Bothalia 12, 3: 565–566 (1978)

A new species of *Aneilema* (Commelinaceae) from South Africa

ROBERT B. FADEN*

ABSTRACT

A new species, *Aneilema* **longirrhizum** Faden, is described from Transvaal and is contrasted with its closest relative, *A. hockii* De Wild.

RÉSUMÉ

*UNE ESPÉCE NOUVELLE D'*ANEILEMA *(COMMELINACEAE) D'AFRIQUE DU SUD*

Une espèce nouvelle, Aneilema **longirrhizum** *Faden, est décritée du Transvaal et contrastée avec le parent le plus près,* A. hockii *De Wild.*

Aneilema is a primarily tropical African genus of about 60 species (Faden, 1975). Among them, eight occur in the Republic of South Africa, including *A. aequinoctiale* (P. Beauv.) Kunth (eastern Cape, Natal, Transvaal), *A. hockii* De Wild. (Transvaal), *A. dregeanum* Kunth (eastern Cape, Natal) and *A. schlechteri* K. Schum. (Natal, Transvaal). *Aneilema zebrinum* Chiov., placed in the genus *Ballya* by Brenan (1964), but a true *Aneilema* according to Faden (1975), was added to the South African flora in 1963 by Mr R. G. Strey, who found it in northern Natal, 2400 km (1500 miles) from its nearest locality in northern Tanzania. The following previously undescribed species, the sole *Aneilema* wholly confined to South Africa, plus two further undescribed species from Natal and Transvaal, which will be described elsewhere, complete the list of South African species.

Aneilema longirrhizum *Faden*, sp. nov. Herba perennis rhizomatosa. *Folia* laminis sessilibus, linearilanceolatis usque anguste lanceolato-ellipticis, 3–13 cm longis, 0,6–2 cm latis, margine papillosa haud scabrida. *Inflorescentia* thyrsi ovoidei laxi 4–13(–18) cm longi 4–8(–13) cm lati cincinnis pro parte maxima alternis composita. *Pedicelli* fructigeri recurvati plerumque c. 270°. *Flores* basibus filamentorum discretis, filamentis staminum lateralium undulatis, ovario loculis dorsalibus 2(raro 1)-ovulatis. *Capsulae* 8–11 mm longae, 4–5 mm latae, apice rotundatae vel truncatae, loculis 2(–1)-seminalibus. *Semina* 3,4–4,2 (–4,9) mm longa, 2–2,5 mm lata, testa dense albofarinosa.

TYPE.—Transvaal, Burgersfort—Pietersburg road, 3,4 km towards Pietersburg from crossing of the Olifants River, c. 150 m north of the road, 24° 16′S, 29°46′E, 850 m, 24 February 1974, *Faden & Faden* 74/217 (K, holotype; B; BOL; BR; C; EA; F; FI; G; HBG; M; MO; NH; NU; P; PRE; S; SRGH; UPS; WAG).

Perennial, rhizomatous herb. *Roots* thick, fleshy, of uniform diameter, to 75 cm long. *Shoots* stiffly erect to ascending, to c. 75 cm tall. *Leaves* distichous or spirally arranged, sheaths 0,3–6 cm long, leaf-blades sessile, linear-lanceolate to narrowly lanceolate-elliptic, 3–13 cm long, 0,6–2 cm wide, apex acute to acuminate, margins papillose, not scabrid, both surfaces lustrous, puberulous-scabrid. *Inflorescence* a terminal, lax, ovoid thyrse 4–13(–18) cm long, 4–8 (–13) cm wide, with (6–)8–15(–24) mostly alternate, ascending cincinni; peduncle 3–8,5 cm long, puberulous; cincinnus bracts ovate to ovate-elliptic, 2–7 mm long; cincinni up to 7,5 cm long and 19–flowered; cincinnus peduncles uniform in length within the inflorescence, 6–18 mm long, puberulous; bracteoles spaced 1,5–5,5 mm apart, eccentrically cup-shaped, perfoliate, 2–3 mm long, not evidently glandular, puberulous. *Flowers* perfect and staminate, fragrant, 13,5–18 mm wide; pedicels 6–7 mm long and erect to ascending in flower, to 9 mm long and recurved usually c. 270° in fruit, puberulous; sepals puberulous, entirely green or suffused with maroon, glandular subapically, medial 4–4,4 mm long, 2,6–3,4 mm wide, lateral 3,7–4,5 mm long, 2,4–3 mm wide; paired petals 7,5–10(–11,5) mm long, 6–8(–9) mm wide, limb ovate, pale lavender, apex slightly hooded, claw whitish, 2–3(–3,5) mm long; medial petal elliptic to ovate-elliptic or lanceolate-elliptic, 5,5–6,5(–7) mm long, 2,5–3,8 mm wide, slightly paler than the paired petal limb, glabrous; filaments free, glabrous; medial staminode with filament 2–2,5 mm long, antherode bilobed, lobes stipitate, obovoid to subreniform or transverseley ellipsoid, stalks 0,3–0,6 mm long; lateral staminodes with filaments 4,2–6 mm long, antherodes bilobed, lobes stipitate, similar in shape and size to the medial antherode lobes, stalks 1–1,3 mm long; lateral stamens with filaments 8,5–9,5 mm long, undulate, anthers ovate to elliptic, 1,4–1,7 mm long, pollen dirty yellow; medial stamen with filament 6–6,5 mm long, anther ovate, saddle-shaped, 1,4–1,9 mm long, pollen yellow to orange-yellow; ovary sessile, oblong-elliptic, 2,5–3 mm long, 1,5–1,8 mm wide, green, densely covered with patent, glandular hairs except along the sutures where subglabrous, apex rounded, ventral cell usually not developed, dorsal cells 2 (rarely 1)-ovulate; style 8,5–12 mm long; stigma capitate. *Capsules* subsessile (within the sepals), oblong-elliptic, bivalved, bilocular, 8–11 mm long, 4–5 mm wide, lustrous, puberulous, apex rounded to truncate, locules 2(–1)-seeded, cells of the capsule wall transversely elongate. *Seeds* oblong-elliptic, 3,4–4,2(–4,9) mm long, 2–2,5 mm wide, testa scrobiculate, densely white-farinose in all the depressions and around the embryotega and hilum. FIG. 1.

