

In its subherbaceous suffrutescent habit *T. pulchella* is very different from most other members of the genus. A rather similar habit is shown by *T. streyi* F. White & B. T. Styles, described in 1986, another rare species known from only two localities in Natal. Subsequent to the rediscovery of *T. pulchella*, several plants of *T. streyi* were relocated at the type locality near St. Michael's-on-Sea. Detailed studies on these two interesting species can now be undertaken to elucidate aspects of their taxonomy, biology and ecology.

VOUCHER SPECIMENS

NATAL.—2930 (Pietermaritzburg): Matabetule Plateau. ± 20 km NW of Durban (—DB), *Van Wyk 8141, 8238* (PRU); *Williams 36, 84* (NH).

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FABACEAE

THE IDENTITY OF *LOTONONIS ELONGATA* (CROTALARIEAE)

Several specimens of a species superficially similar to *Lotononis prostrata* (L.) Benth. and *L. azurea* (Eckl. & Zeyh.) Benth. have accumulated in southern African herbaria since 1953. The herbarium collections and an *in situ* study have shown that the species is quite distinct from all other species of the section *Telina* (E. Mey.) Benth. It was written up to be described as a new species under the name *L. repens* (Van Wyk unpublished manuscript).

A recent examination of the Thunberg Herbarium in Uppsala has revealed that '*L. repens*' is identical to *Ononis elongata* Thunb., a species treated by both Harvey (1862) and Dümmer (1913) as synonymous with *L. prostrata* (L.) Benth. Unlike Harvey, Dümmer apparently did not see the type specimen and presumably followed Harvey's interpretation of the species. Bentham (1843) did not study the Thunberg collection and did not cite *Ononis elongata* in his revision of *Lotononis*. Dietrich (1847) somewhat hesitantly transferred most of Thunberg's *Ononis* species to the genus *Lotononis*—amongst others also *O. elongata*. These and several other new combinations by Dietrich have apparently been overlooked by subsequent workers.

The type specimen of *Ononis elongata* is a small piece of flowering material only, so that the unusual pods, distinctive habit and other diagnostic characters were not known before.

***Lotononis elongata* (Thunb.) D. Dietr.**, Synopsis plantarum 4: 960 (1847).

Ononis elongata Thunb., *Prodromus plantarum capensium* 2: 129 (1800); Thunb.: 587 (1823); DC.: 167 (1825); Harv. 2: 53 (1862), as synonym of *L. prostrata*; Dümmer: 296 (1913), as synonym of *L. prostrata*. Type: South Africa, Cape Province, 'in Cap. b. Spei', *Thunberg s.n. sub THUNB-UPS 16607* (UPS!, lecto., here designated).

Prostrate perennial herb up to 1,2 m wide and no more than 0,1 m high. Branches prostrate and creeping, spreading from a central rootstock; twigs densely pilose. Leaves digitately trifoliolate, very variable in size and shape; petiole (2–) 4–8 (–11) mm long, sparsely pubescent; leaflets oblanceolate, obovate or elliptic,

(3–) 7–16 (–20) × (1,5–) 2–5 (–8) mm, abaxially sparsely pubescent, adaxially glabrous. *Stipules* consistently present, single at each node, lanceolate to broadly ovate, (1–) 2–8 (–11) mm long. *Inflorences* leaf-opposed at each node, slender, long-pedunculate, 25–75 mm long, invariably single-flowered; bracts small, up to 2,5 mm long; bracteoles absent. *Flowers* 10–14 mm long, yellow; pedicel 1–3 mm long. *Calyx* 7–9 mm long, with the lateral lobes on either side fused higher up in pairs, sparsely pubescent. *Standard* large, broadly ovate to orbicular, 11–16 mm long, with a line of hairs dorsally along the middle, adaxially yellow, abaxially pale brown. *Wing petals* dimorphic, the one oblanceolate with an obliquely truncate apex, the other oblong-obovate with a rounded apex, the former positioned higher than the latter at anthesis; both longer than the keel; sculpturing similar in both, upper basal and upper left central, in 5–6 rows of inter- and intracostal lunae. *Keel petals* semicircular, obtuse, auriculate and pocketed near the base. *Antthers* dimorphic. *Pistil* 9–12 mm long; ovary linear, 6–8 mm long, the upper part without ovules and similar to the style, the lower fertile part very short, 2–3 mm long. *Fruit* ovate, terete, very short, 8–14 mm long (excluding the style), 3–6 mm in diameter; apex gradually tapering to the style; pubescent. *Seed* suborbicular in side view, up to 2 mm long, distinctly tuberculate, pale brown or with some irregular black marks; hilar area markedly swollen and black in colour, obscuring the hilar valve (Figure 8). *Chromosome number*: 2n = 28!

Voucher specimen: *Van Wyk 2573* (BOL, C. GRA, JRAU, K. M. MO, NBG, NH, PRE, SAAS, STE).

