

## The Barremian heteromorph ammonite *Dissimilites* from northern Italy: Taxonomy and implications

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A new acrioceratid ammonite, *Dissimilites intermedius* sp. nov., from the Barremian (Lower Cretaceous) of the Puez area (Dolomites, northern Italy) is described. *Dissimilites intermedius* sp. nov. is an intermediate form between *D. dissimilis* and *D. trinodosum*. The new species combines the ribbing style of *D. dissimilis* (bifurcating with intercalating single ribs) with the tuberculation style of *D. trinodosum* (trituberculation on entire shell). The shallow-helical spire, entirely comprising single ribs intercalated by trituberculated main ribs, is similar to the one of the assumed ancestor *Acrioceras*, whereas the increasing curvature of the younger forms resembles similar patterns observed in the descendant *Toxoceratoides*. These characters support the hypothesis of a direct evolutionary lineage from *Acrioceras* via *Dissimilites* to *Toxoceratoides*. *D. intermedius* sp. nov. ranges from the upper Lower Barremian (*Moutoniceras moutonianum* Zone) to the lower Upper Barremian (*Toxancyloceras vandenheckii* Zone). The new species allows to better understand the evolution of the genus *Dissimilites*. The genus appears within the *Nicklesia pulchella* Zone represented by *D. duboise*, which most likely evolved into *D. dissimilis*. In the *Kotetishvilia compressissima* Zone, two morphological forms developed: smaller forms very similar to *Acrioceras* and forms with very long shaft and juvenile spire like in *D. intermedius* sp. nov. The latter most likely gave rise to *D. subalternatus* and *D. trinodosum* in the *M. moutonianum* Zone, forms which were probably ancestral to the genus *Toxoceratoides*.

**Key words:** Ammonoidea, Acrioceratidae, *Dissimilites*, Barremian, Cretaceous, Alps, Italy.

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