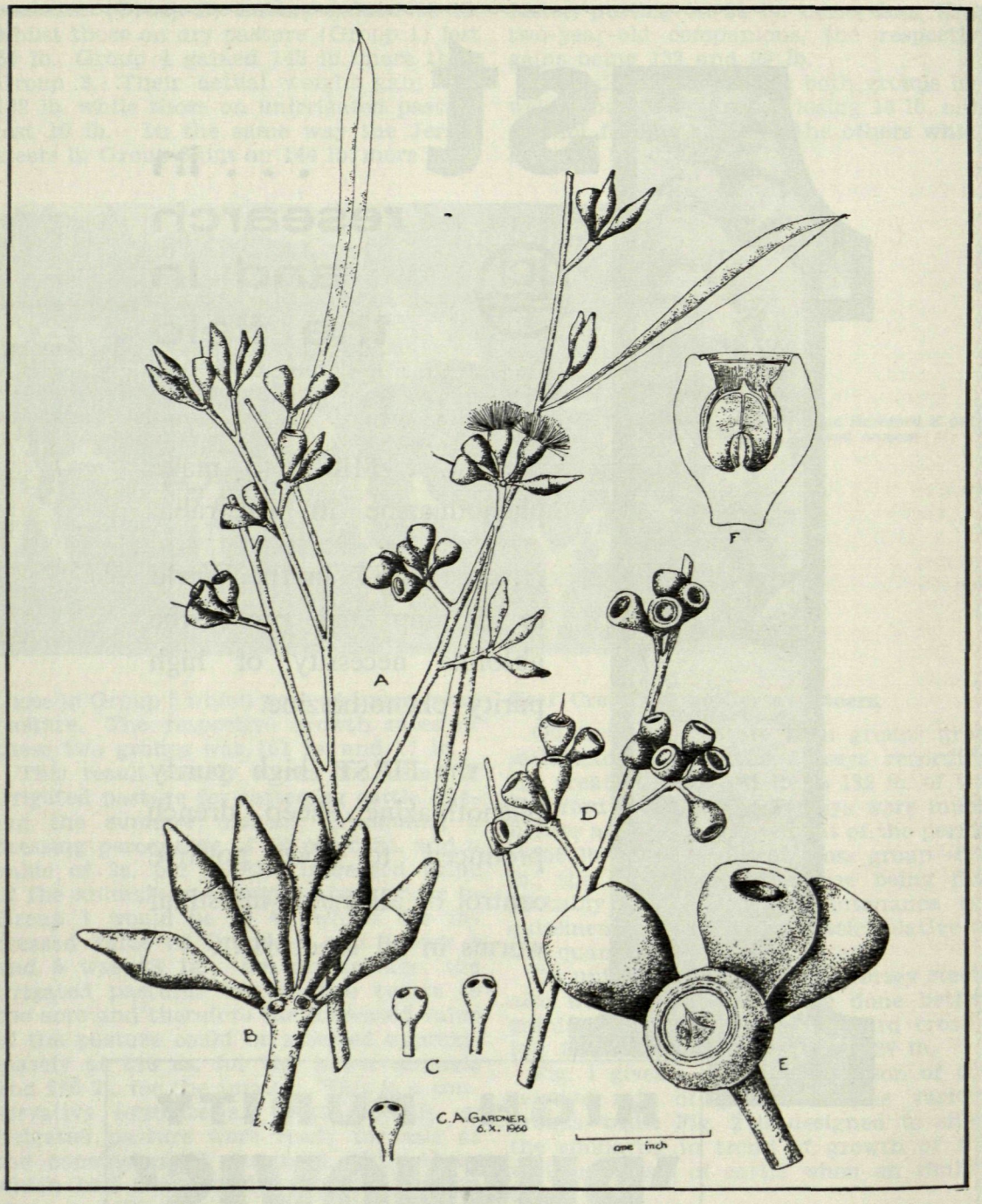



*EUCALYPTUS FOECUNDA* Schau

EXPLANATION OF PLATE

A—Branchlet with flower buds and fruits; B—Umbel of flower buds (much enlarged); C—Anthers (much enlarged); D—Fruits; E—Section of fruit (enlarged). Spearwood, R. D. Royce 6326

# TREES of Western Australia

By C. A. GARDNER

## No. 79

*Eucalyptus foecunda* (Schau).

