

Fish Gotta Eat; Swimming Is Optional

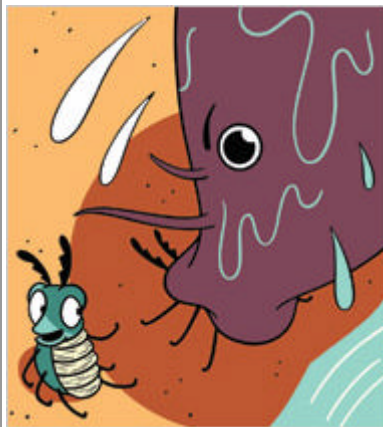
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By [HENRY FOUNTAIN](#)
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Like most fish, the eel catfish eats by sucking water into its mouth, bringing food along with it. But the eel catfish, which inhabits swamps in Gabon and other parts of tropical Africa, has a little secret. It can also hunt and catch insects on land.



Chris Gash

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How the fish does this — by bending its neck so that its mouth can reach down and get a firm purchase on its prey — suggests one way

animals might have foraged for food hundreds of millions of years ago when they first moved from water to land.

"This is such a big step for fishes to do this," said Sam Van Wassenbergh, a Belgian doctoral student, who with colleagues described the finding in *Nature*.

Mr. Van Wassenbergh studies feeding mechanisms in fish, and at first was interested in this fish's large jaw muscles. "We were just thinking about normal aquatic feeding, of course," he said. Until they opened some fish up to study the stomach contents, and found they were filled with beetles.

They suspected the catfish, which can breathe in air as well as water, must work its way onto land to catch the beetles, although there were no reports of this behavior. "I'm convinced these animals mainly hunt at night, which is probably why people haven't seen this," Mr. Van Wassenbergh said.

The researchers were able to observe it in the laboratory ([Click here](#) to access a video.) The fish, which lacks fins, wriggles its 15-inch body onto land and raises its head, using its long tail for stability, and then arches its neck so that the snout and mouth point downward. That way it can trap the insect between its mouth and the ground. If the fish approached from ground level, odds are it would just nudge the prey away.

Mudskippers, the only other fish known to be terrestrial feeders, also bend their necks, though they stabilize themselves differently, using pectoral fins that are adapted to hopping on the ground.

Neither fish is related, in evolutionary terms, to those that gave rise to the first terrestrial animals, like *tiktaalik*, the recently discovered 375-million-year-old fish that scientists say is a transitional creature between sea and land. "But one thing becomes clear now from the eel catfish and the mudskipper," Mr. Van Wassenbergh said. In order to feed on land, "you need to point your head downward, and you need to have anatomical adaptations to do that." *Tiktaalik*, he noted, "apparently has quite a mobile neck," so perhaps it came up with a similar solution.

