

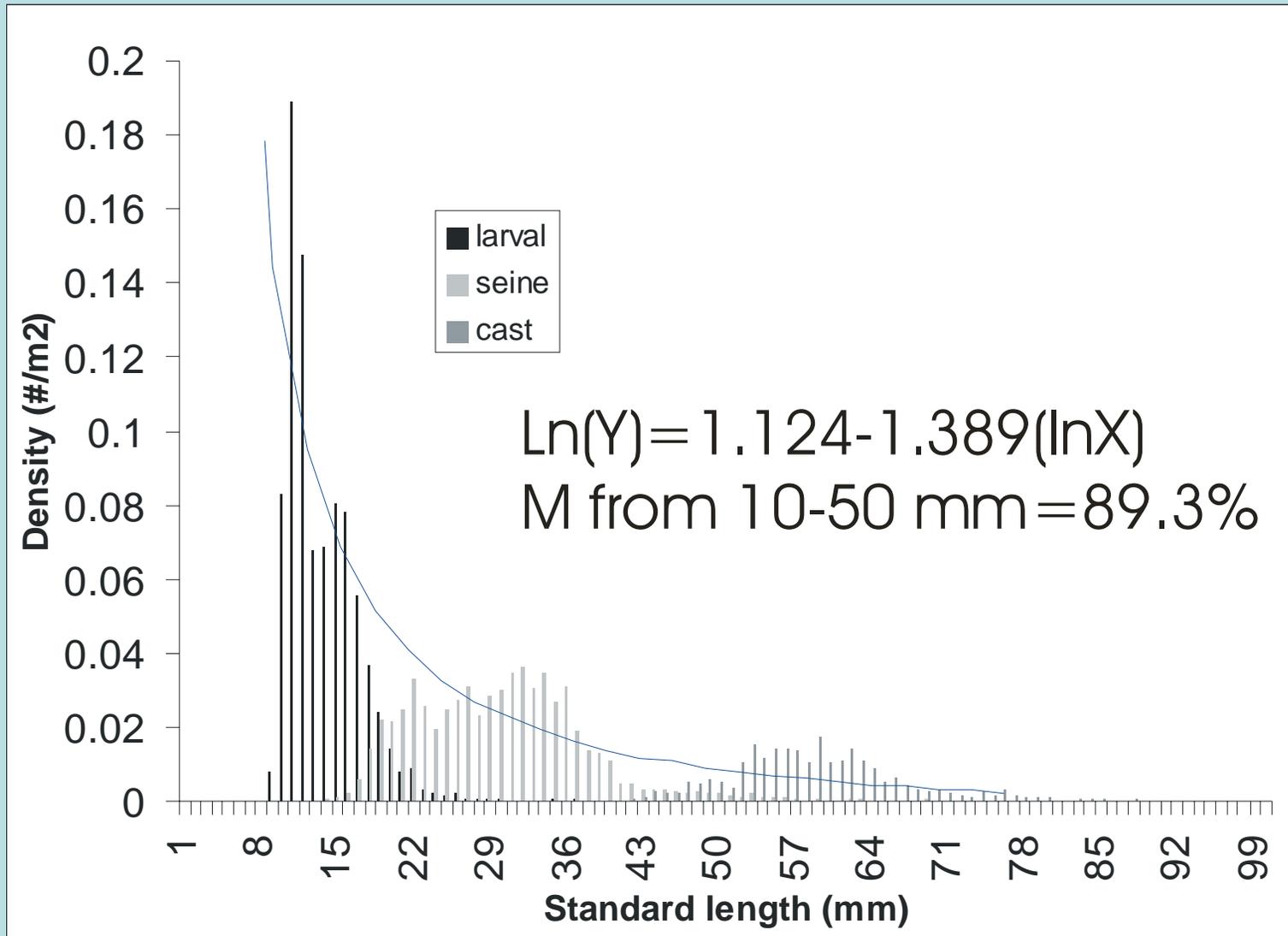
Egg predation in lampreys and the role of adult anti-predator behavior

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Essentials of Fish Reproduction Behavior

- Get sexes together
- **Protect eggs**
 - Hide in nests
 - Place in low predator habitat
- Provide oxygen
- Provide for passive drift to nursery

Larval mortality: Klamath suckers







Problem: high mortality and concentration of eggs in small area

Solutions:

