

AN IMPERFECTLY KNOWN ENDEMIC TAXON OF KUMAON HIMALAYAS—*FALCONERIA**HIMALAICA* HOOK. F. = *WULFENIA HIMALAICA* (HOOK. F.) PENNELL

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## ABSTRACT

During a botanical exploration in the Kumaon Himalayas complete specimens of *Falconeria himalaica* Hook f. were collected at Kalamuni pass at an altitude of 3000 metres. The rediscovery of this taxon is of interest because of its incomplete description and dubious systematic position. The present paper gives a detailed taxonomic description of this taxon.

During a botanical exploration in the Kumaon Himalayas (Uttar Pradesh) in June, 1958 complete specimens of *Falconeria himalaica* Hook.f. were collected at Kalamuni pass at an altitude of 3000 metres. This taxon bears a close resemblance to the illustration and description of *Falconeria himalaica* given in Hooker's *Icones Plantarum* (1883). The specimens were sent to the Kew herbarium who in turn confirmed the identification. The rediscovery of this taxon is of interest because of its incomplete description and dubious systematic position. So far only two collections of this plant have been made and these are more than a hundred years old.

*Falconeria himalaica* Hook. f. in Hook. Ic. Pl. t. 1438, 1883; Hooker, f. in FBI, 4: 319, 1824. *Wulfenia himalaica* (Hook. f.) Pennell, Acad. nat. Sci. Philadelphia. Monogr. No. 5: 66-67, 1943; Rao, Bull. bot. Surv. India 1: 97-120, 1959, Rau & Rao, Bull. bot. Surv. India 2: 43-44, 1960.

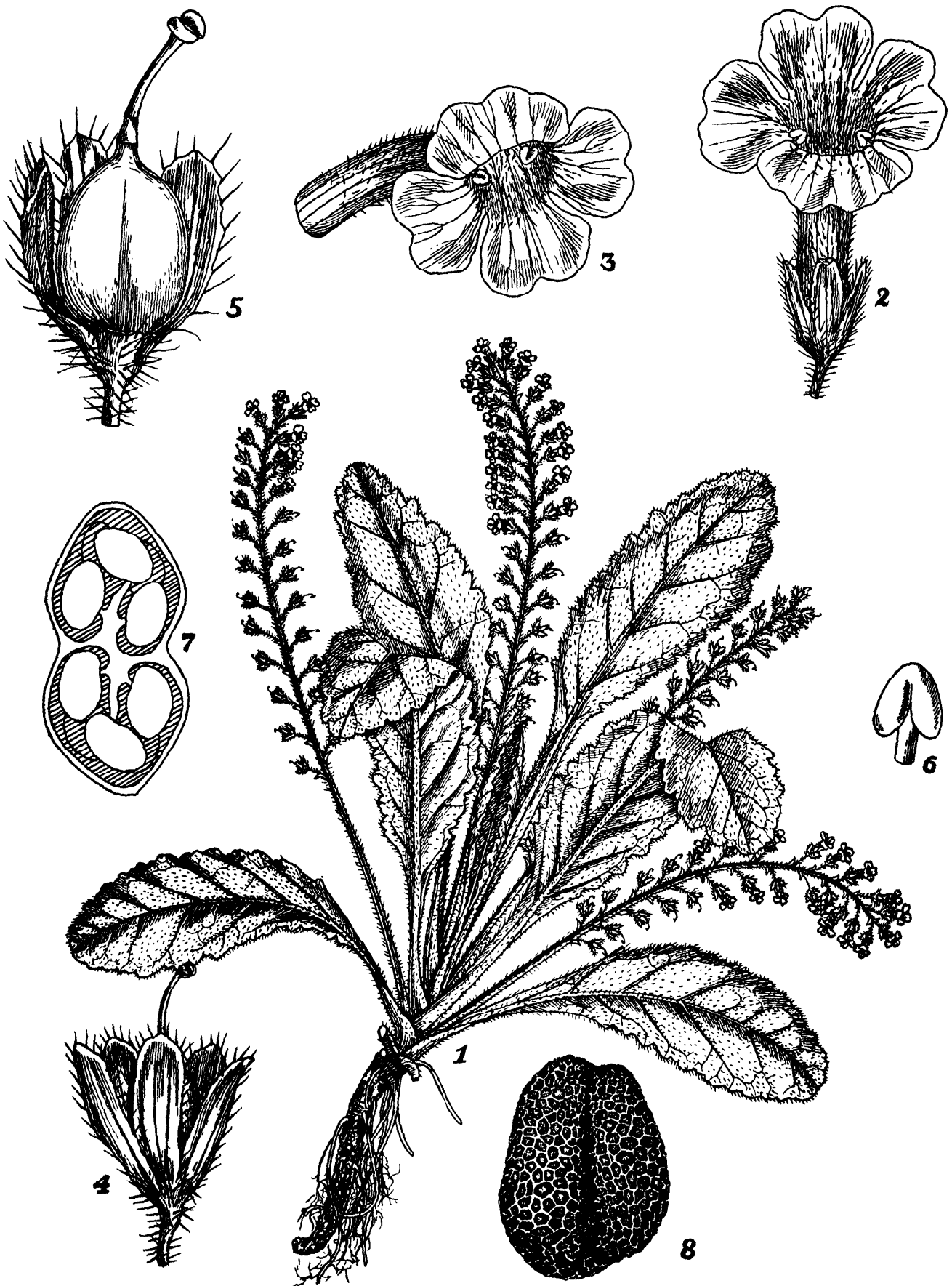
Distribution: T. A. Rao 6701, Western Himalayas, Kalamuni pass, Kumaon 3000 m. 11 June 1958; *Falconer*, (Mazus n. 4 in herb.) Western Himalayas, Madhari pass, Kumaon, 2450 m. *Strachey & Winterbottom*.

