

Giant sunfish species eludes discovery for centuries

July 20 2017

An elusive new species of ocean sunfish has been discovered by an international team of researchers led by a Murdoch University PhD student.

Marianne Nyegaard from the School of Veterinary and Life Sciences uncovered the new species while researching the population genetics of ocean sunfish in the Indo-pacific region.

The previously undescribed species has been named the Hoodwinker Sunfish (*Mola tecta*).

Iconic ocean sunfishes are the heaviest and most distinctive of all bony fishes, with some species weighing in excess of two tonnes and growing to three metres in length. The newly discovered species is thought to approach a similar size.

The challenging journey to confirm the discovery was a four-year labour of love for Ms Nyegaard, who began her investigations after noticing genetic differences in sunfish samples from the Australian and New Zealand longline fishery.

"A Japanese research group first found genetic evidence of an unknown sunfish species in Australian waters 10 years ago, but the fish kept eluding the scientific community because we didn't know what it looked like," Ms Nyegaard said.

"Finding these fish and storing specimens for studies is a logistical nightmare due to their elusive nature and enormous size, so sunfish research is difficult at the best of times. Early on, when I was asked if I would be bringing my own crane to receive a specimen, I knew I was in for a challenging – but awesome – adventure."

Over a three-year period she collected data from 27 specimens of the new species, at times travelling thousands of miles or relying on the kindness of strangers to take samples of sunfish found stranded on remote beaches.

"The new species managed to evade discovery for nearly three centuries by 'hiding' in a messy history of sunfish taxonomy, partially because they are so difficult to preserve and study, even for natural history museums," Ms Nyegaard said.

"That is why we named it *Mola tecta* (the Hoodwinker Sunfish), derived from the Latin *tectus*, meaning disguised or hidden."

"This new species is the first addition to the *Mola* genus in 130 years. The process we had to go through to confirm its new species status included consulting publications from as far back as the 1500s, some of which also included descriptions of mermen and fantastical sea monsters.

"We retraced the steps of early naturalists and taxonomists to understand how such a large fish could have evaded discovery all this time. Overall we felt science had been repeatedly tricked by this cheeky species, which is why we named it the Hoodwinker."

Similar to its two sister species, *Mola mola* and *Mola ramsayi*, the [new species](#) has the characteristic truncated appearance of half a fish, but the differences between the three species become clear with growth.

Mola tecta remains sleek and slender even in larger sizes, differing from the other species by not developing a protruding snout, or huge lumps and bumps.

Ms Nyegaard suspects that, as with other sunfish species, feeding takes place during deep dives. The digestive tract contents of three specimens she sampled consisted mostly of salps, a gelatinous sea creature loosely resembling a jellyfish.

Mola tecta appears to prefer cold water, and has so far been found around New Zealand, along the south-east coast of Australia, off South Africa and southern Chile.

Ms Nyegaard's paper on the new sunfish [species](#) has been published in the *Zoological Journal of the Linnean Society*.

More information: Marianne Nyegaard et al. Hiding in broad daylight: molecular and morphological data reveal a new ocean sunfish species (Tetraodontiformes: Molidae) that has eluded recognition, *Zoological Journal of the Linnean Society* (2017). [DOI: 10.1093/zoolinnea/zlx040](#)

Provided by Murdoch University

Citation: Giant sunfish species eludes discovery for centuries (2017, July 20) retrieved 11 May 2024 from <https://phys.org/news/2017-07-giant-sunfish-species-eludes-discovery.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.