Fungi of Waiopehu Reserve, Levin

E. F. A. Garner, Levin

Periodic visits over the last few years have revealed a wide variety of fungi to be found in this reserve in the vicinity of Levin.

The following list of species has been compiled from coloured photographs and notes taken at the time.

Growing in a group about dead standing trees is *Armillaria limonea,* Stevenson type 552. Another of the same genus, *A. novae-zelandiae,* is in a group on fallen timber, Stevenson 629.

The genus *Mycena* is well represented. For the most part they are small and delicate: *M. parsonsii,* Stevenson 1369, with a pileus of 8+mm and a stipe of 20 mm; *M. hygrophora,* Stevenson 537, and *M. corticola* with its whitish bloom on the blue to blue-grey cap. There is a *Laccaria violaceo-niger,* Stevenson 506, which is somewhat similar in colouring to *Mycena corticola* but is convex, becoming plane.

An interesting fungus is *Hygrophorus psittacinus* which starts as a blue green toadstool and changes with age through yellow and white finally drying out a deep pinkish red. *H. eburneus* is another which is quite white. *Cantharellus elsae* was described first in the genus *Hygrophorus,* Stevenson 948, with deeply decurrent gills or wrinkles running to shallow grooves on the stipe.

Coprinus micaceus is one of those which disintegrates into an inky fluid.

Pholiota is another well represented genus. *P. aurivella* and *P. spectabilis* grow in close groups on trees. Another of this genus, not identified, in a close group of approximately 28 on a tawa *(Beilschmiedia tawa),* is of a light pinkish brown with a slightly darker centre and an up-turned margin, pileus 120mm, quite spectacular. *P. marginata* is on rotting timber.

Omphalia campanella on rotting wood on the forest floor, in groups. *Collybia veluripes* known also as Winter Fungus. *Amanitopsis fulva,* the Tawny Grisette with its reddish-brown pileus, *Oudemansiella mucida* clothing a tree with its slimy white clusters, and *Lepiota cristata,* white with its dainty reddish-brown concentric scales, sometimes less marked than others.

A *Psathyrella* in large numbers on a huge branch which had fallen off a rimu *(Dacrydium cupressinum),* possibly *P. spadicea* since there was no evidence of a veil over the gills.

Tricholoma nudum, also known as Wood Blewits, is an autumn growing fungus of the woods. There is *Crinipellis substipitaria,* Stevenson 211; *C. velutipes,* Stevenson 792, a larger type and fairly common; and *C. procera,* pileus 5-15 mm in diameter with a very long stipe, up to approximately 100 mm, fairly prevalent and well spread. Some of *C. procera* have been found infested with another but unidentified fungus, probably a Myxomycete. In appearance like miniature puff balls about 1 mm diameter, it is white to greyish in colour with an apical pin hole, emitting black powdery spores. *C. procera* is Stevenson 743. There is *Rozites castanella,* with its small triangular pieces round the edge of a red-brown granular pileus and delicately tinted gills.

Pleurotus mitis is one of many fungi which have eccentric stipes or no stipes at all. It grows in clusters and has slightly decurrent gills. *P. parsonsii,* creamy fawn in colour with deeply decurrent gills, is another. Growing in loose clusters on a rotting tree branch, one unidentified species is up to 35 mm diameter, funnel-shaped with an eccentric stipe, 25 to 30 mm and with copious mycelia.

Resupinatus tristis, Stevenson 1431, was growing on a stump in a somewhat scattered group. The gills are wide apart and irregular with gill-like folds between. *R sordulentus* has no stipe; white and drying out to creamy-yellow.

Aleurodiscus pateriformis: a small fungus scattered over the standing trunk of a dead tawa. Fruiting bodies from 8 to 15 mm — thin and tough, the hymenium having a cottony surface. In its early stages it appeared to be covered with granules. *Stereum caperatum* is funnel-shaped with a more or less centrally placed stipe. Like the preceding *Aleurodiscus,* the hymenium has neither gills nor pores. The abhymenial surface is clothed with dense tomentum. The hymenium is decurrent, radially fluted. *S. elegans* is somewhat similar but is seldom solitary. The pileus is glabrous and the hymenial surface grey. *S. fasciatum* is sessile, flabelliform and attached by a narrow base.

Elfvingia applanata is a bracket fungus, perennial. It can become quite large and one which had fallen from a decaying tawa in this bush measured no less than 400 mm wide, 250 mm from back to front and 100 mm deep. The hymenium is off-white becoming pale lilac to light-brown. Pores about 5 per mm. *E. mastopora* from a dead rimu has a brown hymenium.

Another bracket fungus, an unidentified *Osmoporus* species, has a corky pileus without a cortex. Its surface is very uneven and glabrous. *O. strigatus* is imbricate with radiately striate and appressed strigose hairs.

Heterobasidion annosum has a dark brown pileus and cream hymenium of irregular shape and wavy margins. *Trichaptum pargamenum* is small (about 35 mm wide), with dark brown to almost black hair in tufts on a white background with a blue grey hairy border. Its hymenium is blue grey and poroid, the pores having lacerate edges.

Grifola campyla, 35 mm wide, is a dirty white with deep brown hairs in tufts. It appears to be misshapen with two or three caps on a common stipate base. Its pores are about 2 per mm, glanced. *Poria rhodella* with its lavender hymenial surface and white margin was wholly or part y resupinate on a decaying branch on the forest floor.

