

Puzzled otters learn from each other

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Asian short-clawed otters learn from each other when solving puzzles to get food, a new study shows. Credit: Yazmin Pullen

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University of Exeter researchers gave groups of otters a variety of

transparent containers baited with meatballs. Each of these [food puzzles](#) could be opened by twisting or pulling a particular lid or handle.

The otters saw each [puzzle](#) twice, several months apart. The researchers found that the otters solved puzzles 69% faster on average the second time—suggesting a capacity for long-term memory.

The findings also provide evidence of "[social learning](#)"—as when one [otter](#) cracked a puzzle, its closest "friends" quickly figured it out too.

"Asian short-clawed otters are declining in the wild, partly due to overfishing and pollution affecting the crustaceans and small fish they feed on," said lead author Alex Saliveros, of the Centre for Ecology and Conservation on Exeter's Penryn Campus in Cornwall.

"With that in mind, we wanted to understand more about how they learn and remember information about new food sources.

"Being able to catch new prey in new ways, and to pass on that knowledge, could be important in terms of conservation.



Asian short-clawed otters learn from each other when solving puzzles to get food, a new study shows. Credit: Georgina Hume

"Our study is the first to show evidence of social learning and long-term memory in Asian short-clawed otters—which may be good news in terms of their adaptability and future survival."

By building up a picture of "social networks" (which otters spent more time together) before presenting them with the puzzles, the researchers were able to see how problem-solving techniques passed through the otter groups.

Senior author Dr. Neeltje Boogert said: "We previously found that smooth-coated otters learn from each other.

"Now that we know Asian short-clawed otters do so as well, we can start investigating how we might transmit critical survival information regarding new foods and predators through wild otter groups more generally."

The paper, published in the journal *Royal Society Open Science*, is entitled: "Learning strategies and [long-term memory](#) in Asian short-clawed otters (*Aonyx cinereus*)."

More information: "Learning strategies and long-term memory in Asian short-clawed otters (*Aonyx cinereus*)" *Royal Society Open Science* (2020). [DOI: 10.1098/rsos.201215](https://doi.org/10.1098/rsos.201215)

Provided by University of Exeter

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