

Ring-billed gulls found able to pass the string-pull test

December 6 2021, by Bob Yirka

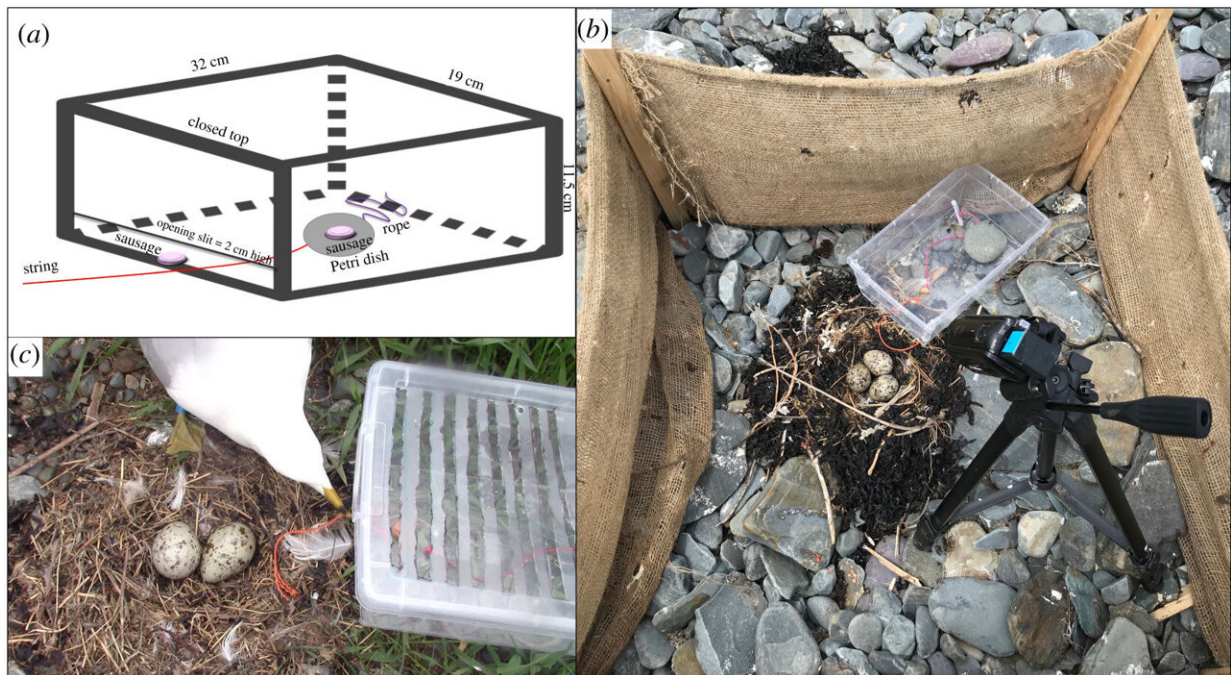


Figure 2. Horizontal version of the string-pull test used here to assess cognition in ring-billed gulls. (a) Schematic of the string-pull test with the lid on; the only way to access the sausage inside the box is to pull horizontally on the string that extends from a plastic Petri dish inside the box through the open slit at the base of the front panel. The Petri dish is tied to the back of the box by a long rope which does not prevent the dish from exiting the box through the open slit but prevents the gull from flying away with the Petri dish. (b) Photograph of the fenced nest during the last habituation trial in which the sausage on the Petri dish is accessible through the lidless top or by pulling on the string through the open slit at the base of the front panel. The box was pegged to the ground with a rock placed inside it to prevent it from moving. (c) Photograph of a string-pull test

trial in which a banded gull (blue color band) is pulling on the string before successfully solving the test. Because the lid of the box was slightly frosted, slits of 1 cm width were made to provide of a better view of the box's contents without providing access through the top. For the last habituation trial and for all three string-pull test trials, a video camera was placed inside the fence to determine whether the gull present during the trial was the banded parent or its unbanded mate. Credit: DOI: 10.1098/rsos.211343

A team of researchers at the Memorial University of Newfoundland has found that the ring-billed gull is able to pass a widely used cognitive test called the string-pull test. They describe their results in a paper published in the journal *Royal Society Open Science*.

The string-pull [test](#) is a widely used experiment to test the cognitive abilities of animals. The researchers note that multiple studies of perching birds and parrots have been conducted to learn more about their intelligence, but very few have been done for waterbirds. They suggest this is because such birds are considered to be less intelligent than other birds. To verify, the researchers set up an experiment using the string-pull test for ring-billed gulls. It is a test that involves placing a treat on a dish and tying it to a string and placing both inside of a plastic box with a slit on one end. The slit is just large enough for the dish and treat to pass through. One end of the string is placed outside of the box. For a bird to gain access to the treat, it must yank the string, pulling the [dish](#) and treat through the slit. Scientists suggest it takes problem-solving abilities to pass the test, a sign of intelligence.

The experiment started with the researchers placing empty boxes near nests in Newfoundland with a treat placed near them, allowing the birds to become accustomed to eating food near the boxes. Then, they began testing the birds by placing test boxes near 93 nests that were home to 138 parent gulls. They then counted how many birds tried to retrieve the

treat from the box and how many succeeded and how many tries it took.

The researchers found that out of approximately 104 attempts, 25 percent were successful and 21 percent of the birds succeeded on their first try. They also found multiple instances of [birds](#) that were able to repeat their success. They conclude by noting that their experiments mark the first time a waterbird has been found to be able to solve the string-pull test.

More information: Jessika Lamarre et al, Waterbird solves the string-pull test, *Royal Society Open Science* (2021). [DOI: 10.1098/rsos.211343](https://doi.org/10.1098/rsos.211343)

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Citation: Ring-billed gulls found able to pass the string-pull test (2021, December 6) retrieved 28 April 2024 from <https://phys.org/news/2021-12-ring-billed-gulls-string-pull.html>

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