Two Interesting Queensland Eucalypts.

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Plate I.

(Read before the Royal Society of Queensland, 28th July, 1930.)

Eucalyptus Curtisii n. sp.

Frutex vel arbor parva 3-7 m. alta; cortice lævi griseo. Folia juvenilia vel primaria oblonga vel anguste lanceolata, opposita vel alterna, breviter petiolata, superne obscure viridia, inferne pallida, $2 \cdot 5$ -7 cm. longa, $0 \cdot 4$ -1 cm. lata, venis lateralibus e costa media angulo 50° -60° emergentibus. Inflorescentiæ axillares vel paniculas corymbosas terminales dispositæ, umbellis 3-6 floris; pedunculis compressis vel anguste alatis. Flores pedicellati, gemmæ 1 cm. longæ, $0 \cdot 5$ cm. diam.; tubo calycis leviter subcostato, limbo minute bidentato; operculo conico, calycis tubo brevius. Antheræ versatiles, late ovatæ vel orbiculares longitudinaliter dehiscentes. Capsulæ pedicellatæ, campanulatæ, venulosæ et subcostatæ 7-8 mm. diam., disco parvo, inconspicuo, valvis 4-6 truncatis profunde inclusis.

A Mallee-like shrub or small tree 3-7 m. high, with grey-silvery stems 5-8 cm. in diameter. Bark smooth, leaden grey in colour, Timber very pale, hard and tough. decorticating in long ribbons. Juvenile leaves (not seen in the earliest stage) linear oblong to narrow lanceolate, opposite and alternate, shortly petiolate, dark green above, pale beneath, the margins slightly irregular and sub-revolute, $2 \cdot 5$ -7 cm. long, 0.4-1 cm. broad. Mature leaves alternate or occasionally opposite, shortly petiolate, lanceolate, dark green and shining above, pale beneath, 6-13 cm. long, 1-2.7 cm. broad. Venation rather obscure, the lateral veins making an angle of 50°-60° to the midrib, the veinlets reticulate, intramarginal vein remote from the edge. Inflorescence in the upper axils forming fairly large terminal corymbose panicles which become infraterminal by the time the fruit develops. Umbels 3-6 flowered; peduncles compressed or narrowly winged, 10-15 mm. long. Buds conical clavate, pedicellate, pale green, 1 cm. long, 5 mm. in diam. at the broadest part. Calyx-tube slightly 4-ribbed or subdipterous at the base, two of the ribs more prominent than the others and terminating in rudimentary teeth on the edge of the calyx rim. Operculum conical, rather thin, pale green shaded pink, shorter than the calyx-tube. Anthers versatile, broadly ovate to orbicular, with distinct cells opening longitudinally, gland rather small, attached to the upper half of the connective. Fruit pedicellate, campanulate, venulose and faintly costate, one or two of the ribs sometimes expanded into narrow wings, 7-8 mm. diam. Disc small and obscure, slightly oblique; valves 4-6, truncate, deeply enclosed.

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EXPLANATION OF PLATE I. Eucalyptus Curtisii (Blakely and White.)

- Fig. 1. Juvenile or coppice leaves, $\frac{1}{2}$ nat. size. Fig. 2. Flowering Twig, $\frac{1}{2}$ nat. size. Fig. 3. Flower bud, $\times 1\frac{1}{2}$ Fig. 3. Flower bud, $\times 1\frac{1}{2}$ Fig. 4. Flower, $\times 1\frac{1}{2}$. Fig. 5. Anther, $\times 25$.

- Fig. 6. Calyx tube and pistil, $\times 1\frac{1}{2}$. Fig. 7. Fruiting inflorescence, ½ nat. size.
 Fig. 8. Capsule, nat. size.
 Fig. 9. Seeds, enlarged.



Description of Seeds.—The seeds are somewhat similar to those of *Tristania conferta* R. Br., and quite distinct from any other species of Eucalyptus, hence a new subseries, Leptospermæ, is proposed.

