

S.G.A.P. BIRDS AND NATIVE PLANTS
STUDY GROUP

Newsletter No. 9

May 1986

CORREAS

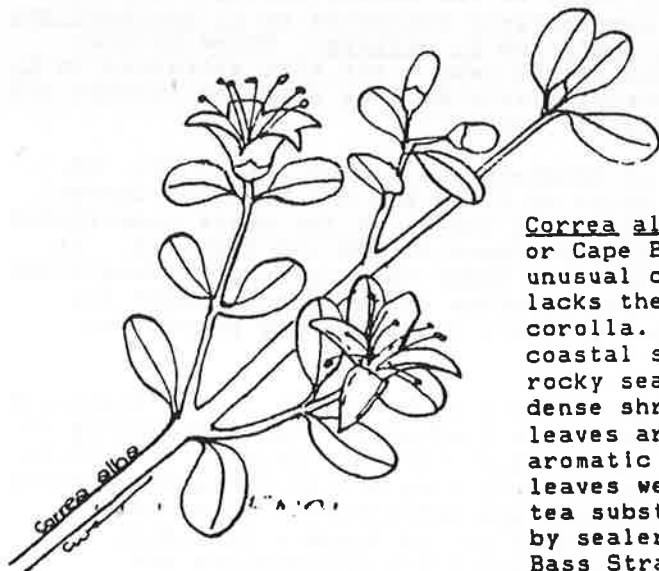
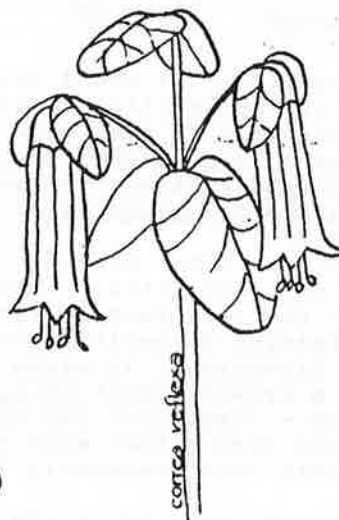
The correas are a truly Australian genus. In all there are only 11 species of *Correa*, all of which are endemic to Australia. Only the Common Correa (*C. reflexa*) grows outside of the eastern states in Western Australia.

Within each species of correa there can be wide variation. Whereas my *Correa reflexa* might have dull green flowers, yours might have flowers of a lovely pale pink colour or of scarlet tipped with green.

The correas belong to the family Rutaceae, as do the boronias, eriostemons, croweas, phebaliums and even citrus trees. They are generally recognised from their rather distinctive flowers. Apart from the White Correa (*C. alba*), the flowers are longish cylindrical tubes, spreading at the top as the flowers open. These tubes are formed from four cohering petals. The calyx is cup-shaped and held for the life of the flower. Up to eight seeds may be formed in each flower and at maturity the fruit bursts open, releasing these seeds. The correas are often quite hairy, particularly the young growth, and the hairs are often rusty coloured.

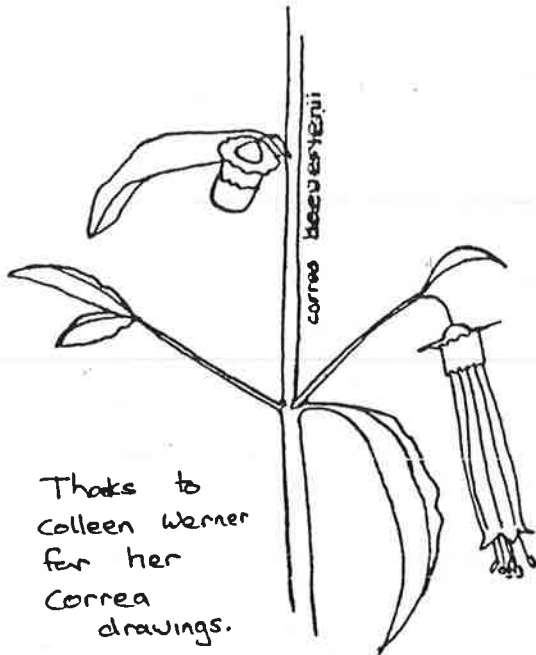
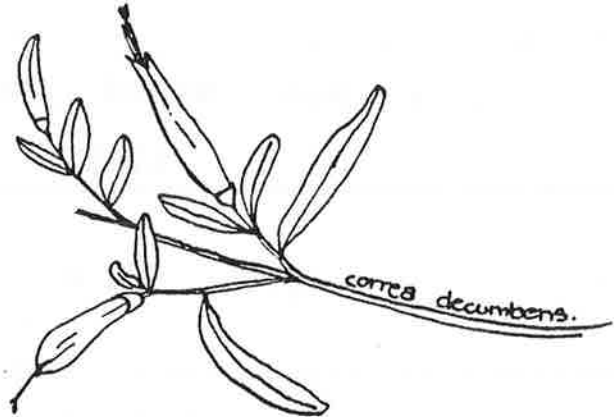
Many of the correas flower over the winter months and their flowers can provide an important source of nectar to birds at this time.

