

## CROTALARIEAE

### RARE OR EXTINCT SPECIES OF *ARGYROLOBIUM*

While revising *Argyrobium* for South Africa, three taxa which are known from single collections were recognised. Perhaps these species will join a burgeoning list of extinctions for southern Africa. It is hoped that the publication of this paper will alert collectors and disprove this assertion.

1. ***Argyrobium crinitum*** (E.Mey.) Walp. in *Linnaea* 13: 506 (1839); Walp.: 630 (1843); Benth.: 340 (1844); Harv.: 68 (1862). Type: Western Cape, Swaartberge, Trado, Drège 6627 (K; P!).

*Chasmone crinita* E.Mey.: 71 (1836).

Suffrutex up to 600 mm tall, forming clumps, branched basally; stems annual, rufous-pilose. *Leaves* pilose; leaflets ovate to obovate, 30–50 × 14–23 mm, apex rounded; petiole 10–20 mm long, adaxially canaliculate; stipules 20–40 × 18–24 mm, amplexicaul, apex usually 4-lobed. *Inflorescence* elongate, terminal; bracts obovate, 13 × 5 mm; bracteoles 2.00 × 0.75 mm, filiform. *Calyx* pilose, deeply bilabiate; upper lobes 6 mm long, upper sinus 4.5 mm deep, lower lip 8 mm long, lobes acute, 3 mm long. *Corolla* yellow; standard suborbicular, strongly reflexed, 8 × 8 mm, adaxial surface sparsely sericeous medially, claw canaliculate, 4 mm long; wings oblong, 9 × 4 mm, glabrous, claw 4 mm long, sculpturing in the lower basal

