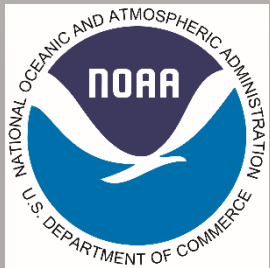
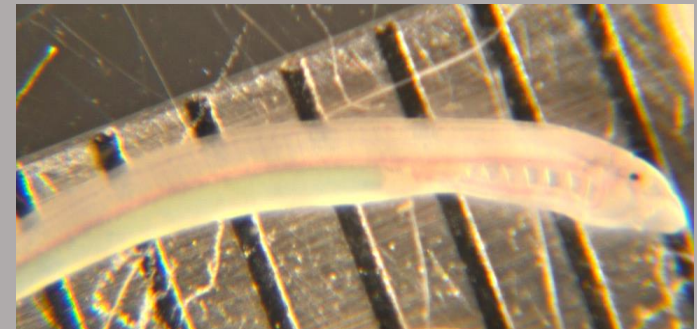
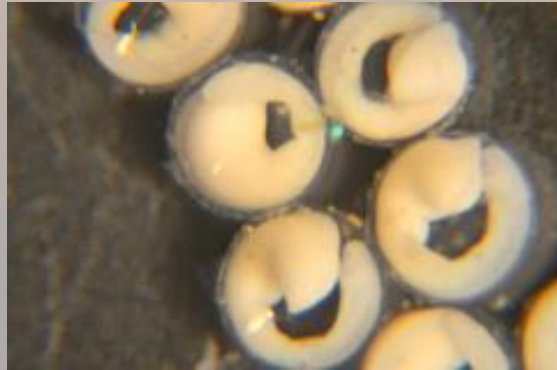
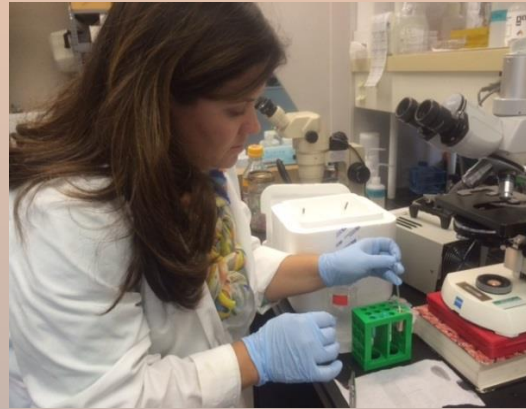
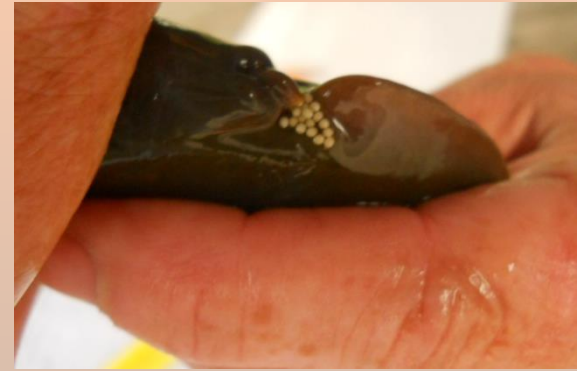


The Secret Lives of Pacific Lamprey: Insights From Artificial Propagation Research

Mary L. Moser, Alexa N. Maine, Jon E. Hess,
and Aaron D. Jackson





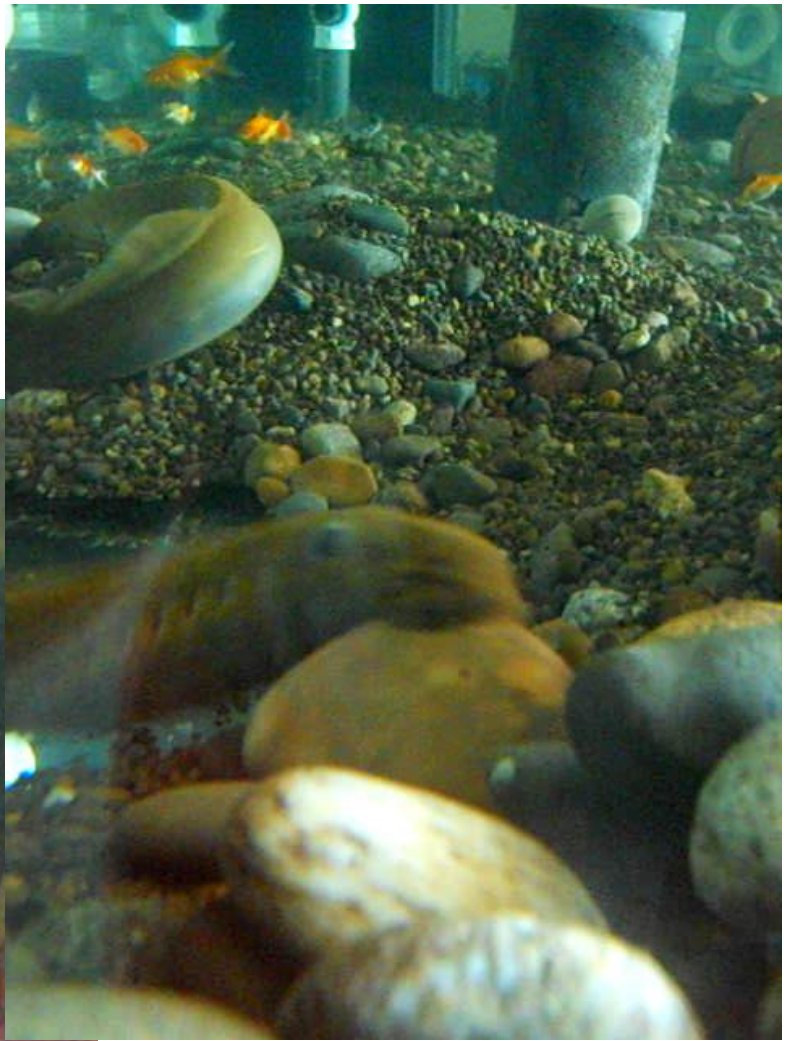
Outline:

Spawning Secrets

Fertilization Secrets

Incubation Secrets

Ammocoete Secrets



Treatment	Date	Fertilization Rates	
		n	Mean %
Ripe (Surgical Removal)	21 April	6	88.7 (1.9)
Ripe (Surgical Removal)	5 May	6	91.1 (5.4)
Dead (Surgical Removal)	13 May	6	89.3 (2.9)
Control (Ripe Stripped)	13 May	6	90.3 (1.7)
Green (Surgical Removal)	20 May	2	63.4 (17.2)

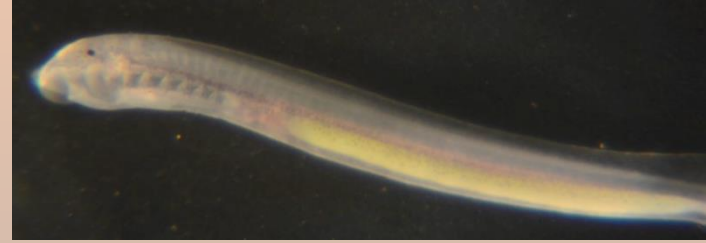
ZOMBIE MOMS



Treatment	Date	Fertilization Rates	
		n	Mean %
Ripe (Surgical Removal)	21 April	6	88.7 (1.9)
Ripe (Surgical Removal)	5 May	6	91.1 (5.4)
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Control (Ripe Stripped)	13 May	6	90.3 (1.7)
Green (Surgical Removal)	20 May	2	63.4 (17.2)



Who's your mama?

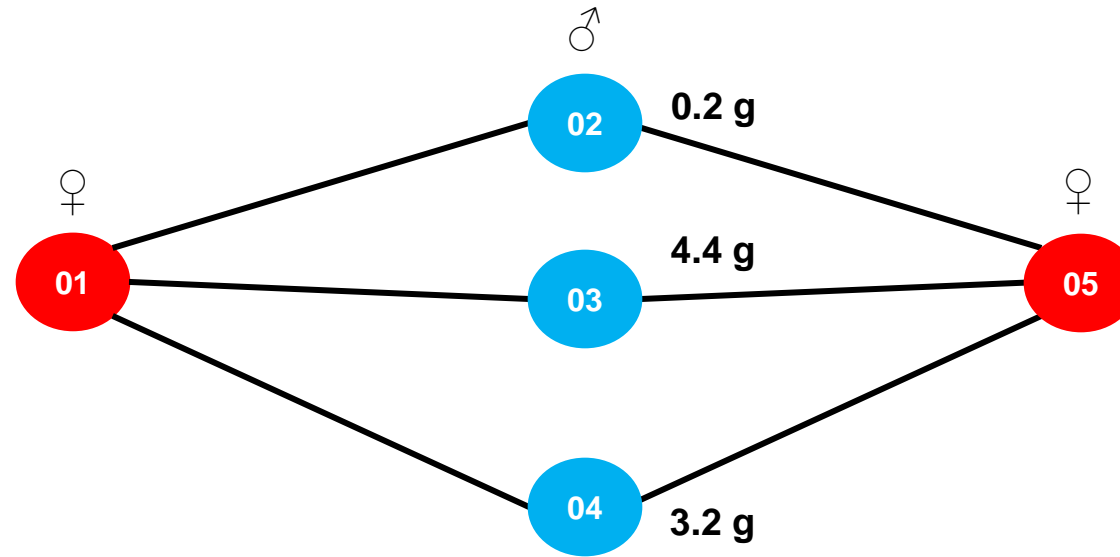


24 of 25
correctly
assigned

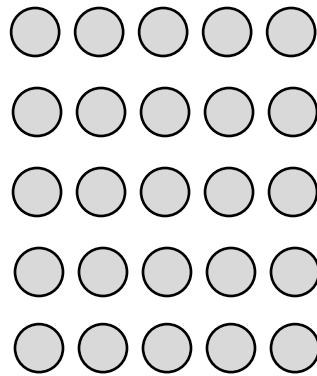
4% Type A error
(no assignment)
0% Type B error
(mis-match)