**THIS species is a mallee with an average stature of 5-15 feet, with several erect twiggy branches, the bark smooth except at the very base where unshed patches of a dark greyish-brown adhere to the stems, otherwise it sheds in small plates, leaving a smooth grey-brown bark.**

The leaves are erect, green and shining on both surfaces, rather narrow, and terminate in usually long fine points; the leaf-stalks are slender and the leaf-blade gradually narrows into these stalks. The midrib of the leaf alone is prominent, the diverging lateral veins scarcely, or not visible to the naked eye, they diverge from the midrib at a rather wide angle. The whole leaf is copiously oil-dotted, and the average length of the leaf and its stalk is 3-4 inches. The flowers are borne in umbels in the axils of the leaves, the common stalk rarely exceeds half an inch in length. The flowers number 6-10 in the umbel, their individual stalks rarely exceeding one eighth of an inch in length. The hypanthium or calyx-tube is narrow in the bud, but becomes almost pear-shaped at the time of flowering; the operculum or bud-cap is conical, and about the same length as the hypanthium, usually slightly narrowed in the upper half in dried specimens. The numerous filmaments are white in colour, and the small anthers are club-shaped and continuous with the filament, that is they are not swivelled as in most species, and open towards the obtuse summit in small oblique pores. The fruit is pear-shaped, smooth and rounded at the top with a short thick rim, and the remarkable white disc is white and descends obliquely into the fruit orifice; the three fruit valves are at first surmounted by the split base of the style, but these soon break off leaving the persistent portion well included within the fruit itself.

