

EUCALYPTUS KONDININENSIS, MAIDEN and BLAKELY

A, branchlet with leaves and flower-buds; B, flower bud; C, fruits; D, fruits; E, longitudinal section of fruit. B, D and E, Kondinin, Gardner 15002

2nd May, 1964

TREES OF WESTERN AUSTRALIA

By C. A. GARDNER

No. 105 THE KONDININ BLACKBUTT

Eucalyptus kondininensis Maiden and Blakely

THIS tree, originally discovered by the writer in July 1923, was described in 1925. At the time it was known only from a small area immediately to the east of the Kondinin town in a shallow depression in the clay flat which more or less surrounds the townsite.

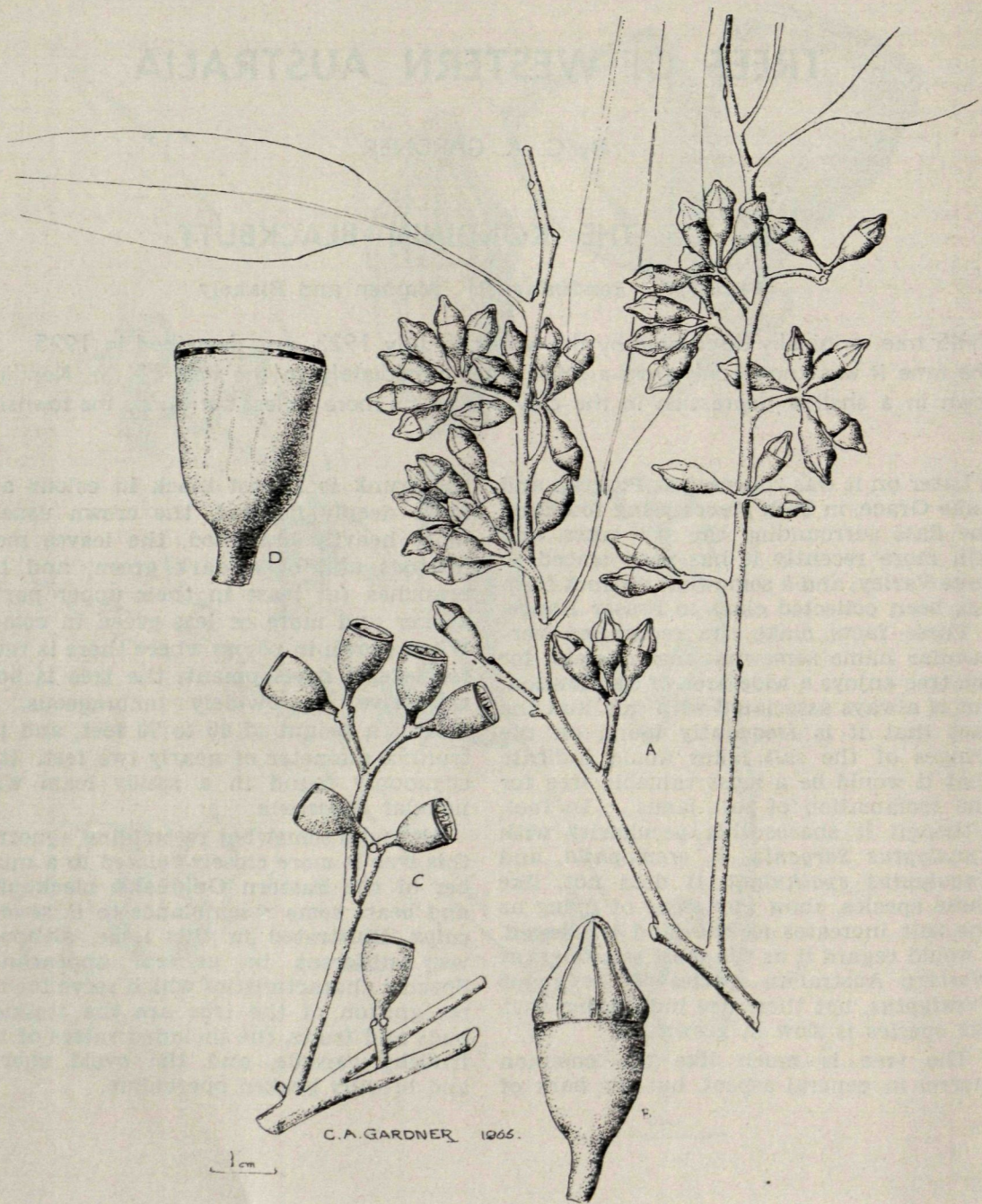
Later on it was collected at Pingrup and Lake Grace, in both places being found on the flats surrounding the salt lakes, and still more recently it has been traced to Lake Varley, and a somewhat distinct form has been collected close to Fraser Range.

