

ELBURZIA: A NEW GENUS OF CRUCIFERAE FROM IRAN

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In the recently published account of the Cruciferae in Flora Iranica (Hedge & Rechinger, p. 175, 1968), the genus *Petrocallis* was included on the basis of an inadequately known species endemic to the Elburz mountains of north Iran. It was suggested then that this species, *P. fenestrata* Boiss., was anomalous in *Petrocallis* and, when more adequate material was available, it might prove to be better placed in a separate genus. Recently, through the kindness of Dr. Esfandiari, Tehran, additional material has been available for study and it shows conclusively that this interesting species should be removed from *Petrocallis* and placed within a new genus.

Elburzia Hedge, gen. nov.

Cruciferae-Drabaeae. Perennis, suffruticosa, foliis petiolatis trifidis, glabra. Sepala oblique patentia, non saccata, interiora prominenter cucullata, scarioso-marginata. Petala albida (?), distincte unguiculata; lamina ovato-rotundata. Glandulae medianae desunt. Filamenta antherarum edentata. Ovula quattuor. Siliculae latiseptatae, dehiscentes, ovato-globosae, 2-3-spermae, valvis convexis; septum ovatum, saepe apice fenestratum. Stigma capitatum. Funiculi liberi. Semina nec alata nec mucilaginis. Radicula accumbens.

Affinis *Petrocalli* R. Br. sed habitu suffruticosa, foliis glabris non rosulatis, subcrassis, pedicellis tenuibus patulo-ascendentibus, petalis distincte unguiculatis recedit. Ab *Pseudovesicaria* habitu perenni, siliculis minoribus ovato-globosis, calycibus non saccatis bene differt.

Species unica.

E. fenestrata (Boiss.) Hedge, comb. nov. (Figs. 1, 2).

Syn.: *Petrocallis fenestrata* Boiss., Diagn. Pl. Or. Nov. Ser. 1, 8:27 (1849).

Dwarf glabrous, glaucous, suffruticose perennial with ascending-erect stems up to 10 cm. Lower leaves including petiole up to 15 mm, slightly fleshy, often purplish beneath, cuneate, with three linear or oblong, rounded or acute lobes; upper leaves less lobed, \pm sessile; uppermost entire linear-oblong. Inflorescence racemose, ebracteate, scarcely elongating in fruit, sometimes almost corymbose. Sepals 3 mm long, oblong, obtuse, with a broad membranous margin; inner prominently cucullate, not saccate. Petals white (?), entire, with a broad almost orbicular blade c. 3.2×3.2 mm abruptly narrowed into a c. 1.5 mm claw. Median gland absent. Filaments terete, not toothed nor winged. Anthers small, oblong, obtuse. Ovary \pm sessile, 4-ovulate, ovate-globose; style c. 1 mm, stigma capitate. Fruiting pedicels 5-7 mm long, slender, spreading-ascending. Silicules ovate-globose, not compressed, 2-3-seeded, c. 4×3 mm with readily dehiscent, slightly inflated, thin valves; style c. 0.75 mm; funicle short, free from septum;

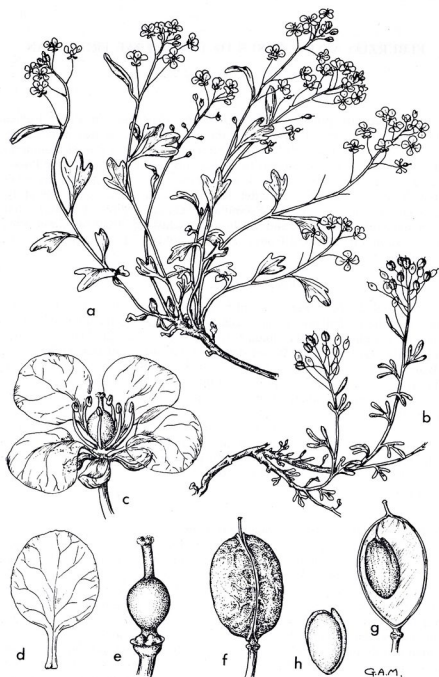


FIG. 1. *Elburzia fenestrata* (Boiss.) Hedge: a, flowering shoot $\times 1$ (Pabot 20088E); b, fruiting shoot $\times 1$ (Bornmüller 6268); c, flower $\times 7$; d, petal $\times 7$; e, ovary $\times 10$; f, silicle $\times 8$; g, septum with seed $\times 8$; h, seed $\times 8$.

