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A new interspecific hybrid in the genus *Verbascum* (Scrophulariaceae: *Scrophularieae*) from Crimea

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Summary. A new natural interspecific hybrid of *Verbascum phlomoides* L. × *V. pinnatifidum* Vahl was described as *V. × maeoticum* V. V. Fateryga et Fateryga, nothosp. nov. The new nothospecies was discovered in Tatarskaya Bay on the shore of the Sea of Azov in the vicinity of Shchelkino, Lenino District of the Republic of Crimea; it occurred in a psammophytic steppe on the edge of an artificial pine forest. Study of the living plants revealed that they did not have fruits and seeds.

Новый межвидовой гибрид рода *Verbascum* (Scrophulariaceae: *Scrophularieae*) из Крыма

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Ключевые слова: коровяк, Приазовье, таксономия, *Verbascum phlomoides*, *Verbascum pinnatifidum*.

Аннотация. Описан *Verbascum* × *maeoticum* V. V. Fateryga et Fateryga, nothosp. nov. – новый естественный межвидовой гибрид *V. phlomoides* L. × *V. pinnatifidum* Vahl. Новый нотовид обнаружен в Татарской бухте на побережье Азовского моря в окр. г. Щелкино Ленинского р-на Республики Крым; он произрастал в псаммофитной степи на опушке сосновых насаждений. Изучение живых растений показало, что они не образуют плодов и семян.

Introduction

The genus *Verbascum* L. (mullein) is the largest in the family Scrophulariaceae and numbers 469 currently recognized species distributed in Eurasia

and Africa, but the center of its diversity is in Turkey and Iran. Some species, such as *Verbascum thapsus* L. and *V. blattaria* L., have become widely naturalized or invasive in many other temperate regions of the world, including North America, Australia, and

New Zealand (Alzahrani et al., 2025; POWO, 2026). Along with another, somewhat less large genus *Scrophularia* Tourn. ex L. (292 accepted species according to POWO, 2026) and two monotypic genera, *Verbascum* belongs to the tribe *Scrophularieae* (Oxelman et al., 2005; Riahi, Ghahremaninejad, 2019). Representatives of the genus *Verbascum* are rosulate, biennial or perennial herbs to small shrubs, with usually yellow-flowered, thyrse or racemose inflorescences. The genus is also characterized by its rotate, nearly actinomorphic corolla and alternate leaves (Ghahremaninejad et al., 2015; Riahi, Ghahremaninejad, 2019). Identification of species of *Verbascum* can be sometimes challenging due to an intraspecific variation and hybridization. While species in the genus *Scrophularia* are rarely reported to produce natural hybrids (just three hybrids are known, according to POWO, 2026), they are very common in *Verbascum*, in which hybridization has played an important role (Ghahremaninejad et al., 2015; Dong et al., 2022). A total of 252 natural hybrids between various species of this genus were known until recently (POWO, 2026).

Being one of the floristically richest regions in Eastern Europe, the Crimean Peninsula has 16 species and a few interspecific hybrids of the genus *Verbascum* (Ivanina, 1981; Yena, 2012; Sheludyakova, 2025). During a field trip to the shore of the Sea of Azov in 2025, we found plants of the genus *Verbascum* not listed in the cited references. Detailed investigations suggested that they belonged to a natural hybrid between *V. phlomoides* L. and *V. pinnatifidum* Vahl. Bibliographical study revealed that this hybrid had been already reported from the same locality and studied in detail by Belyanina and Kiseleva (1990) but not formally described. Thus, the purpose of the present contribution is to describe *V. phlomoides* × *V. pinnatifidum*.

Material and Methods

Specimens were collected on 6 and 20 July, 2025 in Tatarskaya Bay on the shore of the Sea of Azov in the vicinity of Shchelkino, Lenino District of the Republic of Crimea [45°26′06″N, 35°50′57″E]. Photographs were made with a Canon EOS RP digital camera and a Sigma AF 105 mm f/2.8 macro lens. Collected specimens were deposited in herbaria ALTB, LE, PHEO, and YALT. Study of the living plants was made by a careful naked-eye estimation of faded inflorescences in order to ascertain whether they had fruits or not. Taxonomy of plants follows POWO (2026).

Results and Discussion

Verbascum* × *maeoticum V. V. Fateryga et Fateryga, **nothosp. nov.** [*V. phlomoides* L. × *V. pinnatifidum* Vahl] (Fig. 1).