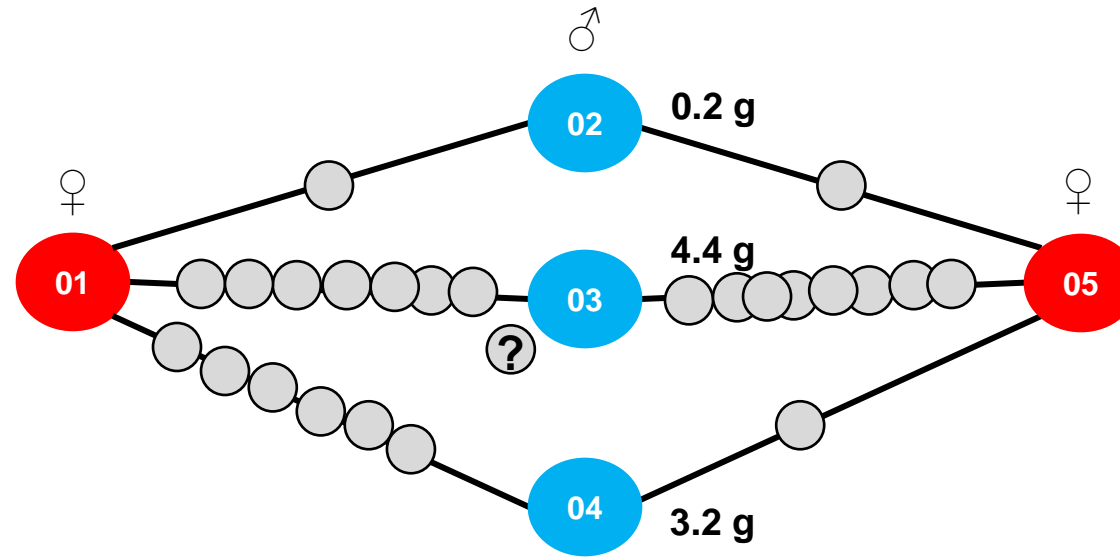
Parentage analysis



Rearing study:
Known parents
and their offspring

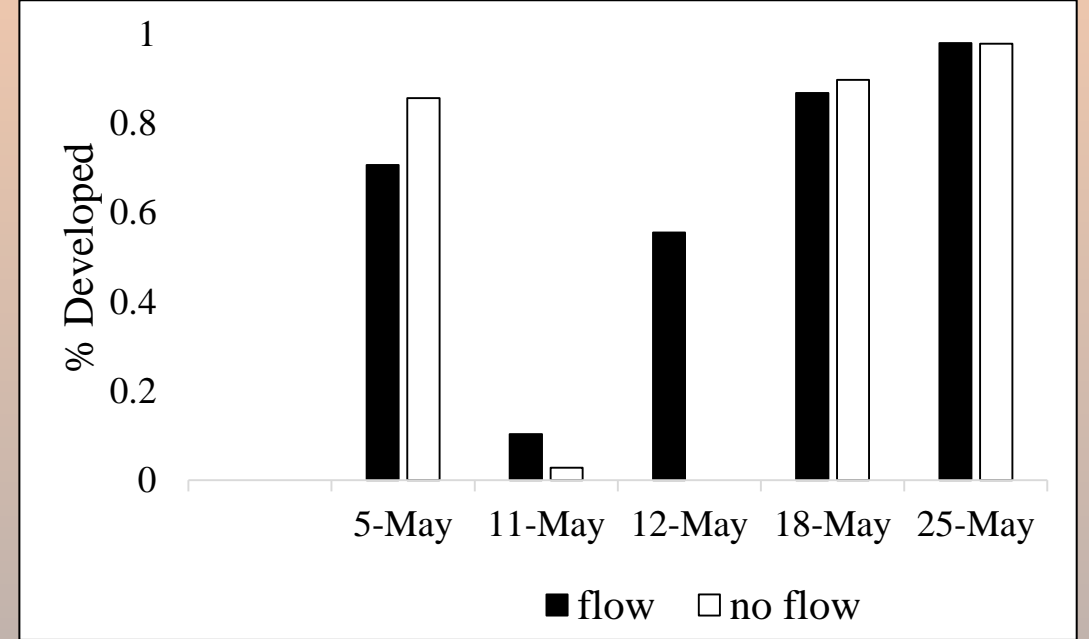
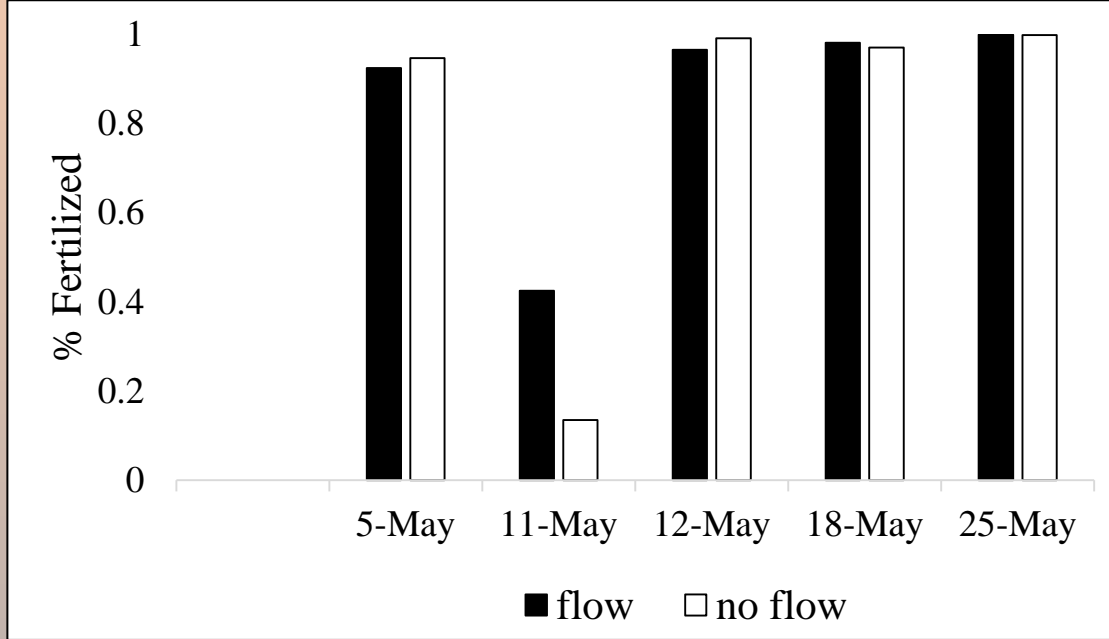


