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NEW SPECIES AND COMBINATIONS OF CYNOGLOSSEAE FROM ETHIOPIA

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Abstract: Cynoglossum alpinum, formerly obviously described as a variety of C. montanum L. by BRAND (1921), is raised to specific rank and supplied with a full description. C. hedbergiorum H. RIEDL is a new species in subgen. Eleutherostylum BRAND of doubtful affinities, with closest relations to taxa described from Madagascar. Paracynoglossum afrocoeruleum R. MILL is transferred to Cynoglossum as a new combination. SCHWEINFURT's manuscript name Paracaryum erythraeum is taken up for Adelocaryum erythraeum BRAND.

Cynoglossum alpinum H. RIEDL, s p e c . n.

Syn.:? Cynoglossum montanum L. subsp. extraeuropaeum BRAND  
var. c. alpinum BRAND in ENGLER, Pflanzenreich IV.  
252: 127 (1921).

Species perennis rhizomate ramoso ramis opace brunneis, subhorizontalibus, residuis foliorum emortuorum inter se et caule florifero valde distantibus tectis. Caules 40-50 cm

alti, ramosi ramis erectis, in parte inferiore patule villosopilosi, in parte superiore pilis tenuibus magis appressis dense vestiti. Folia basalia non visa (secundum cl. BRAND 10-20 cm longa), caulina basi angusta sessilia vel brevissime petiolata, oblonga vel oblongo-lanceolata, (2-)3-14 cm longa, 0,5-2 cm lata, superiora infra medium latissima, acuta vel obtusiuscula, nervo mediano subtus valde prominente, nervis ceteris pinnatis, curvatis et prope marginem anastomosantibus, infra colore pallidiore, supra subtusque pilis subappressis, tenuibus, rectis, subantorsis dense vestita. Inflorescentiae numerosae, terminali-congestae, breviores in axillis foliorum superiorum, demum elongatae, laxiusculae; bractee haud evolutae. Pedicelli floriferi 1-2 mm longi, fructiferi ad 5-8 mm elongati, recurvati. Calyx dense villosus, albidus vel canescens, 3,5mm longus, in tertia vel quarta parte inferiore connatus, lobis ovato-lanceolatis, 2,5-2,8 mm longis, 1 mm fere demum latis, acutis. Corolla obscure coerulea, cylindrico-campulata, tubo calyci aequilongo vel eo paulo brevior, limbo concavo, 3 mm fere in diametro lato. Fornices longitudine ad minimum duplo latiores. Antherae oblongae, fornices vix attingentes. Stylus 1,5 mm fere longus, stigmatibus carens. Nuculae a dorso compressae, area dorsali exteriore plana, basibus glochidiarum marginalium cincta, ambitu ovatae, 4-4,5 mm longae, in area dorsali glochidiis brevibus densiuscule aequaliter obsitae. - A C. montano L. maxime affini partibus subterraneis, foliis basalibus maximis, nervis subtus magis prominentibus, pedicellis fructiferis longioribus, calyce densius villosus sat differre videtur.

SCHIMPER n.49 in alpinis omnibus c. 1300-3500 m). - Holotypus W.

Cynoglossum alpinum may be an ancestral type of the extremely polymorphic, strictly biennial C. montanum-complex that is still perennial and confined to a small mountain area in Ethiopia as an element of the afro-alpine mountain flora as defined by HEDBERG (1957).

Cynoglossum hedbergiorum<sup>1)</sup> H. RIEDL, s p e c . n. (Subgen.  
Eleutherostylum BRAND).

