

**Informationen zur Umwelt und für Naturreisende auf Kreta:**
Information about the Environment and for travellers in Crete:**The Orchids of Crete (Part 1)**

(Man Orchid, Pyramidal Orchid, Barlia, Dense-flowered Orchid, Violet Limodore)

(An article from our forums member [Ralf Schwab](#), Obertshausen [Hessen]).

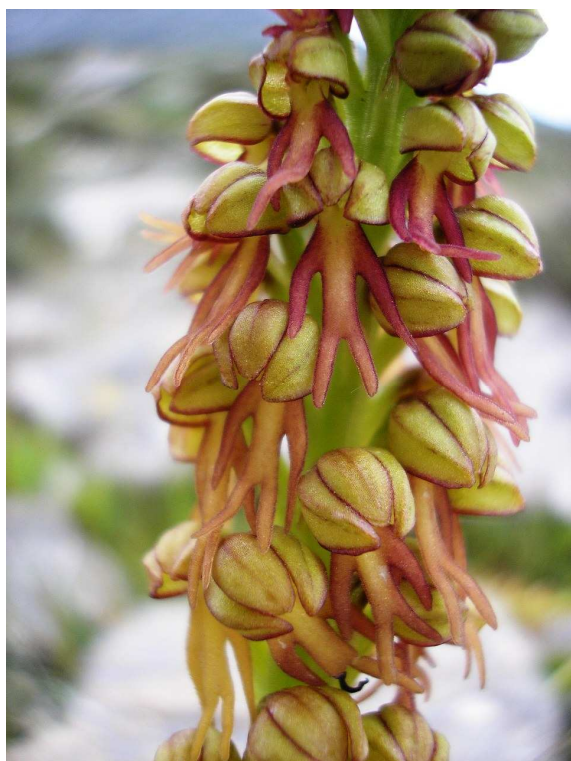
Orchids are known to the most people as beautiful ornamental plants that have their home in the tropics. But there are a number of wild orchids in Europe too. In older identification literature 67 – 70 species of Orchids are named for Crete ^[1]. In the recent literature [H. & G. KRETZSCHMAR, W. ECCARIUS, 2004] the Cretan orchids are sectional into 61 types, of which 6 species on the island occur in several subspecies (total 15) so there is again a total of 70. Some of these forms are so similar that it is difficult to differentiate, especially when, as it is the case in some areas, they form mixed populations, which in addition to the parental species are found in all intermediate transitional forms. Apart from a few exceptions all orchids have parallel vines, as it is characteristic of monocots. Even though the flowers vary greatly from species to species, they are always made of 6 petals, whereby one, usually the most beautifully designed central lower petal, is called labellum. The other 5 petals are divided into three outer (sepals) and two inner (petals). Apart of some species, which are growing wild also in Germany, e.g. the Pyramidal Orchid (*Anacamptis pyramidata*) or the Three-toothed Orchid (*Orchis tridentata*), there are also some types occurring only in Crete – so called endemic (based on the literature of KRETZSCHMAR and ECCARIUS (s.u.) 6 species and 8 subspecies. Most known here is probably the Cretan helleborine (*Cephalanthera cucullata*). Most Orchids occurring in Crete belong to the genera Orchid (*Ophrys*) and Marsh Orchid (*Orchis*). There are areas in which many species can be find side by side in such quantities that it's an incredible sight, to see this most delicate and beautiful drawn flowers between the rather dismissive thorn bushes.

^[1]Quelle: C. & A. ALIBERTIS: Die wilden Orchideen Kretas – Iraklion 1989.