Aneilema longirrhizum occurs in very dry habitats. At the type locality I have recorded it in level to gently sloping *Blepharis—Commiphora—Schmidtia* bushed grassland on red loamy soil with the dominant species being *Commiphora pyracanthoides*, *Blepharis subvolubilis*, *Euphorbia enormis* and *E. aeruginosa* in the grassy areas. Mogg on the label of *Mogg* 1156 has recorded this species from "outcrops and residual soils of the Old Granite."

TRANSVAAL.—2429 (Zebediela): Maritsi's Drift (probably Malipsdrif) (–BB), c.760 m, 3 January 1939, *Mogg 1156* (PRE); Olifants River—Molsgat (–BC), 26 January 1931, *Bremekamp & Schweickerdt 404* (PRE); near Olifants River (–BD), *Faden & Faden 74/217* (K, etc.).

A. longirrhizum is closely related to *A. hockii* De Wild. (cf. illustrations in Brenan, 1952, p. 191, and Van Druten, 1959, as *A. aequinoctiale*), which ranges

* Department of Botany, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, ILL 60605, U.S.A.

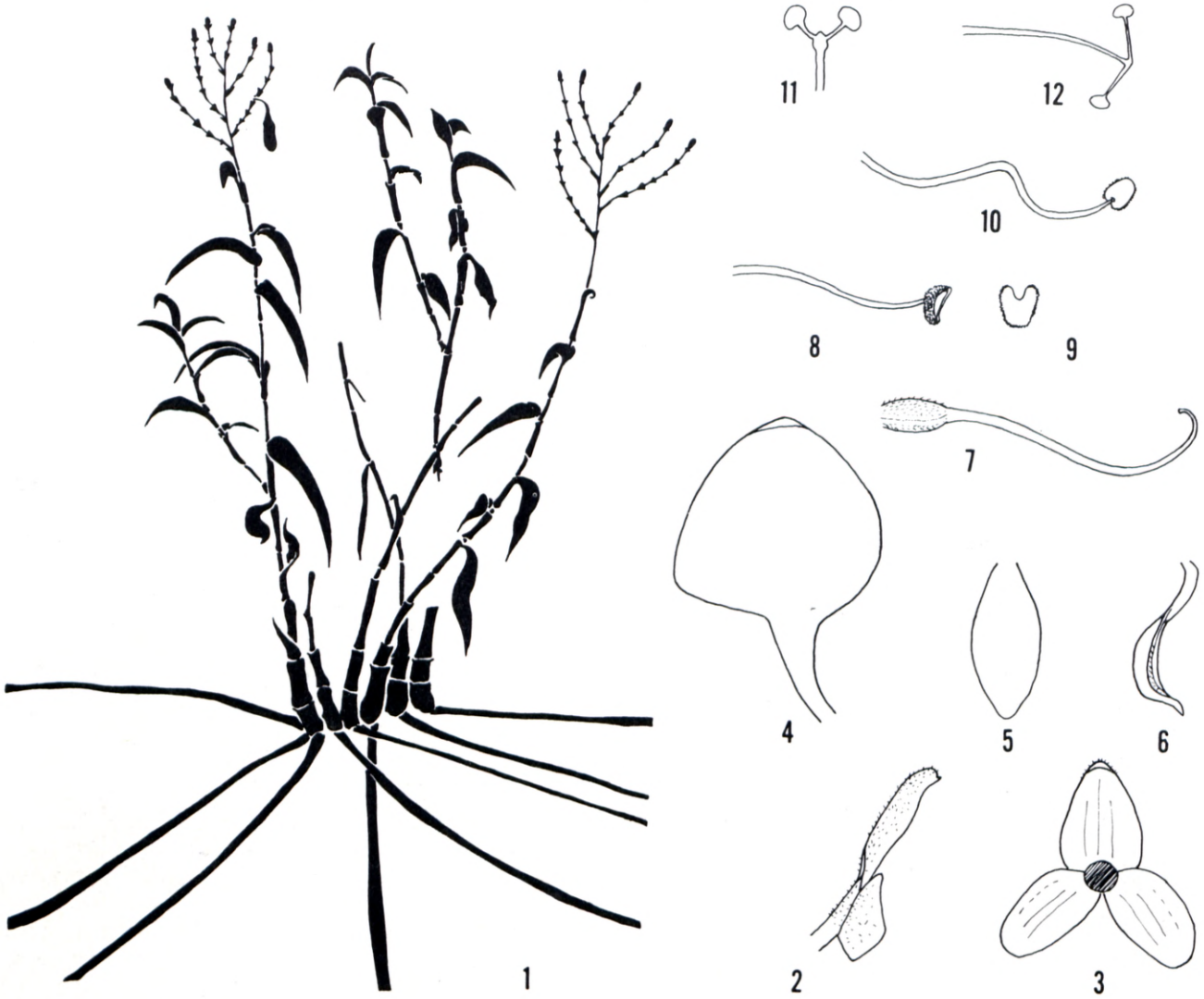


FIG. 1.—1, habit, $\times\frac{1}{8}$; 2–12, floral parts, $\times 2$: 2, calyx, side view; 3, calyx, front view; 4, paired petal; 5, medial petal, front view; 6, medial petal, side view; 7, gynoecium; 8, medial stamen; 9, medial anther, front view; 10, lateral stamen; 11, medial staminode; 12, lateral staminode.

from South West Africa, Botswana and South Africa north to Uganda and Ethiopia. The flowers of the two species are particularly similar, with those of *A. hockii* differing in their larger size, striped sepals, differently shaped staminodes and fused stamen filament bases. *A. hockii* may further be distinguished by its usually non-rhizomatous habit, long hook-hairs (terminology of Tomlinson, 1966, 1969) on the leaf sheaths (in addition to short ones), scabrid