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ONION WEED

(*Asphodelus fistulosus* L.)

Onion Weed, native to the Mediterranean region, has become firmly established in many coastal localities and also occurs in a number of inland districts. Control by cultivation is not difficult, but it is troublesome in pastures and grows freely on roadsides.

WEEDS of Western Australia

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ONION-WEED OR ASPHODEL

(*Asphodelus fistulosus* L.)

IN the form of its flowers and leaves Onion-weed shows a marked resemblance to the cultivated onion types, especially the shallot. They are members of the lily family although belonging to different genera—the true onions being species of *Allium*. Two notable differences are the absence of any conspicuous bulb formation in the case of Onion-weed, and the fact that it does not develop the characteristic smell of the garden plant.

It is interesting to note the diversity of forms and the difference in significance of various members of the lily family. To this group belongs a large number of herbaceous plants both useful and undesirable. Although those having economic value are restricted in number we have already mentioned the various types of onions which, along with asparagus are used as food plants. Certain others such as *Smilax* (Sarsaparilla), *Urginea* (Squills), *Aloe* (Aloes) and *Colchicum* have medicinal value.

Among the more robust types are New Zealand flax (*Phormium*) and *Yucca* both of which yield a commercial fibre. Probably the strangest members of the family and certainly those most unlike the general conception of a lily are the blackboys and grass trees which are such conspicuous components of the vegetation in many parts of this State.

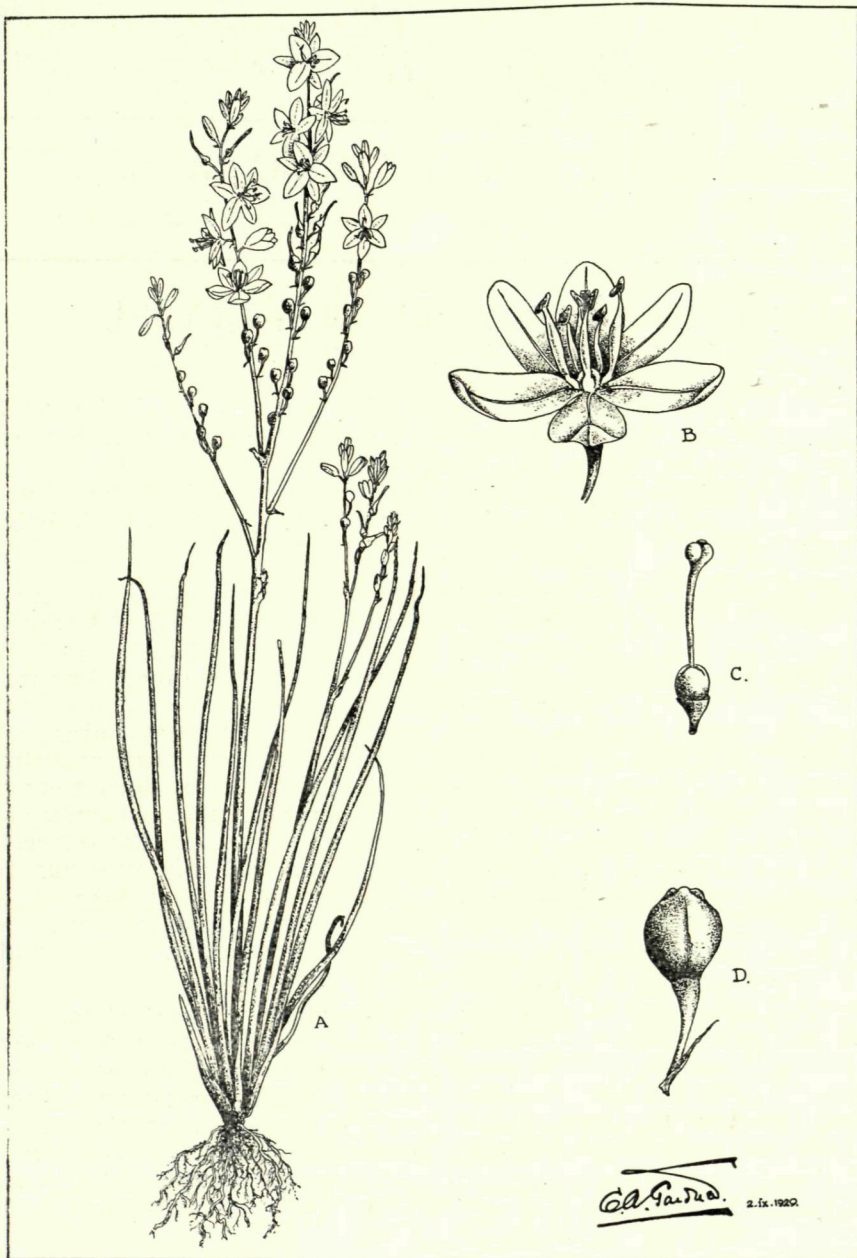
Like many other aggressive introduced species, Onion-weed is native to the Mediterranean region but now occurs in all States of the Commonwealth. It is most plentiful in South Australia where it dominates areas to the almost complete exclusion of other plants. Roadsides and uncultivated land are most affected and the weed is conspicuous in some Adelaide suburbs as well as affecting agricultural land.

