

A new species of the genus *Silene* L. (Caryophyllaceae) from Pakistan

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Zusammenfassung

Silene pakistanica LAZKOV (Caryophyllaceae) wird beschrieben, die Beziehungen zu *S. scabrifolia* KOM. und *S. falconeriana* ROYLE werden diskutiert. *S. pseudo-verticillata* E.NASIR wird in die Synonymie von *S. scabrifolia* gestellt.

Abstract

Silene pakistanica LAZKOV (Caryophyllaceae) is described. Its relationship to *S. scabrifolia* KOM. and *S. falconeriana* ROYLE is discussed. *S. pseudo-verticillata* E.NASIR is stated as later synonym of *S. scabrifolia*.

Key words: Caryophyllaceae, *Silene*, *Silene* sect. *Holopetalae*, *Silene pakistanica*; new species, new synonym, flora of Pakistan.

Introduction

During my visit to the herbarium of the Natural History Museum in Vienna [W] in October 1999, I found 3 specimens of a new species of *Silene* sect. *Holopetalae* SCHISCHK. ex CHOWDHURI. They were collected by R.R. Stewart in Swat (Pakistan). Their characters are different from those of other species of this section studied before. Therefore they are described as new species - *S. pakistanica* LAZKOV.

Results and Discussion

The specimens treated here as *Silene pakistanica* were identified earlier by V. Melzheimer as *S. scabrifolia* KOM., and they are cited under *S. scabrifolia* in "Flora Iranica" (MELZHEIMER 1988). All species of *S. sect. Holopetalae* are closely interrelated, the main differences being in vegetative features. Characters of leaf shape and pubescence are very important for the systematics of this group.

The above-mentioned specimens collected by Stewart differ from *S. scabrifolia* (lectotype: "Sarawschan Gebiet: Berge von Kschut, 5-7000', 19 VI - 1 VII 1882, A. Regel" [LE!]; designated by LAZKOV 1998) in having both leaf surfaces glabrous, only the margin and midvein being scabrous (not scabrous throughout on both surfaces, including margin and midvein, with simple, very short, stout, more or less patent hairs as in *S. scabrifolia*), usually narrower leaves, and claw of petals glabrous (not ciliate at the margin). S.A. GHAZANFAR & Y.J. NASIR (1986) in "Flora of Pakistan" recognized two species of

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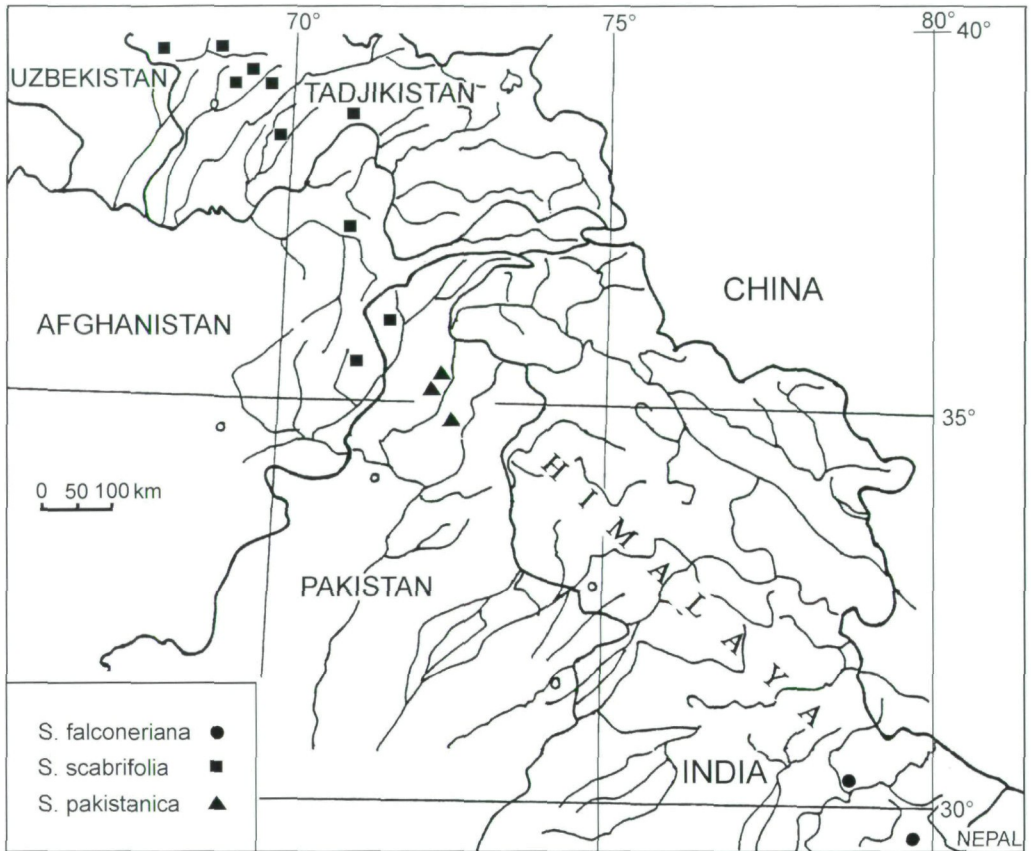


