

World's heaviest bony fish identified and correctly named

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Credit: Springer

Japanese fish experts have identified and clarified the biological name of the world's heaviest bony fish ever caught. The 2,300 kilogram whopper is a *Mola alexandrini* bump-head sunfish, and not, as originally thought, a member of the more commonly known *Mola mola* ocean sunfish species. The study was led by Etsuro Sawai of Hiroshima University and is published in *Ichthyological Research*, which is the official journal of the Ichthyological Society of Japan. The journal is published by Springer.

Bony [fish](#) have skeletons made of bone rather than cartilage, as is the case for sharks or rays. Ocean sunfishes count among the world's largest

bony fish, and have for centuries attracted interest from seafarers because of their impressive size and shape. Specimens can measure up to three meters (total length), and many weighing more than two thousand kilograms have been caught. Instead of a caudal fin, sunfish have a broad rudder-like lobe called a clavus.

In this study, Sawai and his team referred to more than one thousand documents and specimens from around the world - some of which date back 500 years. Their aim was to clarify the scientific names for the [species](#) of the genus *Mola* in fish.

Ocean sunfishes can be classified into three species which Sawai's team temporarily called *Mola* species A, *Mola* species B, and *Mola* species C, respectively. Of the three species, the scientific name of *Mola* species C was officially named *Mola tecta* in July 2017.

In this study, the researchers studied, dissected and measured 30 specimens of the remaining two *Mola* species (*Mola* species A and *Mola* species B) including fresh and preserved samples from different collections in the world. Information was obtained from photographs and from historic and recent records. The team set out specific morphological characteristics, and made notes on the distribution of the different species. This led them to conclude that the species names *Mola mola* (*Mola* species B) and *Mola alexandrini* (*Mola* species A) should be used. They also proposed "bump-head sunfish" as the new common name for *Mola alexandrini* because of the very prominent shape of its head.

"For the same reason, we adopt the already proposed Japanese common name Ushi-manbo. 'Ushi' means 'cow', and refers to the head profile of the fish," Sawai explains.

They also solved a case of mistaken identity. The Guinness World

Records lists the world's heaviest bony fish as *Mola mola*. However, Sawai's team found a female *Mola alexandrini* specimen of 2,300 kilogram and 2.72 meter caught off the Japanese coast (Kamogawa, Chiba) in 1996 as the heaviest bony fish ever recorded. Through their investigations, Sawai's team re-identified it as actually being a *Mola alexandrini* based on its characteristic head bump, chin bump and rounded clavus although this specimen was identified *Mola mola* until now.

"Therefore, the world's heaviest bony fish that has been actually weighed and recorded to date is a specimen of *Mola alexandrini*, not *Mola mola*," says Sawai, who believes that there could be even bigger examples of this species alive in the ocean. In 2004, a 3.32 meter female *Mola alexandrini* specimen was caught off one of Japan's islands (Aji Island, Miyagi), but it was not weighed.

More information: Etsuro Sawai et al, Redescription of the bump-head sunfish *Mola alexandrini* (Ranzani 1839), senior synonym of *Mola ramsayi* (Giglioli 1883), with designation of a neotype for *Mola mola* (Linnaeus 1758) (Tetraodontiformes: Molidae), *Ichthyological Research* (2017). [DOI: 10.1007/s10228-017-0603-6](https://doi.org/10.1007/s10228-017-0603-6)

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