

From then on she lived with the "scrubbers," coming down with them to drink, browsing in happy freedom on the hillsides. We are given some fine pictures of their existence in this unspoiled paradise, one of which, a fight between an old and a young bull for supremacy in the herd, is particularly interesting. But the "scrubbers" were not fated to enjoy their freedom for long. A rider from the station found them and soon afterwards they, too, were mustered and taken to the homestead paddocks. Here they almost fretted to death, but they were saved in time by the old bull, who broke down the gate and let them free.

Once again in their mountain fastnesses they enjoyed their freedom, but their numbers were sadly depleted, and, to make matters worse, as time went on, new settlers built fences about their beloved water-holes, and finally the herd was trapped by a kind-hearted settler who realized that they could not live in the hills without water. Even so, the red cow resented his kindness, and broke the fences and with her calf went back to the mountains. "She reached the last and highest of the camps. The reedy pool from which she and her mates used to drink when camped high on the mountain was now dry. . . . The end was not far off.

"The sun rose higher and beat more hotly down as the hours passed, but the red cow did not move. Gaunt and solitary, she stood, waiting to join the shadowy company of her kind—the wild herd that had passed from the ranges for ever."

## WESTERN AUSTRALIAN WILDFLOWERS.

### No. XXIX.: The Crimson Feather-flower.

(*Verticordia grandis*, Drum.)

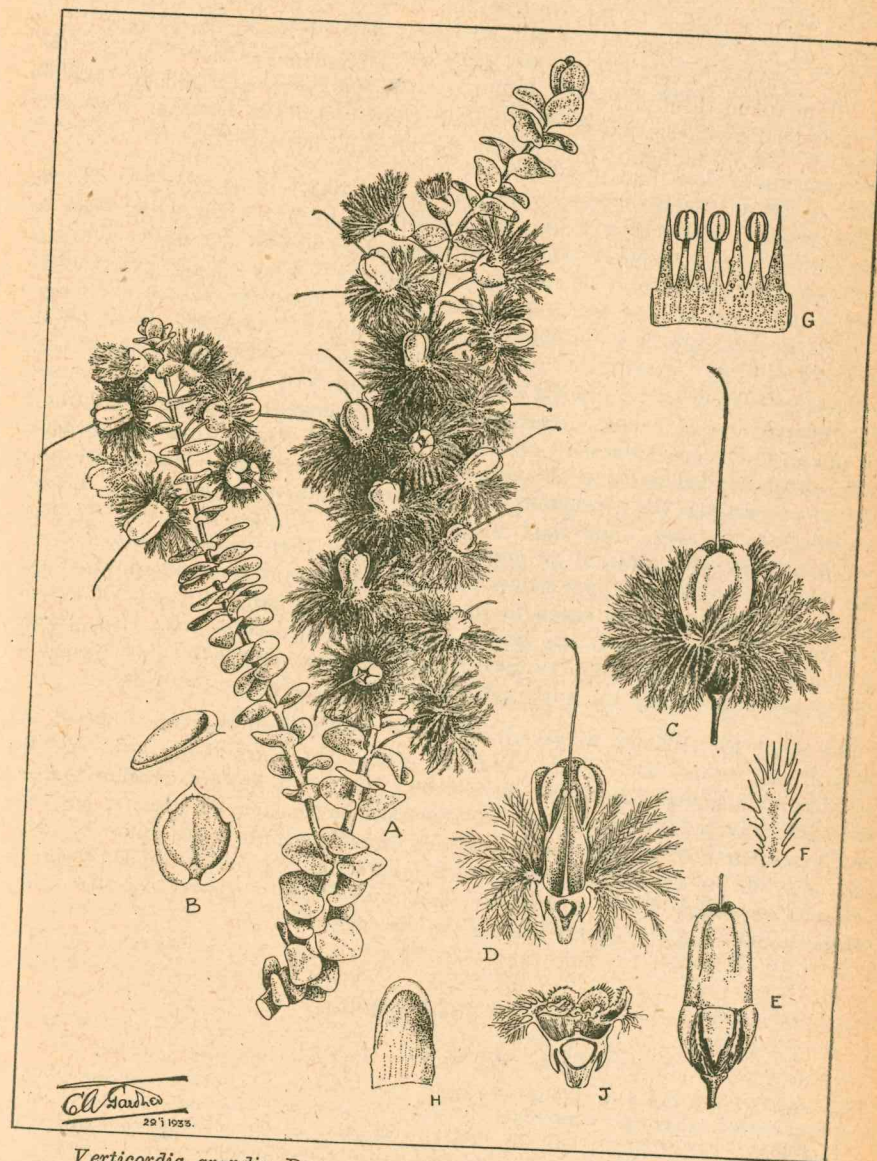
(By C. A. GARDNER, Government Botanist.)