Fig. 1: Distribution of *S. falconeriana*, *S. scabrifolia* and *S. pakistanica*.

S. sect. *Holopetalae* in Pakistan: *S. falconeriana* ROYLE and *S. pseudo-verticillata*, described from Pakistan by E. NASIR (1960). I received from Kew a colour photocopy of the type specimen of *S. pseudo-verticillata* ("Chitral, Madaghlast, 9000', 1908, Toppin 530") and a detailed description of the leaf surface by Dr. Sue Zmarzty [K] composed in response to my enquiry. From study of this material and the description as well as of the picture of *S. pseudo-verticillata* in "Flora of Pakistan", this species is a later synonym of *S. scabrifolia*, because it does not show any significant differences from the latter.

Silene pakistanica closely resembles in habit another species of the same section, *S. falconeriana* ROYLE, described from India; moreover both have similar pubescence of leaf surface. But Stewart's plant differs from *S. falconeriana* in having broader and shorter lanceolate leaves (not long-linear as in *S. falconeriana*). GHAZANFAR & NASIR (1986) noted: "Specimens from our part of Himalaya tend to have broader leaves than those found further east". Moreover the whole anthophore of *S. falconeriana* is densely pubescent with short hairs. Stewart's plants (*S. pakistanica*) have the anthophore glabrous or pubescent with long hairs only at the base.

