

Crabs will fake it to avoid a fight, research finds

May 16 2012

Dr Robbie Wilson, Head of the Performance Lab at the University of Queensland, where this study was conducted, said the research identified more than just some crabby behaviour.

“This study is important because it reveals the general principles behind how liars and cheats are controlled and encouraged in nature.

“Whether it's a soccer player diving to fool a referee or a crab trying to intimidate a rival with weak [claws](#), our lab has shown that individuals cheat more when their deception is likely to go undetected,” Dr Wilson said.

Ms Candice Bywater who is finishing her PhD on fiddler crabs, said that she found that more [males](#) bluff their way through fights when they are less likely to get caught.

“When there are lots of crabs living in one area, there is lots of competition for resources like females and food. High competition means there is a greater chance of males having to fight each other to win resources compared to when there are not many crabs about. Those crabs might not have to fight at all,” Ms Bywater said.

“Crabs that have strong claws will generally win fights. Producing large and strong claws is important to their survival.

“Where crabs are likely to have to fight a lot, the crabs are producing

large, strong, reliable claws. We found that when there are not many other male [crabs](#) in a population (low competition), males produce large but relatively weak claws (unreliable), as they don't have to fight as often and ultimately because can get away with it."

In nature, signals may be behavioural, as in growling or posturing, but are often structural, including the antlers of a deer, and the enlarged fore-claw of many crustaceans.

A male that overstates his quality could improve his ability to gain food or mates, but surprisingly, most signals are honest reflections of a male's prowess.

More information: Functional Ecology paper:
Bywater, C & Wilson RS. 2012. Is honesty the best policy? Testing signal reliability in fiddler crabs when receiver-dependent costs are high. *Functional Ecology*.

Soccer paper:
David GK, Condon CK, Bywater CL, Ortiz-Barrientos D & Wilson RS. 2011. Receivers limit the prevalence of deception in humans: Evidence from diving behaviour in humans. *PLoS ONE* 6(10): e26017
www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0026017

Provided by University of Queensland

Citation: Crabs will fake it to avoid a fight, research finds (2012, May 16) retrieved 3 May 2024 from <https://phys.org/news/2012-05-crabs-fake.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.