

Welcome to the Conservation Lecture Series



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Questions? Contact margaret.mantor@wildlife.ca.gov

Managing California Red-legged Frogs and California Tiger Salamanders in Landscape-scale Habitats



Jeff Alvarez, The Wildlife Project

Natural History Overview



D. Cook

Natural History Overview



D. Cook











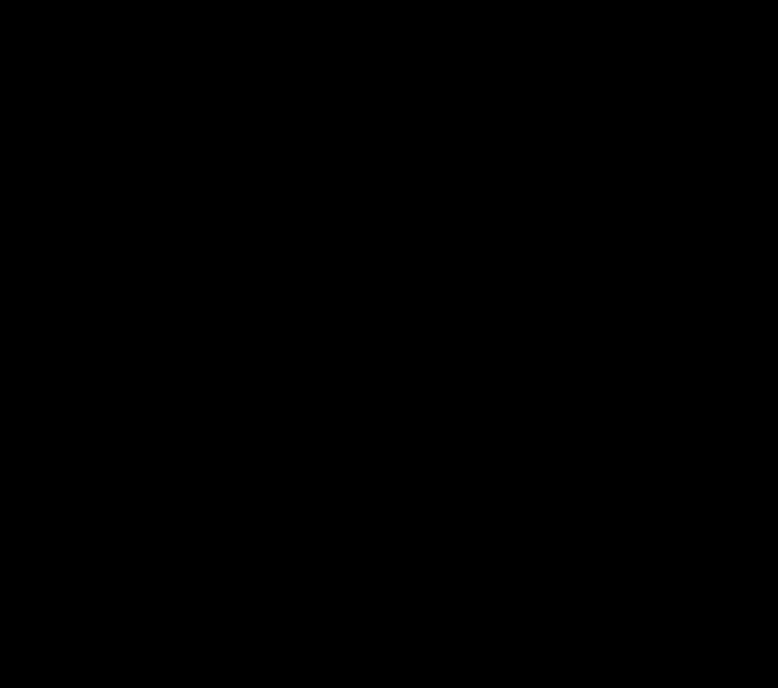








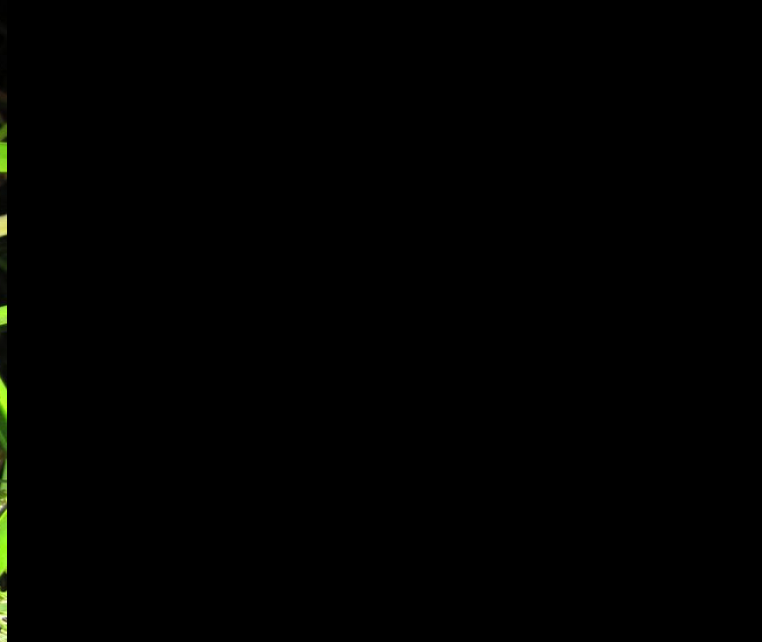




S. Foster

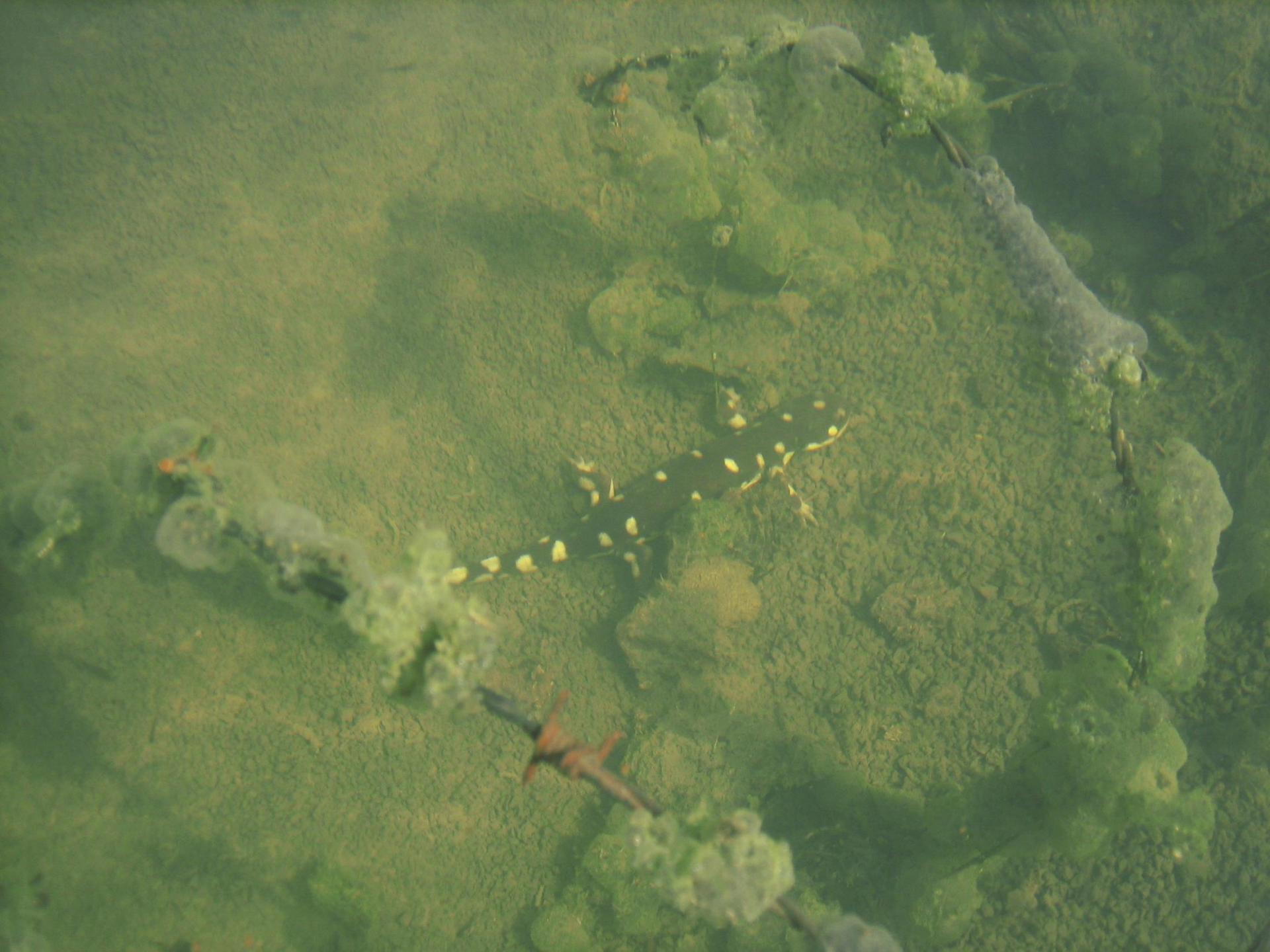
S. Foster



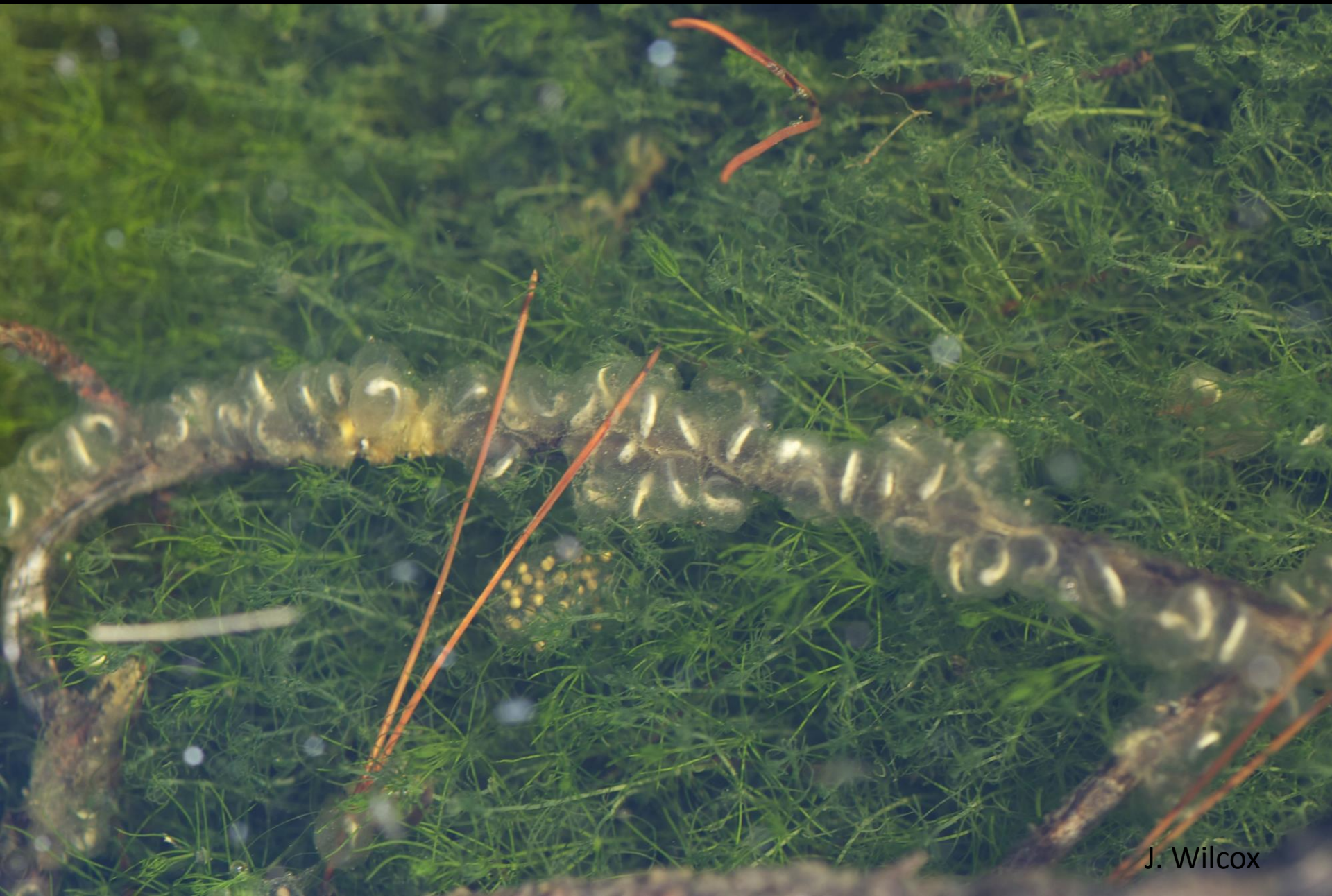


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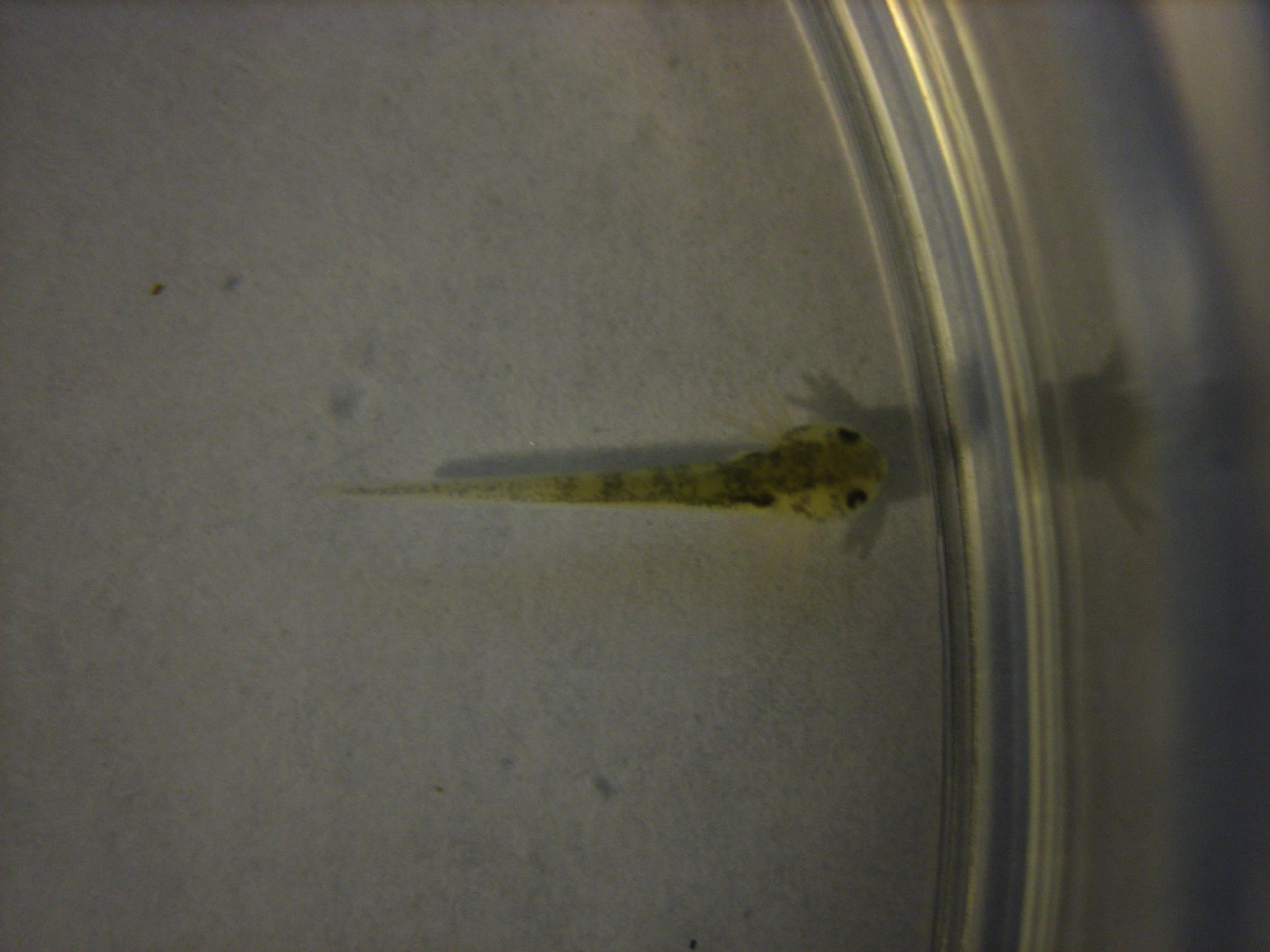