The Crimson Feather-flower is undoubtedly one of the most striking species of our large flora. City dwellers admire the few living specimens which reach the metropolis during the late spring and summer; but only those who have seen it in its royal splendour flung far and wide over the Midlands sandheaths, set into high relief by the hazy smokebush and the dull dark green of the sandplain cypress, have a true conception of the beauty of this plant which, reveling in the sun-baked yellow sand, flowers throughout the hottest period of the year. It is truly a most regal thing with its large spike-like trusses of blossoms displayed to advantage on the stout upright stems densely clothed with grey-green leaves. Added to this attractiveness is the wonderfully complicated structure of the individual flowers with their feathery-lobed sepals, accessory sepals and appendages, and the fringed petals.

These characteristic feathery sepals or calyx-lobes are a distinctive feature of the genus *Verticordia*, and make the name "Feather-flowers" a very fitting one—more so than the meaningless name of "Morrison" so frequently applied to some species of the genus.

The forty-seven known species of the genus are widely distributed throughout the State, more especially in the South-West and central districts, where they decorate the sandheaths with their various hues of red, pink, white, yellow, orange and violet. Even in the far north, beyond the King Leopold Ranges, we find a small tree of the genus with feathery white flowers, yielding a wood which is beautifully grained, and of value for cabinet-making.

The complicated structure of the flower calls for special mention, but the flowers of the genus vary in structure. The accompanying plate of *Verticordia grandis* illustrates the structure of one of these flowers.



*Verticordia grandis*, Drum. Leon. origin. Watheroo, W.A.

If we examine a flower of *Verticordia grandis* in the bud stage, we discover that the young flower is enveloped in two transparent bracteoles which are almost completely round, very concave, and with a minute point just below the tip. (Fig. B.) As the flower expands these bracteoles are either pushed off from the top, or more frequently remain around the base of the mature flower. The mature or expanded flower has a well-defined calyx tube with five calyx lobes.

Each calyx-lobe is divided almost to its very base into numerous (usually 20) fine hair-like segments which are fringed in a feathery manner by other fine scarlet hairs. At the left side of the base of each calyx segment, or primary calyx-lobe we find another transparent fringed lobe (Fig. F) which lies downwards along the calyx tube, and does not spread outwards like the primary calyx lobes. These deflexed lobes are known as accessory lobes. Immediately below the primary lobes are also found five green, almost fleshy appendages which at first sight appear to be swellings of the calyx lobe, but they are quite free at the base, and are easily detached. These processes are the "herbaceous appendages" figured in Fig. E. They are found only on a few species of *Verticordia*. Between the herbaceous appendages the calyx-tube is strongly ribbed with five ridges. This calyx is the most elaborate of any type found within the family Myrtaceae, to which this species belongs, and any one of its characteristics is sufficient for the purpose of recognizing a species of *Verticordia*. The petals are five in number, and although with other species they are usually free, in *V. grandis* they are united into a short tube at the base. Each petal is elegantly fringed towards the apex, and of an intense crimson colour. The stamens are situated at the summit of the tubular base of the petals. They are ten in number, and each has a somewhat flattened filament and rounded anther which opens in two parallel slits. (In some species of *Verticordia* the anthers open in small rounded pores at the tips.) Alternating with the stamens are ten processes resembling the filaments of stamens, but without anthers. These are called "staminodes," and they are a feature of all species of this genus. The style is long and straight to above the middle, then slightly curved, and shortly bearded or fringed just below the tip. The ovary has only one cavity or cell, which contains from seven to 10 ovules, but normally only one develops into a seed. This seed is soft and fleshy, and has no hard seed-coat. It is never shed from the ovary, and thus the fruit consists of the somewhat enlarged calyx with its seed, crowned by the withered but persistent calyx and corolla.

The seeds are difficult to germinate. The withered flowers are planted in light soil just below the surface, and the seed upon germination projects its shoot through the water-softened calyx tube. Very few flowers develop fertile seed. This may be through a lack of adequate pollination by insects, but we do not know for certain that the flowers are insect pollinated. It would be useful if some of the readers of "Our Rural Magazine" could decide this point. All that is necessary is for someone to watch carefully the flowers of the plant for some hours on a sunny day during the summer.

*Verticordia grandis*, Drumm.

#### EXPLANATION OF PLATE.

A. Branch showing two inflorescences. B. Bracteoles, slightly enlarged. C. Individual flower (slightly enlarged). D. Section of flower showing the attachment of the stamens, and structure of the ovary with the herbaceous appendages; the calyx "feathers" are reduced in number to facilitate recognition. E. Flower with the primary calyx-lobes removed, showing the herbaceous appendages and accessory lobes of the calyx. F. An accessory calyx-lobe. G. Three of the anthers and four staminodes. H. Petal. J. Fruiting "flower." All except A enlarged; G enlarged about 4 times; A considerably reduced.

Watheroo, W.A., January, 1933.

Icon. origin.