Using Acoustic Telemetry to track Bonytail within Lake Havasu

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Background

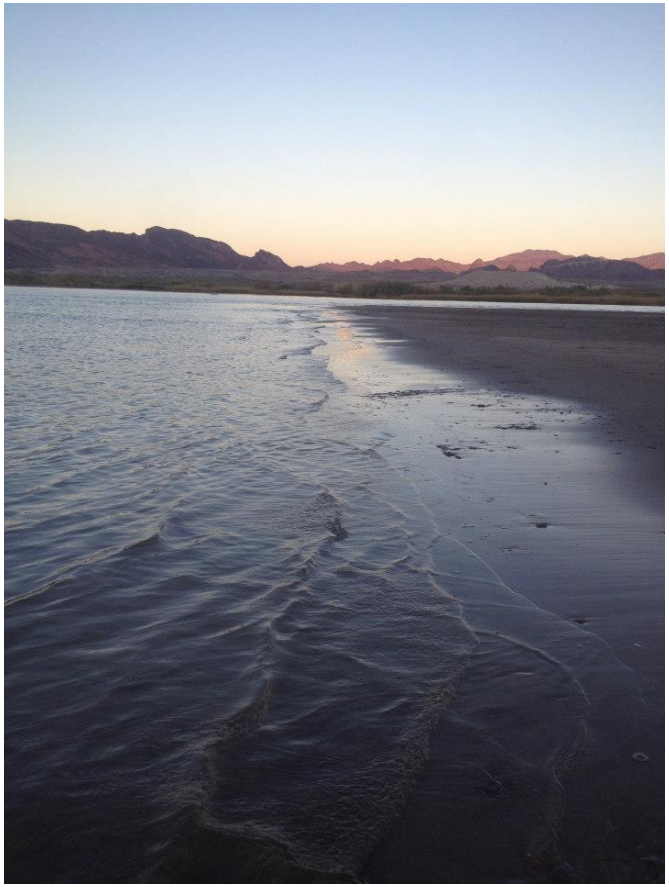
- Lake Havasu
  - Reach 3 of the LCRMSCP
  - Lake portion ~45 rkm
  - River portion ~87 rkm
  - Native fish:
    - Bonytail
    - Flannelmouth sucker
    - Razorback sucker
  - The fish community is primarily comprised of introduced nonnative fishes for recreational activities.

Background

- Bonytail *Gila elegans*
  - Most critically endangered
  - Last wild bonytail captured in the 1970's
  - Rely entirely on stocking programs

Objectives

- Identify specific habitat types utilized or preferred
- Short-term survival estimates (1-3 months)
- Monitor movements and/or movement patterns of individual bonytail