These facts make the recognised vernacular name somewhat meaningless, for the tree enjoys a wide area of distribution, but is always associated with salt, and the fact that it is frequently found on the fringes of the salt lakes would indicate that it would be a most valuable tree for the reclamation of salt lands. In fact, although it shares this peculiarity with *Eucalyptus Sargentii*, *E. eremophila*, and *Eucalyptus spathulata*, it does not, like these species, show any signs of dying as the salt increases as the land is cleared. I would regard it as the most salt tolerant Western Australian species of the genus *Eucalyptus*, but there are indications that the species is slow in growth.

The tree is much like the common morrel in general aspect, but the bark of

the trunk is almost black in colour and more deeply fissured, the crown usually more heavily branched, the leaves more lustrous and of a dark green, and the branches (at least in their upper parts) darker and more or less green in colour. When grown in places where there is room for lateral development, the tree is both attractive and widely umbrageous. It attains a height of 60 to 70 feet, and the trunk a diameter of nearly two feet. It is commonly found in a sandy loam with nodular limestone.

Although somewhat resembling a morrel, this tree is more closely related to a number of the Eastern Goldfields blackbutts, and bears some resemblance to *E. striatocalyx*, illustrated in this issue, although very different in general appearance. Specific characteristics which serve for the recognition of the tree are the stalkless buds and fruits, the included valves of the fruiting capsule, and the ovoid shortly and broadly beaked operculum.



EUCALYPTUS STRIATICALYX, W. V. FITZG.

A, branchlet with leaves and flower buds; B, flower bud; C, fruits; D, fruit. B and D, much enlarged
 Near Big Bell Mine, westwards from Cue. Gardner 13369 August, 1961

No. 106 *EUCALYPTUS STRIATICALYX* W. V. Fitzg.

IN September 1903, Mr. W. V. Fitzgerald collected and described a tree growing at Milly's Soak in the Cue district, which was known locally as "York Gum," but to which it bears no affinity. "Milly's Soak" is no longer known to the local inhabitants, but I visited the place in 1920, and remember it as a depression about four or six miles westwards from the Cue townsite. The locality is not far removed from Big Bell, from which locality the specimens illustrated here were collected.

The name is unfortunate, since the calyx (hypanthium) is not, or only barely striate, but on the other hand the operculum is conspicuously striate or ribbed, the number of ribs varying from about 10 to 15. The trees from other localities, now rarely seen since they have been mainly cut down for mining timber, have a stout trunk, up to eighteen inches in diameter, and covered totally or partially by a dark grey fibrous rough bark, whilst the branches are smooth with a pale orange-yellow or yellowish-white bark, decorticating in long strips. The timber is hard, dark brown and has an interlocked grain. The tree makes its appearance again to the north, where it grows on the sand hills near Lake Annian near Nannine, but here the trees are more slender, and the bark smooth except for a short dark-coloured rough bark for a short distance above the ground.

We meet the tree once more on the watercourse northwards from, and close to Mount Magnet, growing on the loamy soil of the banks of the creek. The three forms exhibit differences in stature and nature of the bark, but in all of them we have the same pendulous grey leaves.

The tree rarely exceeds 30 feet in height,

and occurs often in fairly large numbers in certain areas, as for example at Nannine, and at Mount Magnet.

A comparison with the illustration of this species and that of *Eucalyptus kondininensis* will show many points of similarity, but in *E. striaticalyx* the flower-buds are larger, and distinctly stalked, and the leaves a dark lustrous green. The degree of ribbing and striation of flower-buds, and to a less extent in the fruits, is a characteristic which is dependent largely on the maturity of the organs, and the condition of the specimen when described. They are more conspicuously developed when the buds and fruits are dry. For example, Blakely places *E. striaticalyx* and *E. kondininensis* amongst those species in which the buds and fruits are striate, whilst *Eucalyptus platycorys* (illustrated in the next plate) is described as having "coarsely striate, ribbed or corrugated" buds and fruits. A glance at the accompanying illustrations will reveal how unsatisfactory this distinction is, since *E. platycorys*, illustrated shortly after collection, is practically smooth.

