




- 
- Post-stocking fate
 - Source of mortality
 - Post-stocking dispersal

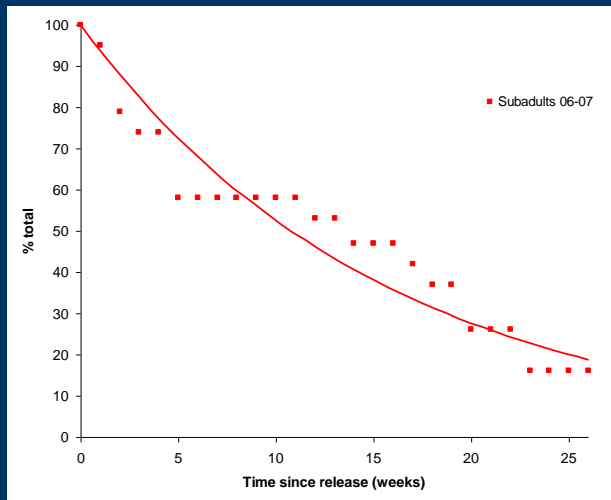
2006-08 Telemetry Review

- Implanted repatriates with six-month acoustic tags
- Released at historic stocking location in autumn of 2006 (subadults), 07 and 08 (subadults and adults)
- Bi-monthly surveys
- SCUBA used to investigate and recover non-moving tags
- Acoustic tag retention study
 - 100% survival

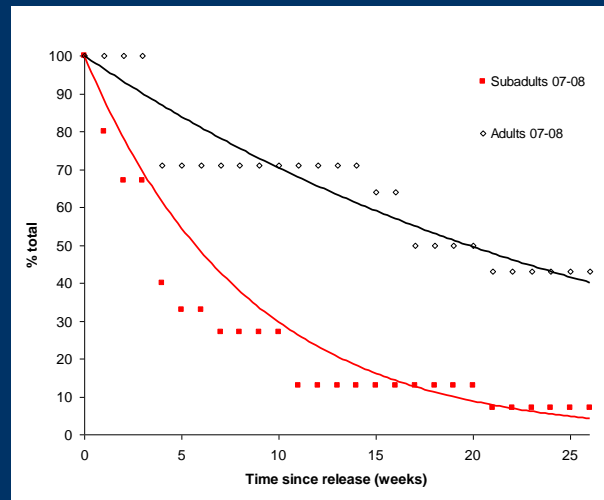


2006-08 Telemetry: Survival

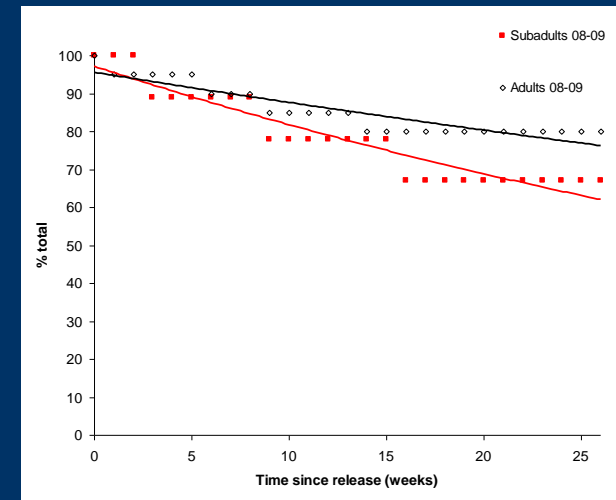
2006



2007



2008



- Poor six month post-stocking survival
[7 to 67% subadults] [36 to 80% adults]
- Large variation in survival between years
- In years where subadults and adults were stocked together, larger fish had higher survivorship

