

Yes, the Octopus Is Smart as Heck. But Why?

It has eight arms, three hearts – and a plan. Scientists aren't sure how the cephalopods got to be so intelligent.



By Carl Zimmer Nov. 30, 2018



To demonstrate how smart an octopus can be, Piero Amodio points to a YouTube video. It shows an octopus pulling two halves of a coconut shell together to hide inside. Later the animal stacks the shells together like nesting bowls – and carts them away.

"It suggests the octopus is carrying these tools around because it has some understanding they may be useful in the future," said Mr. Amodio, a graduate student studying animal intelligence at the University of Cambridge in Britain.

But his amazement is mixed with puzzlement.

For decades, researchers have studied how certain animals evolved to be intelligent, among them apes, elephants, dolphins and even some birds, such as crows and parrots.

But all the scientific theories fail when it comes to cephalopods, a group that includes octopuses, squid and cuttlefish. Despite feats of creativity, [they lack some hallmarks of intelligence seen in other species.](#)

For scientists who study animal behavior, intelligence is not about acing a calculus test or taking a car apart and putting it back together. Intelligence comprises sophisticated cognitive skills that help an animal thrive.