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Youngest record of the extinct walrus *Ontocetus emmonsi* from the Early Pleistocene of South Carolina and a review of North Atlantic walrus biochronology

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The extinct North Atlantic walrus *Ontocetus emmonsi* is widely reported from Pliocene marine deposits in the eastern USA (New Jersey, Florida), Belgium, Netherlands, Great Britain, and Morocco. *Ontocetus* was slightly larger than the modern walrus *Odobenus rosmarus* , may have had wider climatic tolerances (subtropical), and likely originated in the western North Pacific before dispersing through the Arctic. Owing to geochronologic uncertainties in the North Atlantic Plio-Pleistocene walrus record, it is unclear whether *Ontocetus* and *Odobenus* overlapped in time and thus may have competed, or whether the two were temporally separate invasions of the North Atlantic. A new specimen of *Ontocetus emmonsi* (CCNHM-1144) from the Austin Sand Pit (Ridgeville, South Carolina, USA) is a complete, well-preserved left tusk that is proximally inflated and oval in cross-section, relatively short (maximum length: 369 mm) and markedly curved (radius of arc of curvature 197 mm). Globular dentine is present, confirming assignment to *Odobenini*; proportions and curvature identify the specimen as *Ontocetus emmonsi* rather than *Odobenus*. Hitherto unstudied deposits in the Austin Sand Pit lack calcareous macro and microinvertebrates, but vertebrate biochronology provides some temporal resolution. The co-occurrence of a giant beaver (*Castoroides* sp.) and a snaggletooth shark (*Hemipristis serra*) indicate an age of 1.1–1.8 Ma (Early Pleistocene) and correlation with the Lower Pleistocene Waccamaw Formation. The vertebrate assemblage is named the Ridgeville Local Fauna. The composition of the marine mammal assemblage from the Austin Sand Pit is intermediate between that of the lower Pliocene Yorktown Formation (North Carolina, USA) and the modern North Atlantic fauna. This record reported here is the youngest of *Ontocetus emmonsi* from the Atlantic Coastal Plain. A review of North Atlantic Plio-Pleistocene walrus records reveals no overlap between extinct *Ontocetus* and extant *Odobenus*—suggesting independent dispersal to the North Atlantic and a lack of competition.

Key words: Mammalia, Carnivora, Odobenidae, *Ontocetus, Odobenus*, Pliocene, Pleistocene, North Atlantic.

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