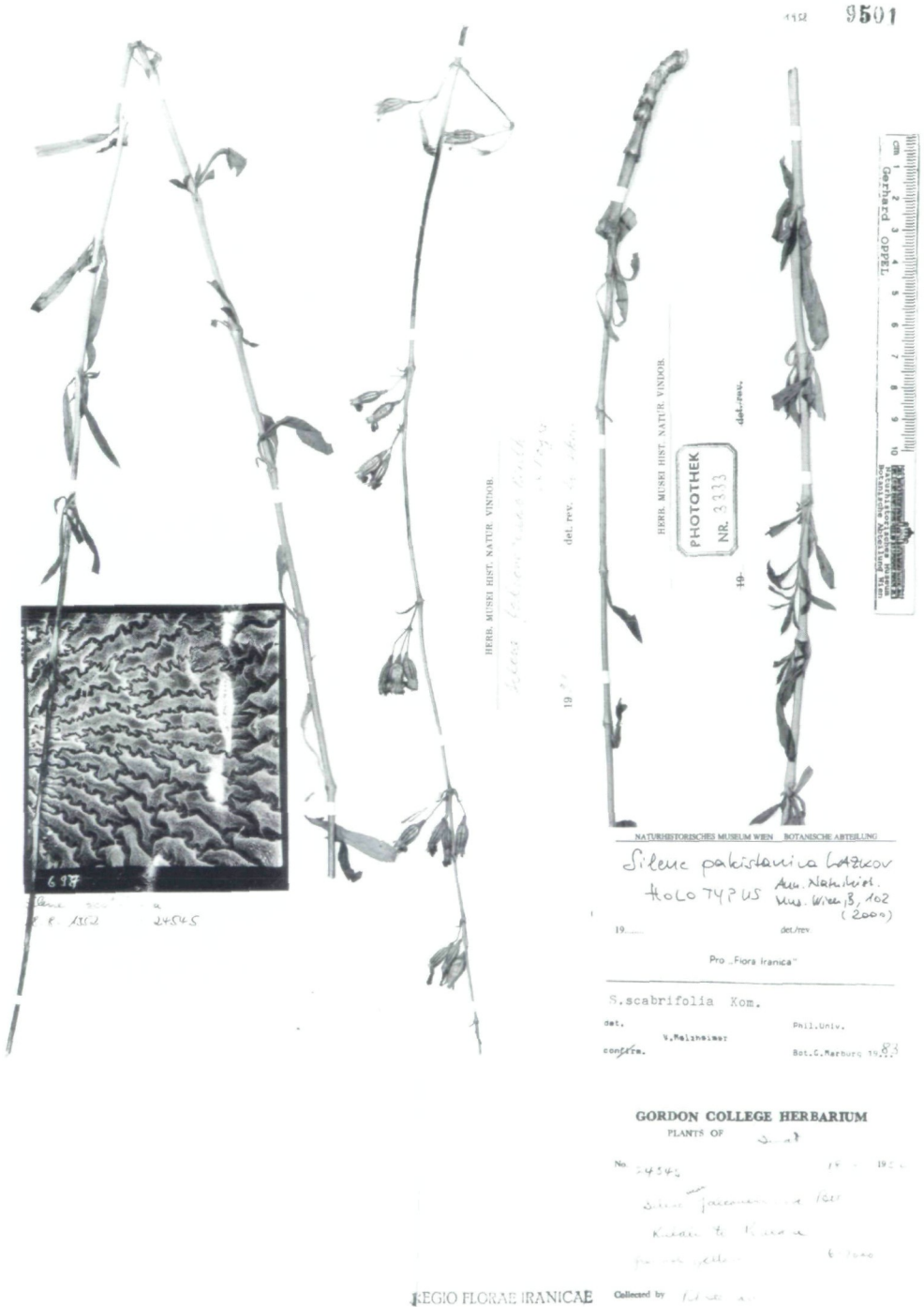


Fig. 2: Holotype of *Silene pakistanica*.

Seven specimens of *S. falconeriana* [LE, W] from India, including an isotype [W] and a photocopy of the holotype (received from K), three sheets *S. pakistanica* (different collections of Stewart from Swat (Pakistan) [W]), and numerous collections of *S. scabrifolia* from Tadjikistan and Afghanistan have been studied. The above-mentioned differences between *S. falconeriana*, *S. scabrifolia* (including *S. pseudo-verticillata*) and *S. pakistanica* (tab. 1) seem to be very constant and sufficient for the recognition of three distinct species. Obviously the distribution areas of these species (according to material seen) are also distinct (Fig. 1).

***Silene pakistanica* LAZKOV sp.n.** (*Silene* sect. *Holopetalae* SCHISCHK. ex CHOWDHURI)

- '*S. scabrifolia*' auct. non KOM., p.p., quoad plantas ex Pakistan.: MELZHEIMER, Flora Iranica, 163: 468. (1988).
- '*S. falconeriana*' auct. non ROYLE: GHAZANFAR & NASIR in NASIR & ALI, Flora of Pakistan. 175 :72, fig. 11, A, B (1986).