2006-08 Telemetry: Survival



Photos: Herman Britz



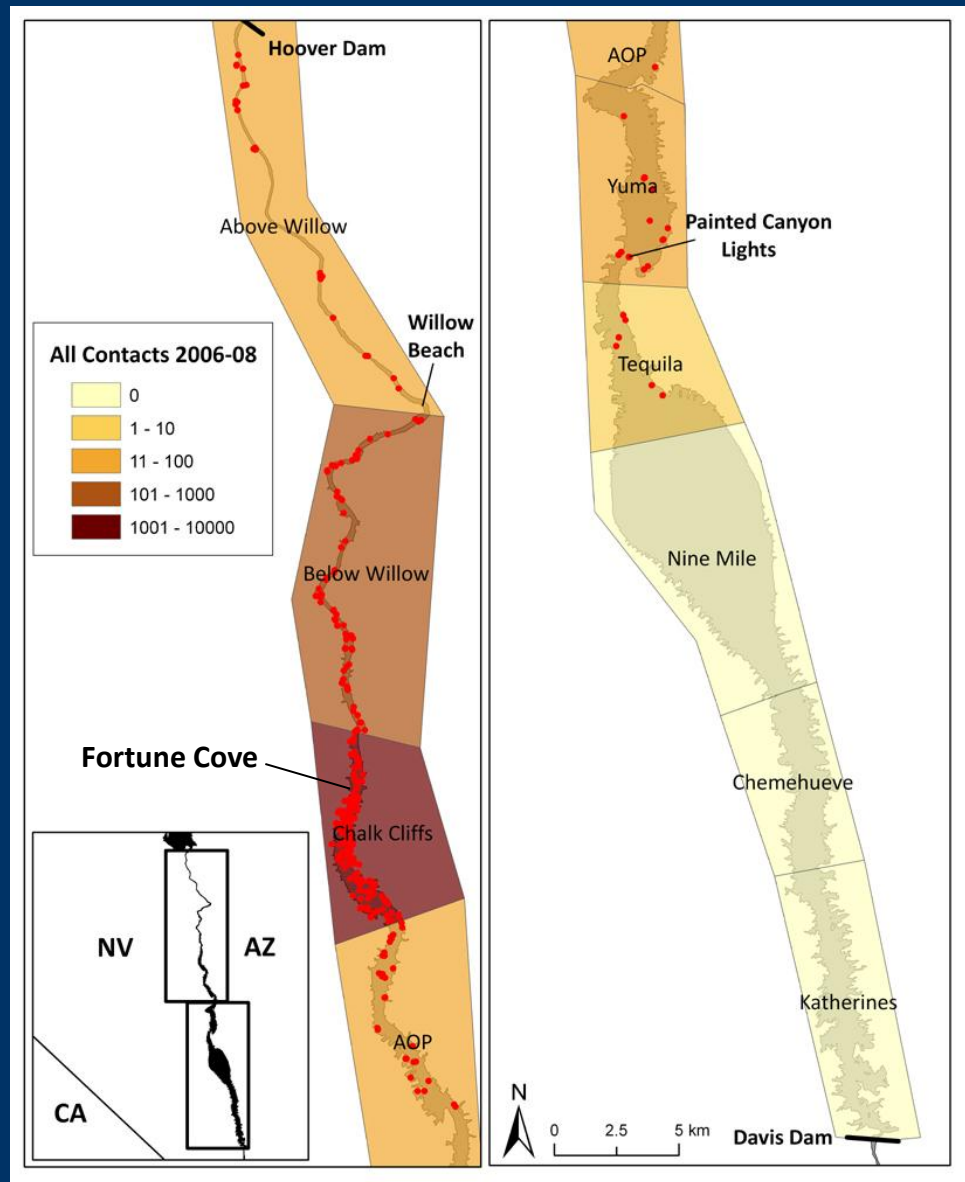
2006-08 Telemetry: Survival



