

(P) Strunian rugose and tabulate corals from Northwestern Turkey**DENAYER, J.**

Service de Paléontologie animale et humaine, Département de Géologie, Université de Liège, Allée du Six-Août, Sart Tilman Liège, Belgium, julien.denayer@ulg.ac.be

Strunian (uppermost Famennian) rugose corals are worldwide known but usually form endemic assemblages (POTY 1986). For example, Western European assemblages contains only solitary rugose corals, Siberian assemblages contains rare several colonial corals and coral fauna from South China contain a lot of colonial and solitary genera (CONIL et al. 1982, POTY & XU 1996). In the Istanbul Zone - Zonguldak and Bartın areas, in Northwestern Turkey - the Strunian coral assemblage was discovered in the middle part of the Yılanlı Formation, a thick unit of variegated limestones and dolostones from Middle Devonian to upper Viséan in age. The fossiliferous Strunian corresponds to a c.a. 30 m-thick unit of bedded limestones resting upon a thick unit of massive reddish sandy limestone and dolostone. The facies is mainly bioclastic to peloidal wackestone to packstone grading to grainstone, often slightly dolomitized, typically formed in shallow water platform environment. In the Bartın area, two levels, 40 to 50-cm thick of stromatoporoid boundstone were observed in several localities, forming a marker level through the region. In the Zonguldak area, 60 km westward, these two levels were not recognized but questionably pass to a thick level of bioclastic rudstones with large fragments of stromatoporoids, *Pseudochaetetes* and tabulate corals. The corals were mainly collected in the bioclastic limestone above the stromatoporoid biostrome of the Bartın area. They forms a bottom-level association, mostly dominated by large campophyllids. The rugose corals are dominated by solitary taxa: *Campophyllum* sp. 1 (Fig. 1C, H), *C.* sp. 2 (Fig. 1E), "*Palaeosmilia*" cf. *aquisgranensis* (Fig. 1F), *Clisiophyllum* aff. *omalusi* (Fig. 1G), and indeterminate solitary undissepimented rugose corals. Only one colonial coral was collected: cf. *Endophyllum* sp. with an unusual dendroid habitus (Fig. 1D). The Tabulate corals are mainly large syringoporids (Fig. 1A) and an indeterminate Auloporida (fig. 1B). This faunal assemblage has a strong Eastern Europe character, the campophyllids, clisiophyllids and endophyllids being the main component Polish Strunian strata (BERKOWSKI 2002). Chinese taxa - e.g. *Cystophrentis*, *Pseudostelechophyllum*, *Heterostroton* - or Siberian Strunian taxa such as *Melanophyllidium*, completely lack in Turkey. The Istanbul Zone is supposed to be situated in central Palaeotethys Ocean, along the southern margin of Laurussia during the uppermost Devonian and Mississippian. The rugose corals plaid to some connection with Eastern Europe at this time or mean that both area were under the influence of a common marine current. The Hangenberg event was not recognized in the Turkish localities, except if considering the disappearance of the corals, occurring less than 3 m below the Devonian-Carboniferous boundary based on the foraminifers biostratigraphy (disappearance of *Quasiendothyra*) in the Topluca section, Bartın area. There is no facies change through the boundary but the first carboniferous coral (small *Uralinia*) recover more or less 10 m above the D-C boundary.

References:

- BERKOWSKI, B., 2002. Famennian Rugosa and Heterocorallia from Southern Poland. - *Palaeontologia Polonica*, **61**: 1-87.
- CONIL, R., POTY, E., SIMAKOV, K.V. & STREEL, M., 1982. Foraminifères, spores et coraux du Famennien supérieur et du Dinantien du massif de l'Omolon (Extrême-Orient soviétique). - *Annales de la Société Géologique de Belgique*, **105**: 145-160.
- POTY, E., 1986. Late Devonian to Early Tournaisian Rugose Corals. - *Annales de la Société Géologique de Belgique*, **109**: 65-74.
- POTY, E. & XU, S., 1996. Rugosa from the Devonian-Carboniferous transition in Hunan, China. - *Mémoires de l'Institut de Géologie de l'Université de Louvain*, **36**: 89-139.

Fig. 1: Strunian rugose and tabulate corals from Northwestern Turkey. **A:** *Syringopora* sp. (specimen ET.11.7.a, Topluca section). **B:** indeterminate Auloporida (specimen ET.11.15, Topluca section). **C:** large specimen of *Campophyllum* sp. 1 (specimen ET.11.12.d, Topluca section). **D:** dendroid cf. *Endophyllum* sp. (specimen D.2.1.II.a, Dallica section). **E:** *Campophyllum* sp. 2 with transeptal dissepiment (specimen ET.11.13.II.a, Topluca section). **F:** *Palaeosmilia* cf. *aquisgranensis* (specimen G.3.19, Gökgöl section). **G:** *Clisiophyllum* aff. *omaliusi* (specimen ET.12a.1.III, Topluca section). **H:** *Campophyllum* sp. 1 (specimen ET.11.12.III.b, Topluca section). Transverse section for all, except B. Scale for all: x3.

