

How brainless jellyfish are capable of learning

Cnidarians — the animal group which includes jellyfish, sea anemones and coral — are brainless, instead getting by with a “dispersed” central nervous system.

Despite this considerable disadvantage, the Caribbean box jellyfish responds to what is called “operant conditioning,” according to the [study](#) in the journal *Current Biology*.

This means they can be trained to “predict a future problem and try to avoid it,” said Anders Garm, a marine biologist at the University of Copenhagen and the study’s lead author.

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To test the jellyfish, the researchers put them in a small, water-filled tank with stripes of varying darkness on the glass walls to represent mangrove roots.

After a few bumps into the walls, the jellyfish quickly learned to move through the parts of the enclosures where the bars were least visible.

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The jellyfish learned their lesson in between three to six tries, “which is basically the same amount of trials for what we would normally consider an advanced animal, like a fruit fly, a crab or even a mouse,” he said.

They said their research supports the theory that even animals with a very small number of neurons are capable of learning.

That such a simple organism is able to achieve this feat “points to the very intriguing fact that this may be a fundamental property of nerve systems,” Garm said.

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