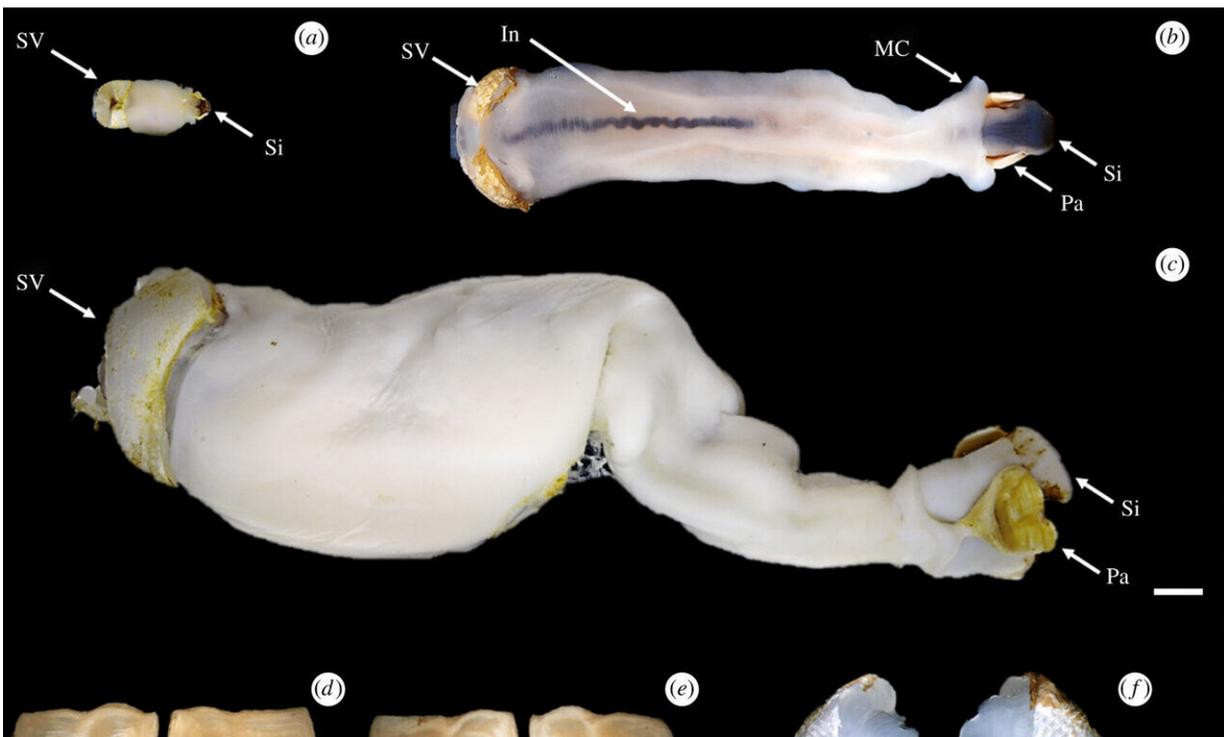


Shipworm that eats rock instead of wood found in river in the Philippines

June 19 2019, by Bob Yirka



Morphology of *Lithoredo abatanica*: (a) juvenile specimen (PMS-4313H); (b) small adult specimen (PMS-4134 W); (c) large adult specimen (holotype PMS-4312Y); (d) pallet pair outer face; (e) pallet pair inner face; (f) shell valves; (g) scanning electron micrograph of shell valve; (h) magnified region from (g) showing valve denticulation; (i) magnified region from (h). In, intestine; MC, mantle collar; Pa, pallet; Si, siphon; SV, shell valve. Scale bar (a–c) = 5 mm, (d–f) = 1 mm, (g–i) = 200 μ m, 100 μ m and 5 μ m respectively. Credit: *Proceedings of the Royal Society B: Biological Sciences* (2019). DOI: 10.1098/rspb.2019.0434

A team of researchers affiliated with several institutions in the U.S. has found and identified a species of shipworm that eats rock instead of wood. In their paper published in *Proceedings of the Royal Society B*, the group describes their study of the bivalve and what they found.

Shipworms are water-dwelling bivalve mollusks—they are well known because of their tendency to chew through wood and digest it. They came to prominence during the heyday of wooden ships—the small mollusks would bore holes in them, at times making them unfit to sail. More recently, they are known for making holes in piers and other [wooden structures](#) used in the water. In this new effort, the researchers have found a species of [shipworm](#) that does not eat wood at all, but instead bores through limestone.

The researchers report that the new kind of shipworm was actually first spotted back in 2006, but it was not until recently that it was carefully studied. After capturing specimens by breaking open the rocks they occupied, the researchers put them in tanks in their lab. They report that the shipworms were small—on the order of 150 millimeters long. They were white and more closely resembled worms than other mollusks. They also differed physically in significant ways from wood-eating shipworms—for instance, they have larger, flatter teeth more suited to boring through [rock](#). The rock borers also lacked the sac used by wood eaters to digest wood. The researchers suggest that such physical differences indicate that the rock-eating shipworm likely did not evolve from its [wood](#)-eating relatives, but more likely diverged from them a very long time ago. The shipworms were observed to gnaw their way into the limestone. A little while later, the researchers observed the shipworms excreting sand.



The river bedrock is shaped by large holes bored by the shipworm. Credit: Marvin Altamia and Reuben Shipway

They were not able to determine the motives behind the rock boring by the shipworms, but note that it is not likely a means of obtaining any sort of nutritional value. They suspect the little mollusks meet their nutritional needs courtesy of bacteria that live in their gills—though they have not ruled out the possibility of food being pulled into its siphon.

More information: J. Reuben Shipway et al. A rock-boring and rock-ingesting freshwater bivalve (shipworm) from the Philippines,

Proceedings of the Royal Society B: Biological Sciences (2019). [DOI: 10.1098/rspb.2019.0434](https://doi.org/10.1098/rspb.2019.0434)

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