Correa reflexa - Common Correa.
This occurs in various soils from the coast to the subalps and in vegetation types as varied as forests, scrubs and heaths. Flowers from May to October. Generally a shrub 1-2 m high. Corolla colours green, crimson or pink.



Correa alba - White Correa or Cape Barren Tea. An unusual correa in that it lacks the typical fused corolla. It occurs on coastal sand dunes and rocky sea cliffs. It is a dense shrub to 1 m and its leaves are particularly aromatic when crushed. Its leaves were once used as a tea substitute, particularly by sealers on islands in Bass Strait. Flowers most of the year, but especially June to October.

Correa decumbens. This correa also does not conform to rules. In this case the corolla is bell-shaped but rather than hanging down faces upwards. It grows as a ground cover of height about 30 cm with a 3 m spread. flowers are red with yellow tips and occur for most of the year with a winter peak. It does well in cold areas.



Thanks to
Colleen Werner
for her
Correa
drawings.

Correa baeuerlenii - Chef's Cap Correa. The rather unusual shape of the calyx gives rise to the common name of Chef's Cap. Flowers are greenish and leaves glossy and dark. It grows to a rounded plant 1.5 X 1.5 m. This is one of three correas on the ANPWS official list of Rare or Threatened Australian Plants. The Chef's Cap Correa occurs only in two areas in NSW (near Bateman's Bay and around Mimosa Rocks N.P.). It is classified as vulnerable, a fairly high classification. C. calycina, a S.A. species, is also classified as vulnerable and C. decumbens is classified as rare.

At first glance it would seem that only birds with long bills, such as Eastern Spinebills, could reap the rewards of the correas' nectar. The spinebills do make good use of the correas. Around Bega we recorded a large number of observations of spinebills feeding. In 9% of these observations the spinebills were at correa flowers, both C. reflexa and C. baeuerlenii.

However, the other birds are not baffled by the correas. Jo Walker, Queanbeyan, has noted "I have several species of Correa in my garden, and for the last four or five years they have been regularly visited by an Eastern Spinebill which feeds on the nectar during autumn and winter flowering - it seems particularly attracted to C. backhousiana and to a lesser extent to C. manii and C. reflexa. Three Crimson Rosellas - 'regulars' for most of the year - are also attracted to C. manii but feed rather more destructively as they pull the flowers off and nibble them presumably for the nectar."

And Richard Loyn, in 'Birds of Mountain Ash forest', Emu, Vol. 85, Pt. 4, Dec. 1985 makes some notes on birds and the Mountain Correa (C. lawrenciana). The Mountain Correa occurs in the dense understorey of tall forests on moist sheltered slopes in NSW and Victoria. It usually grows to 1-3 m in height but under very favourable conditions may reach 6 m. Flowers are usually cream or green but around the subalps of the Snowy Mountains a lovely red flowering population (var. rosea) occurs.

Notes Richard Loyn in the above article of his study in the Victorian Central Highlands "In winter the main food source for honeyeaters at Toolangi was the blossom of the Mountain Correa. Eastern Spinebills and Crescent Honeyeaters inserted their long bills, while White-eared Honeyeaters used their long tongues and short-billed Brown-headed Honeyeaters pecked slits in the bases of the flowers to obtain nectar. Occasionally White-naped Honeyeaters accompanied the Brown-headed, feeding in similar fashion. Striated Thornbills and occasionally Brown Thornbills also obtained nectar from the bases of the flowers using existing slits, including those made by Brown-headed Honeyeaters. At Cambarvale there was no correa and

Eastern Spinebills were absent. However, an alternative food was provided for Crescent and White-eared Honeyeaters by exudates from the bark of Silver Wattles."

Usually correas like well drained soil. As most grow naturally as part of the understorey they should not object to some shade. Correa reflexa is perhaps the most reliable in a very sunny situation. C. reflexa is said to be very hardy but from my own experience they are not immune to total neglect.

Propagation is not difficult from cuttings. As there is great variation within populations, propagation from cuttings is more reliable than from seeds. Some say that C. pulchella, the Beautiful Correa, is the pick of all the correas. It is a small shrub to 50 cm with orange to pink coloured flowers. There are several cultivars of this correa available, including C. nanii.