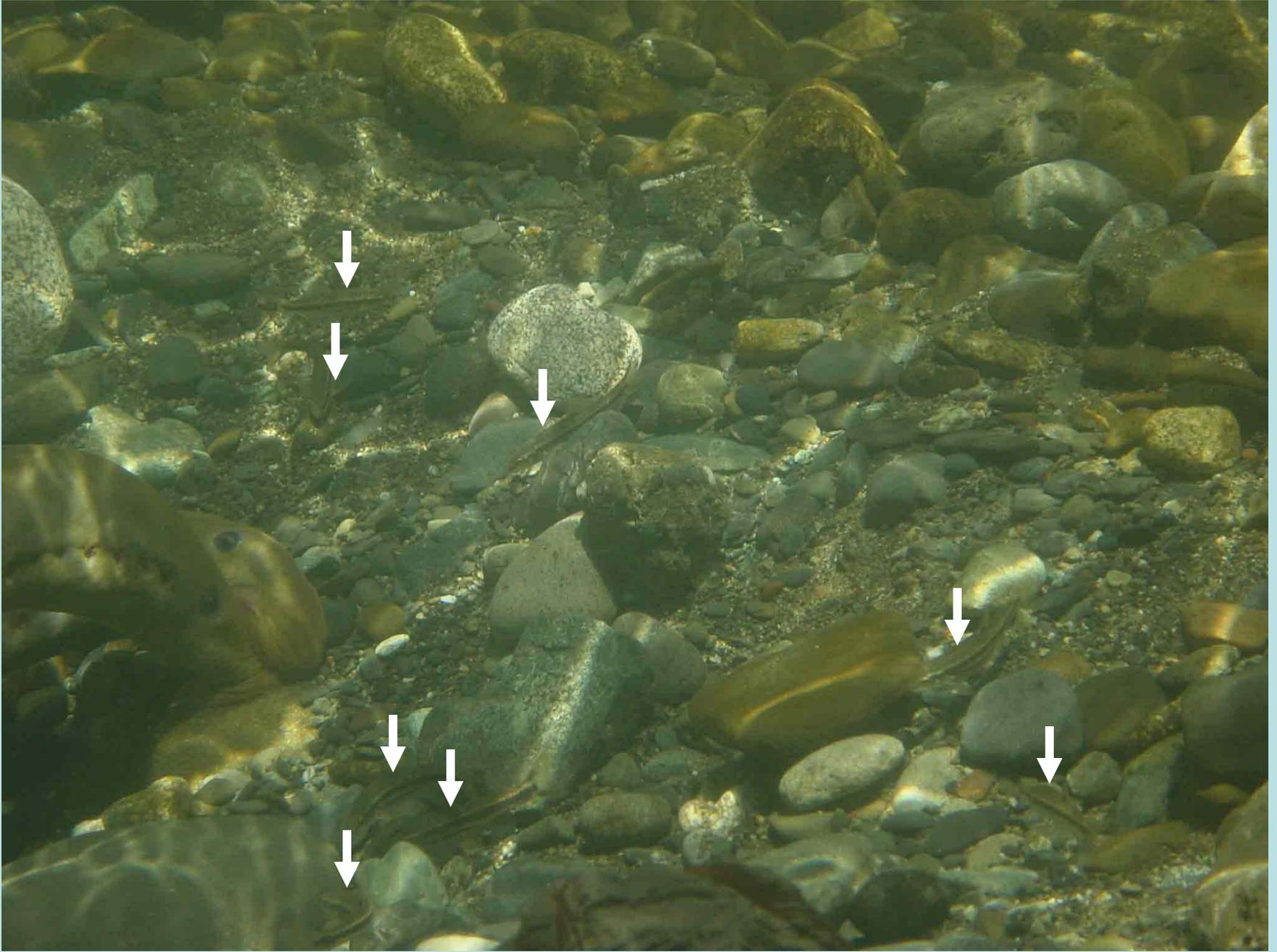
1. Spawn in low-predator areas
 - upstream, low order streams
2. Disperse eggs

