

**Zeitschrift:** Candollea : journal international de botanique systématique =  
international journal of systematic botany

**Herausgeber:** Conservatoire et Jardin botaniques de la Ville de Genève

**Band:** 41 (1986)

**Heft:** 1

**Artikel:** A new species of Petrorhagia (Caryophyllaceae)

**Autor:** Liston, A.

**DOI:** <https://doi.org/10.5169/seals-879991>

#### Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

#### Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

#### Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

**Download PDF:** 09.08.2025

**ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>**

# A new species of *Petrorhagia* (Caryophyllaceae)

A. LISTON

## RÉSUMÉ

LISTON, A. (1986). Une espèce nouvelle de *Petrorhagia* (Caryophyllaceae). *Candollea* 41: 179-181.  
En anglais, résumé français.

*Petrorhagia zoharyana* A. Liston (*Caryophyllaceae*) d'origine israélienne est décrite. Ce taxon a été précédemment reconnu comme distinct, mais il a été confondu depuis avec *P. cretica* (L.) Ball & Heywood et *P. arabica* (Boiss.) Ball & Heywood avec lesquels il est apparenté.

## ABSTRACT

LISTON, A. (1986). A new species of *Petrorhagia* (Caryophyllaceae). *Candollea* 41: 179-181. In English, French abstract.

*Petrorhagia zoharyana* A. Liston (*Caryophyllaceae*) is described from Israel. The taxon has been previously recognized as distinct, but was misidentified with the related *P. cretica* (L.) Ball & Heywood and *P. arabica* (Boiss.) Ball & Heywood.

**Petrorhagia zoharyana** A. Liston, sp. nov. (sect. *Pachypleura* (Jaub. & Spach) T. Post & Kuntze; cf. RABELER, 1984). Ic. Zohary, Fl. Pal. vol. 1, t. 141 as *P. cretica*.

- = *Tunica pachygona* Fisch. & Mey. var. *scabrida* Post, Fl. Syr. Pal. Sin. 127 (1883-1896)  
excl. syn.
- = *Petrorhagia arabica* sensu P. W. Ball & Heywood in Bull. Brit. Mus. Bot. 3: 143 (1964)  
non Boiss. (1849).
- = *Petrorhagia cretica* sensu Zohary in Fl. Pal. 1: 105 (1966) non L. (1762).

Species *P. arabicae* (Boiss.) Ball & Heywood affinis sed caulis altis, foliis latis, calyce scabrido, petalis longis, seminibus magnis differt.

Erect annual 10-25 cm high. Stems finely glandular, dichotomously branched in upper part. Leaves up to 4 × 0.1-0.4 cm; the radical ones oblong-linear, wilted at flowering time; cauline leaves linear-subulate, 3-nerved, margins scabridulous. Inflorescence repeatedly dichotomous, forming a loose, open cyme. Flowers erect, solitary at the end of 1-2 cm long, rigid pedicels. Calyx obconical, 0.7-0.8 cm long; with 15 nerves arranged in five groups of three and membranous interspaces between the nerve groups; with scabrous hairs primarily on nerves; teeth short, ovate triangular, acute-mucronate, scarious margined. Petals 1.0-1.2 cm, linear-spatulate, entire, eligulate, constricted at the point of extension beyond the calyx, claw slightly longer than limb; 3-nerved below, the nerves cream-colored at anthesis later turning red. Stamens 7 mm long, elongating sequentially and thus appearing unequal; anthers lilac, soon deciduous. Style filiform, 2 mm long. Capsule exceeding calyx; seeds strongly flattened, 2.7-3.0 mm long, testa dark brown, minutely papillose.

**Type:** Israel. Lower Jordan Valley, Wadi el Auja, above the spring, W. exposure, rocky slope, with *Retama raetam* and *Phlomis brachyodon*, altitude 50 m, 1.5.1985, A. Liston & G. Sagi 317-1 (holo: HUJ).

