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Artikel: A correlation of the Tethyan Maiolica Formation of the Breggia section (southern Switzerland) with Early Cretaceous oozes of Site 534A, DSDP Leg 76 in the western Atlantic
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coincide with the 75 m (63 m) mark at the Maiolica section. Here, at the top of the Valanginian, a very conspicuous break in variability and abundance of aptychi can be observed, as displayed on the distribution chart (Fig. 2). This distribution of aptychi, we may assume, should also be reflected in ammonite assemblages from close to the Valanginian–Hauterivian boundary.

The intervals between 63 m and 92 m at the Maiolica section and between Core 67 to Core 68 in Hole 534A, and Core 24 to 25 in Hole 391C, both in the Blake-Bahama Basin, are dominated by aptychi distinguished by retroverse curving lamellae patterns. They belong to the group of *Lamellaptychus seranonis,* a form restricted according to present knowledge to the Hauterivian.

Barremian (102 to 130 m)

In the Blake-Bahama Basin (Hole 391A) and the Cape Verde Basin (Hole 367) considerable gaps without remains of Cephalopoda hamper the fixation of the Hauterivian–Barremian boundary.

Within the Maiolica section an interval (tunnel, Fig. 1) without aptychi of 9 m thickness separates the last *L. seranonis* (Hauterivian) from the first *L. angulocostatus*, a widely distributed form within the Tethys, indicating a Barremian age. The limit Hauterivian–Barremian thus remains unclear.

From 5 m below the top of the Maiolica Formation, near 125 m, an ammonite assemblage has been described by RIEBER (1977). The presence of *Pulchellia* and *Karsteniceras,* widely known from Europe (Spain) and northern South America (Colombia, Trinidad) represent a reliable indication for a Barremian age.

The discovery of *Pulchellia,* although flattened and poorly preserved, from Hole 534A in the Blake-Bahama Basin is of the greatest value for regional correlation. Our present correlation is based mainly on the occurrence of *Pulchellia* in Hole 534A, and in the Maiolica section.

F. Conclusions

The present study on aptychi assemblages from the Maiolica Formation in the river Breggia, based on detailed stratigraphic collecting of the fossils, permits a preliminary correlation with holes drilled in the northern Atlantic by the Deep Sea Drilling Project. Regional correlations, based on aptychi from sections exposed within the Tethyan realm of Europe have so far not been attempted, the main reason being the consecutive repetition of nearly identical lamellae patterns of aptychi during the Jurassic–Cretaceous Periods.

Specimens with very similar morphological features (homeomorph) occur within levels of quite different ages. In most publications on aptychi little attention has been paid to the stratigraphical order in spite of its significance for taxonomy. This is demonstrated by the synonymy lists included in the present paper.

The aptychi obtained from the Deep Sea Drilling Project provided an ideal opportunity for investigations of aptychi, this being a main reason for carrying out the present study.

At present we just begin to understand the biochronologic significance of aptychi assemblages, especially in sediments from the Tethys.

The results, evidently, need confirmation at other sections. We propose to study additional sections of deep water Tethyan sediments containing aptychi. Of special interest in this respect are the Jurassic and Cretaceous deposits in the Betic Cordillera in southern Spain, as shown by a few specimens from old collections figured here.

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