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## PS-25 Discovery of the genus *Mauremys* (Testudines: Testudinidae) from the Upper Pleistocene of Taramajima Island, the Miyako Group, with reference to paleogeographical implications

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Taramajima Island (the Miyako Group, the Ryukyu Archipelago) is a small and flat island (19 km<sup>2</sup> in area, 34 m in height) and is located between Miyakojima Island (the Miyako Group) in the northeast and Ishigakijima Island (the Yaeyama Group) in the southwest. This island is composed of the late Middle to the Late Pleistocene coral reef complex deposits (the Ryukyu Limestone) and supposedly the Late Pleistocene Nakasuji ancient dune bed. An uplifted marine terrace recognized in most part of this island has been considered to have been formed during the Marine Isotope Stage (MIS) 5e. Extant non-volant terrestrial vertebrate fauna of Taramajima island is very poor, consisting of only a few lizard and snake species, all common to most Southern Ryukyu (the Miyako Group and the Yaeyama Group) islands. In addition, vertebrate fossils have never been found from this island. Based on such geological data and faunal pattern, Taramajima Island has been considered to have emerged above the sea in no earlier than the Middle Pleistocene. Also, it has been supposed that this island was connected to Miyakojima Island and adjacent islets in the Late Pleistocene, and then have been isolated from all other islands throughout the Holocene. However, we have discovered fossils of an extinct endemic turtle from fissure-filling deposits on this island. Radiocarbon dating executed for two land snail shells in the fossil bearing deposit indicated 17,600 +/- 70 and 20,020 +/- 90 yrBP. The Taramajima material included the nuchal, several costals, hyoplastra, right hypoplastron, right xiphiplastron, and the tibia, all supposedly derived from one individual. Presence of relatively developed inguinal and axillary buttresses reaching costals, presence of wide humeral scute, and absence of inframarginal scutes indicate that the material obviously belongs to the family Geoemydidae. Our comparison between the present material with extant and other extinct geoemydids revealed that the Taramajima turtle shares three taxonomically informative character states (presence of anterolateral extension of the first vertebral scute, wide axillary notch, and strong curvature of the anterolateral forelobe of the plastron) only with Mauremys leprosa, M. sarmatica, and M. yabei. The Taramajima turtle particularly resembled M. yabei from the Middle and Upper Pleistocene of Japan Main Islands in having wide anterior plastral lip and obvious lateral notch in the margin of the xiphiplastron, but differed from the latter in having very narrow cervical scute in dorsal view. These results indicate that the Taramajima turtle represents an undescribed species of the genus Mauremys which obviously differs from M. mutica (a geoemydid species whose natural population in the Ryukyus is confined to the Yaeyama Group), as well as an undescribed Mauremys from the Upper Pleistocene of Miyako Island. This strongly suggests that two endemic Mauremys species occurred in Taramajima and Miyakojima Islands within the Miyako Group in the Late Pleistocene but went extinct until the end of the Pleistocene. Present finding challenges the currently prevailing paleogeographical hypothesis, which assumes a very short history of the Miyako region as an isolated island or island group.