

Birds cultivate decorative plants to attract mates

April 23 2012



An international team of scientists has uncovered the first evidence of a non-human species cultivating plants for use other than as food. Instead, bowerbirds propagate fruits used as decorations in their sexual displays. Credit: University of Exeter

An international team of scientists has uncovered the first evidence of a non-human species cultivating plants for use other than as food. Instead, bowerbirds propagate fruits used as decorations in their sexual displays. The researchers discovered male bowerbirds had unusually high numbers of fruit-bearing plants growing around their bowers, and used these fruits in order to attract females.

Published today, in [Current Biology](#) the research was carried out by the Universities of Exeter (UK), Postdam (Germany), Deakin and

Queensland (Australia).

This is the first time a species other than humans has been found to cultivate non-food [plants](#). However, the scientists do not believe the [bowerbirds](#) are intentionally cultivating the plants: it is more likely that they are growing around their bowers as a result of the birds gathering fruits for display.



An international team of scientists has uncovered the first evidence of a non-human species cultivating plants for use other than as food. Instead, bowerbirds propagate fruits used as decorations in their sexual displays. Credit: University of Exeter

Native to Australia and [Papua New Guinea](#), bowerbirds are well known for their unique [courtship](#) behaviour, which involves males building ornate bowers. Males gather brightly-coloured objects to decorate their bowers, in order to attract females.

The research team observed bowerbirds in Taunton National Park, Central Queensland. They found higher numbers of *Solanum ellipticum*, or potato bush, plants around bowers than in other locations. These

plants have bright purple flowers and green fruit. Their research showed that the birds were not selecting locations with a high number of the plants, but rather that they were growing plants around their bowers.

Bowers with many fruit on them are especially attractive to choosy females. Males collect the fruits, but when the fruits shrivel, they discard them nearby. This results in seeds germinating in the ground around the bower. Bowerbirds clear the area around their bower of grass and [weeds](#), making ideal conditions for new plants to germinate. Male bowerbirds can maintain a bower in the same location for up to ten years, so will benefit from establishing plants that may survive for several years.



An international team of scientists has uncovered the first evidence of a non-human species cultivating plants for use other than as food. Instead, bowerbirds propagate fruits used as decorations in their sexual displays. Credit: University of Exeter

The researchers found that, like farmers selecting for fatter pigs or larger seeds, the bird's behaviour may lead to a change in the appearance of fruits. The fruits from plants close to the bowers were slightly greener in colour than those found on other plants. The researchers tested the

males' choices and found they preferred this colour to that of the other [fruit](#).

Lead researcher Dr Joah Madden said: "Until now, humans have been the only species known to cultivate plants for uses other than food. We grow plants for all kinds of things – from drugs, to clothing, to props that we use in our sexual displays such as roses – but it seems we are not unique in this respect.

"We do not believe bowerbirds are intentionally growing these plants, but this accumulation of preferred objects close to a site of habitation is arguably the way any cultivation begins. It will be very interesting to see how this mutually-beneficial relationship between bowerbirds and these plants develops."

Provided by University of Exeter

Citation: Birds cultivate decorative plants to attract mates (2012, April 23) retrieved 3 May 2024 from <https://phys.org/news/2012-04-birds-cultivate.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>
--