

to our house and we look out for it every time it rains. So far we've found it only under one particular beech tree, although there is a predominance of beech in the area. The fungus is a dark purple and only ever shows the very top of its head above the ground. On digging one up we found a puff-ball shaped object which is extremely slimy.

Another interesting fungus, again a brilliant colour but this time a bright yellow, was found on a dead branch. At first I thought it was a flower but instead discovered a very delicate flower shaped fungus. After several days rain I found that it had increased along the branch forming a bunch of 'flowers.' As soon as the rain stopped my 'flowers' shrivelled but not before we had taken a photo and also interested others in the village so that they also took photos.

Now to hemiparasites. The first we saw whilst tripping about in the Paraparu area was Elytranthe colensoi. We found this mistletoe just getting a hold on a Coprosma spathulata. It was only a few inches high but had its roots well secured around the Coprosma branch. This we hope to be able to view from time to time to record its progress.

On a visit to the Ranger at the Cobb Reservoir we were shown an E. tetrapetala which is living in company with an Aristotelia fruticosa. The two are so intermingled that they appear to be one plant supporting two types of leaf.

An exciting find was an epiphytic fern, Hymenophyllum malingii, which is almost a grey colour above and reddish below. A mountain fern, it is usually found on dead or decaying cedar trees. Miss Crookes has noted it as "growing terrestrially in great luxuriance in thick moss in sheltered places in the Nelson district" and this is how we found it on the Cobb Ridge.

N.H.

WHAT IS A JORDANON ?

R. Silvester

Alexis Jordan was a 19th century botanist - native of Lyons (France), a follower of Linnaeus and a strong believer in the fixity of species.

Jordan studied a small annual crucifer, Erophila or Draba verna, common in poor dry pastures, old walls etc., in Europe and Western Asia. This plant, insignificant in appearance (a rosette of leaves and a few colourless inflorescences) is remarkably polymorphic. Practically all the organs show variations. The most striking are those of the leaves in size (small, large), shape (linear, elliptic, rhomboid), colour (light green, glaucous), glabrous or more or less hairy (hair being simple or stellate). Petals generally cordiform can be emarginate, linear, others touch their neighbours. Peduncles are short or long.

Siliqua are elliptic, linear or nearly orbicular. The plants, 3 to 15 centimetres high, bloom in spring over a period of weeks some being early, others late.

Each location has its peculiar form - around Lyons Jordan found nearly fifty of these - and often different forms would be found living next to each other.

In all, Jordan recognized more than 200 forms in Europe and Asia and a few more have been added since.

Jordan grew Erophila from seeds in large numbers for a period of 10 to 12 years (10 to 12 generations) and found that the different forms came true from seed like the Linnean species. Other scientists working on Erophila got the same results. The Linnean species Erophila verna is not a unit but a conglomeration of 200 odd elementary species, distinct, constant in nature or under cultivation.

Jordan in his book " Icones Florae Europae " gives numerous examples of many elementary species occurring in other plants.

Lotsy (1916) proposed two terms:

"Linneon" - applying to the Linnean species used by the botanist.

"Jordanon" - the elementary species found in the Linneon

The jordanon (inside the linneon) comprises all the externally identical individuals who transmit their characters (however insignificant they may be) by autofecundation or by fecundation by an individual of the same constitution.

Prolonged cultivation by seed is the only process which permits us to recognize the jordanons existing in nature. This is relatively easy for annuals but would be a very lengthy and costly experiment to conduct with plants producing seeds only after many years of growth.

De Vries (1906) thought that jordanons were just mutations and that Erophila was cleistogamic (fertilization occurring in the flower bud).

Lotsy found that some Erophila were apogamic (producing an embryo without pollination). Later it was found that the chromosomes varied in numbers $N = 7$ $N = 15$, and though analogous in many cases were not homologous, varying by only a gene or two and consequently giving a slightly different plant.

In the case of the N.Z. flora it would be a boon to be able to sort out accurately and speedily the jordanons from the interspecific hybrids and so facilitate the task of the taxonomist and of the amateur botanist.

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