

## A KEY TO THE COPROSMAS OF THE CHRISTCHURCH PORT HILLS.

MAX VISCH

Of the 45 species of Coprosma listed in Allan's "Flora of New Zealand" Volume I, up to a dozen species may be found along tracks and margins of the various nature reserves and bush remnants along the Summit Road. No other genus of woody plants is represented by so many species. In a few areas such as Gibraltar Bush, several species of Coprosma dominate the shrub layer over large areas and in places make progress difficult.

Coprosmas with a few exceptions are not generally considered to be amongst the most ornamental shrubs in the New Zealand flora, nevertheless, many species produce an abundance of brightly coloured fruits in autumn and a few when growing in the open assume most interesting shapes. In exposed situations along the Summit Road small groups of the densely divaricate Coprosma crassifolia may be seen hugging rock faces or found huddled together on a rocky knoll for mutual protection. Inside the bush this species is usually much more open in habit with larger leaves and longer internodes. The same applies to many other divaricating species.

In recent years there has been renewed interest in Coprosmas and other divaricating shrubs, as witnessed by the enthusiasm displayed by members of the society during a Coprosma workshop held in June this year under the guidance of Ross Elder. It is to encourage and sustain this interest that this key to the Port Hill Coprosmas has been written. To tell the Coprosmas apart from the divaricating members of other genera such as Myrsine divaricata, Melicope simplex, Melicytus micranthus and the juvenile stages of Pennantia corymbosa and Hoheria angustifolia, the following characteristics should be of help.

Copromas typically have simple, opposite leaves or where the leaves are grouped in clusters, the clusters themselves are opposite. The leaves may be small or large and are nearly always entire or nearly so. Between the petiole bases of a pair of opposite leaves, small, more or less triangular stipules are found, see Fig.1, which although of value in the identification of many species are often too small to be seen in detail without considerable magnification. On the underside of the leaves in the axils of the larger, lateral veins, in most species, occur small pits or domatia, see Fig. 1. The flowers of Coprosma are generally small, greenish and inconspicuous. Pollination is by wind and the male and female flowers occur on separate plants. The fruit is a fleshy, berry-like drupe containing 2-4 stony seeds. The colour of the mature drupes varies with the species and ranges from white or colourless to blue, yellow, orange, red, crimson and black. Coprosmas are not an easy group for the beginner, there are so many species and at first acquaintance many of the smaller leaved species look much alike. It is only when one gets to know them better that one learns to recognise individual species not only by the minute differences mentioned in the key below and which often require the use of a good lens, but also by their general appearance, colour, type of branching, etc. Even then it is always wise to confirm one's identification by checking a few diagnostic characteristics with a lens.

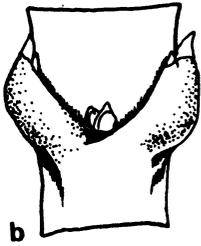
The table below gives some information regarding the distribution of Coprosma species on the Port Hills near Christchurch. The table is based on species lists published by Prof. Arnold Wall and G.C. Kelly and my own observations over a number of years. Further finds will no doubt add to this list.

Key to locations: 1= Sugarloaf Reserve: 2= Hoon Hay Reserve:  
 3= Kennedy's Bush: 4= Ahuriri Reserve:  
 5= Gibraltar Bush: 6= Riccarton Bush.

	1	2	3	4	5	6
<i>C. areolata</i>					X	X
<i>c. crassifolia</i>		X	X		X	X
<i>C. linariifolia</i>	X	X	X	X	X	
<i>C. lucida</i>	X	X	X		X	
<i>C. propinqua</i>	X			X	X	X
<i>C. rhamnoides</i>	X	X	X	X	X	X
<i>C. rigida</i>				X	X	
<i>C. robusta</i>	X		X	X		X
<i>C. rotundifolia</i>	X	X	X	X	X	X
<i>C. rubra</i>			X	X	X	
<i>C. rugosa</i>					X	
<i>C. sp "T"</i>			X	X	X	
<i>C. virescens</i>	X			X		

The commonest species, found in nearly all reserves are *C. linariifolia*, *C. rhamnoides* and *C. rotundifolia*. *Coprosma rubra* is most easily studied in the patch of trees and shrubs across the road from opposite the 'Sign of the Bellbird', where it is the dominant species of *Coprosma*. A few specimens of *C. virescens* may be seen a few metres to the left of the eastern entrance of Mitchell's track into Sugarloaf Bush. A specimen of *C. propinqua* occurs on the righthand side of the track entrance, before you enter the reserve. I have personally seen all the species listed in this key except for *C. rugosa* which I have included for Gibraltar Bush on the authority of John Thompson, see Newsletter April '82. Note further that about half of the species listed also occur in Riccarton bush. When using the key one should realize that no single key could possibly allow for all variation encountered in such plastic species as *Coprosma*. should take note of as many characters as are

available.