Observations of birds at correas are lacking. From Richard Loyn's study in Victoria it would seem that correas are well used by birds. I have only ever seen Eastern Spinebills at correas in the garden. If you can add further observations of birds at correas it would help fill a gap in our knowledge.

NEW MEMBERS

A warm welcome to the following people who have joined our group:-

Tom Chalkley, Bendigo, Vic.
Joan and Frank Hebden, Springwood, N.S.W.
Diedre Morton, Woodford, N.S.W.
Sue and Graham Pizzey, Willaura, Vic.
Josie Radloff, Karoonda, S.A.

FARM BIRDS - NATURE'S PEST CONTROLLERS

Extract from a pamphlet prepared by Hugh Ford for the Department of Arts, Heritage and Environment.

Studies at the University of New England in Armidale suggest that in healthy eucalypt woodland birds may take about half of the insects produced (of the order of 30 kg per hectare per year). Small mammals, like Sugar Gliders, and predatory insects and spiders take a significant proportion of the rest. The average level of attack by insects and the frequency of outbreaks would be higher without these natural predators. Yet in farmland little provision is made for these protectors. It is not surprising that so many trees in farmland are unhealthy, dead or dying. The causes of widespread rural dieback of Australian trees are complex and poorly understood but the loss of insectivorous birds has most likely played a part.

Christmas beetles are eaten by cuckoo-shrikes, kingfishers and the larger honeyeaters, while whistlers snatch leaf beetles and caterpillars from eucalypt foliage. Cuckoos too eat larvae, specialising on unpleasant and hairy species. The smaller honeyeaters eat many insects, especially in spring and summer, particularly concentrating on the sap-sucking lerp and scale insects. The tiny pardalotes, thornbills and wrens also eat a wide range of insects. Flycatchers and swallows take beetles and moths as well as flies. Even parrots include insects in their diet.

Birds not only take insects from trees, they also eat pasture pests. Magpies are most important in this respect, taking thousands of scarab larvae per hectare each year. Ibis may consume large numbers of insects from pasture, particularly grasshoppers and larvae but their activities are often local. It should be realised though that predation by birds of pasture insects is likely to be greater where pasture and woodland meet. Magpies feed on the ground but require trees for nesting. Many woodland birds like choughs and some of the flycatchers, robins and wrens may venture into pastures to forage. Birds may also take pasture insects like scarab larvae and grass grubs as adult insects when they are in flight or feeding or resting on trees. Therefore it makes sense for farmers to manage trees to encourage insectivorous birds in just the same way that they manage their pastures.

THE BROWN THORNBILL

There are 12 species of thornbills in Australia and they share with, among others, the warblers, weebill and scrubwrens, the distinction of being the 'small brown birds' which can be annoyingly difficult to identify.

Although the thornbills can be so frustrating, they are extremely interesting birds and well worth persevering with. Thornbills are all insect eaters though at times they are seen at flowers. At the flowers it is difficult to know if they are actually taking nectar or simply searching for insects.

Thornbills are, to my mind, a lovely example of niche separation. All 12 species are in a sense competing - all are after insects. Each species survives because there is not a mad bun rush for the insects. By separating into different niches, and hunting for insects mainly in these niches, the different thornbill species can co-exist.

Firstly, there is geographical separation of the thornbills. For example, the Western Thornbill is found only in south-western Western Australia, the Mountain Thornbill in north Queensland and the Tasmanian Thornbill in Tasmania. In most regions of Australia there are several species of thornbills. Here in the Blue Mountains we have five different species. A good start in identifying the thornbills is to look up a field guide and work out which species can be expected to occur at your location.

Then there is sometimes separation into vegetation types. For example, in eastern Australia the Striated Thornbills are found in forested country, whereas the Yellow-rumped Thornbills are more likely to be in open, grassy country. And where the thornbills do occur together, there is often further separation. We have Striated and Brown Thornbills resident in our garden but invariably the Striateds are foraging high in the tree tops and the Browns down low in the shrub layer.

Further aids to identification of thornbills are learning their calls - these small brown birds have quite distinctive calls. Also, the social organisation of the thornbills varies. The following is a summary of a most interesting chapter, 'The social organisation and foraging behaviour of three syntopic thornbills *Acanthiza* spp.' by the late Harry Bell, in the recently published 'Birds of Eucalypt Forests and Woodlands' (editors A. Keast, H. F. Recher, H. Ford and D. Saunders; Surrey-Beatty & Sons, Sydney):-

"The Brown, Striated and Buff-rumped Thornbills were studied near Armidale. Brown Thornbills lived as territorial pairs, whereas the other two species spent most of the year in clans of 10-20 birds. In the breeding seasons these separated into pairs or groups of a single female and two or three males. All members of a group helped to feed fledglings and nestlings of their group, and if their breeding attempts failed, they assisted other groups of the same clan. Thornbills breed between July and December and success is low due to predators. Juvenile Brown Thornbills dispersed shortly after fledging, while in the two communal species dispersal occurred in spring, just before breeding.