Lax hairy herb on moist soil. Rootstock 1.27-5.08 cm. long and 0.31-4.02 cm. wide, cylindrical, recumbent, obliquely disposed, clothed with thick elongated fleshy roots and persistent root scars. Leaves radical, confluent, of different shapes, black when dry, spreading, 5.08-12.70 cm. long and 1.89-3.81 cm. wide, oblong-obovate or spatulate, crenate, with a prominent midrib broad at base; secondary nerves distinct, pubescent; petiole flat, 1.27-3.81 cm. long, entire, winged above and attenuated below with a prominent broad midrib. Scapes 1 to 8, radical, 5.08-12.70 cm. long, decumbent, sometimes with a plantlet at the apex; racemes subsessile. Flowers rather small, obovate-oblong or spatulate bracts, pedicellate, 0.31-0.62 cm. long, hairy, deep or pale blue; sepals 5, subequal, linear-obovate 0.42 cm. long, ciliate; petals 5, personate, persistent, 0.84-1.27 cm. long; tube short, decurved; upper lip 2-lobed,

lower larger 3-lobed, laxly hairy; lobes obovate retuse; stamens 2, included, epipetalous; filaments short, straight; anthers 2-celled, cells diverging free below, united at apex; ovary ellipsoid, glabrous, as long as calyx, superior, 2-celled, ovules small, many, axile, style short, included swollen and slightly constricted at base, curved; stigma bilobed. Fruit a septicidal capsule; seeds many, rugose; endosperm scanty (Figs. 1-8).

