

Octopus ancestors lived before era of dinosaurs, study shows

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An octopus swims at the zoo in Frankfurt, Germany on Friday, Nov. 25, 2005. In research published Tuesday, March 8, 2022, in the journal *Nature Communications*, scientists have described the oldest known fossil ancestor of octopuses – an approximately 330 million-year-old specimen found in Montana. Credit: AP Photo/Bernd Kammerer, File

Scientists have found the oldest known ancestor of octopuses – an approximately 330 million-year-old fossil unearthed in Montana.

The researchers concluded the [ancient creature](#) lived millions of years earlier than previously believed, meaning that octopuses originated before the era of dinosaurs.

The 4.7-inch (12-centimeter) fossil has 10 limbs—modern octopuses have eight—each with two rows of suckers. It probably lived in a shallow, tropical ocean bay.

"It's very rare to find soft tissue fossils, except in a few places," said Mike Vecchione, a Smithsonian National Museum of Natural History zoologist who was not involved in the study. "This is a very exciting finding. It pushes back the ancestry much farther than previously known."

The specimen was discovered in Montana's [Bear Gulch](#) limestone formation and donated to the Royal Ontario Museum in Canada in 1988.

For decades, the fossil sat overlooked in a drawer while scientists studied fossil sharks and other finds from the site. But then paleontologists noticed the 10 tiny limbs encased in limestone.

The well-preserved fossil also "shows some evidence of an ink sac," probably used to squirt out a dark liquid cloak to help to evade predators, just like modern octopuses, said Christopher Whalen, an American Museum of Natural History paleontologist and co-author of the study published Tuesday in the journal [Nature Communications](#).

The creature, a vampyropod, was likely the ancestor of both modern octopuses and [vampire squid](#), a confusingly named marine critter that's much closer to an octopus than a squid. Previously, the "oldest known

definitive" vampyropod was from around 240 million years ago, the authors said.

The scientists named the fossil *Syllipsimopodi bideni*, after President Joe Biden.

Whether or not having an ancient octopus—or vampire squid—bearing your name is actually a compliment, the scientists say they intended admiration for the president's science and research priorities.

More information: Christopher Whalen, Fossil coleoid cephalopod from the Mississippian Bear Gulch Lagerstätte sheds light on early vampyropod evolution, *Nature Communications* (2022). [DOI: 10.1038/s41467-022-28333-5](https://doi.org/10.1038/s41467-022-28333-5).
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