

A new species and a new combination in Iranian *Alcea* (Malvaceae)

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Alcea tarica Pakravan & Ghahreman *sp. nova* (Malvaceae) is described from Iran and illustrated. The relationships among it and the closely related species are discussed. *Alcea glabrata* Alef. var. *microcarpa* (Zohary) Pakravan *comb. nova* is proposed, and *A. longipedicellata* I. Riedl is considered its synonym.

Key words: *Alcea*, Malvaceae, new species, nomenclature, taxonomy

Alcea (Malvaceae) comprises almost 70 species. Riedle (1976) mentioned 39 species for the flora of Iran, but the number has now been reduced to 34 (Ghahreman *et al.* 2000, Pakravan 2001, 2003, 2005, Pakravan & Ghahreman 2002, 2003). The genus has a complicated taxonomy (Zohary 1963). The difficulties in delimitation of *Alcea* species lie preliminarily in the very small number of diagnostic characters. Only through a very detailed examination in the leaf sequence and in configuration of the carpels, a few specifically valuable characters can be revealed (Zohary 1963, Pakravan 2001).

I had an opportunity to examine hundreds of specimens from various herbaria and also to observe and collect living material at the centers of distribution of *Alcea*. As a result of the taxonomic study, a new species, a new combination and a new synonym from Iran are presented here.

I studied the plants in the field in addition to studying herbarium material in TARI and W. Further specimens were obtained on loan from BM, E, HUI, P, JE, WU and IRAN.

Alcea glabrata Alef. var. *microcarpa* (Zohary) Pakravan, *comb. nova*

BASIONYM: *Alcea flavovirens* (Boiss. & Buhse) Iljin var. *microcarpa* Zohary, *Israel J. Bot.* 12: 18. 1963. — TYPE: Iran. “Persia: jugi Elbursensis in reg. Subalpina, in valle Lar ad pagum Getchsar”, ca. 2200 m, 1902 *Bornmüller 6500* (holotype E!).

Alcea longipedicellata I. Riedl, *Flora Iran.* 120: 545. 1976, *syn. nov.* — TYPE: Iran. “Persia: Tehran, foothills of southern range of Elburse mountain, just above Darakeh”, *Alava 10534* (holotype W!).

Alcea flavovirens var. *microcarpa* lacks the characters of that species, such as deeply lobed leaves and a carpel with a broad, radially rugose wing. Instead, it is very similar to *A. glabrata* (type: “Persia, Gachsar inter Asadbar et vallem fl. Lour”, *Kotschy 537, W!*). These two taxa differ only in the size of the carpel and width of its wing.

Alcea longipedicellata was characterized by long pedicels, shallow leaf lobes, and a small carpel with a short wing (Riedl 1976). The type