In Western Australia it has been recorded from a number of localities including Geraldton, Greenough, Fremantle, Rockingham, Esperance, Pithara, Koorda and Carnamah. For many years it was restricted to the coastal areas and it was assumed by some that maritime conditions and limestone soils were necessary for its growth. This assumption was dispelled when specimens were received from Pithara in 1938 and subsequently plants have been located in other inland districts. The heaviest infestation, however, still occurs in the Geraldton and Greenough area.

Anthericum divaricatum, a related plant resembling *Asphodelus fistulosus* is also known as Onion-weed and grows under similar conditions although to a lesser extent. It has a similar type of inflorescence but the leaves are flattened and it is generally more robust. Agriculturally it is comparable with *Asphodelus*.

DESCRIPTION

The name "Onion-weed" is obviously derived from the resemblance to the garden onion, while Asphodel is an abbreviation of the generic name. It is well to bear in mind also that Guildford grass (*Romulea rosea*) is sometimes referred to



ONION-WEED OR ASPHODEL.
(*Asphodelus fistulosus* L.)

A—Habit of plant; B—Single flower; C—Pistil, showing fruit developing; D—Fruit.

(From a pen-drawing by Mr. C. A. Gardner, Government Botanist.)

as Onion-Grass or even Onion-weed. In the Eastern States onion-grass is the accepted vernacular name of this plant.

Onion-weed is a hairless perennial herb 1 to 3ft. in height with numerous long, comparatively fine roots. The stem is hollow, simple or branching dichotomously towards the summit. The leaves are slender, semi-cylindrical, dark green, inserted spirally at the base. The flowers are white or flesh-coloured, in loose racemes and are subtended by whitish bracts. The six spreading perianth segments are each about $\frac{1}{2}$ in. long with a pinkish or brownish stripe along the main vein. There are six stamens with lance-shaped filaments, hairy at the base where they curve over the ovary. The stigma is three-lobed and the capsule globular, about $\frac{1}{4}$ in. in diameter, transversely wrinkled and opening in locules. In each locule are one or two black, triangular seeds. These are covered with irregular elevations and depressions. The normal flowering period is July-November.

SIGNIFICANCE

Onion-weed is not known to be poisonous but, on the other hand, is seldom eaten by stock and cannot be regarded as having any forage value. Besides being a perennial it seeds freely and under favourable conditions will soon dominate uncultivated land. It is most conspicuous as a roadside weed but also intrudes into pastures, causing a considerable reduction in productivity. Fortunately our experience to date indicates that it is not a serious weed on land cultivated regularly, but ley farming introducing a rotation including several years of pasture could well favour the development of this weed. Its main disadvantage is that, after a period of years the density of growth pro-

vides severe competition for the desirable elements of a pasture. With few exceptions, in the affected areas these elements are of annual duration compared with the perennial habit of the Onion-weed.

It has been declared a secondary noxious weed for the Road Districts of Dalwallinu, Yilgarn and Esperance and the Municipality of Bunbury.

