

PHYLOGENY AND TAXONOMY OF THE BOREAL ANISIAN FAMILY CZEKANOWSKITIDAE

Dagys, Algirdas

Institute of Ecology, Lithuanian Academy of Sciences, Akademijos 2, LT – 2600 Vilnius, Lithuania.

The entire history of the Czekanowskitidae from its first appearance up to the extinction took place in the East Boreal region. Most probably the early Anisian genus *Groenlandites* (Grambergiidae) is the ancestor of the family. The first highly variable Czekanowskitid *Praeczekanowskites tumaefactus* appeared in a hypermorphic way by changing the shape of the last whorl from suboxyconic with a sharp venter to platyconic having usually a rounded venter. The genus *Praeczekanowskites* was the ancestor of two different genera. The middle ontogenetic stages of *P. planus* are comparable with the phenotype of the thin, involute, feebly ornamented genus *Timites* originated from the planus - group in a pedomorphic way. *P. tumaefactus* shows all characteristic features of the oldest *Czekanowskites* (*Cz. rieberi*), but the latter species differs by the appearance of a flattened venter with distinct ventral shoulders (hypermorphosis) on the terminal ontogenetic stages.

Czekanowskites s.s. unites very variable species with conch shapes from thin involute suboxycones to wide semievolute subcadicones. The next step in this phylogenetic line is the genus *Arctohungarites s.s.*

Contrary to *Czekanowskites* this genus has an invariable conch, usually thin involute platycones, ornamented only on the terminal part of the body chamber. The youngest species of *Arctohungarites* (*A. kharaulakhensis*, *A. trapezoidalis* etc.) differ from *Arctohungarites s.s.* by an essentially more evolute adult conch. For this group the new name *Boreiohungarites* is proposed.

From *Boreiohungarites* evolved the genus *Stannakhites* having a variable shape of shell, differing from *Czekanowskites* by the presence of a wide umbilicus in all modifications of the shell. The genus *Epiczekanowskites* usually is interpreted as a synonym of *Czekanowskites*, but it is separated from the last *Czekanowskites* by a distinct stratigraphic hiatus (3 zones). More probably *Epiczekanowskites* is descendant from *Arctohungarites* and originated as a result of deviation, i.e. morphological changes (appearance of rough ornamentation) on the middle ontogenetic stages. As a result of the family's taxonomic revision a new detailed biostratigraphic scheme of the Uppermost Lower Anisian and Middle Anisian, including 14 discrete biostratons, is proposed.