Lotononis elongata is similar to *L. azurea* and *L. prostrata* but differs from these and related species in the shape of the flowers, the dimorphic wing petals, the sterile upper part of the ovary and in the short, ovate and distinctly pointed fruit. It differs from *L. azurea* also in the yellow colour of the flowers, the shape of the leaflets and the more hairy twigs and leaves. From *L. prostrata* it also differs in the more spreading habit, which can be up to 1,2 m wide (± 0,3 m in *L. prostrata*).

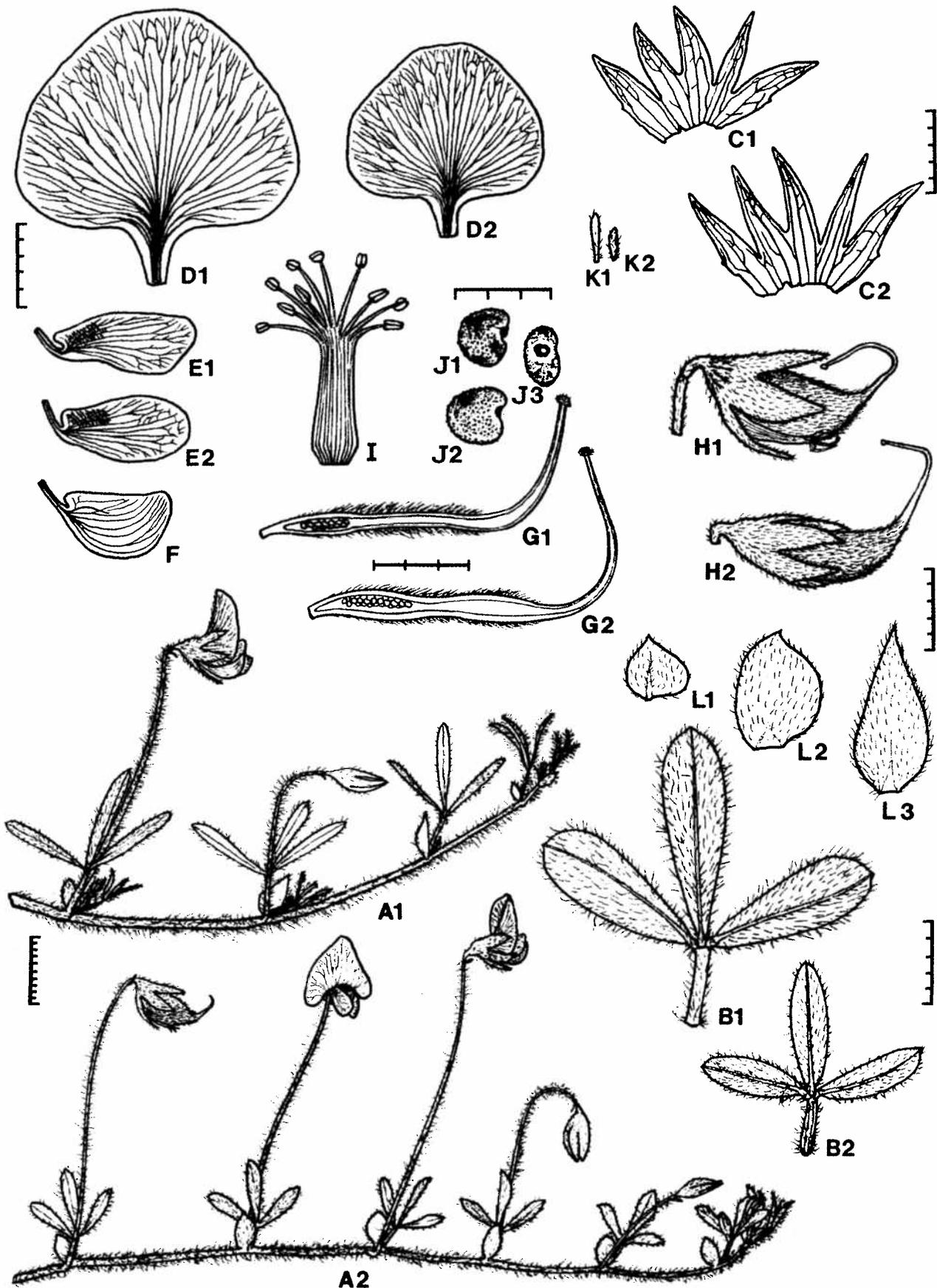


FIGURE 8.—*Lotononis elongata*. A1, A2, flowering branches, showing the prostrate habit and slender peduncles; B1, B2, leaves in abaxial view; C1, C2, calyx opened out, upper lobes to the left, showing the fusion of the lateral lobes; D1, D2, standard petals (note the difference in size); E1, E2, wing petals from the same flower, showing the dimorphic shape; F, keel petal; G1, G2, pistils, showing the sterile upper parts of the ovaries; H1, H2, mature fruit (note the size, shape and also the pointed, tapering apices, which are diagnostic for the species); I, androecium; J1, J2, seeds in side view, showing tuberculate surface; J3, seed in hilar view, showing the raised area around the hilar valve; K1, K2, bracts; L1, L2, L3, stipules, showing variation in size and shape. All from Van Wyk 2573 except A1 & B2 from Vlok 1762 and C2, D1, G2, I & L2 from Vlok 1718. Scales in mm.

