

ART. IX.—*Contributions to the Flora of Australia*,
No. 12.¹

BY

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(With Plates XXI.–XXVI.).

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ACACIA LEUCOSPERMA, F. v. M., ined., and E. Pritzel, n. sp.
(Leguminosae). *Fragm. Phyt. Aust. Occid.*, p. 302;
Engler's Botanische Jahrbücher, Bd. xxxv., 1905, p. 302.

Under this head Pritzel has described a West Australian *Acacia* partly from new material and partly from a specimen from near L. Austin, West Australia, H. S. King, labelled by Mueller "*Acacia leucosperma*, F. v. M." This plant was, however, published as *A. spodiosperma*, F. v. M., in the *Proceedings of the Linnæan Society of New South Wales*, 1868, vol. 3, p. 164. Pritzel gives broader phyllodes (2.4 mm.) than in the type specimen; but a later one from the Gascoyne River (Mrs. Gribble, 1886) has equally broad single-nerved phyllodes. The name *A. leucosperma* is therefore merely a synonym for *A. spodiosperma*, F. v. M.

¹ No. 11 in *Proc. Roy. Soc. Victoria*, vol. xxii., pt. i., 1909, p. 6.

ACACIA RAMULOSA, W. V. Fitzgerald. Journal W. Aust. Nat. Hist. Soc., p. 15, 1904 = A. BRACHYSTACHYA, Benth. (Leguminosae).

Watheroo Rabbit Fence, West Australia. Max. Koch, Sep., 1905. No. 1662. New for W. Australia.

The specimen was labelled from another source (probably Diels and Pritzel), "*Acacia stereophylla*, Meissn., syn. *A. cibaria*, F. v. M., and *A. ramulosa*, W. V. Fitzgerald." It has, however, the rounded heads of *A. brachystachya* instead of the more elongated ones of the two first-named species. Otherwise *A. cibaria*, F. v. M., appears close to *A. brachystachya*, and was, in fact, marked by Mueller, "Forsan *A. brachystachya*." Fitzgerald's species was described from a specimen without flowers. The cylindrical fruit at once distinguishes all these "species" from the flat-fruited *A. aneura*.

ANGIANTHUS MICROPOIDES, Benth., var. *filaginoides*. (Compositae).

PHYLLOCALYMMA FILAGINOIDES, Steetz. Pl. Preiss, I., 437, No. 37.

This was reduced by Bentham to a synonym of *A. micropoides*, but there seems sufficient distinction to recognise a variety. The plants are more slender and branching, the floral leaves of the general involucre are narrower and longer, the flowers and achenes a deeper colour, pappus scales and awn shorter, the former more jagged.

ANGIANTHUS STRICTUS, var. *lanigerus*, n. var. (Compositae).

Differs from the type in the outer floral leaves densely covered with white wool, with bare minute reddish tips. The main stem is well developed and woolly.

Intermediate forms occur.

Woorooloo, West Australia, Max Koch, Oct., 1907. No. 1873.

CALOTIS PLUMULIFERA, F. v. M. (Compositae).

Watheroo Rabbit Fence, W. Australia. Max Koch, Dec., 1905. No. 1897. No. 1896 is a dwarf form of the same species.

CRYPTANDRA APETALA, Ewart and White, n. sp. (Rhamnaceae).

A shrubby plant, more than 10 inches high, with divaricate branches which do not bear spines. The ends of the young branches are slightly pubescent. Leaves linear-lanceolar, situated in tufts on short lateral branches, shortly petiolate, somewhat obtuse and covered with short felt-like greyish hairs, especially on the under surface; the margins are so revolute as to make the leaves almost terete.

Flowers situated in clusters on short lateral shoots, towards the upper branches of the shrub; each flower is sessile, and there are from 2—8 flowers in each cluster. The brown bracts are much shorter than the calyx lobes, and are obtuse; the whole calyx is about 1 line long, and both limb and tube are densely covered with an appressed pubescence of small, greyish hairs. The calyx is tubular, urceolate to slightly campanulate in shape, the lobes about the same length as the tube, sepals 5, brownish pink in colour, and slightly thickened at the tips. The petals are absent, and there are 5 stamens with comparatively large anthers, the filaments being inserted on the calyx at their base, between each pair of sepals.

Disc pubescent, forming a prominent rim round the small central depression in which the style arises. Stigma shortly trilobed. Ovary attached to the calyx tube.

Cowcowing, W. Australia; M. Koch, Sept., 1904. No. 1596.

The plant resembles *C. polyclada*, Diels, externally, but differs entirely in the bracts and flower. Its nearest affinity is *C. tomentosa*, Lindl., a specimen of *C. tomentosa* from L. Albacutya, having the tomentose character of the calyx equally well developed; but it is easily distinguished from that species by the absence of petals, the calyx tomentose all over the outside, and the sessile more sparsely scattered flowers. In the absence of petals and in the disc it shows an approach to *Colletia* (*Discaria*), from which, however, it differs widely in habit.

