

## ***ASPERULA OPPOSITIFOLIA* SSP. *RECHINGERI* (RUBIACEAE-RUBIEAE), A NEW TAXON FROM N. KHORASAN PROVINCE, IRAN**

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### **Abstract**

*Asperula oppositifolia* ssp. *rechingeri* is described from Khorasan Province, Iran. *Asperula oppositifolia* comprises six subspecies mainly distributed in E. Afghanistan, Pakistan, and Middle Asia. Describing these taxa from Iran, shows the extent of diversity of this species in Iran. Morphological evidence supports taxonomic position of these taxa in *A. oppositifolia*, and the subspecies appears to be most closely related to subsp *pseudo-cynanchica* Ehrend.

**Key words:** *Asperula oppositifolia*, Iran, New taxon, Khorasan

### **Introduction**

The genus *Asperula* (Rubiaceae-Rubieae) includes nearly 90 Eurasian species, with concentration in Mediterranean area (MABBERLEY 1997). Based on

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Flora Iranica (SCHÖNBECK-TEMESY & EHRENDORFER 2005), this genus includes 15 species in Iranian plateau. Eight species of *Asperula* thrive in Iran, five of which are endemic (SCHÖNBECK-TEMESY & EHRENDORFER l.c.).

*Asperula oppositifolia* with six subspecies is distributed in Afghanistan, Tadjikistan, Pakistan, N.W. Himalaya, Tian Shan and Pamir-Alaj (SCHÖNBECK-TEMESY & EHRENDORFER l.c.).

In this study, a new subspecies of *Asperula oppositifolia* is described from Khorasan Province (N.E. Iran). The species belongs to the sect. *Oppositifoliae* Shishk. ex Schönb.-Tem. This section is mainly characterized by its subfruticose to chamaephytic, polycormic growth form with strong tap root (but never with rhizomic stolons), opposite leaves (only rarely with stipules), 4-lobed corollas, the glabrous stigmata and the  $\pm$  truncate ovaries and mericarps. This section belongs to the Oriental-Turanian and W. Himalayan floristic element (SCHÖNBECK-TEMESY & EHRENDORFER 2005).

*Asperula oppositifolia* Regel & Schmalh. **subsp. rechingeri** F. Ghahremani., Joharchi & Aydani subsp. nova (Figs 1 & 2)

**Type:** Iran: Khorasan Province, W. Bojnord, Ala-dagh Mt., Kanimokhtar Vall., 37° 23' N, 56° 46' E, 2100 m, 20.6.2004, Mohammadreza Joharchi and Marjaneh Aydani 35596 (holotype FUMH; isotype FUMH, FAR).

Planta perennis,  $\pm$  glandulosa-papilosa, vel fere glabre. Caulis 13-30 cm longus. Folia plerumque linearia, 5.0-20 mm longa, 0.5-1.5 mm lata. Inflorescentia cylindrica vel corymbiformis, laxa vel sublaxa. Flores pedicellis usque 11.0 mm longis vel sessiles. Corolla rosea vel rubra, 3.5-7.0 mm longa, tubo lobo breviora vel eo subaequans. Tubi 1.5-3.0 mm longi; lobi 2.5-4.0 mm, 0.8-1.5 mm lati. Mericarpium rugosum, 1.0-1.7 longum, 0.5-1.0 mm latum.

Differt a subsp. *pseudocyanchia* Ehrend. pedicellis longioribus; mericarpis rugosis glandulosis.

Plants perennial,  $\pm$  glandular-papillose to nearly glabrous, stems 13-30 cm long. Leaves usually linear, 5-20 mm long, 0.5-1.5 mm wide. Inflorescence cylindrical to corymbiform, lax to nearly lax. Flowers with pedicels to 11 mm long, or without pedicels. Corolla pink to red, 3.5-7 mm long, its tubes nearly shorter than or as long

as the lobes, tubes 1.5-3 mm long; lobes 2.5-4 mm long, 0.8-1.5 mm wide. Mericarps obconic, rugose, 1-1.7 mm long, 0.5-1 mm wide.

