

existence is known I feel sure that it will be found in other localities. On June 4th this year, Mr Hatch, Mr Bartlett of Silverdale and I revisited the Wellsford locality. After much careful searching we found two plants which bore buds 1/10th inch long still covered by leaf mould and moss. The buds were enclosed within the bracts which at this stage were very tiny. Mr Hatch suspects the flower blooms below the surface, the seed capsule being raised after fertilisation.

J.B. Irwin

Postscript: After the above was written Mr Hatch again visited the Wellsford locality and this time succeeded in finding a plant in flower. The orchid, as it turns out, is a species of Corybas, but a most unusual and interesting member of that genus. As suspected the flower did not show itself on the surface and was only found by removing the moss layer. The orchid will be fully described in the Transactions in due course. - Ed.

1952 HATCH, E.D. (2): described the species in detail, pointing out that it was not strictly subterranean, for the rhizome lies on the surface, but it is subterranean in effect, for rhizome, leaf and flower are all buried beneath the surface debris. The two subterranean orchids in Australia, Rhizanthella gardneri and Rhizanthella slateri (syn. Cryptanthemi slateri, see "The Orchadian" June 1985), both consist of a tuberless, leafless, branching rhizome which flowers beneath the surface of the soil. Hatch further suggested that the species was almost certainly self-fertile and said all the flowers normally set seed. He also described how the tubers would become superfluous, - Gibson had the Waitotara rhizomes under cultivation at New Plymouth and reported that under the stimulus of the artificial environment, mature plants did form tubers before dying out.

Ecology in his paper is given as: Waitotara - Nothofagus forest with little undergrowth. C. saprophyticus (syn.) was found under clumps of moss among a colony of C. trilobus. Wellsford - a horseshoe shaped ridge enclosing a small valley facing east. Mature, rather open, manuka scrub dominated by Leptospermum scoparium, and containing the association usual in incipient Podocarp-Kauri forest. Ground cover dominated by large clumps of a species of the moss Leucobryum. C. saprophyticus was found both under these clumps and the twig debris where the manuka was more compact.

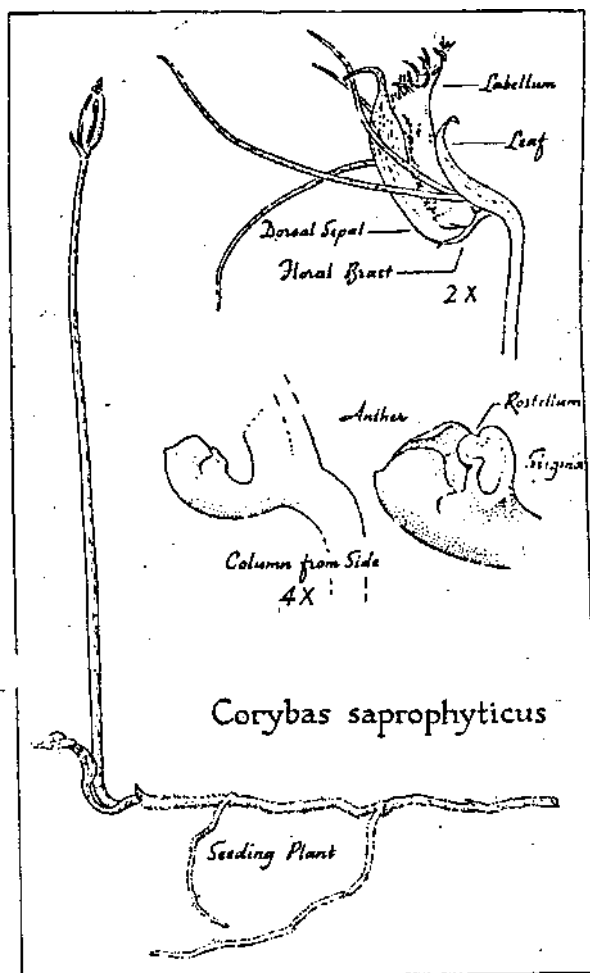
Other orchids recorded from the area were: Thelymitra longifolia, T. pauciflora, Pterostylis trullifolia var., Pt. barbata, Acianthus fornicatus var. sinclairii, A. reniformis var. oblongus. Caladenia carnea var. minor, Earina mucronata, Prasophyllum pumilum, Corybas trilobus, C. oblongus.