J. Wilcox









D. Cook

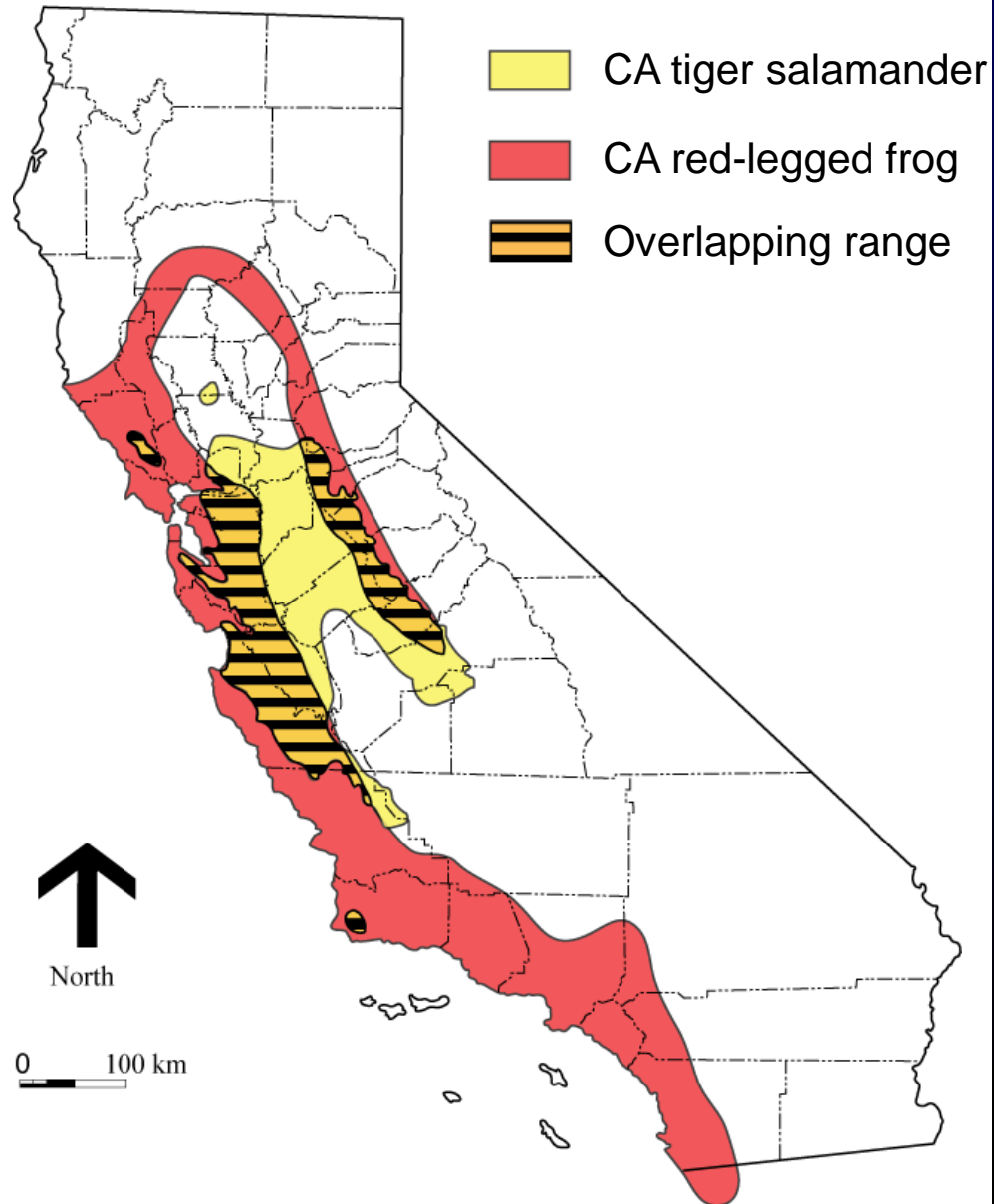


Natural History Similarities



- Biphasic reproductive pattern;
- Congregate in aquatic breeding sites in late fall and winter;
- Lay eggs in shallow water;
- Both may have early metamorphosing or overwintering larvae;
- Adults highly adapted to dry uplands;
- May utilize similar aquatic breeding habitat.

An Important Similarity...