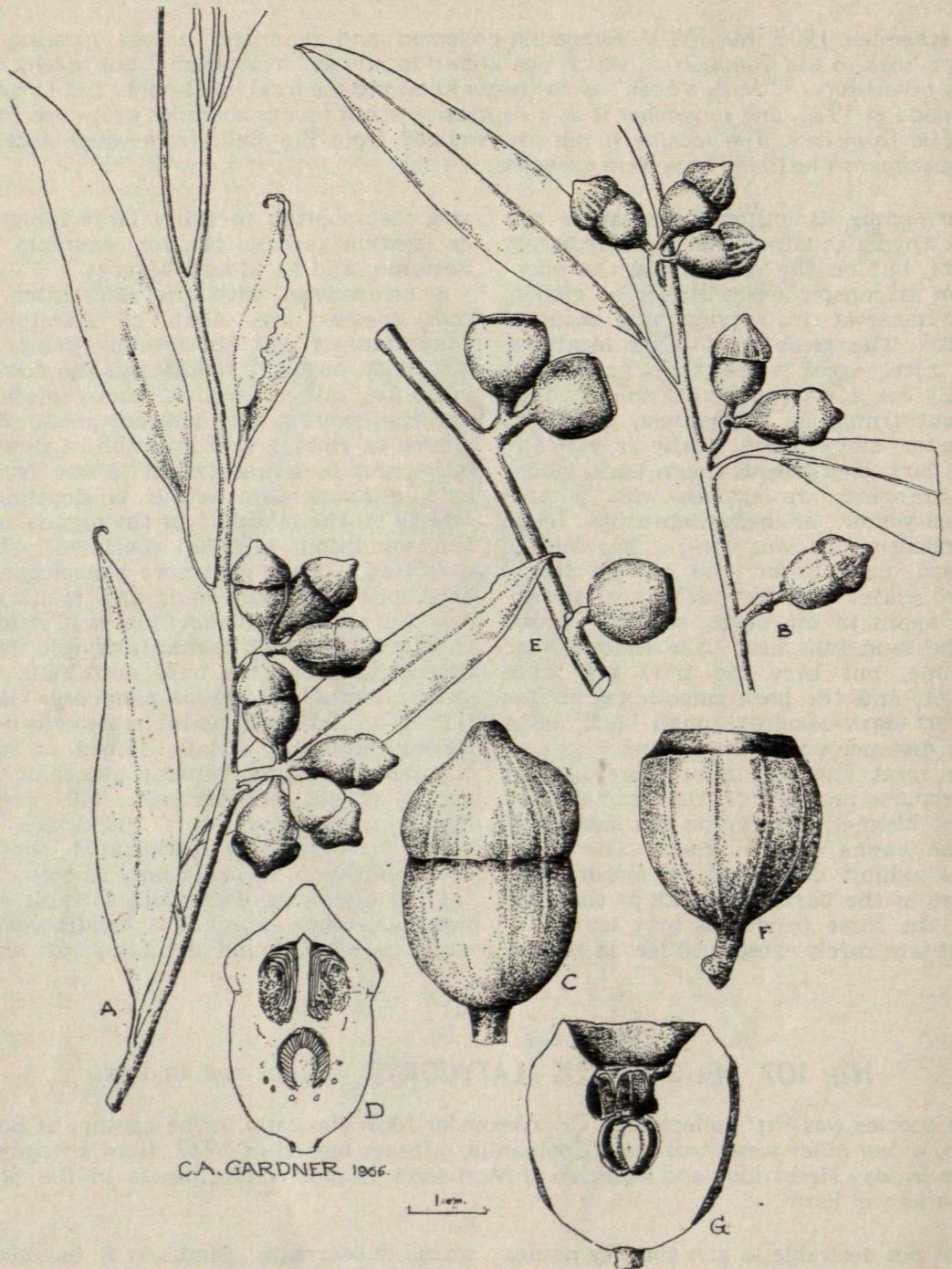
E. striaticalyx is fairly salt tolerant, but not to the same extent as *E. kondininensis*, which is often found in highly salt soils.

