

Fighting Aussie yabbies don't forget a face

February 28 2008



Fighting face-off between two yabbies. Credit: David Paul and Blair Patullo, University of Melbourne

The fighting Australian yabby does not forget the face of its foes says new research from University of Melbourne zoologists.

The research by the University's Department of Zoology has been published today in the *PLoS ONE* journal.

The two year study involving over 100 pairs of yabbies revealed that the species *Cherax destructor* is capable of facial recognition of individuals, particularly its opponents.

“This is a remarkable capacity for the invertebrate species of yabbies and freshwater crayfish. This is an ability known in humans and some vertebrates but in only a handful of invertebrate species,” said Professor

David MacMillan, Head of the Department of Zoology who has led the research.

“Yabbies usually fight when they meet. It is as much a way of meeting each other as a way of establishing territory.”

Professor Macmillan said an understanding of how simple nervous systems recognise features may assist in developing feature recognition in robots.

In the study, after a fight, the loser yabby was isolated and given a choice between its opponent and another crayfish not involved in the fight.

The loser yabby moved towards the opponent it knew as opposed to the rival it did not, revealing that a yabby is capable of visual identity not just an acute sense of smell.

“Careful observation by our team showed that the facial region is the important area for recognition of yabbies during and after a fight,” Professor Macmillan said.

“In particular we showed highly variable cues are used such as colour and face width.”

Researchers also tested whether it is possible to engineer false identifications and whether animals can distinguish between twin opponents.

“We continue to find the yabby is capable of more than we expected for an animal with such a simple nervous system and an invertebrate.”

“Yabbies remember the smell of other crayfish but the extent to which they remember visual features has previously been unknown.”

Source: University of Melbourne

Citation: Fighting Aussie yabbies don't forget a face (2008, February 28) retrieved 23 April 2024 from <https://phys.org/news/2008-02-aussie-yabbies-dont.html>

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