

Tags on fish may act as 'dinner bell' for seals

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A study revealed that seals are more quickly attracted to fish that have been attached with sound-emitting tags, creating a "dinner bell" effect on the seals

Sound-emitting tags fitted to fish to track their survival may, paradoxically, be alerting predator seals to their whereabouts, said scientists Wednesday who warned of a "dinner bell" effect.

Tests with captive grey seals showed that they learned quickly to associate the tag's sound with the presence of an easy meal, British researchers reported in the journal *Proceedings of the Royal Society B*.

Ten juvenile seals who had not been exposed to acoustic tags before, were put to the test in a concrete pool with twenty boxes into which [fish](#), tagged and untagged, were randomly placed for them to eat in 20 trials.

"The seals found the tagged fish in fewer box visits than the untagged fish in later trials, demonstrating the learned use of the acoustic tag to locate food," the researchers found.

With each consecutive test, seals needed about five percent less time to find the box with the tag inside. And they visited the boxes with tagged fish much more frequently than empty boxes or those with non-tagged fish.

Acoustic tags are widely used in mark-and-recapture studies to assess fish survival and stock health. They produce ultrasonic frequencies thought to be imperceptible to the fish that carry them.

Previous studies had suggested the signal was audible to some predators, like seals, but this was the first research to find a "learned association between a signal and food leading to a 'dinner bell' effect," the authors said.

"Our results... illustrate the importance of considering the auditory sensitivities of all animals in the environment when designing an acoustic tagging study," they wrote.

"We showed that acoustic tags... aid prey detection, potentially increasing predation of tagged animals" and potentially skewing study findings.

The team said similar results were likely for other animal species and for other man-made sounds like boat engines, turbines and sonar—causing behaviour changes that could have profound effects on an ecosystem.

This may include tagged predators, like sharks, having less and less hunting success as [seals](#) and other prey scatter in front of the acoustic signal.

"Thus, when introducing artificial sound sources into an environment, it is important to take into consideration all potential effects on local species, both detrimental and beneficial," the authors said.

More information: Grey seals use anthropogenic signals from acoustic tags to locate fish: evidence from a simulated foraging task, [rspb.royalsocietypublishing.org1098/rspb.2014.1595](https://royalsocietypublishing.org/doi/10.1098/rspb.2014.1595)

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