

THE GENUS *MACOWANIA*, OLIV.

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WHILE examining a batch of *Compositae* recently, a specimen labelled *Macowania glandulosa* could not be fitted into this species nor into either of the other two known species. This led to an examination of all the species of *Macowania* and species of *Nestlera*, into which latter genus the specimen referred to was eventually placed.

Having spent some time on the genus *Macowania* and having examined all the available South African material, it appeared desirable to place these observations on record. The writer is indebted to the Curators of the Herbaria of the Transvaal Museum, Albany Museum and the South African Museum for sending him their respective material on loan.

MACOWANIA, Oliv.

Heads terminal, solitary, peduncled, sessile, or sub-sessile, heterogamous, radiate. *Involucre* hemispherical, sub-globose, or campanulate; scales pluriserial, imbricate, unequal; the outer gradually shorter, densely covered with stalked glands without, nude within, acute or obtuse, sometimes acuminate, with the margins scarious, entire, sometimes minutely lacerated near the apices. *Receptacle* convex, nude, honeycombed. *Ray florets* uniseriate, female, fertile. *Corolla* yellow, ligulate, spreading; tube glabrous or glandular-hairy. *Ovary* terete, oblong in outline, ribbed, villous or pubescent; style deeply cleft, cylindric, glabrous; branches flat, linear, obtuse. *Disc florets* bisexual, sterile. *Corolla* yellow, tubular, 5-fid; tube cylindric for two-thirds of its length, then abruptly campanulate or (in one species) becoming wider, glabrous or glandular-hairy on the cylindric portion only; lobes sub-triangular, acute, becoming reflexed. *Anthers* slightly exerted in older florets, sagittate and tailed at the base, with an ovate or oblongo-ovate acute or sub-acute apical appendage. *Ovary* sometimes slightly curved, terete, obscurely ribbed, villous or shortly pubescent; style cylindric, bifid and minutely setulose near the apex, or distinctly two-branched and glabrous; branches linear, flat truncate, papillose. *Pappus* in both ray and disk florets of many rigid bristles, shorter than or sub-equaling the corolla tube, uniseriate, persistent or (in one species) caducous, barbellate.

Much branched glandular bushy shrubs, the branchlets arranged in leafy corymbs; leaves alternate, sessile, linear, with the mid-rib sunken above, evident beneath, and with strongly revolute margins.

KEY TO THE SPECIES.

1. Leaves spreading or reflexed; pappus bristles of disc florets *shorter* than the cylindric part of the corolla-tube; style of disc florets shortly bifid..... 1. *M. revoluta*, Oliv.
Leaves ascending; pappus bristles of disc florets *longer* than the cylindric part of the corolla tube; style of disc florets distinctly 2-branched..... 2.
2. Pappus bristles *tufted* at or near the apices; achenes *villous* 2. *M. glandulosa*, N.E. Br.
Pappus bristles *not tufted* at or near the apices; achenes *pubescent*..... 3. *M. pulvinaris*, N.E. Br.

1. *M. revoluta*. Oliv.

Heads peduncled, 2.5 cm. in diam. (including the rays); peduncles 1–8 mm. long, glandular-hairy with stalked glands. *Involucre scales* edged with brown round the apices, woolly on the dorsal surface; outer scales 3–6 mm. long, 1–2 mm. broad, ovate, acute or obtuse, mucronate; inner 6–8.5 mm. long, 2 mm. broad, mostly elongate, ovate to oblong-ovate, mucronate; innermost 7.5 mm.–1.5 cm. long, 1.5–3 mm. broad, linear-oblong, membranous, obtuse. *Receptacle* 3–4 mm. in diam. *Ray florets* 8–9; lamina minutely 3-toothed; tube 3–4 mm. long, terete, widening above, glandular-hairy. *Ovary* pubescent (mature achenes 17-ribbed); style 5–7 mm. long; branches 2–3 mm. long, obtuse. *Corolla* of disc florets 6 mm. long, cylindric for two-thirds of its length, then abruptly campanulate, with the cylindric part glandular-hairy, and the upper part glabrous; lobes 0.5 mm. long, with a few stalked glands at the apices. *Ovary* pubescent; style 5–6 mm. long, very shortly bifid, stigmatic part minutely setulose. *Pappus bristles* caducous, shorter than the corolla tube.

Shrub up to 1.2 metres high, with the branches densely glandular-hairy towards their apices; leaves 1–3 cm. long, divaricate or strongly reflexed, crowded, acute, with a distinct yellow to brown mucro, standing on broad bases, scabrid on the upper surface with short white stiff hairs, variously canescent below.

DISTRIBUTION: Stutterheim Div., Katberg: *MacOwan* in *Nat. Herb.* 2037!; King-williamstown Div., Pirie Mtn., *Leighton* in *Herb. Norm. Austro-Afr.* 225!, and in *Nat. Herb.* 2035! 2921! 2923!, and in *Herb. MacOwan* 2013!, *Galpin* 5930!, and in *Nat. Herb.* 2036!, *Sim* 1029, *Flanagan* 2144!, and in *Natal Govt. Herb.* 6827!, and in *Nat. Herb.* 2922!; Wolf River Plateau, Keiskama Hoek, *Stayner* 28!; Victoria East Dist., Hogsback Mtns., *Ratray* 304!

