Corybas oblongus</i>	<i>Corybas</i> sp.
<i>C. macranthus typicus</i>	<i>Pterostylis banksii typica</i>

Orchids of Bog and Swamp

<i>Spiranthes sinensis</i> (Waikanae)	<i>Prasophyllum colensoi</i>
<i>Thelymitra venosa</i> (Tararuas)	<i>Aporostylis bifolia</i>
<i>Microtis unifolia</i>	

NEW RECORDS

The following orchids have not previously been recorded from the Wellington district. Specimens are deposited in the Herbarium of the Botany Division.

Thelymitra pauciflora. Manuka scrub, plentiful.

T. ixioides. Manuka scrub near Wallaceville, rare.

T. caesia. Manuka scrub near Silverstream and Upper Hutt, local; on the Puffer, plentiful.

T. decora. Manuka scrub, common.

Pterostylis montana typica. Manuka scrub, frequent.

Spiranthes sinensis. Waikanae estuary, collected by Miss Neumann.

On the evidence of occasional intermediates, it is suggested that the following crosses take place amongst the orchids in the district:

Thelymitra decora X *pauciflora*.

Pterostylis banksii typica X *montana typica*.

P. b. t. X *graminea*.

FLOWERING PERIOD —	JUN	JLY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
<i>Pterostylis trullifolia</i>	—	—										
<i>Acianthus fornicatus sinclairii</i>	—											
<i>Acianthus reniformis oblongus</i>			—	—								
<i>Corybas trilobus</i>			—	—								
<i>Pterostylis nana</i>			—	—								
<i>Corybas macranthus typicus</i>			—	—								
<i>Corybas oblongus</i>			—	—								
<i>Pterostylis graminea</i>			—	—								
<i>Chiloglottis cornuta</i>			—	—								
<i>Pterostylis banksii typica</i>			—	—								
<i>Earina mucronata</i>			—	—								
<i>Pterostylis barbata</i>			—	—								
<i>Pterostylis foliata</i>			—	—								
<i>Caladenia carnea minor</i>			—	—								
<i>Thelymitra pauciflora</i>			—	—								
<i>Thelymitra decora</i>			—	—								
<i>Thelymitra longifolia</i>			—	—								
<i>Pterostylis montana typica</i>			—	—								
<i>Microtis unifolia</i>			—	—								
<i>Thelymitra ixiioides</i>			—	—								
<i>Prasophyllum colensoi</i>			—	—								
<i>Thelymitra caesia</i>			—	—								
<i>Gastrodia cunninghamii</i>			—	—								
<i>Thelymitra venosa</i>			—	—								
<i>Orthoceras strictum</i>			—	—								
<i>Dendrobium cunninghamii</i>			—	—								
<i>Prasophyllum nudum</i>			—	—								
<i>Earina autumnalis</i>			—	—								

Flowering periods of some of the orchids.

NAME CHANGES

Since the publication of Cheeseman's Manual in 1925 a number of the orchids have had their names changed. To facilitate reference to the Manual, a list of the new names used in this article is appended, with the old names in brackets:

Acianthus fornicatus sinclairii (*A. sinclairii*), *Acianthus reniformis oblongus* (*Cyrtostylis oblonga*), *Aporostylis bifolia* (*Caladenia bifolia*), (*Caladenia carnea minor* (*C. minor*), *Corybas* spp. (*Corysanthes* spp.), *Prasophyllum nudum* (*P. rufum*), *Pterostylis nana* (*P. puberula*), *Spiranthes sinensis* (*S. australis*). *P. montana* is a new species. *Thelymitra uniflora* is included in *T. venosa* as a variety.