Photos: Curtiss Easter

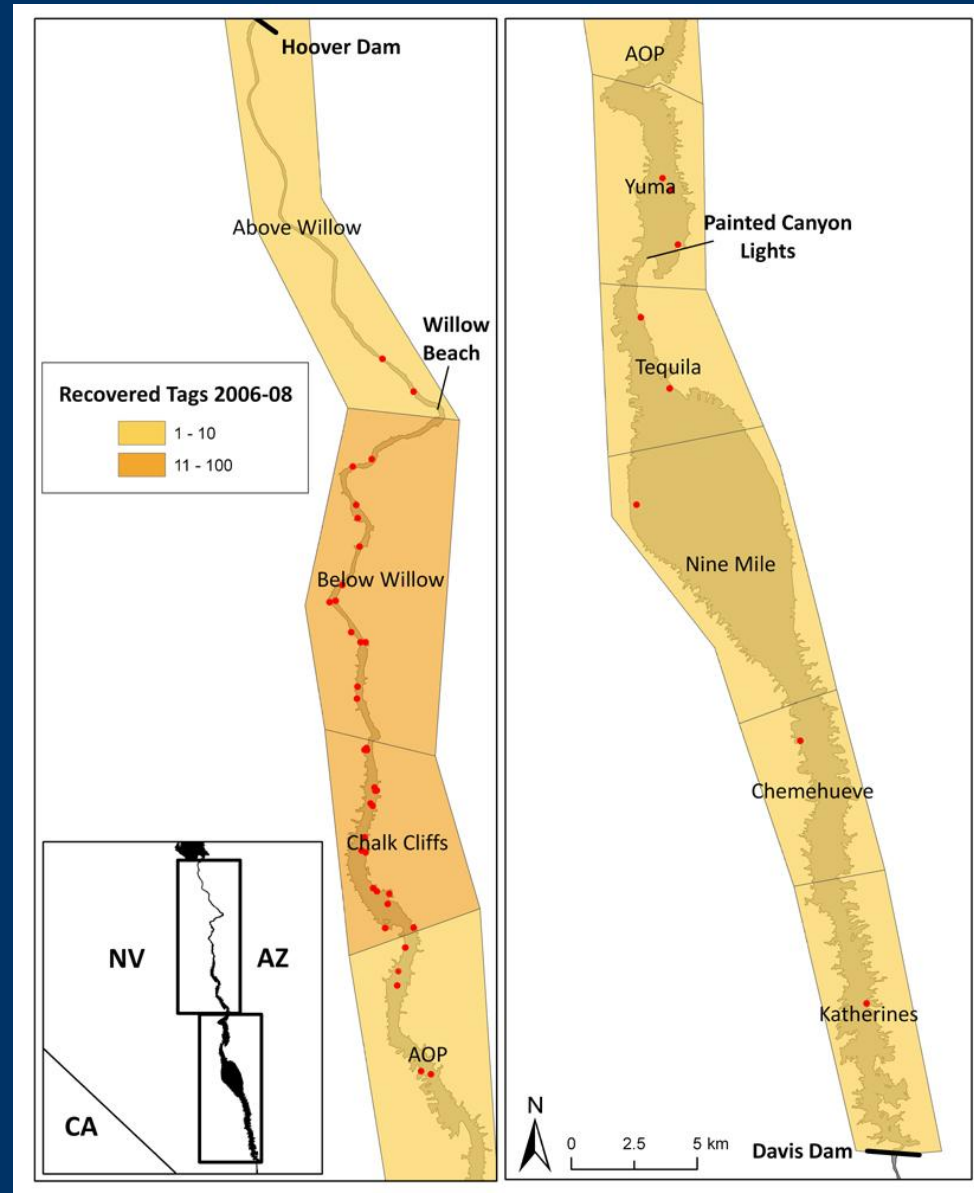


2006-08 Telemetry: Distribution

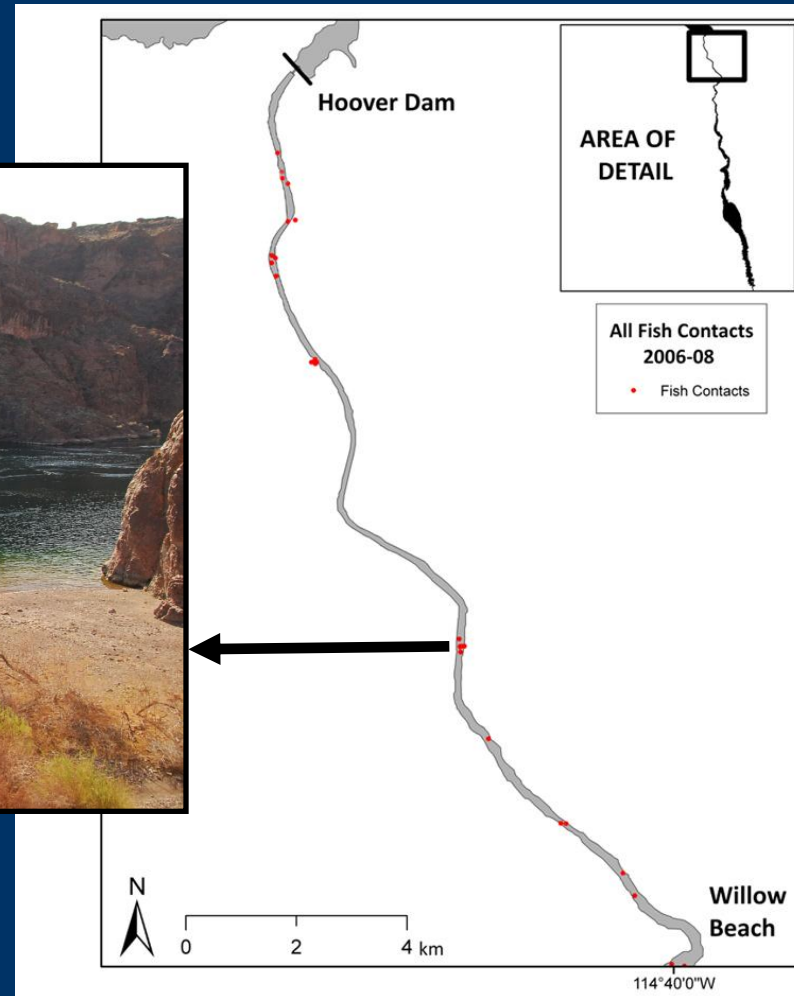


