

## **DIONYSIA SPLENDENS (PRIMULACEAE), A NEW SPECIES FROM THE FARS PROVINCE OF IRAN**

**S. Alipour<sup>1</sup>, I. Mehregan<sup>2</sup>  & M. Lidén<sup>3,4</sup> **

*Dionysia splendens* Alipour, Mehregan & Lidén, sp. nov., from Fars, Iran, is a unique species that cannot be easily accommodated in any hitherto recognised section of the genus and is immediately recognised by its large flowers and pectinate leaves with very broad pale and thick midvein. It agrees with *Dionysia cespitosa* Duby (Boiss.) in the small flat leaves, stalked inflorescence with large bracts, and few large ellipsoid seeds, but differs in the tubular calyx and large purplish-blue corolla. It is also somewhat reminiscent of *Dionysia viva* Lidén & Zetterl. in growth habit and inflorescence structure, but that species has large irregularly dentate leaves, yellow corolla and numerous small angular seeds. *Dionysia splendens* is so far known from a single locality with c.200 mature individuals. An updated key to *Dionysia* species in the Zagros mountains is provided.

**Keywords.** *Dionysia*, Fars province, Iran, new species.

Received 27 January 2021 Accepted 15 September 2021 Published 3 December 2021

### **Introduction**

The genus *Dionysia* Fenzl is endemic to the Irano-Turanian floristic region, from Southeast Anatolia and the Zagros mountains of Iran east to Afghanistan and Tadjikistan, with a southern outlier in Northeast Oman. All species are cliff-dwellers, often confined to vertical or even overhanging rocks. *Dionysia* is a well-characterised monophyletic taxon, but recognising it at generic rank leaves *Primula* L., as traditionally circumscribed, polyphyletic (see Lidén *et al.*, 2021, for further discussion).

*Dionysia splendens* was discovered by the first author in May 2020, southwest of the village of Kaftar in the Fars province in Southwest Iran, in a place that is difficult to access, which explains why this remarkable plant has escaped notice. It is a unique species that cannot be immediately accommodated in any hitherto recognised section of the genus, and is easily recognised from all other *Dionysia* by its pectinate rosette leaves with very broad pale and thick midvein, and its large flowers. It agrees with *Dionysia cespitosa* (Duby) Boiss. in its small flat leaves, stalked inflorescence with large bracts, and few large ellipsoid seeds, but differs (in addition to the unique leaves) in its tubular calyx and very large purplish-blue corolla. It is also somewhat reminiscent of *Dionysia viva* Lidén & Zetterl. in growth habit and

<sup>1</sup> Department of Horticulture, Faculty of Agriculture, Ferdowsi University of Mashhad, Mashhad, Iran.  
E-mail: [s.alipour@mail.um.ac.ir](mailto:s.alipour@mail.um.ac.ir).

<sup>2</sup> Department of Biology, Science and Research Branch, Islamic Azad University, Tehran, Iran.

<sup>3</sup> Göteborg Botanic Garden, Carl Skottsbergs gata 22A, SE-41319 Göteborg, Sweden.

<sup>4</sup> Systematic Biology, Department of Organismal Biology, EBC, Uppsala University, Norbyvägen 18D, SE-75236 Uppsala, Sweden.

inflorescence structure, but that species has large irregularly dentate leaves, much smaller yellow corolla, and numerous small angular seeds.

The only other *Dionysia* species with stalked several-flowered inflorescences with purplish flowers are *D. involuocrata* Zaprjag. and *D. hedgei* Wendelbo, from Tajikistan and Afghanistan, respectively, both belonging to sect. *Dionysiastrum* subsect. *Involuocratae* Wendelbo. They are very different in pubescence, as well as leaf and seed morphology. According to DNA data (Trift *et al.*, 2004), the eastern taxa form a separate clade from the Zagros taxa, but neither *Dionysia splendens* nor *D. viva* was included in that study.

### Species description

***Dionysia splendens*** Alipour, Mehregan & Lidén, sp. nov.

Differs from all other Iranian species of *Dionysia* in its purplish-blue flowers in stalked inflorescences. – Type: Iran, Fars, Eqlid county, Khonjesht district: Kuh-e Musa-Khani SW of Kaftar (30°29'51"N, 52°42'21"E), 3300–3400 m, westward rocky clefts, 21 v 2020, S.

*Alipour s.n.* (holotype IAUH-000015310!; isotypes TARI!, UPS!). **Figure.**

Caespitose scapose suffrutescent chasmophyte. *Perennating stems* glandular-pubescent, reddish brown, terminating in dense rosettes with 10–20 leaves. *Marcrescent leaves* pale grey, thin and fragile, probably not lasting for more than one extra season. *Farina* sparse (or absent) confined to inside of calyx and apical half of corolla tube. *Leaves* 15–22 × 4–6 mm, oblong without defined petiole, in apical half with 4 or 5 regular triangular teeth on each side; midvein very broad, pale, conspicuously raised below; margin flat. *Whole leaf* with rather dense erect mostly glandular hairs 0–1.5 mm. *Inflorescence* pedunculate with one or two tiers of flowers, 1–4 flowers in each. *Peduncle* 3–6 cm, ± pubescent with spreading glandular hairs. *Bracts* usually 3, 10–20 × 4–9 mm, ovate, acute, with sharply dentate margin. *Pedicels* 8–18 mm. *Calyx* 8–11 mm, divided to c.4/5 into linear acute erect lobes; pubescence like that of bracts and peduncle. *Corolla* tube 16–18 mm long, pale yellowish, conspicuously ridged, ± densely pubescent with glandular hairs up to 0.5 mm long, often farinose. *Limb* pinkish purple to pale purplish blue, often paler towards the centre, but without a marked eye, 20–24 mm in diameter, cut into obovate, narrowly and shallowly emarginate lobes, sometimes with a few apical teeth. *Style* in longistylous flowers usually slightly exerted; style of brevistylous flowers reaching halfway through the tube. *Ovary* with c.15 ovules; capsule rounded, 3–4 mm. *Seeds* almost black, ellipsoid, c.1.2 × 0.8–0.9 mm.

