

Hybrids of genetically-modified and wild fish outgrow their parents

If genetically-modified (GM) salmon escape from farms and mate with wild fish from a different species, the results could be surprising. According to a new study, the hybrid offspring grow even faster than the GM fish.

The researchers crossed GM salmon, which carried a snippet of genetic material that increased their growth rate, with wild salmon or brown trout. Then the team raised the fish in tanks that mimicked conditions in a hatchery. Fish also were tested in environments more similar to natural streams.

Forty-three percent of the hybrid fish carried the growth hormone transgene, the team reports in *Proceedings of the Royal Society B*. Under the hatchery-like conditions, the growth rate of hybrid fish with the transgene was 2.1 percent, while GM salmon's growth rate was 1.9 percent.

Wild and GM fish also grew more slowly in the stream-like conditions when hybrid fish were present. The wild fishes' growth rate dropped by 54 percent and the GM fishes' by 82 percent. The study was done by researchers now at McGill University, the University of Washington, the Government of Newfoundland and Labrador, and Memorial University of Newfoundland.

The authors caution that "it is entirely unclear whether this would be observed in truly wild environments." And AquaBounty Technologies, the company producing the GM salmon, claims that its fish are sterile and well-contained. Nevertheless, hybridization should "be explicitly considered when assessing the environmental consequences should transgenic animals escape to nature," the researchers write. — **Roberta Kwok | 28 May 2013**

Source: Oke, K.B. et al. 2013. Hybridization between genetically modified Atlantic salmon and wild brown trout reveals novel ecological interactions. *Proceedings of the Royal Society B* doi: 10.1098/rspb.2013.1047.

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