Enos Lake Studies – 2007 & 2008

Enos Lake Stickleback Recovery Implementation Group

Hypothesis

- The benthic and limnetic stickleback pair in Enos Lake have collapsed into a hybrid swarm because of a crayfish-induced loss of submergent vegetation

# Work undertaken by the Enos Lake RIG and funded by the Habitat Stewardship Program in 2007 and 2008:

1. Physical and chemical description of Enos Lake.
2. Identification and mapping of submergent vegetation.
3. Population estimation and distribution of the introduced crayfish.
4. Measurement of the effect of crayfish on vegetation.
5. Testing of trapping techniques to eradicate crayfish from the lake.
6. Composition and distribution of stickleback.

7. Stewardship projects:

- Information and education programs regarding the stickleback and invasives.

- Water management plan to protect the integrity of Enos Lake water

- Involvement in land development planning to protect Enos Lake

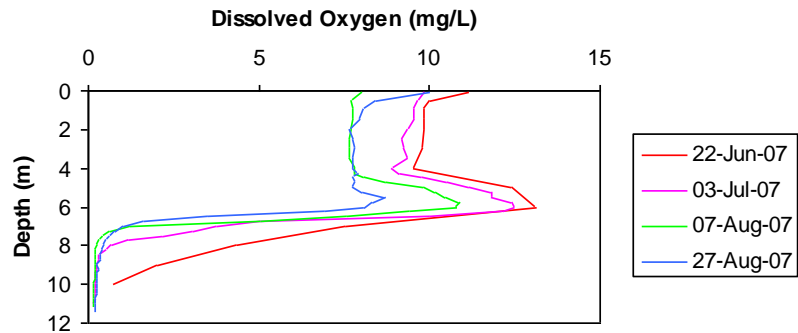# Physical and Chemical Description of Enos Lake

Vertical Temperature Profile of Enos Lake Summer 2007
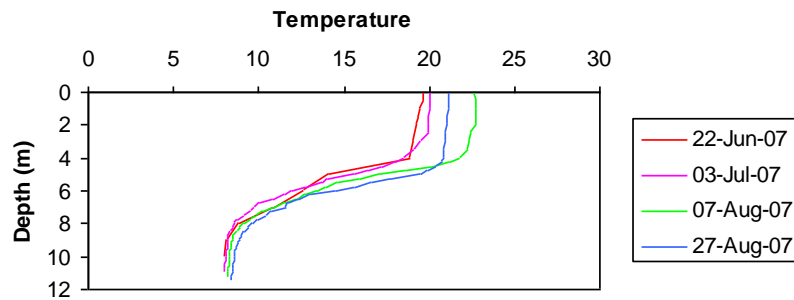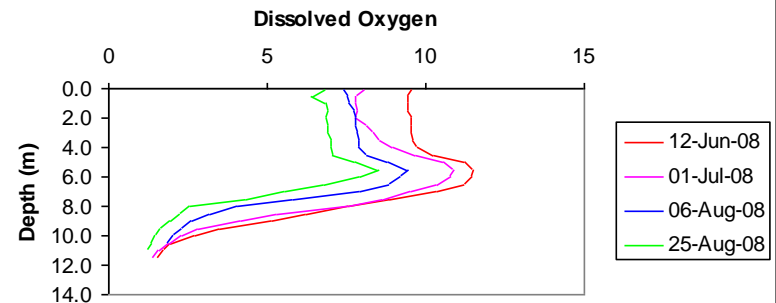

