

NOTE

RARE INDIGENOUS FOREST PLANTS

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Abstract

A selection is presented of 34 plant species or varieties from D. R. Given's provisional list of rare indigenous plants of the New Zealand Botanical Region. Those selected are considered likely to occur within indigenous forest. Brief remarks are made on the general nature of each plant and its distribution.

INTRODUCTION

Dr David Given, of the Botany Division of the Department of Scientific and Industrial Research, has compiled a provisional list of rare indigenous plants of the New Zealand Botanical Region. This is published as an appendix to a paper in a recent number of the *New Zealand Journal of Botany*, in which he proposes the establishment of a register of our rare and endangered species as a primary conservation requirement (Given, 1976).

In Dr Given's list of 314 taxa, the writer has found only 34 that he considers are likely to occur within forested areas of the mainland and the close larger islands (e.g., Great Barrier Island). This is a heartening total, especially as nearly a third of the 34 have by all accounts been very rare since the early days of botanical exploration in this country. None of our large indigenous trees is in the full list, though one may wonder a little at the omission of *Dacrydium kirkii*. But, in general, foresters' eyebrows are more likely to be raised over some of the inclusions than over debatable omissions.

Deciding whether or not a plant should be classed as rare is not, of course, always simple. Many aspects of its distribution and the factors apparently governing its survival have to be taken into account. Then there is the possibility that "rarity may not be real but may reflect lack of collections and sightings" (Given, *loc. cit.*). Foresters who know areas of indigenous forest that botanists have not yet explored can help to remedy any faults in the provisional list resulting from a lack of

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authenticated sightings; as well, they can draw attention to the occurrence of any indisputably rare plant they may chance upon and recognise. Perhaps it hardly needs to be said that they should appreciate the realities of the "rare plants scene" when making — and defending — plans for the management of indigenous forests.

A FOREST SUB-LIST

The 34 forest species and varieties selected from Dr Given's full provisional list are as follows. The accompanying remarks are the writer's, except for slightly adapted quotations from Allan (1961) and Moore and Edgar (1970), on distribution.

Adiantum formosum

A very large maidenhair fern, with much-branched fronds up to 1 m long, occurring on alluvial river banks.

"Reef Point, Herekino, Northern Wairoa River; Manawatu River and tributaries."

Cyathea novae-zelandiae (Col.) Domin

In Allan's *Flora* this tree fern is not admitted as a species or variety, but is described in part and considered "probably worthy of varietal status" (as a variety of *Cyathea smithii*). It was first proposed as a species by Colenso, a notorious "splitter".

Lindsaea viridis

A dainty, tufted little fern, to be seen growing on mossy boulders in or alongside streams in gulches or gorges.

"Lowland to montane forest, rather local, usually in damp places by stream sides; mainly west of divide in South Island."

Loxoma cunninghamii

This is a large fern hardly likely to be mistaken for any other. The fronds are up to 60 cm long, more or less triangular in broad outline, and very pale green or even white on the underside.

"Lowland forest from latitude 35 to 37.30."

Marattia salicina

With huge dark-green fronds up to 4 m long and 2 m wide, this fern cannot be overlooked! Commonly known as king fern and grown in gardens where the climate is mild enough; but

certainly now rare in the wild and only likely to be seen in small, rough gullies.

"North Island lowland forest from latitude 35 to nearly 40 on west of the island."

Thismia rodwayi

A tiny saprophyte hidden in the forest humus, but in summer sending up short pedicles with pink flowers about 15 mm long.

"Known from only a few localities." (These include Opepe, Taurewa, Pirongia and Trounson Park.)

Bulbophyllum tuberculatum

An unusual type of orchid, usually growing in small clumps as an epiphyte in the crowns of large trees. The general appearance is a mass of bulb-like structures, with a single small leaf arising from each of these.

"North Island, scattered localities. South Island, Collingwood."

Chiloglottis formicifera

A small terrestrial orchid, with a stem rarely more than 9 cm long and stem-clasping leaves.

"Vicinity of Kaitaia, Mangonui County. . . This seems to be the only report of the species in New Zealand." (It occurs in eastern Australia.)

Yoania australis

This is a saprophytic orchid, found so far only under the deep leaf litter of taraire. The erect, dark-coloured flowering stems emerge at most 12 cm above the litter, but are quite conspicuous owing to a banded effect given by regularly-spaced colourless bracts. Known occurrences are very few, from Papanui northward.

Microlaena carsei

Fundamentally very close to the well-known common bush oat-grass, *Microlaena avenacea*, but the leaves and other parts are decidedly smaller and the growth habit distinctly different. It has been recorded only in forests in Mangonui County.

Pittosporum dallii

A small tree confined to the north-west Nelson region: the sharply and coarsely-serrated leaves set it apart from other pittosporums.

"South-west of Collingwood near Boulder Lake; Specimen Creek and Snow's River; head of Slate River; Cobb Ridge."

Pittosporum turneri

The juvenile plants are divaricating shrubs with very interlaced, zig-zagging branches; the adults are small, slender trees. The leaves change in size and shape as the plant matures.