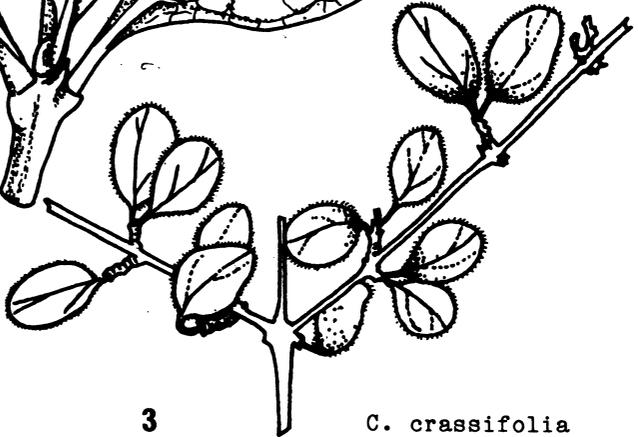


b



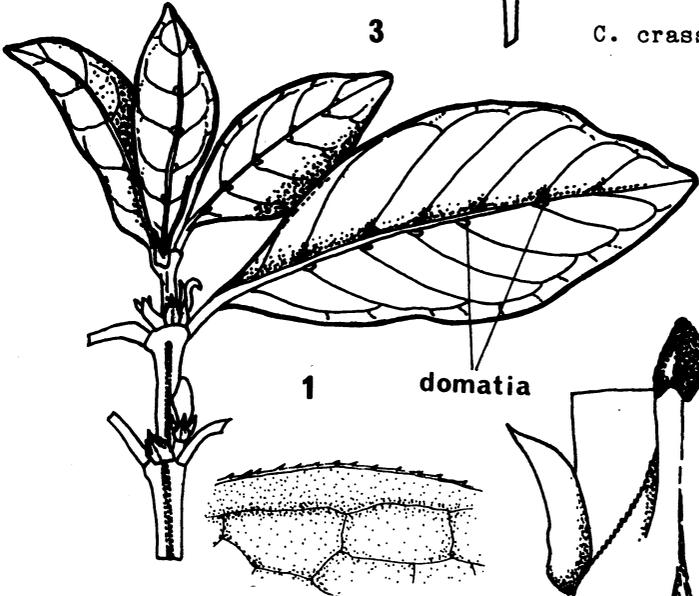
2

*C. lucida*



3

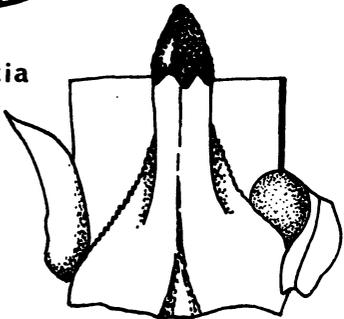
*C. crassifolia*



1

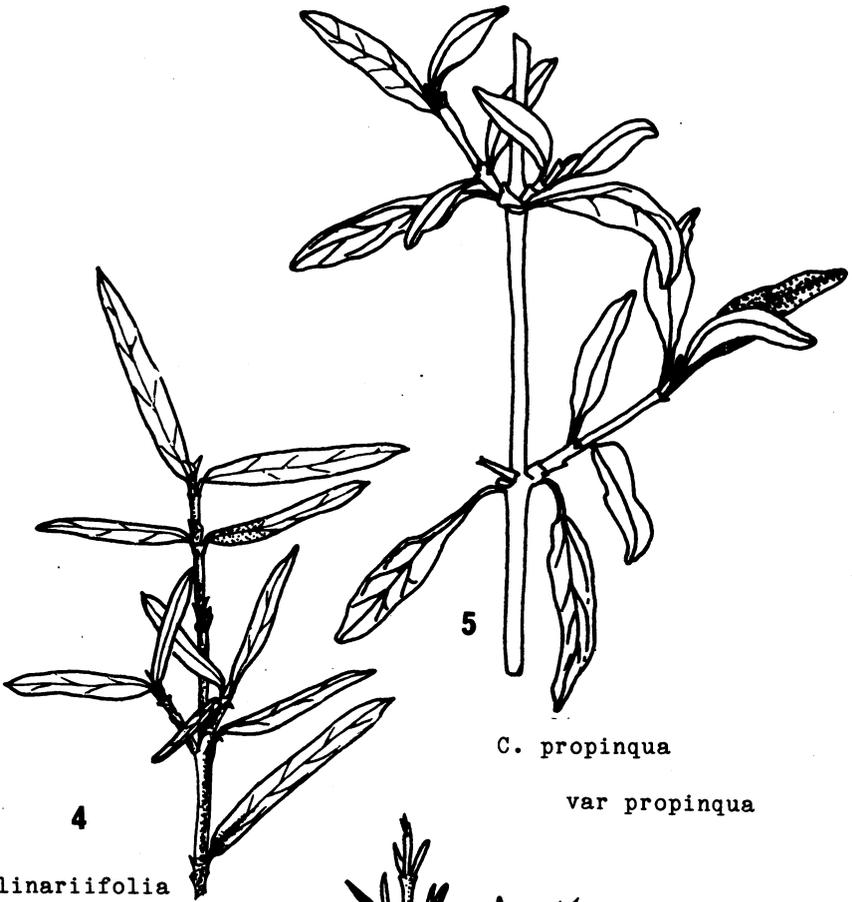
domatia

*C. robusta*



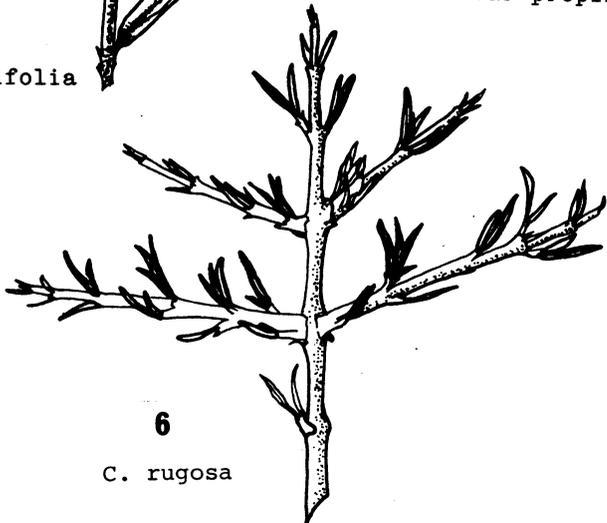
## KEY.

- I. Leaves large, generally >50mm long, broadly ovate;  
non-divaricate shrubs or small trees. .... 2
- Leaves much smaller, up to 40mm, but usually  
much less. .... 3
2. Midrib ridged on underside only; leaf margin  
minutely toothed. Use lens or feel with your  
tongue. Stipules large with black tip diverging  
from the stem. Fig. 1. .... ROBUSTA
- Midrib ridged on both sides of the leaf blade;  
leaf margin without teeth; stipules with  
1-3 black tips and curving towards  
the stem. Fig. 2. .... LUCIDA
3. Leaves thick, leathery, dark green above,  
pale to glaucous white below; leaf blade  
round, oval or oblong up to 15mm long,  
venation somewhat obscure; hairiness variable,  
usually a scattering of minute hairs on the  
underside and along the leaf margin, petioles  
and young branchlets densely pubescent.  
Fig. 3. .... CRASSIFOLIA
- Leaves not having all these characteristics. .... 4
4. Leaf blade smooth or nearly so (in some  
species a few minute hairs may occur at the very  
apex of the younger leaves); leaves broadly ovate  
to linear. .... 5
- Leaf blade distinctly hairy on the upper,  
lower, or both surfaces, or the leaf margin may be  
hairy (use lens); leaves broadly ovate to  
oblong but never linear. .... 12
5. Leaves thick and leathery. .... 6
- Leaves thin and membranous, tend to shrivel up  
soon after collecting. .... 10



