Scientist discovers evidence in animal habitat selection that counters current convention

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(Phys.org) —Chapman University's Walter Piper, Ph.D., has published research this week in a leading science journal that shows animals choose habitat similar to where they were raised rather than that likely to maximize reproductive success. This finding runs counter to current tenets of habitat selection theory.

The paper is published in the *Proceedings of the Royal Society B* on June 26 and includes co-authors Michael Palmer, Nathan Banfield and Michael Meyer. Dr. Piper's research focuses on his long-term study of loons.

"The basic finding is that young loons chose to settle on territories that are very similar to their natal territories," noted Dr. Piper, professor in Chapman's Schmid College of Science and Technology. "This behavioral pattern seems to indicate that loons choose habitat so as to promote their survival, not their breeding success. This is exciting because it flies in the face of current dogma in field of habitat selection."

Here is the abstract from the research: Scientists have long presumed that animals settle on breeding territories according to the ideal free model, which presumes that animals select habitat that maximizes the number of offspring they can produce. But settlement data often show that, in fact, animals do not select high quality habitat. Indeed, here we report that young common loons have a striking tendency to settle on breeding lakes that resemble their natal lake in terms of both size and pH. Preference for natal like rather than high quality habitat, might

allow a young animal to feed on familiar prey and, hence, increase its likelihood of surviving its early breeding years.

More information: www.chapman.edu/scst/_files/pi … earch-paper-2013.pdf

Provided by Chapman University