

Serrated teeth in a new species of the early diverging macrophagous dolphin *Ankylorhiza*

Robert W. Boessenecker

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Ankylorhiza tiedemani is a large agorophiid-grade toothed whale (Odontoceti) from the Oligocene Ashley and Chandler Bridge formations of Charleston, South Carolina; this species is further the largest Oligocene odontocete. Macrophagous adaptations in this extinct “killer” dolphin include large body size, large teeth, fluted enamel, thickened cementum, large temporal fossae, and similar range of motion at the occipital-atlantal joint as in *Orcinus orca*. A new species, *Ankylorhiza serratidens* sp. nov., is reported from the Ashley Formation of South Carolina (late Rupelian; 28–30 Ma) and is based on a skeleton preserving mandibles, distinctive dentition, atlas vertebra, and other postcrania. The dentition of this specimen has extensive serrations (measuring 0.9–1.3 mm) on the posterior postcanine teeth. Though similar in size to *Ankylorhiza tiedemani*, *Ankylorhiza serratidens* sp. nov. was even more highly specialized for macrophagy. Accessory cusps in archaic cetaceans are preliminarily defined as being separated by deep notches and large size (>10% of mesiodistal crown length), with serrations preliminarily defined as lacking deep notches and small size (