

Masquerading in murky waters

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Finding a decent, honest mate is challenging enough without the added problem of reduced visibility caused by human-induced changes to the aquatic environment.

Yet this is precisely the sort of dilemma female stickleback fish are facing in the Baltic Sea, according to a recent study published in the August issue of the *American Naturalist* by Dr. Bob Wong, an Australian researcher from Monash University, and his Scandinavian colleagues, Dr. Ulrika Candolin from the University of Uppsala and Dr. Kai Linstrom from the Åbo Akademi in Finland.

An increase in nutrient input in the Baltic is compromising water clarity by promoting algal blooms. Dr. Wong and his colleagues were interested in finding out whether this, in turn, might lead to a break down in the honesty of sexual displays used by male sticklebacks to attract females. They did so by examining the courtship effort of good and poor condition males in the absence and presence of a rival male in both clear sea water and water rendered turbid by algae.

“Under reduced visibility caused by the presence of algae, poor quality males are able to lie about their physical condition to unsuspecting females by displaying at a higher rate without the risk of attracting the wrath of rival males,” says Dr. Wong. “Since poor condition males are also more likely to eat the eggs that they’re suppose to be tending, this is bad news for females who rely on the honesty of male sexual displays to select mates with superior parental qualities.”

Citation: Bob B. M. Wong, Ulrika Candolin, and Kai Lindström, "Environmental deterioration compromises socially enforced signals of male quality in three-spined sticklebacks" *The American Naturalist* (2007), volume 170:184–189 DOI: 10.1086/519398

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