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CONSERVATION ADVISORY SCIENCE NOTES

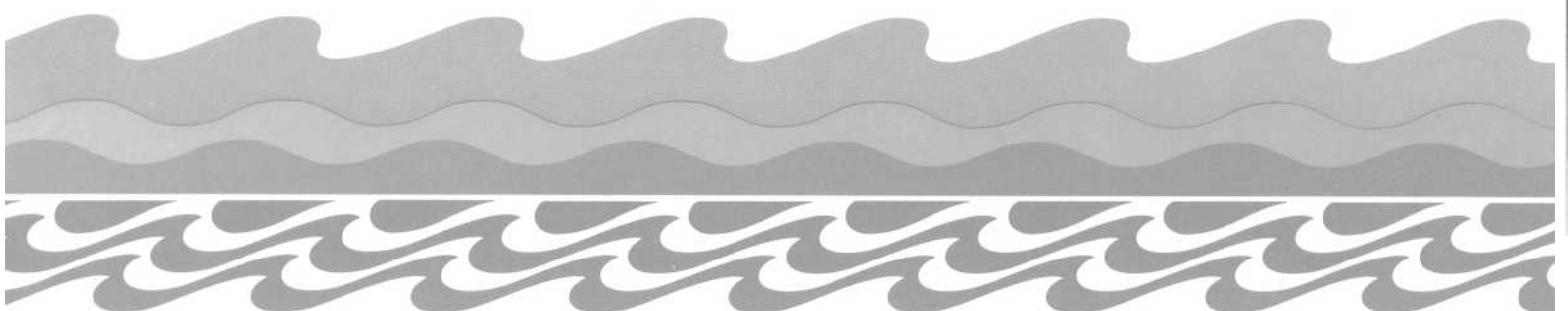
No. 85

**A LOCALITY FOR *PITTOSPORUM OBCORDATUM* IN CATLINS FOREST
PARK**

(Short Answers in Conservation Science)

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Location: NZMS

A LOCALITY FOR *PITTOSPORUM OBCORDATUM* IN CATLINS FOREST PARK

Unprogrammed advice to the Department of Conservation
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P.O. Box 69, Lincoln
9 March 1994

Pittosporum obcordatum was found and identified by Peter Wardle and Miles Giller in Catlins Forest Park on 8 January 1994, while attending the summer camp of the Canterbury Botanical Society. It is situated beside the new track to McLean Falls, a few metres west of the bridge over the stream known locally as Duckaday. The site is an alluvial flat, probably very frosty in winter, that supports a wide variety of other divaricating shrubs, over a ground cover of adventive grasses and the fern *Polystichum vestitum*. These shrubs include *Melicytus flexuose*, which is also regarded as rare.

There are two stems of *P. obcordatum* at the site, but it seems likely that both originate from the same seedling as their bases are only a few centimetres apart. The larger stem had been cut half-through during the building of the track. Only a few flowers and old capsules and one small developing capsule were found. A search over a radius of some 50 m revealed no other plants of the species.

The following attempts to answer the questions posed by DOC.

1. A sample taken from the plant has been confirmed as *Pittosporum obcordatum* by Dr Peter Johnson, of Landcare Research, Dunedin, and deposited in the Landcare Research Herbarium (CHR).
2. Although *P. obcordatum*, once regarded as exceedingly rare, is now known from 11 localities in the North Island (B.D. Clarkson in press), in the South Island the only known localities are near Lake Manapouri, and at Akaroa where it was first discovered but has not been seen since. The Catlins find is therefore of considerable scientific interest, and worthy of protection.

The steps that should be taken depend in part on whether other plants exist in the district. If other plants are found, and can be protected, the pair of plants on the Tautuku Falls track could be highlighted with an interpretive notice, and provided with a short barrier to deflect trampling of the roots by track users. In fact, we suggest that this course is viable even if no other plants are found. After all, the larger plant was nearly destroyed by volunteer track workers who were ignorant of the plant's significance.