Polyporus arcularius, with a bullate pileus, large, more or less hexagonal yellow pores and a brown cap, is in considerable numbers on rotting branches on the forest floor when conditions are right.

Fuscoporia contigua is adherent to a dead pigeonwood *(Hedycarya arborea),* with its tubes or pores glanced to release the spores gravitationally.

Steccherinum ochraceum on a rotting stump is sessile, imbricate and has spines on the hymenial surface instead of gills or pores.

Of the Tremellales or jelly fungi, one unidentified species has a bullate pileus and more or less hexagonal pores. It was sessile and imbricate with a broad clamp on a rotting log. One of no describable shape was possibly *Tremella versicaria.*

There were the *Weraroas* (formerly called *Secotium): W. erythrocephala* (red) and *W. virescens* (pale blue-green). There is the cup-like *Sarcoscypha coccinea,* the flat-shield-like *Lachnea scutellata* with its stiffly hairy margin, *Aseroe rubra,* the scarlet stinkhorn, and *Auricularia polytricha,* or Jew's ear, of which quantities were, at one time, shipped to China for making soups. *Cordyceps sinclairii* attacks the cicadal nymph in much the same way it forms the Vegetable Caterpillar, and another extraordinary growth found on a frond of a *Blechnum* proved to be the conidial stage in the life of a fungus which parasitises spiders. To quote Dr Joan Dingley, "the spider appears to have spun a cocoon on the frond and the fungus and wet weather have done the rest". It belongs to the genus *Cordyceps* or *Torriabiella.*

There are the bird's nest fungi *Crucibulum vulgare,* the charcoal fungus *Daldinia concentrica,* the common puff ball *Lycoperdon depressum,* and two of the *Geastrum* or Earth Stars. *G. triplex* has an externally smooth exoperidium and *G. velutinum* has a fleshy coloured layer on the inside of the exoperidium.

Clavariadelphus junceus, filiform and hyaline, has been seen growing with its pad of mycelium on leaves and twigs on the forest floor.

A species of *Clavaria* has been found but not identified, growing about 40 mm tall and branching upwards to sharp points. It is coloured fawn and turns black with the release of spores.

One slime mould on the trunk of a dead rimu has been given a tentative identification from a description and photograph by Dr Greta Cone, which is much appreciated. It is a species of *Lycogala.*

FOOTNOTE

F. Duguid

Waiopehu Reserve is situated at the eastern end of Queen Street, Levin, not far from the flanks of the Tararua foothills (Arapaepae Ridge). To quote the inscription on the entrance gate post: "This land (area 22½ acres) was proclaimed a scenic reserve 1913-1915 after previously being set aside as a waterworks reserve. In earlier times this land was a refuge for the Mua-upoko tribe with the Koputaroa stream providing water and an abundance of eel and kakahi shellfish". (One could add to this native pigeons, kaka and berries from the surrounding bush.)

Much of the bush is entangled with supplejack, being swampy on the southern side. The northern part has shingle subsoil so is naturally well drained, but becomes very dry after drought. Being so near the foothills, this reserve would have a fairly high rainfall (c. 1270 mm). The very mixed forest formerly contained giant rata and rimu. An old rimu, almost dead, still stands. The last giant rata (c. 1.5 m in diameter) came down in its old age in the February 1936 storm, and now only a few low mounds of rotting wood mark where the giants grew. Pukatea and kahikatea are in the southern part of the bush. Many ferns, both terrestrial and epiphytic species, are a feature throughout. Periods of drought kill them, but others soon take their place.

Mr Garner's list of fungi, above, shows that this small reserve has something of interest at all times for the keen observer.

FOOTNOTE

Greta Stevenson

Mr Garner's list of fungi from one small local reserve shows the range of beautiful interesting plants of this neglected group which may be seen in a restricted area. It must be remembered however that specific identifications from photographs only are nearly always tentative: see *Field Guide to Fungi* by Greta Stevenson, University of Canterbury, Publication No. 30, 1983.

Tree Ferns with the Bends

F. C. Duguid, Levin

Two mamaku ferns in my garden were so close together that for a number of years the trunks (caudices) were more or less parallel and the crowns interlocking. At intervals throughout the year, at times when a number of new fronds are growing up in the centre of the crowns, the older fronds spread out horizontally then hang down and die. While the two heads were interlocked many dead fronds remained entrapped in the crowns.

Early in December 1981, an excessive number of dead fronds were dropping off every few days so I gathered them up frequently to prevent untidy litter. At first the two trunks were parallel at about 16 cm apart. About five days later I was surprised to note that the width of the space at the top had increased perceptibly to about 25 cm. The numerous fronds of both ferns were exerting a horizontal thrust against each other from opposite directions, pushing the upper parts of the trunks apart. Barely a month later the space was about 30 cm. The thrust continued throughout the growing season, though less noticeably.

By late April 1982, growth had slowed down and the older fronds appeared likely to remain some time before falling. By this time the distance between the trunks just below their crowns was 41 cm, at a height of 3.35 m above ground level.

In August 1982 the older fronds were sagging to horizontal, with the two-way thrust as before. By the end of May 1983 the width between the trunks just below the crowns was 63 cm, at a height of 3.54 m above ground level.

The two trunks had remained closely parallel for as long as the fronds were too much interlocked to allow them to spread out horizontally.