Investigations into razorback and flannelmouth sucker hybridization and competition with non-natives

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Photo by George Andrejko

Project importance

Construction of dams along the Colorado River have confined razorback sucker (RBS) and flannelmouth sucker (FMS) to relatively small sections of river where spawning overlaps

- FMS abundance is high where larval RBS are being collected
- Identify risk for introgression (backcrosses)
- Develop field identification tools for biologists
  - Necessary for accurate data collection
- Investigate physiological capabilities of FMS, RBS and flannelmouth razorback hybrids (FRH)

5 Year Project Objectives

1. Evaluate egg viability, juvenile survival and swimming ability of FRH
2. Morphometrics and meristics to develop field identification tools for FRH
3. Evaluate egg viability and juvenile survival of backcrosses and F2 generation
4. Evaluate growth and survival of juvenile RBS in presence of common carp

Pilot Study: Spring 2015

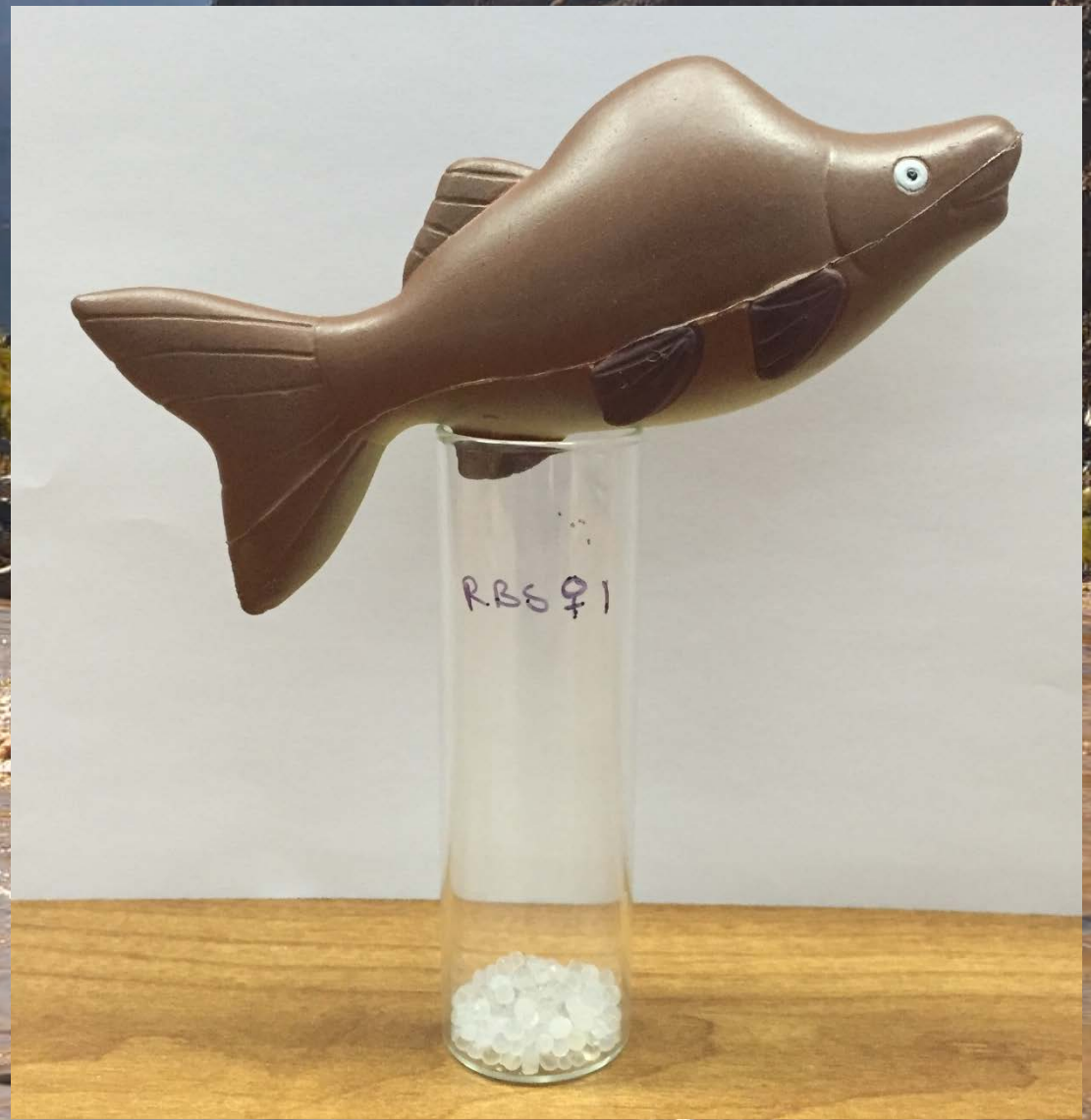
- Exchanged labor for RBS at Bubbling Ponds
- Used FMS that were already in David Ward's possession
- Used Ovaprim to bring fish into ripeness

