An Introduction to Olympic Mudminnow

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Phylum: Chordata
Class: Actinopterygii
Order: Esociformes
Family: Umbridae
Genus: Novumbra
Species: *N. hubbsi*

Washington's Olympic mudminnow

Family Umbridae - Mudminnows

- Closely related to the pike family (Esocidae)
- Five species in Umbridae, all freshwater
  - Alaskan blackfish, central mudminnow, eastern mudminnow, and European mudminnow
- Small fish – maximum 33 cm (Alaskan blackfish)
- Elongate bodies with dorsal and anal fins set far back – soft rays only
- Lateral line faint or absent

Identification

- Dorsal and anal rays set far back and about equal in size
- Dorsal fin directly over anal fin
- Caudal fin is truncated
- Vertical bars on sides (faint in females)

Olympic mudminnow distribution

Olympic Mudminnow Habitat

- Several cm of soft mud
- Aquatic vegetation
- Little/no water flow

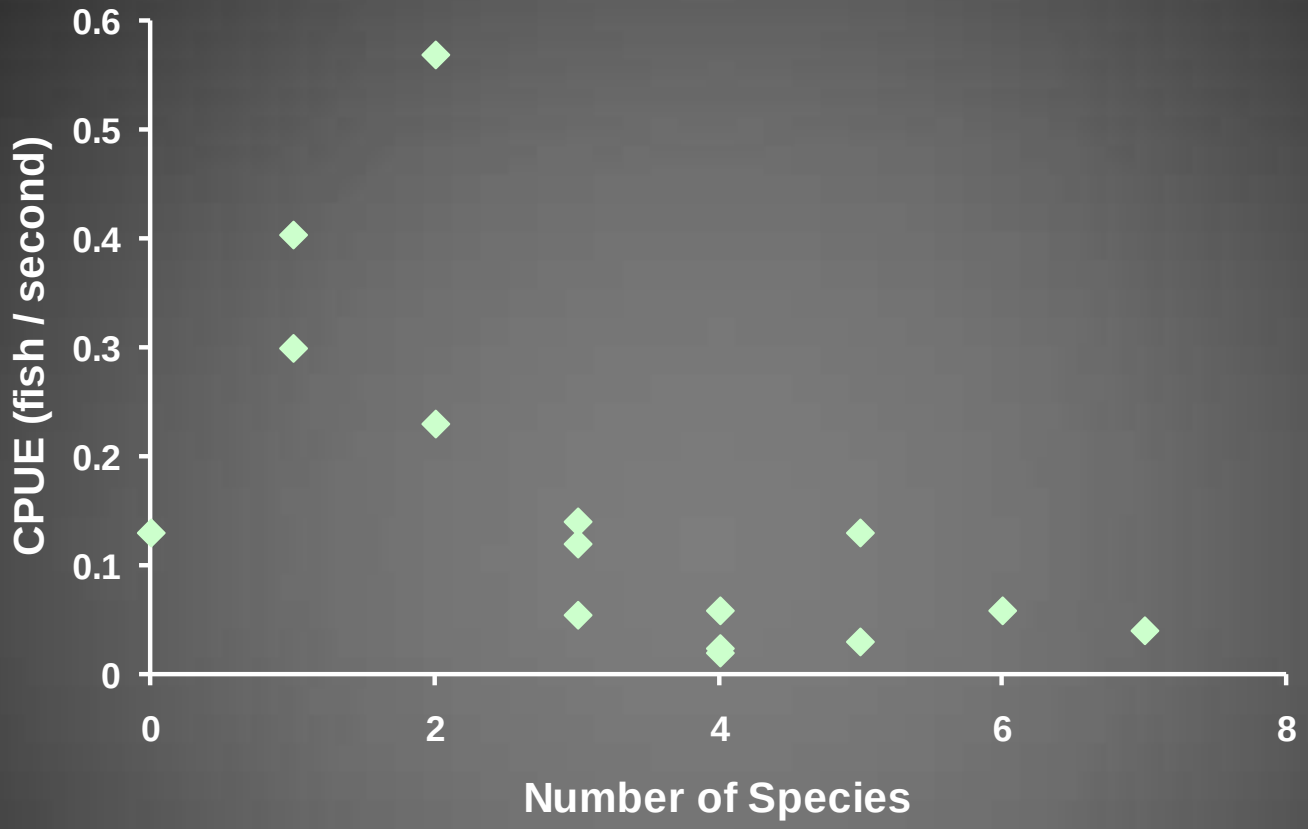
Tell me about this fish…

- Small, 20-90 mm
- Relatively poor swimmers
- Only thrive with a few other fish species
- Age and growth??