J.B. IRWIN. 1954 (3): Corybas saprophyticus has been found in flower (Oct. 1953) by Mr E.E. Ensor of Reefton, in bush on the lower slopes of the Victoria Range near Rotokohu. His is the only record of flowering plants since Mr Hatch found the solitary flower near Wellsford, from which the species was described. The plants were found quite by chance; while lunching in the bush Mr Ensor idly brushed aside the deep leaf-mould and in doing so exposed the flowers.

As the flower is borne beneath the leaf-mould the plant is not noticeable until the seed head is raised well clear, of the surface by the elongation of the peduncle after fertilisation. It could then pass for any other species of Corybas from which the leaf had already withered. Doubtless this orchid will be found to have a much wider distribution if botanists keep an eye open for these apparently leafless seed heads.

The accompanying drawings of the flower are from a fresh specimen, one of a number sent to the Dominion Museum by Mr Ensor. It is now preserved in the herbarium of the Botany Division, Latimer Square, Christchurch.

TONY WHITAKER, 1957 (4): One day in the summer of 1955-6 Piers Hunt and I were out looking for Bulbophyllum in the beech forest behind the



Corybas Saprophyticus
J. B. Irwin

maori relics I found underground stems of *C. cryptanthus* under some manuka. One of the plants had a seed head.

Pinehaven School (Upper Hutt). On our way back Piers noticed what he took to be a seed head of *Caladenia* var. *minor*. As we were not certain we took it to Mr A. Druce for identification. He told us it might be *Corybas cryptanthus* and asked us to look for the flowers the following August.

On July 17 (1956) we went over to the beech forest again and I found 5 flowers of *C. cryptanthus*, their tips just showing above the leaf mould. This we cleared away, thus exposing the flowers completely. Mr Druce later took photographs of the flowers. The plants were growing in a sheltered spot only a few yards from an open grass paddock. They were growing in the leaf mould of black beech, though there were several rimu and kahikatea trees nearby. The ground was flat, moist but not swampy, and received a certain amount of afternoon sun.

Later on we found more flowers and by the end of August we had seen over forty. On September 6th, flowering was nearly over. In December we saw several seed heads (some in places where we had not noticed flowers), but in early February we could not find any.

When I was away camping at Ruakaka Bay, Queen Charlotte Sound, last Christmas, Michael Christeller and I found some while we were digging for

E.O.CAMPBELL, M972 (5) i states; "It is reasonable to conclude that *Corybas cryptanthus* is, at least in part, an epiparasite on the roots of *Nothofagus* and derives nutrient from the tree roots through the agency of a fungus. She also lists a few more localities in her introduction. I hope this summary whets your appetite and helps guide you in your searching. Any more information on *Corybas cryptanthus*?"

References:

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- 2) E.D.HATCH, 1952. A New Species of *Corybas* Salisbury, and a note on some name changes in *Wahlenbergia* Schrader. Trans.Roy.Soc.N.Z. Vol.79, Pts 3-4, pp.366-69.
- 3) J.B.IRWIN, 1954. *Corybas saprophyticus*. Wgtn. Bot. Soc. Bull. 27, 1954, p.22-23.
- 4) TONY WHITAKER, 1957. *Corybas cryptanthus* (saprophyticus). Wgtn. Bot. Soc. Bull. 29. 1957, p.3.
- 5) E.O.CAMPBELL, 1972. The Morphology of the Fungal Association of *Corybas cryptanthus*. J. Roy. Soc. N.Z. 1972. Vol.2, no.1, pp.43-47.
- 6) E.D.HATCH, 1963. Notes on the N.Z.Orchids, II. Trans. Roy. Soc. N.Z. Vol.2, No.14. Sept. 1963.



