

# Botanical Society of Otago

## Newsletter.

### No. 7, 1988 April.



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## Botanical Society of Otago meetings

Tuesday May 3 (Please note the change of date & time)

### A TRIP TO TASMANIA

Slides with commentary, given by some of those who went on a botanical trip to Tasmania in January.

8:00 pm, in the Botanic Gardens Visitor Centre, Lovelock Avenue.

This will be a joint meeting with the Friends of the Botanic Gardens.

Tuesday July 5

### MIKE POLE

of Geology Department, Otago University  
on

### THE ECOLOGY OF EARLY MIOCENE PLANTS OF CENTRAL OTAGO

7:30 pm, in DSIR Buliding, Cumberland St

## Dunedin Naturalists Field Club meetings

All trips depart from NZR Road Services depot,  
Cumberland St.

May 7: Trip to Bull Creek, 9:30 am

May 21: Trip to Warrington, 11am.

June 27: Robin Thomas speaks on life on Stewart  
Island. Mr Thomas is now District Conservator for  
Otago, but was Chief Ranger for Stewart Island for  
10 years. Red Lecture Theatre, 8pm.

For further information, contact Mrs West, 774-869.

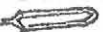
## Coprosma in east Otago

M.J. Heads, Botany Department, University of Otago

The area is characterised by a particularly diverse massing in the large Pacific genus Coprosma. Twenty-two indigenous species are recognised in the list below, which contrasts with, say, only about 5 species of the larger Hebe. Why is this? The blue fruit group of coprosmas (see below) occur with diverse forms in diverse ecologies from swamps to cliffs, with one form typically coastal. Like many mangrove associates the different members of the group are quite widespread, at least in Otago. This contrasts with the other diverse group of coprosmas here, the divaricate species related to C. rubra. These are characteristic of the distinctive east coast forest (what's left of it) along the sector Balclutha - Wairarapa, generally made up of plants with Indian Ocean affinities (e.g. Paratrophis in Moraceae) rather than South Pacific, and "warmer" rather than "cooler" ecology. Two of the species were named by Petrie based on Dunedin specimens (C. rubra and C. virescens).

1. C. pumila Hook. f. Fruit. orange. Catlins; Maungatua; Flagstaff. Prostrate, rooting.
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### Group with narrow leaves and blue fruit:

2. C. acerosa A. Cunn. Prostrate, rooting. Branches often zigzag. Local, mainly coastal. Inland?
3. C. rugosa Cheese. Divaricate shrub, (leaders abort, leaves bunched). Distribution?
4. C. propinqua A. Cunn. Divaricate shrub. Leaves acute with margin and petiole often brown . Stipule distinctive. Widespread, common in different habitats, e.g. cliffs, paddocks, swamps. Leaves of the Nugget Point population differ from the norm - do they approach var. latiusecula?

5. C. cunninghamii Hook. f. Status? Distribution? Generally dismissed as "just a hybrid" (between C. propinqua and C. robusta). However - many so-called "hybrids" are undoubtedly just as ancient as so-called "pure" plants. Are there any truly "pure" plants in N.Z.? Probably most have some hybridism in their past. "Myrsine" "hybrids" around Dunedin, have particularly interesting distributions.

Fruit colourless, leaves intermediate between propinqua and robusta.

6. C. linariifolia Hook. f. Fruit blue or clear translucent. The only species in this group that can produce trees. Widespread, in forest.
- 

7. C. pseudocuneata Oliver. Leaves thick, acute and reflexed. Fruit orange. Maungatua; Cargill.

Group with leaves small, generally ovate - obovate (rather than linear or spatulate), petiole short and not winged.


8. C. cheesemani W. Oliver. Maungatua. This population and that of the Blue Mts are polymorphic for both habit and fruit colour. What's going on? Why just these 2 populations? - the species is widespread in N.Z. Prostrate and rooting (with erect forms at Maungatua - Blue Mts.); fruit red (white orange and pink as well at M. - B.).
9. C. parviflora Hook. f. Fruit lemon, branching generally in flat sprays. Widespread, generally in forest, sometimes in shrubland etc. Leaves of juvenile plants often have some marginal hairs.
10. C. ciliata Hook. Fruit white, yellow, orange (often), pink (rare - e.g. Mt Cargill), red,

purple. This is very variable in all aspects of morphology and some states are very similar to some states of C. parviflora. The east Otago population generally has glabrous leaves and is locally distributed, usually montane, at higher altitudes than C. parviflora. Growing together (e.g. on Mt Cargill) the most striking difference is that in C. ciliata laterals branch in three dimensions, whereas in C. parviflora there is a strong tendency for laterals to branch in one plane.

