

| Achievements

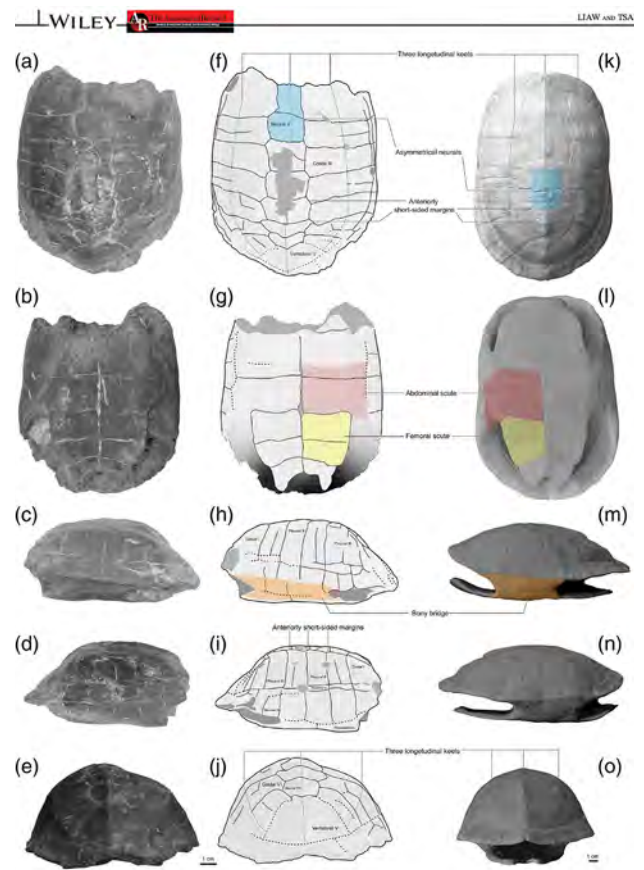
Unearthing the Past to Save the Present: Conservation Paleobiology

Share:     

Conservation paleobiology may not be a household term, but it is a field of great importance for present-day conservation efforts. This field is not just about conserving and studying the fossil remains of extinct species but also using the information gathered from these materials to assist in conserving modern-day species and ecosystems. Such studies involve the use of fossil records to gain insight into how species and ecosystems responded to environmental changes in the past. By understanding how they adapted, conservation paleobiologists can predict how present-day species might respond to present and future changes in the environment and the climate. Such knowledge is crucial in developing effective conservation strategies, particularly for endangered species and ecosystems.

Associate Prof. Cheng-Hsiu Tsai and his PhD student Yi-Lu Liaw of NTU's Department of Life Science have introduced a new research project in conservation paleobiology—demonstrating how the study of fossils can provide valuable insights for conservation policy decision-making. For example, by conducting a revision of the taxonomy of the Pleistocene geoemydid turtle found in Taiwan, they confirmed the existence of the Pleistocene *Mauremys reevesii*. This finding has significant implications for conservation paleobiology and indicates that even though the present population of *M. reevesii* may have been recently introduced by humans, it should be recognized as a native species of Taiwan.

This discovery offers a new perspective on the possibility that such a secondary-invasion population could rebuild its natural habitat and restore the vanished ecological niche of Pleistocene *M. reevesii* in Taiwan. Moreover, this pioneering practice of conservation paleobiology in Taiwan also sheds new light on the decision-making of conservation policy and offers new insights into the origin of modern biodiversity.



The Pleistocene *Mauremys reevesii* of Taiwan (left); anatomical interpretations of the Pleistocene *M. reevesii* (middle); and the shell of modern *M. reevesii* (right).



Reconstructed ecological scene with *Mauremys reevesii* in the Pleistocene Park (illustrated by Yi-Lu Liaw).



Click or Scan the QR code to read the journal article in *The Anatomical Record*.