### Selected specimens

**Israel.** In collibus petrosis inter Tiberiadum et Safed, 9.6.1881, *Letournex* (G-BOIS, K); Khittim Plain, 26.4.1886, *G. E. Post* (Z); N. of Nablus, 1.6.1935, *Eig, Feinbrun, Leinkram* exs. 320 (E, Z); Mt. Gilboa, on the pass from Heftsi-Bah to Jaqqu'a, 17.5.1942, *P. H. Davis* 4740 (HUJ); N. Negev, Mishor Rotem, 10 km E.S.E. of Dimona, sandy ground, 24.4.1965, *M. Kislev* s.n. (HUJ). **Jordan.** Ammon, ascent to Es-Salt, km 13, 6.5.1927, *Eig, Zohary & Feinbrun* s.n. (HUJ). **Syria.** Chaaba, between Damascus & Souweida, amphitheatre, 21.6.1932, *A. Eig & M. Zohary* s.n. (HUJ).

The distinguishing characters and geographical distributions of *P. zoharyana* and the closely related *P. cretica* and *P. arabica* are summarized in Table 1. It can be seen that *P. zoharyana* is situated geographically between *P. cretica* and *P. arabica*. Morphologically, however, it is not intermediate, having longer petals and larger seeds than the other two species. The indumentum of the calyx is more similar to that of *P. arabica*. The scabrous hairs of *P. zoharyana* are 4-celled, whereas the glandular hairs of *P. arabica* are 5-celled.

Petal form is another character useful in distinguishing the three species (Fig. 1). In *P. zoharyana* the limb is almost as long as the claw, while in *P. cretica* the limb is much shorter than the claw. The limb is as wide as or wider than the claw in both species. In *P. arabica* the limb is shorter and narrower than the claw. The illustration of the petal of *P. zoharyana* (as *P. arabica*) in BALL & HEYWOOD (Fig. 9, p. 144, 1964) is inaccurate in not differentiating between the limb and the claw.

Specimens of *P. zoharyana* are generally robust plants, with wider leaves and larger calyx than *P. arabica*. These differences, while helpful in distinguishing the species, are likely to a large

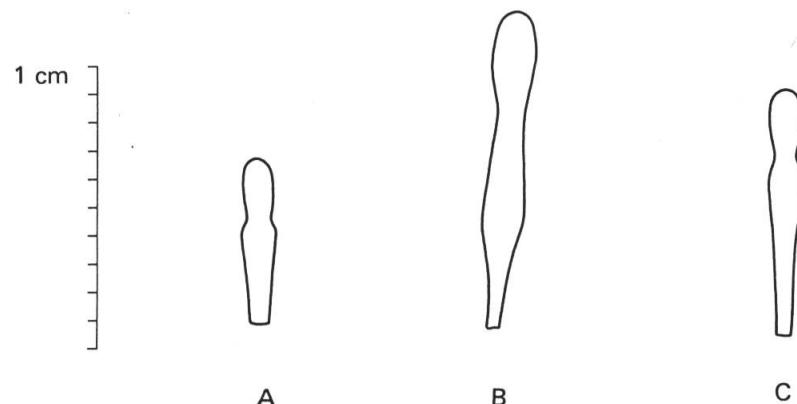


Fig. 1. — *Petrorhagia* species: petal outlines  $\times 3$ .  
A, *P. arabica*; B, *P. zoharyana*; C, *P. cretica*.

	<i>P. cretica</i>	<i>P. zoharyana</i>	<i>P. arabica</i>
Height	10-25 cm	10-25 cm	5-15 cm
Cauline leaves	1-2.5 $\times$ 0.15-0.2 cm	1-2.0 $\times$ 0.1-0.15 cm	1-2.0 $\times$ 0.1 cm
Stem indumentum	glandular hairy but glabrous at base	entirely glandular hairy	entirely glandular hairy
Calyx indumentum	glabrous	scabrous	glandular
Calyx length	5-9 mm	7-8 mm	6-7 mm
Calyx shape	narrowly campanulate	obconical	cylindrical-obconical
Petal length	7-9 mm	10-12 mm	6-7 mm
Petal shape	narrowly oblanceolate	oblanceolate	oblanceolate-ventricose
Anther colour	yellow	lilac	unknown
Seed length	2.5 mm	2.7-3.0 mm	2.0-2.1 mm
Geographical distribution	Greece, Turkey, N. Iran, Iraq, Syria, Cyprus	S. Syria (Djebel Druz), Israel, Jordan	S. Israel, S. and E. Jordan, Sinai