Vertical Temperature Profile of Enos Lake Summer 2008
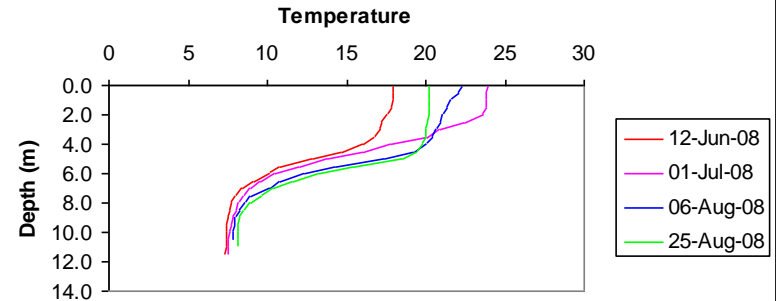
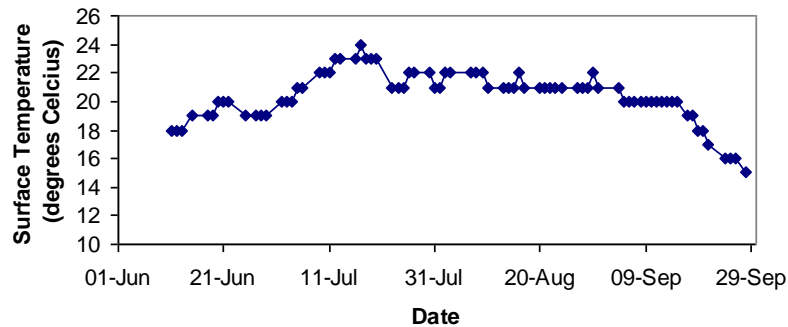Vertical Dissolved Oxygen Profile of Enos Lake

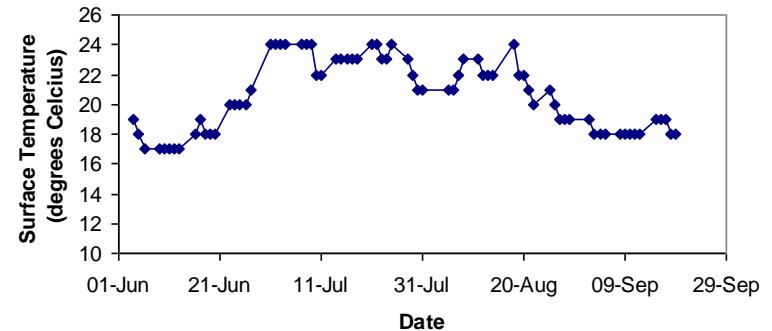Vertical Dissolved Oxygen Profile of Enos Lake Summer 2008

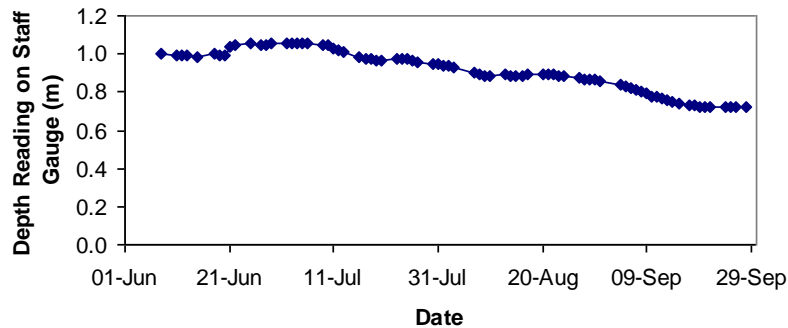# Physical and Chemical Description of Enos Lake (cont.)

