

Researchers prove cormorants can hear under water

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The cormorant Loke is being hearing tested by the researchers. Credit: University of Southern Denmark

For the first time, researchers have shown that marine birds can hear underwater. This offers new possibilities for the protection of marine birds in trafficked waters. Seals, whales and other marine animals can hear underwater. The cormorant also has this ability, which new research from University of Southern Denmark (SDU) shows.

According to the biologists it makes good sense that cormorants can hear underwater—the environment where it finds most of its food. About every tenth bird species in the world—around 800 species—hunts underwater, and it may turn out that others can also hear underwater.

The sound of fish

Researchers Kirstin Anderson Hansen, Alyssa Maxwell, Ursula Siebert, Ole Næsbye Larsen and Magnus Wahlberg from the Department of Biology at University of Southern Denmark have tested the [hearing](#) of the Loke's cormorant at SDU's marine biology research station in the Danish town Kerteminde.

"Hearing underwater must be a very useful sense for cormorants. They depend on being able to find food, even if the water is not clear, or if they live in the Arctic regions where it is dark for long periods at a time," says Kirstin Hansen, Ph.D. Loke's hearing abilities are on a par with the hearing of the toothed whale and the seal.

The sound of humans

Cormorants can hear sounds ranging between 1 and 4 kHz, and it is in this range that fish such as sculpin and herring produce sounds. Both sculpin and herring are on the cormorant's menu.



The research cormorant Loke. Credit: University of Southern Denmark

One to 4 kHz is not only the range in which fish sounds are audible. There are also man-made sounds found in this range.

"Man-made sounds can disturb the ocean's animals to such an extent that they cannot find food or communicate with each other. It is a known problem for porpoises and seals for instance, and now it is also a potential problem for [birds](#). It is certainly something that we should be more aware of," says Magnus Wahlberg, associate professor. Man-made sounds can include everything from spinning wind turbines and ship traffic to water scooters and drilling platforms. The SDU biologists are now planning more trials, and the next birds to be tested will probably be common murre and puffins.

More information: Kirstin Anderson Hansen et al, Great cormorants (*Phalacrocorax carbo*) can detect auditory cues while diving, *The Science of Nature* (2017). [DOI: 10.1007/s00114-017-1467-3](https://doi.org/10.1007/s00114-017-1467-3)

Provided by University of Southern Denmark

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