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Taxonomy of *Cypridea* Bosquet 1852 (Crustacea, Ostracoda) from Quiricó Formation, Lower Cretaceous from São Francisco basin, State of Minas Gerais, Brazil: new relative dating and remarks on nodding



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It is presented the characterization of five species of *Cypridea* Bosquet, 1852 recovered from Quiricó Formation outcrop, Areado Group, Lower Cretaceous from São Francisco basin, located in Tereza Farm, near Olhos D'água County, Minas Gerais State, Brazil: *Cypridea hystrix* Krömmelbein, 1962, *Cypridea hystricoides* Krömmelbein, 1962, *Cypridea conjugata* Krömmelbein & Weber, 1971, *Cypridea* sp. 1 and, *Cypridea* sp. 2. Additionally, a new relative dating and a discussion on nodding patterns within the genus. Limnic ostracods show a great potential as biostratigraphic tools in continental sections regarding relative dating and correlation with other sedimentary basins, they are also used for paleoenvironmental interpretations, and their study in Quirico Formation aims to refine dating based upon paleontological data and analyse the paleodepositional setting. *Cypridea* Bosquet, 1852 is a limnic extinct genus that features several diagnoses and descriptions, therefore interpretations that overestimate local ornamentations elements, contour, or even a regional fauna vision led to the designation of several species, subspecies and subgenus. Faunas belonging to this genus in Cretaceous sediments are abundant within the ostracod diversity, therefore, important for biostratigraphic zoning.

The sample preparation aiming to recover microfossils consisted in disintegrating sixty grams of rock by adding hydrogen peroxide and the use of alcohol to stop the reaction, followed by washing in tap water in a set of sieves with 630, 250, 160 and 50 µm pores. The material retained on each sieve was dried in an oven, and screened using a stereoscopic microscope. Illustrations were produced using the scanning electron microscope.

Cypridea conjugata presents inverse overlap, nodding in a fixed position on the carapace and pore canals in the noddied areas. However, there are specimens weakly noddied or unnoddied. *Cypridea hystrix* and *Cypridea hystricoides* are the most abundant species, and although similar to *Cypridea conjugata*, their sizes are smaller, and the relationship between the valves is reverse. In addition, regarding *Cypridea hystrix* and *Cypridea hystricoides*, their dimensions and contour are similar, but at dorsal view *Cypridea hystrix* is wider; nodding is similar in both species and there are pore canals in the noddied areas, however it is not in a fixed position and varies in its degree of development. *Cypridea hystrix* and *Cypridea hystricoides* might also be the same species, however because of the width and outline differences; they might be female and male respectively. *Cypridea* sp. 1 occurs in two morphotypes, one is with two postero-median intumescences and, the other without intumescences. *Cypridea* sp. 2 is very similar to *Cypridea* sp. 1, but it is larger and free of intumescence. Further studies are being conducted in order to evaluate the possible phenomena producing distinct phenotypes on *Cypridea* species. Therefore a revision in diagnoses e type description for the species is needed, and for the genus as well, because it might result in several species becoming synonyms.

The abundant presence of *Cypridea hystrix*, a species from the Berriasian-Hauterivian age (Early Cretaceous), Zone *Paracypridea brasiliensis*, indicates a much older age for the base sediments of the Quiricó Formation that was initially thought, therefore this Formation might be older than what is presented within the bibliography for the São Francisco basin.