Reproduction

- March – June (peak in April and May)
- Sexes strongly dimorhpic in color
- Males have relatively large territories (1.1 by 0.4 m) – aggressive
- Courtship involves a “wigwag” dance
- Adhesive eggs deposited in vegetation – no parental care

Other species



Reticulate Sculpin

Three-spine Stickleback

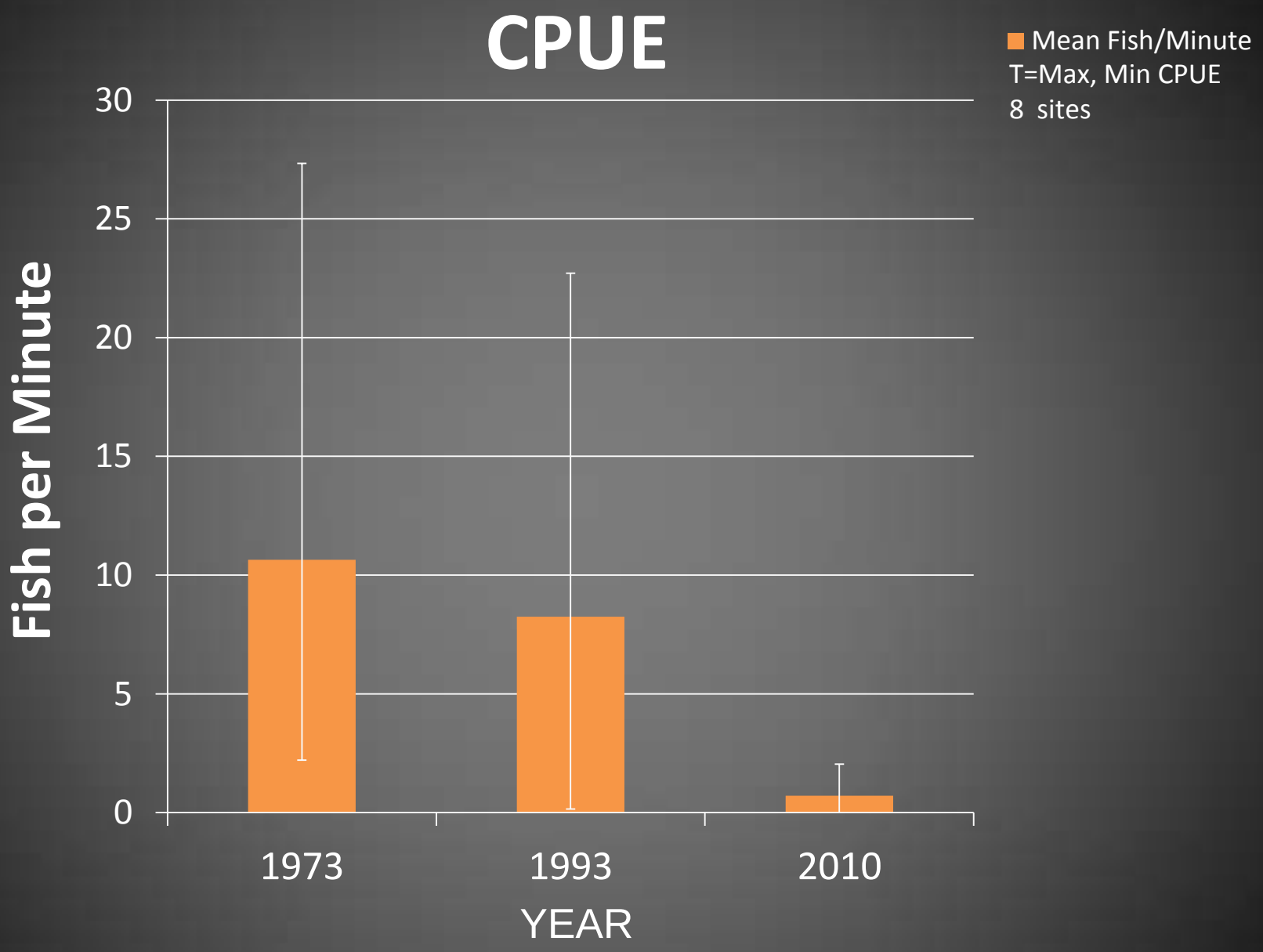
Coho Salmon

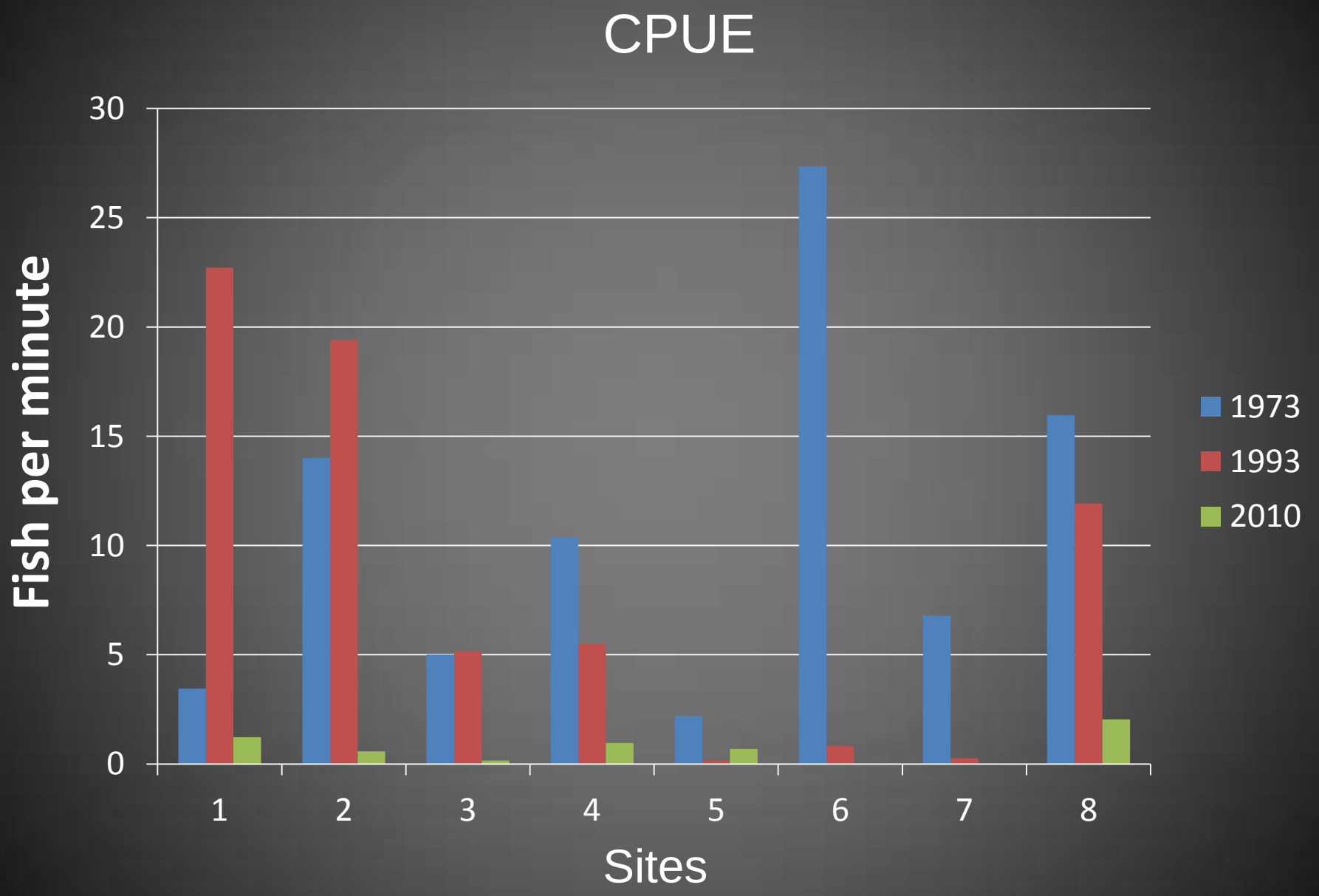