2006-08 Telemetry: Distribution

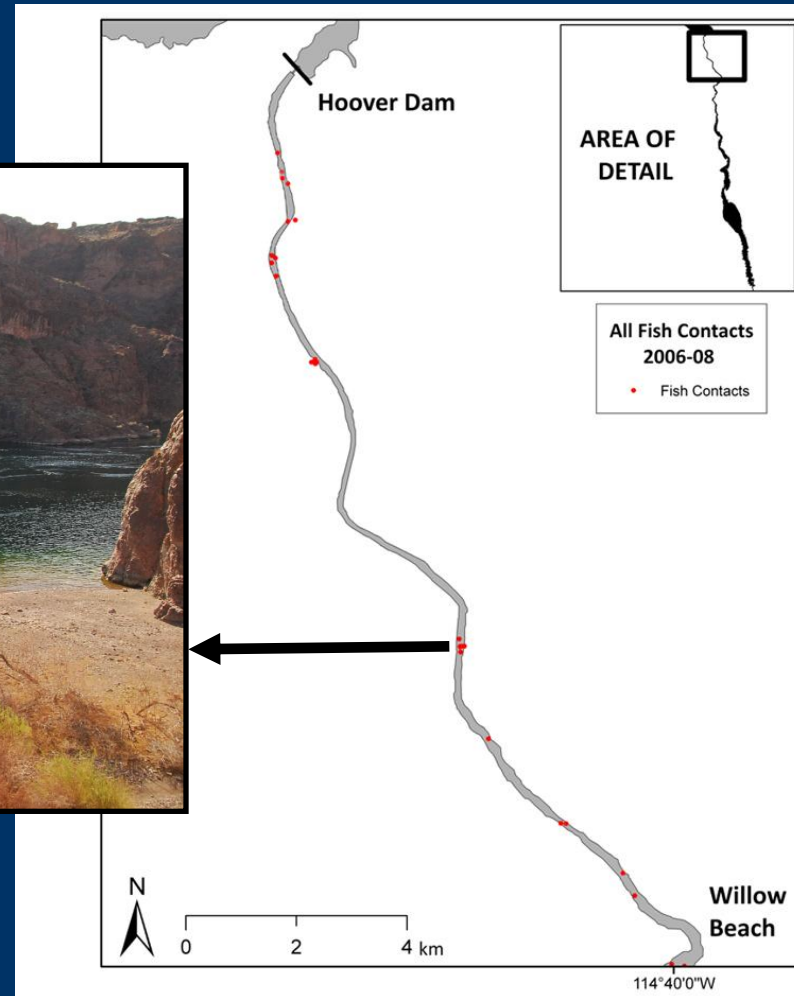
- 45 tags recovered using SCUBA
- Tags recovered in all zones