Fertile seeds pale brown, glossy, minutely rugose on the sides only, the back smooth and glossy, flask-shaped to arcuate, usually 2-ribbed, the base obtuse or produced into a small, straight point, gradually narrowed upwards into the small truncate hilum, $1\frac{1}{2}$ mm. long, $\frac{1}{2}$ mm. broad in the widest part. Sterile seeds somewhat similar in shape and size to the fertile seeds, but straighter and of a darker colour.

Description of Seedlings.—Cotyledons reniform, 5 mm. long, $2\frac{1}{2}$ mm. in diameter. Hypocotyl slender, terete, pale pink, 1-1.5 cm. long. First pair of leaves linear-lanceolate, shortly petiolate, pale green, 1-1.5 cm. long, 4-5 mm. broad. Second pairs of leaves linear-lanceolate, petiolate, 1.5-2 cm. long, 6-7 mm. broad, dark green above, pale beneath. Third to fifth pair of leaves narrow-lanceolate, shortly petiolate, smooth, pale on the lower surface, 4-8 cm. long, 0.7-1 cm. broad. Sixth to eighth pair narrow-lanceolate, 7-12 cm. long, 1-1.3 cm. broad, the same colour as the earlier leaves. Intermediate leaves alternate, petiolate, lanceolate to obliquely lanceolate, 6-8 x 1.5-2 cm. Venation fine and somewhat obscure.

Range.—Sandstone hills near Plunkett, about 33 miles S.W. of Brisbane: C. T. White, 26/8/1923 (sine No.). Bushes 6-8 ft. high, bark peeling off in long strips; 24/2/29 No. 5592, very common on sandstone ridges, small trees up to 7 m., but mostly smaller of Malleelike growth, trunks with a smooth grey silvery bark; Nov. 1929 (flowering specimens), D. Curtis (the type).

The species is named in honour of Mr. Densil Curtis, who first drew the attention of one of us (C.T.W.) to the tree when collecting in that locality in 1923. Unfortunately, only fruiting specimens were gathered. The locality was again visited in February 1929, but again the trees were only seen in fruit, although a good series of fruiting specimens, wood, and coppice leaves were gathered. Mr. Curtis, however, gathered good flowering specimens in November 1929, which enabled us to draw up a satisfactory description.

Affinities.—The species closely resembles E. Shiressii Maiden & Blakely, in shape, colour, and general appearance of the juvenile and adult leaves, also in the shape of the buds, but the anthers place it in a different subsection, while the fruits are more venulose, and the wood is pale.

The leaves are reminiscent of those of *Tristania laurina* R. Br., and the fruits and seeds resemble the corresponding characters of T. conferta R. Br. to a marked degree.

Systematic Position.—It is a very interesting species with the Mallee-like habit of E. eudesmioides F. v. M. and the rudimentary toothed calyx of some of the members of the Eudesmieæ, but the staminal

ring is regular, and the filaments are not tufted. The rather large terminal inflorescence is not unlike the Corymbosæ, but the anthers are much shorter, the fruits not urceolate, and the timber is white.

It cannot be satisfactorily placed under any of Bentham's subseries (Series Normales in the "Flora Australiensis") and a new subseries— Leptospermæ—intermediate between the Corymbosæ and Eudesmieæ, is here proposed to receive it. The characters are as follows:—

Subseries Leptospermæ.—Flowers rather large, inflorescences borne in the upper axils forming a terminal more or less corymbose panicle (infraterminal in fruit). Calyx ribbed, two of the ribs produced into minute teeth on the calyx rim. Capsule campanulate, seeds narrow, minutely rugose on the sides, the back smooth.

Eucalyptus tenuipes n. sp.

