Duck species can imitate sounds

September 6 2021

Male, Sandford, Tasmania, Australia. Credit: JJ Harrison (jjharrison.com.au/), CC BY-SA 3.0

That a parrot can copycat sounds is nothing new. But vocal learning is not common in animals. Researcher Carel ten Cate of the Institute of Biology Leiden (IBL) of Leiden University has now discovered a duck species that can imitate sounds. "It started with an obscure reference

about an Australian musk duck and ended in a nice paper."

Being able to learn how to make particular sounds is a rare characteristic. This vocal learning occurs in humans as well as in some dolphins, whales, elephants and bats. But for most mammals, it does not seem to be in their nature. A barking cat, mooing mouse or singing giraffe: you won't be coming across them anytime soon.

Rare in birds too

However, some birds may be able to do this, Ten Cate tells. "Although also for this group, vocal learning is rare. We know that songbirds, parrots and hummingbirds can learn to make specific sounds. This includes many species, but that is because vocal learning originated in the ancestral species of these groups." Therefore, researchers generally assume that vocal learning evolved in only three of the 35 orders in which all bird species are classified.

"You bloody foo"

With the discovery of imitating duck, Ten Cate introduces a new order into this elite group. He was compiling his knowledge on vocal learning on birds into a review when he came upon an obscure reference about an Australian musk duck (Biziura lobata). The animal was reported to imitate a human voice, sounding like 'you bloody foo(l)".

The duck was also reported to be able to imitate other sounds, such as a slamming door. "This came as a big surprise. Because even though the bird was recorded 35 years ago, it remained unnoticed by researchers in the vocal learning field until now," Ten Cate elaborates. "That makes it a very special rediscovery."

He tried to trace the source of the recording, with success. It appeared to be an Australian birder who recorded the duck around 1987. "The man, Peter Fullagar, told me that the duck was hand reared and would have had heard the sound as a duckling," Ten Cate says. He analysed the recordings in detail and published them with Fullagar as co-author. Additionally, they discovered other cases of musk ducks that imitated noises, such as a snorting pony, the cough of a caretaker and a squeaking door.

Equal quality

The observations indisputably show that this duck species can imitate a surprising and divergent range of sounds. "It is the only bird species outside of earlier mentioned groups that shows this quality of imitation. And the level at which they can do this is similar to other imitating species."

In the evolutionary tree, the duck branch split off early from the other bird groups. "To observe vocal learning in such a group makes this find extra remarkable," Ten Cate concludes. It is not yet clear why this particular species is capable of vocal learning.

More information: Vocal imitations and production learning by Australian musk ducks (Biziura lobata). *Phil. Trans. R. Soc. B* 20200243. doi.org/10.1098/rstb.2020.0243

Re-evaluating vocal production learning in non-oscine birds. *Phil. Trans. R. Soc. B* 20200249. doi.org/10.1098/rstb.2020.0249

Provided by Leiden University