

On two doubtful species of *Cynoglossum* (Boraginaceae) described by J.G.C. Lehmann

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Abstract

Cynoglossum hirsutissimum LEHMANN is known only from a drawing in the herbarium Melbourne and from the original description. Nearly all the recognizable characters suggest that it is conspecific with *C. austroafricanum* HILLIARD & BURTT, but a final proof is impossible. The younger, but better documented name is retained therefore. A collection in the herbarium Melbourne under the same name is *Lappula squarrosa* DUMORTIER. The type of *Cynoglossum lanuginosum* LEHMANN is an incomplete specimen of *C. magellense* TENORE.

Key words: Boraginaceae, *Cynoglossum*, taxonomy.

Zusammenfassung

Cynoglossum hirsutissimum LEHMANN ist nur von einer Zeichnung im Herbar Melbourne und der Originalbeschreibung bekannt. Fast alle daran erkennbaren Merkmale deuten darauf hin, daß die Art mit *C. austroafricanum* HILLIARD & BURTT konspezifisch ist. Da aber ein Rest von Unsicherheit bleibt, wird dem jüngeren, besser dokumentierten Namen der Vorzug gegeben. Ein Herbarexemplar unter dem gleichen Namen aus dem Herbar Melbourne ist *Lappula squarrosa* DUMORTIER. Der Typusbeleg von *Cynoglossum lanuginosum* LEHMANN ist ein unvollständiges Exemplar von *C. magellense* TENORE.

In his monograph, BRAND (1921) mentioned *Cynoglossum hirsutissimum* LEHMANN and *C. lanuginosum* LEHMANN among "Species dubiae vel excludendae" citing LEHMANN's (1818) descriptions in full. At this time he had not been aware that Lehmann's original herbarium is preserved in Melbourne (hb. MEL).

Introduction

Of *C. hirsutissimum*, there is a pencil drawing showing the habit, an opened corolla, the mature fruit and some other details. The name is written on a small label in Lehmann's own handwriting apart from a larger label that gives the name and the place of the original diagnosis and probably was written at a much later date. A second sheet bearing the same name shows a very different plant as a herbarium specimen and certainly has nothing to do with Lehmann himself, though there is a printed note "Ex Herbarium J.G.C. LEHMANN" and another one "Ex Herbarium O.W. SONDER". The handwriting on the label is the same as that on the larger label of the drawing, but certainly not that of Sonder, which could be compared from a label in herb. W (Vienna). Of *C. lanuginosum* LEHMANN, there is only one herbarium sheet that can be regarded as the holotype bearing Lehmann's original handwriting. The plant specimen is in early flower and

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seems to be fairly incomplete. A thorough examination of the material available and comparison with better known taxa led to the following results.

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Cynoglossum hirsutissimum LEHMANN

Cynoglossum hirsutissimum LEHMANN, 1818 *Plantae Asperifol.*: 147 (usually cited as "145" in consequence of a misprinting).

The drawing (Fig. 1) shows clearly a number of characters that are important for the characterization of the species according to the present standard: The simple stem is patent hairy with short, stiff hairs. Stem-leaves narrowly lanceolate to linear-lanceolate or lingulate, acute, covered with short, antrorsely patent hairs, the lower ones tapering into a petiole-like base, the upper ones sessile, decreasing in size towards apex, branches of inflorescence with single, small, bract-like leaves near base. Inflorescence composed of four loose, slightly pendent cymes crowded near apex. Fruiting pedicels longer than calyx and nutlets, slightly curved. Calyx patent hairy, with 5 oblong, more or less obtuse lobes free to the base, about as long as tube of corolla. Tube of corolla short, about as long as or slightly shorter than the lobes. Lobes broadly rounded, about as long as wide. Throat scales wider than long, obviously slightly curved inwards (this is not very clear), obviously not bilobed at apex. Filaments inserted slightly above middle of tube, distinctly shorter than the ovoid-oblong anthers, tip of anthers not reaching base of throat scales. Style about as long as corolla tube (?), bearing the small, capitate stigma. Nutlets ovoid, dorsiventrally compressed, equally covered with more or less columnar glochids, without margin, marginal glochids not widening towards base.

