

## THE GEOLOGY OF THE SAXOTHURINGIAN ZONE IN THE SURROUNDING OF ARZBERG & WALDSASSEN; NORTHEAST BAVARIA

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The research area is situated south of the huge granitoid massive of the Fichtelgebirge near to the Czech – German border and exhibits mainly rocks of the saxothuringian zone of the Variscian orogen. The stratigraphic column starts with the Alexandersbad-Formation, consisting of now weak metamorphic metagreywackes, arcoses, quartzites and schists with rare interbedded small layers of basaltic rocks. It is overlain by the Wunsiedel-Formation with graphitic schists and carbonates. These two formations form together the so called "Arzberger Serie". Its age and tectonic setting is disputed in literature.

This rocks are in turn overlain by the Waldsassen-Formation of probably Cambrian age, consisting of schists and quartzites. It is followed by the tremadocian Frauenbach-formation, which is here represented by massive quartzites, and the also tremadocian Phycoden-Formation with sandy schists and a only partly developed quartzitic layer on top. The highest member of the stratigraphic column is the Arenigian Gräfenenthal-Formation, starting with a thin oolitic iron ore layer, which is overlain by dark schists.

During the Variscian orogenesis the rocks were folded and sheared. Only one main deformation event is existent. The folds have amplitudes of some meters and the axes are mainly NW-dipping. The metamorphic overprint of the rocks was generally low.

The rocks within the research area show no tectonic hiatus between the Alexandersbad-Formation and the Wunsiedel-Formation on the one side and the overlying rocks on the other side. There is obviously no "Cadomian folding" existent.

A stratigraphic comparison of the Alexandersbad- and Wunsiedel-Formation shows, that there is a fair correlation with stratigraphic equivalent rocks of the Saxothuringian zone in east Thuringia and Saxony. It is not necessary to correlate these two formations with the Precambrian rocks of the Barrandium or with the "Bunte Gruppe" of the Moldanubian region. As a consequence a Lower Cambrian age for the Wunsiedel-Formation seems more likely than a Precambrian age.

Within a small area south of Arzberg, at the "Elisenfels" occur rocks of different tectonic deformation. This rocks, mainly paragneisses, are highly deformed and show two main deformation phases. The first phase is represented by strong isoclinal folds with amplitudes of some dm with fold axes which were NNW-SSE striking. During the second phase these rocks were overprinted by a weaker folding with shallow NW dipping axes, similar to the folds in the surrounding rocks described above. The stratigraphic and tectonic setting of the rocks of this area is up to now uncertain.

## GEOCHRONOLOGICAL AND GEOCHEMICAL IMPLICATIONS FOR THE EVOLUTION OF MARGARITA ISLAND, SOUTHEASTERN CARIBBEAN: FROM AN ACCRETIONARY WEDGE TO A CONSERVATIVE PLATE BOUNDARY

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New detailed investigations aimed at unravelling the geological history recorded on the Island of Margarita, Venezuela, allow the formulation of a detailed scenario for this key area of the southeastern Caribbean (STÖCKHERT et al., 1993).

Margarita is part of the Leeward Antilles and is located approximately 25 km north of the Venezuelan mainland. The maximum dimensions are 40 x 70 km. Historically, the metamorphic terrane of the island has been divided into a metabasic unit defined as the La Rinconada Group (LRG), as well as the predominantly metasedimentary Juan Griego Group (JGG), Los Robles Group and Manzanillo Formation (BEETS et al., 1984). A large part of the latter two units is of volcanic origin. Ultrabasic rocks (slices of mantle) metamorphosed and deformed together with these units are usually strongly serpentinized. They occur in all units, but are especially common in the LRG. Non-metamorphic sediments overlying this basal complex are Eocene or younger in age (GONZALEZ DE