KEY TO THE ORCHIDS OF THE WELLINGTON DISTRICT

1. Growing on the ground	2
Growing on the trunks and branches of trees or on rocks	21
2. Leafless	3
Leaf solitary (not counting small bracts up the stem)	4
Leaves more than one	12
3. Stem green	<i>Prasophyllum nudum</i>
Stem mottled grey or brown	<i>Gastrodia cunninghamii</i>
(The rather similar <i>G. sesamoides</i> is also in the district but is rarely met with.)	
4. Leaf tubular	5
Leaf flat or channelled	6
5. Flowers green, with tiny hoods	<i>Microtis unifolia</i>
Flowers greenish or brownish, without distinct hoods	<i>Prasophyllum colensoi</i>
6. Leaf short and broad	7
Leaf narrow	10
7. Flower just above the leaf, solitary (stalk lengthens after flower is over)	<i>Corybas</i> (5 spp.) 25
Flowers(s) well above the leaf	8
8. Leaf closely appressed to the ground	<i>Acianthus reniformis oblongus</i>
Leaf more or less midway up the stem	9
9. Flower solitary, white	<i>Adenochilus gracilis</i>
Flowers more than one, green	<i>Acianthus fornicatus sinclairii</i>
10. Leaf covered with small hairs	<i>Caladenia carnea minor</i>
Leaf without hairs	11
11. Flower(s) with a conspicuous red "beard"	<i>Calochilus paludosus</i>
Flower(s) without such a "beard"	18
12. Stems annual, easily crushed	13
Stems perennial, firm	23
13. Flower solitary	14
Flowers more than one	18
14. Leaves two (not counting small bracts up the stem)	15
Leaves more than two	<i>Pterostylis</i> (8 spp.) 30
15. Leaves covered with small hairs	<i>Aporostylis bifolia</i>
Leaves without hairs	16
16. One leaf much further up the stem than the other	<i>Lyperanthus antarcticus</i>
Leaves opposite or nearly so	17
17. Flower hood about $\frac{1}{2}$ in. high, leaves stalked (short in exposed situations)	<i>Chiloglottis cornuta</i>
Flower hood about $\frac{3}{4}$ in. high, leaves not stalked but gradually narrowed to the base	<i>Pterostylis venosa</i>
18. Flower(s) with two erect "horns"	<i>Orthoceras strictum</i>
Flower(s) without such "horns"	19
19. Flowers small, $\frac{1}{2}$ in. or less, numerous, spirally arranged	<i>Spiranthes sinensis</i>
Flower(s) $\frac{1}{2}$ in. or more, few or many	20
20. Flower(s) hood-shaped, greenish or brownish	<i>Lyperanthus antarcticus</i>
Flower(s) not hood-shaped, white, blue, blue-violet, violet or violet-purple (when opened)	<i>Thelymitra</i> (6 spp.) 39
21. Leaves very small, less than $\frac{1}{2}$ in. long	<i>Bulbophyllum pygmaeum</i>
Leaves more than $\frac{1}{2}$ in. long	22
22. Leaves broad	<i>Sarcochilus adversus</i>
Leaves narrow-linear	23
23. Stems branched, flowers few together (1-4 usually)	<i>Dendrobium cunninghamii</i>
Stems unbranched, flowers many together	<i>Earina</i> (2 spp.) 24

24. Flowering in spring, sheathing bases of leaves firmly attached to stem *Earina mucronata*
 Flowering in autumn, sheathing bases of leaves coming away from stem when pulled *Earina autumnalis*

CORYBAS (CORYSANTHES) SPECIES

25. Leaf stalked (short in exposed situations) 26
 Leaf not stalked 27
 26. Leaf tip more or less three-lobed *C. trilobus*
 Leaf tip rounded or with a small point *C. macranthus typicus*
 27. Leaf tip drawn out, tapering to a point *C. rivularis*
 Leaf tip rounded or with a small point 28
 28. Leaf base rounded or slightly notched, thread-like parts of flower less than 1 in. long *C. oblongus*
 29. Leaf base deeply notched, thread-like parts of flower 1½ ins. long or more *C. sp. (unnamed)*

PTEROSTYLIS SPECIES

30. Most of the leaves close together near the base of the stem 31
 Leaves all spaced at intervals up the stem 35
 31. Flower with a protruding "tongue" covered with golden-yellow hairs *P. barbata*
 Flower without such a "tongue" 32
 32. Leaves at the base of the stem stalked, leaf-blades ½ in. long or less 33
 Leaves at the base of the stem not stalked but gradually narrowed to the stem, more than ½ in. long 34
 33. Plants minutely hairy, flowering in spring *P. nama*
 Plants without hairs, flowering in winter *P. trullifolia* (2 vars.)
 34. Stem with one or more bracts, flower well above the leaves *P. foliata*
 Stem without bracts, flower just above the leaves *P. venosa*
 35. Flowering in winter, leaves 1 in. long or less *P. trullifolia* (2 vars.)
 Flowering in spring or summer, leaves more than 1 in. long 36
 36. Flower hood 1½ ins. high or more (including the thread-like extensions) 37
 Flower hood 1 in. high or less 38
 37. Leaves narrow, almost linear *P. banksii typica*
 Leaves broader, not linear *P. banksii* var. (unnamed)
 38. Flower distinctly overtopped by the leaves (stalk lengthens after flower is over) *P. graminea*
 Flower equalling the leaves or nearly so *P. montana typica*

THELYMITRA SPECIES

39. Flower(s) white (when opened) *T. longifolia*
 Flower(s) blue, blue-violet, violet or violet-purple (when opened) 40
 40. Flower(s) with dark blue spots 41
 Flower(s) with dark blue lines 42
 Flower(s) without such spots or lines *T. pauciflora*
 41. Centre of flower (column) tipped with red *T. irioides*
 Centre of flower (column) tipped with yellow *T. decora*
 42. Centre of flower (column) with two tufts of pale yellow hairs *T. caesia*
 Centre of flower (column) without any tufts of hairs *T. venosa* (2 vars.)