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Crataegus gregorianii (*Rosaceae*), a new species from Armenia

Crataegus gregorianii (*Rosaceae*) — новый вид из Армении

E. Tz. Gabrielian[1], M. V. Sargsyan[2]*

Institute of Botany after A. L. Takhtajyan, National Academy of Sciences of the Republic of Armenia
Department of Taxonomy and Geography of Higher Plants
Acharyan Str., 1, Yerevan, 0040, Republic of Armenia
[1] botany2008@gmail.com
[2] samerine@mail.ru

*Corresponding author

Э. Ц. Габриэлян[1], М. В. Саргсян[2]*

Институт ботаники им А. Л. Тахтаджяна НАН Республики Армения
Отдел систематики и географии высших растений
ул. Ачаряна, 1, Ереван, 0040, Республика Армения
[1] botany2008@gmail.com
[2] samerine@mail.ru

*Автор для переписки

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Abstract. A new peculiar species *Crataegus gregorianii* is described from the Dalar (Arzakan) River gorge, from Aparan floristic district of Armenia. The species clearly differs from the other hawthorns by complete absence of thorns as well as by 3-lobed, shiny dark green leaves, broadly falcate-denticulate stipules, as well as barrel-shaped fruits with narrow, pear-like base.

Keywords: *Crataegus gregorianii*, *Rosaceae*, Armenia, Caucasus, new species, habitat.

Аннотация. Новый своеобразный вид *Crataegus gregorianii* описан из ущелья реки Далар (Арзакан) в Апаранском флористическом районе Армении. Вид четко отличается от остальных боярышников полным отсутствием колючек, 3-лопастными, блестящими, темно-зелеными листьями, крупными широкосерповидными, зубчатыми прилистниками, а также бочонковидными плодами, грушевидно сужающимися к основанию.

Ключевые слова: *Crataegus gregorianii*, *Rosaceae*, Армения, Кавказ, новый вид, местообитание.



Fig. 1. *Crataegus gregorianii* between villages Aghveran and Arzakan, 22 IX 2019. Photo by M. Sargsyan.

In Armenia, the genus *Crataegus* L. is presented in three sections: *Crataegus*, *Azarolus* Loudon and *Pentagynae* C. K. Schneid., and 22 species (Sargsyan, 2016). According to Christensen (1992), the genus *Crataegus* of about 150 to 1200 species (depending on the species concept accepted), is distributed mainly in temperate regions of the Northern Hemisphere. Among the 50–100 Old World species of *Crataegus*, the taxa of sect. *Crataegus* (= sect. *Oxyacanthae* Loudon) occurring in Europe, Northern Africa, and Western Asia stand out immediately, because they have small leaves with 1–4 pairs of lobes, usually more than 0.5 of the width from leaf blade margin to the midrib, and ventro-laterally sulcate or smooth pyrenes.

The floristic district of Aparan where the new taxon is described from, is considered a very unique place. The Dalar (Arzakan) River gorge is densely covered with *Quercus macranthera* Fisch. et C. A. Mey., *Juglans regia* L., *Fraxinus excelsior* L. and with many wild rela-

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Fig. 2. Detalis of *Crataegus gregorianii* morphology.
A — fruiting shoots; B — stipules of leaves on elongate shoot; C — fruits. Photos by M. Sargsyan.

tives of cultivated plants such as *Malus orientalis* Uglitzk., different species of *Pyrus* L. and *Rosa* L., *Prunus divaricata* Ledeb. and others (Gabrielian, Zohary, 2004). In 1968, T. N. Popova collected a relict *Ophioglossum vulgatum* L. from this place. At this very place E. Gabrielian collected *Zingeria biebersteiniana* (Claus) P. A. Smirn. which is considered a rare Caucasian species, previously known to occur only in Kislovodsk.

The new species has been observed and studied for years. Its population is found on the western slopes of the gorge, in open woodlands. It grows as a lonely tree or rarely in groups with other arid species of hawthorn, *Crataegus pseudoheterophylla* Pojark., *C. atrosanguinea* Pojark., *C. armena* Pojark. Recently described not far from this place was *C. susanykleinae* Gabrielian et Sargsyan (Gabrielian, Sargsyan, 2009).



Fig. 3. Holotype of *Crataegus gregorianii* (ERE0011982).

