LINGULID BRACHIOPODS : EXAMPLE OR MODEL ?

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The living and fossil "*Lingula*" are characterized by their stereotypical image, mainly anectodal, which is traditionally accepted and commonly propagated in the literature. Actually, when taking into account the recent morphological, ecological and taphonomic studies on the lingulids, the reality appears much more complex than the distorted picture of the "*Lingula*" concept. Because the "*Lingula*" shell type is known since the Cambrian, the broad "sack" genus *Lingula* became the status of "living fossil", spreading over 400-500 my. Nevertheless, the conservative morphology of the shell of the infaunal lingulids does not preclude absence of evolutionary patterns and conservatice ecological requirements. Within the lingulids the evolutionary changes occurred mainly on soft-bodies features, i. e. a decrease of the volume of the lophophoral cavity, changes in the arrangement of the mantle canals and body muscles. But the lingulid genera and species show a large time scale, extending over several tens of my. Both living genera, *Lingula* and *Glottidia* appeared at the beginning of the Cenozoic.

On the other hand, as the ecological observations on living species apply until the early Paleozoic, the habitat of the infaunal lingulid has not changed significantly and was not affected by the gradual environmental changes, since 400-500 my. The optimum environment of the living lingulid species is not interdital and a similar tendency is likely to characterize fossil species. The lingulids show a range of morphological, physiological, and behavioural feature that allowed a similar mode of life since the early Paleozoic. The living lingulid populations appear less tolerant to ecological features than generally supposed.

Formation of lingulid fossil beds generally occurred under drastic changes of one or several ecological features, between two days to 2-3 weeks, mainly through changes in salinity, substrate, temperature, and storm effects. Such event may lead to the fossilization of a lingulid population. In a paleoecological interpretation fossil lingulids indicate always the effect of a catastrophic event ; consequently, a lingulid bed never indicates the normal life conditions which can sometimes be analyzed in the bed (or beds) just below this fossil bed.

By their general characteristics in the infaunal Lingulida appears as a group rather near from a evolutionary steady state and present all the features of a dominant group within a community. In the present communities the *Lingula* and *Glottidia* can respectively represent up to 44 and 52% of the macrofauna which varies from 17 to 193 species and from 79 to 41,000 individuals m^{-2} and of which only the molluscs are able to fossilize. In the fossil beds Lingulids are generally the alone remnants of the "living" community which fauna has been highly reduced by the environmental changes.

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