



ISSN-Nr. 1614-5178

Publisher: NAOM eV • Public relation, H. EIKAMP / U. KLUGE +49 (0)6104 - 490614
Internet: www.kreta-umweltforum.de / www.nluk.de; E-mail: klugesei@gmx.de

Alexanderstraße 42
63179 Obertshausen

Informationen zur Umwelt und für Naturreisende auf Kreta:

Information about the Environment and for travellers in Crete:



“Geotope” in Agios Pavlos - probably unique in Europe! / Literature

Directions: *Agios Pavlos* is a village within the bay of Melissa in South-Crete, around 16.8 miles southeast of *Spili*. From *Spili* drive towards Agia Galini and branch off right shortly after the village *Nea Kria Vrissi* towards *Agios Pavlos*. It's about another 8 miles from the branch to the destination.

The route leads (from the junction), after the last hilltops are crossed, in many (partly narrow) serpentines down to the sea. You should not flinch from doing because it is rewarded with great views and at the end of a unique landscape. Here you find, besides peace and “Crete pure”, particularly geological highlights (“Geotope”), which are unique in Europe.



The Bay of Agios Pavlos has a special microclimate and miles of beaches invite for swimming. You should not miss to walk over the great "Dune", it offers magnificent views of the coastal formations and the two islands PAXIMÁDIA in the Libyan Sea.

The picture above right shows the “Crocodile”, which “guards” the bay of Agios Pavlos. On the "mouth" of the "Crocodile" a dark water line and "Water marks" at the rock mark the North dumping and uplifting of Crete which happened in the late Pliocene age to early Quaternary, which led to the present contours and the island was raised to about 1.5 m from the sea.



The picture series shows the probably most photographed rock in Crete: DIPLONO PETRIS. The folded rock formation is "on the back of the Crocodile" and probably knows nothing comparable in Europe (fig. left), next to it detail pictures of rock folding. The rock formations documented an alternation of limestone layers with chert layers in the Pindos range. These sediments deposited in a deeper Sea basin (the Pindos Ocean) formerly deformed by the alpine fold tectonics (alpidische Orogenese)[see also our leaflets No. **081-05/E**: “Geological structure of Crete”, **054-04/E**: “Geomorphology of Crete” and **017-04/E**: “Geotope on Crete”]

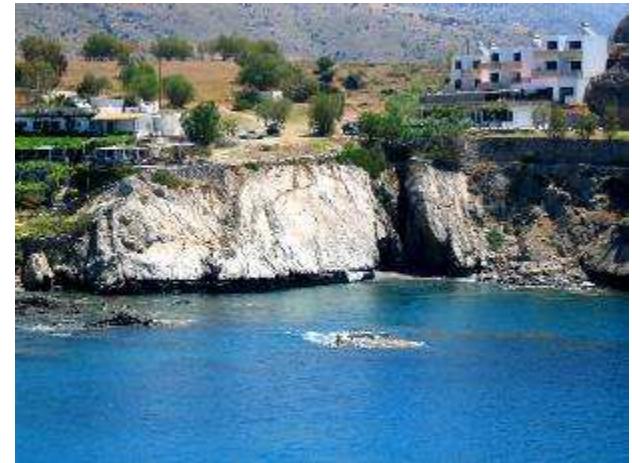


Fig. show a view ("from the mouth of the crocodile") through a so-called sea arch emerged from the ruins of a littoral cave (left) and from the "Dune" to the beach area of the bay (middle). The fig. right shows Agios Pavlos seen from "the back of the Crocodile" towards inland.

Pictures: (3) U. Kluge / (3) H. Eikamp (10.05.2005)

LITERATURE ABOUT GEOLOGY AND PALAEONTOLOGIE OF CRETE/GREECE.

Λογοτεχνία στη γεωλογία και την παλαιοντολογία Κρήτη/Ελλάδα

BONNEAU, M. & GINSBURG, L. (1974): Découverte de *Dorcatherium puyhauberti* ARAMBOURG et PIVETEAU (Mammalia) dans les faciès continentaux de base de la molasse tertiaire de Crète (Grèce): Conséquences stratigraphiques et tectoniques. – Compte Rendu Sommaire des Séances de la Société Géologique de France, v. 1974, nr. 1: 11-12; Paris.

CREUTZBURG, N., DROOGER, C.W., MEULENKAMP, J. E., PAPASTAMATIOU, J., SANNEMANN, W., SEIDEL, E. & TATARIS, A. (1977): General Geological Map of Greece: Crete Island, 1:200.000. – Institute of Geological and Mining Research; Athen.

DE BRUIJN, H. & MEULENKAMP, J.E. (1972): Late miocene rodents from the Pandanassa Formation (Prov. Rethymnon), Crete, Greece. – Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, v. 75, nr. 1: 54-69; Amsterdam.

DE BRUIJN, H., SONDAAR, P. Y. & ZACHARIASSE, W. J. (1971): Mammalia and Foraminifera from the Neogene of Kastellios Hills (Crete). A correlation of continental and marine biozones. – Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, v. 74, nr. 5: 1-22; Amsterdam.

