FOREST FUNGI.

Miss Joy Osborne, whose work in the State Forest Service is concerned mainly with mycology, gave us an interesting evening talk on November 19 on Forest Fungi. She introduced us to the subject by describing first how different the nutrition of the fungus is from that of the green plant, which sustains itself by drawing inorganic raw materials from the soil and the atmosphere. Most fungi live either as saprophytes, using dead organic material for food, or, as parasites when they live on another living organism. That interesting class of fungi, the mycorrhiza-forming species, were referred to specially. They grow in and upon the roots of living plants including practically all forest trees, from which they appear to derive something while at the same time they contribute to their host nitrogenous material, which they synthesise using atmospheric nitrogen. This interesting behaviour of forming a helpful partnership with another organism is seen in many fungi, for example, also, in all those which go into lichens.

Most of the forest fungi are beneficial, although some forest fungal diseases are important. Several American examples were described in detail and beautiful illustrated pamphlets for educating the public in these matters were shown. Some gall fungi of indigenous forests, notably Cyttaria gunnii on Nothofagus were demonstrated. Different kinds of wood rots, classified according to the form developed by the rotten wood mass were illustrated with beautiful photographs. How the offending fungus could be isolated was described, and a row of tube cultures showed how the fungus is grown on artificial media in a pure state so that it can be identified.

The saprophytes active in the bush rapidly convert dead wood and leaf material into humus, and finally into nitrate and ammonium compounds which are available to the roots of living plants, and into carbon dioxide which returns to enrich the air. Many forest saprophytic fungi have conspicuous fruit bodies, brackets and toadstools, which were illustrated by a large collection of specimens and some very beautifully pictured books. Miss Osborne explained how these large fungal bodies, which so often appear very suddenly and last but a short time, are built up by the massing of the minute threads which form the main, though usually invisible part of the growing fungus. The cottonwool-like growth in the culture tubes showed the form of the fungus plant which penetrates whatever substratum it grows upon.

The many details which Miss Osborne gave us show what a keen and thorough worker she is in this field. The comprehensive collections and the wide range of exhibits which she carried along with her were a further testimony. Keen appreciation was shown by the meeting. After the talk, over the exhibits, many questions were asked and ably answered by the speaker.

Greta B. Cono.

LABOUR DAY IN THE WANGANUI DISTRICT.

At Raetihi we stopped the car and wondered which way we should take, the Wanganui River or the Para Para. Fortunately we chose the latter. For a few miles south of Raetihi the country is rather uninteresting, and near the bottom of a long winding hill the road passes over the Mangawhero River, flowing in a deep gorge. This river the road follows, never losing sight of it for thirty or more miles. The country is unlike that in any other part of New Zealand. It is high but not razor-backed. It is all papa country, dearly loved by our kowhai; and it was these kowhais that made our trip so wonderful and interesting. There were literally thousands of them, mostly in bloom. They followed the tortuous river banks, they ornamented the towering papa cliffs above the road, they dotted the green paddocks. They were in all shades of yellow, from lemon to almost orange - kowhai gold - providing a feast for numerous tuis. The trees had extra charm because they are all of the drooping kind; they were showers of gold - no stumpy branches here. Leaves were not showing at all.

LABOUR DAY IN THE WANGANUI DISTRICT (Contd.).

Three kinds of clematis were in blossom too; starry white in some places, real sheets of it; the pale frail green one, and the strong-smelling yellowish one, this latter loving to festoon the makomako trees.

Another gorgeous sight were the aspens in spring dress. They bore bunches of small leaves of vivid copper-beech colour, and from each bunch hung one or two green catkins, a unique colour scheme, especially when the sun shone through. As the road dropped towards the Wanganui River we lost the kowhais and the colour in the aspens became less vivid, and we felt less in need of rubber necks. One cannot help being interested in the blossoming times of the kowhais in the various parts of New Zealand, from June or July right till November.

Dulcia M. Mason.

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MEMBERS' EXHIBITS.

The evening meeting in December was occupied by an informal exhibition of specimens of various kinds, of which only a few can be mentioned here.

Mrs. Newman lent a set of beautiful china plates, decorated with paintings of Australian wild flowers.

Mr. Morris Jones brought a large collection from his garden, including Rhadbothamnus with richly tinted bell flowers; brightly coloured fronds of Doodia media, a fern that grew in Hataitai before there were so many roads there; Ackama rosaefolia from the kauri forests; dainty male flowers of Pittosporum cornifolium; Teucridium parvifolium, belonging, like the puriri, to the verbena family; and two sprays of the reinga lily (Arthropodium cirrhatum) both grown from seed, but differing markedly in size.

Mr. Duncan's garden also made a large contribution, amongst which was a flowering branch of Olearia thomsoni a species from the Wanganui River district that has very seldom been collected. Flowers of Senecio Alfred Atkinson were much admired, as were also those of Wahlenbergia matthewsii, a bluebell with flowers more than an inch across. The creamy white flowers of Pittosporum kirkii were new to most of us. A plant that any gardener would be proud to grow is Senecio turneri, one of the herbaceous members of the genus somewhat like S. latifolius. The inflorescences are tall, with stiff reddish stems and flat bronze-yellow daisy flowers.

Dyeing with lichens and other native plants was briefly described by Mrs. Samson, who was wearing, as a demonstration, a knitted cardigan dyed a dull old-gold colour with the bark of Coprosma grandifolia (C. australis).

An inflorescence of Cordyline pumilio, the dwarf cabbage tree, was exhibited by Miss Neumann, who brought the plant from Hokianga about two years ago.

Dr. Morice brought Orthoceros stricta, a late-flowering orchid, from Wallaceville. She displayed also twigs of Carmichaelia hookeri, from a plant that was collected at Paekakariki about 15 years ago and is now ten feet high in a Wadestown garden.

Flowering plants of an Ourisia recently gathered on Mt. Matthews were shown by Mr. Druce. He brought also pressed specimens of Helichrysum bellidioides which has single flower-heads Gnaphalium koriense with much-branched flower-heads, and plants intermediate between the two which he suggested must be hybrids.

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