Diagnosis: *Verbascum* × *maeoticum* is intermediate between *V. phlomoides* and *V. pinnatifidum*. Leaves are smaller in length (basal ones 10–16 cm) than those in *V. phlomoides* (15–35 cm) and larger than those in *V. pinnatifidum* (5–15 cm), pinnately divided to lobate (vs. entire in *V. phlomoides* and dissected to divided in *V. pinnatifidum*). Flowers are also smaller in diameter (25–40 mm) than those in *V. phlomoides* (25–55 mm) and larger than those in *V. pinnatifidum* (25–30 mm). Two anterior (lower) stamens are with reniform glabrous anthers and partially dorsally pubescent filaments (vs. with decurrent anthers and glabrous filaments in *V. phlomoides*). Tomentose pubescence on the stem, leaves, bracts, as well as on the calyx is somewhat sparser than that in *V. phlomoides* and evidently denser than that in *V. pinnatifidum*.

Description: Biennial herb. Root 7–8 mm in maximal thickness, longitudinally wrinkled, brown. Stem terete, erect, 70–110 cm height, branched in upper part of its lower half (Fig. 1B). Basal leaves arranged in rosette, 10–16 cm long and 1.5–3.5 cm wide, with petiole taking about 1/3 of their length and generally elliptical, pinnately divided lamina (Fig. 1C, D); cauline leaves alternate, upper ones 2–4 cm long and 0.5–1.0 cm wide, generally lanceolate, pinnately lobate to crenulate, sessile, auriculate. Flowers arranged in distant fascicles by three to six. Bracts entire, ovate-lanceolate, about 10 mm long and 5 mm wide; bracteoles rather linear, about 5 mm long and 1 mm wide. Calyx 5–8 mm long, divided to its half, lobes rather ovate, acuminate on top. Stem, leaves, bracts, and calyx tomentosely pubescent with branched trichomes still not hiding their green surface. Corolla rotate, 25–40 (usually about 35) mm in diameter, yellow. Stamens five; two anterior (lower) ones with reniform glabrous anthers and filaments partially pubescent dorsally with erect trichomes. Three posterior (upper) stamens with reniform anthers partially pubescent with erect trichomes and filaments completely pubescent with such trichomes. Style with spatulate, decurrent stigma, glabrous (Fig. 1E). Ripe capsules not developed.

Type: “Crimea, Lenino District, vicinity of Shchelkino, Tatarskaya Bay, 45°26′06″N, 35°50′57″E, psammophytic steppe on the edge of an artificial pine forest. 6 VII 2025. A. V. Fateryga, V. V. Fateryga s. n.” (holo – LE 01330243, iso – ALTB 1100103988).

Paratypes: “Crimea, Lenino District, vicinity of Shchelkino, Tatarskaya Bay, 45°26′06″N, 35°50′57″E, psammophytic steppe on the edge of an artificial pine forest. 20 VII 2025. A. V. Fateryga, V. V. Fateryga s. n.” (PHEO, YALT).

Etymology: The specific epithet “*maeoticum*” refers to Μαῖωτις Λίμνη (“Lacus Maeotis” in Latin), an Ancient Greek name for the Sea of Azov, on the shore of which the type locality is situated.

Distribution: The new nothospecies is currently known only from the type locality.

Habitat and biology: *Verbascum* × *maeoticum* was recorded along with both parent species (and in the absence of any other congeners) in ca. 250 m from

the Sea of Azov, within a psammophytic herbaceous vegetation developed between an artificial plantation of the Crimean pine (*Pinus nigra* subsp. *pallasiana* (Lamb.) Holmboe, Pinaceae) and a dirt road. A total plant coverage in the habitat was about 85 % and the community was predominated by *Lomelosia argentea* (L.) Greuter et Burdet (Caprifoliaceae), *Cynodon dactylon* (L.) Pers. (Poaceae), *Artemisia marschalliana* Spreng. (Asteraceae), *Euphorbia seguieriana* Neck. (Euphorbiaceae), and *Cynanchum acutum* L. (Apocynaceae) (Fig. 1A). The flowering period of *V.* × *maeoticum* was probably from June to July, since some plants observed at the beginning of July had been already nearly faded. Careful study of the living plants