Arbor parva vel mediocris, cortice fibrato persistenti. Folia juvenilia opposita vel alterna, linearia vel anguste lanceolata, sessilia vel breviter petiolata; folia matura vel secundaria opposita vel alterna breviter petiolata, anguste lanceolata, 6-15 cm. longa et 0.8-1.8 cm. lata; venis lateralibus e costa media angulo $60^{\circ}-70^{\circ}$ emergentibus, venis lateralibus et venulis subobscuris. Inflorescentiæ umbellas axillares dispositæ; umbellis 5-10 floris; pedunculis 1.2-1.7 cm. longis; pedicellis tenuibus subteretibus, 0.7-1.1 cm. longis. Flores ignoti. Capsulæ hemisphericæ vel late turbinatæ 4-5 mm. diam. valvis 3-4 leviter inclusis vel discum subæquantibus.

A "Stringybark or Mahogany" of medium size, bark long-fibred, dark reddish brown, close and persistent to the small branches. Juvenile leaves not seen in the earliest stage; those available are smooth, yellowishgreen when dry, opposite and alternate, linear to narrow-lanceolate, sessile to shortly petiolate, dark coloured and subcaniculate above, pale beneath, with a yellowish prominent midrib, $5 \cdot 15$ cm. long, $0 \cdot 5 \cdot 1$ cm. Mature (adult or secondary) leaves opposite and alternate, broad. shortly petiolate, narrow-lanceolate, thin and pale, drying a dull yellowish green, 6-15 cm. long, 0.8-1.8 cm. broad. Venation very fine and subobscure, the lateral veins diverging at an angle of 60°-70° to the midrib; the intramarginal vein very close to the edge. Inflorescences in axillary umbels of 5-10 markedly pedicellate flowers. Peduncles slender, subangular, 1.2-1.7 cm. long; pedicels very slender, subterete, 0.7-1.1 cm. long. Flowers unknown. Fruit pedicellate, hemispherical to goblet-shaped, remarkably thin, 4-5 mm. diam. Disc depressed or much lower than the calycine ring, rather flat, or forming a thin carnose ring over the delicate capsule and partly concealing the three or four very small valves. Fertile seeds pale brown, D-shaped to obliquely pyramidal, glossy, faintly 2-ribbed $1\frac{1}{2} \ge 1$ mm. Hilum small, terminal, irregular in shape. Sterile seeds pale brown, as long as the fertile seeds, but narrower and more irregular in shape.

Affinities.--Its affinities are firstly with E. acmenioides Schauer,

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particularly in the venation of the leaves, shape and sculpture of the fruit, and probably in the anthers; the bark is also like that of *E. acmenioides* Schauer, known in New South Wales as White Mahogany and in Queensland as Yellow Stringybark. It is, however, readily distinguished from *E. acmenioides* by its narrow sub-rigid juvenile leaves, its uniformly narrower adult leaves, and in the exceedingly long slender pedicels to the fruits. *E. Curtisii* Blakely & White resembles this species mainly in the narrow juvenile and adult leaves, and to some extent in the shape of the fruits, but *E. Curtisii* is a smooth-barked, small, Mallee-like shrub or tree, with a large terminal inflorescence, while *E. tenuipes* is a medium-sized tree with a very fibrous persistent bark.

Synonym.—E. acmenioides Schauer, var. tenuipes, Maiden & Blakely Crit. Rev. Gen. Euc. vol. vii. (part lxx.), p. 464, plate 285, figs. 5, 6.

Range.—Meteor Creek, South-Central Queensland; local name "Peppermint Stringybark': Dr. H. I. Jensen, July 1921 (type). Dalby Forest district, "Stringybark of medium size": Deputy Forester Singleton, No. 34. Nudley via Dalby: Forest Overseer Scouller: Chinchilla, small "Stringybark" tree of stunted appearance, very loose outside bark, 25-30 ft. high; the best stem I could find was 8 inches in diameter, older trees very hollow; I only know of one patch of these trees about here; inside wood of a brown colour. R. C. Beasley, No. 17, 3/7/1928: Chinchilla on poor stony ground, local name "Mahogany." R. C. Beasley: Additional specimens 16/1/30 (sine No.).



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