"Brown Thornbills gleaned from the foliage of shrubs, and Striated Thornbills from eucalypt foliage. Buff-rumped Thornbills fed on the ground and gleaned from bark, and to a lesser extent the foliage of shrubs and trees. Striated Thornbills often hung upside down while foraging, and occasionally hovered, while Brown Thornbills occasionally snatched insects from foliage. Buff-rumped Thornbills fed far more on the ground in autumn and winter, when they were in clans. The breeding pairs and groups fed mostly in trees, on leaves in spring and later on bark mostly. This seasonal change in foraging may reflect changes in abundance of insect prey on the different substrates, or alternatively larger groups may be less vulnerable to ground predators than are small groups.

"Each species tended to retreat into its specialized niche when food became scarce. Consequently, overlap between any pair of species in foraging was inversely correlated with the abundance of arthropods. All species also fed more rapidly when food was scarce.

"All three species show some morphological adaptations to their foraging specializations. Striated Thornbills have short beaks to pick insects, especially scales, off eucalypt leaves. Brown Thornbills have fine beaks to probe into the densely-packed foliage of shrubs, and Buff-rumped Thornbills have slightly decurved beaks to probe into fissures in bark."

Brown Thornbills will be attracted to a garden with a goodly supply of shrubs. It seems, in the case of Brown Thornbills, that it is the physical structure, rather than the species composition, of the garden that is important. Some people feel that the bipinnate acacias, which have a high leaf surface area, are particularly good for thornbills. In our garden I have not noticed the Brown Thornbills to be particularly attracted to bipinnate acacias - any dense shrub seems popular. If you have Brown Thornbills in your garden, can you add any observations of the types of shrubs they feed in, the height at which they feed, whether they feed alone, in pairs or in mixed-species flocks and so on?

 HOW DO HOLLOW FORM

From 'The ontogeny of hollows in Blackbutt (*Eucalyptus pilularis*) and its relevance to the management of forests for possums, gliders and timber' by Charlie Mackowski in 'Possums and Gliders' (edited by Andrew Smith and Ian Hume, 1984, Surrey-Beatty & Sons, Sydney):-

"The formation of, and maintenance of hollows suitable for vertebrate fauna in Blackbutt is dependent on (1) excavation of hollow limbs by termites, (2) branch breakage to allow access to hollows, (3) drainage patterns within trees, (4) occlusion of wildlife hollows by continued branch growth, until eventual total collapse of the large tree."

The following diagrams show just how valuable hollow old trees are.