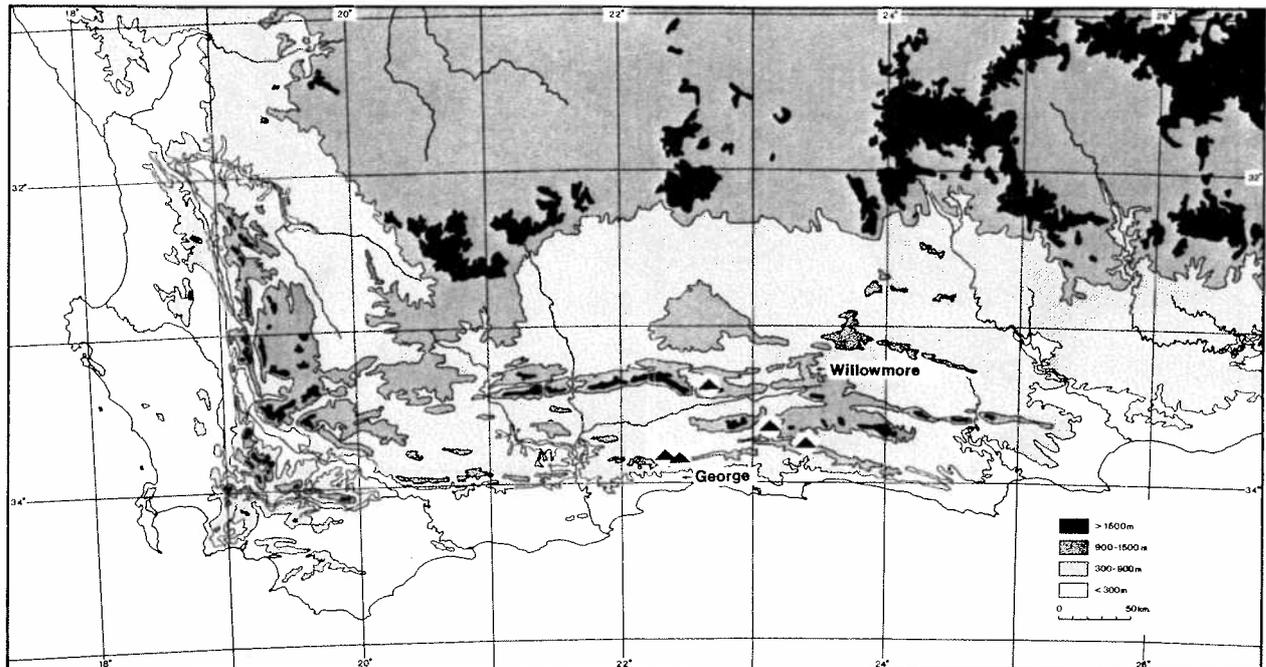


FIGURE 9.—The known geographical distribution of *Lotononis elongata*.

The species has a relatively wide distribution in the southern Cape (Figure 9). It seems to have escaped the notice of collectors for nearly 200 years—recent collections date back to 1953. Thunberg must have collected the type specimen on one of his two journeys to the eastern Cape between 1772 and 1774. It is known that he crossed the Outeniqua Mountains on several occasions during this period (Gunn & Codd 1981). Recent collections by Mr J. H. J. Vlok (Saasveld Forestry Research Centre, George) have considerably expanded the known distribution range.

The peculiar pistil, in which the upper sterile part of the ovary closely resembles the style, has not been observed in any other species of the section *Telina*. This development approaches the usual condition in the genus *Crotalaria* (where the style is geniculate and hairy), but in *L. elongata* the hairy part of the pistil is undoubtedly part of the ovary and not the style. The presence of macrocyclic pyrrolizidine alkaloids in *L. elongata* (Van Wyk & Verdoorn in prep.) also suggests an affinity with *Crotalaria*. The single stipules, calyx structure, tuberculate seed surface and chromosome number, however, leave little doubt about the correct generic position in *Lotononis*.

CAPE.—3322 (Oudtshoorn): Swartberg Mountains, mid-northern slopes of Blesberg, next to forestry track (—BC), 15.12.1986, Vlok 1762 (JRAU, K, NBG, PRE); northern foothills of Outeniqua Mountains, about 3 km west of Herold at Camferskloof (—CD), 22.11.1986, Vlok 1718 (BOL, C, GRA, JRAU, K, M, MO, NBG, NH, PRE, SAAS, STE); top of Outeniqua Pass (—CD), 23.1.1987, B-E. van Wyk 2573 (PRE, BOL, C, GRA, JRAU, K, M, MO, NBG, NH, PRE, SAAS, STE); Zebra, top of Outeniqua Pass (—CD), 19.10.1953, Lewis 3734 (SAM); Zebra, George District (—CD), 19.10.1953, Barker 8195 (MO, NBG). 3323 (Willowmore): about 8 km from Uniondale on road to Avontuur (—CA), 20.12.1967, Grobbelaar 1401 (PRE); 23.2 km east by south of Uniondale (—CB/—CD), 16.11.1958, Acocks 19986 (K, M).

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