

A Remarkable Alpine Lobelia from Bhutan

BY

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WITH PLATE CCLIV.

***Lobelia nubigena* Anth. Sp. nov.**

Species (sectionis *Rhynchoptali* Benth. et Hook. f.) inter congeneres indicos valde distincta; caule eramoso densissime foliato, inflorescentia bracteis magnis conspicuis pilosis vestita, facile recognoscitur.

Herba monocarpica alta, erecta neque ramosa, pyramidata, basi 0.3 m. lata. Radix crassa, lignosa, ramosa. Caulis simplex, per totam longitudinem foliis dense vestitus, robustus, basi circ. 2 cm. diam., ad 1 m. attingens. Folia subintegra, utrinque bene reticulata, margine glandulis et minutis et numerosis praedita; basalia rosulata, oblanceolata, ad 30 cm. longa, 5 cm. lata, atroviridia, glabrescentia, costa lata conspicua, in petiolum brevem sensim attenuata; caulina oblongo-lanceolata, ad 12 cm. longa, 2 cm. lata, pallido-viridia, sessilia, decurrentia, inferiora glabrescentia, superiora basim versus albo-pilosa, sursum in bracteas gradatim diminuentia. Inflorescentia terminalis, spicata, bracteata, densiflora. Bracteae magnae, pendulae, dense albo-pilosae, lanceolatae, 4-6 cm. longae, 1.5-2 cm. latae, gradatim longe acuminatae. Flores axillares, pallido-purpureo-caerulei, pedicello piloso 0.5-1 cm. longo. Calycis tubus brevis campanulatus, limbus alte 5-fissus, lobis angustissime triangularibus 2 cm. longis 0.2-0.4 cm. latis acuminatis utrinque dense albo-pilosis. Corolla calycem paulo superans, dorso ad basim fissa, 5-loba, lobis circ. 1 cm. longis, basi 0.2-0.3 cm. latis, duobus posterioribus quam anteriores paululo longioribus. Stamina 5; filamenta circ. 1 cm. longa, sparse pilosa, basi dilatata 0.2 cm. lata, libera, ad apices conniventia; antherae circ. 0.7 cm. longae, in tubum conjunctae, 3 majores nudaе, 2 minores pennicellatae. Ovarium semi-superum, 2-3-loculare, extra pilosum, stylo circ. 1.3 cm. longo ad apicem piloso, stigmate bifido. Semina ellipsoidea, brunnea, 1-1.5 mm. longa, dorso margine angustissimo pellucido instructa.

BHUTAN.—Tall biennial plant with long pendulous bracts. On alpine turf. Tibdeh La. On the Yato La ridge. Lat. 27° 20' N. Long. 90° 40' E. Altitude 13,000 feet. In flower, July 1915. R. E. Cooper, 4099. (Type.)

[Notes, R.B.G., Edin., No. XCIII, July 1936.]

Plant 3 feet high. On alpine peat turf, same locality and altitude. In fruit, September 1915. R. E. Cooper, 4766.

This *Lobelia* was discovered by Mr. R. E. Cooper during his plant-collecting expedition in Bhutan, an account of which has already been published. There he refers to this interesting plant.^{1,2} It is recorded from the Tibdeh La and found on the Yato La ridge on one of the peculiarly isolated areas of high elevation which occur in Bhutan and which Mr. Cooper describes. This species is a tall, pyramidal, very leafy plant with a terminal inflorescence conspicuous by its numerous hairy bracts. It is interesting to find such a type as this occurring among the Campanulaceae. It recalls at once similar types from other families, such as *Saussurea gossipiphora* D. Don, and *Rheum nobile* Hook. f., already recorded from this high alpine area of the Eastern Himalayas. On the other hand, this new species is quite unlike any other *Lobelia* at present known from Asia. Its form suggests comparison with the Giant Lobelias of the mountains of East Africa.³ As there is already evidence of a linkage of the flora of the Himalayas with that of Arabia and Abyssinia, it is not unnatural to look for a near neighbour of this species among those peculiar *Lobelias* which grow on the mountains of East Africa. Among these it falls naturally into the *Telekii* series and is nearest to *Lobelia Telekii* Schweinf. Both are high alpine plants (circ. 13,000 feet) of pyramidal habit, with tall, unbranched leafy stems and a terminal bracteate racemose inflorescence. Further, a comparison of the photograph of this species with that of *L. Telekii*^{4,5} shows that there are found growing together leafy rosette plants without flowers and flowering plants. These resemblances may, in part at any rate, be accounted for by the fact that the environmental conditions in both areas agree to a considerable extent. The present species differs, among other characters, from *Lobelia Telekii* in its lanceolate bracts, which are about three times as long as the flowers. In *L. Telekii* the bracts are linear and five times as long as the flower. Further, the flowers of this new species are only half as large as those in *L. Telekii*.

¹ Notes, R.B.G. Edin. xviii (1933), 67, 76.

² New Flora and Silva, i (1929), 229, fig. lxxiii; ii (1929), 44.

³ Giant Lobelias of East Africa, Kew Bull. (1934), 61.

⁴ New Flora and Silva, vii (1934), 110, fig. iii.

⁵ Nat. Hist. Mag. v (1935), 182, fig. 16.



LOBELIA NUBIGENA ANTH.

[Photo, R E Cooper