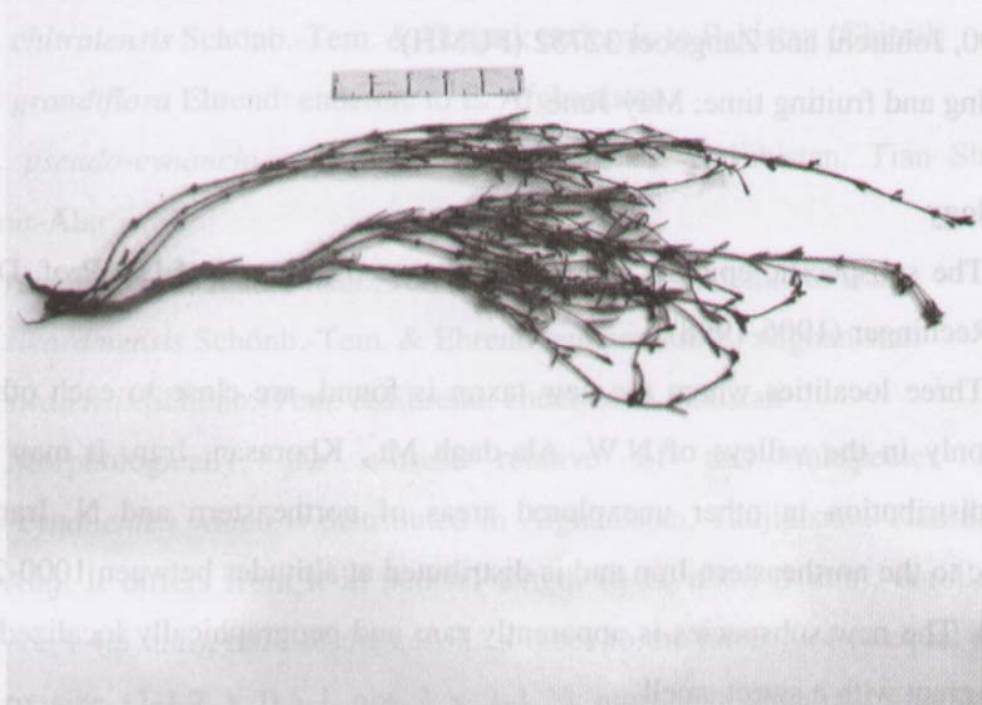


Fig. 1. *Asperula oppositifolia* ssp. *rechingeri* (from the holotype: M. Joharchi & M. Aydani 35596, FUMH).



Fig. 2. *Asperula oppositifolia* ssp. *rechingeri*.

**Paratypes:** Iran: Khorasan Province, W. Bojnord, Ala-dagh Mt., between Darkesh and Havar, 37° 24' N, 56° 46' E, 1700-1900 m, 6.6.2004, Joharchi and Aydani 35497 (FUMH, FAR); Khorasan Province: W. Bojnord, Jozak, Cheshmeh-Eshgh, 1000 m, 9.5.2000, Joharchi and Zangooei 32752 (FUMH).  
Flowering and fruiting time: May-June

### Etymology

The subspecific epithet, *rechingeri*, is named in honor of late Prof. Dr. Karl Heinz Rechinger (1906-1998).

Three localities where the new taxon is found, are close to each other and grows only in the valleys of N.W. Ala-dagh Mt., Khorasan, Iran. It may have a wider distribution in other unexplored areas of northeastern and N. Iran. It is endemic to the northeastern Iran and is distributed at altitudes between 1000-2100 m (Fig. 3). The new subspecies is apparently rare and geographically localized and is very fragrant with a sweet smell.



Fig. 3. Map showing locality of *Asperula oppositifolia* ssp. *rechingeri*.

List of *Asperula oppositifolia* ssp. based on SCHÖNBECK-TEMESY & EHRENDORFER (2005) are:

1. ssp. *cabolica*: Ehrend; endemic to E. Afghanistan
2. ssp. *chitralensis* Schön.-Tem. & Ehrend; endemic to Pakistan (Chitral)
3. ssp. *grandiflora* Ehrend; endemic to E. Afghanistan
4. ssp. *pseudo-cynanchica* Ehrend; E. Afghanistan, Tadjikistan, Tian Shan and Pamir-Alaj
5. ssp. *rechingeri* F. Ghahremani., Joharchi, & Aydani; endemic to Iran
6. ssp. *sikaramensis* Schön.-Tem. & Ehrend; endemic to E. Afghanistan
7. ssp. *swatensis* Schön.-Tem. & Ehrend; endemic to Pakistan

Morphologically, the closest relative of this subspecies is ssp. *pseudo-cynanchica* which is distributed in Afghanistan, Tadjikistan, Tian Shan and Pamir-Alaj. It differs from it in pedicel length (0-11 not 1-5 mm), corolla length (3.5-7 not 3-4.5 mm), ratio of the corolla's tubes to the lobes (3/4 to equal not 1/2), mericarp size (1-1.7 x 0.5-1 not 2 x 1-1.25 mm) and glandular mericarp (not glabrous).

#### Acknowledgements

Authors wish to thank the director of Ferdowsi University of Mashhad Herbarium (FUMH), Mashhad, Iran for providing the opportunity to study *Asperula* specimens.

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