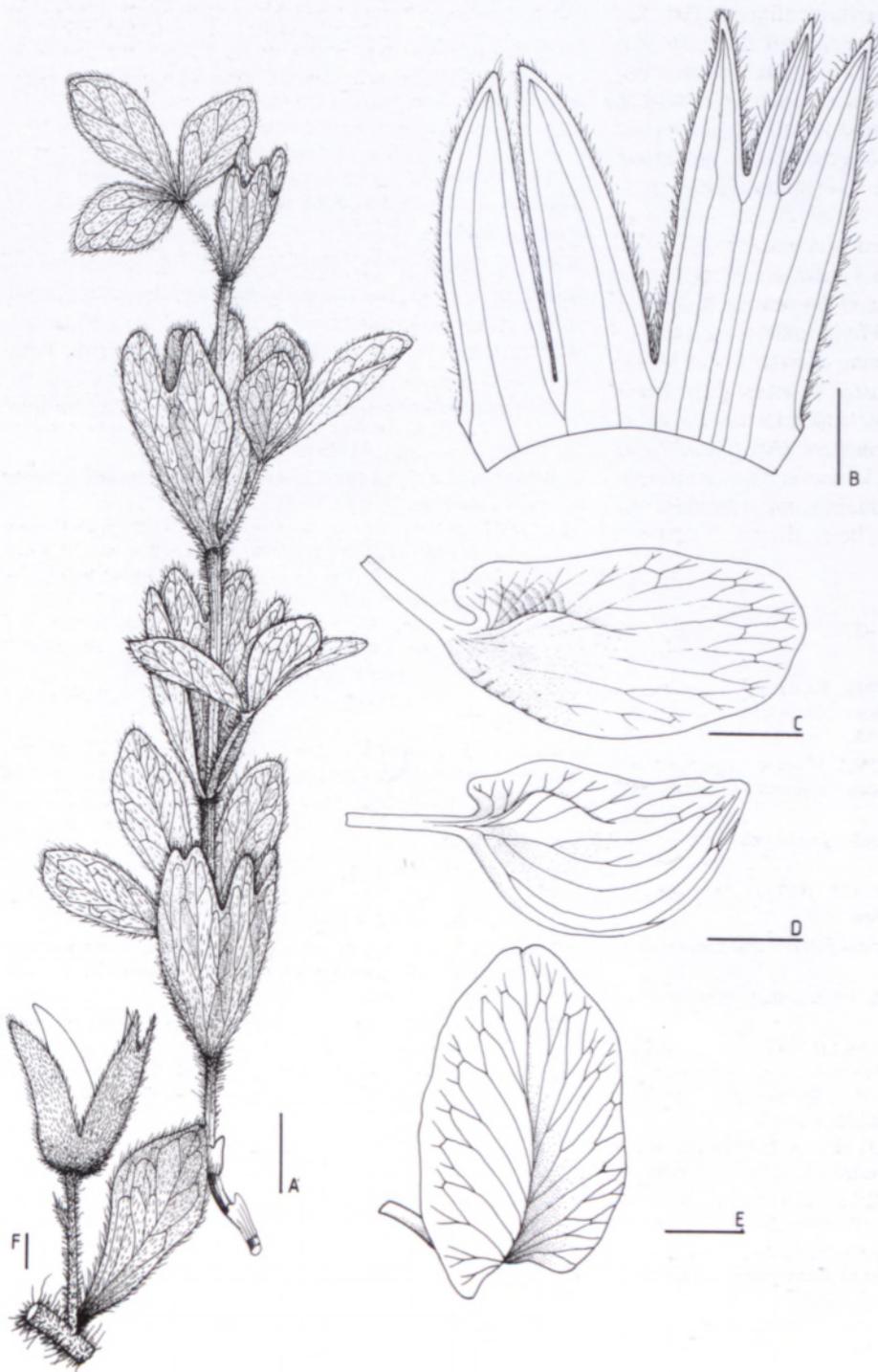


FIGURE 2.—*Argyrolobium crinitum*, Drège s.n. A, vegetative branch; B, calyx; C, wing; D, keel; E, standard; F, calyx, pedicel and bract. Scale bars: A, 20 mm; B-F, 2 mm.

and upper basal zones; keel cymbiform,  $7 \times 4$  mm, claw 5 mm long. *Stamens* monadelphous, sheath split above. *Ovary* narrowly oblong, 9 mm long, densely rufo-sericeous, 6-seeded; style 4 mm long. *Fruit* and *seed* unknown.

*A. crinitum* (Figure 2) is a distinctive species with large, 4-lobed stipules. Its distinctive morphology led Meyer (1836) to suggest that it may represent a new genus. The closest ally is undoubtedly *A. amplexicaule* (E.Mey.) Dummer which has similar leaves, stipules and vestiture. The species are allopatric with *A. amplexicaule* commonly occurring in grasslands of the Eastern Cape and KwaZulu-Natal.

Only a single flower of *A. crinitum* was available for examination and details of inflorescence structure were

therefore taken from Meyer (1836). The calyx has a truncate base and the petals have well-developed claws, features unusual for *Argyrolobium*. The fusion of the filaments, the dimorphic anthers and the calyx lobing, however, support its generic placement.

WESTERN CAPE.—3320 (Montagu): Swartberge, Trado, (–DC), Drège 6627 (K, P).

2. *Argyrolobium splendens* (Meisn.) Walp., *Repertorium botanices systematicae* 2: 845 (1843); Benth.: 348 (1844); Harv.: 76 (1862). Type: Western Cape, mountainsides around Klein Rivier, Swellendam, Krauss 927 (B†; NY!, lecto. selected here; G!, MO!, W!, isolecto.).

*Chasmone splendens* Meisn.: 78 (1843).

Herb, 0.2–0.3 m tall, erect, well branched, stems shortly sericeous, plants forming clumps. *Leaves*: abaxial surface densely sericeous, adaxially sparsely sericeous becoming glabrous; leaflets oblong to obovate, 20–35 × 7–14 mm, strongly revolute, apex rounded, apiculate; petiole 5–12 mm long; stipules ovate, 7–9 × 4 mm, base obliquely cordate. *Inflorescence* pseudo-umbellate, 1–3-flowered, peduncle well developed, 25–60 mm long, leaf-opposed; bracts lanceolate, 4–5 × 1.5–2.0 mm; bracteoles lanceolate, 3 × 1 mm. *Calyx* shortly sericeous, upper lip 10–11 mm long, sinus 7–9 mm deep; lower lip 11–12 mm long, lobes 3–4 mm long, medial lobe linear. *Corolla* yellow; standard orbicular, 12–14 × 9–12 mm, adaxial surface sparsely sericeous, base obtuse, claw 3 mm long; wings oblong, 11–12 × 3 mm, with lunate-lamellate sculpturing in upper central zone, claw 3 mm long; keel cymbiform, 9–10 × 4 mm, upper margin shortly ciliate, 3 mm long. *Stamens* monadelphous; an-

thers dimorphic. *Ovary* weakly arcuate, 8–9 mm long, densely sericeous; style 4–5 mm long, basally hairy. *Fruit* compressed, sericeous, 38–42 × 5 mm. *Seed* not seen. Figure 3.

The obvious alliance between this species and *A. lunare* (Meisner 1843; Harvey 1862) contradicts the use of torulose fruits as a sectional character within *Argyrolobium* (Bentham 1844; Harvey 1862). *A. splendens* is known only from the type collection which was gathered on the coastal fold mountains which flank the Kleinrivier at Hermanus (Figure 4). The species is sympatric with its ally *A. lunare* (L.) Druce which is distinguished by its torulose fruits, longer petioles and non-revolute leaf margins.

WESTERN CAPE.—3419 (Caledon): mountainsides around Klein Rivier, (–AD), Krauss 927 (NY, G, MO, W).