Perennis rhizomate verticali colloque crassi. ...., interdum divisio, residuis foliorum emortuorum vestito, primo anno rosulam foliorum usque ad annum secundum, saepe et ad fructificationis tempus, persistentem et caules frequentissime complures, ascendentes, rosulam cingentes, rarius erectos emittente. Caules 8-30 cm alti, simplices vel parce ramosi, dense pilis flexuosis, longiusculis, retrorse appressiusculis vestiti. Folia basalia (rosularia) petiolo nunc brevi, nunc longiusculo incluso 3-14(-15) cm longa, 0,5-1,5 cm lata, lanceolata, acuta vel rarius obtusiuscula, gradatim in petiolum attenuata, supra subtusque pilis longis tenuissimis, antrorse appressis tecta, pinnatinervia, nervis secundariis prope marginem confluentibus. Folia caulina basalibus plerumque multo minora, 1-4,5 cm longa, usque ad 0,8 cm lata, inferiora basi angusta, cetera basi lata interdum semiamplexicauli sessilia, lanceolata, ovato-lanceolata vel oblongo-lanceolata, acuta, indumento ut in basalibus descripto. Inflorescentiae terminaliter congestae, vel in ramis lateralibus singulae, primo  $\pm$  contractae, demum paulo elongatae, ebracteatae; flores in seriebus 2 ad idem latus spectantes instructi. Pedicelli dense antrorse pilosi, floriferi  $\pm$  1(-2) mm longi, fructiferi ad 3 mm elongati, recurvati. Calyces floriferi 2-2,5 mm longi, fructiferi 4-4,5 mm longi, usque ad partem quartam vel tertiam basalem in lobos ovato-lanceolatos, acutos, demum 2,5-1,8 mm latos divisi. Corolla campanulata; tubus in calyce inclusus, eum longitudine aequans vel eo paulo brevior, albidus (ut videtur e sicco); limbus 6,5-7 mm in diametro latus, tota longitudine fere in lobos obovatos vel suborbiculares, 1,5-1,8 mm fere longos divisis, intense coeruleus. Fornices albidi, subquadrati, in summo tubo inserti. Antherae oblongo-ellipticae, apice fornices vix attingentes, infra medium tubum sessiles. Stylus filiformi-

1) Name given in honour of Prof. Dr. Olov HEDBERG, editor of "Flora of Ethiopia", and his wife Inga.

columnaris, nucas vix 1 mm superans, stigma minutum discoideo-capitatum ferens. Nuculae 4, a stylo omnino liberae, 3-3,5 mm longae, ambitu ovatae, area dorsali mediana glochidiis 2-5, rarissime pluribus imprimis secus lineam medianam verticalem obsita, praeter glochidias interdum verruculis minutissimis prope centrum tecta, basibus compressis triangularibus glochidiarum marginalium cincta, in facie ventraliinteriore glochidiatae. - Planta haud ullae speciei generis Cynoglossi adhuc notae comparanda comparanda, forsan speciebus Madagascariensibus C. rochelia A.DC. vel C. borbonico (LAM.) BORY maxime affinis.

Ethiopia, Shoa province, Sq. 59B. Near Ankobar, 162 km north east of Addis Ababa on Ankobar road. Alt. 3310 m (Aethiopia, prov. Shoa. Prope Ankobar, 162 km ab Addis Abeba boreo-orientem versus secus viam ad Ankobar ducentem, alt. 3310 m). Holotypus, UPS.-Leg. J.W. Ash Junio 26, 1971, no 1016. The collector gives the following description of the species' ecology: "perennial in alpine meadow, also on disturbed ground and amongst rocks, frequent on Debre - Berhan - Ankobar road. Open grassland and earthbanks - full sun." - 52 km Northeast Debre Berhan, on the Dessie-road. 2900 m (52 km ad boreo-orientem ab Debre Berhan versus, secus viam ad Dessie ducentem). Co-Typus, UPS. - Leg. Loutfy Boulos & Amare Getahun. The Herbarium. International Life-stock Centre for Africa. Flora of Ethiopia. No.11664, sub nomine "Cynoglossum coeruleum". Decembre 12, 1977.

The species clearly belongs to subgenus Eleutherostylum. In its growth-habit, it is a typical representative of Ethiopia's high mountain-flora and as such also an element of the afro-alpine stock. No other close relatives are known. Its closest affinities seem to be with species from Madagascar such as C. rochelia or C. borbonicum.

Cynoglossum afrocaeruleum (R. MILL) H. RIEDL, c o m b . n..  
Syn.: Paracynoglossum afrocaeruleum R. MILL ex MILL & MILLER, Notes Roy.Bot.Garden Edinb.41(3): 481 (1984).  
Cynoglossum coeruleum HOECHST. ex A.DC. in DC., Prodr.

10: 148 (1846), non C. caeruleum BUCH.HAM. ex D.DON (1825).

In spite of the mode of attachment of the nutlets which separate from the style with an awn, and the differences in pollen morphology, the characters Paracynoglossum-species share with typical Cynoglossum seem to be so predominant that I don't see any reason, why Paracynoglossum should be more than a subgenus as I proposed before. MILL's new name would have been necessary, if he had retained the species in Cynoglossum but is a nomen superfluum and illegitimate, therefore, under Paracynoglossum. Nevertheless, I take up the name here, as under Cynoglossum HOCHSTETTER's epitheton had been a younger homonym of C. caeruleum BUCH.-HAM. ex D. DON.

