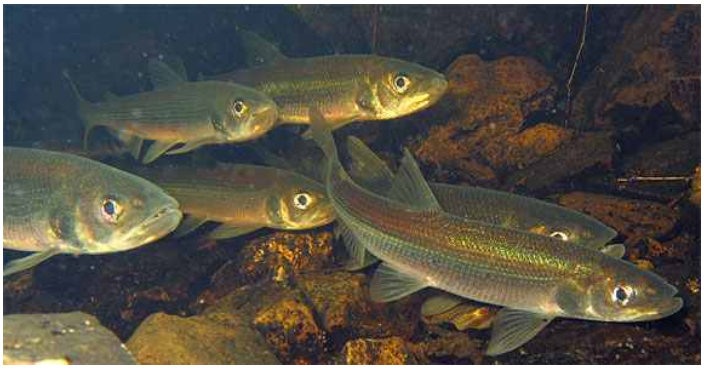
DOWNEAST SALMON FEDERATION

Smelt Surveying

The Downeast Salmon Federation has been collecting data on Sea-run Rainbow Smelt for many years. Due to recent declines in smelt numbers, there has been in increased effort to collect information on this important species.

We are looking for people with an interest in recreational smelt fishing, natural history buffs, healthy rivers, or those who want to learn to help collect data on the health of the sea-run smelt population in Downeast Maine.

Our Sea-run Rainbow Smelt citizen science initiative is a powerful scientific tool that DSF is using to advocate for conservation and sustainable harvest as well as educate the next generation of stewards. Monitoring lesser-known species like smelt allows DSF to collect critical information about the health of our fish populations and habitat that would otherwise be lost or forgotten.



This project extends all the way from the Bagaduce watershed to the Canadian border, so we are inviting people anywhere in that region to participate in monitoring streams near where they live. Recreational smelt anglers can provide information on the health of this fishery by making a few simple observations while out smelting.

There are hundreds of smelt streams in our area, and any one person would find it impossible to check all of them for spawning smelts. That is why we are reaching out the community to help collect as much information as we can, so we can stay up to date on the health of our Downeast smelt population.

Please consider making some notes when you are out in the field. You may come across streams during the day which have no smelt, but may have smelt eggs. This can be useful information to collect, but you may not know what to look for. These are smelt eggs.

Sometimes you may find smelt eggs on an exposed stream bed. They will look like white dots on the rocky substrate. Those are smelt eggs that have been exposed at low tide and are likely dead. In the stream, where eggs are not exposed, these layers of eggs will be yellow to clear in color.

Surveying streams for smelt eggs is a good way to get out and collect information during the day. If you want to see adult smelt in the stream, you will likely need to go during a night high tide. You can get a tide chart from U.S. Harbors.

When selecting a stream to survey, it is important to remember that smelt will not swim very far above the head of tide, or any obstacles such as waterfalls or dams. You can participate in our citizen science initiative by logging your Sea-run Smelt data into our Anecdata Project titled “Downeast Maine Smelt Monitoring”

https://www.anecdata.org/projects/view/175

Or use the following Smelt Field Trip Data Sheet . Any and all information is helpful! For more information or any questions, please feel free to contact DSF staff member Sarah Madronal at sarah@mainesalmonrivers.org.

Location: **Date:** **Time:** **Names:**

Smelt Presence

1) **Number of Eggs**
   a. None
   b. 10s
   c. 100s
   d. 1,000s
   e. 10,000s
   f. Millions
2) **Approximate size of egg bed**
   a. Less than 10 square feet
   b. More than 10 square feet
3) **Algae on eggs?**
   a. Yes
   b. No
4) **Number of Smelt**
   a. None
   b. 10s
   c. 100s

Weather Conditions

5) **Weather**
   a. Clear
   b. Cloudy
   c. Rain
   d. Hazy/foggy
6) **Tide Phase: _____**

Stream Conditions

7) **Water Depth (in feet): _____**
8) **Adjacent Land Type**
   a. Agriculture
   b. Developed
   c. Forest
   d. Wetland
9) **Stream Substrate Primary**
   a. Boulder
   b. Cobble
   c. Gravel
   d. Sand
   e. Silt & Clay
   f. Vegetation
10) **Stream Substrate Secondary: _____**
11) **Stream Substrate Tertiary: _____**
12) **Canopy Cover?**
   a. 0-25%
   b. 26-50%
   c. 51-75%
   d. 76-100%
13) **Easy public access to stream?**
   a. Yes
   b. No
14) **Is anyone fishing?**
   a. Yes
   b. No
15) **If yes, how many people are fishing? _____**
16) **Obstructions to fish passage?**
   a. Culvert
   b. Low dam
   c. Natural falls
   d. Road bed
17) **Do you see any eggs being eaten? If so, by what?**
   _____
18) **Stream Gradient**
   a. Steep
   b. Medium
   c. Flat

Water Quality Measurements

19) **Dissolved Oxygen:_____**
20) **Water Temperature:_____**
21) **Water pH:_____**
22) **Salinity:_____**
23) **Water Turbidity:_____**
24) **If turbid, can you determine the source?**
   a. Tree tannins
   b. Silt from bank erosion
   c. Other? _____