BIOLOGICAL RESPONSE OF AMMONITES TO CHANGING ENVIRONMENTAL CONDITIONS: AN EXAMPLE OF BOREAL *AMOEBOCERAS* INVASIONS INTO SUBMEDITERRANEAN PROVINCE DURING LATE OXFORDIAN

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The territory of Central Poland constituted in the Oxfordian a part of the Submediterranean Province. The ammonites of the Boreal genus *Amoeboceras* are encountered here in larger numbers in the two thin layers only - in so called *Amoeboceras* layers. These layers are known from the Bimammatum Zone of the Upper Oxfordian: the lower one characterized by occurrence of *Amoeboceras ovale* (Quenstedt) is placed in the Hypselum Subzone, the upper one characterized by occurrence of closely related forms: *Amoeboceras bauhini* (Oppel) - *Amoeboceras praebauhini* Salfeld - *Amoeboceras lineatum* (Quenstedt) is recognised in the Hauffianum Subzone. These layers mark short-time invasions of the Boreal forms into the Submediterranean Province.

The ammonites of the genus *Amoeboceras* found in the layers in question do not show any marked differences in size what precludes the recognition of the typical micro-, and macroconchs. All specimens are generally small-sized up to 45 mm in maximum diameter revealing thus in their size and the type of ornamentation some similarity to microconchs. The bulk of the specimens are fully grown, having from 5 1/4 to 5 3/4 whorls. In all specimens studied a distinct development of septa is observed: (1) up to four whorl (*i.e.* up to about 9 mm diameter) the number of septa per each whorl is "normal" and equals 13-14; (2) on the next stage which includes 3/4 to 1 1/4 of whorl the marked septa approximation is observed, and the number of septa equals from 22 to 35, respectively. The observed change in septa density is related with change of ornamentation: from more sharp and more regular ornamentation occurring on inner whorls, to less distinct somewhat irregular ornamentation on the outer whorls.

The observed long-termed approximation of septa is stated in the Boreal ammonites of the genus *Amoeboceras* showing the invasional character of occurrence only. The same feature is not observed in the Submediterranean and Subboreal ammonites found in the same layers as *Amoeboceras*. It may be concluded thus, that the approximation of septa observed in studied *Amoeboceras* faunas is an adaptive reaction of animals to new environmental conditions.

The approximation of septa is treated generally as showing the reduced rate of growth. The reduced rate of growth as shown by approximation of a few last septa is usually related with sexual maturation. In the studied case the gonads maturation has been stimulated through a long time due to untypical for Boreal forms environmental conditions.