The new species *C. gregorianii* Gabrielian et Sargsyan belongs to the section *Crataegus*, series *Monogynae* A. Pojark. (Pojarkova, 1939). It is named after Vardan Gregorian, the scientist and philanthropist.

Crataegus gregorianii Gabrielian et Sargsyan, sp. nova (sect. *Crataegus*).

Shrub or tree 3–4 m tall without thorns (Fig. 1). Twigs glabrous or sparsely tomentose. Buds 1.1–3.1 mm long, 1.1–2.5 mm wide. Leaf blades coriaceous, dark green and glabrous above, greyish green tomentose along midveins and in the vein axils beneath. Lower leaves of fertile shoots 2–4 cm long, 1,5–3 cm wide, obovate, 3-lobed, margin irregularly or regularly serrate with uneven teeth; upper leaves 4.8–5.5 cm long, 3.5–4.5 mm wide, 3(5)-lobed; lobes broad, with 6–8 teeth on each side, at apex 4–6-dentate (Fig. 2: A). Lower leaves of sterile shoots 5.5–5 cm long, 3.4–4.5 cm wide, 3-lobed, cuneate at the base; upper leaves 5.5–7 cm long, 4–6 cm wide, 3–5-lobed, truncated at the base. Petioles 25–35 mm long. Stipules of leaves of elongate shoots 25–32 mm long, 12–20 mm wide (Fig. 2: B); stipules of leaves of flowering shoots 10–14 mm long, 2–6 mm wide, entire or sharply dentate, the exterior margin of their lobes with 3–8 teeth. Inflorescence 4–6 cm in diam., corymbose, 1–14-flowered. Pedicels 5–40 mm long, glabrous or sparsely tomentose, with whitish lenticels. Sepals 3.5–5 mm long, 0.5–2.5 mm wide, at the base wide and obliquely triangular, then abruptly tapering into a cusp. Petals 5, white. Stamens 18–20. Anthers whitish. Style 1. Fruits 13–15 mm long, 10–12 mm wide, barrel-shaped to ellipsoidal, red, sparsely tomentose, crowned by slightly bent sepals, pear-shaped at the base, with juicy yellow pulp (Fig. 2: C). Pyrene 1, laterally sulcate, hypostyle pilose. Fl. V–VI, fr. VIII–IX.

H o l o t y p e : Республика Армения, Котайкская область, западный склон ущелья реки Далар, между сс. Ахверан и Арзакан, редколесье, 1680 м над ур. м., 40°29′35.08″ N, 44°35′39.07″ E, 22 IX 2019, М. Саргсян [Republic of Armenia, Kotayk Region, western slope of Dalar River gorge, between villages Aghveran and Arzakan, open forest, 1680 m, 40°29′35.08″ N, 44°35′39.07″ E, 22 IX 2019, M. Sargsyan] (ERE: 196571, barcode ERE0011982; isotypes: ERE 196572, 196573, 196574; LE; K). — Fig. 3.

P a r a t y p e s . Республика Армения, Котайкская область. между сс. Ахверан и Арзакан, западный склон ущелья р. Далар, редколесье, 1680 м над ур. м., 40°29′35.08″ N, 44°35′39.07″ E, 14 IX 2018, *М. Саргсян* (ERE: 196575, 196576, 196577); *западный склон ущелья р. Далар, между сс. Ахверан и Арзакан, редколесье, 1695 м над ур. м., 40°29′45.05″ N, 44°35′37.0″ E*, 14 IX 2018, *она же* (ERE 196582); *там же*, 22 IX 2019, она же (ERE 196578, 196581); выше с Арзакан, рядом с домом отдыха «Академия», 1700 м над ур. м., 40°29′54.04″ N, 44°35′22.69″ E, 22 IX 2019, *она же* (ERE 196579, 196580).

A f f i n i t y . The new species is different from the relative *C. rhipidophylla* Gand. in having 3-lobate (rather than 5(7)-lobate) leaves, anthers whitish, rather than purple, barrel-shaped (rather than subglobose or cylindrical) fruits. In contrast to *C. pseudoheterophylla* Pojark. it has no wax coating of the leaves beneath, fruit 10–12 mm in diam. (rather than 5–9 mm), sepals wide and obliquely triangular at the base, then abruptly tapering into a cusp, rather than narrowly triangular.

H a b i t a t . Bush thickets, arid woodlands, 1600–1700 m a. s. l.

D i s t r i b u t i o n . Armenia: Aparan floristic district.

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