

Studies in the genus *Lotononis* (Crotalarieae, Fabaceae). 5. A new species of the *L. involucrata* group (section *Polylobium*) from the north-western Cape Province

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ABSTRACT

A new species of the section *Polylobium* (Eckl. & Zeyh.) Benth. of *Lotononis* (DC.) Eckl. & Zeyh. is described, namely *L. racemiflora* B-E. van Wyk. The species, known only from a single collection near Clanwilliam in the north-western Cape, is closely related to *L. involucrata* (Berg.) Benth. and *L. angustifolia* (E. Mey.) Steud.

UITTREKSEL

* 'n Nuwe soort van die seksie *Polylobium* (Eckl. & Zeyh.) Benth. van *Lotononis* (DC.) Eckl. & Zeyh. word beskryf, naamlik, *L. racemiflora* B-E. van Wyk. Die soort, wat slegs bekend is van 'n enkele versameling naby Clanwilliam in die Noord-wes Kaap, is naverwant aan *L. involucrata* (Berg.) Benth. en *L. angustifolia* (E. Mey.) Steud.

INTRODUCTION

Lotononis involucrata (Berg.) Benth. and related species differ from other species of the section *Polylobium* (Eckl. & Zeyh.) Benth. in the subterranean caudex from which flowering shoots develop annually. Stipules are paired or absent and never single or markedly dimorphic as in other species. The umbellate inflorescence in all the species which Dümmer (1913) included in *Polylobium* was used as a diagnostic character for the section.

The new species described below is morphologically intermediate between *L. involucrata* (Berg.) Benth. and *L. angustifolia* (E. Mey.) Steud. and is obviously very closely related to these species. However, the inflorescence is a true raceme. Inflorescence structure is therefore no longer a useful diagnostic character for distinguishing the section *Polylobium*. It may indeed be argued that *Polylobium sensu lato* is an artificial group which has resulted from the excessive weighting of inflorescence structure as a diagnostic character.

Lotononis racemiflora B-E. van Wyk, sp. nov., *L. angustifoliae* (E. Mey.) Steud. valde similis, sed inflorescentia multiflora racemosa (in *L. angustifolia* pauciflora umbellata vel subumbellata), basi stipulae semicordato, indumento densiore piloso differt; etiam *L. involucrata* (Berg.) Benth. similis, sed ab hac specie inflorescentia racemosa, foliorum amplitudine texturaque (quam in *L. involucrata* maioribus coriaceioribus), stipularum amplitudine formaque, vexillo alisque multo maioribus differt.

TYPE.—Cape, 3218 (Clanwilliam): Clanwilliam District, Bokwater, W of Clanwilliam (–BB), 28.10.1948, Acocks 15171 (PRE, holo.; K, iso.).

Suffrutescent herb, with annual flowering branches

from a woody root. *Branches* procumbent, up to 0,3 m long, thick and rigid, densely leafy, more sparsely so towards the base, densely pilose. *Leaves* digitately trifoliate, densely and softly pilose; petiole (3–) 8–12 (–14) mm long; leaflets linear to narrowly elliptical, (4–) 10–18 (–22) × 2–2,5 mm, with soft pilose hairs on both surfaces. *Stipules* similar to the leaflets, consistently present, paired at each node, ovate to lanceolate, (3–) 8–10 (–12) mm long; base distinctly semicordate; apex obtuse to acute. *Inflorescences* terminal on primary and secondary branches, racemose, lax, 90–140 mm long, up to 18-flowered; peduncle 28–50 mm long, densely and softly pilose; rachis up to 95 mm long, bracts conspicuous, thickly textured, ovate-cymbiform, up to 8 × 3 mm, pilose on both surfaces; bracteoles absent. *Flowers* large, 14–16 mm long, yellow; pedicel 3–5 mm long. *Calyx* 12–14 mm long, lobes narrowly acuminate, with the lateral ones on either side fused higher up in pairs, lanately pilose. *Standard* large, suborbicular, 15 mm long, longitudinally striated, base broadly cordate. *Wing petals* broadly obovate, much longer than the keel; apex obliquely rounded; sculpturing upper basal and upper central, in 7–8 rows of mostly intercostal lunae and lamellae. *Keel petals* small, semicircular, 11–12 mm long, auriculate and pocketed near the base; apex acute. *Anthers* dimorphic. *Pistil* 11–12 mm long; ovary oblong-linear, 6–7 mm long, pubescent. *Fruit* (immature) oblong-linear, twice as long as the calyx, much inflated laterally, sparsely pubescent, with evenly spaced warty protuberances along the upper suture. *Seed* unknown. Figure 1.

L. racemiflora is closely related to *L. angustifolia* but differs in the many-flowered racemose inflorescence (few-flowered and umbellate or subumbellate in *L. angustifolia*), the semicordate stipule base and the more densely pilose vestiture. It is also similar to *L. involucrata*, but differs from this species in the racemose inflorescence, the size and texture of the leaflets (larger and more coriaceous than in *L. involucrata*), the size and shape of the stipules and the much larger standard and wing petals.

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FIGURE 1.—*Lotononis racemiflora*. A, habit, showing a flowering branch, the persistent root and the long, racemose inflorescence. B1, B2, B3, leaves and stipules, showing the variation in size and shape and the pilose vestiture: B1, abaxial view of a mature leaf taken from a basal node, B2, adaxial view (note the vestiture), B3, abaxial view. C, calyx opened out, with the upper lobes to the left, vestiture not shown; D, standard petal; E, wing petal; F, keel petal, showing the small size and pointed apex; G, pistil; H, immature fruit in lateral view, showing the verrucose upper suture; I1, I2, I3, long anther, carinal anther and short anther respectively; J, bract. All from Acocks 15171. Scales in mm.

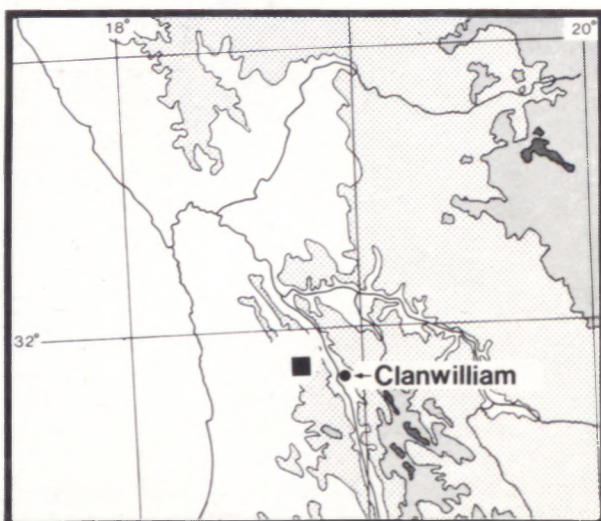


FIGURE 2.—The known geographical distribution of *Lotononis racemiflora*.

The new species may be confused with *L. angustifolia* and *L. involucreata* when not in flower, but the inflorescence structure is quite different. It is known from a single collection near Clanwilliam in the north-western Cape, where it was found on an old land in Fynbos-Strandveld vegetation. Figure 2.

CAPE.—3218 (Clanwilliam): Clanwilliam District, Bokwater, W of Clanwilliam (—BB), 28.10.1948, Acocks 15171 (PRE, holo.; K. iso.).

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REFERENCE

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