

Solitude breeds despair: Worm injects sperm into own head

June 30 2015



Credit: © Ramm SA, Schlatter A, Poirier M, Schärer L

From the shooting of sperm darts to post-coital cannibalism, there is not much that surprises researchers into the weird ways of animal sex.

But on Wednesday, biologists said they have witnessed a behaviour so weird that it warrants scientific mention: a creature which procreates by jabbing a needle-like "penis" into its own head.

The bizarre beast is a microscopic, water-dwelling [flatworm](#) dubbed *Macrostomum hystrix*, a team reported in the journal *Proceedings of the Royal Society B*.

And they theorised it may have evolved the unconventional method of self-impregnation in order to procreate "under conditions of low mate availability."

M. hystrix is a transparent worm about one millimetre (0.04 of an inch) long—a hermaphrodite with both male and female reproductive organs.

Normally, they exchange sperm with others of their kind using a needle-like protrusion called a "stylet", which pierces the partner's outer body membrane in a method known to scientists as "traumatic wounding".

But when sex partners are scarce, it seems, these worms can turn their stylets, located in the tail section, on themselves.

Biologists from the University of Basel in Switzerland and Bielefeld University in Germany studied the creatures in petri dishes in the lab. Some were held alone, others in small groups.

After a while, the team measured how much sperm each worm contained—and found "strikingly different distributions".

The worms kept in groups contained larger volumes of sperm, but mainly in the tail region. In the loners, there was more sperm in the head region.

The findings indicated that when deprived of a mate, *M. hystrix* self-injects sperm "including or even exclusively into their own [head](#) region," said the team.

The [sperm](#) migrates from there to the site of fertilisation in the centre of the tiny body.

More information: Hypodermic self-insemination as a reproductive

assurance strategy, [rspb.royalsocietypublishing.org ...
.1098/rspb.2015.0660](https://rspb.royalsocietypublishing.org/doi/10.1098/rspb.2015.0660)

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