Paracaryum erythraeum SCHWEINFURTH ex BRAND in Engler, Pflanzenreich IV, 252: 78 (1921), in syn.

Syn.: Adelocaryum erythraeum (BRAND), l.c.

Cynoglossum erythraeum (BRAND) H. RIEDL, Österr.Bot. Z. 119: 72 (1971).

The membranous wing of the nutlets turned inwards and hiding the dorsal surface in part is typically that of Paracaryum-species as known mainly from Asia. It is true that the nutlets are not attached to the gynobasis with their whole inner surface, but this is due to the small size of it and not so important in my opinion as the majority of other characters it has in common with Paracaryum from different regions. I take up SCHWEINFURTH's unpublished binomial therefore, which is validated here with the hint to BRAND's description (1921).

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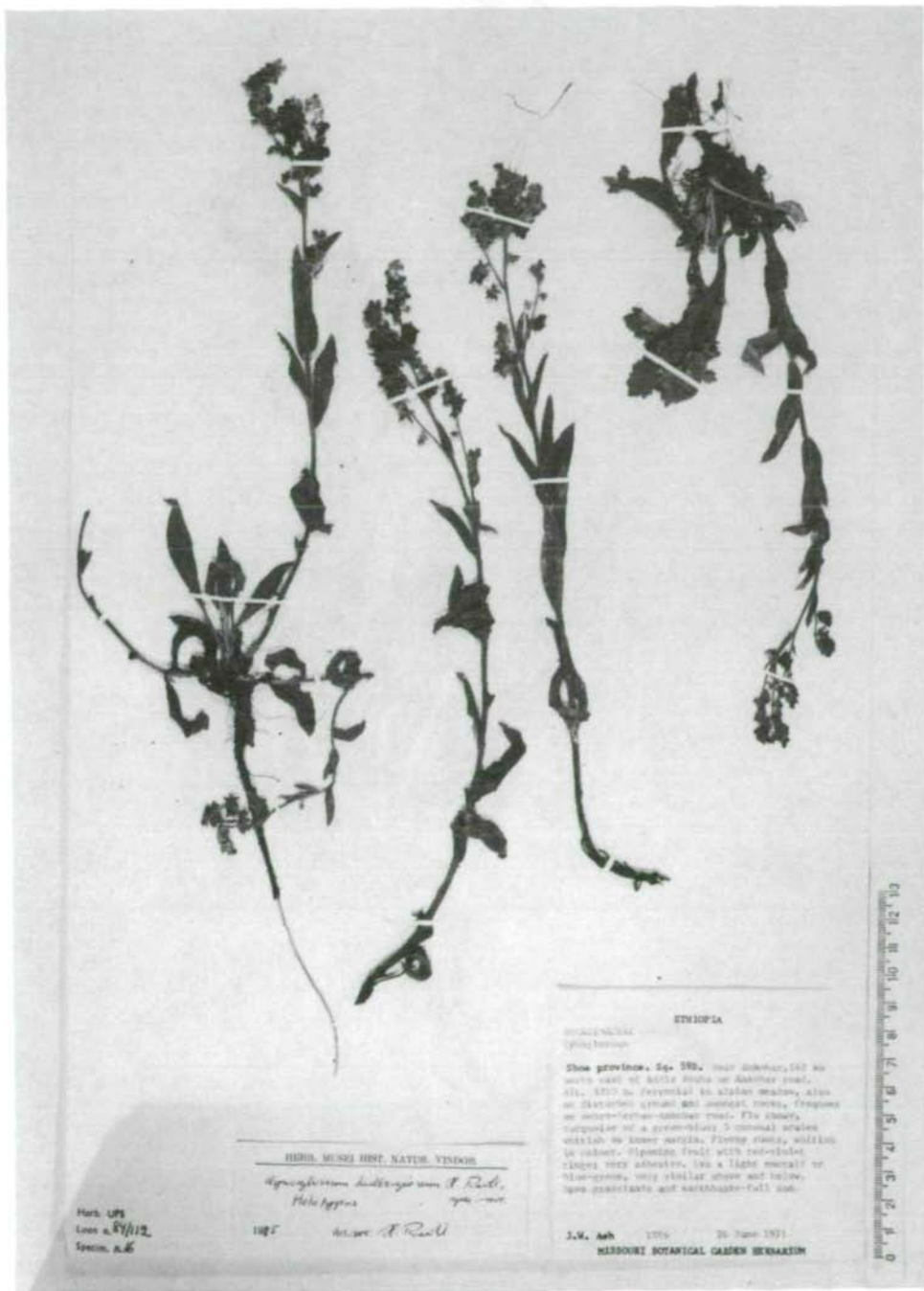
*Cynoglossum alpinum* Riedl

