

Rudists from the Moulin de la Roque section and other Santonian outcrops of the La Cadière-d'Azur Formation (Le Beausset basin, SE France) housed in the MCNB palaeontological collections

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Palaeontological collections of the Natural Sciences Museum of Barcelona (MCNB) preserve rudist bivalve fossils from several classical fossil localities from the Cretaceous of SE France. Among all the French localities represented in the collections, the specimens from Le Beausset basin deserve special consideration for their well preservation, quantity, and diversity. In the present work we have studied the rudist faunas belonging to the La Cadière-d'Azur Formation cropping out in the municipalities of La Cadière-d'Azur, Le Castellet and Le Beausset.

The well-known La Cadière-d'Azur Formation forms a carbonated sedimentary lenticular body rich in rudist banks that was developed in a perideltaic environment of early Santonian age (Late Cretaceous). This formation extends from NE to SW forming an elongated strip of about 6 km in the central part of the Le Beausset basin. The rudist association recognized from our material of the Moulin de la Roque section (Le Castellet) consists of *Hippurites matheroni*, *Hippurites socialis*, *Hippurites sublaevis*, *Hippuritella toucasi*, *Bournonia excavata*, *Praeradiolites caderensis*, *Praeradiolites toucasi*, *Praeradiolites cf. sinuatus*, *Radiolites galloprovincialis*, and *Radiolites squamosus*. Among all these species represented, *H. socialis*, *H. toucasi* and *R. galloprovincialis* are the most abundant and the main bioconstructing organisms. *Bournonia excavata* and *H. matheroni* are also abundant, whereas the other species are poorly represented. The rudist assemblages from the La Cadière-d'Azur and Le Beausset localities are richer in terms of diversity, containing other species such as *Hippuritella maestrei*, *Pseudovaccinites beaussetensis*, *Pseudovaccinites galloprovincialis*, *Biradiolites acuticostatus*, and *Biradiolites fissicostatus*. Thus, the MCNB palaeontological collections hold a well representation of the rudist species diversity appearing in the classical fossil localities from Le Beausset basin. The detailed study of these specimens will permit to update the description of some species as well as contribute to a better characterisation of the sites from a stratigraphical and palaeontological point of view.

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