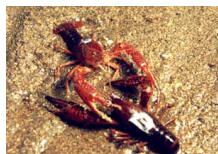


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By: Stefan Anitei, Science Editor



[Fake Homosexual Sex to Ease Aggression](#)

Crayfish too do it, not only vertebrates

Scientists have long observed a bizarre behavior during mating season on vertebrates: fake homosexual sex. When males battle for females, the loser can endure a mortification: the winner pseudo-copulates with him like it would be a female. This has been seen in deer, antelopes, giraffes, primates, monitor lizards, some birds and other species.

"Pseudocopulation" among primates also establishes hierarchies. This complex dominance behavior has the role of easing and redirecting accumulated aggression. Without it, more powerful males would kill younger ones, which is not beneficial for the species. But recently, researchers at Georgia University in Atlanta have found for the first time the same behavior in invertebrates: Louisiana crayfish (*Procambarus clarkii*). Crayfish pseudocopulation between males has been seen in the wild and in captivity. A male crayfish courting a female approaches her from behind lashing her with his antennae. After that, he climbs atop the female and flips her over. If the female adopts a subordinate pose with outstretched limbs, the male grasps her and begins copulation for 30 to 90 minutes. The scientists found that in 16 out of 20 pairs of adult male crayfish tested, pseudocopulation attempts occurred. In 12 pairs, the subordinated male suffered a pseudocopulation nearly identical to normal sexual copulation for seven seconds to about nine minutes. In the other four pairs, the male approached as females rejected all attempts. In pairs that pseudocopulated, the aggressive behavior between the males, like claw attacks or offensive tail flips, decreased strongly during the first hour of interaction, not degenerating to killings in 24 hours. In the male pairs that did not pseudocopulate, the aggression levels did not ease and during the first 24 hours half of the subordinate males were killed, dismembered and partially eaten. Thus pseudocopulation establishes a hierarchy, cutting down violent rivalries. "Universally, aggression or its threat is used to set up and maintain dominance rankings within a population of animals. Aggression, however, is dangerous for both dominant and subordinate, so many animals try to discover ways to avoid it," explained neuroethologist Donald Edwards. The team wants to investigate if pseudocopulation occurs also between female crayfish.