1872 - 1873

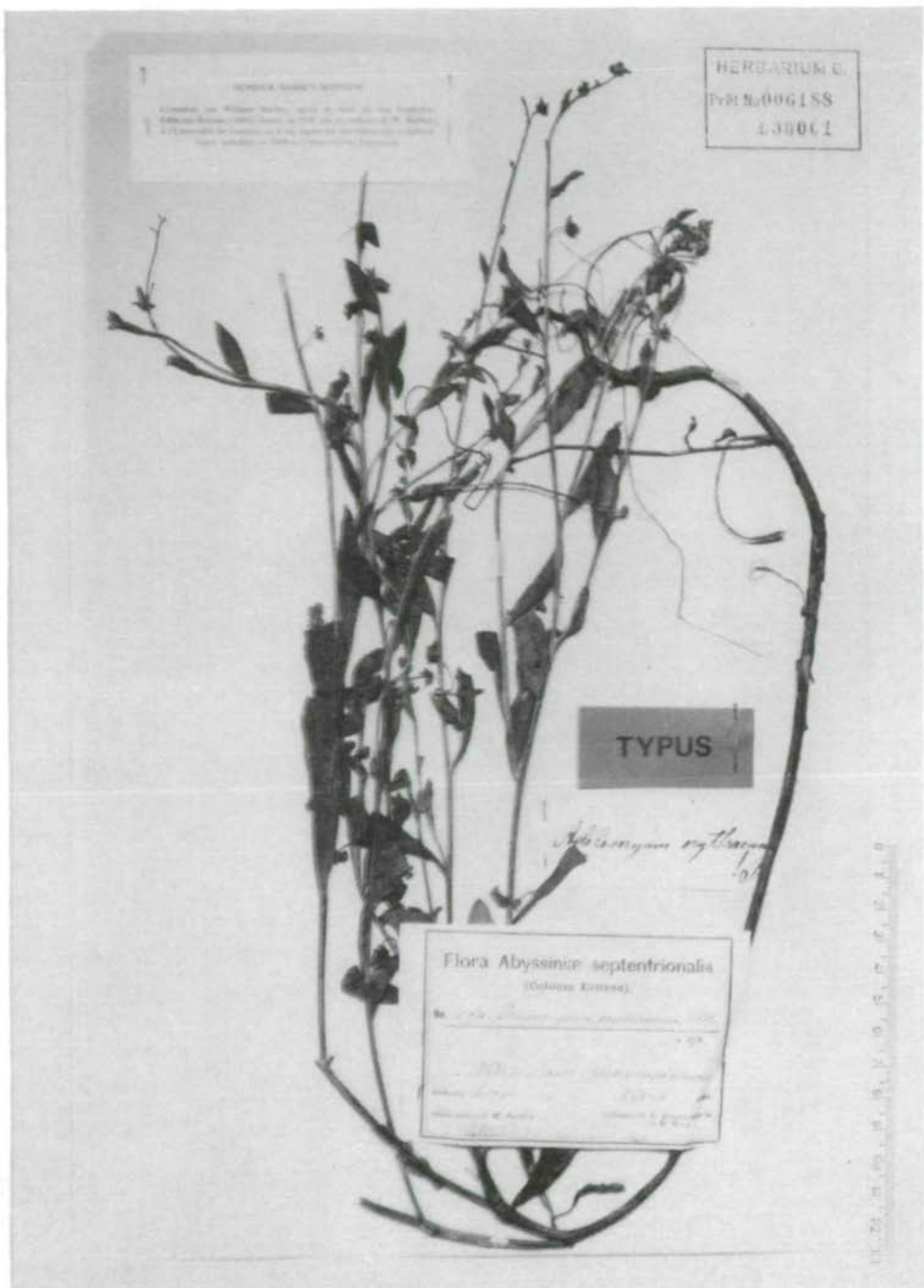
*Cyn. spec. caeruleum* Riedl

*Cyn. alpinum* Riedl  
Alpen

Cynoglossum alpinum H. RIEDL, Holotypus, W

***Cynoglossum hedbergiorum* H. RIEDL, Holotypus, UPS**





Parecarum erythraeum SCHWEINF. ex BRAND, Isotypus, K

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