2006-08 Telemetry: Distribution



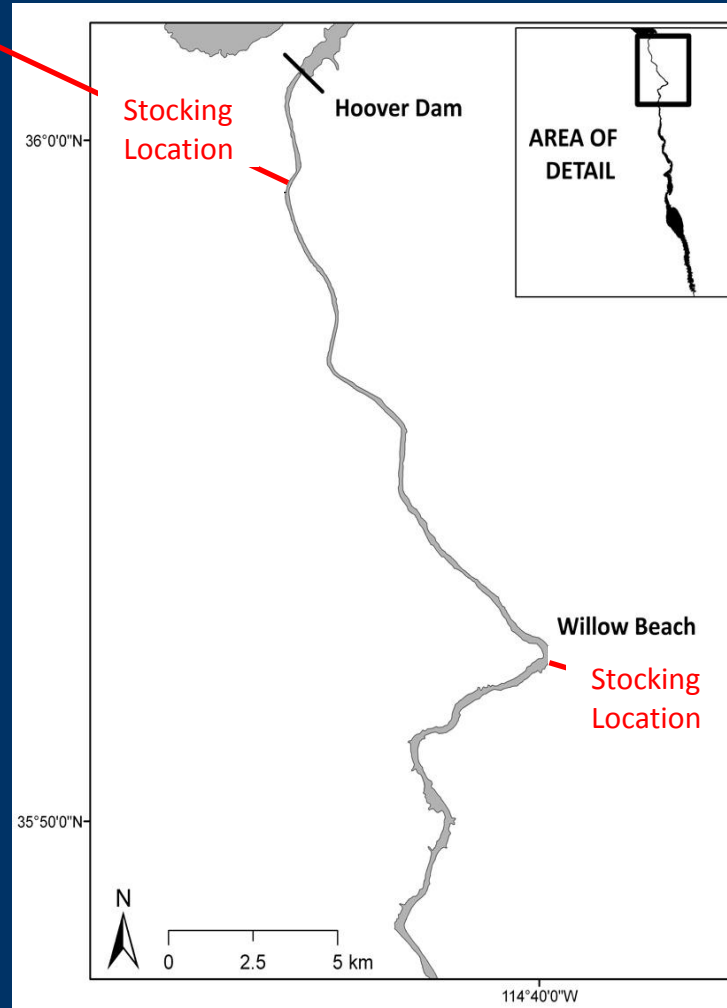
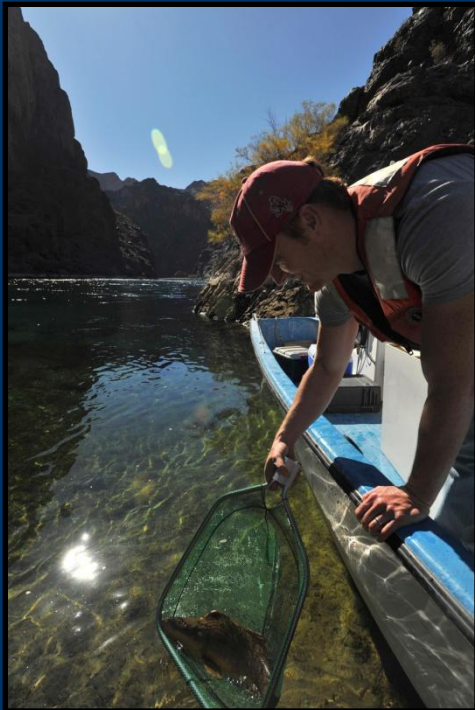
2006-08 Telemetry: Distribution



- Where do fish that are stocked in the upper river disperse?
- Post-stocking survival?
- Are they contributing to *downstream* larval collections?