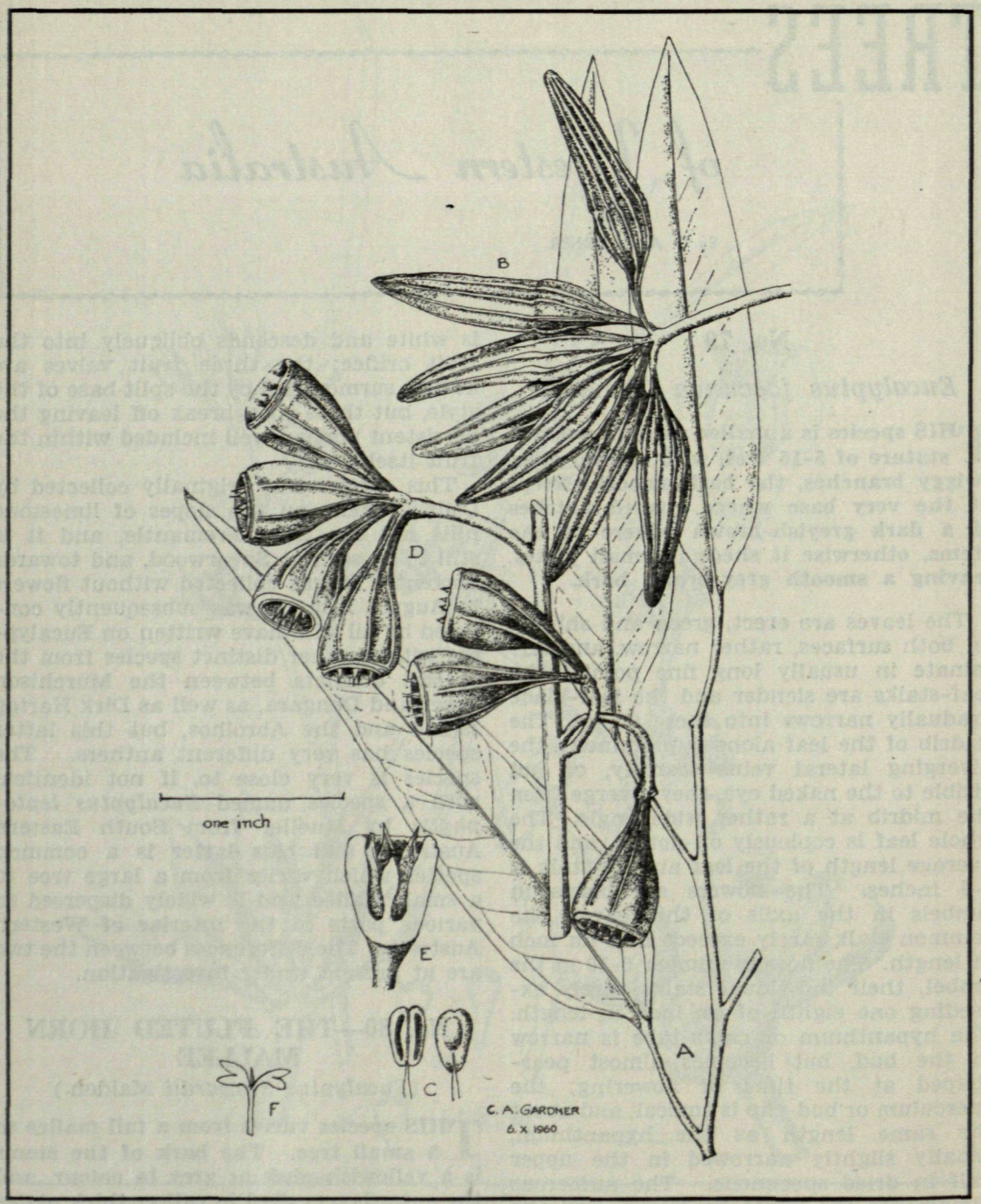
This species was originally collected by Ludwig Preiss on the slopes of limestone hills not far from Fremantle, and it is still to be seen at Spearwood, and towards Sorrento. It was collected without flowers in August 1939. It was subsequently confused by all who have written on Eucalyptus with another distinct species from the coastal districts between the Murchison River and Dongara, as well as Dirk Hartog Island and the Abrolhos, but this latter species has very different anthers. The species is very close to, if not identical with a species named *Eucalyptus leptophylla* by Mueller from South Eastern Australia, and this latter is a common species which varies from a large tree to a small mallee and is widely dispersed in various parts of the interior of Western Australia. The differences between the two are at present under investigation.

## No. 80—THE FLUTED HORN MALLEE

(*Eucalyptus Stowardii* Maiden.)

**THIS species varies from a tall mallee to a small tree. The bark of the stems is a yellowish-pink or grey in colour, and the outer layers shed in rather thick plates about the month of March, leaving the new bark a yellow or orange colour. A few of the lower plates remain adherent, giving the mallee a rough bark at the base.**

