

Mating that causes injuries

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Researchers at Uppsala University can now show that what is good for one sex is not always good for the other sex. In fact, evolutionary conflicts between the two sexes cause characteristics and behaviors that are downright injurious to the opposite sex. The findings are being published in the scientific journal *Current Biology*.

In both males and females in the animal world it is common - much more common than one might like to think - for one sex to evolve characteristics and properties that are injurious to individuals of the other sex, according to Professor Göran Arnqvist at the Department of Ecology and Evolution, who adds:

"One especially tricky case involves species where the males have mating organs that are supplied with hooks, barbs, and flukes that cause internal injuries in females during mating. This is extremely common among insects, but it also occurs in many other animal groups."

The Uppsala scientists have studied seed beetles and their mating behavior. Göran relates that the males' mating organ is rather similar to a medieval spiked club and that it causes severe wounds in females during mating. But since it is never a good idea for a male merely to injure a female, the researchers have assumed that these structures serve another purpose and that the injury is an unfortunate side effect.

"Females' injuries as such do not benefit the male she mated with. It has been suggested rather that the injuries are a side effect of other benefits the males reap from the barbs. Now, for the first time, we are able to show that this is the case," says Göran Arnqvist.

Despite these costs, females mate with multiple males.

"We also show that males with long barbs cause more severe injuries to females, but also that these males have a greater rate of fertilization success,"

says Göran Arnqvist.

The barbs are thus extremely important to males in their competition to be able to fertilize an egg. When females mate with two males, it is more often the male with the longer barbs that fertilizes her eggs.

Source: Uppsala University

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