2. *M. glandulosa*, N.E. Br.

Heads sessile or sub-sessile, surrounded by the upper leaves, 1.5–2 cm. in diam. (including the rays). *Involucre scales* edged with brown round apices, sometimes bluntly keeled; outer scales 3–4 mm. long, 1.5 mm. broad, oblong-elliptic, mucronate; the inner 5–8 mm. long, 1.5 mm. broad, obovate-oblong, mucronate; the innermost 1–1.2 cm. long, 1.5 mm. broad, linear, membranous, acute. *Receptacle* 2–3 mm. in diam., honeycombed, with the margins of the cells fimbriate. *Ray florets* 20–24; lamina oblong-elliptic, minutely trifold, sometimes bifid; tube terete, widening above, entirely glabrous. *Ovary* villous, with the bristles rigid, ascending; style 4.5 mm. long, ventricose at the base, arising from a flattened disc; branches 1 mm. long. *Corolla* of disc florets 5.5 mm. long, cylindric for two-thirds of its length, then gradually broader, entirely glabrous; lobes 0.5 mm. long, with a few stalked glands near the apices. *Ovary* densely villous; bristles rigid, ascending; style 5 mm. long, 2-branched, ventricose at the base, arising from a flattened disc; branches 1 mm. long truncate, papillose at the apex. *Pappus bristles* persistent, sub-equalling the corolla tube, tufted at or near the apices.

Young stems cobwebby, with numerous leaf-scars; leaves 1–1.8 cm. long, ascending, crowded, acute, with a short apical spine, glabrous and glandular-punctate on the upper surface, white-woolly below.

DISTRIBUTION: Natal, Tabamhlope Mtn., *Evans* 412!, and in *Natal Govt. Herb.* 8811!, and in *Nat. Herb.* 2938!, *Wylie* in *Herb. Wood* 10629!, and in *Nat. Herb.* 2924!; Langalibalele's Location, *Fannin* 2013.

NOTE.—N. E. Brown (*Kew Bull.* 1901, p. 125) described the stems of *M. glandulosa* as being glandular-hairy, but I failed to note this on any of the specimens of *Evans* 412 (type number), so that this character must be variable.—C. A. S.

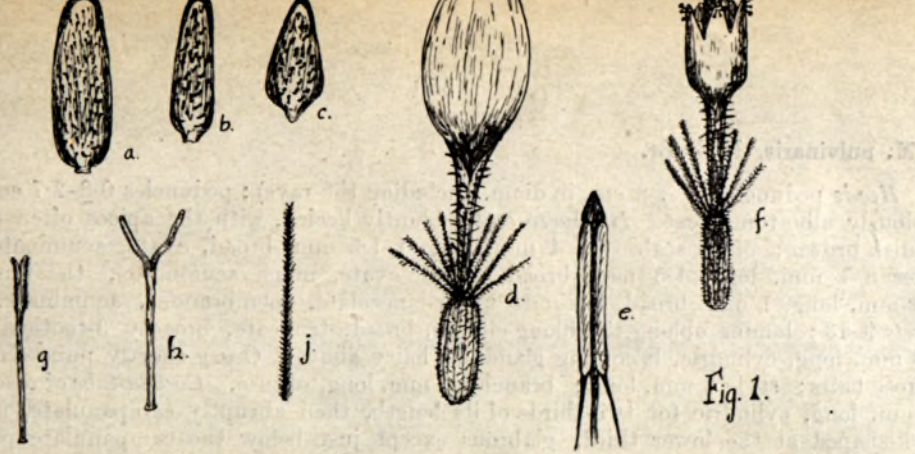


Fig. 1.

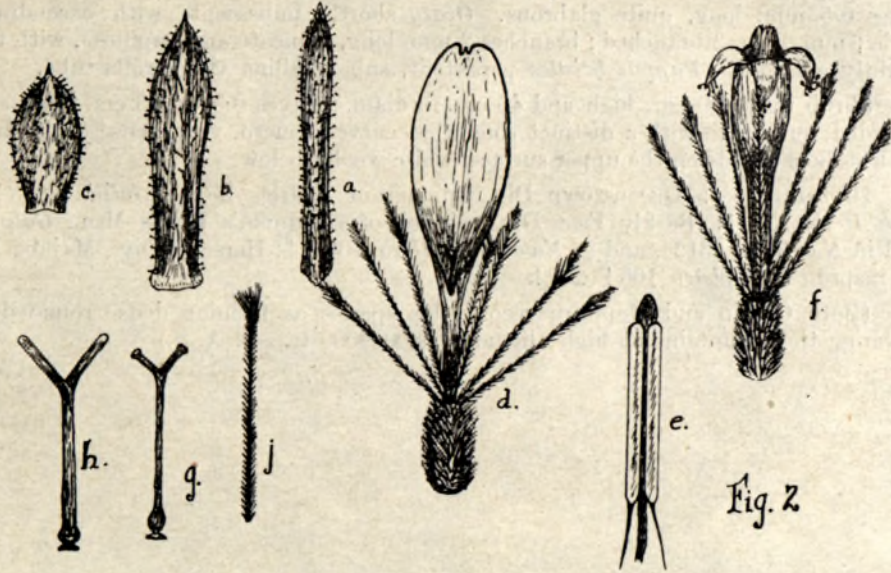


Fig. 2.