Diagnosis and description of LEHMANN (1818) do not add much to these facts. It seems worthwhile, however, to cite the former here to show, what the author himself considered as important differences: "C. caule erecto simplici, foliis angusto-lanceolatis semiamplexicaulibus acutis, utrinque papilloso-hirsutissimis: hirsutiae patente, racemis solitariis elongatis ebracteatis, staminibus inclusis."

The only African species known corresponding to the above description in nearly all the recognizable characters, especially the distribution of glochids on the flat to slightly convex dorsal surface of the nutlets, is *C. austroafricanum* HILLIARD & BURTT (1986). This species obviously is described from far stouter plants than *C. hirsutissimum* (stem up to 1 m in *C. austroafricanum*, 1 ft. in *C. hirsutissimum*). This may, however, be explained by the fact that it is far easier to collect and transport small specimens, which was especially important in earlier times without the facilities of today. HILLIARD & BURTT (1986) describe the upper leaves as gradually merging into bracts, while the cymes are ebracteate in *C. hirsutissimum* according to LEHMANN (1818). Cymes are fairly branched in *C. austroafricanum*, with about 4 branches only in *C. hirsutissimum*. This description is not exact enough for comparison. The same is true for the length of the

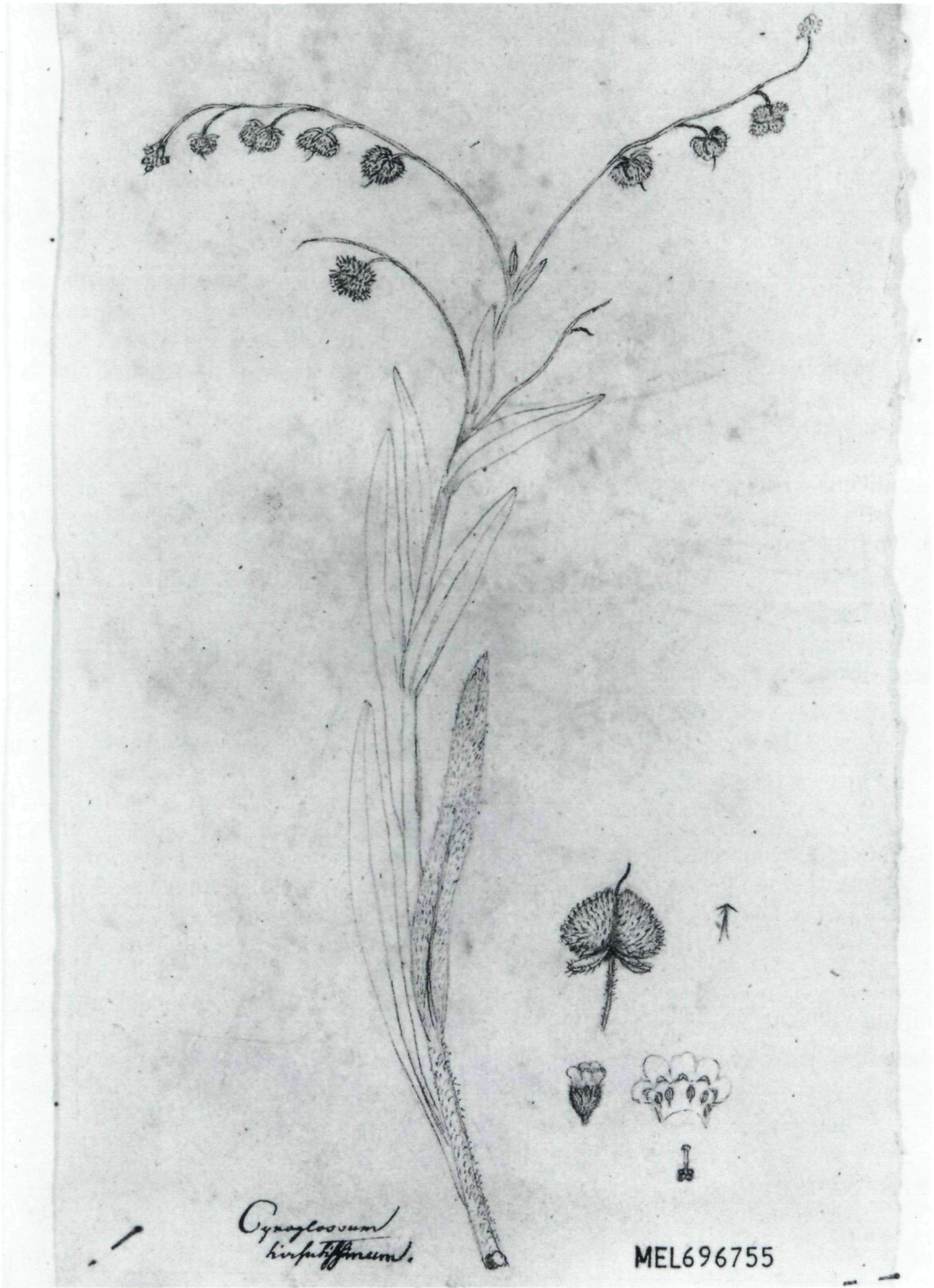


Fig. 1. *Cynoglossum hirsutissimum*, original drawing from Lehmann's herbarium. Reproduced with permission of the Director of the Royal Botanic Gardens, Melbourne.

calyx, which is given only for the fruit in *C. austroafricanum*. LEHMANN (1818) calls the corolla-tube "brevissimus", it equals the lobes according to HILLIARD & BURTT (1986). The drawing shows a tube fairly equalling the lobes. HILLIARD & BURTT (1986) describe the throat scales as bilobed and more or less oblong, but from the measures given this can only mean "transverse oblong". One cannot easily apply this term to the drawing. In *C. hirsutissimum* they are not bilobed according to the drawing, but this may have been difficult to see in the dry material. Filaments arise from the upper third of the tube in *C. austroafricanum*, slightly above the middle in *C. hirsutissimum*. This can scarcely be called a difference. In style and nutlets there is no obvious difference at all.