Parentage analysis

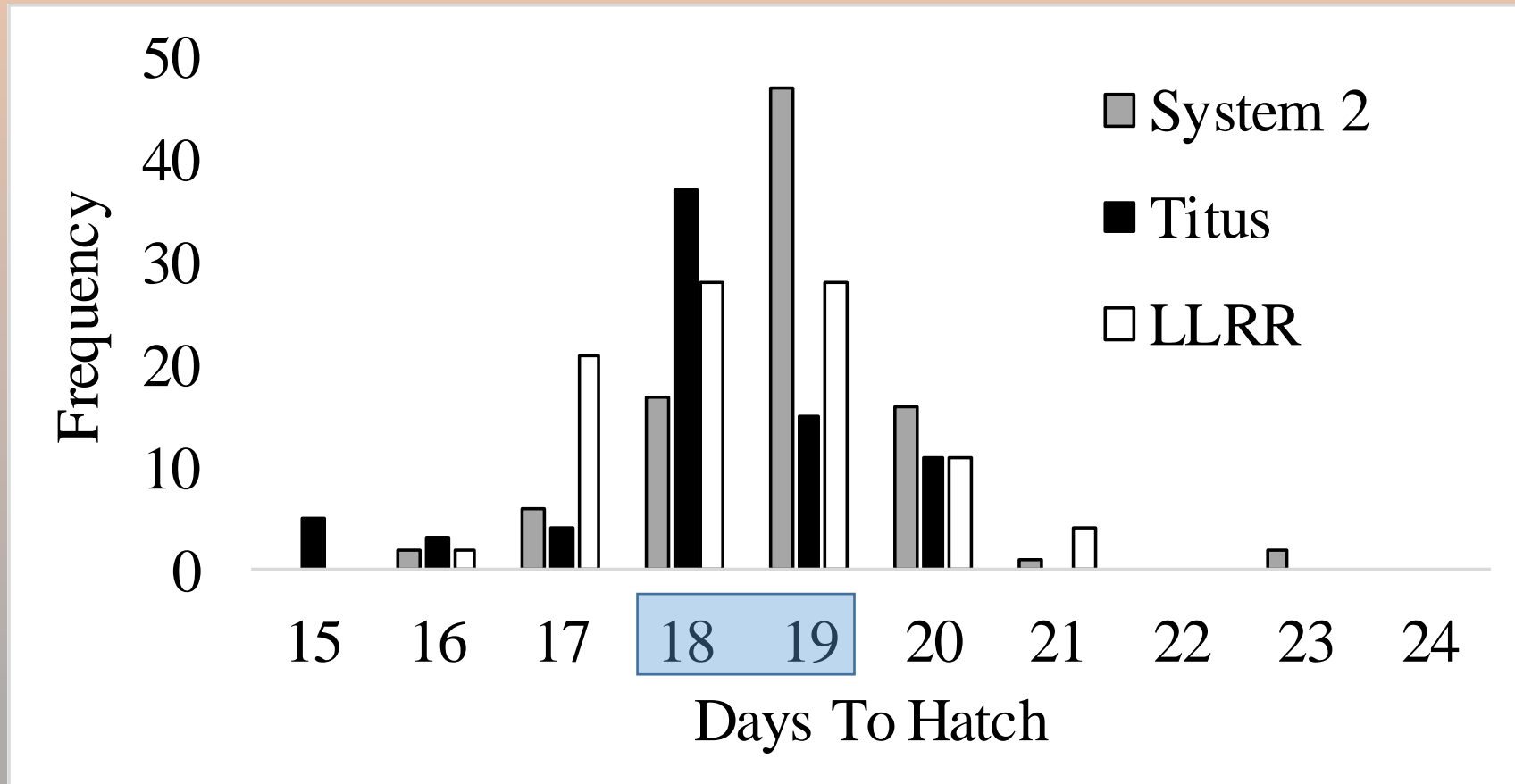


Rearing study:
Known parents
and their offspring

