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Source: Willdenowia, 44(1) : 35-38

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: https://doi.org/10.3372/wi.44.44105

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SAMAN A. AHMAD[1]

Petrorhagia sarbaghiae (*Caryophyllaceae*), a new species from Kurdistan, Iraq

Abstract

Ahmad S. A.: *Petrorhagia sarbaghiae* (*Caryophyllaceae*), a new species form Kurdistan, Iraq. Willdenowia 44: 35–38. 6 March 2014. – Version of record published online ahead of inclusion in April 2014 issue; ISSN 1868-6397; © 2014 BGBM Berlin-Dahlem.

DOI: http://dx.doi.org/10.3372/wi.44.44105

Petrorhagia sarbaghiae is described and illustrated, its distribution is mapped, and its distinguishing characters from the other species of *Petrorhagia* in SW Asia are discussed. A key to the perennial SW Asian species of the genus is provided.

Additional key words: Hawraman Mountains, Southwest Asia

During 2011–2013, the author conducted extensive floristic fieldwork in the Hawraman Mountains, Kurdistan, Iraq, as part of his Ph.D. research. This mountain series is part of the Zagros Range, and it is located along the Iraqi-Iranian border some 50 km E of Sulaimani City. Several novelties and many additions to the flora of Iraq were discovered during that research, of which one is described herein.

Petrorhagia sarbaghiae S. A. Ahmad, **sp. nov.**
Holotype: Iraq, Kurdistan, Sulaimani Province, Dalane Mountain, 35°20'01"N, 46°07'36"E, 2506 m, 18 Jul 2012, *S. A. Ahmad 12-1546* (SUFA; isotype: MO) – Fig. 1, 2.

Diagnosis — *Petrorhagia sarbaghiae* is easily distinguished from all perennial species of *Petrorhagia* in the Flora of Turkey and Flora iranica areas by possessing the following combination of characters: plants perennial, eglandular, glabrous except for calyx; caudex compactly branched; stems erect, rather slender, rigid; flowers in a monochasium, subsessile; calyx tubular, 5–7 mm long, moderately short-pilose; petals white, linear; fruits obovoid.

Description — *Herbs* perennial, eglandular. *Caudex* compactly branched, woody, covered with stem and leaf remains of previous seasons. *Stems* erect, simple or rarely few branched distally, rather slender, rigid, 15–35 cm long, glabrous throughout. *Basal leaves* few, not rosulate, linear, 1-veined, often withered at anthesis. *Cauline leaves* linear, 3–7 × c. 0.5 mm, 1-veined, glabrous, base membranous. *Flowers* 2–6, forming a monochasium, appressed, subsessile, subtended by 2 or 3 pairs of subulate bracts. *Calyx* tubular, 5–7 mm long, membranous to base between lobes, obscurely veined, moderately short-pilose; *teeth* purplish, subacute, c. 0.5 mm long. *Petals* white, linear, undifferentiated into blade and claw, 7–9 × c. 1 mm, apex obtuse. *Stamens* exserted, 7–9 mm long. *Styles* 2. *Fruit* a capsule, glossy, obovoid, becoming campanulate when dehisced, c. 5 × 2.5 mm, glabrous, apex 4-toothed. *Seeds* (immature) peltate.

Phenology — Flowering from April to June; fruiting from June to July.

Distribution — Known thus far only from two localities in the Hawraman Region of Kurdistan, Iraq, mainly

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Fig. 1. *Petrorhagia sarbaghiae* – photograph of the holotype specimen at SUFA.

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Fig. 2. *Petrorhagia sarbaghiae* – A: portion of a monochasium. – B–E: dissected flower; B: bracts; C: calyx; D: petals and stamens; E: pistil. – F: immature seed, showing peltate shape, arrow indicating attachment of funicle. – Scale bars: A = 5 mm; B–E = 5 mm; F = 0.5 mm.

above the village of Ahmad Awa and on Dalane Mountain (Fig. 3).

Ecology — Limestone rocky areas and crevices at altitudes of 1100–2500 m.

Conservation status — Petrorhagia sarbaghiae is known from only two small populations. Its IUCN Red List category (IUCN 2012) remains uncertain and is currently assessed as Data Deficient (DD).

Etymology — Petrorhagia sarbaghiae is named in honour of Dr Sarbagh Salih, President of the Kurdistan Botanical Organization, in appreciation of her continuous support throughout my Ph.D. research.

Additional specimen examined (paratype) — Iraq: Kurdistan: Sulaimani Province: above Ahmad Awa, 35°19'07"N, 46°05'48"E, 1050 m, 7 Apr 2011, *S. A. Ahmad 11-1110* (SUFA).