Perennial and ephemeral creeks



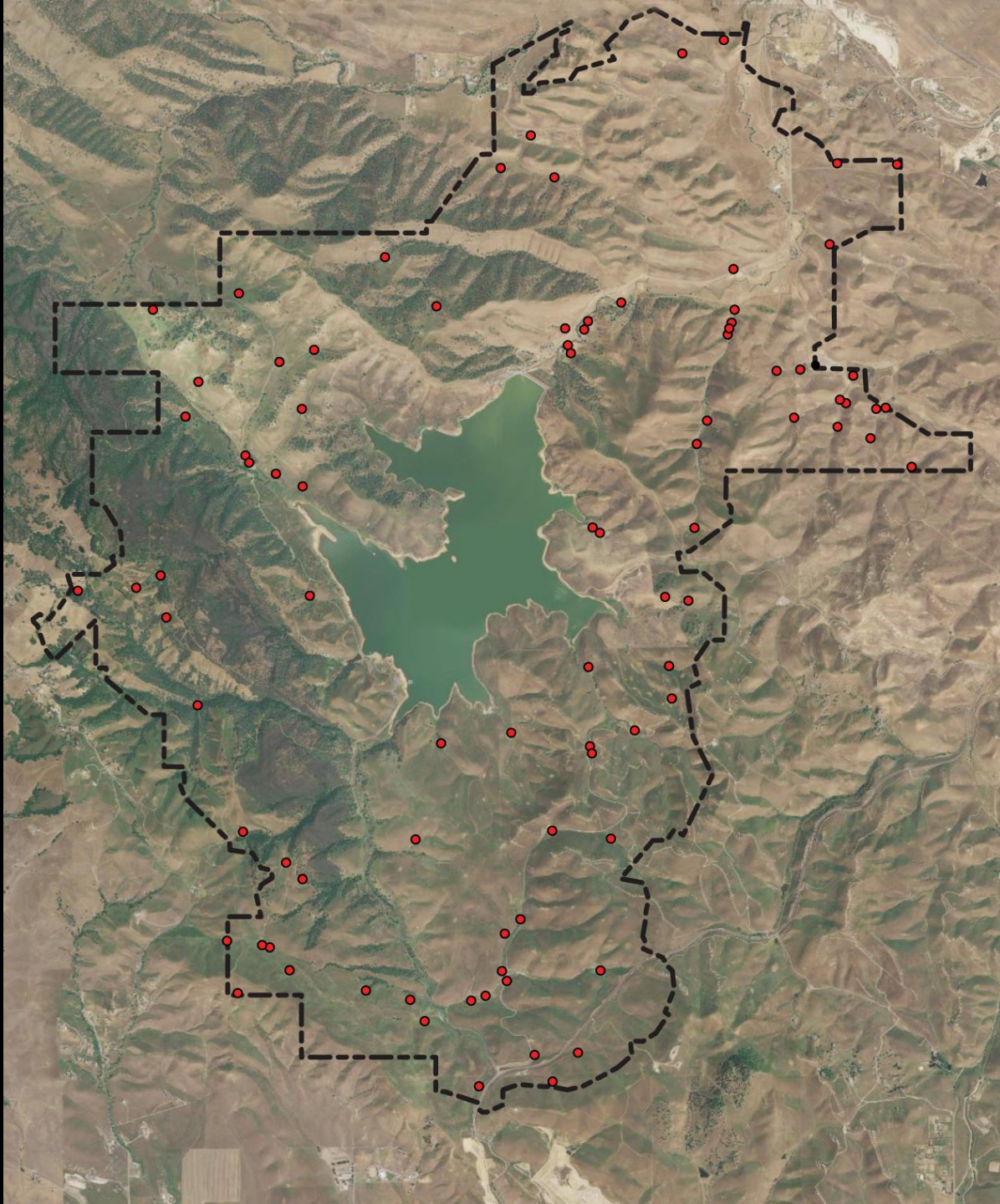
Created wetlands

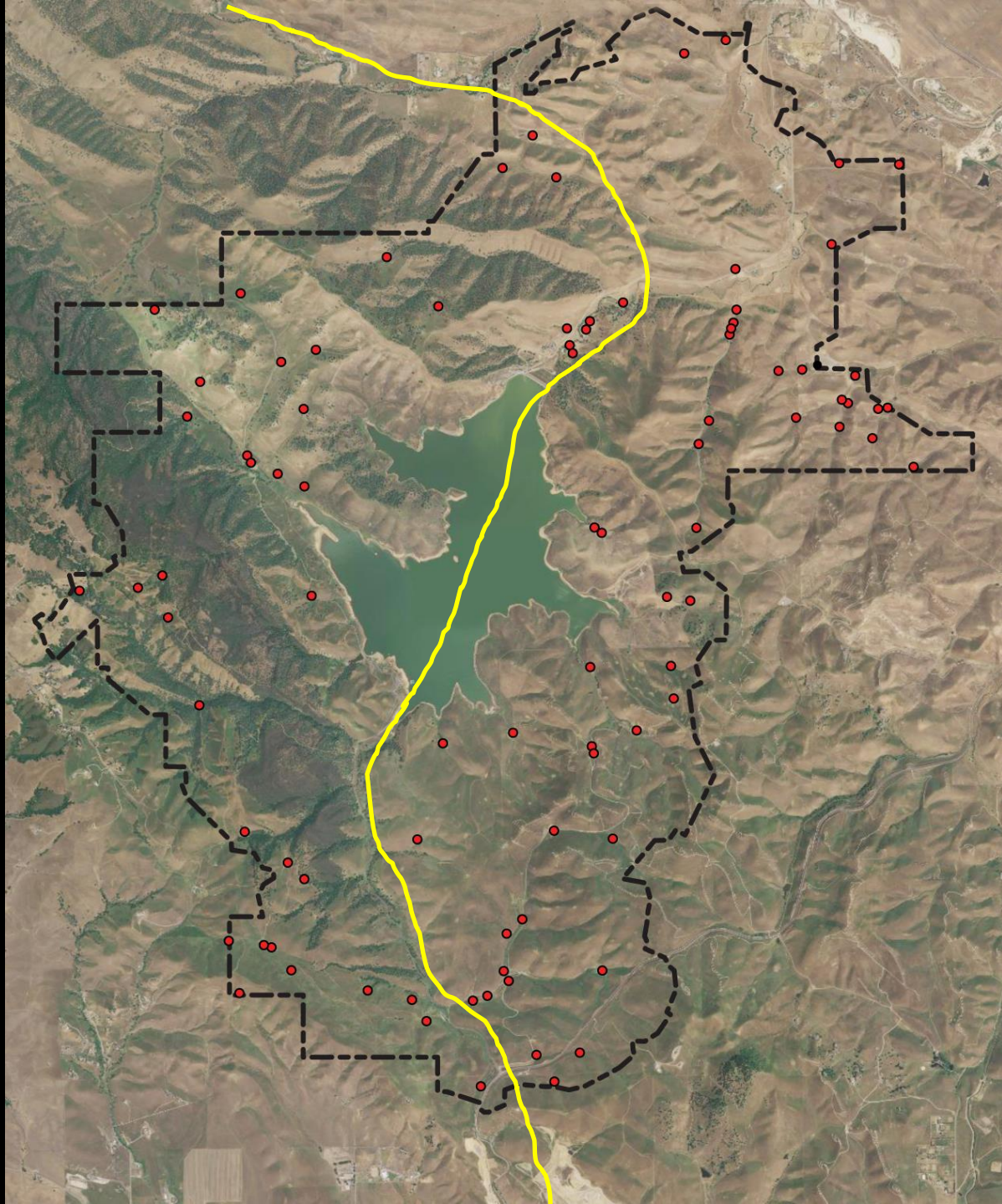
Ephemeral ponds





Perennial stock ponds







Management Activities

Aquatic breeding habitat:

- invasive species management
- vegetation and silt removal
- pond construction/repair/removal

Upland habitat:

- grazing
- vehicular travel
- rodent control (passive and active)
- ground disturbance

Other:

- “dry” ponds
- atypical habitat
- good projects

















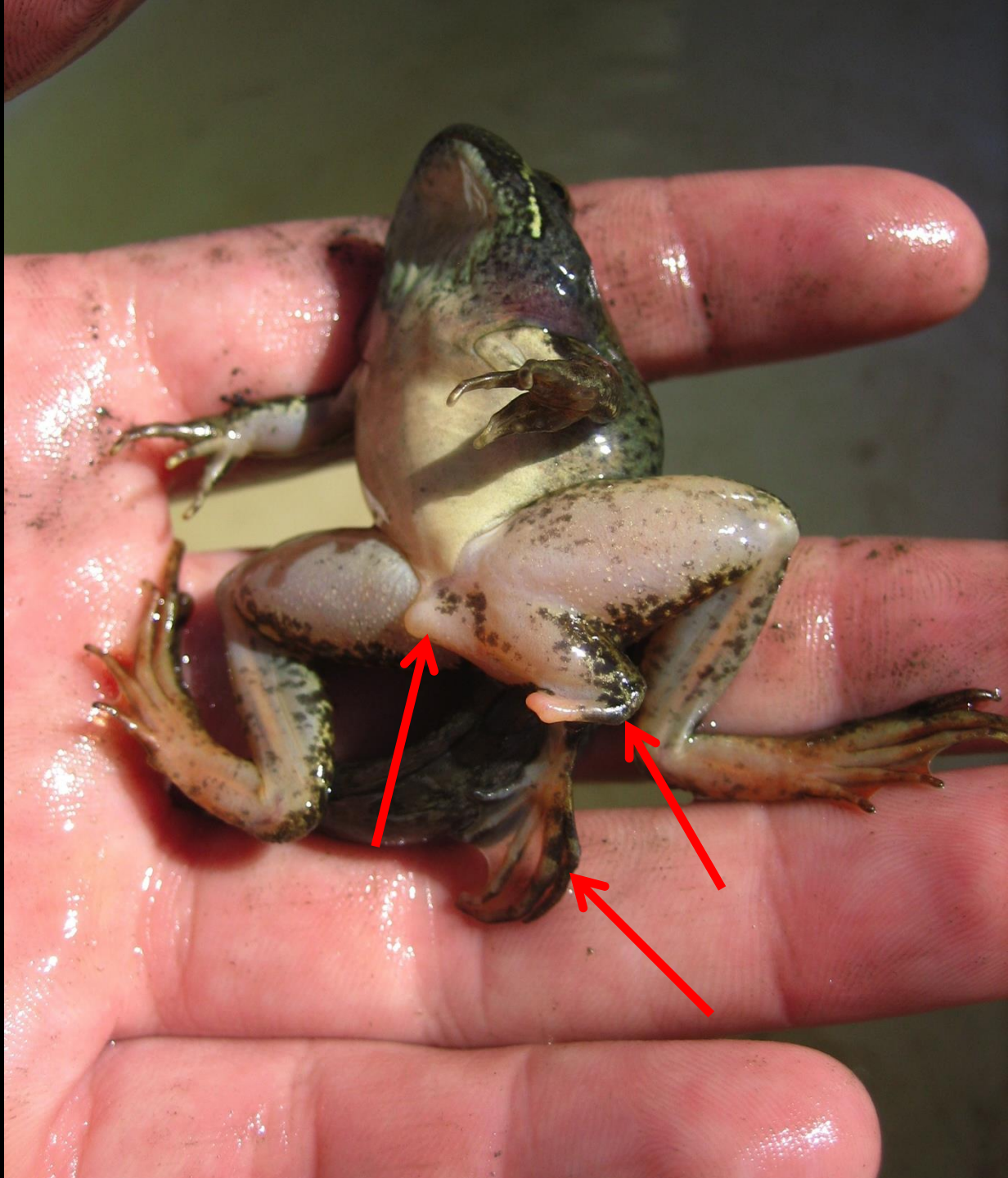










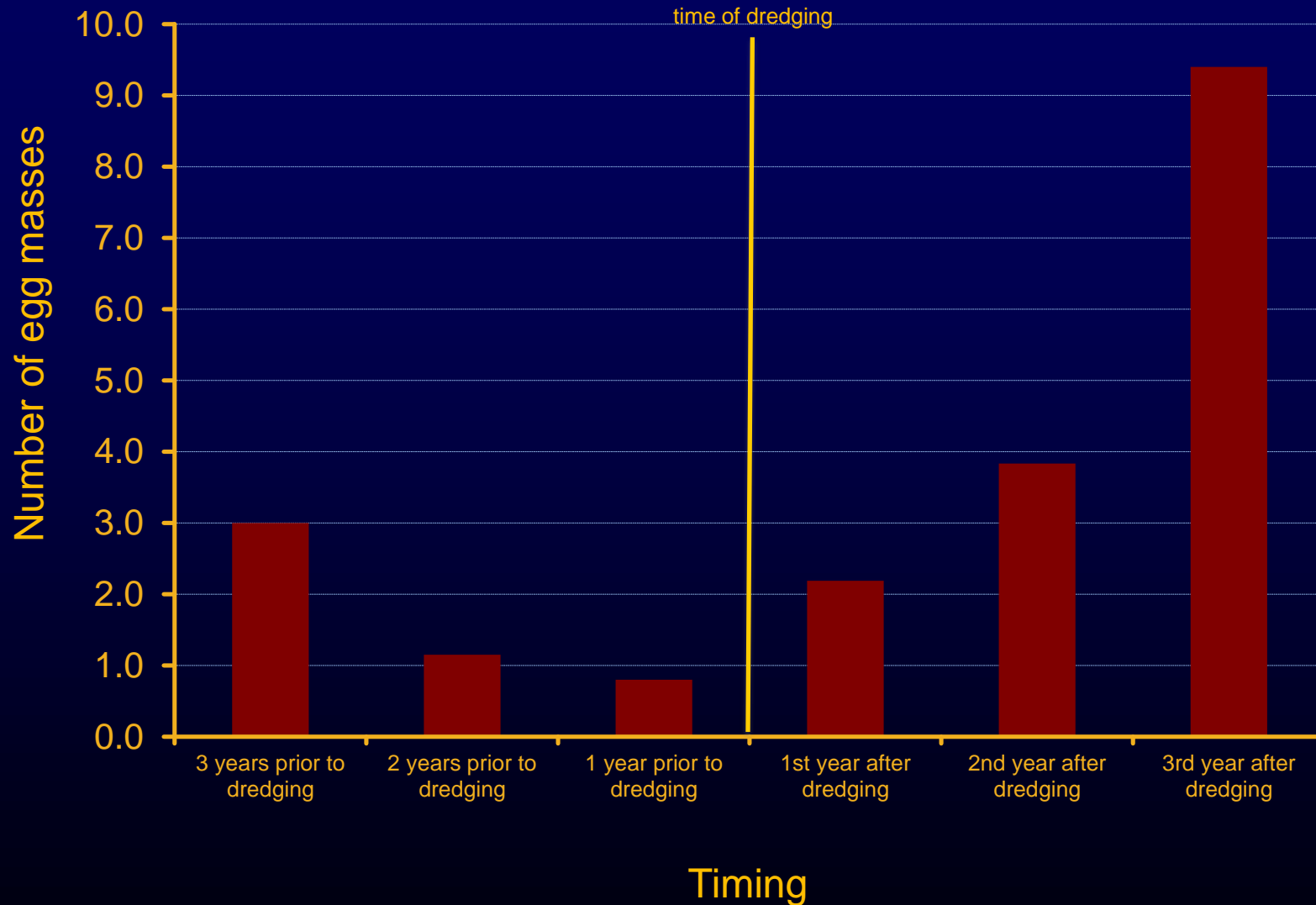


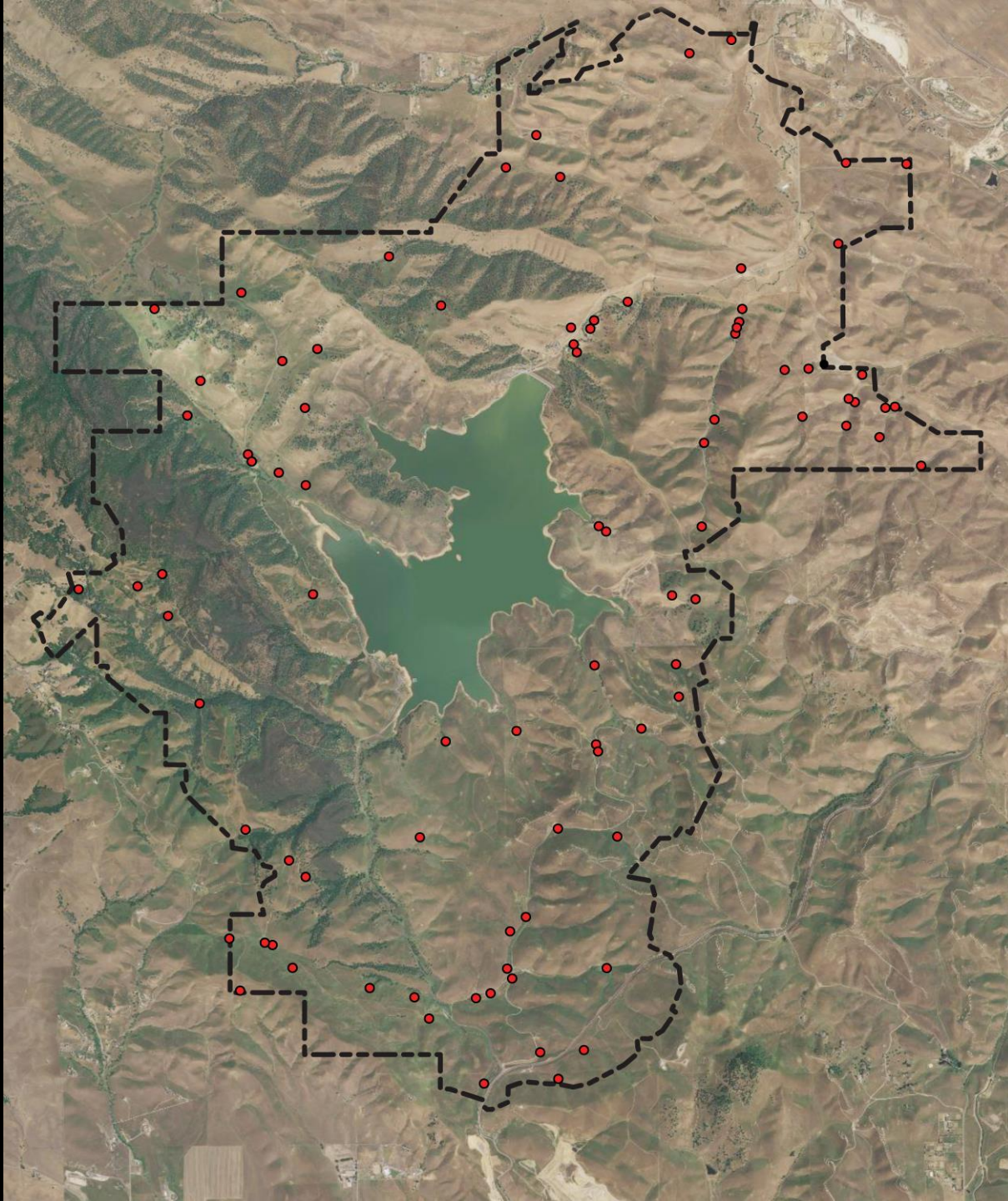






Numbers of egg masses relative to dredging









Results of Surveys at Aquatic Breeding Habitat

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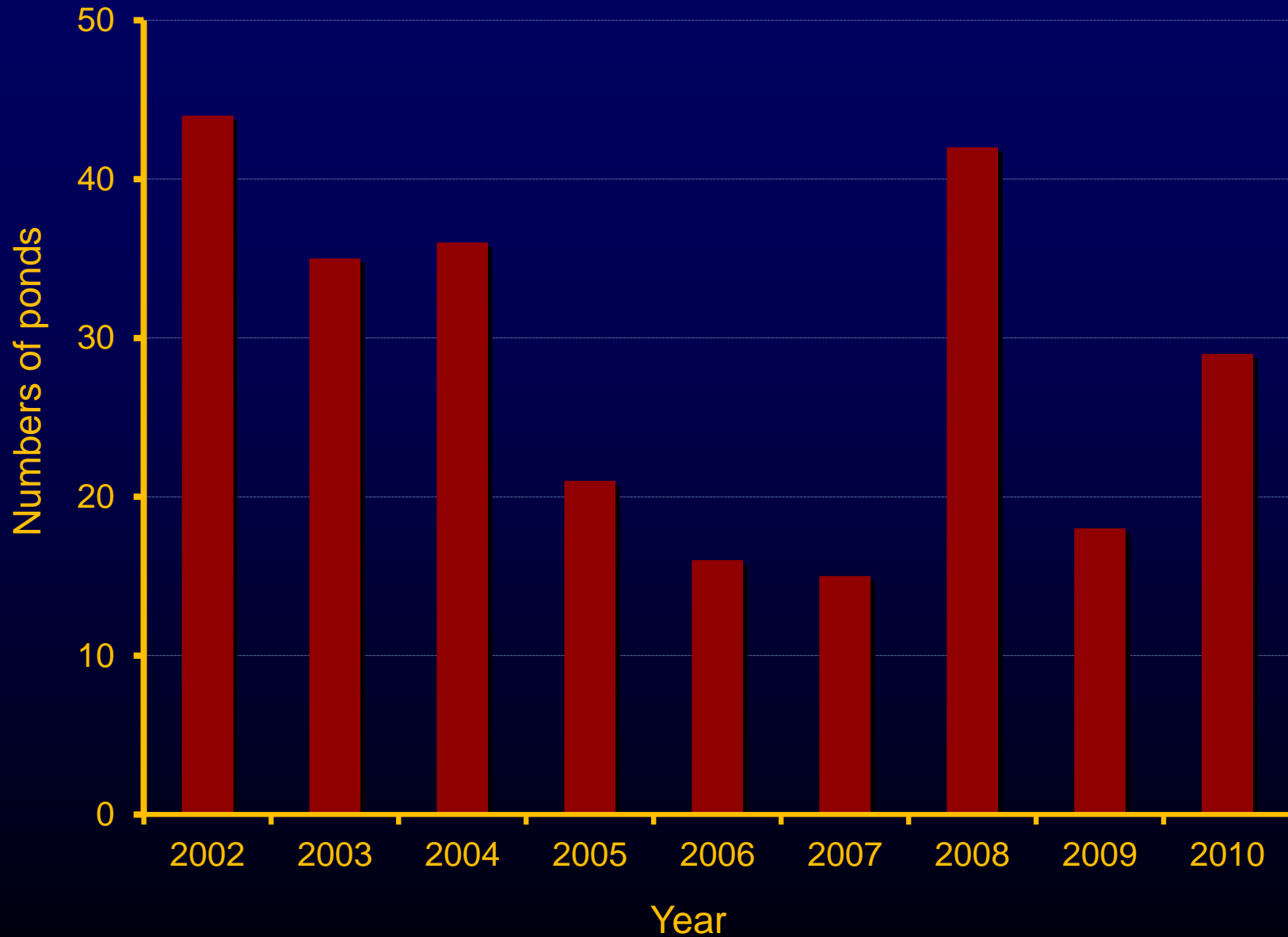
