Orchis pauciflora TEN., Fl. Napol. 1: 52. 1812.

Few-flowered Orchid

Lectotype (hoc loco selectus):

TEN., Fl. Napol: t. 88 (without a flower). 1820.
Origin: Italy, vicinity of Naples.
Remarks: According to information from the Herbarium of the University of Naples, holotypes or isotypes do not appear to exist.

Synonyms:

Orchis provincialis ssp. *pauciflora* (TEN.) LINDL., Gen. Sp. Orchid. Pl.: 263. 1835.
Orchis provincialis var. *pauciflora* (TEN.) BATT. & TRAB., Fl. Algérie 1(2): 195. 1895.

Etymology:

pauciflorus (lat.) = few flowers: after the plant, which has a very sparsely flowered spike.

Remarks:

If *Orchis olbiensis* is the western Mediterranean representative of the section *Masculae*, one could call *Orchis pauciflora* the Mid Mediterranean counterpart, as the distribution of this species joins directly to that of *Orchis olbiensis* with its most eastern outpost in Crete. There is only one very small area that overlaps and that is on the island of Corsica.

From a genetic point of view, both species are certainly close, they branch off directly of the developing trunk of the cladogram, with *Orchis olbiensis* being the older of the two species. This supports the theory of propagation from the west in an easterly direction; this is also in accordance with the main wind direction, which appears to endorse this theory.

Pict. 326/1: Lectotype of *Orchis pauciflora*

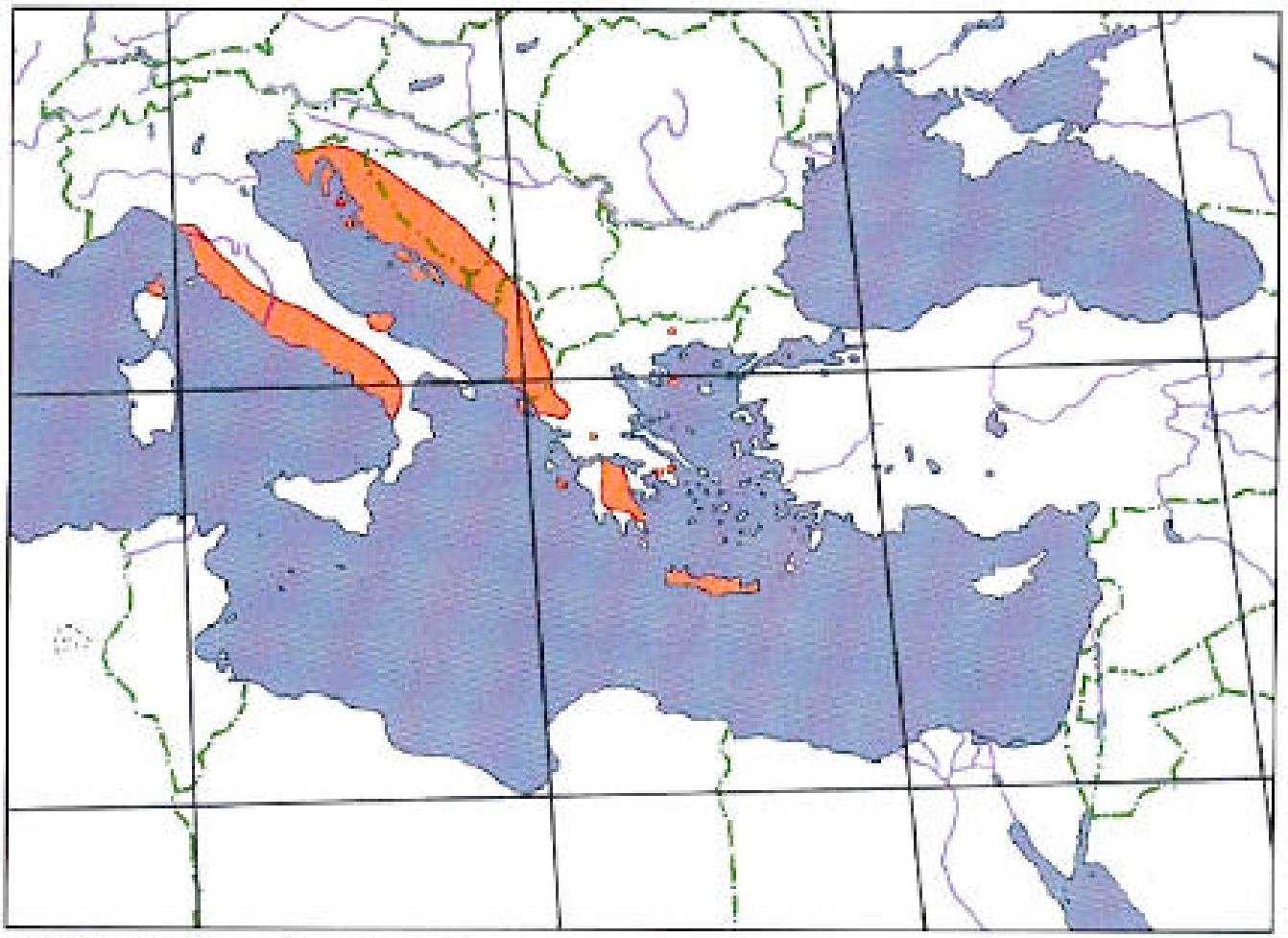
Morphology:

