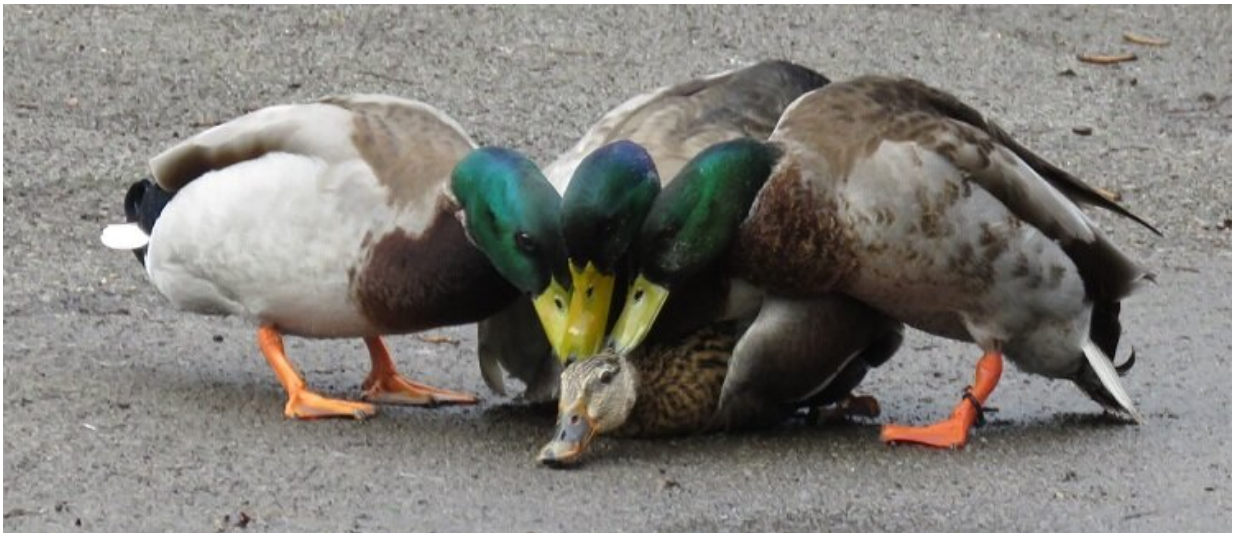


Ignorance would be bliss: the family ties that grind

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A female mallard being harassed by three males. Credit: Africa Gomez

The ability to recognize relatives can make life more dangerous for the female of the species, new research carried out at the University of St Andrews, the Institute for Advanced Study in Toulouse and the University of Valencia has shown.

Known as kin recognition, this ability to discriminate between members of your species who are family and those who are not had been thought to decrease violence in mating.

Previous studies on [fruit flies](#) and red jungle fowl have shown that [males](#) competing to mate with a female show less [aggression](#) when they are related to each other, even though a less aggressive male is less likely to mate with the female.

The "selfish gene" theory being that as long as their own genetic material is being passed on (albeit through a related male rather than themselves) their interests are being met. However, if the competitor is unrelated, and doesn't carry copies of the same genes, the male is more incentivised to do everything possible to be the one who mates with the female even if he harms her in the process.

However, now researchers in a paper published in *Nature Ecology and Evolution* today (Monday 25 May) have been able to show, through [mathematical modelling](#), that kin discrimination can create more aggression overall in males—because although males reduce their aggression when competing against relatives, they increase their aggression when competing against non-relatives.

Their study led by Dr. Gonçalo Faria, who recently completed his doctoral research at the School of Biology at the University of St Andrews, suggests that kin discrimination leads to an overall worsening of harming behaviour.

Dr. Faria said: "Although males who are competing against brothers will ramp down their harming behaviour, a male who is able to tell that he is competing against non-relatives will ramp up his harming behaviour, and overall this means that there is an increase in the amount of harming in the population as a whole—compared with what would happen if males weren't able to tell who is their brother and who is not."

More information: Gonçalo S. Faria et al. Kin discrimination and demography modulate patterns of sexual conflict, *Nature Ecology &*

Evolution (2020). [DOI: 10.1038/s41559-020-1214-6](https://doi.org/10.1038/s41559-020-1214-6)

Provided by University of St Andrews

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