

One bite can destroy a reputation, even if you are a fish

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Maintaining a clean reputation: Reputation rules the Surgeon fish and cleaner fish relationship. Photo Copyright belongs to Richard Smith - OceanRealmImages.com

(PhysOrg.com) -- Misbehaving in front of others can ruin your reputation even if you are a fish, according to an international study that has shown for the first time an audience can influence levels of cooperation in non-human animals.

Scientists from The University of Queensland (UQ), University of Cambridge, and the University of Neuchatel have found that cleaner fish that remove parasites from larger 'client' fish – providing a type of cleaning service – are less likely to bite their client if they have an [audience](#) of other fish (eavesdropping bystanders).

These cleaner fish sometimes get greedy and bite clients rather than sticking to parasites. This bad behaviour brings mealtimes to an abrupt end as the disgruntled larger fish swims off.

The study, which was published in *Current Biology* today, showed that other large reef fish that observe this behavior avoid the cleaner fish that have a reputation for biting.

Study co-author, UQ's Dr Lexa Grutter, said the group's research has demonstrated for the first time that having an audience can influence levels of [cooperation](#) in a non-human animal.

“Having an audience makes cleaner fish work to improve their reputation by behaving more cooperatively,” Dr Grutter said.

“The fish in the audience – what we call ‘eavesdropping bystanders’ - used image scoring to decide which cleaner fish to avoid.”

Future research will investigate whether cleaner fish care about their [reputation](#) more if the bystanders are more valuable clients.

The bluestreak cleaner wrasse (*Labroides dimidiatus*) is one of several species of cleaner wrasse found on coral reefs in much of the Pacific Ocean and the Indian Ocean, as well as many seas, including the Red Sea and those around Southeast Asia. Like other cleaner wrasses, it eats [parasites](#) and dead tissue off the surface of larger fish in a mutualistic relationship that provides food and protection from predation for the wrasse, and considerable health benefits for the other [fish](#).

More information: The paper ‘Cleaner wrasses *Labroides dimidiatus* are more cooperative in the presence of an audience’ is available [online](#).

Provided by University of Queensland

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