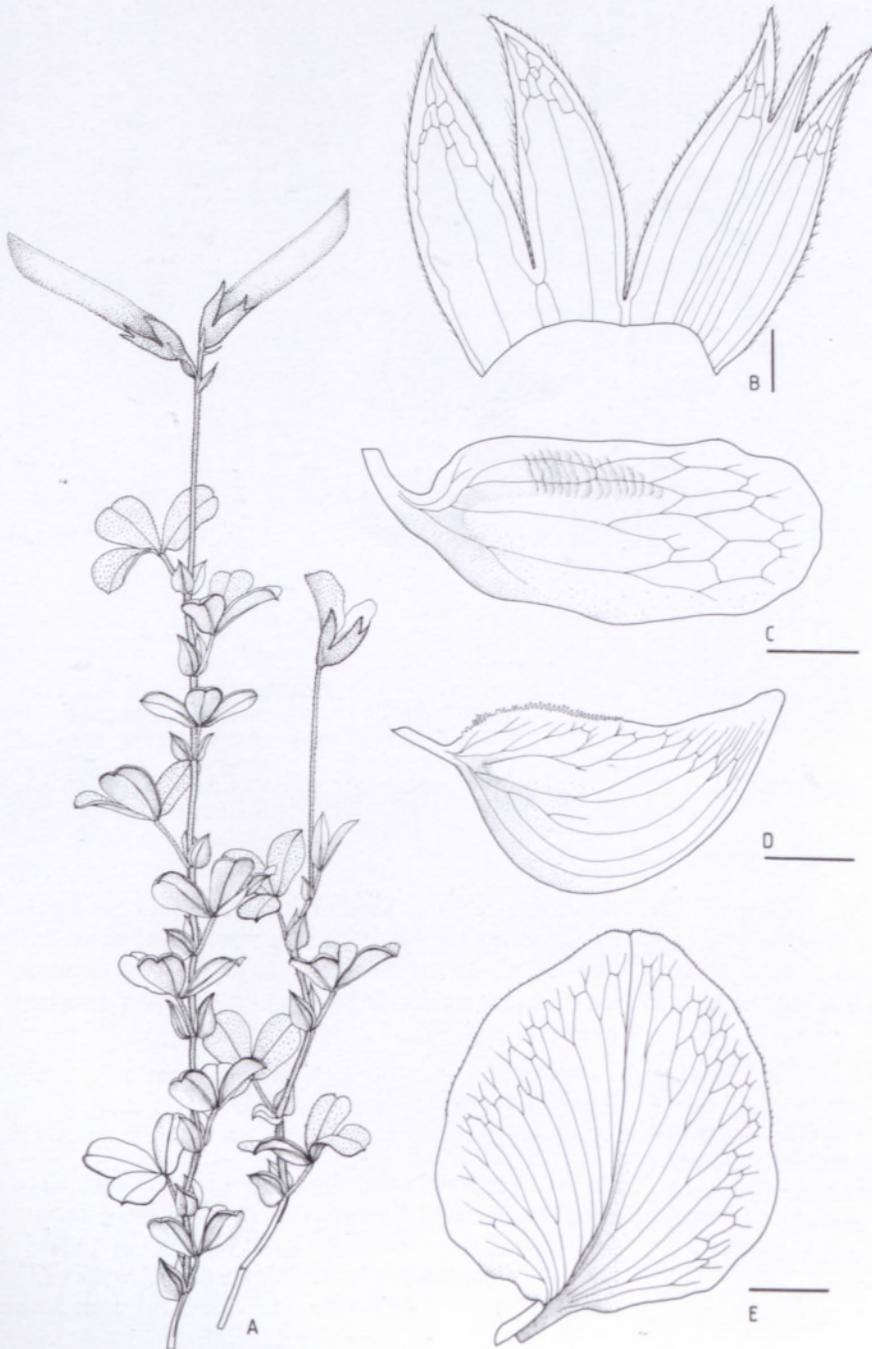


FIGURE 3.—*Argyrolobium splendens*, Krauss 927. A, reproductive branches; B, calyx, inner surface; C, wing; D, keel; E, standard. Scale bars: A, 20 mm; B–E, 2 mm.

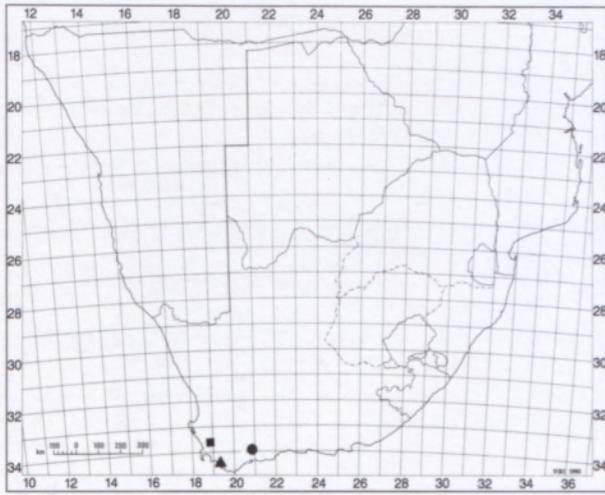


FIGURE 4.—Recorded distribution of: *A. crinitum*, ●; *A. splendens*, ▲; and *A. angustissimum*, ■.

