

by K. BRAUNE and K.O. HEIMANN -

In the Mediterranean area isolated localities of evaporites of Upper Miocene age (e.g. the Solfifera-series on Sicily (2) and the gypsum deposits on the Ionian islands (3) have been interpreted up to now as local formations. The discovery of gypsum and anhydrites of same age in deep sea cores in the Western and Eastern Mediterranean (4) requests a new uniting interpretation for both, the marine and land localities. The only possible conclusion is that the evaporites were formed during a general sea level lowering by evaporation on the whole Mediterranean Sea at this time.

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(1) This research is financed by the Deutsche Forschungsgemeinschaft

(2) Hardie, L.A. & Eugster, H.P. : The Depositional Environment of Marine Evaporites : A case for Shallow, Clastic Accumulation . Sedimentology, 16, 187-220, 1971.

(3) Dremel, G. : Das Miozän von Kephallinia (Ionische Inseln).- Diss. Univ. München, 1965. - Hug, F. : Geologisch-mikropaläontologische Untersuchungen im Südwesten der Insel Kephallinia (Paxos-Zone, Griechenl. Unveröff. Dipl.-Arb., Univ. München, 1965

(4) Ryan, W.B.F. : Deep Sea Drilling Project: leg. 13 Geotimes, 1970, 12-15

On the Ionian islands Cephalonia and Zante well exposed outcrops with evaporites of Neogene age were studied sedimentologically for the first time.

On Cephalonia an almost undisturbed profile of Middle to Upper Miocene age measures 229 m sediment : Thick beds of marls interbedded with thin calcarenitic layers are interrupted by conglomeratic banks up to 4 m. 10 coaly and bituminous layers (up to 32 cm thick) and some carbonate banks (up to 55 cm) are characteristically intercalated in this sequence. The begin of the evaporitic facies is indicated by mm-layers of gypsum which occur together with the calcarenites.

In the upper third of the profile the marly sediments are replaced by gypsum to a good part. The gypsum occurs - in alternation with marls and/or calcarenites - as m-banks of conglomerates (indicating reworked evaporites), as decimeter to m-banks of fine crystalline to selenitic shape, or as cm- to dm-layers of gypsums, or as mm-laminations.

This series is followed by a bank of white marly limestone, topped by arenitic detrital fossiliferous limestone with *Ostrea*, *Pecten* and *Cardium*, indicating lowest Pliocene age.

The marls in the upper part of the profile are dated by nannoplancton as uppermost Miocene (5).

The outcrops of Zante are comparable with those of Cephalonia. The main difference is a larger thickness of pure evaporites on Zante. Here gypsum conglomerates are rare, testifying an almost uninterrupted sedimentation of evaporites during the Upper Miocene.

On Cephalonia and Zante the evaporites and intercalated marls were formed in shallow water. This is indicated by a high content of reworked mikrofossils of Eocene to Lower Miocene age, also by numerous conglomeratic, arenitic and carboniferous interbedding. Numerous bedding plains in marls contain fossil seagrass and seeds of terrestrial plants.

Interventions à la suite du 7-14 -

NESTEROFF - Je voudrais souligner la très grande similitude entre les séries qui viennent d'être présentées, celles forées en mers profondes durant le leg 13-DSDP, ainsi que celles de Sicile.

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(5) dated by C. Muller, Frankfurt/M.

Cette similitude suggère non seulement un mode de dépôts semblables, mais de plus, par exemple, un seul et unique bassin pour les lambeaux d'évaporites de Sicile et des Iles Ioniennes.

Réponse : It is not possible to separate the basins.

BITTERLI - Have you investigated the Miocene bituminous layers you mentioned to have found on the Ionian islands and have you established a relationship to the oil (asphalt seepage of Keri Zakynthos) ?

Réponse : We have not analyzed the samples. We are just in the beginning.