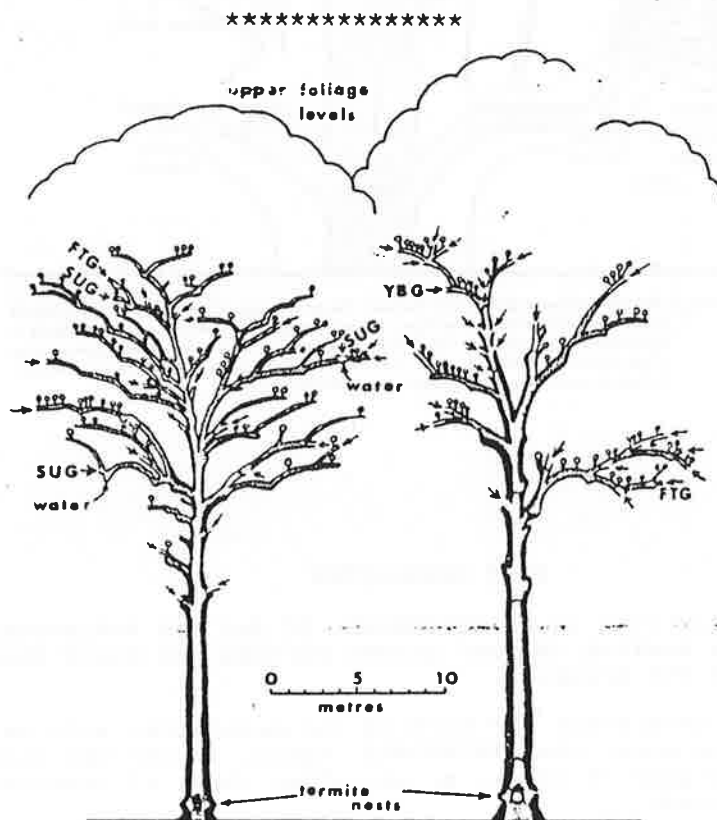


Fig. 5. Tree Dissection. Two dimensional reconstruction of dissected hollow bearing Blackbutt, drawn to scale. Tree on left shows many small and medium hollows and mudguts filled branches potentially capable of producing more hollows if broken. Tree on right shows stem hollows which form when main stem mudgut collapses or is allowed to drain. Arrows indicate hollows and entry slope. All hollow or mudguts filled stem and branch organs are shown — small circles indicate sound live branches (width of stub below small circle indicates size of branch). Fauna occurrence indicated as: FTG, Feather-tailed Glider; SUG, Sugar Glider; YBG, Yellow-bellied Glider. Shading represents mudguts.

MACROWSKI: ONTOGENY OF TREE HOLLOW

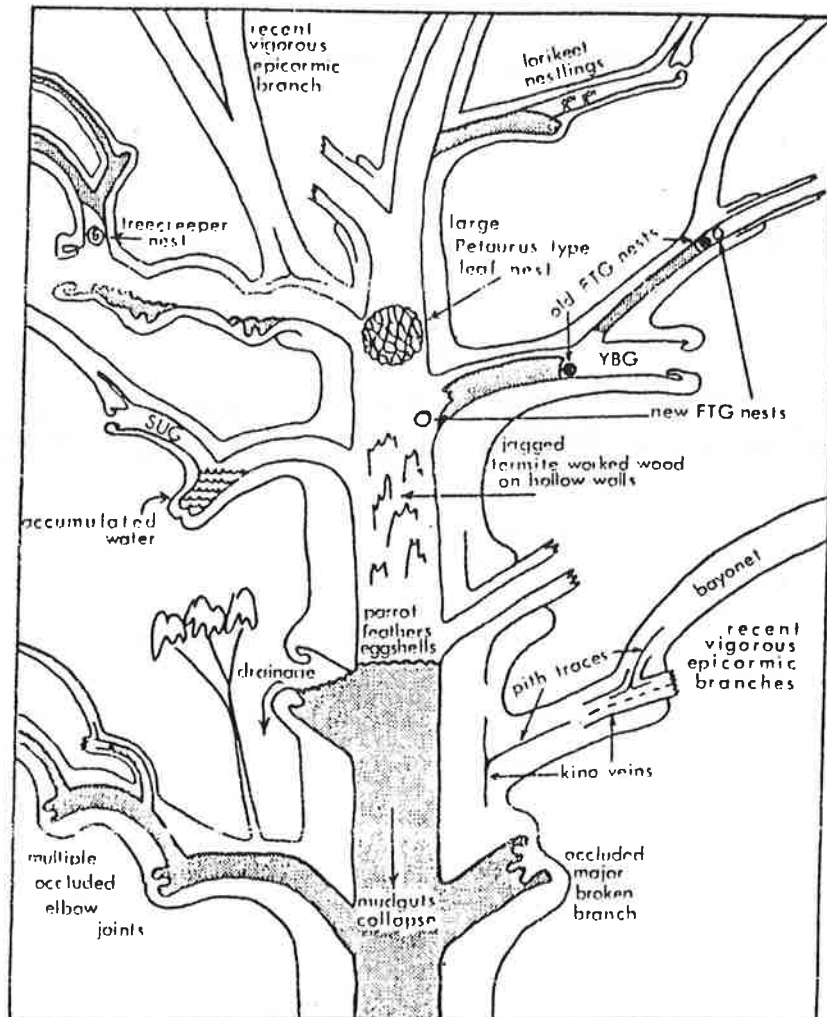


Fig. 6. Schematic Drawing of Dissection Features. Fauna symbols as for Figure 5. Nests which appear to hang in mid air in Figure 6 and mudguts similarly in Figure 5 are held in bends not accounted for in two dimensional drawing. Rainwater accumulates in some elbow joints by running along the underside of branches and into elbow joint hollows if there is insufficient callus outgrowth to shield the hollow.

NEXT NEWSLETTER

The next newsletter will be in SEPTEMBER. If you are fortunate enough to have any birds nesting in your garden perhaps you could share your observations with the group.

In the September newsletter the bird of the newsletter will be the PARDOLOTES and the plant the CASUARINAS. Again, if you can contribute observations of either of these, or any other items of interest, they would be most welcome.

Looking forward to the warmer months

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