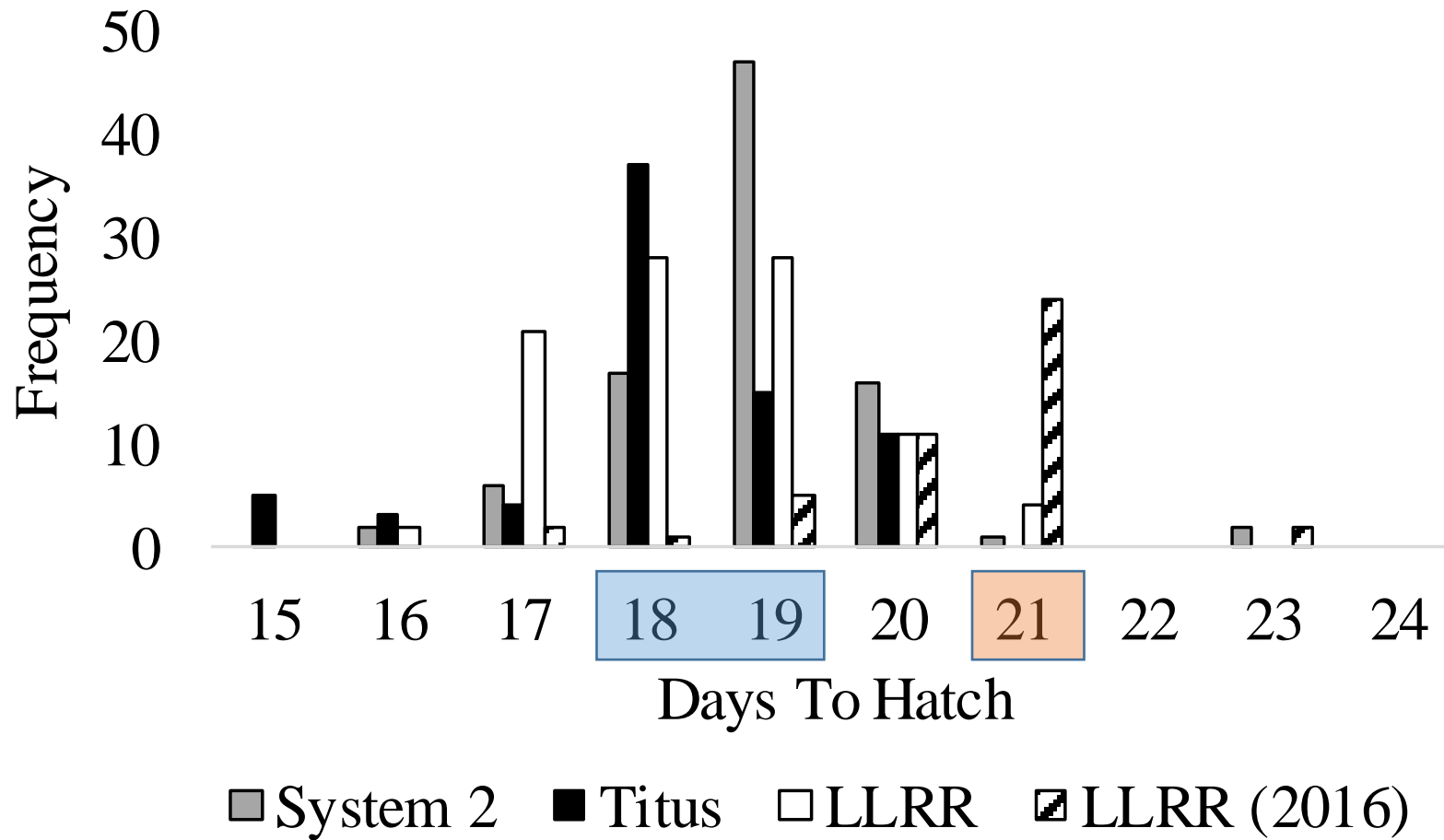
Effects of Flow



Effects of Water Supply on Incubation (14°C)

