Veins provide useful differentia. Species with toothed margins are veined as follows:-

N.fusca has 3-4 distinct pairs of veins, N.truncata has 5-6 distinct pairs while in the smaller leaved N.menziesii the veins are obscure.

Another useful character is provided by the "domatia" (little pits occurring in some species in the axils of the veins.) These are found only in menziesii and in fusca but remember as regards Fusca domatia have not been recorded in saplings below 6-10 feet high.

As regards the two species with smooth margins, a glance at the sketch shows how these differ in shape. The veins of solandri are distinct but those of cliffortioides are obscure. The under surface of the former has a grayish-white tomentum, of the latter a grayish-fulvous tomentum.

There are, of course, differences in leaf size and these also can be taken into consideration.

These characteristics, worked out originally by Cockayne, apply of course only to pure species, and it is to be remembered as Cockayne has stated, "Hybridism occurs to an astonishing degree in the genus".

Needless to say the flowers and fruit are very important for the taxonomy of the genus, but members who wish to go into the matter further must consult Poole's articles. In the meantime the editor wishes them success with their keys.

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## Weeds in My Garden (Part 5)

"Larger Fellows of the Baser Sort".

Solanum auriculatum Ait. The auricled Solanum.

It seems odd to refer to a tree as a weed, but there is one small tree that constantly contributes vigorous and aggressive seedlings to quiet corners. Fully grown it reaches about 24 ft. and rapidly colonises waste areas, particularly in volcanic regions. Its one merit is ease of recognition. Its large soft leaves, often eight inches long with their white tomentum (covering of woolly matted hairs) and their quaint little "auricles" at the leaf bases are like no other naturalised tree, while its blue potato-like flower clusters and round yellow berries proclaim it as a member of the genus Solanum with refreshing clearness. The specific name auriculatum derives from the auricles i.e. the little stipule-like leaves to be found in the leaf axils. (See fig.I).

When crushed the plant emits a repellent smell and one is not surprised to learn that it is listed as "probably poisonous". It hails from tropical Africa and is, not surprisingly, confined to the northern part of our island. It is essentially a "waste places" weed.

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Solanum nigrum L. Black Nightshade.

An even more common, and much more widespread member of the Solanum family is the black nightshade - Solanum nigrum. It varies in height from one to three feet and is annual or biennial. Its tiny potato-like flowers are white to be followed by berries that are usually black. In Britain also the berries are usually black, but, especially on the Continent, they sometimes adopt more colourful ways and are reported to be green, yellow or dingy red. The variety humile (Bernh.) a low growing form with yellow berries is sometimes to be seen in N.Z. but it is much rarer than the black-berried forms.

The interesting question arises, is S.nigrum native or is it introduced? Dr. Allan states that "the forms commonly found in waste places, are at least in most part introduced", and he comments, "Luxuriant forms with large leaves and lustrous berries, frequent as forest margin plants, are perhaps indigenous." It is listed as "probably poisonous".

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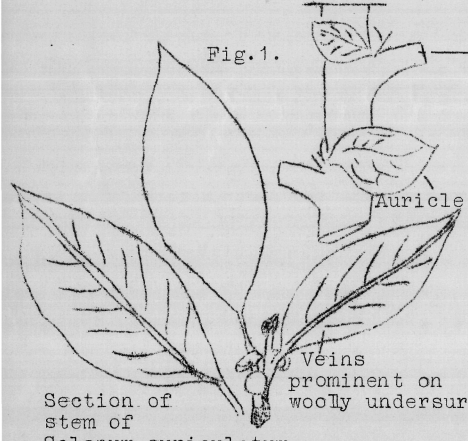
Phytolacca octandra L. Inkweed.

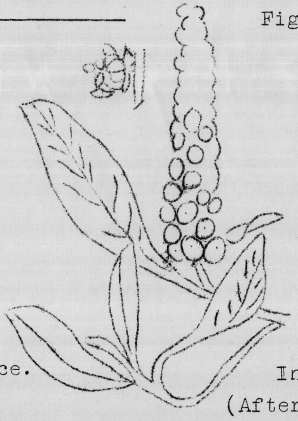
A naturalised plant that I find particularly revolting is the large and blatant inkweed. I can discover in it no redeeming features. It is sometimes 6 feet and more high, ugly, poisonous, and to add insult to injury, its berries give a particularly obstinate stain. It has angled stems, leaves up to eight inches long, and stiff erect racemes of small inconspicuous, close packed greenish flowers. The green to purplish sepals are persistant in the fruit. The fruit is flattened and berry-like consisting of the (usually eight) ripened and united carpels. It is a "waste place" weed and also given to disfiguring forest margins. (See fig. 2).

Fig.1.




Section of stem of Solanum auriculatum (After G.I. White)

Fig.2.




Inkweed (After Atkinson)