Table 1. — Differential characters of *Petrorhagia zoharyana* and related species.

extent environmentally determined and thus unreliable. On the other hand, petal length, seed size and calyx indumentum are constant and correlated in all specimens examined.

Ecologically *P. zoharyana* is a rare plant of semi-steppe batha on the Mediterranean-Irano-Turanian border. Mean annual rainfall is 200-400 mm. Its primary habitat is mountain slopes.

A review of the taxonomic history of these three species explains why *P. zoharyana* was until now undescribed: the nomenclature of the species long known as *Tunica pachygona* Fisch. & Mey. (cf. BOISSIER, 1867) was clarified by DAVIS (1957) as *T. cretica* (L.) Fisch. & Mey. A second species, *T. arabica*, was described by BOISSIER (1849) from Arabia Petraea (type G-BOIS!). In the supplement to "Flora Orientalis", BOISSIER (1888) refers an additional collection (inter Tiberiadum et Safed, 9 Juni 1881, Letournex 328 (G-BOIS!, K!) to *T. arabica*.

BALL & HEYWOOD (1964) transferred both species to *Petrorhagia* in their revision of the genus. The description of *P. arabica* offered, however, does not fit the type (not seen by them), but is based on the Letournex specimen and other material from northern Israel (which is, in fact, *P. zoharyana*). Boissier's inclusion of the Letournex collection in *Tunica arabica* is apparently what misled Ball & Heywood and previous researchers.

POST (1883-1896) recognized a taxon with a scabrous calyx (*Tunica pachygona* Fisch. & Mey. var. *scabrida* Post), which he synonymized with *T. arabica*. BORNMÜLLER (1898) also considered these taxa synonymous, but notes that Post probably did not see the Boissier type. As such ZOHARY (1966) was the first who recognized as distinct from *P. arabica* the taxon which now commemorates his name. He, however, erroneously assumed it to be *P. cretica*.

#### ACKNOWLEDGEMENTS

I wish to thank Dr. I. Gruenberg-Fertig for correcting the Latin diagnosis, Mrs. Esther Huber for the drawing, Prof. C. C. Heyn for helpful criticism of the manuscript, and the directors of herbaria from which material has been studied.

#### REFERENCES

- BALL, P. W. & V. H. HEYWOOD (1964). A revision of the genus *Petrorhagia*. *Bull. Brit. Mus. (Nat. Hist.), Bot.* 3: 119-172.
- BOISSIER, E. (1849). *Diagnoses Plantarum Orientalium Novarum ser. I*, 8: 62. Paris.
- BOISSIER, E. (1867). *Flora Orientalis*, 1: 522-523. Geneva.
- BOISSIER, E. (1888). *Flora Orientalis Supplementum*: 83. Geneva.
- BORNMÜLLER, J. (1898). Ein Beitrag zur Kenntniss der Flora Syrien und Palästina. *Verh. Zool. Bot. Ges. Wien* 48: 562.
- DAVIS, P. H. (1957). New Turkish species of *Tunica*, *Velezia* and *Potentilla*. *Notes Roy. Bot. Gard. Edinburgh* 22: 164-165.
- POST, G. E. (1883-1896). *Flora of Syria, Palestine and Sinai*: 127. Beirut.
- RABELER, R. K. (1984). Notes on nomenclature within *Petrorhagia* (Caryophyllaceae). *Taxon* 33: 714-716.
- ZOHARY, M. (1966). *Flora Palaestina*, 1: 105. Jerusalem.

