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Silene helleboriflora, spec. nov.

by

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Silene helleboriflora Exell & Bocquet, spec. nov.

Herba perennis, laxe caespitosa. *Radix* lignosa, perpendicularis. *Caules* adscendentes, 12-25 cm. alti, rigidi, flavo-virentes, simplices, hirti pilis nigrescentibus. *Folia* fere sessilia, inferne non rosulantia; inferiora anguste oblanceolata, 60-90 mm. longa, 10-20 mm. lata, in apice acuta, integerrima, flavo-virentia, praesertim secundum medium nervum marginemque hirta; superiora anguste elliptica vel lanceolata, 10-20 mm. longa, 6-7 mm. lata, hirta. *Cyma* uni-triflora; pedicelli 10-40 mm. longi; *flores* nutantes, post anthesin erecti. *Calyx* clavato-campanulatus, late inflatus, in ima parte umbilicatus, 30-35 mm. altus, 30-35 mm. latus (exsiccatus), virescens, membranaceus, hirtus, pilis nigrescentibus densioribus in nervis, fructifer apertus; nervi 10, in dentibus non conjuncti (spectati sine lente); dentes 5, late triangulares, apiculati, circa 6 mm. alti, 15 mm. lati, quartam partem altitudinis totius calycis vix aequantes, sinibus subacutis, margine scarioso undulato ciliato. *Anthophorum* 10 mm. altum ad anthesin, lanuginosum pilis nigrescentibus. *Petala* 5, calycem 2-7 mm. ad anthesin superantia; unguis pallido-violaceus, 12 mm. longus, late auriculatus, tertia parte inferiore pubescens; lamina quadrifida segmentis laciniatis, 15 mm. longa, 12 mm. lata, purpurea, appendicibus in fauce binis, fornicatis, 2-3 mm. longis, truncatis, denticulatis. *Stamina* 10; filamenta tertia parte inferiore lanuginosa, 12-15 mm. longa; antherae pallido-violaceae, 1×2 mm. *Ovarium* ovoidem, virescens; styli 5, papillosi; capsula colore glandaceo, se decem dentibus erectis aperiens. *Semina* reniformia, 1 mm. diam., compressa, dorso serie unica setularum 0.2-0.3 mm. longarum cincto.

HOLOTYPE. — K.M. Sharma E 66 (BM).

A herbaceous perennial, loosely caespitose in habit. *Root system*: a woody tap root. *Stems*: erect, 12 to 25 cm. long, rigid, yellowish-green, not branched, hirsute, with blackish hairs. *Leaves*: opposite, not forming a basal rosette; the lower ones 60 to 90 mm. long and 10 to 20 mm. wide, narrowly oblanceolate acute, entire, yellowish-green, hirsute particularly along the midrib and the margins; the upper leaves narrowly elliptic to lanceolate, 10 to 20 mm. long, 6 to 7 mm. wide, hirsute-pubescent. *Inflorescence*: a 1 to 3-flowered cyme, pedicels 10-40 mm. long; flowers nodding at first, becoming erect after anthesis. *Flowers*: calyx campanulate, broadly inflated, umbilicate at the base, 30 to 35 mm. long, 30 to 35 mm. broad (when dry),



FIG. 1. — *Silene helleboriflora* Exell & Bocquet, spec. nov. Type in herb.
British Museum

greenish, membranous, hirsute particularly along the ribs, hairs blackish; ribs 10, blackish, indistinct, united in the teeth (but fusion not visible to the naked eye); calyx topped by 5 broadly triangular, apiculate lobes, 6 mm. long by 5 mm. broad, their length approximately $\frac{1}{4}$ of the total length of the calyx, the sinus between them acute and their margins undulate, scarious and ciliate. *Anthophore*: 10 mm. long at anthesis, woolly with blackish hairs. *Petals*: 5 projecting by 2 to 7 mm. from the calyx at anthesis; claw pale violet, 12 mm. long, auriculate, hairy on the lower third; blade 12 mm. wide, 15 mm. long, ending in four laciniate segments, purple, with arched, truncate, dentate appendages. *Stamens*: 10; filaments wooly on their lower third, 12 to 15 mm. long; anthers 2×1 mm., pale violet. *Ovary*: ovoid, greenish; styles 5, papillose. *Fruit*: a capsule, light brown, dehiscing from the apex by 10 erect teeth. *Seeds*: reniform, flattened, 1 mm. in diameter, bearing dorsally a number of small bristly hairs 0,2-0,3 mm. long.

ECOLOGICAL OBS. — *S. helleboriflora* flowers from July to October at an altitude of 3400-5500 m. It has been found growing on rock ledges, crevices and open grass slopes.

DISTR. — Nepal, probably common in a limited area.

NEPAL: Malmuleykhola, 4600 m., Aug 17, 1931, K.M. Sharma E 66 (BM); East of Chalike Pahar, 4400 m., Aug. 3, 1954, Stainton, Sykes & Williams 3736 (BM); id., 4600 m., Sept. 23, 1954, Stainton, Sykes & Williams 4557 (BM); Lamjung Himal, 4600 m., July 14, 1954, Stainton, Sykes & Williams 6343 (BM); Annapurna Himal, 3950 m., July 28, 1954, Stainton, Sykes & Williams 6522 (BM); Samargaon, N. of Tukucha, 5250 m., Aug. 16, 1954, Stainton, Sykes & Williams 7254 (BM); Tukucha, Kali Gandaki, 3450 m., Aug. 22, 1954, Stainton, Sykes & Williams 7404 (BM); Taglung, S. of Tukucha, Kali Gandaki, Sept. 20, 1954, Stainton, Sykes & Williams 7937 (BM); Phagune Dhuri, 4100 m., Oct. 13, 1954, Stainton, Sykes & Williams 9006 (BM).

OBS. — 1) The broad vesiculous calyx and unbranched stems place *Silene helleboriflora* close to *Silene wahlbergella* Chowdhuri. It differs from this species, however, by its larger leaves, its petals exerted from the calyx and its wingless seeds with their ciliate dorsal surface.

The classification of P.H. DAVIS and P.K. CHOWDHURI (P.K. CHOWDHURI, 1957) has been adopted regarding the incorporation of the genus *Melandrium* within the genus *Silene*. *Silene helleboriflora* is placed in the section *Gastro-Lychnis* (Fenzl) Chowdhuri next to *Silene wahlbergella* Chowdhuri, syn. *Lychnis apetala* L., Sp. Pl. 1: 437. 1753, *Melandrium apetalum* (L.) Fenzl. in Ledeb., Fl. Ross. 1: 326. 1842, non *Silene apetala* Willd. 1799.

2) The fusion or non-fusion of the vascular strands in the calyx teeth is a feature made use of by ROHRBACH in his "Synopsis der Lychnideen" (1869-70), also by EDGEWORTH in J.D. HOOKER'S "Flora of British India" (1872).

An examination with the aid of a binocular dissecting microscope reveals however that these strands are always fused in the calyx teeth although this character may not always be visible to the naked eye. The fact that this fusion

is at times visible without the help of a lens is still, nevertheless, a useful criterion and affords an easy means of recognition for some species.

3) The terminology used for leaf shapes in the description follows the definitions set down by W.T. STEARN (1956).

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