

Radiolarian biostratigraphy of Late Cretaceous pelagic sediments in the Wadi Jizzi area of the Oman Ophiolite

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The Cenomanian-Coniacian radiolarian biostratigraphy of pelagic sediments overlying basaltic extrusive lavas of the Oman Ophiolite was studied in the Wadi Jizzi area, about 40 km west of Sohar, northern Oman Mountains. Pelagic and metalliferous sediments commonly occur on lavas and at the boundaries between different volcanic units. The most thickly accumulated sediments, which rest directly on the V1 lava formed by ridge magmatism, were named the Suhaylah Formation (Fleet and Robertson, 1980; Woodcock and Robertson, 1982). The Suhaylah Formation is overlain by the Zabyat Formation (Woodcock and Robertson, 1982; Robertson and Woodcock, 1983). This formation consists of ophiolite debris, redeposited sandstone- to siltstone-sized volcanoclastic rocks, and pelagic mudstone. From the occurrence patterns and stratigraphic ranges of radiolarians, the species clearly make up three distinct assemblages. Based on the occurrences, we defined the following three biostratigraphic zones (interval zones): *Guttacapsa gutta* zone (basal part of the Suhaylah Formation; middle Cenomanian to latest Cenomanian), *Rhopalosyringium scissum* zone (main part of the Suhaylah Formation; latest Cenomanian to Turonian), and *Archaeospongoprimum bipartitum* (Zabyat Formation; Coniacian). In previous studies (e.g., Tippit et al., 1981), the Suhaylah Formation was dated as early Cenomanian to Coniacian-Santonian. We revised the age of this formation to middle-late Cenomanian to Turonian. The radiolarian age of the sediments overlying the V1 lava (ca. 96 Ma) is consistent with the high-precision U-Pb zircon age of crustal rocks formed by ridge magmatism (96.0-95.5 Ma) (Rioux et al., 2014).

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