EIKAMP, H. & KLUGE, U. (2002): Fossilien auf Kreta. – Ztschr. FOSSILIEN, 19. Jg., H. 5: 261-262, 3 Abb.; Goldschneck-Verlag, Korb. [weitere Literatur siehe www.naom.de]

EIKAMP, H. & KLUGE, U. (2005a): Geologischer Aufbau Kretas (Kurzabriss). – Info-Merkblatt Nr. 81-05 der KRETAumweltinfo, 2 S., 3 Abb., 1 Karte; NAOM eV, Oberthausen. [weitere Literatur siehe www.kreta-umweltforum.de: Info-Merkblätter Nr. 11-04, 17-04, 36-04, 40-04, 43-04, 45-04, 54-04, 63-05, 69-05 und 71-05]

EIKAMP, H. & KLUGE, U. (2005b): Zu Kretas Klima (Wetter) und Vegetation. – Info-Merkblatt Nr. 82-05 der KRETAumweltinfo, 2 S., 6 Abb., 2 Karten; NAOM eV, Oberthausen. [weitere Literatur siehe www.kreta-umweltforum.de]

EIKAMP, H. & KLUGE, U. (2005c): *Deinotherium* auf Kreta entdeckt. Nachweis eines Protoelefanten aus Ostkreta (Miozän). – Info-Merkblatt Nr. 83-05 der KRETAumweltinfo, 2 S., 3 Abb., 1 Karte; NAOM eV, Oberthausen. [weitere Literatur siehe www.kreta-umweltforum.de: ATHANASSIOU, A. (2004); BENDA, L. HILTERMANN, H., KUSS, S.E. & SYMENOIDIS, N. K. (1970); DERMITZAKIS, M. D. (1994); EIKAMP, H. & KÖNIG, W. (1983); EIKAMP, H. (1994); EIKAMP, H. & SCHNEIDER, W. (2001); SYMINOIDIS, N. K. (1966)]

GEODOK – Literaturdatenbank Uni Erlangen. – www.geodok.uni-erlangen.cgi-bin/geodok/geodok.pl?sl = Kreta.

GRADSTEIN, F. M. (1973): The Neogene and Quartenary deposits in the Sitia District of Eastern Crete. – Annales Géologiques des Pays Helléniques, v. XXIV: 527-572; Athen.

HAMILAKIS, Y. (1996): Cretan Pleistocene Fauna and Archaeological Remains: The Evidence from Sentoni Cave (Zoniana, Rethymnon). – In: REESE, D. S. (ed.), Pleistocene and Holocene fauna of Crete and its first settlers. – Prehistory Press: 231-239; Madison.

JAKOBSHAGEN; V. (1986): Geologie von Griechenland. – Beitr. zur regionalen Geologie der Erde, Bd. 19; Berlin/Stuttgart.

KUSS, S.E. (1965): Die pleistozäne Säugetierfauna der Insel Kreta. - Neues Jahrbuch für Geologie und Paläontologie, Monatshefte, Abh. 233 (2): 275-296; Stuttgart.

KUSS, S.E. (1976): Ein erster Fund von *Pliohyrax* aus dem Vallesium von Kreta/Griechenland. – Neues Jahrbuch für Geologie und Paläontologie, Monatshefte, v. 1976, nr. 3: 157-162; Stuttgart.

LAX, E. M. (1996): A gazetteer of Cretan paeontological localities. In: REESE, D. S. (ed.), Pleistocene and Holocene fauna of Crete and its first settlers. – Prehistory Press: 1-32; Madison.

LEINDERS, J. J. M. & MEULENKAMP, J. E. (1978): A *Microstonyx* tooth from Eastern Crete; paleogeographical implications of Cretean Tortonian mammal associations. - Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, v. 81, nr. 4: 416-424; Amsterdam.

MARKOPOULOU-DIACANTONI, A. & LOGOS, E. (2004): Presence of *Metaxytherium cuvieri* CHRISTOL in the Miocene Sediments of Seteia, Crete. 10th Congress of the Geological Society of Greece, 2004, Abstracts: 152-153; Thessaloniki.

MARKOPOULOU-DIACANTONI, A., MIRKOУ, M.-R., LOGOS, E., ANDREADOU, A. & ZERI, S. (1993): Données nouvelles sur la stratigraphie du Néogène dans le graben néotectonique de Sitia (Crete orientale, Grèce). – Bull. Geological Society of Grece, v. XXIX: 17-31; Athen.

THEODOROU, G. & DERMITZAKIS, M.D. (1991): Fossil Vertebrates in Cretan caves. – 6th International Cretological Congress, 1991, Preceedings, v. B.: 377-392; Chania.

VAN DER MADE, J. (1996): Pre-Pleistocene land mammals from Crete. In: REESE, D. S. (ED.), Pleistocene and Holocene fauna of Crete and its first settlers. – Prehistory Press: 69-79; Madison.