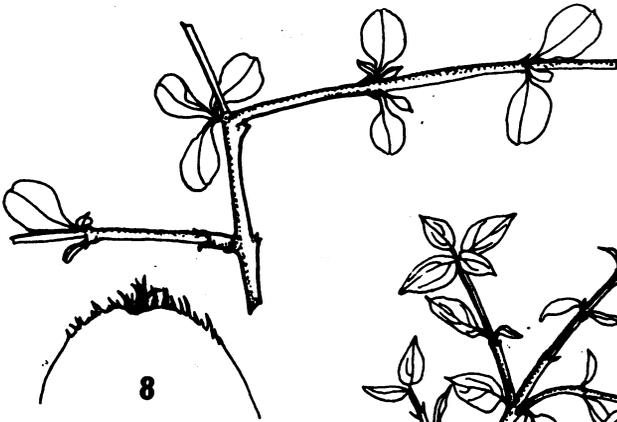
4  
*C. linariifolia*

5  
*C. propinqua*  
var *propinqua*



6  
*C. rugosa*

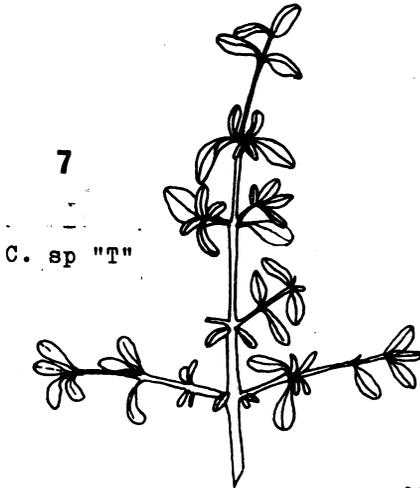
- 6. Leaves narrow oblong to linear, at least 5x as long as the blade is wide. .... 7
- Leaves much wider, only 1-3x as long as the blade is wide. .... 9
- 7. Leaves linear, 10-40 mm long, green above, paler below; midrib prominent and slightly furrowed or depressed; stipules black, long tubular, sheathing the stem; wood yellow under the bark of an older branch; non-divaricating shrub or small tree with upright trunk and branches, and slender drooping twigs; drupes white, translucent. Fig 4. .... LINARIIFOLIA
- Leaves up to 20mm long; wood not yellow, densely divaricating shrubs; drupes pale blue to blue. .... 8
- 8. Leaves leathery, dark green and glossy above, paler below; leaf blade oblong to linear up to 14mm long and with one margin often slightly more curved than the other; domatia usually present Fig 5. .... PROPINQUA var PROPINQUA
- Leaves narrow linear, 6-14 mm long, smooth or with a scattering of small, white, deciduous hairs on the upper surface of the younger leaves; domatia generally absent; branchlets stiff, reddish brown and divaricating at right angles; bark reddish brown; drupes pale blue. Fig. 6. .... RUGOSA



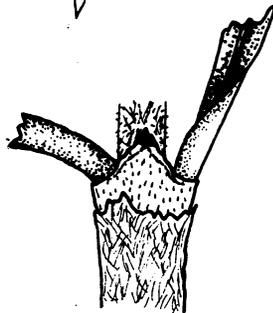
*C. rigida*



*C. rhamnoides*



*C. sp "T"*



*C. virescens*

- 9. Leaf blade 5-12 mm long with rounded apex and gradually narrowing into a very short (1 mm) pubescent petiole; leaves sometimes have a yellow blotch at the base; densely divaricating shrubs with branchlets finely pubescent; drupes white, translucent or tinged pink or pale yellow, occ. purplish red. Fig. 7. .... sp "T"

Leaf blade 10-20mm long, smooth, apart from a small tuft of minute hairs at the rounded, truncate or slightly notched apex; petioles 2-3 mm long, winged; branches densely divaricate, rigid; bark reddish brown, smooth; branchlets divaricating at an angle of 90 degrees or over, finely pubescent when young, tending to become smooth and red brown with age and in exposed situations; drupes yellow-orange or white.

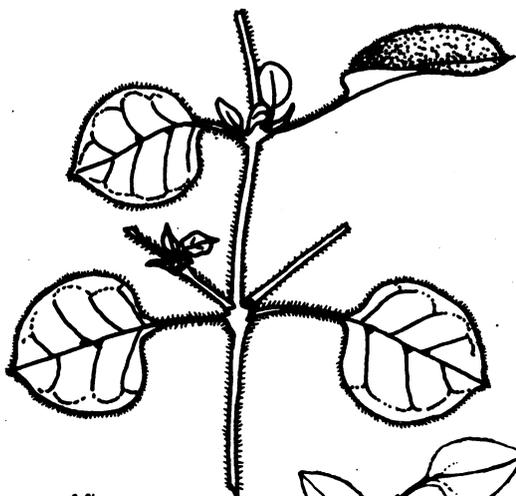
Fig 8. .... RIGIDA

- 10. Leaf shape highly variable, ranging from more of less rounded to narrow oblong and linear, all on the same branch and up to 14 mm long; leaf margin slightly thickened; venation evident, especially below; branchlets slender but stiff, densely divaricate and finely pubescent; drupes dark crimson to black. Fig. 9. .... RHAMNOIDES