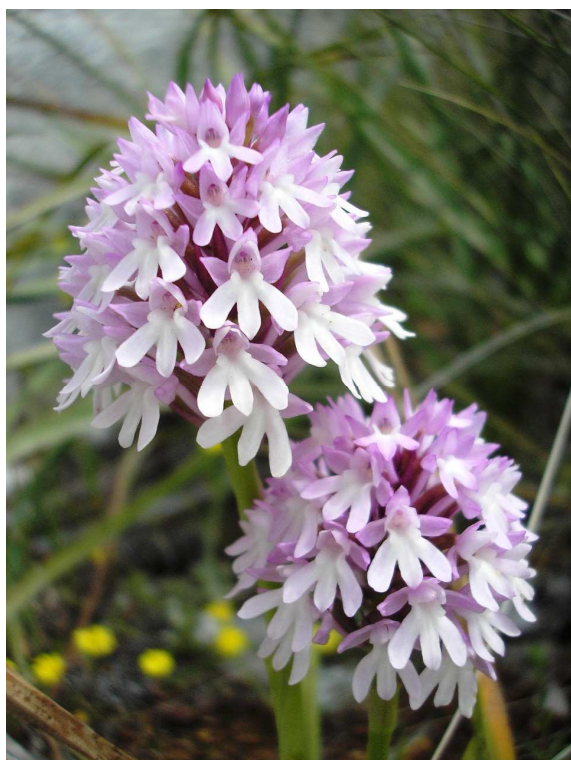
The book "Orchideen – Kreta und Dodekanes" from H. & G. KRETZSCHMAR und W. ECCARIUS is recommended as identification literature. It presents all species with excellent photographs and a detailed description. Also a distribution map of the individual species is given [Mediterraneo Editions, ISBN: 960-8227-43-7].

The heyday of Cretan orchids focuses on mid March to mid April, when many of the common species are in bloom. There are also types that flowering begins in January or in October. But also within a species, flowering varies according to altitude and location. Thus it may be impossible to locate all local Crete orchids in a three-week vacation. Also, there are those that occur only in very few locations with a few copies in addition to the species on the island. The Cretan orchids occupy in most diverse habitats. Many grow in the garrigue on basic surface, but there are also species that grow in pinewoods, shady canyons, on damp meadows or broom heath on sour surface.

Selected species – with images – will be presented in several documents of the series **CRETE Environmental info**, where the short description is not meant as identification literature (therefore very good professional literature is available), but to give you an overview on diversity of orchids found in Crete.



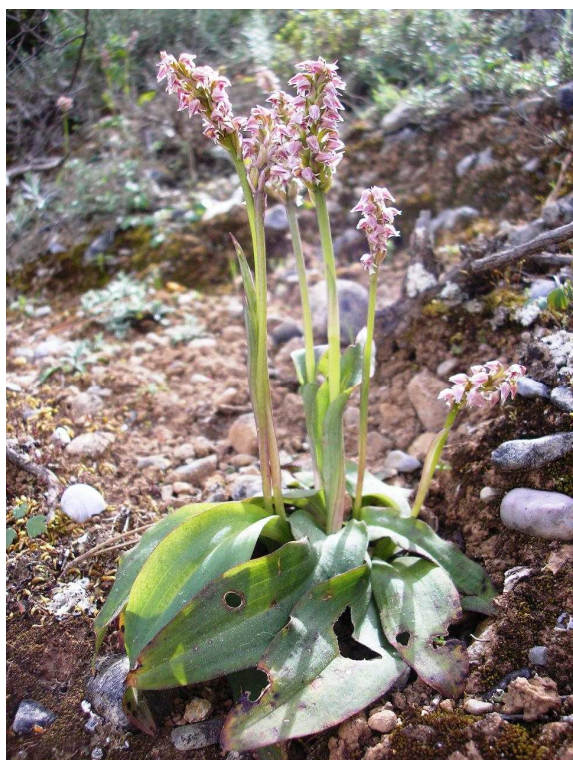
Man orchid (*Aceras anthropophorum*): Only species of the Orchis relatives without spur. The flower of this slight species reminds of a doll with long thin arms and legs (labium), while the head is made of the remaining petals. The **colour** of the flowers varies from pale yellow to dark red. **Flowering season**: Early to late April. **Habitat**: in meadow garrigue; bound to lime underground. **Plants find spot**: west of Geraki / Prefecture Iraklion on 16th and 19th of April 2007.



