ACTA PALAEONTOLOGICA POLONICA

Morphological variations and geographic distribution of the rare Middle Jurassic ammonite *Oecoptychius refractus*

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Acta Palaeontologica Polonica 68 (2) 2023: 321-335 doi:10.4202/app.01026.2022

The rare Middle Jurassic ammonite *Oecoptychius refractus* is revisited based on material collected in southern Poland (Ogrodzieniec quarry) and France (St.-Laon near Loudun, western France). Based on available data and an evaluation of the literature, *O. refractus* ranges from the middle Callovian *Kosmoceras jason* Zone to the upper Callovian *Quenstedtoceras lamberti* Zone. Additionally, two specimens from Kachchh (western India) were re-evaluated and are now assigned to the lower part of the upper Callovian *Peltoceras athleta* Zone, similar to specimens from southern Germany. In the present study, *O. refractus* displays large morphological variation in the shape of the body-chamber, with a gradation from V- to U-shape. Additionally, the smaller upper Callovian specimens from Poland are morphologically closer to the lectotype (more evolute and compressed) and form a separate grouping as compared to the much larger middle Callovian specimens from France. Based on available data, the authors tentatively propose *Phlycticeras polygonium* var. *waageni* [M] as the dimorphic partner of *O. refractus* [m]; both dimorphs have similar morphology (ribbing pattern and striations), suture line and co-occur from middle to upper Callovian. *Oecoptychius refractus* maintains its morphological variability throughout the middle and upper Callovian, before its final dissapearance in the *Q. lamberti* Zone. *Oecoptychius refractus* is better documented from western Tethyan localities (Poland, Germany and France) as compared to those from the eastern Tethys (Madagascar and India). Recurrent sea level rises in the Middle Jurassic might be one of the plausible factors for its extensive palaeobiogeographic range.

Key words: Ammonoidea, *Oecoptychius* , morphological variation, Callovian, Jurassic, Tethys, Poland.

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