

Santanachelys, an oldest known sea turtle from the Santana Formation, and its paleoenvironmental implication.

HIRAYAMA, R. Faculty of Information, Teikyo Heisei University, Uruido 2289-23, Ichihara, Chiba 290-0193, Japan

Santanachelys gaffneyi Hirayama, 1998 (Family Protostegidae; Superfamily Chelonioidea; Order Testudines) was described based on a nearly complete, beautifully articulated skeleton unearthed from the calcareous concretion of the Romualdo Member of the Santana Formation near Santana do Cariri, Ceara, eastern Brazil. Its geological age (late Aptian to early Albian) demonstrates this occurrence as the earliest known cheloniod. Its unique combination of the cranial morphology (enlarged interorbital foramina), implying large lachrimal glands for excreting salt, and the poor development of limb paddles suggest that the establishment of the salt-excreting system, and the shift of terrestrial to marine environment, may have preceded the formation of rigid and enlarged paddles in the history of cheloniod sea turtles. Its presumed marine (or salty) habitat shows a certain development of marine environment among the Romualdo Member. Unfortunately, the exact horizon of the holotype of Santanachelys is uncertain. Thus, additional specimen of this taxon with more accurate geological data would be quite helpful for understanding the succession of paleoenvironments among the Romualdo Member.