

# Japan scientists breed salmon from surrogates

January 15 2013

---



Photo illustration obtained January 13, 2011 shows a Fraser River sockeye salmon in the North Pacific Ocean. Japanese scientists have successfully bred a type of salmon using surrogate parents of a different species.

Japanese scientists have successfully bred a type of salmon using surrogate parents of a different species, in a breakthrough that could help preserve endangered creatures, the chief researcher said Tuesday.

Researchers froze the testes of the yamame salmon, a fish indigenous to Japan that lives its entire life in rivers, before extracting primordial germ cells and implanting them into otherwise sterile [rainbow trout](#) hatchlings.

These primordial cells, called spermatogonia, were used by the fish's growing body to develop fully functional sperm in males and viable eggs in females, said Goro Yoshizaki at Tokyo University of Marine Science and Technology.

The eggs and sperm can be fused in vitro to produce a healthy yamame salmon, he told AFP.

"As far as these kinds of trout and salmon are concerned, I can say this methodology is complete, and we can recreate sperm and eggs, and individuals, of the original species any time," Yoshizaki told AFP.

"We have confirmed the technology can also apply to tiger pufferfish as well," he said, referring to the popular—but poisonous—Japanese delicacy.

Yoshizaki and his team are already working on a project aimed at preserving [endangered fish](#) species and would like to see if the same process is also possible in amphibians.

"I want to upgrade one class to another so that this technology can be applied eventually to reptiles and mammals," he said.

"But the hurdle is still high because the sets of genes are much more different between male and female mammals."

The study was published online in the [Proceedings of the National Academy of Sciences](#) of the United States of America.

(c) 2013 AFP

Citation: Japan scientists breed salmon from surrogates (2013, January 15) retrieved 28 April 2024 from <https://phys.org/news/2013-01-japan-scientists-salmon-surrogates.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.