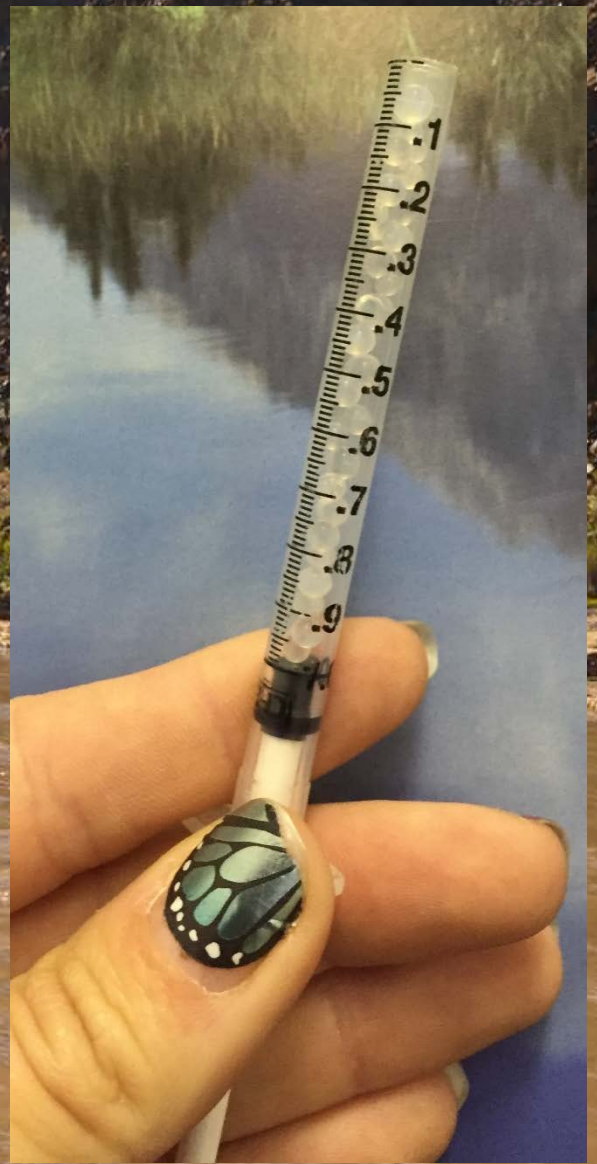
Will Work For

Pilot Methods

RBS ♀ X RBS ♂

RBS ♀ **X** FMS ♂





Methods Cont.

Photo by Matthew Fry USFWS

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Pilot Results

- Very low hatch rates, both hybrids and pure fish (fungus)
- > 50% deformed after hatching, both hybrids and pure fish
- Poor survival overall
- ~ 30 RBS and ~30 FRH larvae survived
- 26 FRH survived to date

Discussion

- Why fungus and deformities?
  - Egg handling techniques?
  - Poor gametes?

Conclusion

- Need new egg quantifying techniques
  - Pictures of each treatment?

Questions / Feedback?