

**FSA contributions 3: Asphodelaceae/Aloaceae, 1028010 *Poellnitzia***

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***Poellnitzia* Uitewaal** in *Succulenta* 22: 61 (1940); D. R. Hunt: sub t. 804 (1981); G. F. Sm.: 75 (1994b); G. F. Sm. & B-E. van Wyk: t. 2119 (1995). Type: *Apicra rubriflora* L. Bolus, i.e. *Poellnitzia rubriflora* (L. Bolus) Uitewaal.

Herbaceous perennial; caulescent, offsetting at and near the base, stems erect when young, ascending when old, up to 250 mm long,  $\pm 10$  mm in diameter; roots terete, 2–3 mm in diameter. *Leaves* thick, hard, usually four-ranked in spirally arranged rows, squarrose-imbriate, ovate-squamiform, apex triquetrous, pungent-acuminate, dark green to glaucous green, coated with a waxy layer, 20–40 mm long,  $\pm 20$  mm broad near base, up to 5 mm thick; *upper surface* concave or flat, immaculate or with very few lighter green spots near base; *lower surface* convex, keeled towards tip, usually with few lighter green spots, spots sometimes confluent to form longitudinal lines; *margins* and keel apex minutely scabrid. *Inflorescence* up to 500 mm long; *peduncle* simple, erect, slender,  $\pm 300$  mm long,  $\pm 3$  mm in diameter; *sterile bracts* membranous, lanceolate-acuminate, keeled with one reddish brown vein,  $\pm 7$  mm long; *raceme* borne horizontally,  $\pm 200$  mm long,  $\pm 28$  spirally arranged flowers and buds, 3–8 accessible to pollinators simultaneously; *floral bracts* membranous, lanceolate, keeled, clasping pedicels, shorter than pedicels, 3–5 mm long; *pedicels* erect, persistent, brown, 6–8 mm long,  $\pm 1$  mm in diameter. *Flowers* borne secundly erect, narrowly tubular, elongate, slightly constricted above ovary and below segment lobes, upper one-third slightly decurved, tube red to orange, upper one-tenth of perigone members dark green, connivent, reduplicate-valvate, tips of segments scarcely separated,  $\pm 20$  mm long; 3 mm in diameter; *segments* red to orange with brownish midveins, not free to base, fused, closely adhering where free, apically spoon-shaped, outer segments slightly larger than inner, margins apically minutely crenulate-erose, yellow; *stamens* 6, subequal, inserted within perianth tube, attached below ovary,  $\pm 18$  mm long; *filaments* light green; *anthers* yellow, dorsifixed, dehiscent longitudinally; *ovary* green, sessile, 6–7 mm long, 3 mm in diameter; *style* white, straight, capitate,  $\pm$  equalling anthers,  $\pm 12$  mm long. *Fruit* green, capsule trilobular, cylindrical, apically retuse, dehiscent loculicidally, chartaceous when dry,  $\pm 16$  mm long, 3–4 mm in diameter. *Seed* dark brown to black, angled, shortly winged,  $\pm 4$  mm long. *Chromosome number*:  $2n = 14$ . Figure 1.

Monotypic. *Poellnitzia* is endemic to the Robertson Karoo (districts of Robertson, Bonnievale and McGregor) which is one of the drier, predominantly winter rainfall areas bordering the Fynbos Biome. The vegetation in the

habitat of *Poellnitzia* can be broadly classified as Karroid Shrublands and the entire range of distribution of the genus falls within the Succulent Karoo Biome. *Poellnitzia* is found  $\pm 150$ –250 m above sea level. Figure 2.

On vegetative morphological grounds *Poellnitzia* shows affinities with some representatives of *Aloe*, *Astroloba* and *Haworthia*. However, the flower morphology of *Poellnitzia* is unique in the family Aloaceae in that the dark green, free portion of the segment lobes is connivent and reduplicate-valvate with the very tips of the segments scarcely separated.

The genus name *Poellnitzia* honours Dr Joseph Karl Leopoldt Arndt von Poellnitz (4 May 1896–15 February 1945). He was a German agriculturist and botanist with

