

Stickleback's nest structure and mate choice in lake Þingvallavatn

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Sticklebacks are diverse. Different morphotypes of sticklebacks often live within the same lake or watershed. Research on stickleback morphotypes in lake Þingvallavatn have shown that sticklebacks chose to mate with individuals of their own morphotype. It is also clear that nest structure differs. Indications are that males from lava-area in the north side of the lake spend less energy in nest structure than males from more traditional habitats. It is not clear if this variance has an effect on sexual isolation.

In the summer of 2005 sticklebacks were caught in three different habitats in lake Þingvallavatn: 1) Vatnskot – lava area in the north side of the lake, 2) Langitangi – A shallow creek on the east side of the lake and 3) area out of Mjóanes where the algae nitella grows. In the laboratory two males were placed in a 300 L tank, separated with two glass partitions. When the males had constructed a nest, a female was placed between the partitions and the behaviour of the fishes recorded. One female could evaluate the males without the partitions and possible spawn. Morphological traits were recorded after the behavioural tests both for males and females. Nest structure and the colour of males were also recorded. This study will attempt to answer the following questions.

1. Is there a difference in nest structure within lake Þingvallavatn?
2. Do females chose a mate based on nest structure?