

## Oral sex gene helps male fish fake it

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Men may be intrigued to hear that researchers have pinpointed a gene that makes females suck up sperm through their mouths.

The gene was found in the cichlid fish, where the males have evolved a way to lure females close so that they can squirt sperm into their mouths.

As is the case in many fish species, the sight of a brightly coloured male somehow triggers females with ripe eggs to start releasing them. But in cichlids, there is a twist. Females hold their eggs in their mouths and incubate them there after fertilisation – a behaviour that is thought to have evolved to protect the eggs from predators.

As soon as a female has spawned her eggs, she collects them up in her mouth. Normally, sperm released into the water by a male nearby will then fertilise the eggs.

But males of certain cichlid species in east Africa have evolved a way to increase the odds that females take up their sperm. Oval yellow markings resembling the eggs are found on the anal or pelvic fins. When a female approaches the male, she thinks she sees an egg on its fin, so tries to vacuum it up in her mouth – and get a mouthful of sperm from the canny male in the process.

### 'Turned on'

"It looks like she's eager to pick up the 'egg dummy' because she thinks she's forgotten one of her own eggs," says [Walter Salzburger](#) at the University of Lausanne, Switzerland, who led the study.

"The females actually seem to be turned on by the egg dummies," comments Sigal Balshine at McMaster University in Hamilton, Ontario, Canada. "And the amazing thing is that they match the egg colour shade within each species."

Salzburger's team believes it has now identified the gene that makes this bizarre mating behaviour possible.

They suspected a gene called *csf1ra* – short for colony-stimulating factor 1 receptor a, was responsible – because they knew that zebrafish lacking this gene failed to produce a yellow pigment similar to the shade of the cichlid fin spots.

The researchers extracted DNA samples from 19 cichlid species – nine that had egg spots on their fins and 10 that did not. They found the species that had evolved most recently had a mutation in the *csf1ra* linked to the egg spots.

Salzburger says this shows that the dummy egg spots are a genetic trait that provides a selective advantage because they encourage females to participate in oral mating.

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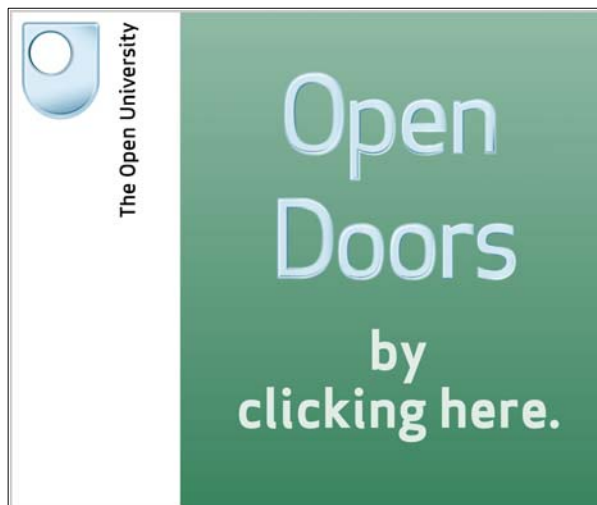
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