"Stream sides and forest margins: Hauhungaroa Range and Waimarino Plateau, 600-1050 m."

Pittosporum umbellatum var. *cordatum*

P. umbellatum is a fairly common small tree in eastern lowland forest or shrubland of the North Island as far south as Gisborne. The only immediately obvious difference in this variety is its smaller leaves. It is only known to occur on one part of Great Barrier Island.

Tetrapathaea tetrandia

This is the New Zealand passion-flower, a climbing shrub, often reaching the tree-tops on the forest outskirts and very showy when bearing orange-coloured fruits among the dark-green, glossy leaves.

"Lowland forests, marginal, from near North Cape to latitude 44."

Entelea arborescens

A large shrub or small tree of northern climes, with large more or less heart-shaped leaves. Once at least locally abundant in coastal situations, but widely destroyed by animals.

"Coastal to lowland forest, southwards to latitude 38, thence more local to latitude 41."

Australina pusilla

A very slender-stemmed, intricately-branched, creeping herb, forming matted patches over shaded ground in lower-altitude forests.

"Coastal to lowland forest, local from latitude 35 southwards."

Parietaria debilis

This slender, straggling, limply-growing herb, up to 45 cm high, occurs in well-lit forest at low altitudes.

"Coastal and lowland light forest, forest margins and open shrubland throughout."

Dactylanthus taylori

The vegetative parts of this peculiar root parasite are usually hidden underground; the main structure is a roughly-surfaced, more or less ball-like rhizome, attached to a root of a tree or shrub. (The wood of the host root becomes disc-shaped and fluted, the bushman's "wood rose".) Short, thick, scaly, flowering stems appear above ground; the flowers have a strong, distinctive smell.

"North Island, most abundant on Volcanic Plateau. In tall forest or marginal scrub, on rather wide range of host trees."

Pseudopanax ferox

This small tree is readily distinguished from the common lancewood by the large hooked teeth on the leaves of the juvenile plant and the truncated adult leaves.

"Lowland forest and scrub from latitude 35 southwards, rather rare."

Pseudopanax gilliesii

A shrub or small tree recorded only in coastal forest and scrub in the vicinity of Whangaroa North and on Little Barrier Island.

Galium tenuicaule

A long-stemmed, straggling herb, with the leaves in rather far-spaced whorls. Found in very damp places in forests from latitude 35 southward.

Olearia allomii

This is a very small shrub, a typical olearia in general appearance but only known to occur on Great Barrier Island. It may be confined to rocky places in the forested country.

Olearia furfuracea var. *angustata*

A recognised variety of a shrub species common north of Hawke's Bay and Taranaki which is noted for the wide variability of several features. This variety has been recorded only north of Auckland.

Olearia thomsonii

A small tree up to 5 m tall, readily distinguished from other arborescent olearias by the large, leathery yet thin leaves and the delicate tomentum of their undersides.

"Wanganui Basin, Ohura River; east of Te Awamutu."

Olearia virgata var. *laxiflora*

This large, divaricating shrub occurs locally at lowland forest margins on the South Island west coast, from about Hokitika to Doubtful Sound.

Olearia virgata var. *serpentina*

Another recognised variety of the very polymorphic species: a stiffly-branched, divaricating, large shrub, apparently confined to stunted forest or shrubland on the Nelson-Marlborough "mineral belt".

Senecio bifistulosus

This sturdy-looking, closely-branched shrub has been recorded only in the vicinities of Dusky Sound and Chalky Inlet, in Fiordland.

Senecio turneri

A tall herb, having woody stems lying along the ground and bearing ascending branches with large, bright-green leaves. Only known to occur on wet cliffs along some reaches of the Mokau and Wanganui Rivers.

Senecio sciadophilus

The only liane among the senecios, sometimes growing in a tangled mass or spread along the ground.

"South Island. Forest margins, lowland to lower montane, local, N.W. Nelson, extending to latitude 46 east of divide."

Senecio myrianthos

A sparsely-branched shrub with black bark and coarsely-toothed leaves, only known to occur in ravines and beside streams on Cape Colville Peninsula.

Senecio perdicoides

Quite common as a cultivated yellow-flowered shrub, but found in the wild only in and alongside forest from Hicks Bay to Mahia Peninsula.

Solanum aviculare var. *albiflorum*

A variety of the well-known poroporo; more slender generally, with paler, thinner leaves and flowers always white. Common in Auckland Province, but only occasional further south.

Rhabdothamnus solandri

The very pretty bell-shaped, red-streaked orange flowers, appearing nearly all the year round, make this slender twiggy shrub easy to recognise and impossible to forget. It often (but not invariably) grows on banks alongside or near streams.

"North Island. Coastal to lowland forest, especially by stream sides, throughout, but local south of latitude 40."

Scutellaria novae-zelandiae

A partly-woody herb about 30 cm tall, with small white flowers. If for nothing else, noteworthy as one of the only two indigenous members of a plant family (Labiatae) with many cultivated and naturalised species in this country.

"South Island. Occasional in lowland forest on alluvial ground to about latitude 41.30."

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