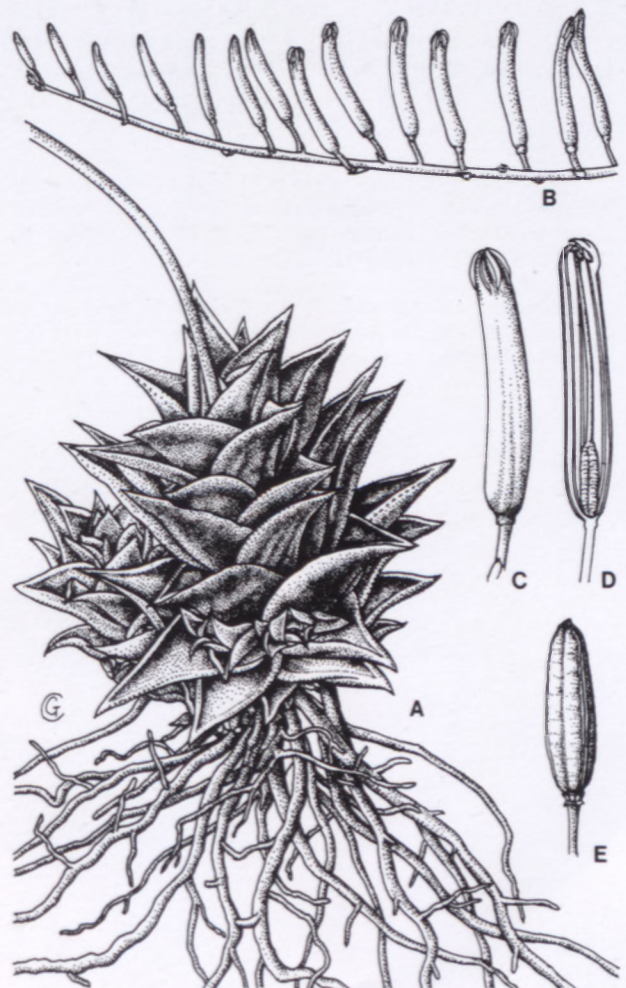


FIGURE 1.—*Poellnitzia rubriflora*: A, habit,  $\times 0.7$ ; B, terminal portion of raceme,  $\times 0.7$ ; C, lateral view of flower,  $\times 1.4$ ; D, longitudinal section of flower (three stamens removed),  $\times 1.4$ ; E, fruit, trilobular capsule,  $\times 1$ . All drawings, except E, were made from live material of *Smith 184* (PUC). Fruit drawn from *C.J. Burgers 78* (PRE). Artist: Gillian Condy.

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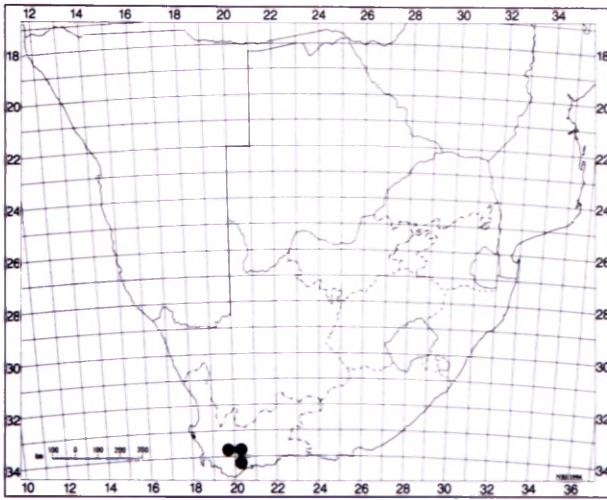


FIGURE 2.—Distribution of *Poellnitzia rubriflora*.

a general interest in succulent plants, particularly the family Aloiaceae. Both von Poellnitz and his only daughter died tragically in bombing raids during World War II.

***Poellnitzia rubriflora*** (L. Bolus) Uitewaal in *Succulenta* 22: 61 (1940); D. R. Hunt: sub t. 804 (1981); G. F. Sm.: 75 (1994b); G. F. Sm. & B-E. van Wyk: t. 2119 (1995). Type: Western Cape: southwestern region; Swellendam Div., Bonnie Vale, *Smith s.n.* (*National Botanic Gardens, No. 2/17*) (*Herbarium Bolusianum 45213*) (BOL, holo!).

*Apicra rubriflora* L. Bolus: 13 (1920); Uitewaal: 28 (1939). *Astroloba rubriflora* (L. Bolus) E. Lamb: 230 (1955) nom. illegit. *Haworthia rubriflora* (L. Bolus) Parr: 196 (1971). *Aloe rubriflora* (L. Bolus) G. D. Rowley: 2 (1981).

*Apicra jacobseniana* Poelln.: 95 (1939). *Poellnitzia rubriflora* var. *jacobseniana* (Poelln.) Uitewaal in Jacobsen & Rowley: 80 (1955). *Haworthia rubriflora* var. *jacobseniana* (Poelln.) Parr: 89 (1972)

comb. inval. Type: 'Kapland; Worcester, leg. Mrs Florence Morris; Typ (= *Triebner 34*) im Botanischen Garten Kiel kultiviert,' no specimen preserved [unnumbered photograph in *Kakteenkunde* (1939): 95 lecto., icono.].

Icons: Hunt: t. 804 (1981); Court: 140 (1981); Smith: 17 (1994a).

Vouchers: *Acocks 14098* (PRE); *Burgers 78* (PRE); *Smith 9* (PRU); *Smith 174, 177* (PUC).

Description as for the genus.

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