yemenense

SYN. [*C. micranthum* sensu Oliv. in Trans. Linn. Soc., Bot., ser. 2, 2: 343 (1887), *non* Poir.]
C. johnstonii Bak. in K.B. 1894: 29 (1894)
[*C. lanceolatum* sensu Bak. & Wright in F.T.A. 4(2): 54 (1905), quoad *Volkens* 1661, *Buchwald* 227, *Holst* 3383, etc.; De Wild., Pl. Bequaert. 2: 122 (1923), pro parte; F.P.N.A. 2: 130 (1947), pro minore parte; Taton in F.C.B., Borag.: 50 (1971), pro minore parte, *non* Forssk.]
[*C. coeruleum* sensu Martins in F.Z. 7(4): 104 (1990), pro parte *non* A.DC. sensu stricto]

NOTE. Kazmi (Journ. Arn. Arb. 52: 343 (1971)) included *C. johnstonii* in his synonymy of *C. lanceolatum* but cannot I think have examined the type since it differs from *C. lanceolatum* in the different inflorescences, usually blue flowers and larger fruits. Admittedly there are intermediates. Many specimens with small flowers, particularly in eastern Uganda, appear to be hybrids with *C. lanceolatum* but may be just a small-flowered taxon. *Faulkner* 4744 (Lushoto District, Soni, 25 Nov. 1972) with small fruits 5 mm. wide and divaricate inflorescences of blue flowers may also be a hybrid. Occasional white-flowered specimens (? populations) of true var. *johnstonii* occur (e.g. *Archbold* 371, Moshi District, Marangu, 18 Dec. 1963). In the Teita Hills populations of short annual plants occur up to 50 cm. tall with ± sparse glochidia on the upper face of the nutlets and short styles 0.8–1.1 mm. long. *Thorel* 3880 (Cherangani Hills, Embobut Forest, 3240 m.) a 20 cm. tall herb with small narrow sessile leaves 3 × 0.7 cm. may belong here but is not in fruit. *Hooper & Townsend* 802 (Mbeya District, 15 km. from Mbeya on Chunya road, 16 Mar. 1975) has very small fruits with short glochidia resembling those in true *C. coeruleum*. Whether it is a hybrid with *C. lanceolatum* or a distinct variant is not certain.

Undoubtedly the major problem is the relationship of some forms of var. *johnstonii* to Indian species. B. L. Burtt (Notes Roy. Bot. Gard. Edin. 43: 350 (1986)) has independently noted this problem but no one else appears to have drawn attention to it. *Mhoro* 522 (Iringa District, Kidatu, 8 Nov. 1971) is virtually indistinguishable from *C. wallichii* G. Don; *Greenway* 1661 (E. Usambaras, Amani, 3 July 1929) and numerous specimens collected by *Peter* near Amani with leaves to 14 × 4.5 cm. and the very similar *Schlieben* 2221 (Mahenge, Sali, 18 May 1932) are also particularly close, e.g. compare with *Sedgwick & Bell* 5420 from India. I have resisted pursuing this problem since it would take a great deal of time and lead to much confusing change. Moreover, the large-flowered African taxa are so different from those in India that it is doubtful any one would accept the logical consequence. The nomenclature of the Indian species is very confused and the taxonomy far from clarified (see Verdc. in K.B. 43: 343–348 (1988)). Future monographers, however, will not be able to ignore the problem. *C. yemense* (Mill & A.G. Miller) Verdc.* is very close to some forms of *C. johnstonii* and may be no more than another subspecies. A number of Peter sheets from the E. Usambaras have narrower leaves; these sheets have been annotated var. A and had previously all been referred to *C. lanceolatum* which they certainly are not, having bigger fruits, usually blue flowers and different inflorescences although the flowers are small.

var. **mannii** (*Bak. & Wright*) *Verdc.*, comb. nov. Type: Cameroon Mt., *Mann* 2005 (K, holo.! & iso.!)

Nutlets with glochidia mostly restricted to the margins and a median line across the outer face. Often annual and calyx-lobes often more ovate and 'leafy'. Fig. 31/1, 2.

UGANDA. Kigezi District: Virunga Mts., Muhavura-Mgahinga saddle, 8 Nov. 1954, *Stauffer* 713!; Ruwenzori at 2100 m., *Doggett* !; Mbale District: Elgon, W. side, Jan. 1918, *Dummer* 3601! (var. with long fruiting style to 3 mm.)
KENYA. Northern Frontier Province: Ndoto Mts., Sirwan, 1 Jan. 1959, *Newbould* 3370!; ? District, 2nd day's march from Eldama [Eldoma] Ravine to Upper Mau Plateau, *Whyte* !; Meru District: Upper Imenti Forest, 28 June 1974, *R.B. & A.J. Faden* 74/916!
TANZANIA. Morogoro District: Mikese [Mikesse], 29 Apr. 1935, *Rounce* 384! (somewhat intermediate and said to have yellow flowers); Mbeya District; Poroto Mts., 15 May 1957, *Richards* 9713!; Rungwe Forest Reserve, June 1954, *Semsei* 1567!
DISTR. **U**2, 3; **K**1, 3, 4, 6; **T**2, 3 (intermediates), 4–7; Cameroon, Zaire, Rwanda and Burundi (fide Martins), Malawi, Mozambique, Zambia and Zimbabwe; also South Africa (Natal) (fide Martins)

HAB. Submontane forest, swamp forest, bamboo thicket and *Erica* associations, bushland, grassland, margins of cultivation and sometimes as a weed in resting fallows, etc.; 1740–3150 m.

SYN. *C. mannii* Bak. & Wright in F.T.A. 4 (2): 52 (1905); Hutch. & Dalz., F.W.T.A. 2: 200 (1931)
C. geometricum Bak. & Wright in F.T.A. 4 (2): 52 (1905); De Wild., Pl. Bequaert. 2: 122 (1923); F.P.N.A. 2: 132 (1947); Martins in F.Z. 7(4): 107 (1990). Lectotype chosen by Hilliard & Burtt in Notes Roy. Bot. Gard. Edin. 43: 348 (1986): Malawi, Mt. Chiradzulu, *Whyte* (K, lecto.!)
C. lanceolatum Forssk. subsp. *geometricum* (Bak. & Wright) Brand in E.P. IV. 252 (78): 140 (1921); Heine in F.W.T.A., ed. 2: 324 (1963); Taton in F.C.B., Borag.: 52, t. 7, map 18 (1971)
C. lanceolatum Forssk. subsp. *geometricum* (Bak. & Wright) Brand var. *mannii* (Bak. & Wright) Brand in E.P. IV.252 (78): 140 (1921)
[*C. lanceolatum* sensu De Wild., Pl. Bequaert. 2: 122 (1923), pro minore parte, *non* Forssk.]
Paracynoglossum geometricum (Bak. & Wright) Mill in Notes Roy. Bot. Gard. Edin. 41: 478, fig. 1/d, j (1984)

* *Paracynoglossum yemense* Mill & A.G. Miller in Notes Roy. Bot. Gard. Edin. 41: 478 (1984)

yemenense !