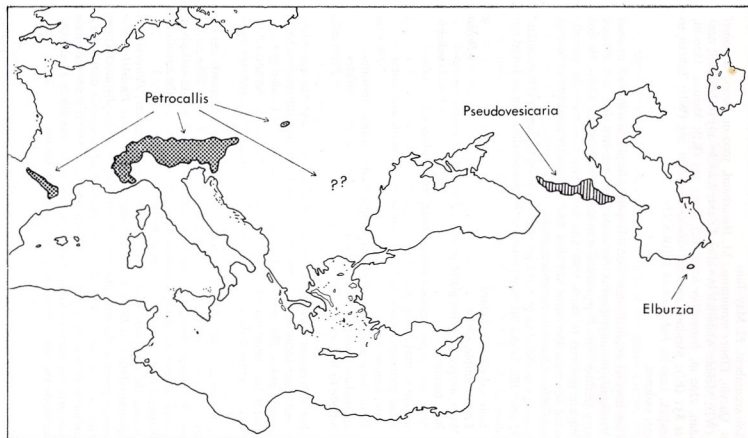


FIG. 2. Distribution of *Elburzia fenestrata* (Boiss.) Hedge, *Petrocallis pyrenaica* (L.) R. Br. and *Pseudovesicaria digitata* (C.A.M.) Rupr. The question marks refer to the doubtful Rumanian records of *Petrocallis*.

septum often fenestrated near apex. *Seeds* not winged, not mucilaginous. *Radicle* accumbent. *Fl.* May-June.

IRAN. Qazvin, Elburz mountains: M. Hesarband, 3000 m, *Gauba & Sabeti* 220 (W!); Meidan Abdullah in valley Loura, *Kotschy* 493 (G!-holo.); near Meidan, 2200 m, *Bornmüller* 6268 (E!), *Trott* 573 (K!); Meidan, 1820 m, *Davis* 851 (E!); Meidan, 2100 m, *Gauba & Sabeti* 205 (W!); Tehran to Shemshak, 2200 m, *Pabot* 20088 E (IRAN!).

Range: endemic.

When Boissier originally described this species, he placed it in the European and previously monotypic genus *Petrocallis* but suggested that, as it differed in many features from *P. pyrenaica*, it might represent a new genus. He had inadequate material to work with and it is only now with the recently collected flowering specimens of Pabot, that sufficiently complete gatherings are available to assess its status accurately.

By using a modified form of the generic keys given by Schulz (Pflanzenfam. ed. 2, 17B: 281, 1936), the new genus and its closest allies can be keyed out as follows:

- | | | |
|----|---|------------------------|
| 1. | Leaves digitately divided | 2 |
| + | Leaves simple, entire | <i>Draba</i> |
| 2. | Style winged; median gland present; fruit valves weakly reticulate; biennial | <i>Pseudovesicaria</i> |
| + | Style not winged; median gland absent; fruit valves with a prominent central nerve; perennial | 3 |
| 3. | Plant glabrous; petals with an ovate-orbicular blade and linear claw; funicles free | <i>Elburzia</i> |
| + | Plant with an indumentum of simple hairs; petals obovate-spathulate, scarcely differentiated into blade and claw; funicles adnate to septum | <i>Petrocallis</i> |

Other differences between *Elburzia* and *Petrocallis* are: the caespitose often pulvinate habit of the latter in contrast to the lax suffruticose habit of the new genus; the prominently cucullate sepals of the Iranian genus in contrast to the almost flat sepals of the European one; the slender spreading-ascending fruiting pedicels of *Elburzia* and the sturdy erect-adpressed pedicels of *Petrocallis*.

I am grateful to Mr. D. M. Henderson for the following remarks on the pollen of the two genera. The pollen grains of *Petrocallis* and *Elburzia* are essentially similar: both are tricolpate with a simplicibaculate reticulum. However, the two are readily distinguished by the coarseness of the reticulum: 1μ diameter in *Elburzia* and $1.5-2\mu$ in *Petrocallis*.

Despite the numerous differences between the two genera, *Petrocallis* is the closest relation of *Elburzia* and although the Caucasian *Pseudovesicaria* is another genus in the same general alliance and geographically much closer to *Elburzia*, it is morphologically more distant. The geographic distributions of the three monotypic genera are shown on fig. 2. All three are mountain species growing between about 2000 and 3000 m; *Petrocallis* is a calcicole, *Elburzia*, on the basis of one field-note, grows on granite.