

## **An interesting new species of *Alchemilla* (Rosaceae) from S Italy**

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## An interesting new species of *Alchemilla* (*Rosaceae*) from S Italy

### Abstract

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*Alchemilla austroitalica* from the Aspromonte area in S Italy is described as a species new to science and illustrated, and its relationships are discussed. The new species is particularly remarkable as it is the only member of *A. sect. Erectae* found to the west of the Balkans.

During field work in the Aspromonte area, S Italy, a very rare and peculiar *Alchemilla* species growing alongside montane streams was discovered. The hitherto undescribed species clearly belongs to *A. sect. Erectae* (= *A. sect. Alchemilla* subsect. *Calycanthum* Rothm. ser. *Elatae* Rothm. p.p.), whose members, according to Rothmaler (1938), Pawłowsky (1972) and Fröhner (1986, 1990), are distributed from the Balkans and Carpathians eastwards to Anatolia, the Krym, Caucasus, and Persia.

This species, not only being the sole member of *A. sect. Erectae* in Italy but also the sole member of the genus in this region of S Italy, is well differentiated from all other known taxa of the genus, and is described here as a species new to science.

*Alchemilla austroitalica* Brullo, Scelsi & Spamp., **sp. nova** – Fig. 1.

Holotypus: Italy, Aspromonte, Torrente Menta, 27.7.1991, Brullo, Scelsi & Spampinato s.n. (CAT; isotypi: B, CAT, FI).

Planta perennis, rhizomatosa, usque ad 60 cm alta. Caulis erectus, inferne dense pilosus patentibus pilis ad 0.8 mm longis, superne sparse pilosus. Folia radicalia magna, petiolis 15–35 cm longis, dense patenter pilosis, laminis suborbicularibus vel orbiculari-reniformibus, ad 12.5 × 11.5 cm, sinu basali sat lato, angulum 50°–90° formante, extus sparse pilosis, subtus dense pilosis, 1/5–1/6 incisis, perfecte vel rare imperfecte 9–lobatis, lobis arcuatis semiorbicularibus 16–18 dentatis. Folia caulina sinu latissimo ad 180°, 5–7 lobata. Inflorescentia ramis brevibus, glabris, floribus in glomerulis dispositis. Flores 3–4 mm lati, flavidi, hypanthio breviter campanulato omnia patenter piloso, episepalis et sepalis glaberrimis, acutis, subaequilongis.

Perennial herb, with a robust creeping rhizome densely covered with remnants of stipules and petioles. Stem erect, 40–60 cm, robust, densely patent-hairy below, with hairs up to 0.8 mm long, sparsely hairy above. Basal leaves large, with petioles 15–35 cm long, erect, densely patent-hairy, with blades suborbicular or orbicular-reniform, up to 12.5 × 11.5 cm, sparsely



Fig. 1. *Alchemilla austroitalica* Brullo, Scelsi & Spamp. – A: habit, B: indumentum of basal stem portion, C: detail of leaf margin, D: flowers (top view), E: flowers (side view), F: fructified flower. – All from the type.

hairy above, densely hairy beneath, with open and wide sinus forming an angle of 50°–90°, with prominent veins, lobed to 1/5–1/6; lobes 9, arcuate, semiorbicular, with 16–18 subequal teeth, 1.2–2.5 mm long and 1.2–2.5 mm wide at the base, obliquely subtriangular-mamilliform, acute or slightly acute, penicillate. Basal stipules connate for 1/4–1/5 of the length. Cauline leaves with subsessile blade, widely semiorbicular-reniform, lobed to 1/5–1/6, with 5–7 lobes and very broad sinus forming an angle up to 180°. Cauline stipules irregularly serrate. Inflorescence with short branches, glabrous, and flowers arranged in lax and small glomerules. Flowers 3–4 mm wide, yellowish, with entirely patent-hairy hypanthium, shortly campanulate, epicalyx lobes subequal to the sepals, glabrous, acute, with entire or slightly erose margin; sepals ovate-triangular, 1.5–1.7 mm long, often slightly wider than epicalyx lobes. Nutlet manifestly exceeding the dry hypanthium.