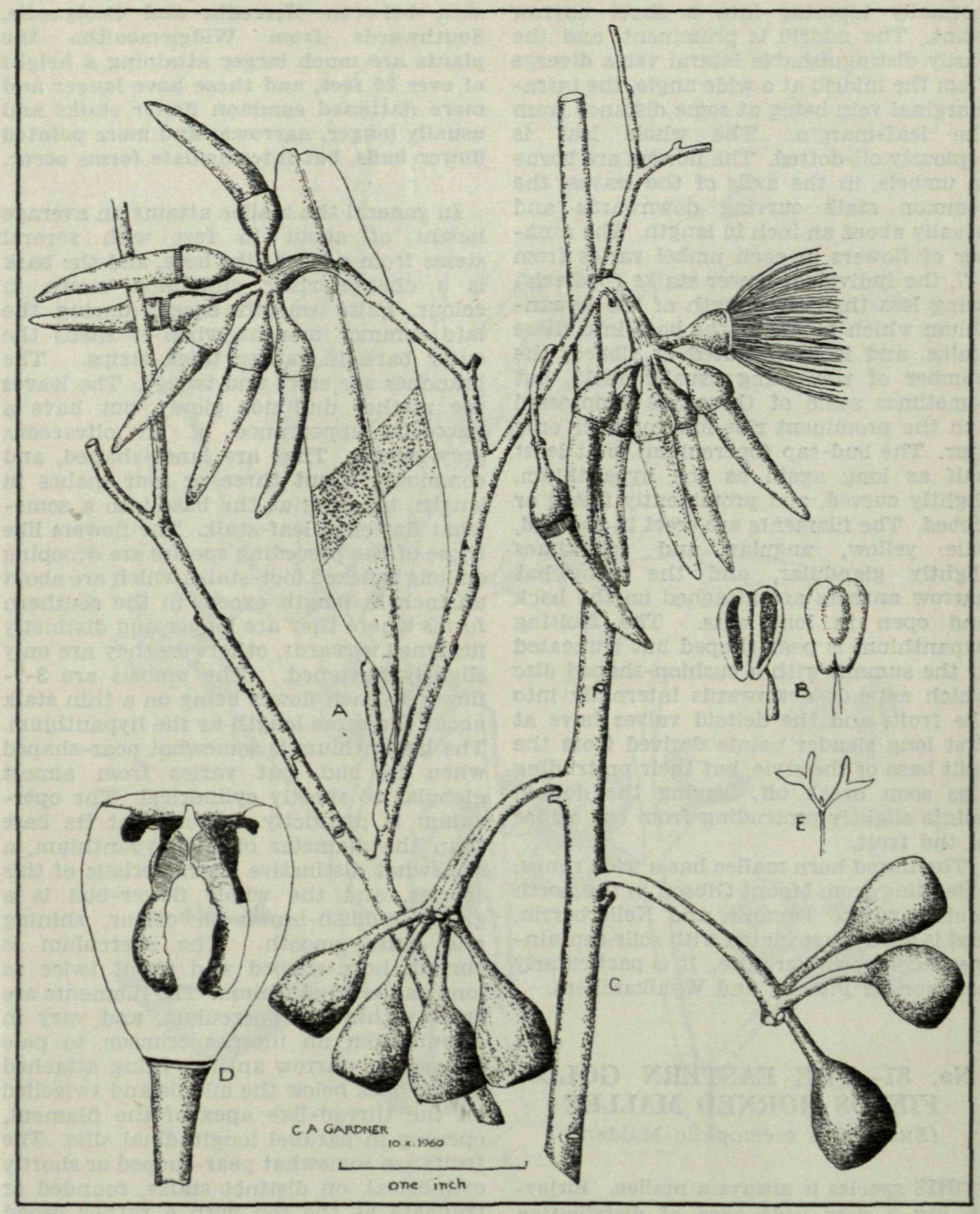
The leaves are rather large and highly lustrous, deep green in colour and are up to four and a half inches in length,




*EUCALYPTUS STOWARDII* Maiden

EXPLANATION OF PLATE

A—Branchlet with leaves; B—Flower buds; C—Anthers; D—Fruits; E—Section of fruit; F—Cotyledons
near Mt. Gibson, C. A. Gardner 10203




*EUCALYPTUS EREMOPHILA* Malden

EXPLANATION OF PLATE

A—Branchlet with flower buds; B—Anthers; C—Branchlet with fruits; D—Section of fruit; E—Cotyledons. B and D much enlarged. A and B—Between Yerbillon and Bodallin, Gardner sine no. C and D—Between Bullabulling and Coolgardie, Gardner sine no.