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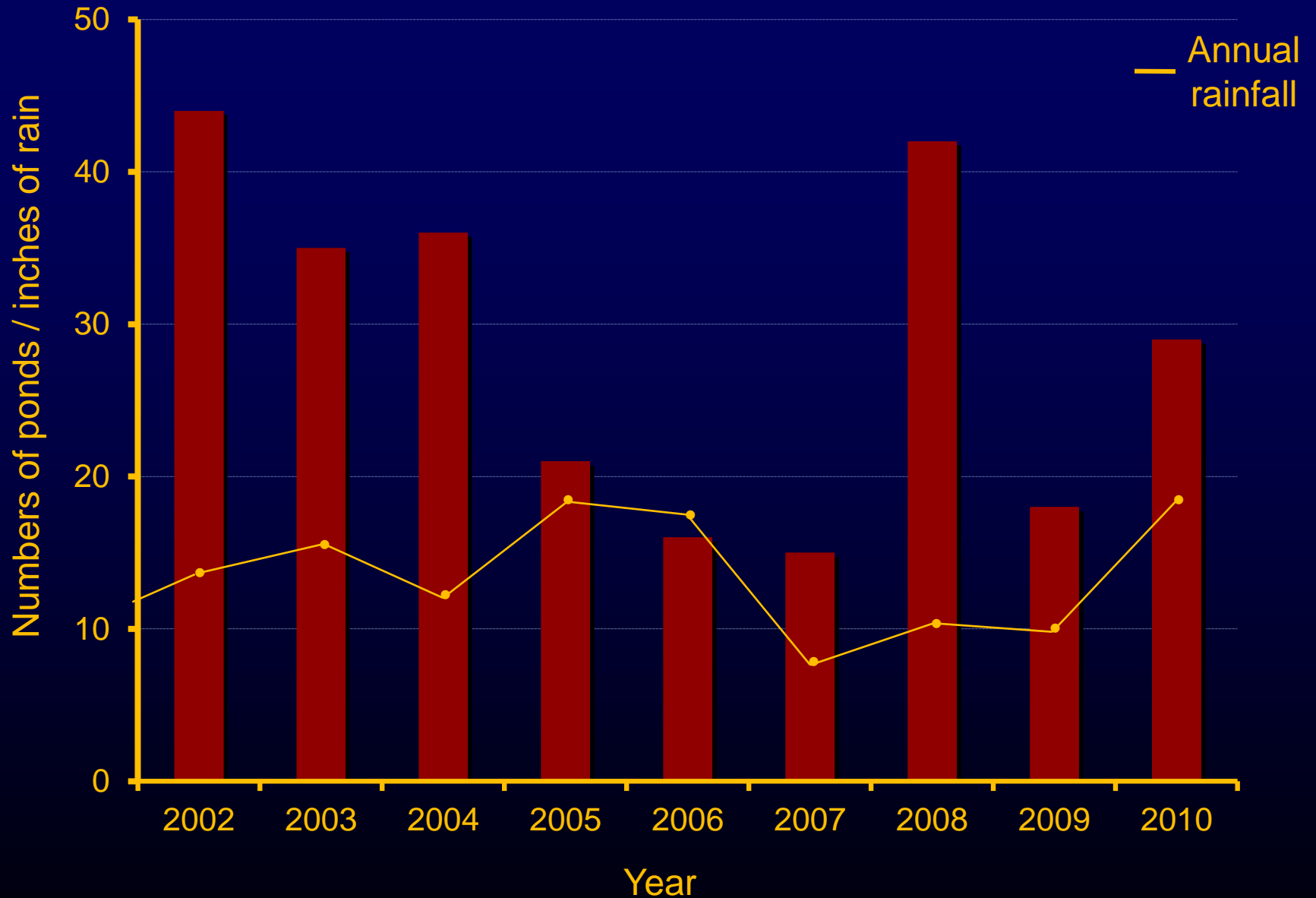
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- Up to 44 ponds had CTS breeding in a single season,
- CTS bred in perennial and ephemeral systems with turbid to clear water,
- CTS were sympatric with California red-legged frog 100% of the time.