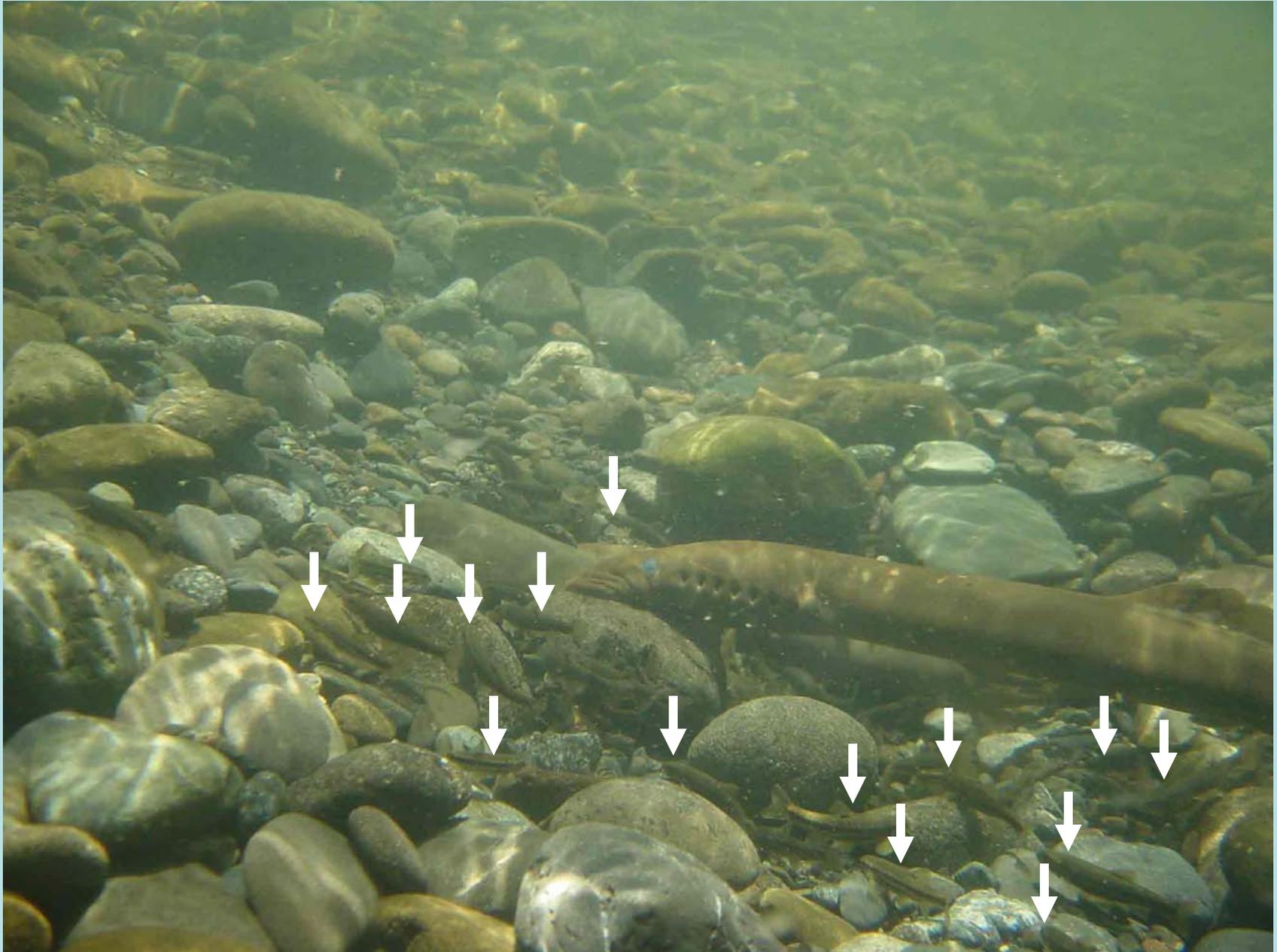








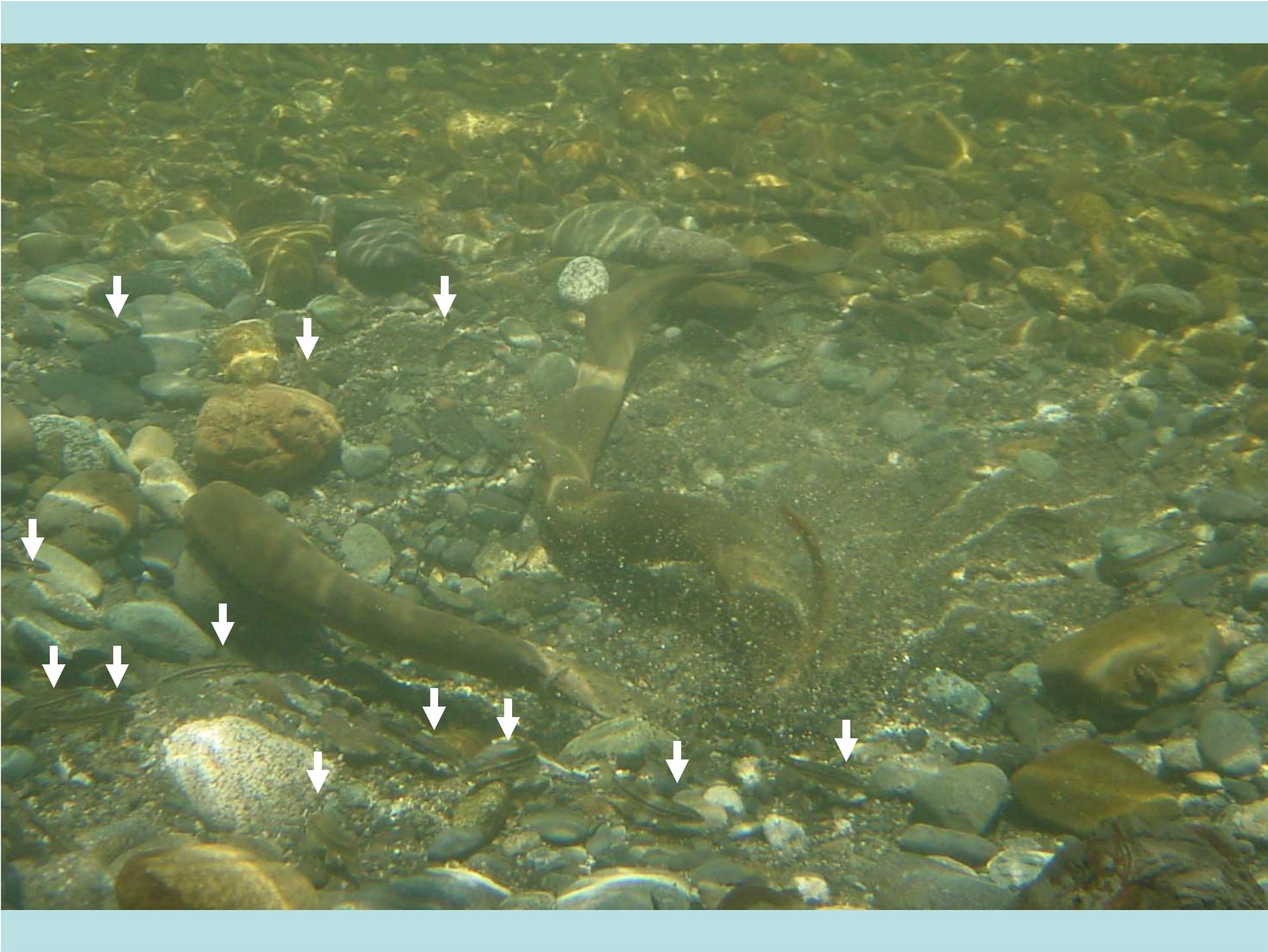












Possible functions?

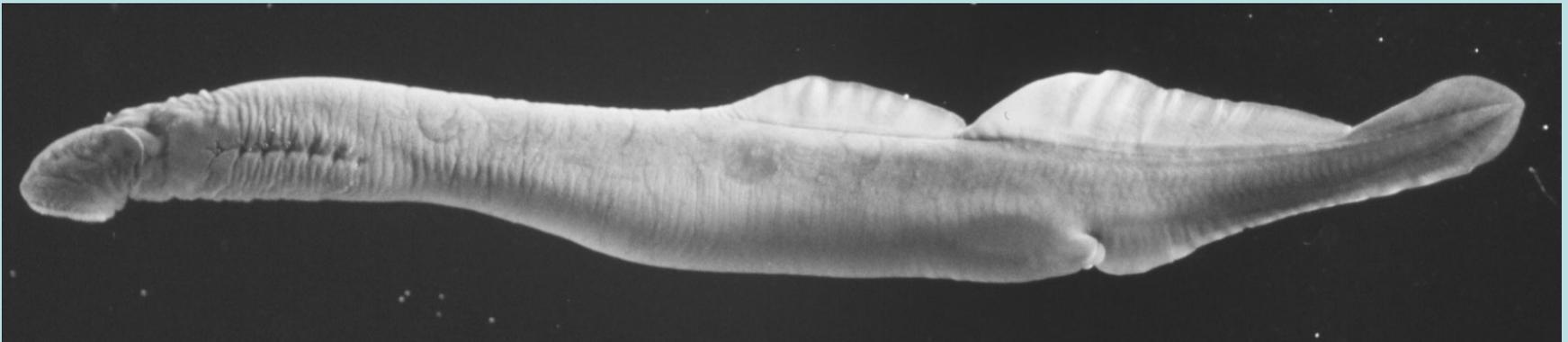
- Remove unfertilized eggs from nest
 - Behavior should be seen in areas with no fish predators
- Disperse eggs from concentrated, easily-found site to crevices in rocks
 - Behavior should not be seen in streams with no egg predators