From all this it can be concluded that *C. austroafricanum* is probably conspecific with *C. hirsutissimum*, though there are minor differences between them at least from the drawing of the latter. As to the origin of *C. hirsutissimum*, only "Habitat in Africa" is mentioned by LEHMANN (1818). *C. austroafricanum* is known from South Africa (Natal and Orange Free State). From the history of exploration of the African continent it does not seem unlikely that Lehmann's plant that he saw in dried state as he mentions himself came from somewhere in southern Africa. Nevertheless, the identity cannot be proven beyond doubt as long as the herbarium specimen Lehmann had before him is unknown. *Cynoglossum austroafricanum* is far better documented, and it would be a pity to abandon this name for mere assumptions, well founded as they may be.

The herbarium voucher from hb. MEL under the name *C. hirsutissimum* is nothing but the well known European *Lappula squarrosa* DUMORTIER. As certainly nobody would include this plant in *Cynoglossum*, it must be assumed that a confusion of labels has taken place.

Cynoglossum lanuginosum LEHMANN

Cynoglossum lanuginosum LEHMANN, 1818 *Plantae Asperifol.*: 148.

Nothing is known about the geographical origin of this species. There is no flower left, but LEHMANN (1818) describes it from one imperfect specimen as similar to that of *C. officinale*. The terminal subcapitate inflorescence seems to consist of one central flower and two short, loose, lateral cymes of 3 and 6 flowers respectively. Only the single central flower on a much longer pedicel than the rest bears young nutlets. From these, it is evident that the central disc bears rather few glochids, that are mainly marginal. There is a distinct margin developed. From all these characters and from a comparison with herbarium specimens it is clear that the plant is *Cynoglossum magellense* TENORE.

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