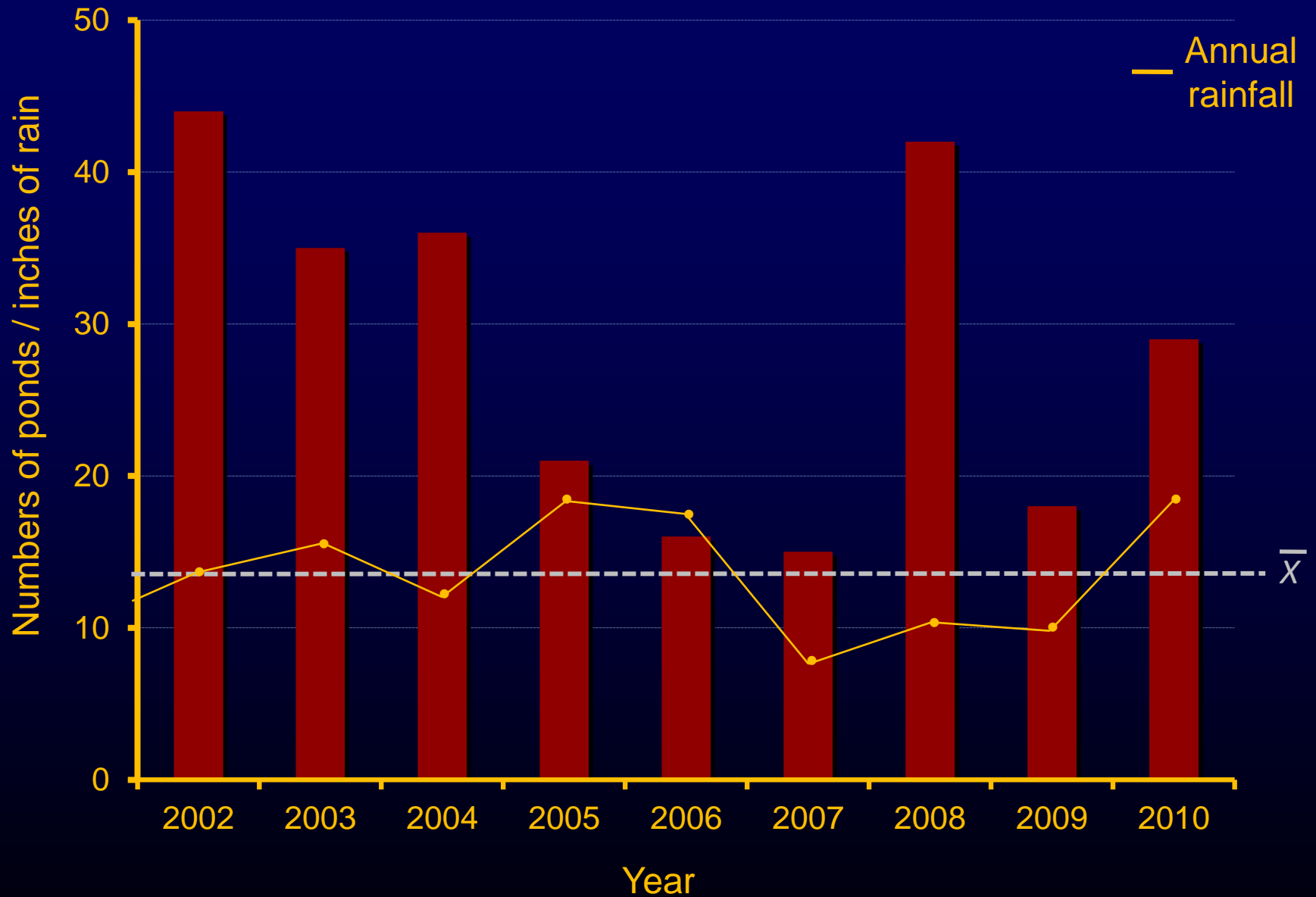
Numbers of ponds with observed CTS breeding



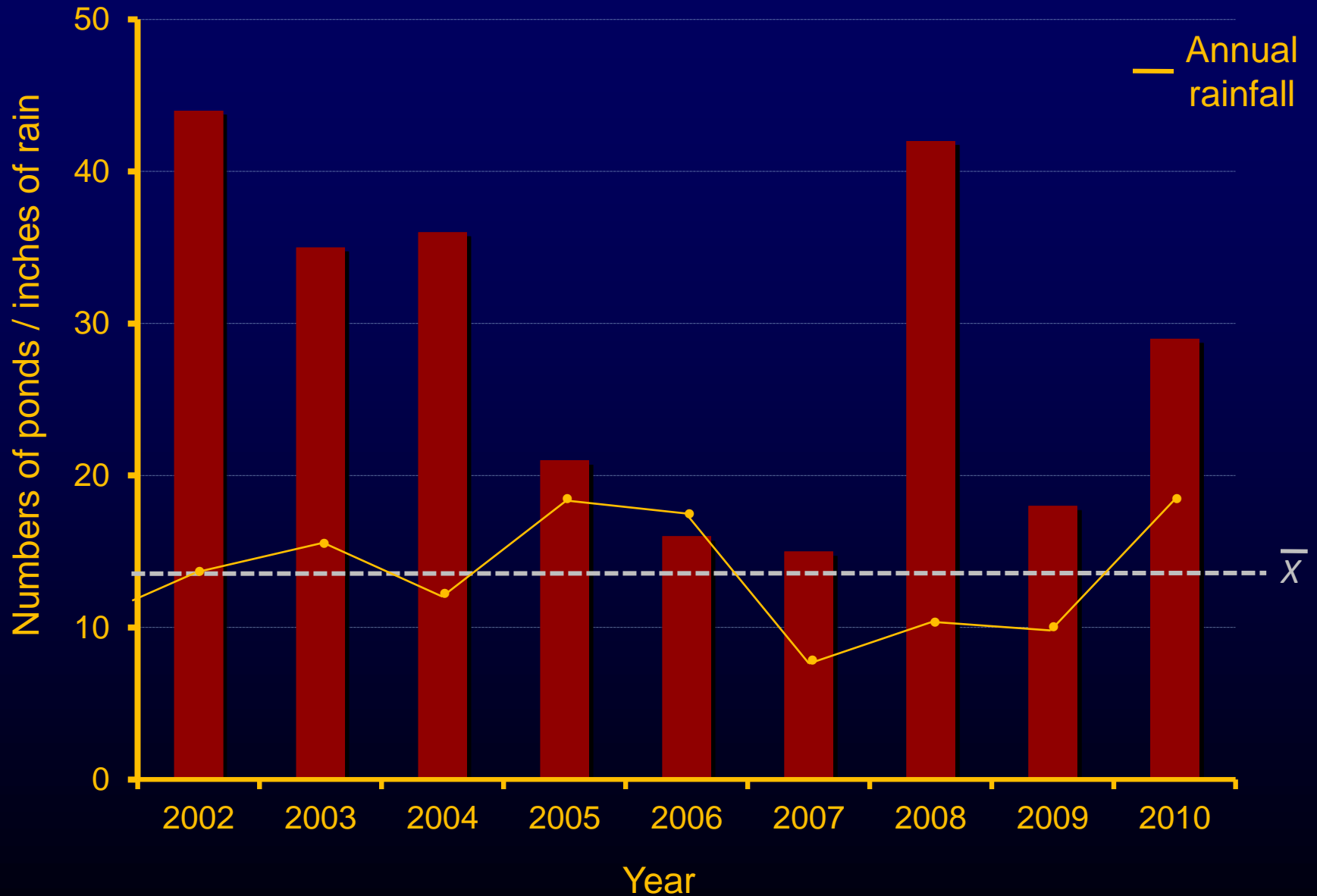
Numbers of ponds with CTS breeding observed



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Where are the rest of the CTS?































