

A marine Mr. Mom: Male pipefish gives birth, but some are deadbeat dads, study shows

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A male Gulf pipefish rests in a tank at Texas A&M University. A skinny little fish called the pipefish is high on the list of wildlife oddities, for the male of the species is the one which gets pregnant.

Male pipefishes and their seahorse cousins are the only males that actually become pregnant and give birth, but pipefishes likely will never win any Father of The Year awards - their attitude towards their offspring can range from total love to total neglect, according to new findings from Texas A&M University researchers.

Kim Paczolt and Adam Jones, researchers in the Department of Biology, found that the male pipefish can be a nurturing father as it tends its young before giving birth, but later it may not choose to make the effort.

The key factor for this [attitude](#): How the male feels about the mother.

The study was funded by the National Science Foundation and the findings are published in the current issue of *Nature* magazine.

The Texas A&M researchers studied consecutive broods in male Gulf pipefish to understand why some [offspring](#) survive while others do not. Their results reveal that the males who were especially fond of the females they had mated with were more likely to show a nurturing attitude toward their offspring. In almost every case, those that were not overly fond of the mother were less nurturing toward their young.

"The bottom line seems to be, if the male likes the mom, the kids are treated better," Paczolt explains.

"Why this occurs, we don't fully understand, but our findings are quite specific about this relationship between the male pipefish and its mate. If the male prefers the female, he treats their mutual offspring better."

Pipefishes are found worldwide and are especially prevalent in tropical and subtropical waters, including the U.S. Gulf Coast. They are 4-5 inches in length and somewhat resemble a stretched-out version of a seahorse.

Like the seahorse, the male pipefish becomes pregnant and gives birth. The Gulf pipefish can carry from 5 to 40 developing offspring at one time in its specialized brood pouch.

Pipefishes and seahorses are part of a family of marine life called syngnathid fishes that have a unique reproductive system in which the male carries developing embryos. The male - not the female - provides for the embryo during their development.

Paczolt says the study supports several aspects of the sexual selection theory - not only do individuals choose their mates based on a variety of traits, but also, this choice can be expressed both before and after mating.

"The one trait in the pipefish that seems to stand out is the size of the female," she adds.

"Mate choice in the Gulf pipefish is related to the size of the female. Males tend to seek out larger females to be their mates. If he really likes his female mate, he makes a greater effort to tend their babies. It's almost as if he is saying, 'Are these babies worth my effort?' If he is not overly fond of the mother, the answer appears to be 'No,' and he invests fewer resources."

Paczolt says by studying male pregnancy in pipefish, it may give researchers a better understanding of how the brood pouch in syngnathid fishes evolved. "The whole phenomenon of male pregnancy is full of conflict and far more complex than we had previously realized," she notes.

Provided by Texas A&M University

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