No. 107 *EUCALYPTUS PLATYCORYS* Maiden and Blakely

THIS species was first collected by Dr. Alexander Morrison early in the century at Boorabbin, a few miles westwards from Coolgardie. It was named in 1929, from a fragment in the Sydney Herbarium, and a portion of Morrison's original collection is in the State Herbarium in Perth.

It is not desirable to give locality names to plants unless their range is fully understood. Such names can be very misleading. For example, *E. comitae-vallis*, is not confined to Comet Vale; in fact Comet Vale is at the eastern extremity of the extensive range of this species which extends west-

wards to Merredin. Similarly *E. burracopinensis* is found northwards to Warralackin, and southwards to near Hyden, and is also very common in the Yorkkraine district northwards from Tammin; *E. ebbanoensis* is much more common at Wongan Hills and Comet Vale than it is



EUCALYPTUS PLATYCORYS, MAIDEN and BLAKELY

A, branchlet with leaves and flower-buds; B, the same; C, flower-bud; D, flower-bud in longitudinal section; E, fruits, F, the same (enlarged); G, fruit in longitudinal section

in the Mingenew district (Ebbano soak is southwards from Mingenew). Many other similar cases could be discussed, but the above illustrate the undesirability of such names.

Eucalyptus platycorys is a small mallee occurring rather commonly at Boorabbin, whence it extends as a mallee through the vicinity of Victoria Rocks in a more or less southerly direction to Norseman, where it occurs near the lake as a tree of 25 feet in stature. This and the two preceding species are therefore plants which can thrive in saline soil.

The Boorabbin plants rarely exceed seven or eight feet in height, are densely branched, and well foliaged. The leaves are rather thick, a deep lustrous green and usually hooked at their extremities. The flowers are either solitary, in pairs, or more commonly in groups of three on short peduncles and pedicles, and the operculum is much broader than the calyx, smooth when fresh, but becoming longitudinally wrinkled (but *not* corrugated) when dry. The specific epithet is derived from two Greek words—*platys*, flat; and *korys*, a helmet, in reference to the flat (or relatively flat) operculum.

No. 108 *EUCALYPTUS CUPULARI* C. A. Gardn.

THIS recently described species was collected in 1951 close to Hall's Creek, growing on a schistose hill but confined to the westward slopes. It is a white-barked tree 25-30 feet tall, the bark being smooth except near the base where it is somewhat furrowed.

The leaves are long and narrow mostly about six inches long, rather thick, the same colour on both surfaces, somewhat lustrous, and tapering into an acute or long fine point. The flowers are in umbels of 5-7, on, rather long rigid stalks (peduncles). The buds are whitish, and the operculum at the base is somewhat narrower than the rim of the hypanthium. The fruits are hemispherical-campanulate in outline, with a rather narrow raised disc, and broadly protruding triangular erect acute valves.

The tree is apparently rare, having been observed only on the particular hill in question, and local residents are asked to obtain, if possible, further specimens for study.

The species is a handsome one, with somewhat drooping branchlets. It could be compared as a subject for planting, with the red gum or river gum (*Eucalyptus camaldulensis*), but is much smaller, and would be a desirable tree for gardens and street planting.