The rediscovery of this plant is of considerable significance. Hooker described it from Falconer's original collection and named it *Falconeria himalaica*. Regarding this taxon Hooker states in *Icones Plantarum* (1883) that "its habit is that of *Mazus* but it differs from that genus and from the tribe to which it belongs in the capitate stigma and in the lateral lobes of the corolla being (I think) outermost in bud. The specimens are unfortunately not very good and I have seen no fruit." In the *Flora of British India* (1884) this taxon is included under genera of doubtful position. In the description account it is stated therein "apparently nearly *Wulfenia* but differing in the 2-lipped corolla and included stamens." Pennell (1943), perhaps based upon the previous depauperated specimens, has considered that there can be little question of generic association of this species with the other two species viz. *Wulfenia carinthiaca* Jacq. the generic type and *Wulfenia amherstiana* (Wall) Benth. Of these three species, Pennell (1943) is of opinion that *W. amherstiana* Jacq. is hardly so close to the genotype as *W. himalaica*. He has accordingly made a new combination—*Wulfenia himalaica* (Hook f.) Pennell.

A careful study of this taxon showed that the stigma is distinctly bilobed with included style, and not capitate as recorded by Hooker (1883). Further, the capsule is ellipsoidal containing rugose seeds. In view of its distinct morphological characters (Table I) it appears that there is no justification for making a new combination and merging it with the genus *Wulfenia*. It should remain as a distinct and separate genus from *Wulfenia* and *Mazus*.



*Falconeria himalaica* Hook. f.

Fig. 1. Habit  $\times 5.625$  Nat. size; Fig. 2. Flower  $\times 15$ ; Fig. 3. Corolla  $\times 15$ ; Fig. 4. Calyx with the immature capsule  $\times 22.5$ ; Fig. 5. Mature Fruit with bilobed stigma  $\times 30$ ; Fig. 6. Anther  $\times 15$ ; Fig. 7. T. S. of Capsule  $\times 30$ ; Fig. 8. Seed  $\times 90$ .

TABLE I

	<i>Wulfenia</i> Jacq.	<i>Falconeria</i> Hook. f.	<i>Mazus</i> Lour
1. Habit	A glabrous herb; perennial; woody rootstock.	A scapigerous laxly hairy herb; perennial; rootstock with thick fleshy fibres.	A glabrous or sparsely hairy herb; annual; rootstock sometimes with runners.
2. Leaf	Subradical, petioled, crenate.	Radical, petioled, crenate.	Opposite below or rosulate; above opposite or alternate; Petioled, coarsely crenate.
3. Flowers	Blue, bracteate, spicate on radical scapes, secund; ebracteolate.	Deep to pale blue, bracteate, racemed scapes, sub-secund, ebracteolate.	Blue, bracteate, racemed scapes; sub-secund, bracteoles minute or 0.
4. Calyx	Sepals 5, narrow; glabrous.	Sepals 5, subequal, linear-obovate, ciliate.	Sepals 5, campanulate, glabrous.
5. Corolla	Tube cylindric, lobes 4, erectopatent, upper 2-fid, lower entire or crenate.	Tube short, decurved, lobes 5, upper lip 2-lobed, lower larger 3-lobed. One lateral exterior.	Tube short, upper lip erect, 2-fid, lower much larger, spreading, 3-fid; Throat with a 2-lobed palate.
6. Androecium	Stamens 2, inserted between the upper lobes, exerted; anthers 2-celled, divergent, tips confluent.	Stamens 2, included, filaments straight; anthers 2-celled, divergent, free below, united at the top.	Stamens 4, didynamous; anthers 2-celled, divergent contiguous.
7. Gynoecium	Stigma capitate, capsule acute, septa and loculicidal margins of valves inflexed separating from the placentiferous axis; seeds many, ovoid concavo-convex; Testa lax, smooth.	Stigma distinctly bilobed, capsule ovoid, septicidal, axile placenta, seeds many, rugose.	Stigma bilamellate, capsule globose or compressed, obtuse, loculicidal, valves entire; seeds many, most minute, ovoid.

## ACKNOWLEDGEMENTS

The writer desires to express his thanks to Rev. Fr. H. Santápau, Chief Botanist, for his interest and encouragement. He is grateful to Dr. K. Subramanyam for valuable suggestions in the preparation of this note. His thanks are also due to Dr. M. A. Rau, Regional Botanist, Dehra Dun for the constant encouragement and enthusiasm he had shown during the period of this work.

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