

# Captive snake with no male companion gives birth—again

September 17 2015, by Jim Salter

---



This 2015 photo provided by the Missouri Department of Conservation shows a female yellow-bellied water snake at the Cape Girardeau, Mo., Conservation Nature Center that for the second time in two years has given birth without any help from a male member of the species, conservationists say. The offspring did not survive this summer, but they did in 2014. It is believed to be the first documented cases in the species of parthenogenesis, or asexual reproduction. (Candice Davis/Missouri Department of Conservation via AP)

For the second time in two years, a captive snake in southeast Missouri has given birth without any interaction with a member of the opposite sex.

Officials at the Missouri Department of Conservation's Cape Girardeau Conservation Nature Center say a female yellow-bellied water snake reproduced on her own in 2014 and again this summer. The snake has been living in captivity, without a male companion, for nearly eight years. An intern who cares for the snake found the freshly laid membranes in July.

This year's offspring didn't survive, but the two born last summer are on display at the nature center, about 100 miles south of St. Louis.

Conservation Department herpetologist Jeff Briggler said virgin births are rare but can occur in some species through a process called parthenogenesis. It occurs in some insects, fish, amphibians, birds and reptiles, including some snakes, but not mammals.

Parthenogenesis is a type of asexual reproduction in which offspring develop from unfertilized eggs, meaning there is no genetic contribution by a male. It's caused when cells known as polar bodies, which are produced with an animal's egg and usually die, behave like sperm and fuse with the egg, triggering cell division.

The conservation department said there are no other documented cases of parthenogenesis by a yellow-bellied water snake. Like other water snakes, this species gives birth to live young rather than eggs that hatch.



This 2015 photo provided by the Missouri Department of Conservation shows membranes that were laid by a female yellow-bellied water snake at the Cape Girardeau, Mo., Conservation Nature Center. It's the second time in two years the snake has given birth without any help from a male member of the species, conservationists say. The offspring did not survive this summer, but they did in 2014. It is believed to be the first documented cases in the species of parthenogenesis, or asexual reproduction. (Candice Davis/Missouri Department of Conservation via AP)

Robert Powell, a biology professor and snake expert at Avila University in Kansas City, said the Brahminy blind snake—a small burrowing animal native to southeast Asia commonly known as the flowerpot snake—has long been the only known snake that routinely reproduces without a male's contribution.

In the Missouri case, it's possible—but unlikely—that momma snake

simply stored sperm from her time in the wild. But Michelle Randecker, a naturalist at the center, said eight years is too long. Powell agreed, saying a female snake usually can't store sperm for longer than a year, although there are accounts of successful storage as long as three years.

"Long-term storage is unusual. When you run into situations like this, you always wonder, 'Is that a possibility?'" he said. "If nothing else, it's an interesting phenomena. Whether this is long-term storage or parthenogenesis, it's cool. Just another sign that nature works in mysterious ways."

A.J. Hendershott, outreach and education regional supervisor for the conservation department, said there was some pride in having the first snake of its species reproduce through parthenogenesis.

"This is the way you make discoveries when you keep things in captivity," Hendershott said. "You learn things about what they're capable of."

**More information:** [www.mdc.mo.gov/CapeNatureCenter](http://www.mdc.mo.gov/CapeNatureCenter)

© 2015 The Associated Press. All rights reserved.

Citation: Captive snake with no male companion gives birth—again (2015, September 17)  
retrieved 26 April 2024 from

<https://phys.org/news/2015-09-captive-snake-male-companion-birthagain.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--