

***Paralepidotus ornatus* (AGASSIZ 1833-43): A semionotid from the Norian (Late Triassic) of Europe**

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Abstract

Paralepidotus ornatus is a rather common semionotid in most Norian marine localities of Europe. New findings of well preserved material in northern Italy allow preliminary restoration and confirm the inclusion of *Paralepidotus* within the Semionotidae s.s. Since growth stages are well represented, ontogenetic variation is recorded. Juveniles are more slender than adults and their dentition is not like the powerful crushing one of large specimens. Bone and scale ornamentation appears at 11-15 cm standard length (SL) and reaches its adult aspect at about 30 cm SL. These modifications imply a change in environment during the life of an individual *Paralepidotus*, from superficial open waters to shallow mollusc banks when teeth reach the strictly grinding shape at 25-30 cm SL. A change in diet is also implied by the change in dentition.

Introduction

Since the beginning of the last century, the Norian locality of Seefeld (Austria) has been famous for its large fossil fishes, mostly *Paralepidotus ornatus* (AGASSIZ 1833-43), as well as for representatives of Pholidophoridae. AGASSIZ erected other species on that material, but the entire fauna was described by KNER (1866, 1867). Fishes were also collected from somewhat younger localities near Hallein (Austria), and Giffoni (Salerno, Italy). This latter fauna was described by COSTA (1853, 1853-60) and revised by BASSANI (1895). The Hallein fauna was described by GORJANOVIC-KRAMBERGER (1905), who erected other species, including the oldest pycnodont and macrosemiid known at that time. The marine vertebrates from the European Norian have attracted little interest (BONI 1937) until the discovery of very rich fossiliferous levels in the Calcare di Zorzino (Zorzino Limestone), Northern Italy, about twenty years ago (TINTORI et al. 1985, JADOUL 1985, TINTORI 1992). Since then, hundreds of specimens have been recovered, most of them better preserved than those from the classical localities. This new fauna, though largely dominated by small pholidophorids, is highly diversified: possibly more than 40 fish species are present (pers. obs.). After the pholidophorids, semionotids are the most common fishes (TINTORI 1983, TINTORI & OLIVETTI 1988), and *Paralepidotus ornatus* is, by far, the dominant species, with dozens of specimens, ranging from a few centimeters up to 50 cm in SL.

The presence of numerous well-preserved specimens allows an almost complete anatomical description during different growth stages. Furthermore, because of their taphonomic history, many specimens have lost some of the dermal bones and scales (TINTORI 1992), which helps in the observations of the neurocranium and vertebral column.

Remarks on nomenclatural history of *Paralepidotus*

AGASSIZ (1833-43) erected the species *Lepidotus ornatus* based on very poor material from the locality of Seefeld, then considered as Liassic (AGASSIZ 1833-43: 249, pl. 32; see also McCUNE 1986). Unfortunately, the two specimens figured by AGASSIZ are lost, perhaps since the last century (BOTTCHEP pers. comm.,

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