

Conservation News

Lost and found: discovery of the painted swellshark *Cephaloscyllium pictum* in Timor-Leste

During a survey of Timor-Leste's deep-sea environment (water depth > 200 m), we have recorded the first live video footage of a painted swellshark *Cephaloscyllium pictum*. We conducted this survey using low-cost deep-sea cameras developed by the National Geographic Society Exploration Technology Lab (Giddens et al., 2021, *Frontiers in Marine Science*, 7, 601411).

Cephaloscyllium pictum was described in 2008 from five specimens collected at fish markets in Lombok and Bali, Indonesia (Last et al., 2008, *CSIRO Marine & Atmospheric Research Paper*, 022, 358). Four of the five specimens were collected in 2002, with the fifth collected at the Tanjung Luar fish landing site in Lombok on 12 July 2004. To our knowledge, this species has never been observed in the wild, and little is known about its ecology, habitat or behaviour.





On 17 and 18 November 2024, our deep-sea cameras captured footage of this species at two sites off Dili, Timor-Leste, at depths of 570 and 536 m. The habitat at both sites consisted of steep rocky slopes. At each site, the shark returned to the camera several times, and in the second instance the female shark interacted with the bait and made several passes in front of the camera. This is a new species record for Timor-Leste and extends the species' known range by > 1,100 km.

Although sharks and rays are protected in Timor-Leste, there is a dearth of information on their diversity and distribution, especially for deep-sea species. Recently, the IUCN Species Survival Commission Shark Specialist Group

identified four Important Shark and Ray Areas along the north coast of Timor-Leste based on diver observations (sharkrayareas.org/e-atlas). However, in situ research is critical to inform conservation, especially for deep-sea species where diver observations are not possible.

Cephaloscyllium pictum is categorized as Data Deficient on the IUCN Red List because of the limited information available. Approximately 33% of chondrichthyan species are threatened, with this number increasing to c. 40% if Data Deficient species (which may be threatened) are included (Dulvy et al., 2021, *Current Biology*, 31, 4773–4787). The discovery of the painted swellshark off Timor-Leste highlights the importance of modern, cost-effective technologies to survey the deep sea and locate these lost sharks before they vanish.

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