

**Informationen zur Umwelt und für Naturreisende auf Kreta:**

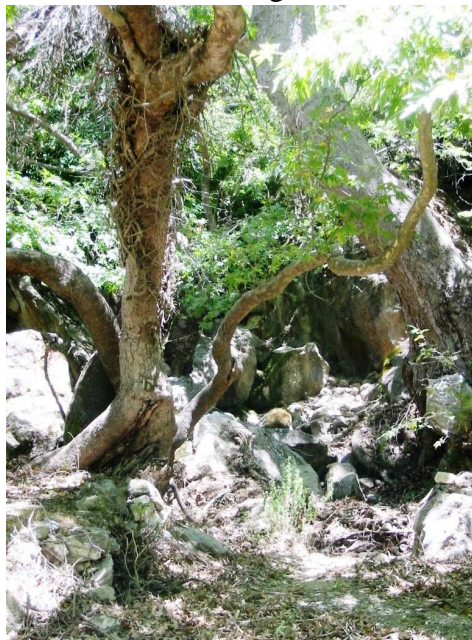
Information about the Environment and for travellers in Crete:

The Orchids of Crete (Part 12):**Cretan Helleborine, *Cephalanthera cucullata* BOISS. & HELDR. ex RCHB. f**

So far we introduced **50 Orchid types** of Crete with our leaflet series “**The Orchids of Crete**”; therefore see our web side at navigator rubric “Botanical” the info-leaflets 269-08/E to 273-08/E (Part 1-5) and 280-08/E to 285-08/E (Part 6-11). Information about the “Cretan Helleborine” can also be found within our leaflet No. 230-07/E und within the forum (German only) at [<http://www.kreta-umweltforum.de/wbb2/thread.php?threadid=51>].

Cephalanthera cucullata has been discovered by the French scientist V. RAULININ in 1845. The Orchid is protected in Greece by the Greek Presidential Decree 67 / 81 and recorded worldwide in the annexes II and IV of the Habitats-directive and the CITES Convention (annex II). The Cretan Helleborine is also recorded in appendix A of the VO (EG) 1332 / 2005 concerning the protection of species of wild fauna and flora. 1985 the Greek Ministry of agriculture has designated an area of 0.2 hectares (on Mount of Psiloritis in Kamares) with a small population of the orchid as a natural monument. In the course of the CRETAPLANT project [<http://cretaplant.biol.uoa.gr>] the Orchid has been resettled in a 12 hectare area (near the village Koustogerako in the District of Anatoliko Selino, on a mountain range of the LEFKA ORI).

The **genus Helleborine (Cephalanthera)** was compiled in 1818 by the French botanist Louis Claude Marie Richard. The genus name is formed from the Greek κεφαλή kephalē = Head and ανθηρός anthērós



= blooming. Fourteen species belong to the genus. The occurrence stretches from North Africa and Europe to China and Japan. A kind of mycotrophs [Mycotroph (from Greek mykes = fungus and trochein = feed)] is found in the Western United States. The Helleborine are slim, persevering and herbaceous growing rhizome Geophytes. The rhizomes are short, crawling, branched and strongly rooted; the parallel nerved leaves are distributed on the stem. The large, hermaphrodite, dorsiventral, triad flowers have colours of white and yellow to almost violet. The flower leaves are often helmet-shaped inclined together. Only in some species the flower opens up almost completely. The labium is divided into a rear- (Hypochil) and front labium (Epichil). A strong spur exists in some species, at others it is missing or only implied. Partially self pollination. *Chryssoula & Antonios Alibertis* described in their book "The wild orchids of Crete" (p. 29-33) [9. Ed., 1989; 176 Pages, 209 fig] 4 species from genus *Cephalanthera* for Crete: *Cephalanthera cucullata* (Spurred Helleborine), *Cephalanthera damasonium*

(White Helleborine), *Cephalanthera longifolia* (Equitant-leaf Helleborine) und *Cephalanthera rubra* (Red Helleborine), the latter was not encountered by the authors, the description and illustration in this publication are based on informations from *Dr. W. Teschner*, who (1975) will have discovered 20 plants of this in Crete. Except *Cephalanthera cucullata* (Cretan Helleborine) and *Cephalanthera longifolia* (Equitant-leaf Helleborine), whose occurrence in Crete is secured, the other 2 types are doubtful, although sporadically reported for Crete.

Because of the absence of suitable biotopes, who also are exposed to strong grazing pressure the Cretan Helleborine is very rare. The endemic grows at elevations over 700 m in deciduous mixed forests, especially along water leading gutters (see fig, Page 1), but also in drier turkey oak forests. The plants are often small (less flowered specimens are sometimes only 5 cm high), but can also be about 20 cm high. They have upwards shrinking, the stalk enfolding bracts for the up to over 20 close standing blossoms. The flowers open (depending on weather conditions) more or less and are coloured strong white (to Pink). Heyday is from mid-May to mid-June. The labium has a significant, but only about 2 mm long spur at its base. Hybrids of the Cretan Helleborine are not known.



Pictures above: biotope view of a habitat of the Cretan Helleborine near the abandoned village Ano Simi, Prefecture Lassithi [page 1], Photo: *H. Eikamp* (08.07.2007); plant images, from left to right: from the database of the NHMC (9876), Photo: *Dr. A. Trichas* at Gergeri, Prefektur Iraklion, Photos: *G. Blaich* ^{1]} (19.05.1991).

^{1]} This way we thank Mr *Günther Blaich* for the use of images of Cretan Helleborine and recommend his website "Günther's Homepage": www.guenther-blaich.de; here you will also find good image documentation to "European Orchids and their hybrids".

Literature: H. & G. KRETZSCHMAR & W. ECCARIUS (2002): Orchideen auf Kreta, Kasos und Karpathos – 416 Pages, 700 Fig. (74 species and subspecies), therefore see at: [<http://www.orchideen-kartierung.de/KKreta/KKRETA.HTML>]

Worth knowing information:

The Cretan Helleborine was also documented at a stamp, therefore see: HAUSSMANN, F.-H. (1984): In Europe growing Orchids on stamps. - *Ber. Arb.krs. Heim. Orchid.* 1 (2): 267-287

Using the pollen analysis the often discussed question after the fossil age of orchids could be answered recently by the paleo-botany. The estimated age of orchid plants therefore varies between 26 million (Miocene Epoch) and 112 million years, the age of the Cretaceous period; see also a post in our Forum at (German only): [<http://www.kreta-umweltforum.de/wbb2/thread.php?threadid=428>]