

Reef sites

A pelagic thresher shark (*Alopias pelagicus*) gives birth at a cleaning station in the Philippines



Fig. 1 A pelagic thresher shark gives birth at a cleaning station while a crescent wrasse bites at its cloaca

For the past two decades, pelagic thresher sharks (*Alopias pelagicus*) have been known to visit a shallow coastal seamount in the Philippines where they interact with cleaner wrasse *Labroides dimidiatus* and *Thalassoma lunare* (Oliver et al. 2011). Known for possessing an elongate caudal fin that evolved for prey capture (Oliver et al. 2013), pelagic thresher sharks mature late, have low fecundity, and are classified as vulnerable to overexploitation by the International Union for Conservation of Nature.

Parturient sharks have rarely been observed in the wild, and little is known of the reproductive strategies of most oceanic species. Here, we present photographic evidence that we captured on April 4, 2013, as the first record of a thresher shark giving birth.

At 0628 hrs, during a biological survey of Monad Shoal (N11°19'06.7", E124°11'31.9"), we observed a large female pelagic thresher shark swimming back and forth across a cleaning station in an agitated state. We were unable to decipher the cause of the shark's distress from our observation post 15 m away, although it was evident that cleaner wrasse were taking bites from its pelvic region. We observed the shark for a total of 4 min, during which we took its photograph for identification purposes. The shark then left the cleaning station and was not observed again. Later, when we processed the photograph for analysis, it revealed the head of a pup emerging from the shark's cloaca (Fig. 1).

Pelagic thresher sharks have been described as having a cosmopolitan distribution with metapopulations occupying appropriate habitats across the globe (Tsai et al. 2010). Current evidence suggests that the gender and maturity dynamics of thresher sharks that visit Monad Shoal collectively comprise a single unit stock, which incorporates male, female, juvenile, transitional, and mature sharks, and includes gravid females (current data). While interactions among thresher sharks and cleaner fish are well documented at this site (Oliver et al. 2011), this is the first time cleaners have been seen interacting with a marine organism while it gives birth.

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