

LOWER CRETACEOUS MARINE REPTILES FROM ARGENTINA

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Remains of plesiosaurs and ichthyosaurs have been discovered in Lower Cretaceous rocks of the Neuquén Basin in west-central Argentina. Several thousand meters of thick marine and continental rocks were deposited in a back-arc setting, forming an extensive, northwest-southeast orientated marine embayment open to the Pacific. The fossil remains were found in various levels of the Agrio Formation, a marine sequence that consists of Valanginian-Barremian limestones, mudstones, marls, and sandstones, with a maximum thickness of approximately 1.600 m. The fauna is dominated by molluscs, with few echinoderms and crustaceans. Vertebrates are extremely rare. The most abundant remains correspond to plesiosaurs, discovered in two localities: Agua de la Mula and Arroyo Truquico. The plesiosaurs are associated with ammonites of the *Hoplitocrioceras gentilii* Zone (Lower Hauterivian) and from the *Karakaschiceras attenuatus* Subzone (Upper Valanginian), respectively. In both places, the fossils were scattered over 15 m². They consist of 36 vertebrae and some other fragmented bones of the postcranial skeleton. At least 14 vertebrae are of the cervical region. Most of them lack the neural arc but it is possible to identify, on the ventral side of the centra, two oval depressions containing nutrient foramina. In addition, the ratio H/L (height of the articular face/ length of the centrum) of these vertebrae is less than one. Therefore, they are assigned to the Family *Elasmosauridae*, long-necked plesiosaurs of the Superfamily *Plesiosauroidea*. The record of ichthyosaurs is restricted to few isolated vertebrae. Future detailed studies will include comparative studies with ancestral and derived forms of other plesiosaurs from the fossil record.