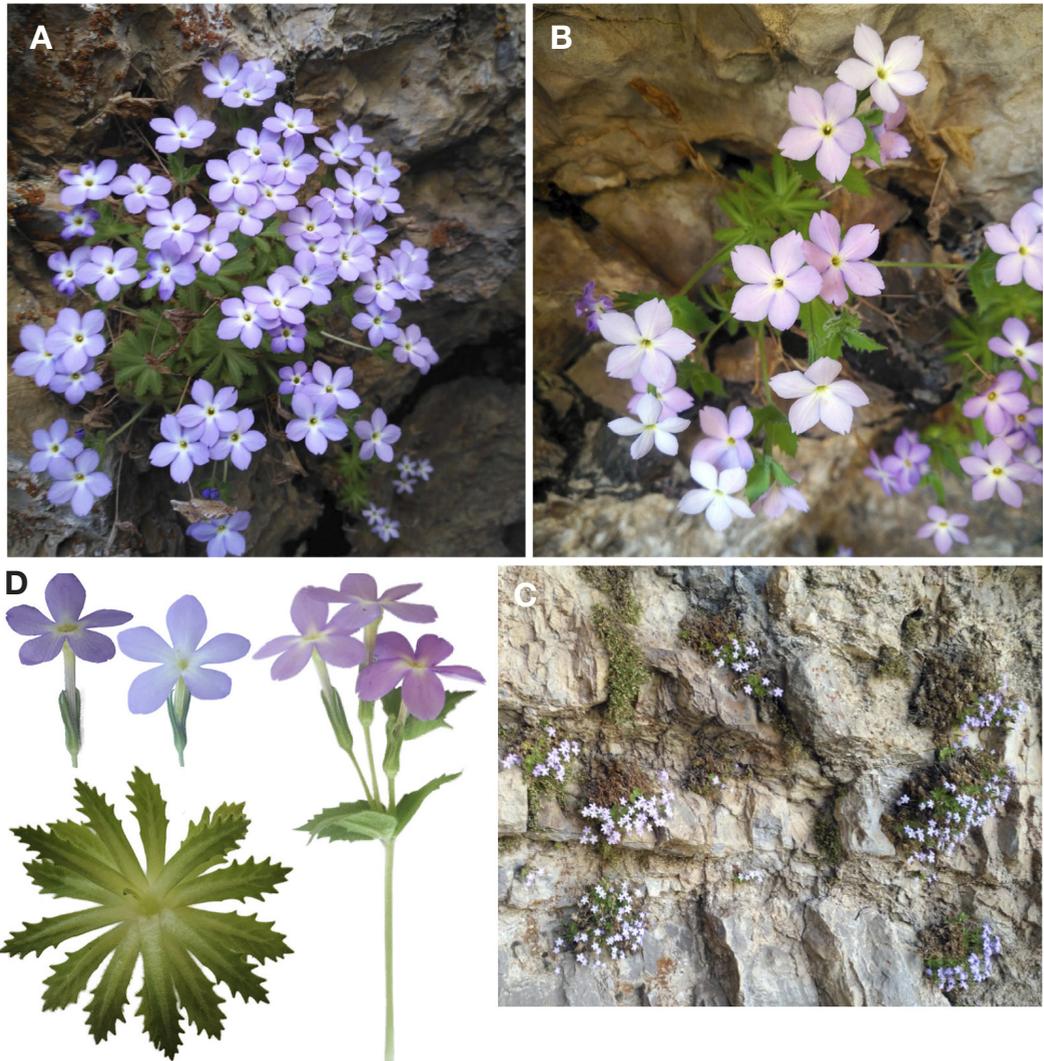
*Altitudinal range.* 3300–3400 m.

*Ecology.* On west-facing limestone cliffs.

*Etymology.* From Latin *splendens* ('illustrious').

*Phenology.* Flowering in May.

*Distribution.* Known only from the type locality.



**Figure.** *Dionysia splendens* Alipour, Mehregan & Lidén, sp. nov. A–C, plant in habitat, type locality; D, close-up of flowers, inflorescence and leaf rosette (upper left, brevistylous corolla; upper middle, longistylous corolla). Photographs: Sajad Alipour.

*Provisional IUCN category.* The restricted occurrence (a single locality with c.200 mature individuals is currently known) suggests the category Endangered (criterion D) according to the IUCN (2012). However, the species may well occur in other parts of the Kuh-e Mousa-Khani, and because we know of no immediate threat to the population, we list *Dionysia splendens* as LC (Least Concern).



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## Acknowledgements

We want to thank Dr Reza Alipour for his help in collecting material of *Dionysia splendens* from the type locality.

## ORCID iDs

I. Mehregan  <https://orcid.org/0000-0002-5108-2558>

M. Lidén  <https://orcid.org/0000-0001-6306-9353>

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