

BROOM OR CLOVER RAPE (OROBANCHE MINOR).

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THERE are several species of broom-rapes, but the only one naturalized in New Zealand is the lesser or clover broom-rape, *Orobanche minor*. As I have had several inquiries about it, and have seen it in paddocks of clover in the North Canterbury district, it may interest farmers to know something about it, or enough to identify it if found in their fields. This parasitic plant is destitute of green-colouring matter, and so, unlike green plants in general, is impotent to manufacture sugar and starch from carbon-dioxide and water to meet its food requirements. Broom-rape is wholly a parasite, and becomes a robber of other plant-life. The seed is sometimes sown accidentally with clover, and when it germinates becomes attached to the roots of the crop. To get command of the food in the plant to be robbed the parasite has a special tool called a sucker, which is inserted into the root of the host plant. Owing to this peculiar mode of attack it is commonly called a root parasite. Once the robber gets command of the food resources of a plant it immediately turns them to good account, for it transforms them into a corpulent underground body called the tuber, from which proceed the roots, or suckers, that attach themselves to the clover. The stem is erect and fleshy, bearing small colourless pointed scales instead of leaves. It is from 8 in. to 12 in. high, and is at first a yellowish-brown colour, turning darker in shade as it grows older. At the free end it bears flowers of a dirty-white colour. These produce oblong capsules full of numerous minute seeds of a dark colour. To prevent the attack of the broom-rape the seed of the red clover must be absolutely free from the seed of the parasite. If any spot in the clover-field shows signs of the parasite the plants there should at once be dug out and burnt, to prevent seeding. On no account should broom-rape plants be allowed to seed.

NOTE BY A. H. COCKAYNE.

The broom-rape (*Orobanche minor*) is, in Europe, looked upon as a very serious clover-parasite, and is said to cause wholesale destruction in fields that are devoted exclusively to clover-growing. It is especially detrimental in those clover crops that are grown for seed.