Orchis pauciflora is a geophyte that has two ovoid to ellipsoidal tubers during flowering time.

The plants grow up to a height of 10 to 20 cm (in special cases to 30 cm!) and have a rosette of 4-9 strongly green, unmottled, elongated oval leaves, 4-7cm long and 0.6-1.7 cm wide, that bend over backwards in a graceful curve, 2 - 3 further leaves vaginate the stalk. The bracts are membranous and they are with a length of 11-20 mm a little longer than the ovary.

The quite short, lax flower spike consists of up to 15 single blossoms, but as a rule there are normally considerably fewer, however, they look quite large on this small plant. The matched sepals thrust upwards and backwards, thus contributing to the impression of much larger flowers. These are 10-15 mm long and 6-10 mm wide, and by this they are clearly wider than the middle sepal. Together they form a helmet. The central lobe of the tri-lobed lip protrudes and shows a more

Pict. 327/1 - Small group of two plants - 12.4.92 - Crete, Saktouria (H. Kretzschmar)



Pict. 328/1: *Orchis pauciflora* - distribution area

intense yellow along its centre; this is covered by fine, brown to red-brown spots. These can be totally absent in exceptional cases (Pict. 330/2). The side lobes that bend back are also a bright yellow.

The spur, at 14-25mm, is about one and a half times longer than the ovary. To begin with it is almost horizontal and the last third bends strongly upward. It is blunt at the tip and contains no nectar.

Biology:

Flowering time lasts from the end of March to the end of April. The fact that this plant is allogamous is proven by the appearance of hybrids with *Orchis anatolica*, *Orchis mascula*, *Orchis olbiensis*, *Orchis provincialis*, *Orchis quadripunctata* and *Orchis sitiaca*. Hybrids and probably hybrid swarms can occur with *Orchis mascula* and *Orchis provincialis*. Pollinators are unknown to date.

Cytology:

2n = 42 (Vermeulen 1949; Mirkvicka 1993)

Ecology:

Sparse grasses, garrigues and amongst shrubs on dry stony ground are settled; here in particular, very rocky biotopes are colonised where the species can occur in strong populations (Pict. 329/1). The species is bound to calcareous subsoil. They grow at altitudes that range from the coast at sea level, up to about 1,700 m.

Pict. 329/1: *Orchis punctulata* in its habitat - 17.4.00 Crete, Gerakari (H. Kretzschmar)

Pict. 329/2: Inflorescence - 12.4.92 Crete, Sakturia (H. Kretzschmar)

Pict. 329/3: Flowers - 1.4.94 Crete, Melambes (H. Kretzschmar)

Pict. 330/1: Typical biotope among rocks - 9.4.00 Crete, Prodromi (H. KRETZSCHMAR)

Pict. 330/2: Flower without spots - 4.5.85 Italy, Ita (H. KRETZSCHMAR)

Variability:

While the plant size may depend on the local levels of nutrition, the yellow colouring of the central lobe of the lip is variable: it ranges from bright yellow to a greenish yellow (cf. Pict. 329/2 and 329/3); otherwise the species is remarkably uniform.