Western Brook Lamprey

Speckled Dace

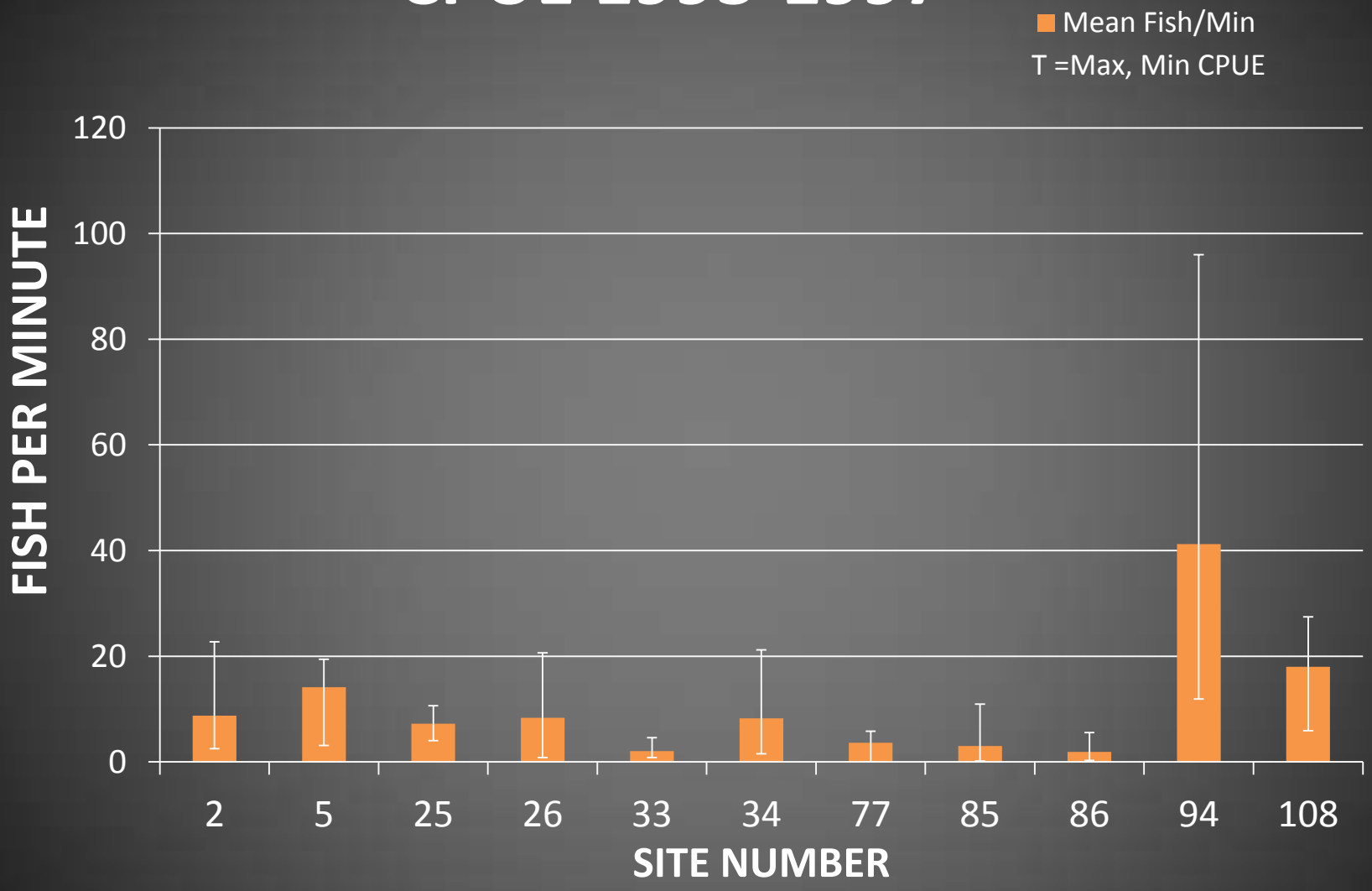
Population Trend Data

- Electrofishing at selected sites
- 1973 – UW (Harris 1974)
- 1993-97 – WDFW
- 2010 – WDFW, USFWS