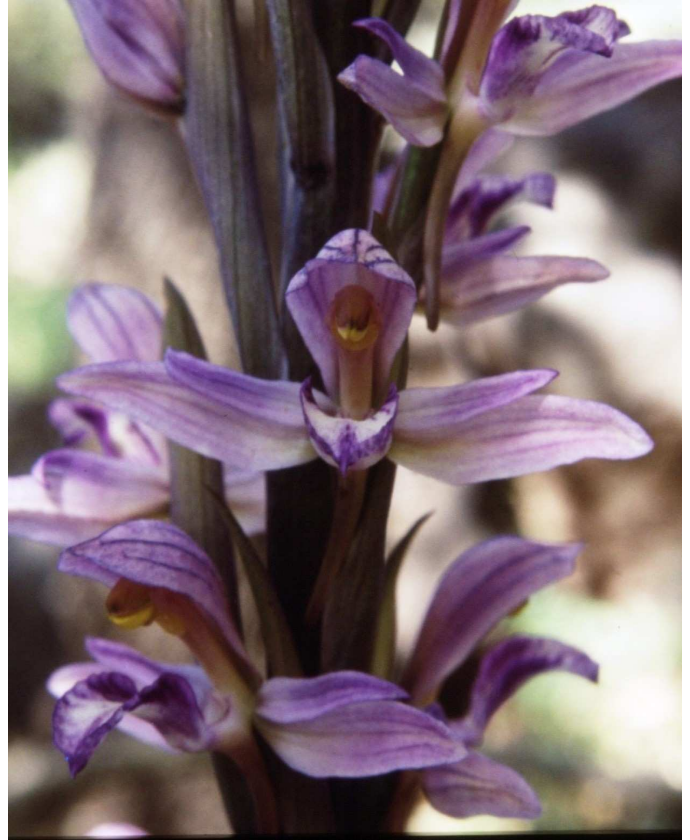
Pyramidal orchid (*Anacamptis pyramidalis*): The name derives of the pyramid shape of inflorescence, resulting from the blossoming plant if the lower flowers flourished, but the top are still closed. The **colour** is usually a lighter red, but also white flowering plants occur. **Flowering season**: End of March to late May. **Habitat**: Garrigue on basic ground. **Plants find spot**: between Gonies and Krasi / Prefecture Iraklion on the 28th of April 2007.



Barlia (*Barlia robertiana*): A plant that is worthy of its name: very large and vigorous plant with long flowering crop. The **colour** of the large flowers varies from greenish white to dark purple. **Flowering season:** Early February to early April. **Habitat:** individual in Garrigue, from lowlands up to over 1000 m. **Plants find spot:** between Prina and Kalamafka / Prefecture Iraklion on the 26th of March 2008.



Dense-flowered Orchid (*Neotinea maculata*): A small, dainty plant with tiny white-pink flowers that are in a dense spike. The labium with its 4 tails reminds in its form to a doll. **Flowering season:** late March to late April. **Habitat:** this species grow on sour ground, gladly on shadow places. **Plants find spot:** between Kalo Horio and Prina / Prefecture Iraklion on the 21st of March 2008.



The **Violet Limodore** (*Limodorum abortivum*) is a large, strong plant without green leaves. The stem shows only a few, purple, enveloping shed sheets. The flowers are large, the **colour** of the sepals are whitish-violet, steel-blue to red-violet, sometimes almost white. The labium is darker, most violet, long spurred whereby the spur is directed steep down. **Flowering season:** late March to mid May. **Habitat:** most in *Pinus brutia* forests, in Western Crete in chestnut groves and high Garrigue, sometimes in open terrain. The Orchid has become relatively rare in Crete, because the pine trees strongly decreases ("fire clearing") **Plants find spot:** Thripti, south-east of Pahlia Ammos / Prefecture Iraklion on the 21st of April 2007. The image right shows a blooming flower from North-Israel, springtime 1999.

In the literature it is described both way, as autogamy ^[1] and as allogamy ^[2]. Upon self-pollination the pollen mass fall from the open anthers on the below lying sticky stigma. Because the flowers of the spur secrete nectar, also insect pollination is possible. Solitary bees of the genus *Anthophora* have been proven as pollinators in the Mediterranean. The plants can, during unfavourable (dry) years, bloom also underground (Cleistogamy)

^[1] **Autogamy** (gr. αὐτό *autó* „self“, γάμος *gamos* „marriage“), also called self-fertilisation, is a form of sexual reproduction where only one parent is present or genetically contributes to reproduction.

^[2] **Allogamy** (cross-pollination), stands for the pollination of a flower with another flowers pollen.

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[to be continued with Part 2]