

Stratigraphy and radiolarian age of the Zabyat Formation at Lasail section in the Wadi Jizzi area, Oman Ophiolite

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The Oman Ophiolite consists of mantle peridotites, gabbros, a sheeted dyke complex, and extrusive lavas overlain by pelagic sediments. The basaltic extrusive rocks have been subdivided into three volcanic units (the V1, V2, and V3 lavas) (Ernewein et al., 1988). The overlying pelagic sediments, named the Suhaylah Formation, consist of metalliferous and fine-grained calcareous sediments of Cenomanian-Santonian? age (Fleet and Robertson, 1980; Tippit et al., 1981). The Zabyat Formation, which covers conformably the Suhaylah Formation, is composed of conglomerate derived mainly from a collapsed oceanic crust during the thrusting stage (Woodcock and Robertson, 1982; Robertson and Woodcock, 1983). Although Robertson and Woodcock (1983) investigated the sedimentation process of this formation, they did not study the biostratigraphic age of fine-grained sediments intercalated with conglomerate at Lasail section in the Wadi Jizzi area.

At Lasail section, the stratigraphy of the Zabyat Formation consists of the lower conglomerate interbedded with micritic limestone and red mudstone and the upper red mudstone and siliceous mudstone. The micritic limestone of the lower part contains *Alievium superbum* and *Rhopalosyringium scissum*, indicating Turonian in age (O'Doghterty, 1994). From the red mudstone of the upper part, we obtained *Pseudoaulophacus lenticularis*, *Pseudoaulophacus praefloresensis*, and *Theocampe salillum*. The occurrence of these species assigns the upper part of the Zabyat Formation to Coniacian (Pessagno, 1976; Bandini et al., 2008). Our biostratigraphic result of the Zabyat Formation, taken together with that of the Suhaylah Formation, shows that the change of the tectonic setting from mid-ocean ridge through subduction zone to oceanic thrusting occurred in a short period (c.a. 4 m.y.) of latest Cenomanian to Coniacian time.

Keywords: Oman Ophiolite, pelagic sediments