

Lamellorthoceratid cephalopods in the cold waters of southwestern Gondwana: Evidences from the Lower Devonian of Argentina

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Based on three specimens assigned to *Arthrophyllum* sp., the family Lamellorthoceratidae is reported from the Lower Devonian Talacasto Formation in the Precordillera Basin, central western Argentina. These Devonian cephalopods have been known only from low to mid palaeolatitudes and its presence in the cold water settings of southwestern Gondwana is notable. A nektonic mode of life, not strictly demersal but eventually pelagic, with a horizontal orientation of the conch is proposed for adults lamellorthoceratids, whereas a planktonic habit is suggested for juvenile individuals. These features would have allowed their arrival to this southern basin, explaining their unusual presence in the Malvinokaffric Realm, and reinforcing the need to re-evaluate the distribution pattern of several groups of cephalopods.

Key words: Cephalopoda, Lamellorthoceratidae, *Arthrophyllum*, Palaeozoic, Talacasto Formation, Malvinokaffric Realm, Precordillera Basin, Argentina.

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