11. C. sp. (illustrated by Eagle, 1982, as Coprosma "p") Fruit bright red. Leaves pale green, leaf shape distinctive and relatively invariable. Catlins; Maungatua; Mt Cargill. I only know it from boggy sites. Divaricate shrub.

This group (the last four spp.) is a real mess. There are undoubtedly several entities which would warrant a name in Otago (e.g. a very distinctive population in western Fiordland). Thorough collecting throughout our area would help tremendously.

Group of divaricating shrubs with more or less spatulate leaves, sometimes acuminate.

12. C. rubra Petrie Fruit clear or lemon. Bark dark reddish brown, not flaking. Leaves larger than C. virescens. Local.
13. C. virescens Petrie Fruit clear or lemon. Bark falling in flakes, giving a trunk mottled green and white like eucalyptus. Local. + deciduous. Leaves tiny with blade diamond-shaped. 
14. C. crassifolia Colenso Fruit clear or lemon. Trunk usually fluted, bark reddish brown. Leaf with white "bloom" on underside. Widespread.
15. C. rigida Cheese. Fruit clear lemon or orange. Bark dark reddish brown and

smooth. Plants in forest have much larger leaves than plants of shrubland. Leaves often arcuate, with a minute apical notch with a tuft of hairs (lens needed).



16. C. rotundifolia Cunn. Fruit clear, orange or red. Bark pale and rough. Leaves and young stems much hairier than C. areolata. Leaves often red/purple/brown. Widespread, especially in colder and wetter places in the lowlands.
17. C. areolata Cheese. Fruit (rarely seen) dark blue or black! Bark pale and rough. Leaves distinctly mottled around the veins, marked differentiation between flat laterals and erect trunk (which eventually "falls" and become flat). Widespread (?) in forest, often with C. rotundifolia and C. rhamnoides.
18. C. rhamnoides Cunn. Fruit tiny, bright red. Branches twiggy, often distinctly arching. Leaf margin wavy/irregular. Widespread in forest and shrubland.

Two final members of this group have larger leaves, and axes staying erect (orthotropic) and not aborting, thus forming more of a trunk...

19. C. colensoi Hook. f. Fruit orange. Very thick midrib, apex often emarginate. Catlins; Maungatua. Forest.
20. C. foetidissima J. et G. Forst. Fruit orange. Leaves foetid when crushed. Relatively widespread (?).

Group with large leaves and no leader abortion

21. C. lucida J. et G. Forst. Fruit orange. Midrib raised above. Local.



22. C. robusta Raoul Fruit orange. Midrib not raised above. Supposedly introduced, but Petrie recorded in south to Kaitangata in 1896, and this is a thoroughly normal biogeographic boundary for many endemic forms. What is its distribution? This should be easy to establish with such a conspicuous plant.
23. C. grandifolia Hook. f. Introduced. Fruit orange. Leaves very large, stipule distinctive.
24. C. repens A. Rich. Introduced. Fruit orange. Coastal. Leaves fleshy and shiny.
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C. cuneata is known from Catlins and Hunters Hills, and may turn up nearer Dunedin. Earlier records probably refer to C. pseudocuneata.

C. sp. (aff. intertexta) is a bog plant with linear leaves and blue fruits present in the Catlins, and to be searched for in swamps around Akatore Creek, for example.

The main difficulty with coprosmas is that the leaf shape of the small-leaved species is very variable within species and even individuals. It is essential to compare many leaves of an individual to obtain an average size and shape of some statistical significance.

References:

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Oliver, W. 1935. The genus Coprosma. Bull. Bishop Mus. 132.  
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## Botanical Society of Otago

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Ideas for activities, to: Dr Peter N. Johnson, Botany  
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home 780-376.

Donations to cover costs, to: Mr H. Ian West, 20,  
Bellvue St, Dunedin.

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