

# Young salmon may leap to 'oust the louse'

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Credit: Simon Fraser University

A study by Simon Fraser University aquatic ecologists Emma Atkinson and John Reynolds reveals that young salmon may jump out of water to remove sea lice.

"Ideas about why [fish](#) leap include getting over obstacles during their

upstream migration as adults, catching food and avoiding predators," says Atkinson.

"However, these reasons may not apply to young salmon since their diet is composed almost exclusively of underwater zooplankton and their tendency is to scatter rather than leap when escaping from predators."

Atkinson hypothesized that the leaping behaviour could be the fish's way of removing parasitic [sea lice](#), which is a common condition for wild and penned salmon off the B.C. coast. Heavy sea-louse infestation is correlated with reduced growth, impaired swimming and competitive foraging ability for young salmon.

To test her hypothesis, Atkinson and her team caught wild juvenile sockeye salmon during their coastal migration away from the Fraser River. They held the fish in flow-through net-pen enclosures, half of which were covered with netting to prevent leaping and the other half were left uncovered to allow leaping. After three days, the team counted the [lice](#) on each fish.

The researchers found that, on average, the salmon that were allowed to leap in the uncovered pen had 22 per cent fewer sea lice compared to those that weren't allowed to leap in the covered pen.

The researchers also found that it may take more than 50 leaps for a young [salmon](#) to dislodge a sea lice, which Atkinson acknowledges is a substantial amount of energy to expend. She says these costs may be offset by the benefits of successfully removing sea lice, but will have to be investigated in another study.

Atkinson's study was recently published in the *Journal of Fish Biology*.

**More information:** E.M. Atkinson et al, Oust the louse: leaping

behaviour removes sea lice from wild juvenile sockeye salmon  
*Oncorhynchus nerka*, *Journal of Fish Biology* (2018). [DOI:  
10.1111/jfb.13684](https://doi.org/10.1111/jfb.13684)

Provided by Simon Fraser University

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