CPUE
Mean Fish/Minute
T=Max, Min CPUE
8 sites
Fish per Minute
30
25
20
15
10
5
0
1973
1993
2010
YEAR


CPUE
Fish per minute
30
25
20
15
10
5
0
1
2
3
4
5
6
7
8
Sites
1973
1993
2010

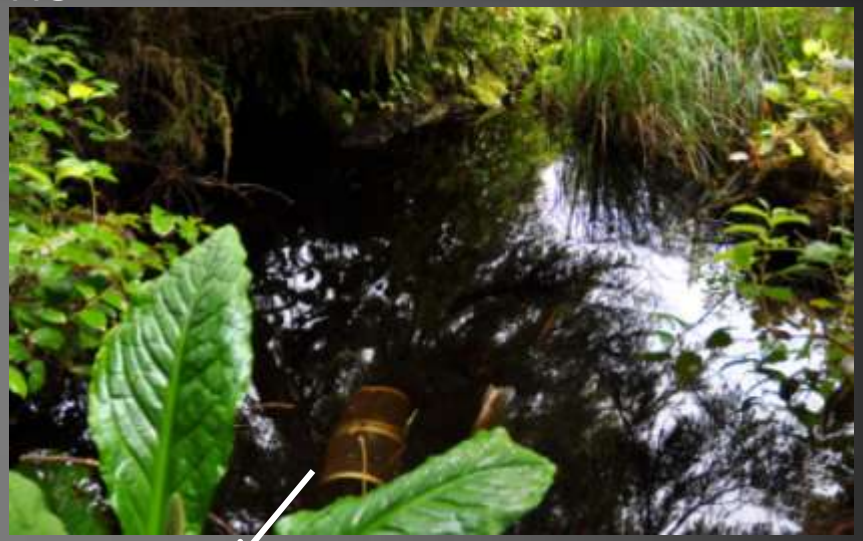
CPUE 1993-1997

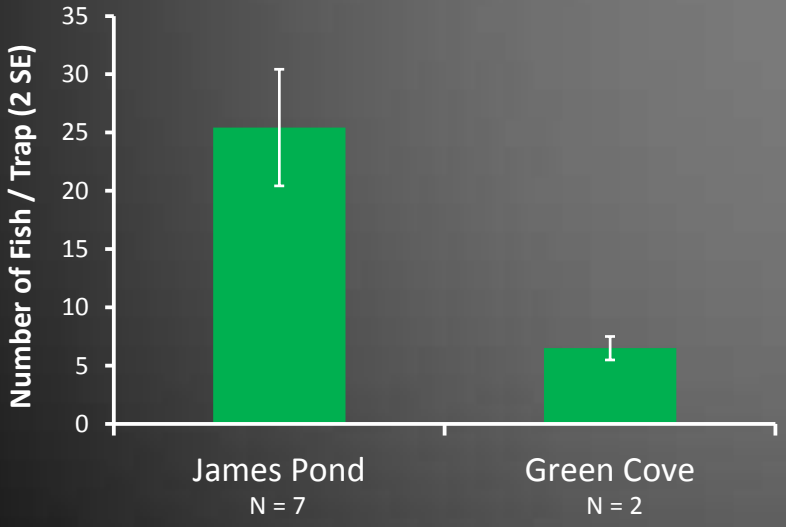


Other Sampling Technique

Minnow Traps

- Baited with frozen bloodworms
- Overnight sets
- Several can be set each night
- Standard unit of effort





State Sensitive Species

State Sensitive – a native species that is vulnerable or declining and is likely become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats.

Listing Justification – Limited range And threats from habitat loss.

Olympic mudminnow Threats

Green Cove Drainage
Olympia ,WA

What happened at Green Cove?

Habitat Alteration

Next Steps

- *Genetic Analysis*
- *Status Review*