Holotype: [Pakistan] Plants of Swat, Kulali to Kalam, 6-7000', [flowers] greenish yellow, 18. 8. 1952, R.R. Stewart 24545, sub "*Silene* near *falconeriana*"; ex Gordon College Herbarium [W 1958-9501].

Herba perennis, atroviridis. Caules ad 70 cm alti, erecti, inferne asperi, superne glabri, viscidi, foliosi, ramulis abbreviatis in axillis foliorum praediti. Folia caulina 3 - 5 cm longa, 4 - 6 (8) mm lata, lanceolata, utrinque glabra, margine et secus nervum medium scabrido-pubescentia. Inflorescentia racemosa. Bracteae 2 - 2,5 mm longae, linearilanceolatae, albo-marginatae, tenuiter ciliatae. Flores in ramulis oppositis 5 - 30 mm longis, singuli vel terni. Pedicelli 6 - 10 mm longi, glabri. Calyx 8 - 10 mm longus, 2 - 2,5 mm latus, tubulosus, glaber, secus nervos violaceus, dentibus triangularibus, obtusis, margine ciliatis. Petala 12 - 13 mm longa; limbo 5-6 mm longo, integro; ungue 7 - 8 mm longo, glabro. Anthophorum 2 - 3 mm longum, glabrum vel basi pilosum. Capsula 8 mm longa, 4 mm lata, ovoidea. Semina ignota.

Differt ab *S. falconeriana* foliis latioribus, lanceolatis (nec linearibus), anthophoro glabro vel basi pilis longioribus (nec toto pilis brevioribus) tecto.

Perennial, dark green. Stems up to 70 cm tall, straight, scabrid-pubescent below, glabrous above, viscid, leafly throughout, with short branches at the nodes. Cauline leaves 3 - 5 cm long, 4 - 6 (8) mm broad, lanceolate, glabrous on both surfaces, margin and midvein scabrid. Inflorescence raceme-like. Bracts 2 - 2,5 mm long, linear-lanceolate, white at the margin, ciliate. Flowers 1 - 3 on branches opposite 5 - 30 mm long lateral branches. Pedicels 6 - 10 mm long, glabrous. Calyx 8 - 10 mm long, 2 - 2,5 mm broad, cylindrical, glabrous, teeth triangular, obtuse with ciliate margins; nerves violet, prominent. Petals 12 - 13 mm long; limb 5 - 6 mm long, not lobed; claw 7 - 8 mm long, glabrous. Anthophore 2 - 3 mm long, glabrous or pubescent at the base with long hairs. Capsule 8 mm long, 4 mm broad, ovoid. Seeds not seen.

Other material seen: [Pakistan] Plants of Swat, Madiai, in grass 5000', [flowers] yellow green, 15. 8. 1952, R.R. Stewart 24456, ex Gordon College Herbarium [W 1958-9504]; - [Pakistan] Plants of Swat, Kulali to Kalam, rocky bank, [flowers] yellow green, 25. 8. 1952, R.R. Stewart 24747, ex Gordon College Herbarium [W 1958-9502].

Tab. 1: Differential characters of *S. scabrifolia*, *S. falconeriana* and *S. pakistanica*.

Characters	<i>S. scabrifolia</i>	<i>S. falconeriana</i>	<i>S. pakistanica</i>
Shape and size of middle stem leaves	lanceolate or broadly-lanceolate, 5-10 (15) cm long 6-15 (30) mm broad	long-linear 5-7 cm long 2-3 (4) mm broad	lanceolate 3-5 cm long 4-6 (8) mm broad
Pubescence of leaves	scabrous on both surfaces, including margin and midvein	glabrous on both surfaces, margin and midvein scabrous	glabrous on both surfaces, margin and midvein scabrous
Anthophore	pubescent with short hairs	pubescent with short hairs	glabrous or pubescent at the base with long hairs
Petal claw	ciliate at margin	glabrous at margin	glabrous at margin

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