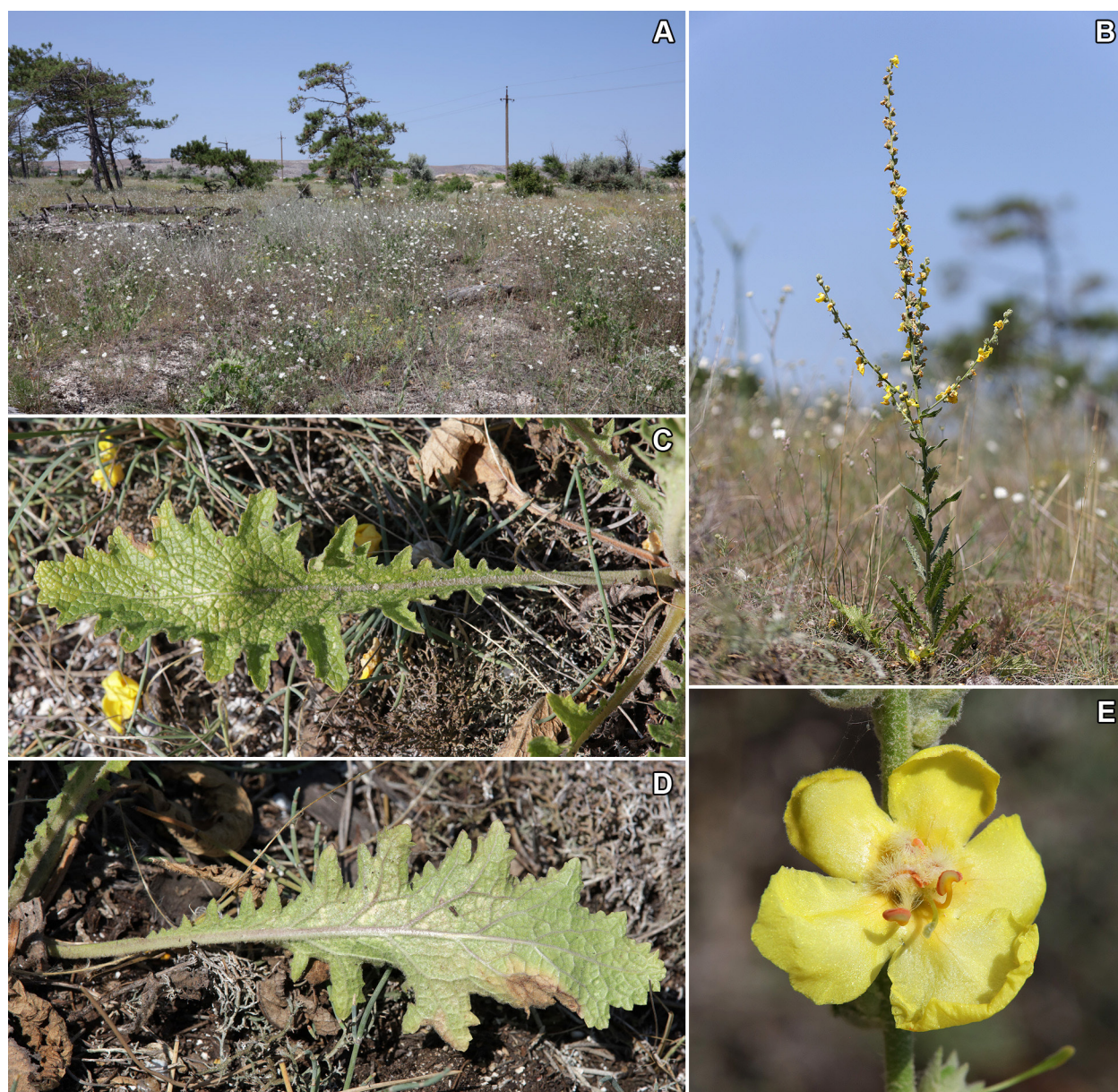


Fig. 1. *Verbascum* × *maeoticum* V. V. Fateryga et Fateryga, nothosp. nov. in Tatarskaya Bay (Crimea): A – habitat; B – plant in flower; C – basal leaf, adaxial surface; D – the same, abaxial surface; E – flower in frontal view. Photographs by A. V. Fateryga.

revealed that they did not have fruits and seeds. This observation contradicts to a speculation by Belyanina and Kiseleva (1990) that the studied nothospecies is completely separated from its parent taxa and exists independently from them. Anyway, it is worth mentioning that the first record of *V. × maeoticum* was made in this locality in 1978 (according to Belyanina, Kiseleva, 1990), while the nothospecies is still present there after 47 years. This can mean that the described

taxon is regularly reproduced by the parent species in suitable conditions of psammophytic habitats along the shore of the Sea of Azov.

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