normally tapering into a short narrow point. The midrib is prominent, and the easily distinguishable lateral veins diverge from the midrib at a wide angle, the intramarginal vein being at some distance from the leaf-margin. The whole leaf is copiously oil-dotted. The flowers are borne in umbels, in the axils of the leaves, the common stalk curving downwards and usually about an inch in length. The number of flowers in each umbel varies from 5-7, the individual flower stalks (pedicels) being less than the length of the hypanthium which tapers at the base into these stalks, and is itself fluted or ribbed, the number of ribs being usually 10-12, but sometimes some of these are suppressed and the prominent ribs may number only four. The bud-cap (operculum) is at least half as long again as the hypanthium, slightly curved, and prominently fluted or ribbed. The filaments are erect in the bud, pale yellow, angular and sometimes slightly glandular, and the somewhat narrow anthers are attached on the back and open in long slits. The fruiting hypanthium is pear-shaped but truncated at the summit with a cushion-shaped disc which extends downwards internally into the fruit, and the deltoid valves have at first long slender points derived from the split base of the style, but their protruding tips soon break off, leaving the deltoid points slightly protruding from the orifice of the fruit.

The fluted horn mallee has a wide range, extending from Mount Gibson in the north southwards to Tammin and Kellerberrin, and is always associated with soils containing decomposing granite. It is particularly common at Pithara and Wyalkatchem.

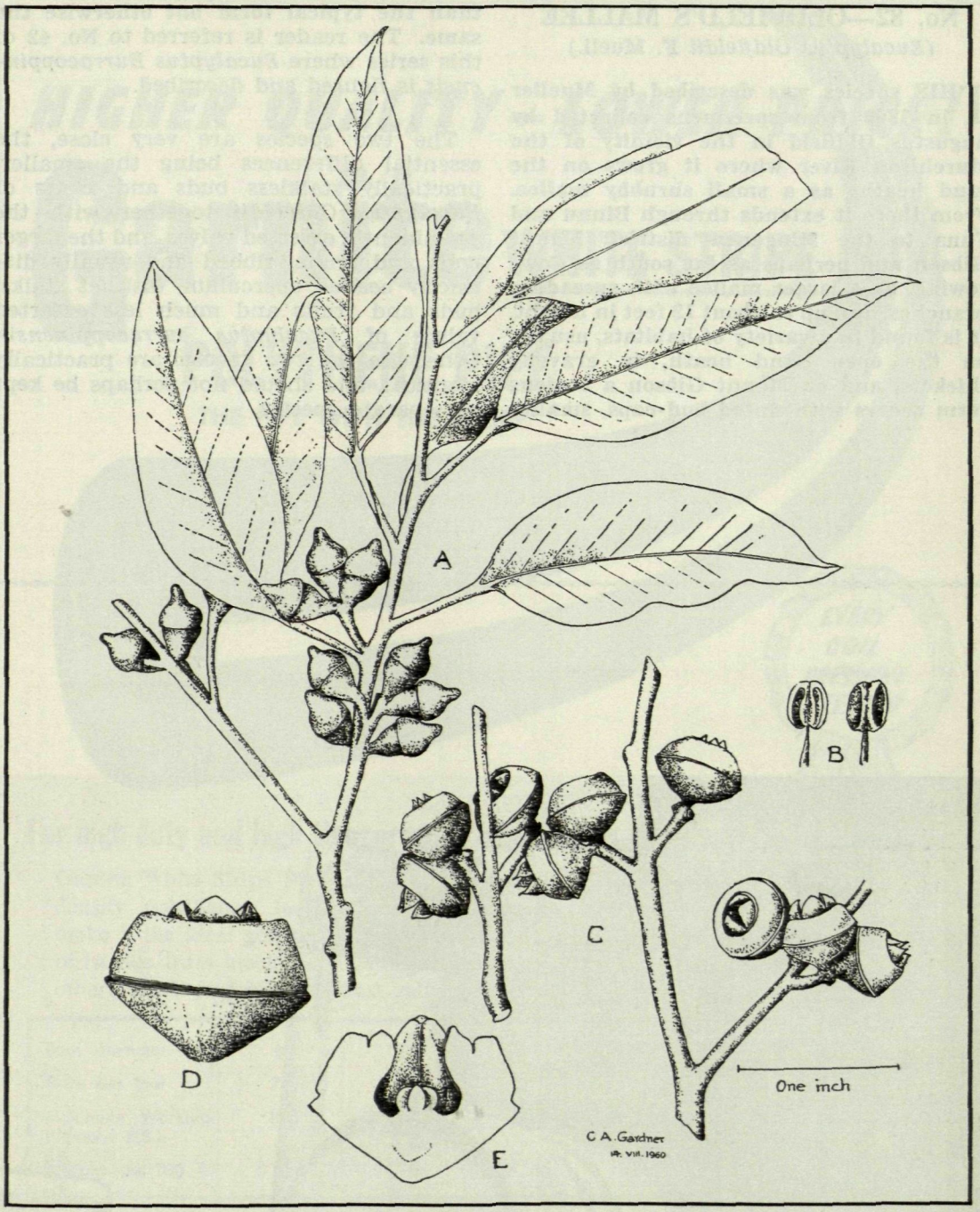
## No. 81—THE EASTERN GOLDFIELDS HORNED MALLEE