DROSERA ANDERSONIANA, W. V. Fitzgerald, ined. Ewart and White, n. sp. (Droseraceae).

Rootstock apparently not bulbous. Stems more or less erect, 6 to 9 inches long, not so slender as in *Drosera penicillaris*.

Lower leaves well developed, rather large, in fine specimens about 3 lines in diameter, rosulate, orbicular, not peltate. Stem leaves situated usually in groups of three, of which one is larger and has a much longer pedicel than the other two, the smaller leaves being about 1 line in diameter, the larger 2 to $2\frac{1}{2}$ lines, all with long marginal glandular hairs, and the stem leaves very slightly angled. Pedicels slender and from $\frac{1}{2}$ to $\frac{3}{4}$ inch in the lower leaves, and $\frac{3}{4}$ to 1 inch long in the larger stem leaves. Stipules absent.

Flowers, several, situated on a loose cyme, peduncles as long or longer than the flowers, and slightly hairy. Sepals 5, free, except at the base, somewhat hairy, about 1 line long. Petals 5, free, pink or red, about twice the length of the sepals.

Stamens 5, anthers 2-celled and almost circular. Ovary comparatively large, style much divided into numerous dichotomous branches.

Cowcowing, W. Australia, Max Koch, 1904. No. 1106 (with the unpublished manuscript name, *D. Andersoniana*, W. V. Fitzgerald).

Although the plant bears some resemblance to *Drosera penicillaris*, Benth. (*D. Drummondii*, Planch.), it is easily distinguished by the basal leaves, non-flexuose stem, and dichotomously divided styles. The size of the leaves readily separates it from *D. Menziesii*, R. Br., and *D. macrantha*, Endl. Investigations upon the amount and degree of variation in the character and branching of the styles in the genus *Drosera* would be of great value. It is possible that too much importance is attached to this feature in the classification of species.

EUPHORBIA DRUMMONDII, Boiss. (Euphorbiaceae).

This little weed, spread over the whole of Australia and Tasmania, is endemic to Australia, and though very common, does not appear to have been figured. As noted by Bentham, the plant, apart from its glabrous character, bears a strong resemblance to *E. chamaesyce*, L. Owing to a typographical error, this name is given in Bentham's *Flora Australiensis* (vi., p. 49) as *E. chamaesgee*, which is repeated in the Kew Index as *E. chamaesgec*. Mueller (*Native Plants of Victoria*, p. 105) suggests that *E. Drummondii* may be a variety only of

E. chamaesyce. It is true that some specimens of the latter are nearly, or quite, glabrous; that the capsules and seeds are much alike, being quadrangular and reddish-brown turning to a grey and white, somewhat wrinkled surface, and that the stipules show similar variations of shape in both species, but *E. Drummondii* is a perennial instead of an annual, the involucre and its glands differ, and the "flowers" are more sparsely scattered and less clustered. Apart from that, it is unlikely that a species (*E. chamaesyce*) restricted to the countries around the Mediterranean, including N. Africa, should be represented by a variety spread over the whole of Australia, without any intervening forms or varieties occurring in the intervening districts, which include large tracts of country similar in character to those in which the two species flourish.

E. Drummondii has long been regarded as intensely poisonous to stock, mainly on the authority of Baron von Mueller. Careful investigations by Stanley (Agricultural Gazette of New South Wales, 1890; 1896, p. 319) have, however, shown not only that the plant is not poisonous, but that it has a certain fodder value, especially for sheep. By causing hoven or tympanitis, the plant may cause the death of sheep, but in precisely the same way as all succulent fodders may do, when sheep are allowed to gorge upon them, especially after being weakened by starvation or exhausted by travelling.

E. chamaesyce was a medicinal plant well known to the ancients, and was used by them internally as a purge, and externally for painful ulcers, warts, scorpion stings, spots on the nails, and weak eyes. Many attempts have been made to extract a poisonous principle from both these species, especially from *E. Drummondii*, but without success, so that their non-poisonous character may be regarded as definitely established.

GREVILLEA PRITZELII, Diels. Fragm. Phytog. Austr. Occid.
Engler's Bot. Jahrb., xxxv., p. 150, 1905. (Proteaceae).
M. Koch, Dec., 1904, No. 991.

Specimens of this shrub have been received, labelled, from one source, *Grevillea concinna*, R. Br.; syn. *G. Pritzellii*, Diels, and from another source, labelled as *G. armigera*, Meissner.

While near to both *G. concinna* and *G. Hookeriana*, the very prominent concave and tongue-like hypogynous gland readily distinguishes it from both species. Other differences lie in the frequently segmented but hardly compound leaves, more rigid and paler; the hairs outside the perianth and ovary whitish instead of brown; pedicels slightly longer; stalk of ovary somewhat shorter.

MONTIA FONTANA, L. (Portulaccaceae).