3. *Argyrolobium angustissimum* (E.Mey.) T.J.

*Edwards* comb. nov. Type: Western Cape, Paarlberg, 1000–2000 ft, *Drège* s.n. (G!, lecto. selected here; BM!, E!, MO!, OXF!, P!, S!, W!, isolecto.).

*Chasmone angustissima* E.Mey.: 75 (1836).

Herb, 0.2–0.3 m tall, erect, sparsely branched, stems weakly perennial, shortly sericeous, plants solitary, or forming small clumps. *Leaves* adaxially glabrous, abaxially shortly sericeous leaflets; linear, 25–45 × 1.0–1.5 mm, conduplicate, apex acute; petiole 1.5–3.0 mm long; stipules deltoid to linear, 2–4 × 0.5–1.0 mm. *Inflorescence* pseudo-umbellate, 1–6-flowered, peduncles leaf-opposed; bracts linear, 4–5 × 0.75–1.00 mm; bracteoles linear, 3.5–5.0 × 0.75 mm. *Calyx* shortly sericeous, upper lip 14–15 mm long, sinus 12–14 mm deep; lower lip 15–17 mm long, lobes 4–5 mm long, medial lobe linear. *Corolla* russet and yellow; standard obovate, 16–18 × 10–12 mm, adaxial surface sparsely sericeous, base cuneate, claw 1–2 mm long; wings narrowly oblong to obovate, 14.0–15.0 × 3.5 mm, with lunate-lamellate sculpturing in upper basal zone, claw 1.0–1.5 mm long; keel cymbiform, 7–9 × 3.5–5.0 mm, distally sericeous, claw 1.0–5.0 mm. *Stamens* monadelphous; anthers very weakly dimorphic. Ovary weakly arcuate, ± 10 mm long, densely sericeous; style 3–4 mm long, basally hairy. *Fruit* not seen. *Seed* not seen.



FIGURE 5.—*Argyrolobium aciculare*, Stokoe 61544: A, habit. B, *A. harveyanum*, Edwards s.n.: habit of southern form. C–F, L: *A. filiforme*, Walgate 399: C, calyx; D, keel; E, wing; F, standard; L, pistil. G–K, *A. angustissimum*, Drège 1419: G, calyx; H, keel; I, wing; J, standard; K, pistil. Scale bars: A, B, 20 mm; C–L, 2 mm.

*A. angustissimum* is formally recognised on the basis of its robust habit and large distinctive flowers (Figure 5). It is closely allied to *A. tuberosum* which has similar leaf morphology and flower colour but differs in the size and morphology of the flowers. The species are allopatric, *A. angustissimum* is known from a single Drège collection (Figure 4) made at Paarlberg whereas *A. tuberosum* occurs sporadically in grasslands of the Eastern Cape, KwaZulu-Natal, Mpumalanga and into the highlands of Zimbabwe.

WESTERN CAPE.—3318 (Cape Town): Paarlberg, (-DB), Drège s.n. (BM, E, G, MO, OXF, P, S, W).

#### ACKNOWLEDGEMENTS

I wish to thank the Curators of the cited herbaria for the loan of herbarium specimens and Kew for the provision of cibachromes of their type material. The referees are thanked for their comments on the manuscript. The Natal University Research Fund is gratefully acknowledged for financial assistance.

#### REFERENCES

- BENTHAM, G. 1844. Enumeration of Leguminosae, indigenous to southern Asia, and central and southern Africa. *Hooker's London Journal of Botany* 3: 338–365.
- HARVEY, W.H. 1862. Leguminosae. *Flora capensis* 2. Hodges Smith, Dublin.
- MEISNER, C.F. 1843. Contributions towards a Flora of South Africa. *London Journal of Botany* 2: 53–105.
- MEYER, E.H.F. 1836. *Commentariorum de plantis africae australioris* 1. Leopoldum Voss, Leipzig.
- WALPERS, G. 1839. Animadversiones criticae in Leguminosae Capenses. *Linnaea* 13: 449–543.
- WALPERS, G. 1843. *Repertorium botanices systematicae* 1. Friedrich Hofmeister, Leipzig.

T.J. EDWARDS\*

\* Unit for Plant Growth and Development, Botany Department, University of Natal, P.O. Box 01, Scottsville 3209.  
MS. received: 1995-05-25.