No. 109 THE THICK-LEAVED MALLEE

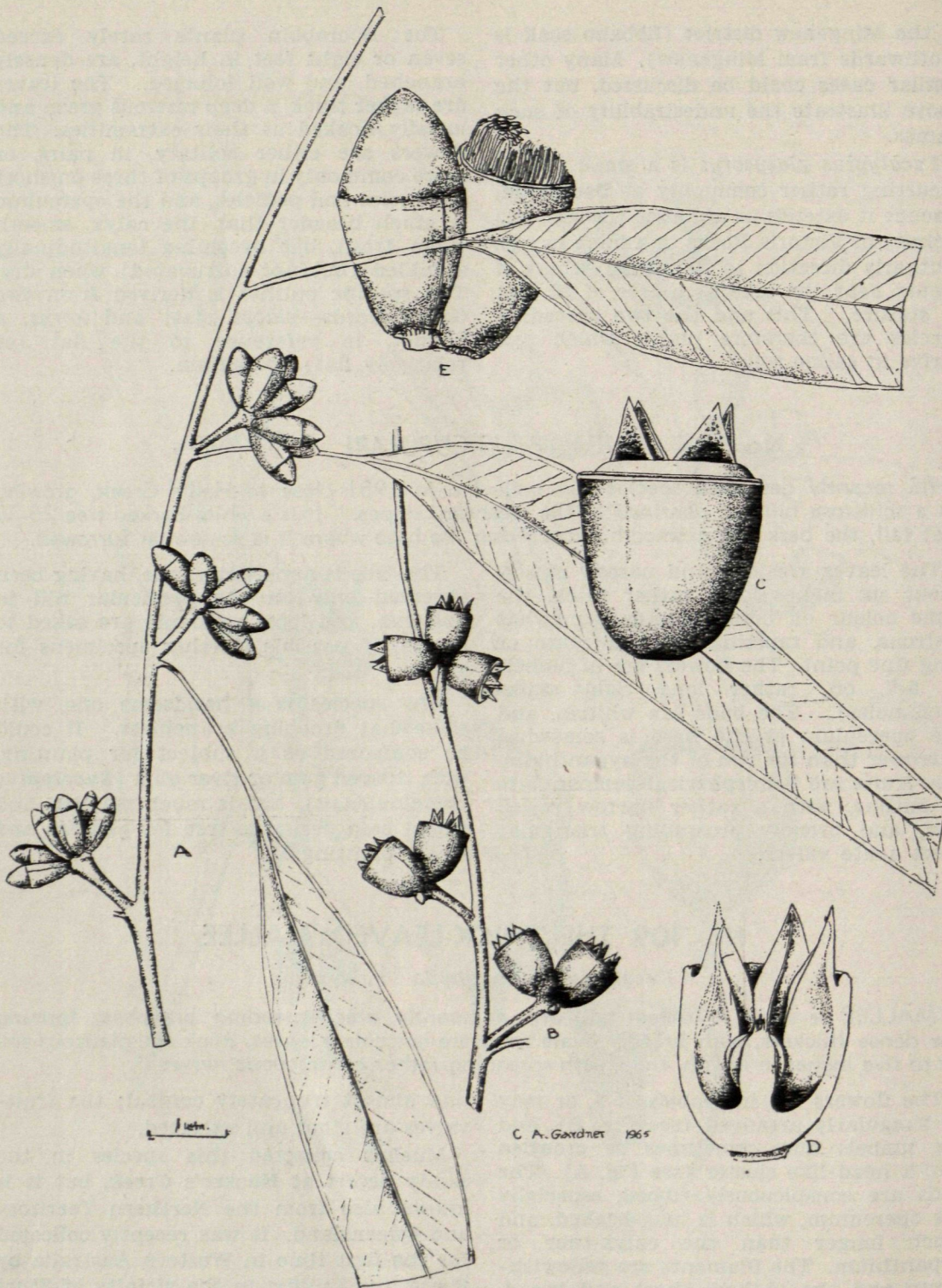
Eucalyptus pachyphylla F. Muell.

A MALLEE or shrub 4-10 feet tall, with apparently erect-spreading branches, forming low dense thickets, with broadly ovate or ovate-lanceolate leaves, thick and glaucous and up to five inches in length, rigid, with spreading rather conspicuous nerves.

The flowers are in umbels of 3, or may be irregularly arranged (see Fig. B), and the umbels may sometimes be crowded into a head-like cluster (see Fig. A). The buds are conspicuously ribbed, especially the operculum, which is long-beaked, and much longer than the calyx-tube or hypanthium. The filaments are yellowish-white and the anthers short and broad, opening in two longitudinal slits. The fruit is distinctly pedicellate, hemispherical, few-ribbed, and the disc elevated

and almost truncately conical; the fruit-valves are stout and exserted.

Mueller collected this species in the sandy desert at Hooker's Creek, but it is known also from the Northern Territory and Queensland. It was recently collected for the first time in Western Australia by Beard and Lullfitz in the vicinity of Sturt Creek in dry sand with Spinifex, but the specimens are in fruit with only immature buds.



EUCALYPTUS CUPULARIS, C. A. GARDN

A, branchlet with leaves and buds; B, fruits; C, fruit; D, fruit in longitudinal section; E, buds
 Near Hall's Creek, Gardner 10217 11 May, 1951



EUCALYPTUS PACHYPHYLLA, F. MUELL.

A, branchlet with leaves and young flower-buds; B, fruits; C, fruit; D, fruit in longitudinal section.
(C and D much enlarged)

Sturt Creek, at Billiluna, Beard and Lullfitz 4259

29 May, 1965