

Tiny red handfish hatchlings a lifeline for world's rarest fish

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Red handfish hatchling. Credit: Jemina Stuart-Smith

Fifty newborn red handfish are giving IMAS scientists an opportunity to

help save the last known populations of the world's rarest fish.

The tiny red handfish hatched in an IMAS aquarium this month from two egg masses collected at one of the last remaining sites in Southern Tasmania where fewer than 100 adults survive.

IMAS researcher Dr. Jemina Stuart-Smith said keeping the juveniles in a [safe environment](#) during their vulnerable early stages would protect them from predators and environmental risks.

"These juvenile red handfish will play a vital role in ensuring the species continues to survive in the wild," Dr. Stuart-Smith said.

"We plan to release them back into their remaining habitat when they are around one-year old, to help rebuild the population at one of the two known sites that has been compromised by range of impacts—including habitat loss.

"Raising them in a [controlled environment](#) is a conservation strategy known as headstarting, designed to improve their chances of surviving to maturity and eventually reproducing.

"Little is known about red handfish biology, reproduction and early growth, and these juveniles will also allow critical research that can help us to ensure this is not the last generation of their species," Dr. Stuart-Smith said.

IMAS Ph.D. student Tyson Bessell said handfish lay eggs on upright stalks of vegetation on the seafloor and the mother stays with them until they hatch.

"The fish at IMAS were just 3-4 mm long when they hatched and would be almost impossible to find and study in the wild, where they shelter

under seaweed on shallow reefs," Mr Bessell said.

"This is the second group of red handfish that have hatched in captivity after a similar egg mass was collected last year, and hatched at CSIRO.

"The 2018 batch of 16 juveniles has provided important insights and will soon be released after surviving their crucial first year at Seahorse World near Launceston, where they are currently on public display," Mr Bessell said.

IMAS research into the red handfish is being carried out in collaboration with the CSIRO under the auspices of the National Handfish Recovery Team, which has successfully brought the Spotted handfish back from the brink of extinction.

To help raise funds to support the research, profile pages on the Handfish Conservation Project website have been created for the 100 known surviving adult red [handfish](#).

So far 17 individuals and organizations have donated \$1,000 each for the opportunity to name one of the fish and numerous smaller donations have also been received from across Australia and around the world.

More information: Handfish Conservation Project: handfish.org.au/

Provided by Institute for Marine and Antarctic Studies (IMAS)

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