This small cosmopolitan was originally recorded (in Australasia) from Tasmania, and later was found in Victoria and New South Wales. A specimen of it in the Herbarium from Perth was originally queried as *Tillaea*, and was apparently collected by W. V. Fitzgerald. It will probably be found over the whole of the south of Australia. Some of the specimens approach the variety recognised as a species by Gmelin (*M. minor*, Gmelin, *Fl. Bad.*, i., 301). The plants are, however, practically identical. (See Pl. XIX., Fig. 4).

PODOPETALUM ORMONDI, F. v. M. (Leguminosae).

This Queensland plant was made the type of a new genus by Mueller (Melbourne Chemist and Druggist, June, 1882), but without describing the species, which is accordingly referred in the Kew Index to "F. v. M. Census, nomen." Bailey refers the species to the first citation. The specific description is, however, given in the Garden and the Field, April, 1884, p. 174, and as that may be inaccessible, is here repeated.

"Pod on a stipe of rather more than half an inch, somewhat compressed; valves coriaceous, tardily separating, hardening through exsiccation, to $\frac{3}{4}$ inch or more wide, contracted between the seeds, dorsally undulating, becoming black outside; pithy cross walls imperfect or absent; funicle thick, very short, strophiole none; seeds few, roundish to quadrangular, $\frac{1}{3}$ to $\frac{1}{2}$ inch, slightly compressed; hilum roundish oval, about 1 line long; testa thinly crustaceous, smooth, bright scarlet; albumen, none; embryo pale yellowish, horny when dry; radicle very short, next to the hilum."

A tree fifty feet high, bark smooth and greyish, flowering for several months, so that blossoms and pods are present at the same time (December).

The accompanying figures were prepared from the pencil sketches of R. Graff, with a few small corrections. A plate appears to have been actually lithographed, since a proof exists at the Herbarium, but not to have been issued.

In Engler's Pflanzen Familien, iii., 3, 193, the species is given as native to New Zealand, which is an error for Queensland.

TRICHINIUM (PTILOTUS) INCANUM, R. Br., var. intermedium,
n. var. (Amarantaceae).

R. Helms (Elder exploring expedition), Warrina, S. Aust., May, 1891.

The plant has the cylindrical inflorescence and transparent woolly bracts of *T. incanum*, but the indumentum of the stem and the larger flowers of *T. obovatum*, Gaud. The *T. incanum* of Moquin is referred by Bentham to *T. obovatum*, and it is possible that the two species may ultimately prove to be varieties of one species.

Var. PARVIFLORUM, n. var. (PTILOTUS HELMSII, F. v. M. and Tate, ined.).

Elder exploring expedition, Camp 4, S. Australia, R. Helms, July, 1891. The flowers have constantly 3 stamens, the heads are fewer flowered, the bracts are darker in colour, the hairs of the woolly indumentum are longer and looser, and the young shoots less densely white and woolly.

EXPLANATION OF PLATES.

PLATE XXI.—*CRYPTANDRA APETALA*, Ewart and White.

- Fig. 1. Part of branch of *Cryptandra*. Nearly natural size.
 2. Leaf of *Cryptandra*. Enlarged.
 3. Diagram of a leaf cut across. Enlarged.
 4. Small portion of a branch, showing the inflorescence.
 5. Longitudinal section through flower. Enlarged.
 6. One of the brown bracts. Enlarged.

PLATE XXII.—*DROSERA ANDERSONIANA*, Ewart and White.

- Fig. 1. Plant of *Drosera Andersoniana*. Nearly natural size.
 2. Peltate cauline leaf. Magnified.
 3. Flower with petals removed. Magnified.
 4. *Montia fontana*, L., var. *minor*.
 (a and b) corolla; (c) calyx (the front segment bent downwards); (d) foliage leaf; (e) fruit surrounded by the persistent calyx lobes; (f) scarious bract; (g) ovary.

PLATE XXIII.—*EUPHORBIA DRUMMONDII*, Boiss.

- Fig. 1. Plant, entire.
 2. Portion of vegetative shoot.
 3. Flowering leafy shoot.
 4, 5, 6. Forms of stipule.

PLATE XXIV.—*EUPHORBIA DRUMMONDII*, Boiss.

- Figs. 1, 2, 3. Front, side, and back views of inflorescence with female and male flowers.
 4. Involucre laid open, with only the stalk of the female flower.
 5, 6. Male flowers.
 7. Pollen grains.

8. Styles and stigmas. Enlarged.
9. 10. Ripe and dehiscing fruits.
11. Fruit in section ; not yet fully angular.
12. Seed.
13. Section of seed.
14. Embryo.

PLATE XXV.—*PODOPETALUM ORMONDI*, F. v. M.

Inflorescence and compound leaf.

PLATE XXVI.—*PODOPETALUM ORMONDI*, F. v. M.

- Fig. 1. Flower.
2. Petals.
 3. Flower cut open.
 4. The same, ovary removed.
 5. Stamen from back.
 6. Stamen from front.
 7. Pollen grains.
 8. Ovary.
 9. Ripe fruit opened.
 10. Seed.
 11. Seed shewing hilum.
 12. Seed opened.

END OF VOLUME XXII.

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