#### Additional specimens studied

ITALY: Aspromonte, Torrente Menta, 2.10.1984, *Signorello & Spampinato s.n.* (CAT); *ibid.*, 31.7.1984, *Signorello & Spampinato s.n.* (CAT); *ibid.*, 18.7.1992, *Brullo, Scelsi & Spampinato s.n.* (CAT); *ibid.*, Tre Limiti, 12.7.1989, *Scelsi & Spampinato s.n.* (CAT); *ibid.*, Bocca del Lupo, 12.7.1989, *Scelsi & Spampinato s.n.* (CAT).

#### Distribution and ecology

*Alchemilla austroitalica* is a very rare and localized species of the Aspromonte area. It occurs only at altitudes of 1500–1600 m, on stream banks mainly in little gorges, growing on wet ground in a hygrophilous plant community characterized by *Bryum pseudotriquetrum* (Hedw.) Schwaegr., *Athyrium filix-foemina* (L.) Roth, *Rhynchocorys elephas* (L.) Griseb., *Sagina subulata* (Swartz) Presl, *Chaerophyllum calabricum* Guss., *Petasites albus* (L.) Gaertn., *Dactylorhiza saccifera* Brogn.

#### Taxonomic remarks

According to Rothmaler (1934, 1938), Pawłowski (1957, 1968, 1972), Pawłowski & Walters (1972), Lippert & Merxmüller (1974), Fröhner (1986, 1990), and Kalheber (1994), the genus *Alchemilla* is quite critical especially in the Eurasian territories, where it is mainly represented by apomictic species.

The taxonomic position of *Alchemilla austroitalica* as a member of *A.* sect. *Erectae* Fröhner (= *A.* sect. *Alchemilla* subsect. *Calycanthum* Rothm. ser. *Elateae* Rothm. p.p.) is, however, evident because of the following features: large size of the plant, at least the lowermost stem internodes and petioles with an indumentum of erecto-patent to patent hairs, initial stipules bilobed, cauline stipules connate at the base, leaves lobed to >1/2 with 9 or more lobes, epicalyx segments at least as long and wide as sepals, patent with the sepals at anthesis, hypanthium hairy and distinctly shorter than both the mature nutlet and the sepals.

Within *Alchemilla* sect. *Erectae*, *A. austroitalica* is morphologically well differentiated from all other species but shows some resemblance to three species:

*A. orthotricha* Rothm. from NE Anatolia and Transcaucasia also has glabrous and subequal epicalyx segments and sepals, a hypanthium with patent hairs, and subequal leaf teeth. In contrast to *A. austroitalica*, *A. orthotricha* is, however, a species of woods and groves, and is distinct by stem and petioles erecto-patent hairy, leaves bluish-green with narrow or closed sinus and 9–11 lobes with 10–16 teeth, basal leaves of only 4–4.5 × 4.5–5 cm, cauline leaves 5(7)-lobed, pedicels hairy, and flowers (3.5)4–5 mm wide.

*A. erzincanensis* Pawł. from E Anatolia is ecologically very similar to *A. austroitalica*, its sepals and epicalyx segments are also glabrous, and the stem, petioles and hypanthium patent-hairy; in contrast to *A. austroitalica*, this species has, however, leaves with a narrow or closed sinus and 11 lobes with 14–22 unequal teeth, the epicalyx segments are generally longer than the sepals and often have 1–2 denticles.

*A. amoena* (Czeczott) Rothm., known only from one locality in a montane pine forest in Anatolia, also has a glabrous inflorescence, leaves with a wide sinus and 9 lobes with 12–18 teeth, as well as epicalyx segments subequal to and glabrous as the sepals, but it differs mainly in having a shorter stem, smaller leaves, and a glabrous or only sparsely hairy hypanthium.

*A. austroitalica* should therefore be considered an old schizoendemic, being geographically isolated from its allies in Anatolia and the Balkans.

Since *A. sect. Erectae* has genetically participated in hybridogene endemics which are even found as far west as the Iberian Peninsula (Fröhner 1986), the discovery of this westernmost member of *A. sect. Erectae* is of some interest for the phylogeny of the genus.

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