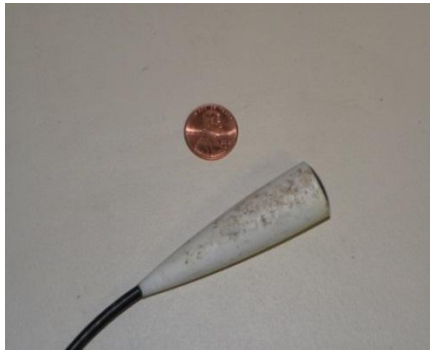


Surgical Technique

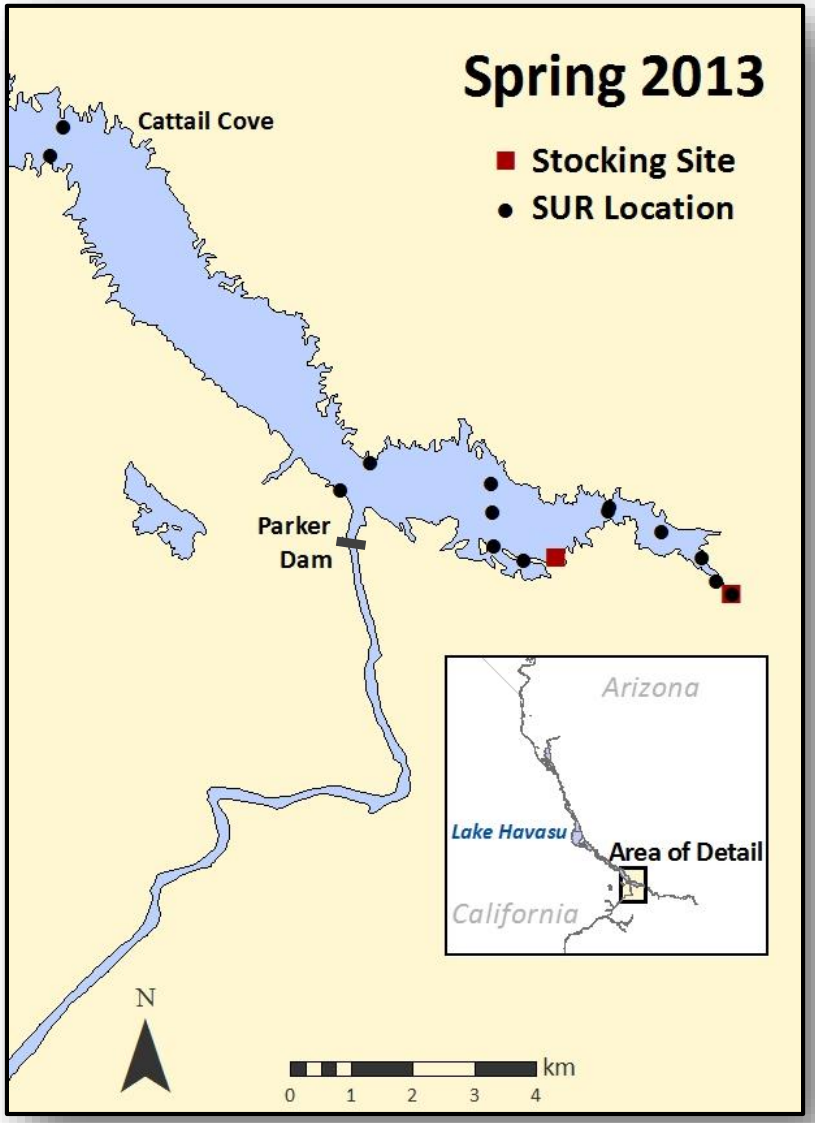
- Bonytail implanted with PT-4 acoustic transmitters (Sonotronics, Inc.)
- Recorded total length, weight, and scanned for a PIT tag
- Spring study implanted 6 bonytail with tags
- Fall Study implanted 10 bonytail with tags

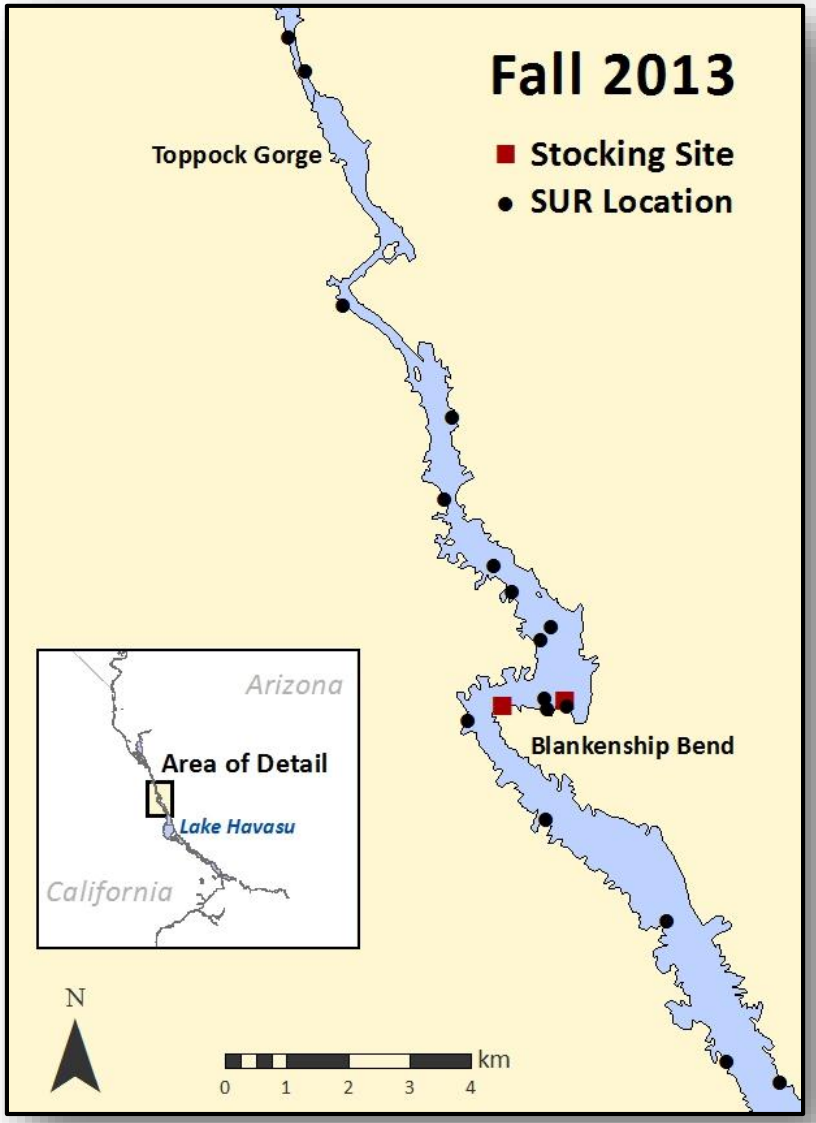
Tracking tagged fish

- Intensive month-long sampling, then 3 additional trips in the following 60 days
- Submersible ultrasonic receivers (SURs) will be placed throughout the study area that scan continuously for the duration of our study
- Towable hydrophone was used in spatially restricted environments