leaf margins, mainly subopposite or subverticillate cincinni in the inflorescence, erect fruiting pedicels, and emarginate capsules with more numerous, smaller seeds which lack farinose granules. Despite these differences, there is no doubt about the affinites of *A. hockii* and *A. longirrhizum*, which have the same chromosome number ($2n=64$ in South African and Zambian *A. hockii*, $2n=$c.64 in *A. longirrhizum*), which is otherwise unknown in the genus (Faden, 1975).

Superficially, *A. longirrhizum* resembles *A. brenanianum* Faden of southern Kenya and northern Tanzania and *A. obbiadense* Chiov. of Somalia. They differ in their scabrid leaf margins, usually more numerous cincinni in the inflorescences, erect fruiting pedicels (fruits unknown in *A. obbiadense*), and many floral characters. Their similarity to *A. longirrhizum* is probably more indicative of like adaptations to similarly dry habitats than of close evolutionary relationship.

UITTREKSEL

'n Nuwe species, Aneilema **longirrhizum** *Faden, word van die Transvaal beskryf en met* A. hockii *De Wild., die spesies naaste daaraan verwant, vergelyk.*

REFERENCES

BRENAN, J. P. M., 1952. Notes on African Commelinaceae. *Kew Bull.* 7: 179–208.

BRENAN, J. P. M., 1964. Notes on African Commelinaceae. IV. *Ballya*, a new genus from East Africa. *Kew Bull.* 19: 63–68.

DRUTEN, D. VAN, 1959. *Aneilema aequinoctiale. Flower. Pl. Afr.* 33: t. 1302.

FADEN, R. B., 1975. A biosystematic study of the genus *Aneilema* R.Br. (Commelinaceae). Ph.D. dissertation, Washington University, St Louis.

TOMLINSON, B. P., 1966. Anatomical data in the classification of Commelinaceae. *J. Linn. Soc. (Bot.)* 59: 371–395.

TOMLINSON, B. P., 1969. *Anatomy of the monocotyledons. III. Commelinales—Zingiberales.* Oxford: Clarendon.