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The first fossil of the extant leatherback sea turtle *Dermochelys coriacea*

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The leatherback sea turtle (*Dermochelys coriacea*) is the largest living sea turtle, but their evolutionary history remains poorly known due to the lack of any confirmed fossil record of the extant species. Here we describe a fossil humerus from the Pleistocene of Taiwan. Its preserved morphology shows a close match to the extant leatherback sea turtle, including the humeral head tilted to the intertubercular side, a slightly-curved secondary deltopectoral crest, and the absence of a deep intertubercular fossa. This Pleistocene humerus from Taiwan then presents the first fossil record of the extant leatherback sea turtle worldwide. The record suggests that the modern global migration pattern of the leatherback sea turtle has already included the western North Pacific. Our discovery of the first fossil leatherback sea turtle should encourage more fossil finds to reveal the detailed evolutionary history of the leatherback sea turtle and the ecosystem they utilize.

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