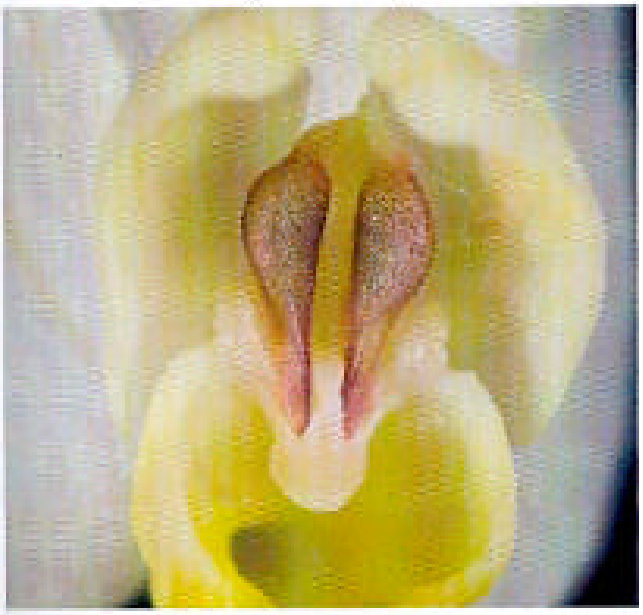
Distribution:

The species appears on Corsica, in Italy, on the Balkan Peninsula, particularly southwards along the Adriatic Coast and to Crete. Former reports of the species being found on Sicily are erroneous.

Status and Threat:

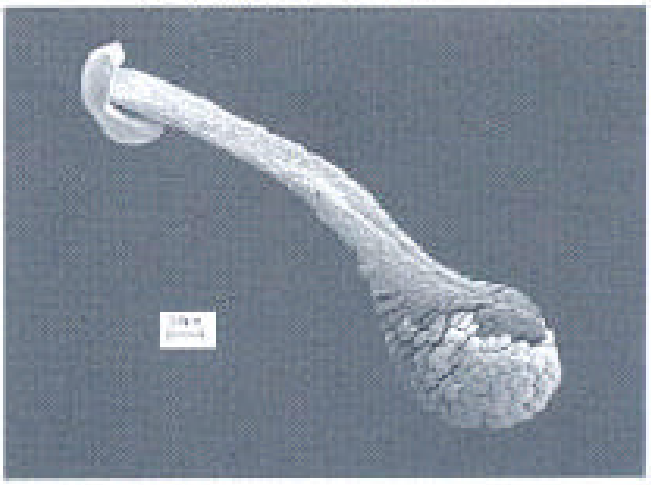
Even though the area of *Orchis pauciflora* is not really big, it is actually not under any special threat; this is unlikely to change as long as there are no changes to pasturing of its biotopes. This does not exclude populations being impaired or destroyed by human influence, for example, by changes to, or expansion of infrastructure, or changes of utilisation and housing. These are specifically vulnerable by tourism activities and the associated fast expansion of hotels and their facilities.

Pict. 331/1: Samples still in bud - 19.4.03 Crete, Kathare (W. Eccarius)

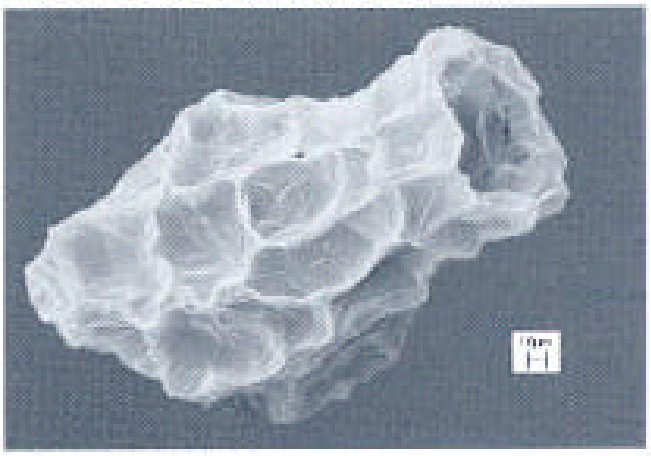


Pict. 331/2: A look into the helmet - 4.4.06 Greece, Lambokambos (H. Kretzschmar)

Pict. 331/3: Fruits - 10.5.04 Northern Greece, Delvinaki (H. Kretzschmar)



Pict. 331/4: SEM pollinarium (H. Dietrich)



Pict. 331/5: SEM seed (H. Dietrich)