*(Eucalyptus eremophila* Maiden.)

**THIS species is always a mallee. Enjoying a very wide area of distribution which extends from Cleary and Beacon in the north to Pioneer and perhaps Gnowangerup in the south, westwards to Kellerberrin and Dalwallinu, and eastwards at least as far as Kalgoorlie, it exhibits some variation in its structure, especially in the flowers and fruits. The typical form is seen between Merredin and Coolgardie. Southwards from Widgiemooltha the plants are much larger attaining a height of over 20 feet, and these have longer and more flattened common flower stalks and usually longer, narrower and more pointed flower-buds, but intermediate forms occur.**

In general the mallee attains an average height of about 15 feet with several stems from a stock-like base, and the bark is a characteristic cinnamon brown in colour, quite smooth except during the late summer months when it sheds the outer bark in rather thick strips. The branches are erect and twiggy. The leaves are neither dull nor glossy, but have a nacreous appearance of an olivaceous grey-green. They are lance-shaped, and commonly about three or four inches in length, tapering at the base into a somewhat flattened leaf-stalk. The flowers like those of the preceding species are drooping on long reflexed foot-stalks which are about an inch in length except in the southern forms where they are longer and distinctly flattened upwards, otherwise they are only slightly flattened. The umbels are 3-7-flowered, each flower being on a thin stalk about the same length as the hypanthium. The hypanthium is somewhat pear-shaped when in bud, but varies from almost globular to shortly cylindrical. The operculum is distinctly narrower at its base than the diameter of the hypanthium, a somewhat distinctive characteristic of this species, and the whole flower-bud is a glossy reddish-brown in colour, shining and quite smooth. The operculum is curved, horn-shaped and about twice as long as the hypanthium. The filaments are erect within the operculum, and vary in colour from an intense crimson to pale yellow, the narrow anthers being attached on the back below the middle and swivelled on the thread-like apex of the filament, opening in parallel longitudinal slits. The fruits are somewhat pear-shaped or shortly cylindrical, on distinct stalks, rounded or truncate at the top with a rather broad flat or rounded disc, and the capsule has short included deltoid valves (see Fig. D.)

*Eucalyptus eremophila* inhabits loamy soil, frequently found on the margins of the salmon gum forest and forming open thickets. The plant flowers from June to October.




