Asteliads of the Wellington District

I. M. Morice

As two brothers, or two sisters, in a family are sometimes mistaken for one another by strangers, though to those who know them well they look entirely different, so astelias and the related collospermums appeared to me at first to be much the same. An interest in the seeds of cabbage trees led to further interest in other members of the family Liliaceae—as listed in "Manual of the New Zealand Flora" by T. F. Cheeseman—among them the genus *Astelia*. C. Skottsberg (Studies in the genus *Astelia* Banks et Solander, *K. svenska Vet. Akad. Handl. Ser. 3, 14 (2)*, 1934) recognised certain differences between a group of species of *Astelia* (meaning without a stem) and the remainder of the genus, and placed this group in a new genus, *Collospermum* (meaning glutinous seeds). The names that follow are those used by Skottsberg. Unlike the genus *Cordyline*, the genera *Astelia* and *Collospermum* are dioecious, so the finding of a plant in flower does not guarantee the subsequent finding of seeds; the plant may turn out to have been a male, or a female that has flowered at the wrong time of the year and remained unfertilised.

Two species of *Astelia* are fairly common at low levels near Wellington—*A. solandri* (*A. cunninghamii* of Cheeseman) and *A. nervosa* var. *silvestris*. *A. solandri* (after Dr. D. Solander) is usually epiphytic, growing on hinau, rimu, kamahi, beech, kohekohe and other trees. It grows on the ground in some beech forests, and may be seen on cliffs, as for instance beside the road to Oteranga Bay. The leaves are narrow, ½-1 in. by 20-77 in., and of a silvery green colour. I have seen it flowering on the Akatarawa Saddle in January. The fruit is small, and yellowish to brown when ripe.

Astelia nervosa var. *silvestris* (of the forest) grows only on the ground, very often but not always beside a stream. There are some clumps near a streamside bush remnant on the way to Te Ikaamaru Bay. It is plentiful beside the Akatarawa R. and by a tributary of the Wakatikei; it has also been seen up a rocky gully near the mouth of the Orongorongo, and beside the Blue Mountains road, behind Pinehaven, where in November it had young fruit shining in the rain like green caviare. The leaves, up to 3in. by 90 in., are tough and almost impossible to pull out. They are much wider than those of *A. solandri* and on each side of the mid-vein there is a distinct rib or "nerve" (hence the specific name). This is sometimes coloured red. The fruit is orange when ripe in February and it set on a slightly fleshy, orange perianth which becomes flattened to the shape of an inverted saucer. Like the leaves, the stem of the inflorescence is difficult to pull out and very tough to cut with a knife.

Astelia cockaynei (after Dr. L. Cockayne) grows on the ground at higher levels, either in the bush or in the open. There is much of it on the Rimutaka and Tararua ranges. The leaves, 1¼-1½ in. by 28-53 in., are narrower than those of *A. nervosa* var. *silvestris* and have a bronzed appearance on the under surface. The ripe fruit may be red or orange, and sits in a "cup", not a "saucer".

Astelia linearis var. *novae-zelandiae* grows in bogs above the bush-line on the Tararua Range. It is one of the smallest species in the genus, with leaves only 1/10-¼ in. by 1-8 in., and attracts attention by its bright red fruit which seems large for such a tiny plant. I have found ripe fruit in January, at which time some plants were still flowering. The fruit smells most attractive, but I have not tried eating it.

If one can get close enough to them, *Collospermum hastatum* and *C. microspermum* can be easily distinguished from *Astelia* species by their dark brown or black leaf bases. In contrast to the leaves of *Astelia,* which are tough, the leaves of *Collospermum* are brittle and break easily. In *Collospermum* none of the lateral racemes of the inflorescence are branched, whereas in *Astelia solandri* and *A. nervosa* var. *silvestris* the lower ones are. As a result of the longer stamens the male inflorescence of *Collospermum* has a much fluffier appearance than that of *Astelia.*

Collospermum hastatum (*Astelia solandri* of Cheeseman) derives

Photo: A. P. Druce.

Astelia linearis var. *novae-zelandiae,* Tararua Ra.

Photo: I. M. Morice.

Male plant of *Collospermum microspermum*, Blue Mountains.

its name from the hastate or arrowhead-like anthers, which indeed are characteristic of all the species of *Collospermum*. *C. hastatum* is very easy to find in the bush of the Wellington district. The great clumps it forms on the trunks of trees were at first taken by Captain Cook and his companions to be the nests of some large bird. It grows on the same range of trees as *Astelia solandri* and like that species is sometimes found on the ground. In Muritai Park I saw what looked like *A. nervosa* var. *silvestris* growing a short distance below the path, but on closer examination I realised that the plant was *Collospermum hastatum* for it had black leaf bases. The leaves are about the same width (1½-3 in.) as those of *Astelia nervosa* var. *silvestris* but are usually shorter (24-67 in.). It flowers in January and the fruit is ripe in May. I found no fruit in the autumn of 1961, but in 1962, and particularly in 1963, fruit seemed to be abundant. The fruit is rather small, bright red and translucent, and not unattractive to the taste.

The leaves of *Collospermum microspermum*, ½-1½ in. by 16-61 in., are narrower than those of *C. hastatum*. *C. microspermum* grows on trees such as rimu, kamahi, beech, mahoe and hinau, or on the ground. I have not noticed it at Otari, Crofton Downs or Butterfly Creek, but have seen it in the valleys of the Wakatikei, Akatarawa and Akatarawa West, and in the Blue Mountains bush. It is com-

Photo: I. M. Morice.

Female plant of *Collospermum microspermum*, Blue Mountains.

mon at higher levels in the Rimutaka and Tararua ranges. At first sight it resembles *Astelia solandri*, but it can be distinguished from that plant by its black leaf bases. In the Blue Mountains bush *Collospermum microspermum* and *Astelia solandri* were growing side by side, with *A. nervosa* var. *silvestris* not far away, but there was no *Collospermum hastatum*. *C. microspermum* was flowering there in January, and in June five fruiting inflorescences were obtained. When ripe the fruit is white, with the black seeds showing through the flesh and skin. The taste is like that of *C. hastatum*. Despite the specific name the seeds of *C. microspermum* are slightly bigger than those of *C. hastatum*. They seem to be less glutinous.

Opossums appear to have a fondness for asteliad flowers. In Crofton Downs bush seven intact female inflorescences of *Collospermum hastatum* were seen close to the path, but further away three out of another four were bitten off near the lowest raceme. In a branch of the Wakatikei R. the flowers of *C. hastatum* growing on felled trees had been eaten. Some of the inflorescences of *C. microspermum* in the Blue Mountains bush had also been eaten, possibly by deer, probably by opossums. In the Akatarawa West a few bitten-off inflorescences of this species were seen on trees in positions beyond the reach of any deer. Although there were many plants present no fruiting inflorescences were found.

Photo: G. C. Kelly.

Astelia nervosa var. *silvestris*, Akatarawa Saddle.

Astelia cockaynei, Ruahine Ra.

Photo: A. P. Druce.

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Young plant of *Collospermum microspermum*, Egmont National Park.

Astelia solandri, on rata trunk, Egmont National Park.

Photo: A. P. Druce.

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Fruit of *Astelia cockaynei* (above) and *A. nervosa* var. *silvestris* (below), Egmont National Park.

Photo: A. P. Druce.