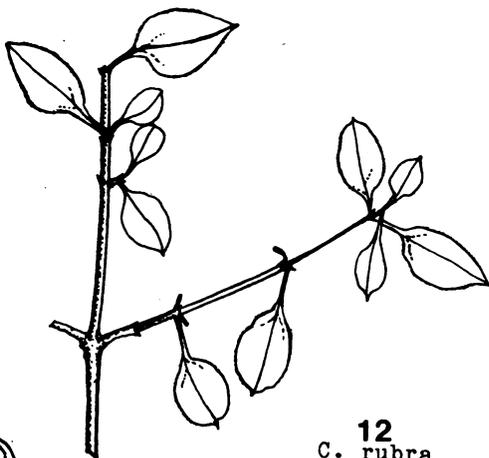
Leaf shape much more uniform. .... 11

- 11. Branchlets very long, slender and flexible, with whitish stipule cups which persist long after the leaves have fallen; bark pale greyish brown; leaf blade 5-8 mm long, spatulate oblong or diamond shaped, narrowing quickly into a 2-4 mm long smooth and winged petiole; drupe yellowish white. Fig. 10. .... VIRESCENS

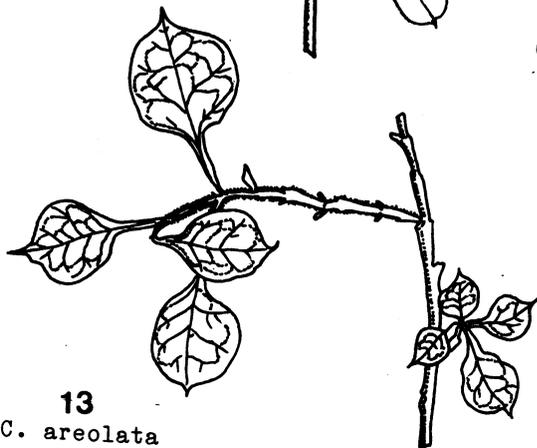
Branchlets rigid, bark reddish brown; leaves notched at the tips. .... RIGIDA (9)



11  
*C. rotundifolia*



12  
*C. rubra*



13  
*C. areolata*

- 12. Leaves distinctly hairy on both surfaces; leaf margins and petioles covered with long, brown bristles; leaf blade 20-25 mm long, rounded with pointed tips, yellowish green, sometimes turning dark brown or purple; drupe orange red;

Fig. 11. .... ROTUNDIFOLIA

Leaves hairy, if at all, on one surface only, but less obviously, use lens. .... 13

- 13. Leaves green, sparsely hairy on the upper surface only, giving it rough feel; leaf margins with minute incurved hairs, use lens; leaf blade 10-20 mm, broad-ovate to oblong, suddenly narrowed into a 4-6 mm long winged petiole; drupe yellowish white; divaricate shrub; bark reddish brown;

fig. 12. .... RUBRA

Leaves yellow green, venation very conspicuous due to the slightly raised, pinkish veins which give the leaves a 'marbled' appearance leaf blade broad elliptic, 10-15 mm long, with the apex drawn out into a definite point; smooth above, the underside of the leaf has a sparse covering of long, silky white hairs closely appressed to the leaf surface; drupe dark purple to black; divaricate shrub with slender branches; fig. 13. .... AREOLATA

Acknowledgements: I would like to thank my colleague Dr. Felicity Cutten for the diagrams she has made to illustrate this article. They greatly add to the usefulness of the 'key' and will be of special benefit to those who have only recently taken to this interesting group of plants. [NOTE: C. sp "T" (C. parviflora var. dumosa Cheeseman, 1906 but not var dumosa of Allan, 1961). This species is distinguished from C. parviflora Hook f. 1853, which is restricted to north of latitude 36 deg., by not being minutely hairy on the under surface of the leaf. Ed.]