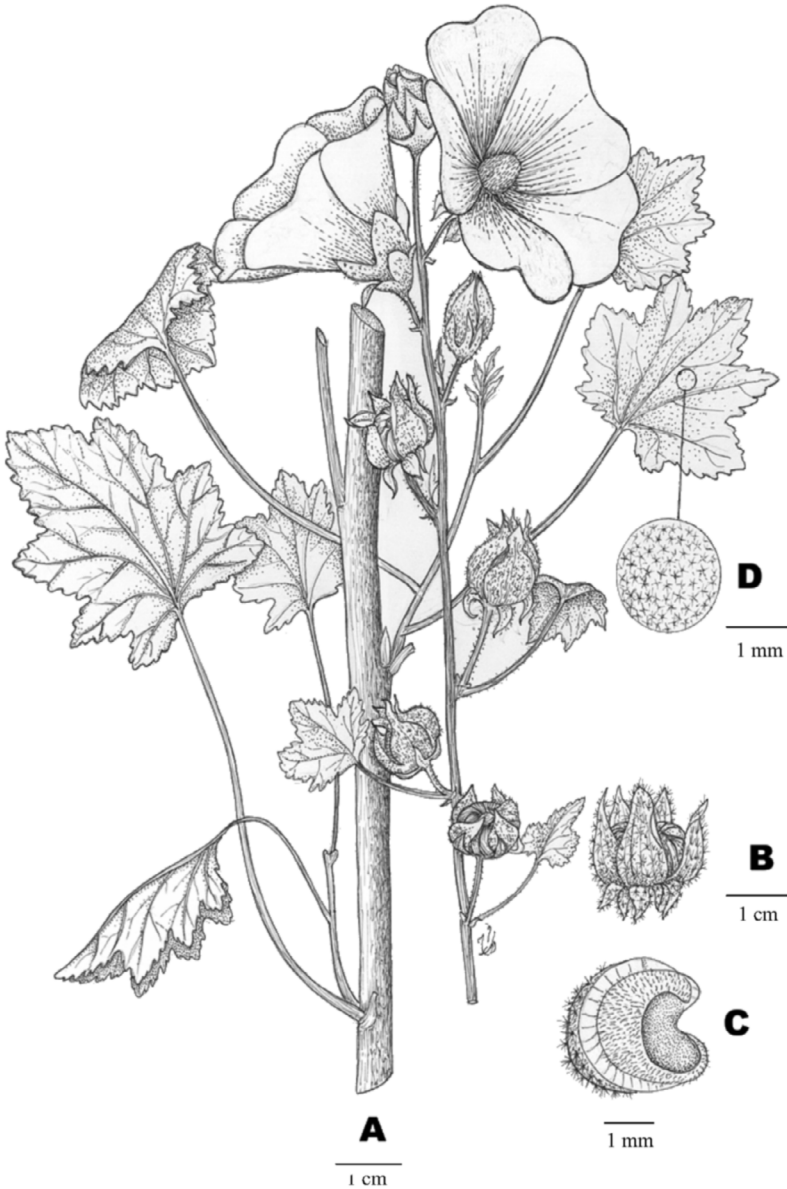


Fig. 1. *Alcea tarica* (from the holotype). — **A:** Habit. — **B:** Calyx and fruit. — **C:** Carpel. — **D:** Hairs.

material of *A. longipedicellata* and also several specimens determined by Riedl as *A. longipedicellata* — such as *Edmonson 805* (E), *Rechinger 48382, 49592* (both W), *Alexandrov 6100* (E) — are very similar to the type of *A. glabrata* var. *microcarpa*. Some other recently collected specimens (*Amin 14527* (TARI); *Foroughi & Hariry 14521, 14536* (TARI); *Pakravan et al. 26415* (TUH)) confirm the synonymy (Table 1).

Alcea tarica Pakravan & Ghahreman, *sp. nova* (Fig. 1)

Maxime affinis A. glabratae, differt imprimis carpelis exelatis et diminutis, petalis roseis.

TYPE: Iran. Tehran, road of Firuzkuh, around Tar lake, 2400 m, 12.VII.1999 *M. Pakravan & A. Dareshoory 26380* (holotype TUH; isotype TARI). — PARATYPES: Iran. Semnan, lasjerd, Emamzadeh Abdollah, *V. Mozaffarian 78045* (TARI); Tehran, Damavand, N of Liran village, 1850 m, *V. Mozaffarian 32353, 32351* (TARI); Tar lake, from Chenaran road,

2400 m, *V. Mozaffarian 78021* (TARI); Ziba to Katalkan, Firuzkuh, *Ghahreman et al. 10047* (TUH); Firuzkuh to Semnan, 1800 m, *Musavi 2200* (IRAN).

Annual or biennial herb, to 100–150 cm tall. Stem erect, pilose with sparse stellate hairs or glabrescent. Leaves palmate, with 5–7 shallow-triangular, acute or obtuse lobes, and 5–7 veins, cordate at base, upper and lower parts of leaves with sparse stellate hairs. Petiole 50–100 mm long. Raceme remote. Pedicel 5–12 mm long. Epicalyx with 6–7 segments, 7–10 mm long; segments triangular-oblong, one third of calyx length. Calyx 16–20 mm long, \pm ribbed, with dense stellate hairs; calyx segments triangular. Corolla 2–2.5 times longer than calyx, lobes emarginate at apex. Fruit 15–20 mm wide with 24–26 carpels; each carpel 3–4 mm long, 3–4 mm wide, wingless, plane or grooved dorsally, lateral side wrinkled, with dense simple hairs. Seeds 2–3 mm in diameter, smooth, with sparse white granules.

Alcea tarica is distributed in the provinces of Semnan and Tehran, growing mainly on the southern slopes of Alborz mountain. It is related to *A. glabrata*. The distinguishing characters of *A. tarica* are the 5–12 mm long pedicels, pink flowers, and small and wingless carpels. Within the genus only *A. tarica* and *A. glabrata* var. *microcarpa* have small carpels. The characteristic features and differences among the related taxa are summarized in Table 1.

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Table 1. Diagnostic morphological characters among *Alcea tarica* and the closely similar taxa. – = character unknown.

Species	Leaf shape	Leaf indumentum	Pedicel length (mm)	Epicalyx length (mm)	Calyx/epicalyx	Petal color	Carpel dimensions (mm)	Carpel wing width (mm)	Form of wing
<i>A. tarica</i>	palmate, with 5–7 shallow lobes	very sparse stellate hairs	5–12	7–10	2–2.5	pink	3–4 × 3–4	–	–
<i>A. glabrata</i> var. <i>glabrata</i>	palmate, with 5–7 shallow lobes	sparse stellate hairs	10–35	10–12	1.5	pale yellow	5–6 × 4–4.5	0.5–1	\pm radially wrinkled
<i>A. longipedicellata</i>	palmate, with 5–6 shallow lobes	sparse stellate to glabrous hairs	7–40	8–12	1.5–2	pale yellow to yellow	2.5–4 × 2.5–4	0.1–0.2	smooth to \pm radially rugose
<i>A. flavovirens</i> var. <i>microcarpa</i>	palmate, with 5 shallow lobes	sparse stellate hairs	10–35	7–10	1.5	pale yellow	2.5–4 × 3–4	0.1–0.2	smooth
<i>A. flavovirens</i> var. <i>flavovirens</i>	palmate, with 5–7 very deep lobes	sparse stellate or glabrous hairs	10–30	5–8	2.5–3	yellow	6–8 × 5–6	1–1.5	radially wrinkled

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