
***Alcea hyrcana* (Grossh.) Grossh.**
***Alcea lenkoranica* Iljin**
***Alcea rugosa* Alef.**
***Alcea tabrisiana* (Boiss.et Buhse) Iljin**
MALVACEAE

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Local Names

Azerbaijan: *Alcea hyrcana*: Hırkan gülxətmi; *Alcea lenkoranica*: Lənkəran gülxətmissi; *Alcea rugosa*: Qarışıq gülxətmi; *Alcea tabrisiana*: Təbriz gülxətmissi,
English: Hollyhock.

Botany and Ecology

***Alcea hyrcana* (Grossh.) Grossh.**

Plants are biennial or perennial herbs. Stems 100–300 cm long, mostly erect usually unbranched with a coating of star-shaped hairs. Leaves blades 2–10 cm length, broad, egg-shaped, circular, or kidney-shaped in outline extending from a long leaf stalk. At least the lower leaves are shallowly 5- or 7-lobed, the base rounded to shallowly heart-shaped, the margins toothed. Flowers solitary or in small clusters. Calyces 16–24 mm long, cup-shaped at fruiting time. Petals 35–50 mm long, the tips broadly rounded or shallowly notched. White to dark purplish black often pinks. Anthers yellow. Fruit tan

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to brown, kidney-shaped to nearly circular in shape. The fruit is a mericarp, eventually breaking apart into 15 individual different sections that each has seeds. A widespread garden ornamental, sometimes naturalized (Fig. 1).

Azerbaijan: Rare endangered species, included in the Red Book of the Republic of Azerbaijan (Redlist Committee Azerbaijan 2013). Grows in coastal sands, hircanian forests, blackerry thickets in the lowlands and to the middle mountain zone (to 1800 m) in the Lankaran lowlands and mountainous part of Lankaran. Flowering in June–August, fruiting July–August (Flora of Azerbaijan 1950–1961).

***Alcea lenkoranica* Iljin.**

Azerbaijan: Endemic of Caucasus. Rare endangered species, entered in the Red Book of the Republic of Azerbaijan (Redlist Committee Azerbaijan 2013). Distributed in Lankaran and Kur-Araz lowlands. Grows in coastal sands and drossy areas from lowland to foothills (to 400 m). Flowering in June–August, fruiting July–August (Flora of Azerbaijan 1950–1961) (Fig. 2).

Fig. 1 *Alcea hyrcana* (MALVACEAE). Azerbaijan (Photo: A. Dadashova)



Fig. 2 *Alcea lenkoranica* (MALVACEAE). Azerbaijan (Photo: A. Dadashova)



Fig. 3 *Alcea rugosa*
(MALVACEAE). Azerbaijan
(Photo: N. Mehdiyeva)



***Alcea rugosa* Alef.**

Azerbaijan: Distributed in regions of Kur-Araz lowlands, Kura plain, Nakhchivan plain and mountainous part of Nakhchivan, Lankaran lowlands and Diabar, as well as in all regions of Lesser Caucasus. Found in dry slopes in the composition of mountain steppe and dry-steppe vegetation from lowland to middle mountain zone (to 1800 m). Flowering in June–August, fruiting in July–October (Flora of Azerbaijan 1950–1961) (Fig. 3).

***Alcea tabrisiana* (Boiss.et Buhse) Iljin**

Azerbaijan: Distributed only in the regions of Nakhchivan plain and mountainous part of Nakhchivan. Grows in dry slopes in the composition of mountain steppe and dry steppe vegetation from lower to middle mountain belt (to 1800 m). Flowering in June–August, fruiting in July–September (Flora of Azerbaijan 1950–1961).

Local Medicinal Uses

Azerbaijan: *Alcea hyrcana* is used for Respiratory system problems: A decoction of the flowers is used as an antitussive in pneumonia. Pustular skin diseases: Flowers boiled in milk and mixed with seeds of flax (*Linum*) are applied to furuncles and carbuncles for relief and removal of pain (Fedorov 1949). *Alcea lenkoranica* is used for Respiratory system disorders: A decoction from leaves and flowers is used to treat colds. A decoction of flowers in milk is used for cough. *Alcea rugosa* serves to treat diseases of Respiratory tract: A decoction of flowers and seed is used as antitussive. *Alcea tabrisiana* heals diseases of the Respiratory Organs: A decoction of roots, leaves and flowers is used for colds and for cough. Nervous system: The decoction of flowers is applied as sedative. Intestinal: problems: A decoction of flowers is applied as laxative for children. Diseases of the skin: The root decoction of is for external use in the form of a poultice used in wound healing, especially for furuncles. Infectious diseases: Roots, leaves and

flowers are applied in as poultice as antipyretic in malaria. Diseases of the eyes: Boiled flowers are applied to sore eyes. General health: Flowers are used as tea and given to the sick as refreshing drink, as well as to relieve chest ache and headache (Grossheim 1942, 1943).

Local Handicraft and Other Uses

Azerbaijan: All species are decorative. They can be used in designing of gardens and parks. *Alcea hircana* is used for dyeing. A dye solution is made from flowers to obtain pink color. The solution is used for dyeing wool yarn as well as products made of wool, and products from silk and cotton (Akhundov et al. 1989). *Alcea rugosa* is also used for dyeing. The dye solution is made from flowers to obtain violet and pink colors and is used for dyeing wool yarn as well as products made of wool.

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