

**Rafferty N & Boughman JW. (2006) Olfactory mate recognition in a sympatric species pair of threespine sticklebacks. Behavioral Ecology,17: 965-970.**

Mate recognition is critical to the maintenance of reproductive isolation, and animals use an array of sensory modalities to identify conspecific mates. In particular, olfactory information can be an important component of mate recognition systems. We investigated whether odor is involved in mate recognition in a sympatric benthic and limnetic species pair of three-spined sticklebacks (*Gasterosteus* spp.), for which visual cues and signals are known to play a role in premating isolation. We allowed gravid females of each species to choose between water scented by a heterospecific male and water scented by a conspecific male. Benthic females preferred the conspecific male stimulus water significantly more often than the heterospecific male stimulus water, whereas limnetic females showed no preference. These species thus differ in their odor and may also differ in their use of olfaction to recognize conspecific mates. These differences are likely a consequence of adaptation to disparate environments. Differences in diet, foraging mode, habitat, and parasite exposure may explain our finding that odor might be an asymmetric isolating mechanism in these sympatric stickleback species. Key words: *Gasterosteus aculeatus*, mate recognition, odor, olfaction, reproductive isolation, three-spined sticklebacks.

[pdf](#)

[home](#)