

## HEMIOPLITID AMMONOIDS FROM THE AUSTRAL BASIN OF PATAGONIA, ARGENTINA

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The recent finding of a beautifully preserved ammonite fauna in the Austral basin of Southern Patagonia, Argentina sheds light on the origin, evolutionary trends, and palaeobiogeographic distribution of the genus *Hemihoplites* Spath, 1922.

Two species were already known from Patagonia: *Hemihoplites ploskiewiczi* and *H. varicostatus*. The former is a small species with subrectangular to compressed whorl and fine, flexuous ribbing and has been included in the *Favrella americana* assemblage zone (late early to early late Hauterivian). The second one is a medium sized species with subrectangular to subquadrate whorl, flexuous ribbing bifurcate in inner whorls and simple on outer whorls. It has been found in beds with *Protaconeceras patagoniense* (*Favrella wilckensi* assemblage zone, late Hauterivian) and *Hatchericeras* spp. (*H. patagonense* assemblage zone, early-middle Barremian) (Riccardi and Aguirre-Urreta, 1989). Both species show sexual dimorphism. A third species, reported here for the first time, corresponds to *Hemihoplites feraudianus* (d'Orbigny), type species of the genus. Several specimens recovered from a single bed shows a total coincidence with the modern descriptions of this species regarding size, whorl section, and ornamentation (Delanoy, 1990, 1997). This species is also represented by a dimorphic pair. No other ammonites have been recorded with this species, but it can be placed in the Late Barremian (*Feraudianus* zone of Europe).

*Hemihoplites* is recorded in the recent edition of the "Treatise" as Upper Hauterivian-Barremian and its presence in older rocks of Southern Patagonia as recorded by Riccardi and Aguirre-Urreta (1989) has been overlooked (Wright, 1996) or dismissed as unlikely (Delanoy, 1990).

The early appearance of *Hemihoplites* in Southern Patagonia led some authors to question the age of the *Favrella americana*, *F. wilckensi* and *Hatchericeras patagonense* faunas (Delanoy, 1990). However, the recent discovery of *Hemihoplites feraudianus* permits to postulate a long history of this genus in the Austral basin, with an evolutionary trend towards increasing body size and coarser ribbing.

The sudden appearance of *Hemihoplites feraudianus* in the European late Barremian also prompts to the proposal of an immigration to the Tethyan region and casts doubts on the proposed origin of *Hemihoplites* from the late Hauterivian genus *Pseudothurmannia* (Wright, 1996) or from *Emericiceras* of the *barremense* group (Delanoy, 1990).

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