First ever photo of fish using tools

July 11 2011, by Deborah Braconnier

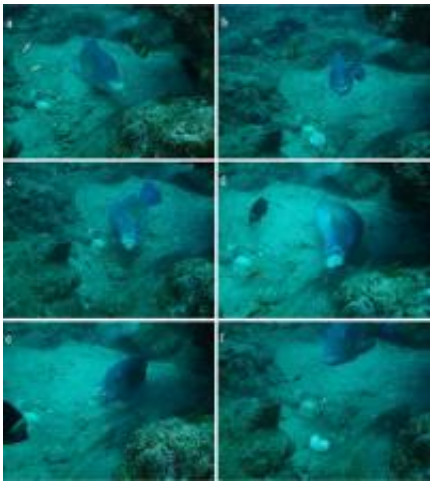

Image credit: *Coral Reefs*, DOI:10.1007/s00338-011-0790-y

(PhysOrg.com) -- A new paper soon to be published in *Coral Reefs* reveals the first ever photographs of a fish, in this case the blackspot tuskfish, using tools to acquire their food.

Scott Gardner, a professional diver, was out diving Australia's Great Barrier Reef when he heard a strange banging noise under water and went to investigate. What he discovered was the blackspot tuskfish with a clam in its mouth. The fish was banging and slamming the clam against a rock in order to crack it open. Once it cracked, the fish ate the bivalve inside. Gardner, having his camera with him, was quick to snap up some shots of this fish and its apparent use of tools.

While tool use was once thought to be exclusive to humans, researchers have found animals such as primates, birds, dolphins, elephants and even octopuses that use some form of tool. While it was suspected that some fish may use similar behavior, it had never been documented until these pictures from Gardner.

Culum Brown, a behavioral ecologist from Macquarie University in Australia, is the co-author of this current paper and says that the pictures taken by Gardner show that this fish was quite skilled at this behavior. Evidence around the rock show this was not the first crushed shell and believes that with more exploration, more fish species will be found to use tools.

This finding however has sparked the debate as to exactly what defines tool use. While the tuskfish is clearly using the rock to break the shell, it is never really "holding" the tool itself. Many scientists argue that this is essentially not tool use. However, Brown argues that this definition of tool use would restrict any possibility to only animals with an anatomy similar to humans. Fish do not have hands and the ability to use a rock to swing at the shell, so they use what they can.

To look at the debate in another way, think of humans that are born without, or lose, their arms and legs. They no longer have the ability to swing a tool in the traditional way, but because they may use their mouth to accomplish a task, does that make them any less capable of tool use?

More information: Tool use in the tuskfish Choerodon schoenleinii? A. M. Jones, C. Brown and S. Gardner, *Coral Reefs*, DOI:10.1007/s00338-011-0790-y

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