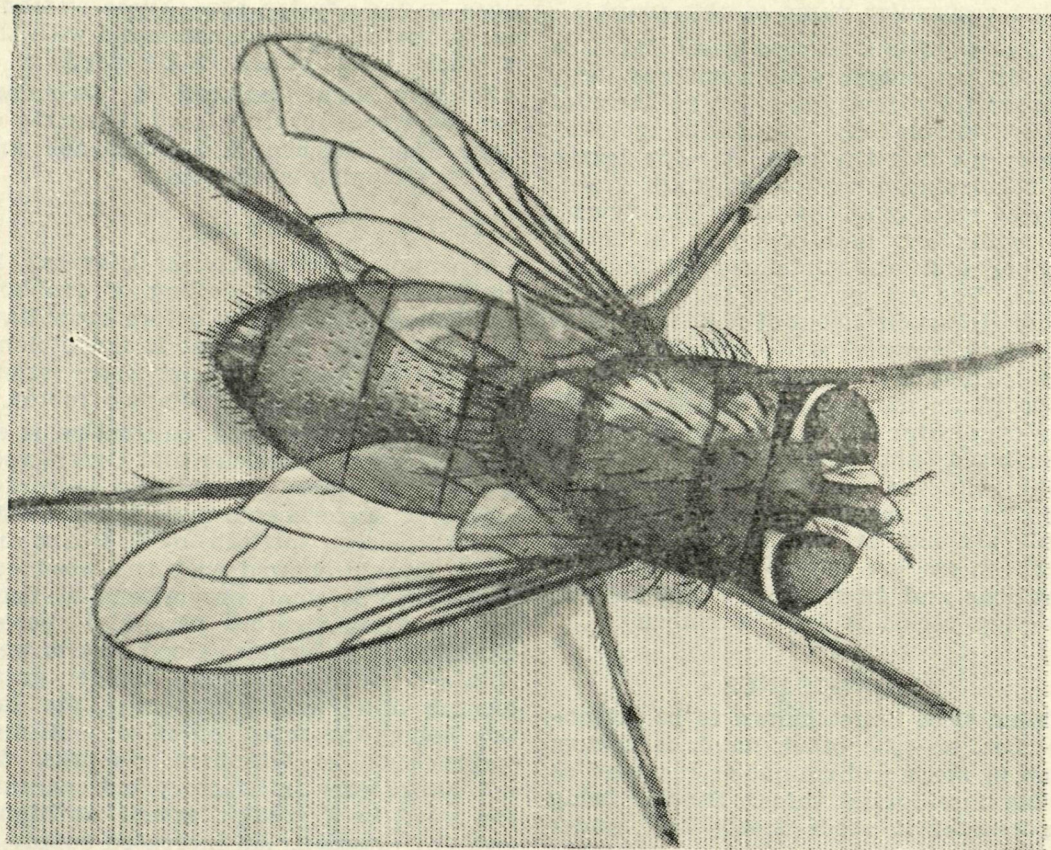
CONTROL

When plants first appear they can be destroyed readily by pulling or grubbing and this should be done before seeds have been produced. The plant is not stoloniferous like a number of our more serious weeds and is relatively shallow rooted.

As already mentioned, cultivation is an effective control measure and Onion-weed is not troublesome on land that is worked regularly. Experiments undertaken at the Waite Research Institute by B. Roark and C. M. Donald showed that the weed can be reduced to small proportions by competition from vigorous perennial species, either grass or legume. Good results were obtained with perennial veldt grass, lucerne and *Phalaris tuberosa*, the last two being the most effective. Annual species such as Wimmera rye-grass did not prove very satisfactory but checked the weed to a greater extent at higher levels of nitrogen. An increased supply of nitrogen was even more important in the case of perennial rye-grass.

Perennial pasture species cannot be grown readily in the districts in this State where Onion-weed is most vigorous and therefore every effort should be made to prevent its encroachment into pastures. It is relatively resistant to the hormone-like herbicides, and chemicals such as sodium chlorate are too costly for other than small areas.





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