

## Benthic and Limnetic Stickleback Species Pair, Healthy Habitat Worksheet

Name: \_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Weather: \_\_\_\_\_

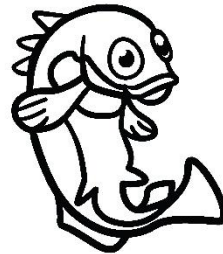
Air Temperature: \_\_\_\_\_

### Water Quality

Water Temperature: \_\_\_\_\_

pH: \_\_\_\_\_

Water Clarity/Turbidity: \_\_\_\_\_



### Habitat

Make a sketch of your location.

Include:

- Aquatic plants
- Invasive species
- Aquatic insects
- Plants around the lake
- Logs and branches in the water

Is this a healthy stickleback habitat? \_\_\_\_\_



## Benthic and Limnetic Stickleback Species Pair

### Healthy Habitat Parameters

#### Water Quality:

Water Temperature	+/- 1°C from ambient background
pH	7.4-7.6 (up to 8.3)
Water clarity	E (See Turbidity Test <a href="#">here</a> on p. 16.) Sticklebacks require clear water to differentiate mates.

#### Habitat:

Macrophyte beds	Required for nesting, foraging for invertebrates, and sheltering from predators. The current abundance of macrophytes should be maintained.
Invasive species	Invasive species are the biggest threat to stickleback species pairs. Their environment should remain free of invasive species, particularly aquatic invasive species. These species include bullheads, crayfish, purple loosestrife, Eurasian watermilfoil,
Macroinvertebrates	Macroinvertebrates are the main food source for benthic sticklebacks.
Overhanging branches	Overhanging branches are important for providing insects (food source, fall into the water), fallen leaves (carbon source for the lake ecosystem), and woody debris for shelter.
Lake vegetation	Vegetation surrounding the lake is important for providing bank stability to prevent sediments from entering the lake and reducing water clarity.
Logs and branches	Logs and branches in the lake provide shelter for sticklebacks from predators, as well as habitat for invertebrates that they feed on