

Cynoglossum alticola has much larger nutlets than any other species in southern Africa and it has no close ally amongst them. It is related to a plant from the highlands of Ethiopia which was placed by Brand as *C. montanum* var. *alpinum* but is here raised to specific rank as *C. alpinum* (see above).

At first it was thought that *C. alticola*, found on sheep-grazed mountains, might be an introduction from Eurasia, but all the north temperate species that are in any way similar have the fornicies longer than broad, whereas in *C. alticola* they are broader than long. In this, however, it does agree with *C. alpinum* and there seems no doubt that it represents another example of the phytogeographical link between the mountains of southern Africa and the Ethiopian highlands.

Cynoglossum alticola grows on damp slopes and near streams at c.2600m on Ben McDhui on the Cape-Lesotho border. In February only old fruiting stems and new tufts of radical leaves were present. A plant raised from seed at Edinburgh flowered in May 1985 and also set fruit. Two other specimens from Mokhotlong had been misdetermined (Guillarmod, *Fl. Lesotho* 234, 1971) as '*C. basuticum* Weim.' (i.e. *C. spelaeum* Hilliard & Burt, a quite different white-flowered species).

473. *Cynoglossum austroafricanum* Hilliard & Burt, species nova *C. caeruleo* A. DC. affinis et magis comparanda sed differre videtur nuculis immarginatis (nec leviter marginatis) et glochidiis columnaribus basi vix incrassatis (nec conicis basi distincte expansis).

Syn.: [*Cynoglossum austroafricanum* Weim., Jacot Guillarmod, *Fl. Lesotho* 233 (1971); Gibbs Russell *et al.* in *Mem. Bot. Surv. S. Afr.* 48:109 (1984)—nomen nudum.]

Herba hispida, perennis vel biennis(?), radice palmari valido usque ad 1cm diam.; caulis ad 1m altus inflorescentia inclusa, ad c.5mm diam., simplex vel e basi ramosus, foliatus. *Folia* radicalia tempore florendi emarcida; lamina ad 170×25mm, elliptica, utrinque attenuata, parte petiolari ad 25mm longa; folia caulina plerumque 50–100×8–20mm in bracteis gradatim minores in inflorescentia transeuntia, lanceolata, apice acuta, basi angustata. *Inflorescentia* paniculata, bene ramosa. *Flores* numerosa. *Calyx* fere ad basin 5-lobus; lobi c.2–3×1.75–2.5mm sub fructu, anthesi paulo minores, late elliptici, obtusi, intus glabri, extra hispidi. *Corolla* 2.75–4.25mm longa; tubus lobis aequalis, extra glaber, intus zona papillarum basali 0.5mm lata; lobi 1.5–2.5×1.5–2.5mm suborbiculares, vivide caerulea, glabra, fornicibus 0.5–0.75×0.75–1.25mm plus minusve oblongis paulo bilobis extra papillosis orem tubi vix occultantibus caeruleis. *Stamina* 5, inclusa; filamenta e triente tubi superiore orientia, c.0.25–0.3mm longa; antherae 0.75–1mm longae. *Stylus* fructus 1.5–2mm longus. *Nuculae* 3–3.5×2.5–3mm, ambitu ovatae, leviter dorsoventraliter compressae, immarginatae, glochidiis columnaribus dense armatae, cicatrice deltoidea c.0.5×1.25mm, cum fascia styli caducae.

Type: Natal, Underberg distr., 2929 CB, Cobham Forest Reserve, Sipongweni, c.6500ft, 21 ii 1981, Hilliard & Burt 14072 (E holo., NU iso.).

ORANGE FREE STATE. Witzieshoek, near the entrance to the Rest Camp, 7200ft, 28 xii 1975, *Hilliard & Burt* 8665 (E, NU). Harrismith distr., 2829 AC, Platberg, 7 i 1979, *Hilliard & Burt* 11960 (E, NU).

NATAL. Klip River distr., Van Reenen Pass, farm Nolans Volens, 5000–5500ft, 9 xii 1976, *Hilliard & Burt* 9437 (E, NU). Bergville distr., 2829 CC, Cathedral Peak Forest Reserve above Tseketseke river, c.6900ft, 18 i 1983, *Hilliard & Burt* 16298 (E, NU). Lion's River distr., Mooi River, 13 xii 1900, *Johnston* 288 (E). Mpendhle distr., 2929 BC, Loteni Nature Reserve, 24 xii 1978, *Hilliard & Burt* 11803 (E, NU); *ibidem*, c.4900ft, 27 xii 1982, *Hilliard & Burt* 16135 (E, NU); Mulangane ridge above Carter's Nek, 7000–7300ft, 3 ii 1984, *Hilliard & Burt* 17509 (E, NU). Underberg distr., 2929 CB, Sani Pass, near ruins of old police post, 7800ft, 5 i 1984, *Hilliard & Burt* 17241 (E, NU); *ibidem* 8000–8800ft, 23 iii 1977, *Hilliard & Burt* 9793 (E, NU).

Cynoglossum austroafricanum was originally recognized as an independent species by the late Dr H. Weimarck, but he did not pursue his studies in this genus nor did he publish the name. However, as it has crept into use as a *nomen nudum*, it seems best to retain the epithet although it is described from a different type specimen.

In southern Africa this species was at first confused with *C. lanceolatum* Forsk., which differs in its smaller and paler flowers, smaller fruits and more divaricate inflorescence branches. The closer affinity of *C. austroafricanum* may be with *C. caeruleum* A.DC., which was described from Ethiopia. How much East African material should be assigned to this species is uncertain, but we have been able to examine an isotype (*Schimper* 554, K) and this has slightly marginate nutlets with the glochidia expanded at the base. In the present state of knowledge of this difficult genus it would merely add to the confusion to include *C. austroafricanum* here, though further comparison with more plentiful Ethiopian material is obviously needed.

One specimen that we assumed in the field to be *C. austroafricanum* proved to differ in having marginate and bigger (4×3.5 mm) nutlets. This specimen (Natal, Mpendhle distr., 2929 AD, upper Loteni valley in vicinity of Ash Cave, 6400ft, 5 ii 1985, *Hilliard & Burt* 18103) we now believe to represent the hybrid *C. austroafricanum* $\times$ *C. geometricum*. For further discussion of hybrids see under *C. geometricum* below.

474. *Cynoglossum geometricum* Baker & Wright in Thiselton-Dyer, Fl. Trop. Afr. 4(2):52 (1905).

Lectotype (chosen here): Malawi, Mt Chiradzulu, *Whyte* s.n. (K).

Syn.: *Cynoglossum lanceolatum* Forsk. subsp. *geometricum* (Baker &