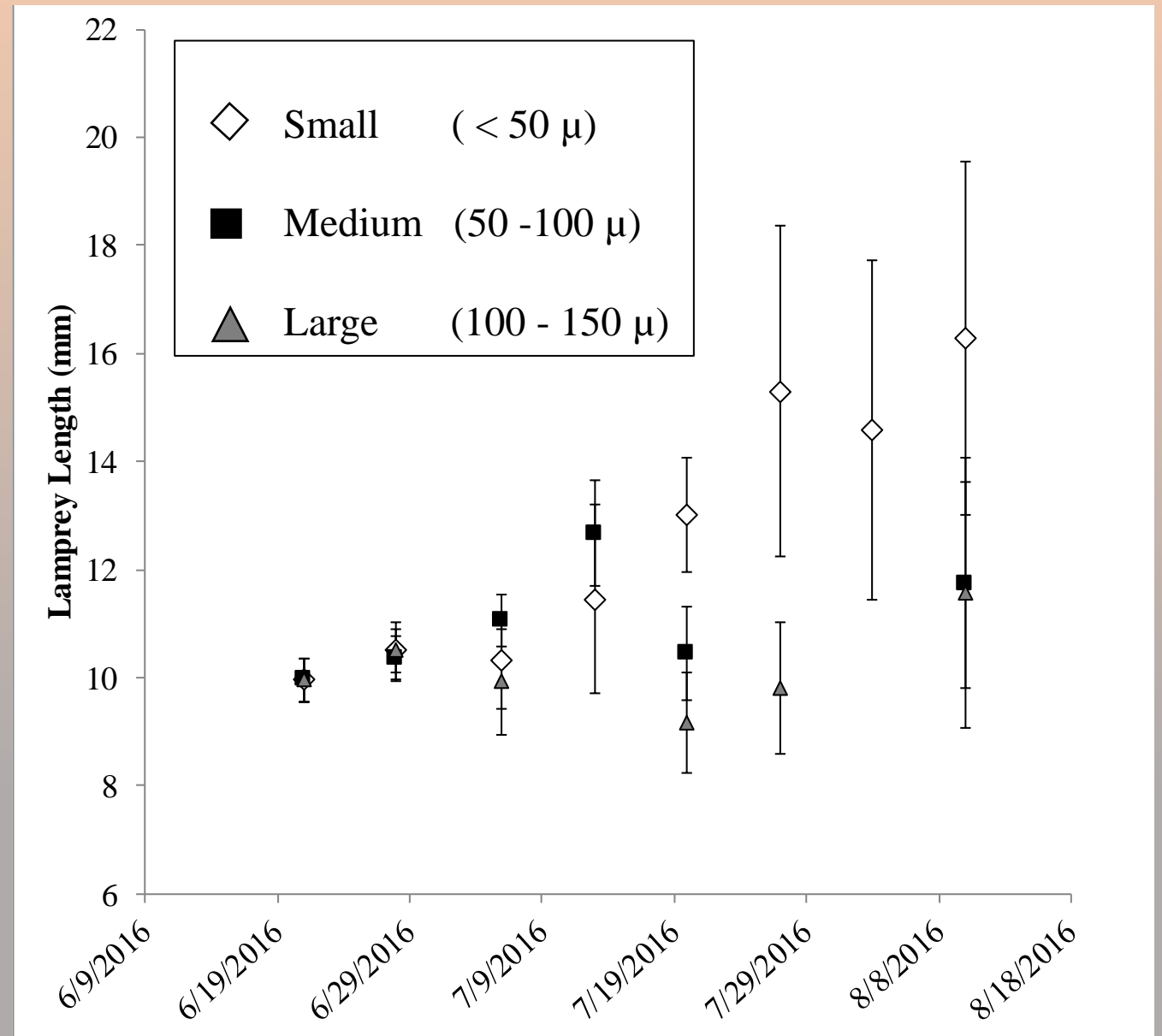
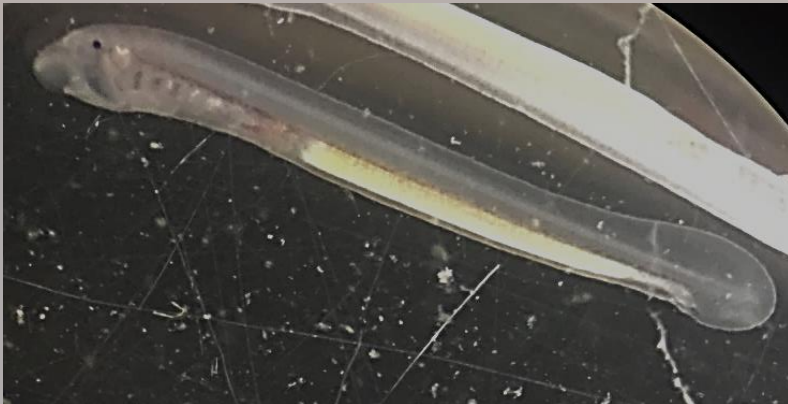


Genetic Effects on Incubation?

