

**Informationen zur Umwelt und für Naturreisende auf Kreta:**
Information about the Environment and for travellers in Crete:

Crete seen from outer space

To the geomorphology¹ of Crete

Crete is the fifth largest Mediterranean island and the largest island in Greece. Their dominant location between three continents (Europe, Asia and Africa), almost in the middle of the Eastern Mediterranean, has played a dominant role for the history of the island from antiquity until today. Four seas flow around Crete, the Carpathian in the East, the Myrtoan in the West, the Cretan in the North and the Libyan Sea in the South.

The island was part of the Aegean mainland during the Palaeocene of the Cenozoic. Its current form began only by the newer ground movements of the Pliocene and the Quaternary Earth fold. These tectonic processes cut off the island in its uncommon, elongated narrow shape from the Aegean continental plate. Later, during the Miocene, most of the island was covered by the sea. New fractures and shifts have created the relief-like surface shape of the island, the four big mountain massifs and smaller mountains; the final form of today was created by last movements of the solid Earth's crust. The latest rock strata are sediments out of the Quaternary, where are mammalian fossils, mainly of large mammals such as dwarf elephant, hippopotamus and antelope, which are proven by fossils finds (finds from the creek beds of the Lassithi plateau).



The figures show a karst cavity in the upcoming rock that was probably filled with sediment (as "fissure fill" by water transport) during the Quaternary.

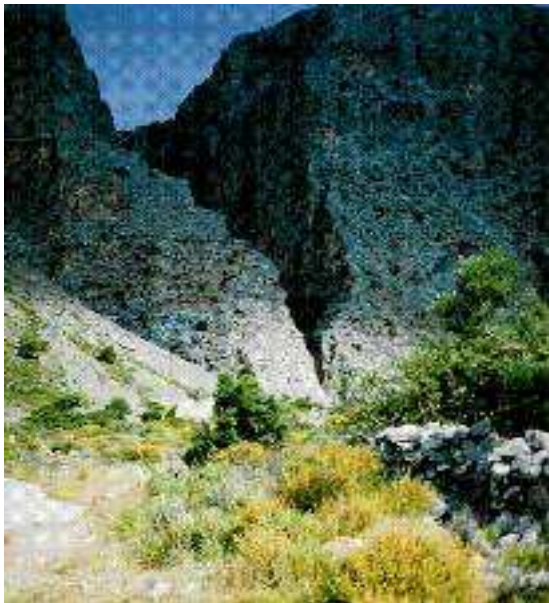
The detail shows part of the Quaternary snail shell in the soil sediment of the "fissure fill" (karst cavity)

Pictures: U. Kluge (20.09.2004)



Crete is an extremely mountainous island. High mountains stretch from one end to the other, where deep valleys, gorges and many plateaus are located in between. Caves and grottos (approximately 5,000) complete the impression of a labyrinth.

Three big mountains dominate the island with their cross foothills. In the Prefecture of *Chania* in the West, the *Lefka Ori* (White Mountain) mountain range rises. The highest peak is the 2,453 m high *Pachnes*. In the Centre of Crete the large mountain range *Idi* or *Psiloritis*, the highest peak *Timios Stavros* with 2,456 m is the highest point of the island. Further East, on the western edge of the Prefecture of *Lassithi*, lays the 2.148 m high *Dikti* Mountain. Fertile plateaus spread between the high mountain peaks. The most important are: the *Omolos* plateau located in the White Mountains, the *Nida* plateau on the East side of the *Idi* near the *Idean* cave at 1,400 m, *Katharo* plateau west of *Kritsa* and finally the *Lassithi* plateau as largest plateau of Greece at around 850 m altitude.



At the foot of the mountains gorges have formed in many places from deep, narrow columns in soils, which play an extremely important role for the conservation of fauna and flora. The most important gorges are through the *White Mountains*, where the *Samaria Gorge*, also called *Pharangas* with approx. 11 miles exceeds all others in length. At the *Idi Mountain* the *Zarou Gorge*, at the *Asteroussia* the *Ajiopharango Gorge*, the *Vianno-* and *Arvi Gorge*. In *Lassithi* the Gorges *Cha* and *Poropharango* and in *Sitia* the Gorges of *Krypthi* and *Zakro*.

The picture shows the so-called HA-Canyon, left the road, between *Pachia Amos* und *Ierapetra*, which is with 7.9 miles width the narrowest place of Crete. The gloomy gap of the *Monastiraki Gorge* has no walkable output at the end of the Canyon and interrupts at this point the massif of the *Thriptis Mountain*.

Pictures: H. Eikamp (14.05.2002)

Due to the small width of the island and its soil (many small hollows and fissures in the ground) it hardly creates rivers, because the surface water (rain water) flows torrent-like to the sea or seeps into the ground. Therefore there are only a few significant rivers (besides the river *Vrisakos* is only the *Kourtaliotiko* at *Koxare* to name), the most are torrent-like which do not lead water during the summer. There are only two (2) lakes on Crete: the freshwater lake *Kournas* is probably the well known and with 160,000 sp the biggest; the second (2nd) freshwater lake, *Agia*, is located on the *Kydonia-Plateau*.



The fig. left shows a mountain creek which flows as torrent (waterfall) downhill into the river *Platis* (fig. right), which leads at *Agia Galini* into the *Libyan sea*.

Pictures: H. Eikamp (27.04./02.05.2003)

For further information about the geology of Crete see http://www.kreta-umweltforum.de/NLUK_en.htm and the leaflets No. **011-04/E**, **036-04/E** and **040-04/E**

¹Geomorphology (Earth, Form, Shape and Science) is a sub domain and describes / examined shapes the forms of the form processes of the Earth's surface and the connections and mutual interference of lithosphere (Stone), atmosphere (Air), hydrosphere (Water) and biosphere (Life). This geology provides important background information.

Translated by Michael Bloechinger-Daeumling

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Palaeoanthropology II: Neanderthals – powerhouse with brain
Homo neanderthalensis ("Stone Age man")

The Neanderthal was much more similar to us than researchers previously thought. Meanwhile over 70 sites in the world prove that the up to 1.75 m Caveman could speak and created complicated tools. He buried his dead in carefully created graves. With the "Homo sapiens", our direct ancestor, the Neanderthals lived side by side for thousands of years - and were not inferior. Why he died around 25,000 years ago, is under discussion by Science in several theories. The fig. left is showing the skull of "Galiläa man" (*Homo neanderthalensis*) which lived in Israel about 150-180 thousand years ago (Inv. No. 071); besides a skull of "Border-Cave" (*Homo sapiens*), which lived around 70-80 thousand years ago in South Africa (right, Inv. No. 077)

The shown skulls are from the teaching aids collection of the publisher.