3. That there are only two plants of *P. obcordatum* in the Catlins district seems most improbable, and a survey of possible habitats is strongly recommended. This should begin with the flats along the Tautuku River, and then extend to alluvial flats in other valleys. Well developed meanders with back swamps are a favoured habitat of the species. The known site has been logged, and partly cleared and grazed, although recently it has been given protection within the Forest Park. At

present small-leaved divaricating shrubs dominate the vegetation, but originally there would have been at least a partial overstorey with podocarps, lowland ribbonwood (*Plagianthus regius*) and pokaka. Therefore the search should include both forested, cleared, and regenerating areas.

The elusiveness of *P. obcordatum* is due to its resemblance to other small-leaved, divaricating species. From a distance, its slender, erect central stem and deep, narrow crown should attract attention. On coming closer, one may note that the branching is not particularly dense, that the twigs are straight and fork at a wide angle, and that the orientation of the branches rotates at each successive node, giving a rather characteristic three dimensional effect.

The adult leaves are variable and somewhat irregular in shape, although a broad, rhomboidal outline prevails. They can be smooth-margined, or have one or two notches. They are borne alternately or clustered on the twigs. In texture they are like the adult leaves of other small-leaved pittosporums, but are larger and different in shape. Juvenile leaves, which are confined to seedlings and reversion shoots at the base of older plants, are long and narrow, with lateral lobes.

Presence of capsules will confirm the plant as a pittosporum. Only one other small-leaved species has pale yellow flowers; this is *P. anomalum* which has a totally different growth form, and capsules unlike those of other pittosporums.

Anyone searching for the species would be well advised to carry field copies of the illustrations of *P. obcordatum* in Volume II of Eagle's "Trees and Shrubs of New Zealand" and Hugh Wilson's "Small Leaved Shrubs of New Zealand".

4. It would certainly be desirable to increase the population at Tautuku Falls. According to Clarkson (op. cit.) *P. obcordatum* can regenerate well in the absence of cattle; however, the paucity of flowers and seeds on the Tautuku plants suggests that natural regeneration would be unlikely. We suggest that the priority order for obtaining seedlings should be (1) from seed gathered from the Tautuku plants; (2) seed or wildings from other Catlins populations if such are found; (3) cuttings from the Tautuku plants. Establishing from cuttings would not increase genetic diversity, especially if the two existing plants have originated from a single seedling; but it would be better from a scientific point of view than introducing genetic material from outside the Catlins district.

Bruce Clarkson advises that cuttings should be made by cutting with a sharp razor blade at a 45 degree angle, rooting hormone applied, and striking in a 50-50 mixture of sand and potting mix. Saplings, whether produced from seeds or cuttings, may need to be released by weeding after they have been planted out.

SITE REPORT - LOCATION Landcare Research			page
SPECIES NAME: Pittosporum obcordatum			3
LOCALITY DESCRIPTION: S.E. Otago, Tautuku Valley, track to McLean Falls. Alluvial flat; a frost hollow enclosed by hills, with other divaricating plants, including Melicytus "flexuose", Coprosma rigida, Olearia lineata. One shrub seen, c. 3 m tall, 5 cm diam, damaged by track works Specimen collected for CHR	NEAREST MAJOR LOCALITY: Tautuku		
	ECOL. DISTRICT: Tahakopa		
	LAND DISTRICT: Otago		
	CONSERVANCY: Otago		
	LAND TENURE (if known):		
OWNER/OCCUPIER (if known):			
MAP SERIES: NZMS 260	MAP NO.: G 47	GRID REFERENCE: 297 977	ALTITUDE: 30 m
LOCALITY MAP (1:50000 or 1:63360)		SKETCH MAP/NOTES	
OBSERVER/SOURCE: P. Wardle & Myles Giller		DATE: 8.1. 1994	