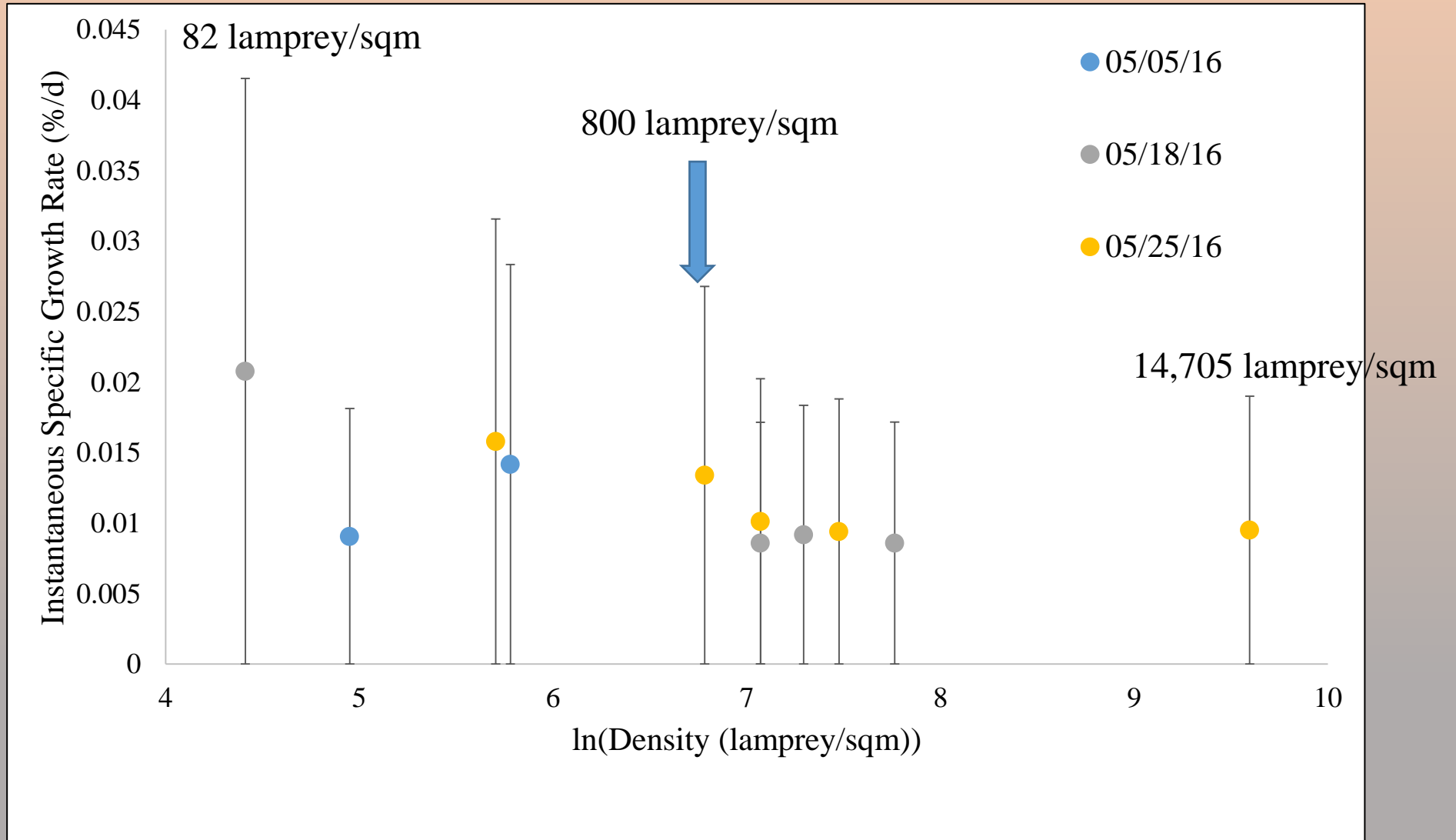


Effects of Food Particle Size on First-Feeding Larvae

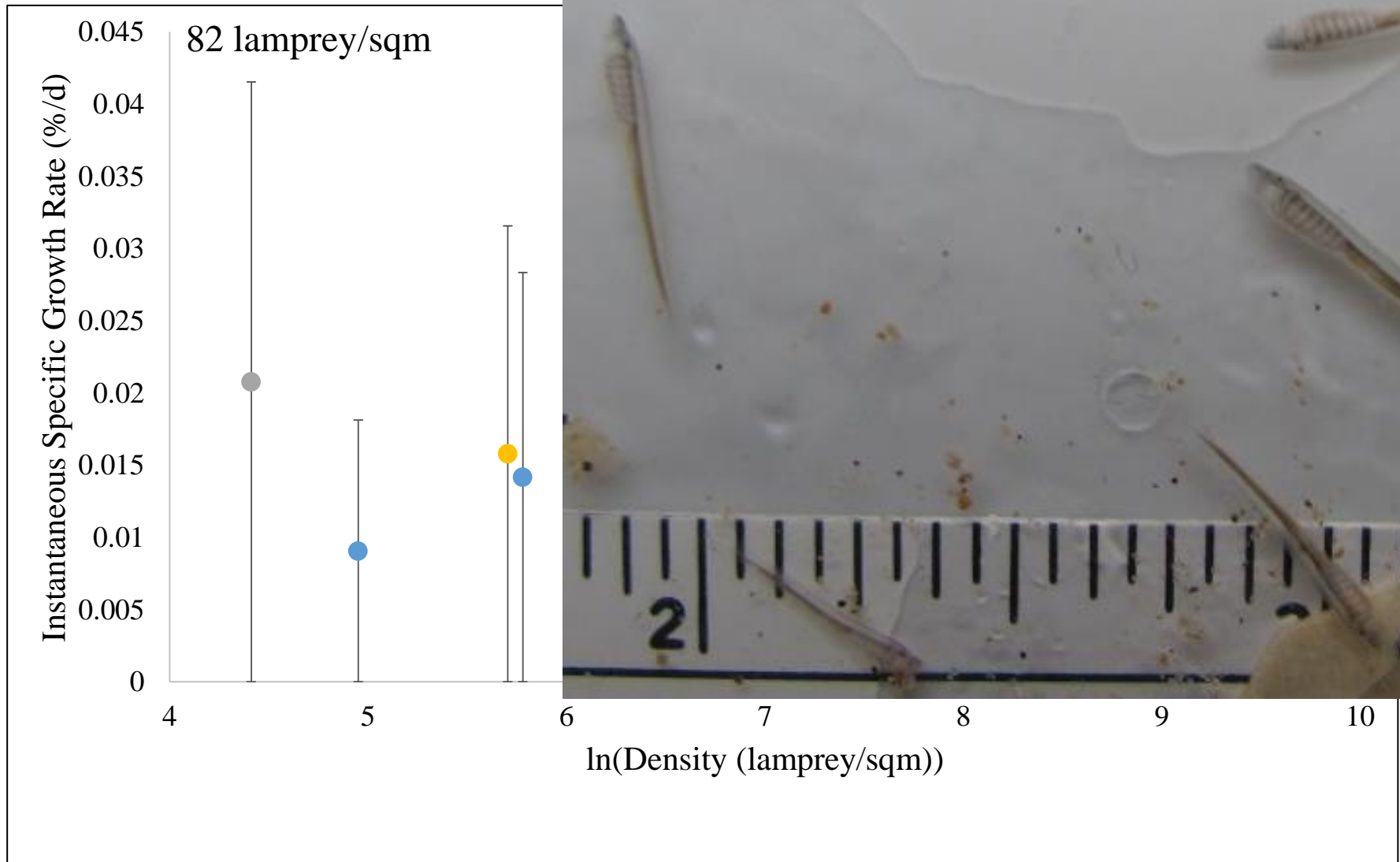
Note highly variable growth



Effect of Density on Growth of Early Larvae



Effect of Density on Growth of Early Larvae



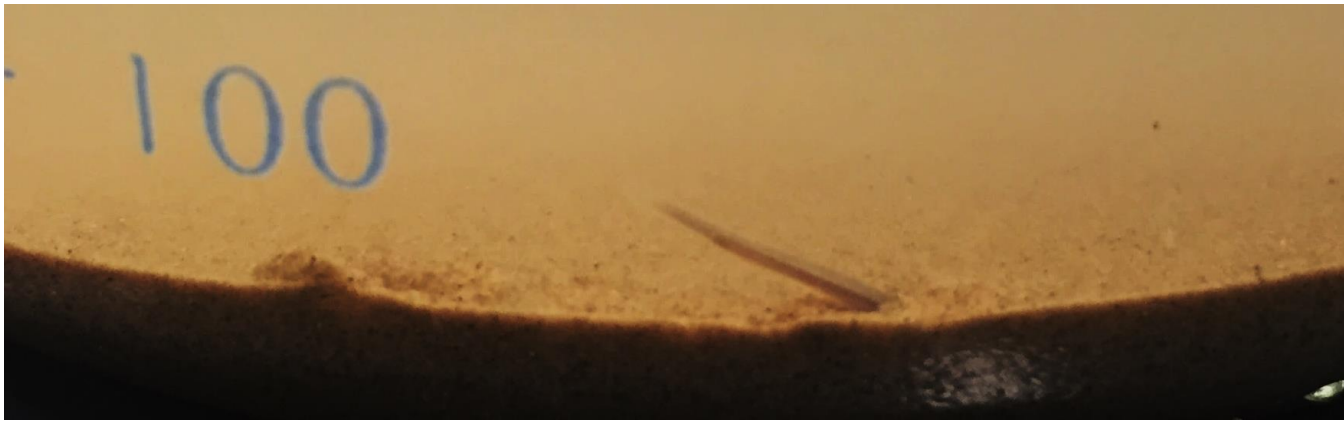
Spawning and Fertilization Secrets

- Adults require substrate to initiate spawning
- Eggs from dead females were viable
- Parentage assignment worked
- Sperm equally competitive



Incubation and Early Life Secrets

- Incubation successful in no flow
- Hatch timing effects: water supply, year
- Food particle size affected growth
- Growth highest at < 800 larvae/sq meter





Thanks to:

Emma Stevens (University of Puget Sound),
Justin Pearson (Walla Walla Community College),
Jerrid Weaskus, Kanim Moses (CTUIR)
Ralph Lampman, Patrick Luke (Yakama Nation),
Sue Camp (BOR) and Debbie Docherty (BPA)