

Knowledge of stingrays' sparked-up sex may help deter sharks

July 9 2013



Sexual attraction of the electric sort happens when stingrays meet, according to a researcher at The University of Western Australia's Oceans Institute - and the finding may help prevent shark attacks on humans.

PhD candidate and shark [biologist](#) Ryan Kempster is the lead author of a paper about stingrays' use of electroreception in identifying mates, published in the journal *Brain, Behaviour and Evolution*.

The author undertook the research with colleagues at UWA's Neurecology Group.

Female blue spotted stingrays have more electrosensory nerve axons (inputs) entering their brains than their male counterparts, the researchers found.

Despite the important role that electroreception plays in the behaviour of stingrays - and sharks - this is the first study to assess the variation in electrosensory nervous input to the brain.

"This information can tell us how important a particular [sensory system](#) is to an animal and what role it plays in their behaviour," Mr Kempster said.

"We found that female stingrays have far more [nerve axons](#) than males, which may allow for improved electrosensitivity and help females identify suitable mates.

"Because it's the males that usually approach the females for mating, the extra electrosensory clues that females receive may allow them to distinguish mates from predators.

"Female stingrays may make a calculated decision about whether they should stay and wait for an approaching mate or make an escape before they're spotted by a would-be predator."

Knowing more about the electrosensory system - not just between species but between [males and females](#) of the same species - may help to ensure that electronic shark mitigation devices work effectively for as many species as possible and even for each sex.

More information:

www.karger.com/Article/FullText/351700#abstract

Provided by University of Western Australia

Citation: Knowledge of stingrays' sparked-up sex may help deter sharks (2013, July 9) retrieved 20 April 2024 from

<https://phys.org/news/2013-07-knowledge-stingrays-sparked-up-sex-deter.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.