

Title : Morphological Characteristics of Ammonoids at Ban Phai Ngam, Mueang Mai Subdistrict, Chae Hom District, Lampang Province

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Ammonoid morphology varies with ontogeny, phylogenetic evolution, seawater depth, temperature, and other environmental controls. Certain taxa evolved morphologies conducive to active locomotion and predator avoidance, whereas others were better suited to passive transport and drifting; in addition, some shell forms reduce hydrodynamic drag during locomotion. This study investigates ammonoid morphotypes from Ban Phai Ngam, Mueang Mai Subdistrict, Chae Hom District, Lampang Province, northern Thailand, with the objectives of morphologic classification and paleogeographic interpretation based on ammonoid imprint fossils. Morphological analysis integrates conch parameter, external ornamentation, and septal characters, including sutural morphology, followed by morphogrouping and functional interpretation.

Most specimens exhibit moderate maximum conch diameter. Conch coiling, quantified by the Umbilical Width Index, indicates predominantly very evolute coiling with a wide umbilicus and strongly exposed earlier whorls. Ornamentation is dominated by ribbing, including simple rectiradiate, convex, and bifurcating; locally, subparallel rib sets along the whorls resemble the diagnostic ornament of *Euflemingites*, suggesting an Early–Middle Triassic age (251–247 Ma). Septal features are commonly poorly preserved in the imprints; however, where visible, sutures are ceratitic, consistent with ceratitid ammonoids (Order Ceratitida), a group ranging from the Permian to Triassic. The prevalence of very evolute coiling and pronounced ribbing implies limited hydrodynamic streamlining and is interpreted to reflect a lifestyle biased toward passive drifting/slow cruising rather than sustained fast nektonic swimming. Associated bivalve occurrences in certain beds further suggest a habitat from near-bottom (nektobenthic) settings to outer shelf–shelf-margin conditions.

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