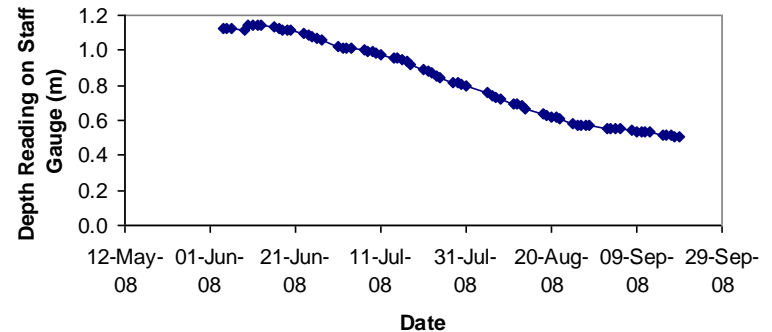Surface Temperature Monitoring Enos Lake 2007
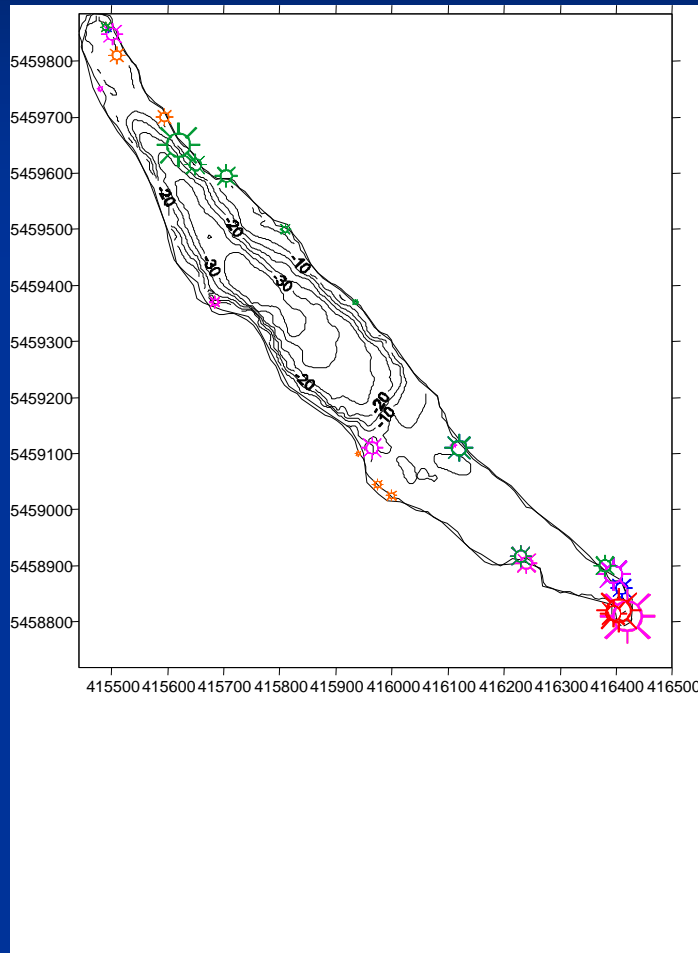

Surface Temperature Monitoring Enos Lake 2008

Water Level Monitoring Enos Lake 2007

Water Level Monitoring Enos Lake Summer 2008

Lake Vegetation

Lake Vegetation

Species	02-Jul-08		11-Aug-08		20-Aug-07	
	Total Area (Sq m)	Number of Sites	Total Area (Sq m)	Number of Sites	Total Area (Sq m)	Number of Sites
Polygonium amphibium	725	8	49	4	122	15
Scirpus lacustrus	496	9	92	8	69	6
Dulichium arundinaceum	202	5	12	2	14	3
Potamogeton sp.	490	2	150	2	20	1
Typha latifolia	9	1	0	0	5	1
Hippuris vulgaris	0	0	0	0	69	1
Sedges & Grasses	608	9	400	1	24	3
TOTAL	2530		703		323	

Crayfish Studies

Crayfish Enclosure Studies:

- Test enclosure results: 88% to 92% loss of plants (wet weight)

- Control results: 32% to 70% loss of plants (wet weight)

Stickleback Studies

		% Benthic	% Limnetic	% Hybrid	Sample Size
■	1994	48.6	41.9	11.1	74
■	1997	80.2	12.5	7.3	96
■	2000	65.0	28.0	7.0	102 (juveniles)
■	2000	83.7	9.7	6.5	154 (adults)
■	2002	70.2	20.7	9.1	111
■	2007	7.6	10.9	81.5	692
■	2008	16.8	7.0	76.2	244