

Rediscovery of the Sedge, *Gahnia Robusta*

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IN 1894—sixty-seven years ago—T. Kirk described (in *Trans. N.Z. Inst.* 24: 261) a “robust species” of *Gahnia* “with erect culms, 6 ft.-7 ft. high” that he had collected at “Mungaroa, Wellington” (now spelt “Mangaroa”). He named it, appropriately, *Gahnia robusta*. And that was the last that was heard of the plant apart from Cheeseman’s remark (*Manual of the N.Z. Flora*, 1925) that he had seen “the specimens in Mr. Kirk’s herbarium.”

I had often wondered about this *Gahnia*—whether it was still growing and what it was like—when visiting Mangaroa Valley and its large swamp. But there appeared little hope that it would be found for W. F. Harris had written in 1947 (*Bull. Wellington Bot. Soc.* 15: 8): “The valley is now much altered . . . as bush has been cleared from the hills and the swamp has been drained and planted in flax. Dried specimens in the Kirk herbarium are probably all that remains of *Gahnia robusta*.” Then in September last year (1960) I quite accidentally stumbled across two plants a few yards off the Wallaceville road at the north end of the swamp. The erect panicles immediately distinguished the species from the others that I knew. So *Gahnia robusta* was not extinct!

But were there only two clumps? In August and September this year (1961) I twice revisited the locality and found, altogether, six more clumps, several of them (let it be admitted) fully visible from the road. The locality is 400-500 yards S.S.E. of Cruickshank trig and 200-300 yards N.W. of the bridge over Black Creek at the outlet of the swamp. The altitude is 450 feet and the grid reference 617408 on map N. 161 of the one mile series. The plants, eight in all (six adults, two juveniles) are growing in wet peaty situations at the foot of two small gullies on the N.E. side of the road. The vegetation, of which they form part, is a manuka/flax/*Blechnum capense* community. The manuka (*Leptospermum scoparium*) forms a very open upper layer at about 15 feet and with it are associated several small trees of *Pittosporum tenuifolium*. The gaps are mainly occupied by clumps of flax (*Phormium tenax*) which, with the addition of the *Gahnia* tussocks, some bracken and a number of shrubs, forms a second layer six to seven feet high. The shrub species—in most cases represented by only a few individuals each—are as follows: *Coprosma robusta*, *C. lucida*, *C. rhamnoides*, *C. tenuicaulis*, *Cyathodes fasciculata*, *Neopanax arboreum*, *N. anomalum*, *Pittosporum tenuifolium* (saplings), *Pseudopanax crassifolium* (saplings), and the adventives, gorse, broom, Spanish heath. The third layer is dominated by the common form of *Blechnum capense*, which, in places, forms a dense cover three to four feet high. With it is a fair amount of *Carex lessoniana* (*C. ternaria*) and two species of

Cladium. The only liane present is *Muehlenbeckia australis* which was leafless at the time of my visits. On the roadside margin of the community *Carex virgata* and two tall unnamed species of *Juncus* occur in small numbers.

The low hills immediately bordering the community away from the road formerly carried beech forest, with black beech on the easier, less-well-drained slopes and hard beech on the steeper, better-drained ones. At the present time these hills are in manuka scrub, except on the side of one of the gullies facing south-east, where the scrub has already developed into kamahi forest. I searched both the scrub and the forest but could find no plants of *Gahnia robusta*—only *G. setifolia* and *G. pauciflora*. *Coprosma microcarpa* is common here, and at the edge of the manuka/flux/*Blechnum* community *Olearia arborescens* and *Neomyrtus pedunculata* occur—an unusually low altitude for these species.

On the margins of Mangaroa swamp *Gahnia xanthocarpa*, up to ten feet high, is abundant in places but can be distinguished from *G. robusta* by its drooping panicle. It is possible that *G. robusta* occurs in the main area of the swamp, but in the three places where I have been onto the peat I have failed to find it. At the present time renewed efforts are being made to develop the swamp into farmland by draining and clearing, and it appears likely that the native vegetation, already very greatly modified, will eventually disappear.