***EUCALYPTUS OLDFIELDII* F. Muell.**

**EXPLANATION OF PLATE**

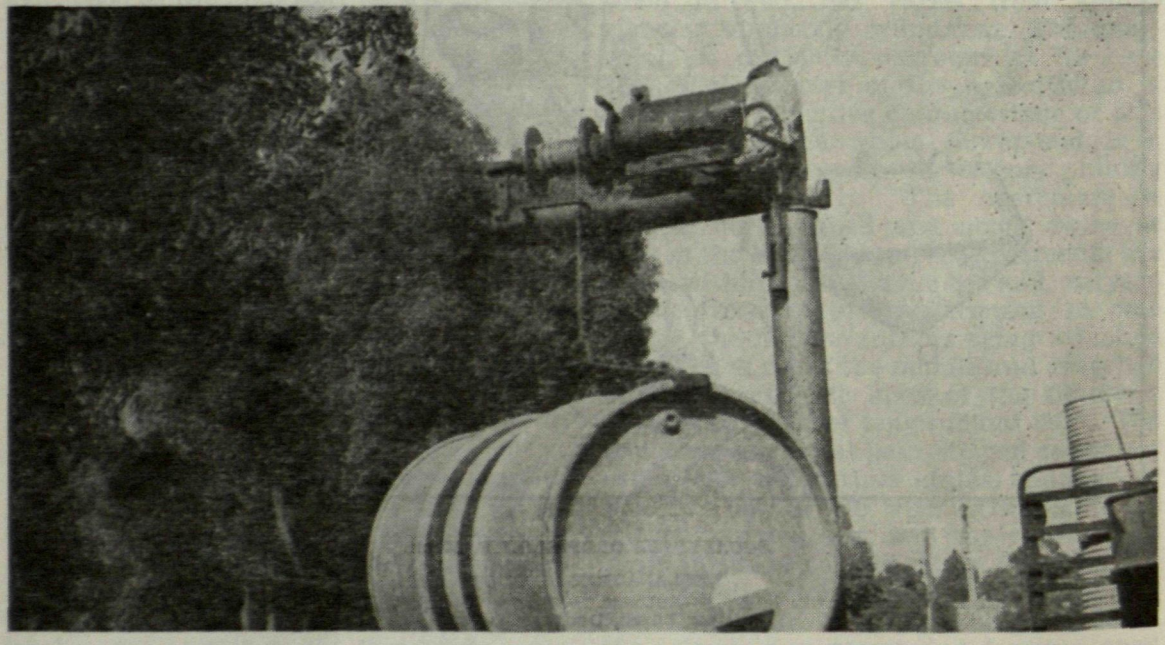
**A—Branchlet with leaves and flower buds; B—Anthers; C—Fruits; D—Fruit (enlarged); E—Section of the same. Near Binnu, Gardner sine no.**

## No. 82—OLDFIELD'S MALLEE

*(Eucalyptus Oldfieldii* F. Muell.)

**THIS species was described by Mueller in 1860 from specimens collected by Augustus Oldfield in the vicinity of the Murchison River where it grows on the sand heaths as a small shrubby mallee. From there it extends through Binnu and Yuna to the Mingenew district, Mount Gibson and perhaps as far south as Cowcowing, as a larger mallee with spreading branches, and up to about 12 feet in height. It is found in a variety of habitats, usually on the open sand heath, in gravelly thickets, and on Mount Gibson a curious form occurs with fluted bud-caps, smaller than the typical form but otherwise the same.** The reader is referred to No. 42 of this series where *Eucalyptus Burracoppinensis* is figured and described.

The two species are very close, the essential differences being the smaller, practically stalkless buds and fruits of *Eucalyptus Oldfieldii* together with the prominently exserted valves, and the larger buds and fruits, ribbed and usually distinctly beaked operculum, distinct stalks, buds and fruits and much less exserted valves of *Eucalyptus burracoppinensis.* Otherwise the two species are practically identical, and should not perhaps be kept as separate species.



Above is shown one of the disposal electric winches used as a winch to load honey drums on to the back of the truck. It is for designing this winch that the Beekeepers' Section of the Farmers' Union of W.A. gave Mr. Greenslade, of Broomhill, the Watson Cup as a beekeeper who did the most to advance the industry during 1959-60.