

# Striped mice -- the neighbors from hell

June 22 2010

---

Fighting, paternity tests and infidelity. No, not a daytime talk show, but the results of new research examining why the fur will fly if a four-striped grass mouse (*Rhabdomys pumilio*) wanders into his neighbour's territory. Researchers writing in BioMed Central's open access journal *Frontiers in Zoology* investigated aggression in the mammalian species, finding that breeding males are much more concerned with repelling their neighbours than with defending their partners from complete strangers.

Carsten Schradin from the University of Zurich, Switzerland, worked with a team of researchers to stage encounters between wild mice in a specially created 'neutral' arena. He said, "We found that breeding males tested during the breeding season showed significantly more [aggression](#) towards their neighbours than towards strange breeding males not neighbouring them. Breeding males were significantly more aggressive than non-breeders".

This 'Nasty Neighbour' phenomenon has been seen in other animals and contrasts with the 'Dear Enemy' behavior in which the breeding male will preferably attack strangers. Both are ways of limiting the cost of territorial behavior. In this field study, the researchers were able to test the paternity of offspring conceived during the study period and found that neighbouring males were more likely than the wandering strangers to sire pups with another mouse's 'harem'.

According to Schradin, this may explain the animal's preference for neighbourly aggression, "We've found that the neighbours of breeding

males pose a recognisable threat to the breeding male's confidence of paternity, and suggest that this explains the occurrence of the nasty neighbour phenomenon in striped mice".

**More information:** The nasty neighbour in the striped mouse (*Rhabdomys pumilio*) steals paternity and elicits aggression , Carsten Schradin, Carola Schneider and Anna K Lindholm , *Frontiers in Zoology* (in press), [www.frontiersinzoology.com/](http://www.frontiersinzoology.com/)

Provided by BioMed Central

Citation: Striped mice -- the neighbors from hell (2010, June 22) retrieved 9 April 2024 from <https://phys.org/news/2010-06-striped-mice-neighbors-hell.html>

<p>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.</p>
--