Now that *Gahnia robusta* has been found it will be necessary to determine whether this species is really distinct from *G. rigida* of the South Island. Kirk, who described both species, says *G. robusta* has "the strict habit of *G. rigida*, T. Kirk, but is more robust". I strongly suspect that we are dealing with one entity only, but since I have not seen *G. rigida* I must leave the question in abeyance in the meantime. Even if the Mangaroa plants turn out to be *G. rigida* they will be of significance as the only known representatives of that species in the North Island. Specimens from Mangaroa, collected in 1960, are in the herbarium of the Botany Division, Lincoln.

Kirk described the nut of *Gahnia robusta* as "black or brownish black", Cheeseman as "black when fully ripe". Fully ripe nuts collected off one of the plants I saw at Mangaroa this year, though brownish black in the middle, are consistently coloured reddish brown at the ends (more at the base than at the tip). Each species of *Gahnia* in New Zealand has nuts that are distinctive in colour and/or size, and in order to show the position of *G. robusta* in relation to the other species (excepting *G. rigida*) the table below has been made. The species are listed in order of increasing length of the fully ripe nut, which is given as a mean value derived from measurements of about 20 nuts. The range in length is indicated in brackets. (The style base, if still present, was not included in the measure-

ments) The table could easily be adapted into a key; the only possible difficulty that might arise would be in separating the similar reddish brown nuts of *G. procera* and *G. pauciflora*, where the ranges in length overlap slightly. The two may be distinguished, however, by another character—the shape of the tip of the nut: the tip is slightly drawn out in *G. pauciflora* but not in *G. procera*.

	nut length (mm)	nut colour
<i>G. affinis</i>	3.1 (2.8-3.3)	black
<i>G. robusta</i>	3.6 (3.3-3.9)	brownish black with reddish brown tips
<i>G. lacera</i>	4.0 (3.8-4.3)	black
<i>G. setifolia</i>	4.4 (4.0-4.9)	dark reddish brown
<i>G. xanthocarpa</i>	5.4 (5.0-5.9)	black
<i>G. procera</i>	5.5 (5.0-6.0)	reddish brown
<i>G. pauciflora</i>	6.5 (6.0-7.1)	reddish brown

Finally, a word about these *Gahnia* species in the Wellington district: *G. procera* is a mountain plant, particularly abundant in the northern Tararua Range; *G. pauciflora*, *G. setifolia* and *G. xanthocarpa* are common lowland plants; *G. affinis* (*G. gahniaeformis*) I know only from the hills on the east side of Wellington harbour; *G. lacera* I have not seen south of Wanganui, but it is recorded as reaching Cook Strait by Cheeseman.

Orchids of the Wellington District

Notes and Additions (2)

A. P. Druce

THESE notes follow on from previous records of the orchids of the Wellington district published in Bulletins 22 (p. 4), 23 (p. 9), 25 (p. 10) and 29 (p. 3). Three additional orchids are recorded and the range of four others is extended. Fifty different orchids are now known to occur in the southern part of the North Island from the Tararuas southwards.

Pterostylis furcata var. *micromega* (*P. micromega*). A colony of this orchid was discovered by Miss L. B. Moore in November, 1956, in wet, open manuka scrub on the western margin of Mangaroa swamp (grid reference 600390 on map N.161 of the one mile series). Following Miss Moore's directions I located what was probably the same colony the following season and took the photograph reproduced here. The only other record of this orchid south of the volcanic plateau is the vague one of "swamps at Wairarapa, Colenso" (Cheeseman, Manual of the N.Z. Flora, 1925).

Pterostylis banksii var. *patens*. This orchid appears to be absent from the Tararua Range, though abundant in the mountains both to the north and the south. It came as somewhat of a surprise, then, to find it, in December, 1957, in two places in secondary forest at