

**AN OBSERVATIONAL AND
EXPERIMENTAL INVESTIGATION OF
POPULATION AND STAGE-SPECIFIC
RESPONSES TO SALINITY IN THE
PACIFIC CHORUS FROG (*PSEUDACRIS
REGILLA*)**

Alexandria
Marquardt
Oregon State
University
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MOTIVATION

- Anecdotal evidence of Pacific Chorus frog tadpoles in saline (boundary) pools near the ocean
 - Lacking vegetation
 - Exposed
 - Assumed variable salinity levels



HYPOTHESIS

- Populations will exhibit different tolerance to saline conditions
- Older age classes less affected by salinity



EXPERIMENTAL DESIGN

- **2x5x5 Fully factorial design**
 - **2 age classes**
 - Hatchling & 5 week old
 - **5 populations**
 - **Inland** (Finley National Wildlife Refuge, Dairy Barn)
 - **Coastal Dune** (Baker Beach State Park, South Beach State Park)
 - **Boundary** (Fogarty Cr.)
 - **5 salinity treatments**
 - Control, 0.4ppt, 4ppt, 8ppt, & 16ppt



Total of 300 experimental units

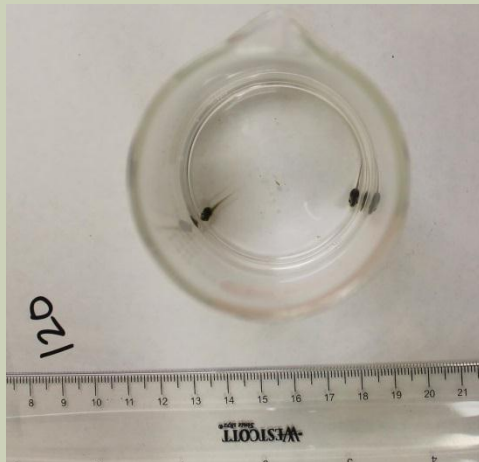
FIELD SURVEYS AND COLLECTION

- Collected egg masses – Feb. 15-22 & April 28th
- Identified second boundary population May 25th 2013
- Variable salinity levels measured at Cape Perpetua (boundary site)



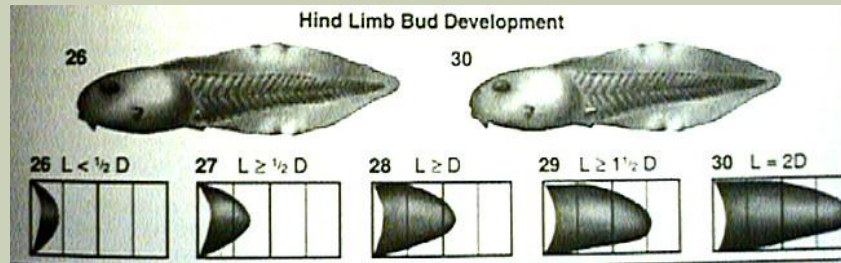
DATA COLLECTION - HATCHLING

- Weekly overhead photographs
 - Analyzed using ImageJ software
- Daily checks for mortality



DATA COLLECTION – 5 WEEK OLD

- Weekly total length measurements
- Weekly measurement of Gosner stage



CONCLUSIONS/SUMMARY

- Data collection still in progress
 - Trends show a treatment effect
 - Waiting to finish boundary population



QUESTIONS?

