

Two new Italian species of carnivorous plants from Alpi Apuane: *Pinguicula mariae* and *Pinguicula apuana*

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Pinguicula is a carnivorous genus that belongs to the family Lentibulariaceae. The species of this genus occur worldwide, with widest distribution in the northern hemisphere. They are characterized by a rosette of leaves which appear slimy and are greasy to the touch due to the presence of mucilage-producing glands on the upper surface of the leaves. The mucilage contains enzymes able to digest small insects that become trapped, providing nutrients to the plant.

Two new species of *Pinguicula* from Alpi Apuane, a mountain range in northern Tuscany, Italy, have recently been described (Wulfenia 16: 1-31, November 2009): *Pinguicula mariae* Casper and *Pinguicula apuana* Casper & Ansaldi. Before this publication, *P. longifolia* ssp. *reichenbachiana* and *P. leptoceras* were reported from these mountains as well but *P. leptoceras* is now known only to occur in the Alps of northern Italy and *P. longifolia* ssp. *reichenbachiana* occurs in some valleys of Liguria.

Here follows a brief description of the two species:

Pinguicula mariae Casper

Distribution and habitat: this species appears to be very rare in its range. It can be found in two valleys on the left side of Serchio River at altitudes of 300-400 m and in the area of the mountains Nona and Procinto at altitudes of about 1000 m. It grows on south/southwest-facing dripping, vertical walls or slopes, typically on bare limestone and in association with *Globaltria* sp., *Potentilla* sp., *Adiantum capillus-veneris* and dwarf willows.

Description: it has a homophyllous rosette (it does not produce very long leaves during the summer, as *P. longifolia* ssp. *reichenbachiana* does) from 4 to 10 cm in diameter. It has ovate-oblong leaves with an usually acute apex narrowed at the base into a short petiole. The colour of the lamina ranges from light green to reddish, depending on sun exposure, but it can greatly vary from plant to plant. During the cold season it forms a bulb-like winter bud. Flowering occurs between late March and April. The flower is big and beautiful; up to 3.5 cm long, including spur, purple with a white spot, and has stems about 5 cm long. Typically there is a widely opened corolla, the lower lip much larger than the upper one. The lobes are more or less obovate with rounded edges, not touching each other, and a long and thinned spur. Another typical feature is the spherical capsule.

Pinguicula apuana Casper and Ansaldi

Distribution and habitat: this species is quite common on Alpi Apuane and is very easy to find on wet meadows, along streams and mossy rocks. It usually grows above 1000 m (up to 1900 m) in north-facing habitats in association with dwarf gentians, orchids and *Soldanella* sp. *P. apuana* can also be found in calcareous peat bogs, on limey-clayish walls and, in rare cases, on limestone walls at very low altitudes (200 m).

Description: it has a homophyllous rosette from 4 to 10 cm in diameter; the leaves are ovate, more or less oblong, with apex more or less rounded in light green. During the cold season it forms a bulb-like winter bud. Flowering occurs between May and June. The flower is up to 3 cm long, spur included, and is coloured blue-violet; it may or may not have a white spot and the throat is dark

purple with very slight purple veins and has stems about 10 cm long. The corolla is moderately opened, with obovate lobes more or less oblong with rounded to truncated apex, not touching each other; the spur is not too thinned with an obtuse apex. The capsule is cone-shaped.

Summarizing, the two new species can be easily distinguished by:

- habitat;
- flowering period;
- shape of the rosette: not immediately noticeable, but the leaves of *P. mariae* are a bit more elongated and pointed and may be reddish;
- flower: the flower of *P. mariae*, with its widely opened corolla, recall *P. poldinii* or *P. longifolia* ssp. *reichenbachiana*, while the slightly more closed corolla of *P. apuana* is more reminiscent of *P. vulgaris* and, particularly, *P. fiorii*;
- fruits: spherical in *P. mariae* and cone-shaped in *P. apuana*.