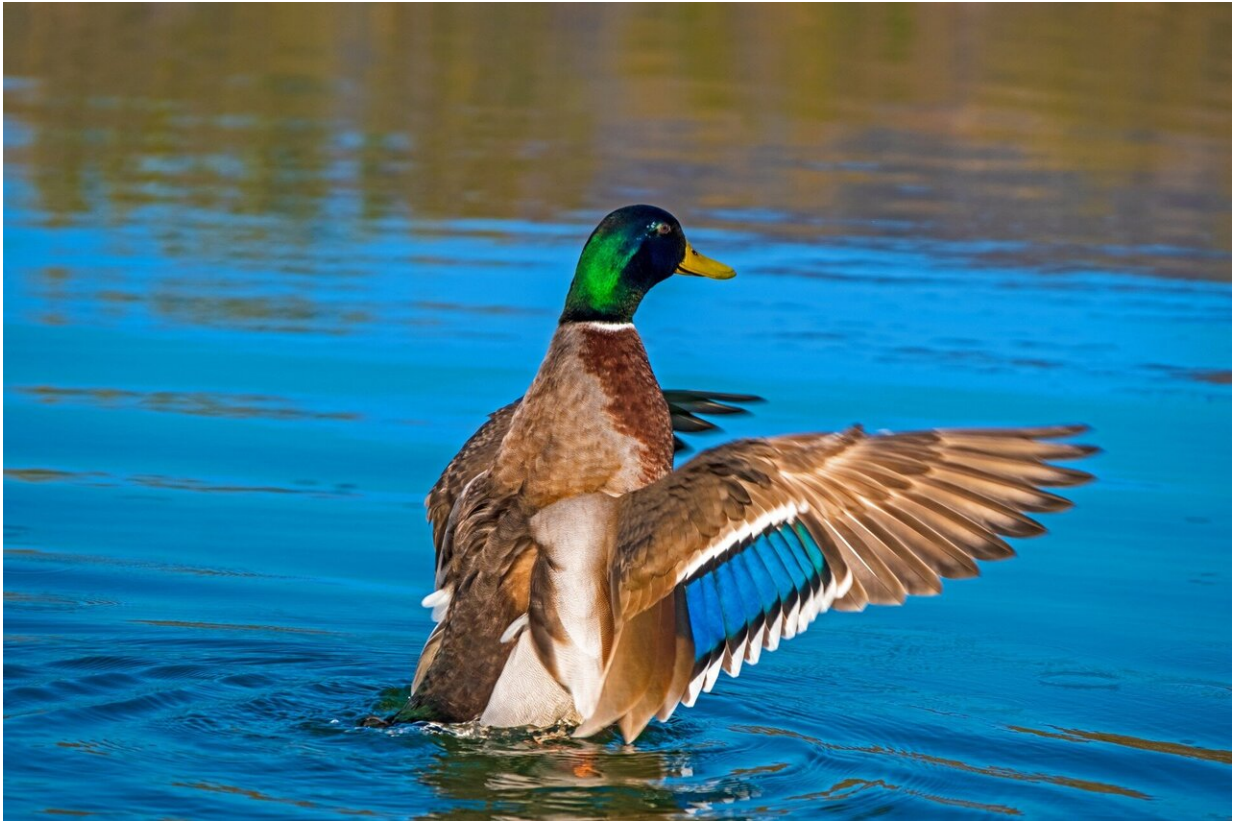


Experiment shows it is possible for fish to migrate via ingestion by birds

June 23 2020, by Bob Yirka



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A team of researchers from the Danube Research Institute and the National Agricultural Research and Innovation Centre, both in Hungary, and Estación Biológica de Doñana, Consejo Superior de Investigaciones

Científicas in Spain reports that it is possible for fish eggs to survive the trip through the bird digestive tract and subsequently to hatch. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes their experiments with birds and fish eggs and what they found.

Fish have been found swimming in extremely isolated lakes over the years, raising the question of how they got there. Prior research has shown that most such [fish](#) are related to fish in other less isolated areas, which suggests that fish in isolated places must have somehow migrated there. Scientists have suggested that the most obvious explanation for such migration is fish [eggs](#) being consumed by [birds](#) who carry them in their digestive tracts and then deposit them in a new locale when they defecate. Surprisingly, no one has thought to test this theory until now.

The work involved feeding fish eggs to birds and then retrieving them from their feces at a later time, and then testing them in an incubator to see if they would hatch.

More specifically, the researchers fed eight mallard ducks 500 fish eggs each from two kinds of fish (Prussian carp and common.) They waited for the ducks to defecate (which took only an hour on average). They then counted the number of eggs they found and were able to retrieve.

The data from their survey showed that six of the ducks had viable eggs in their excrement—for a total of 18 from all of them. Just 12 of the eggs were deemed viable enough for further testing. Of the 12, only two hatched—one Prussian, one common. The numbers showed a 0.2 percent survival rate. Not very high, but high enough, the researchers contend, to show that it is possible for fish to migrate in the [digestive tract](#) of birds—they note that for some species of carp, just one is enough, because they have been known to reproduce asexually.

More information: Ádám Lovas-Kiss et al. Experimental evidence of dispersal of invasive cyprinid eggs inside migratory waterfowl, *Proceedings of the National Academy of Sciences* (2020). [DOI: 10.1073/pnas.2004805117](https://doi.org/10.1073/pnas.2004805117)

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