But what about...

*projects that have little to do with CRLF
and CTS, but will likely provide a benefit to
them?*









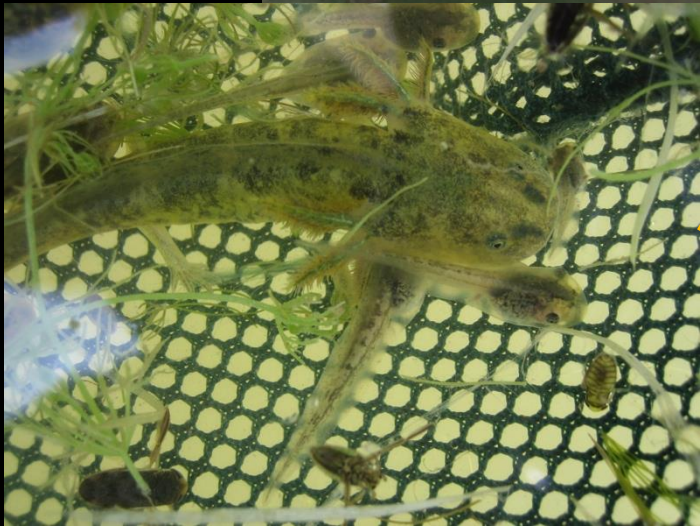




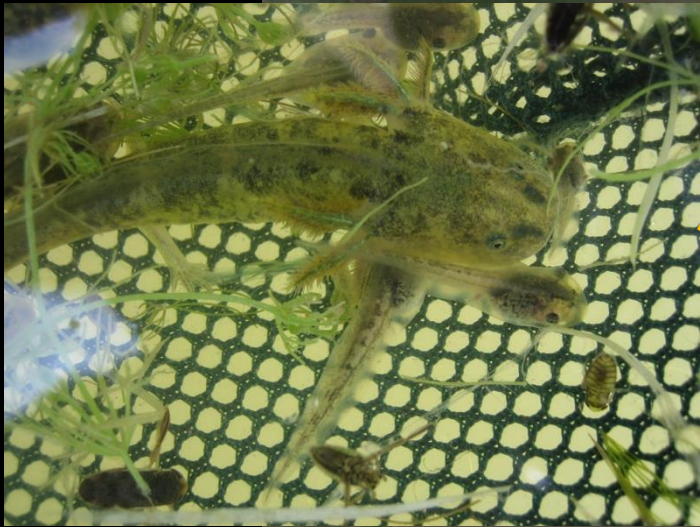
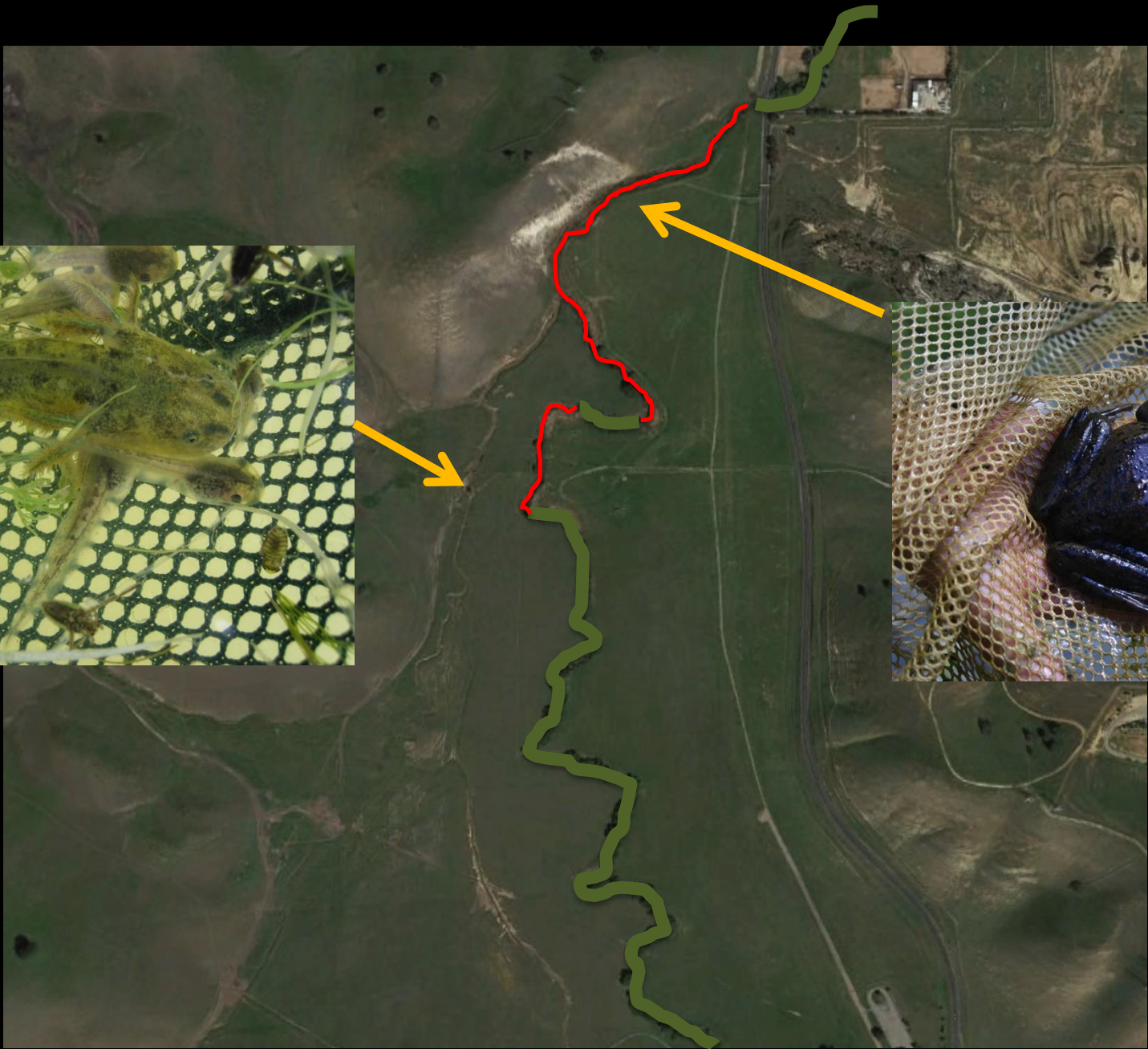


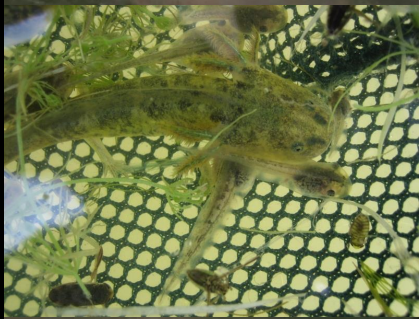












Considerations:

- Sympatry is common in CRLF/CTS;
- Grazing, or upland vegetation management is critical for CTS;
- Observed CTS breeding is sporadic;
- CRLF require uplands for nocturnal foraging;
- “Dry” ponds are not always dry and may still be suitable for CRLF/CTS;
- CRLF/CTS can respond quickly to predator control efforts;
- Aquatic breeding habitat can be manipulated to the benefit of CRLF/CTS;
- Nearly all sites will require management over time.



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