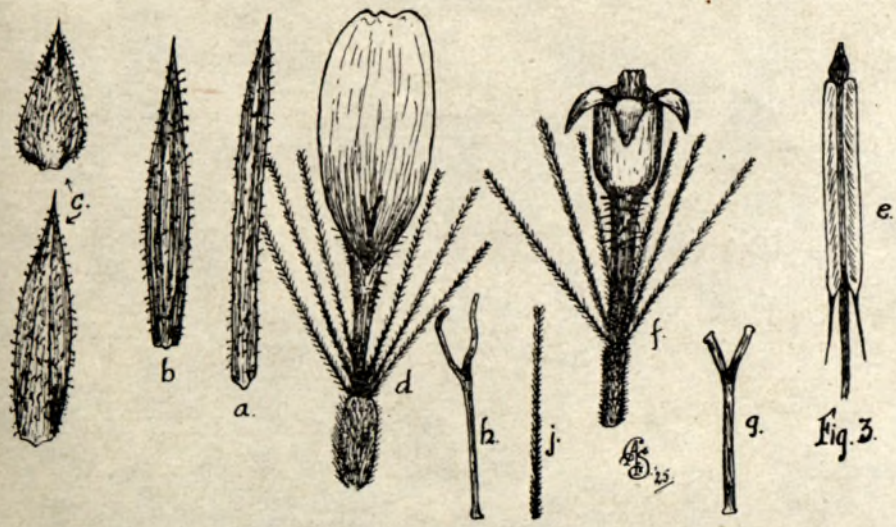


Fig. 3.

EXPLANATION OF PLATE :

Fig. 1. *Macowania revoluta*, Oliv.

a = innermost involucre scale; *b* = inner involucre scale; *c* = outer involucre scale; *d* = ray floret with pappus; *e* = anther of disc floret, showing tails; *f* = single disc floret, showing pappus; *g* = style of disc floret; *h* = style of ray floret; *j* = single pappus bristle, showing barbs.

Fig. 2. *Macowania glandulosa*, N. E. Br. Letters as in Fig. 1.

Fig. 3. *Macowania pulvinaris*, N. E. Br. Letters as in Fig. 1.

3. *M. pulvinaris*, N.E. Br.

Heads peduncled, 1-1.8 cm. in diam. (including the rays); peduncles 0.8-2.7 cm. long, copiously albo-tomentose. *Involucre scales* bluntly keeled, with the apices often slightly reddish brown; outer scales 2.5-4 mm. long, 1-1.5 mm. broad, ovate, acuminate; the inner 5-7 mm. long, 1.5 mm. broad, elliptic-ovate, much acuminate; the innermost 7-9 mm. long, 1 mm. broad, linear to linear-lanceolate, membranous, acuminate. *Ray florets* 9-13; lamina oblong to oblong-elliptic, broad, truncate, broadly 3-toothed; tube 3.5 mm. long, cylindric, becoming glandular hairy above. *Ovary* shortly pubescent, with retrose hairs; style 6 mm. long; branches 2 mm. long, obtuse. *Corolla-tube* of disc florets 6 mm. long, cylindric for two-thirds of its length, then abruptly campanulate, in some flask-shaped at the lower third, glabrous except just below the campanulate portion; lobes 0.5 mm. long, quite glabrous. *Ovary* shortly pubescent, with ascending hairs; style 6 mm. long, 2-branched; branches 2 mm. long, truncate and papillose, with the apices slightly enlarged. *Pappus bristles* persistent, sub-equalling the corolla-tube.

Shrub up to 30 cm. high and 46 cm. in diam.; leaves 0.5 to 1.3 cm. long, ascending, crowded, sub-acute with a distinct somewhat curved mucro, very densely glandular hairy with stalked glands on the upper surface, white-woolly below.

DISTRIBUTION: Queenstown Div., summit of Andries Berg: *Galpin* 2258!, and in *Nat. Herb.* 2313!; Barkly East Div., summit of Doodman's Krans Mtn., *Galpin* 6694!, and in *Nat. Herb.* 2312!, and in *Natal Govt. Herb.* 10364!; Herschel Div., Majuba Nek, near Sterkspruit: *Hepburn* 106! 237!.

(Both Galpin and Hepburn record this species as forming dense rounded cushions covering the mountains at high altitudes, 6800-9000 ft.—C. A. S.)