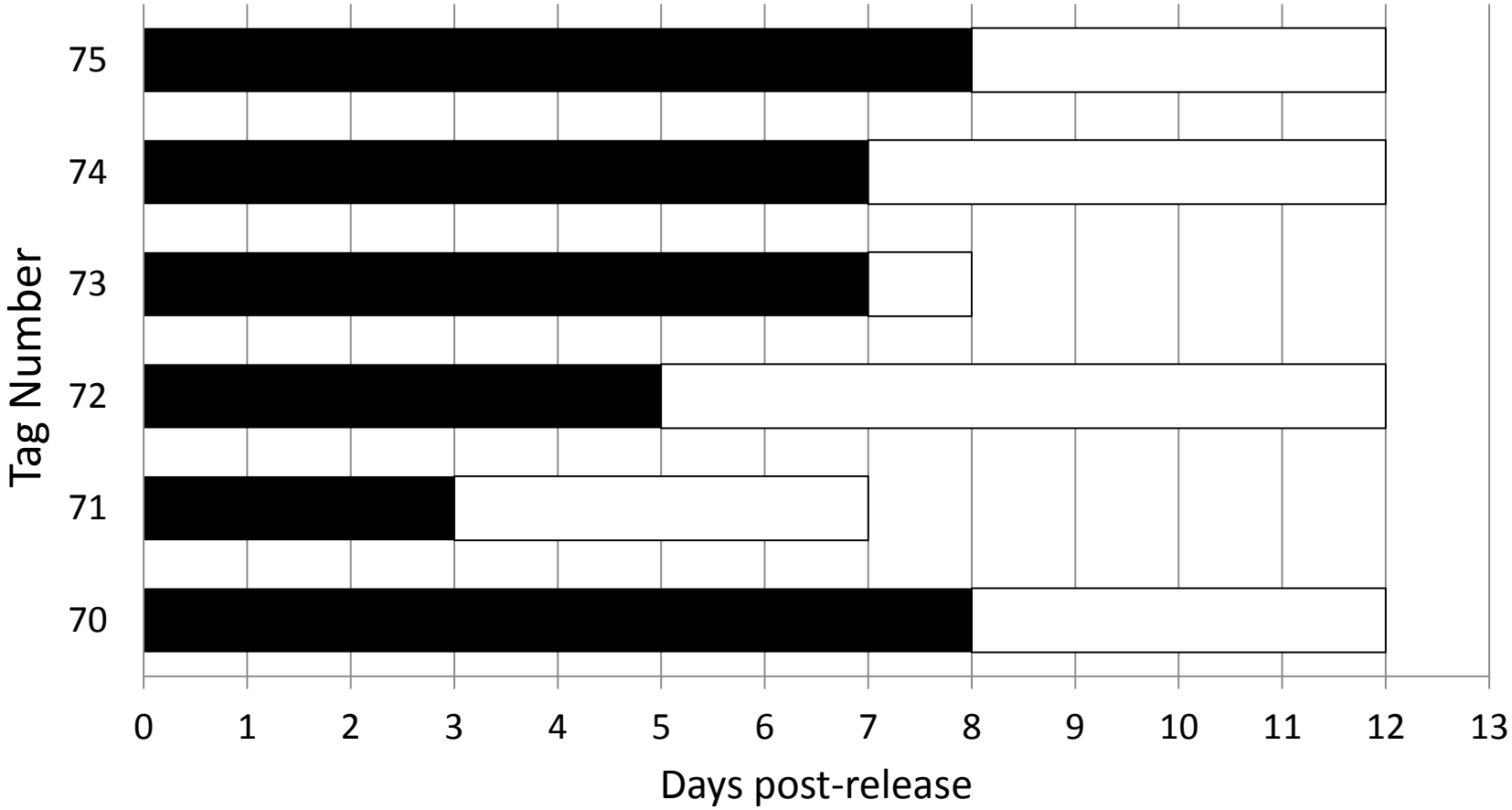


SUR Locations and Stocking Sites





Results – Spring



Results – Fall

- Backwater stocking location:
  - 2 confirmed mortalities
  - 1 fish currently being manually tracked
  - 2 fish have been contacted on SURs
- Main Channel stocking location:
  - 1 tag has remained stationary and likely needs to be recovered
  - 1 fish moved upstream
  - 1 fish moved downstream
  - 2 fish have been recorded on SURs

Future Work

- Pit-scanning study starting January 14th 2014
- Spring 2014 telemetry study near Blankenship Bend
- Fall 2014 telemetry study near BWRNWR

Thanks to our partners for their support

SNARCC

Achii Hanyo