Problem: concentration of eggs in small area

Solutions:

1. Spawn in low-predator areas
 - upstream, low order streams
2. Disperse eggs
3. Reduce predator numbers

Miller Lake lamprey – world's smallest parasitic lamprey or world's smallest predatory lamprey?



Feeding in adult lamprey

1. Blood feeding or flesh feeding occurs during growth phase in ocean (*L. tridentata*) or in rivers (*L. similis* or *L. ayresi*)
2. Stops before spawning

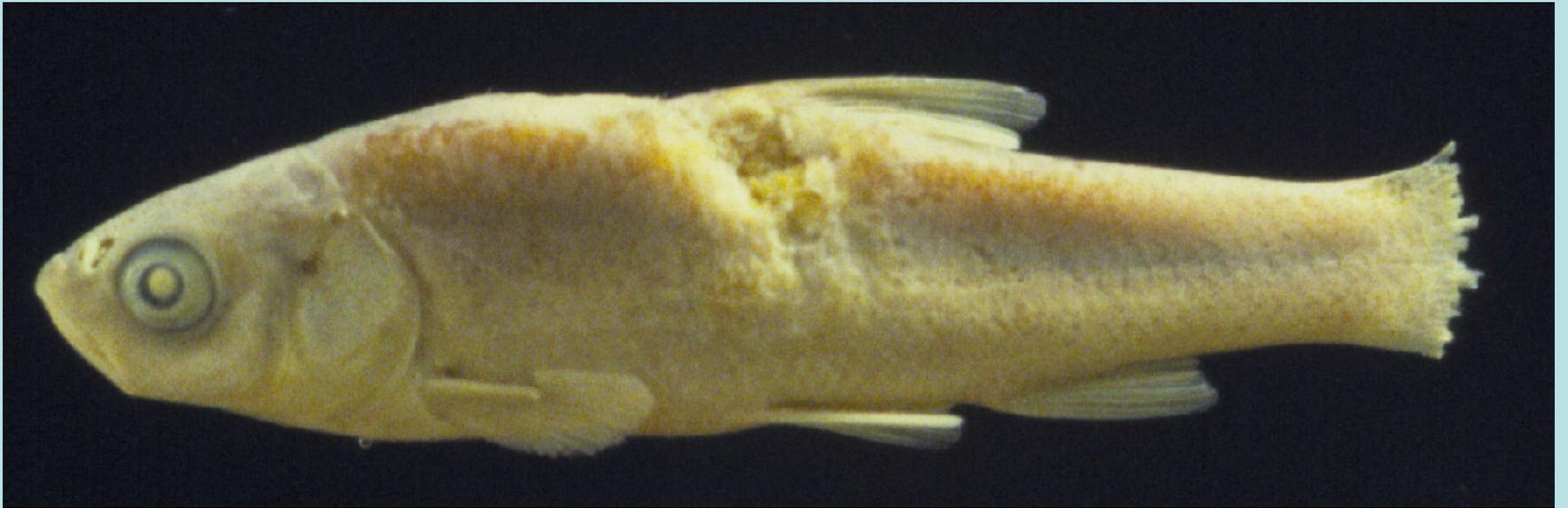
Feeding in adult Miller Lake lamprey

1. Growth phase in ammocoete
2. Shrink during adult phase
3. Adult flesh feeding starts during maturation and through spawning
4. Why?

L. minima is a flesh gouger







Why?

- Assumption: adult feeding in Miller Lake lamprey has no nutritional benefit to adult
 - Is gut functional?
- If true, could adult predatory behavior serve to remove potential egg predators ?
 - How to test?