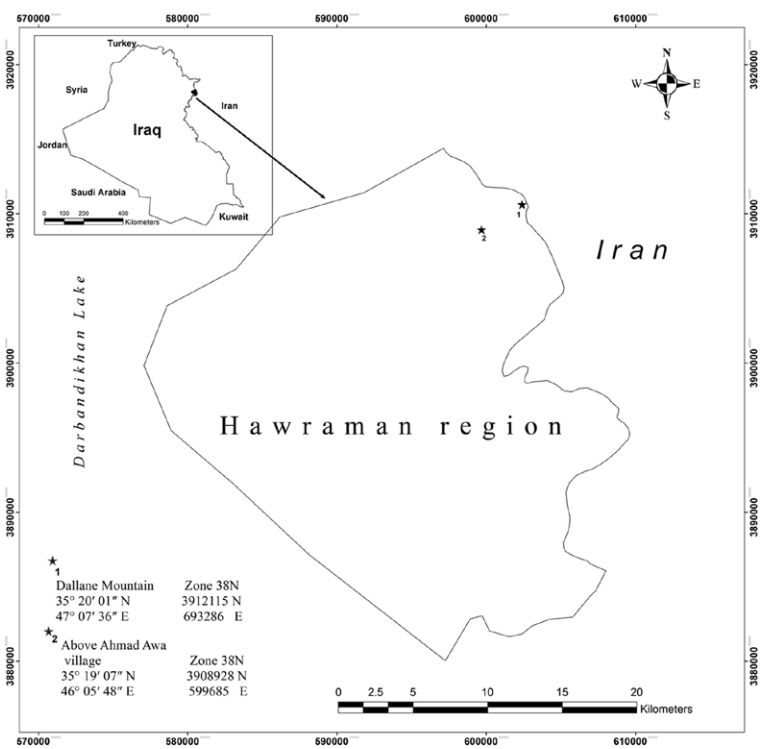


Fig. 3. Map of Hawraman region showing the distribution of *Petrorhagia sarbaghiae* (★). – Inset: map of Iraq showing the Hawraman region.

Remarks — The novelty described above was initially misplaced in the genus *Gypsophila* L. as broadly delimited by Barkoudah (1962) to include *Petrorhagia* (Ser.) Link. However, the availability of additional literature (e.g. Ball & Heywood 1964; Rabeler 1985; Bittrich 1993; Rabeler & Hartman 2005), as well as the re-examination of the immature seeds, amply demonstrated that the novelty should instead be assigned to *Petrorhagia*. This genus of some 33 species, which are distributed from the Canary Islands eastward into Kashmir (Mabberley 2008), is readily distinguished from the larger *Gypsophila* (c. 150 spp.) by having bracteate (vs ebracteate) flowers and peltate (vs reniform) seeds (Ball & Heywood 1964; Rabeler 1985; Bittrich 1993). *Petrorhagia* is represented in the Flora of Turkey and Flora iranica areas by 13 species (Coode & Cullen 1967; Rechinger 1988), of which eight are annuals and five, including *P. sarbaghiae*, are suffrutescent perennials with woody caudices or short rhizomes. The perennials are easily distinguished by the following key.

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1. Flowers in lax 10–30-flowered panicles (SW Turkey) . . . . ***P. lycica*** (P. H. Davis) P. W. Ball & Heywood
– Flowers in dense 2–6-flowered cymes 2
2. Flowers ebracteate; calyx 8–10 mm long; corolla purple veined, 13–15 mm long (NE Iraq) . . . . . ***P. wheeler-hainesii*** Rech. f.
– Flowers bracteate; calyx 3.5–7 mm long; corolla white or rarely pink, 4.5–10 mm long 3
3. Bracts nearly as long as 3.5–5 mm-long calyx and enclosing it; pedicels 8–14 mm long (C and S Europe, Turkey, Armenia, Iraq and Iran) . . . . . ***P. saxifraga*** (L.) Link
– Bracts considerably shorter than 5–8 mm-long calyx and not enclosing it; pedicels obsolete or to 5 mm long 4
4. Stems simple or apically short-branched, glabrous throughout; capsules obovoid, becoming campanulate when dehisced; flowers subsessile (NE Iraq) . . . . . ***P. sarbaghiae*** S. A. Ahmad
– Stems long-branched below middle, glandular puberulent proximally; capsules oblong-cylindrical; flowers distinctly pedicellate (W Iran) . . . . . ***P. macra*** (Boiss. & Haussskn.) P. W. Ball & Heywood

Acknowledgements

I am profoundly grateful to my mentor Dr Ihsan A. Al-Shehbaz (MO) for his advice and help throughout my Ph.D. studies and for providing much-needed literature on *Petrorhagia*. I am equally grateful to Dr Sarbagh Salih (President, Kurdistan Botanical Organization) for her continuous support during my research. I am also greatly thankful to two anonymous reviewers for advising on the generic placement of the above novelty into *Petrorhagia* instead of *Gypsophila*. The help and advice of Dr Shahina Ghazanfar (K) during my two-month visit to the Royal Botanic Gardens, Kew in 2013 is much appreciated. Finally, I thank Mr Nicholas Turland for his editorial advice.

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