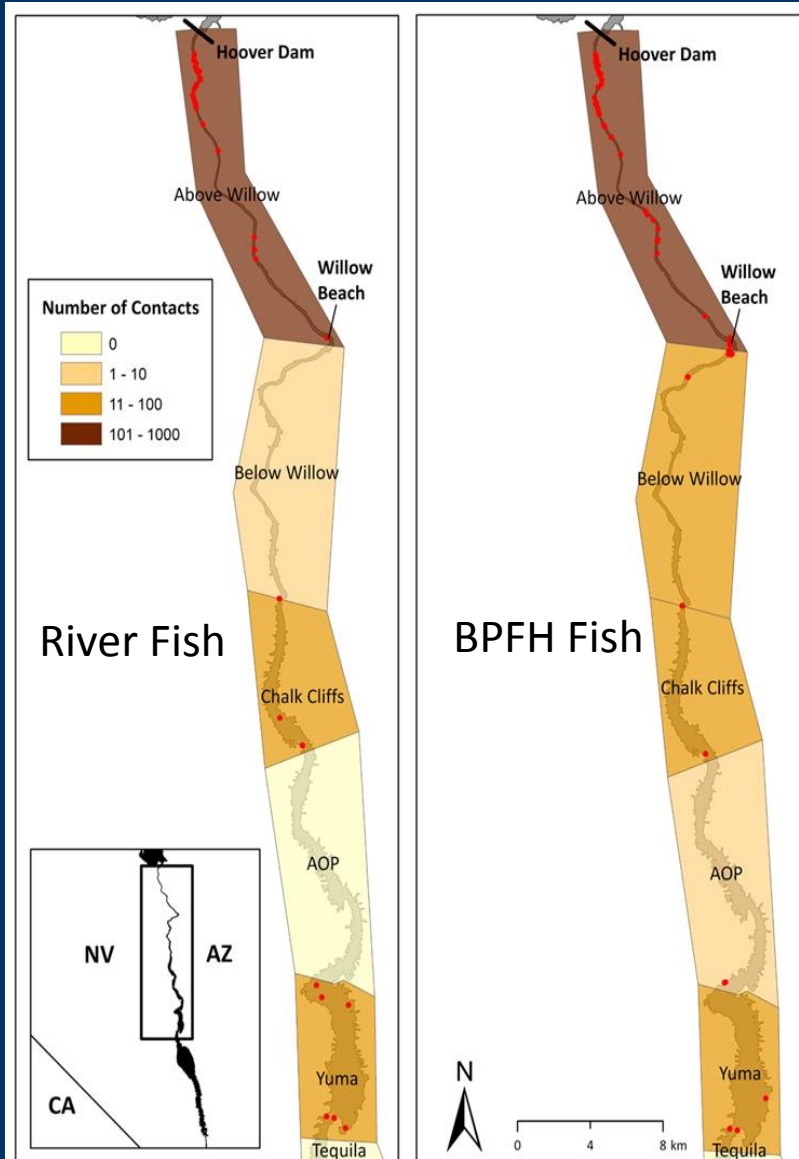
2009 Telemetry

- 10 river-caught RBS (avg TL 61 cm)



- 14 Bubbling Ponds RBS (avg TL 53 cm)
 - 4,822 hatchery RBS stocked in weeks prior

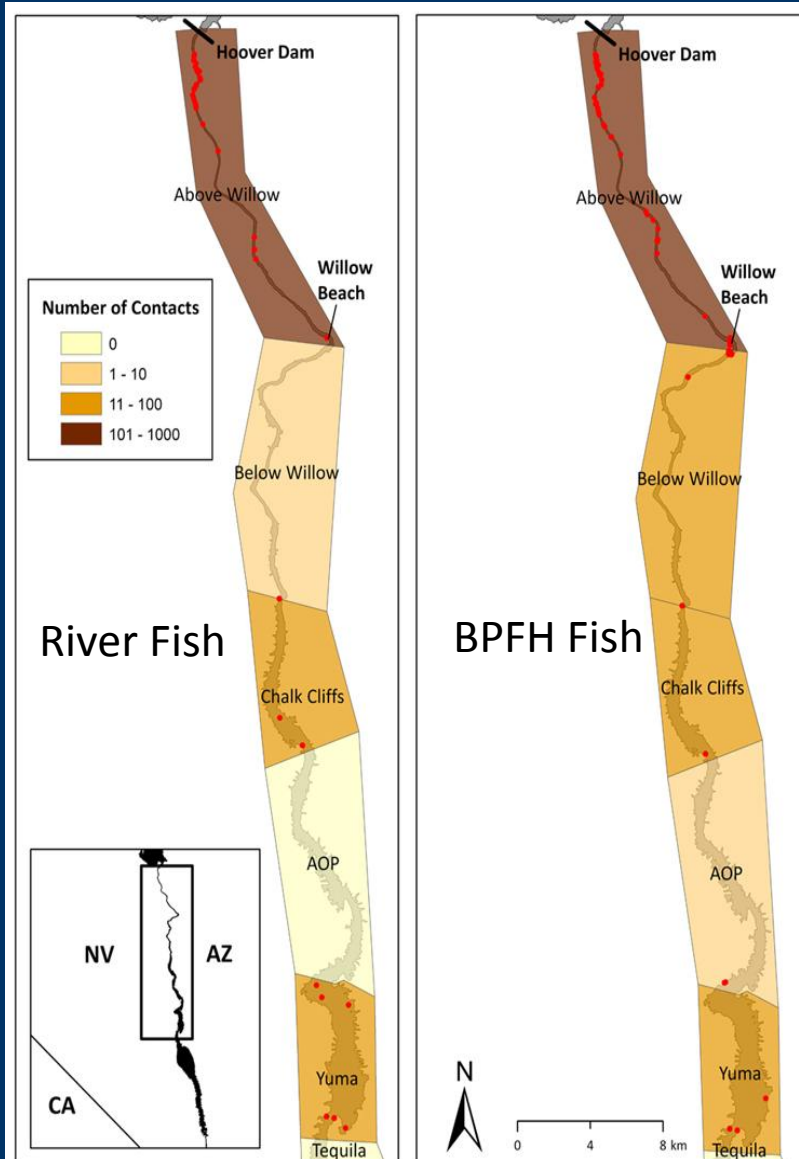
2009 Telemetry Results



- 100% Survival
- 60% of fish detected *exclusively* in the zone Above Willow Beach
- USBR summer e-fishing captures



2009 Telemetry Results

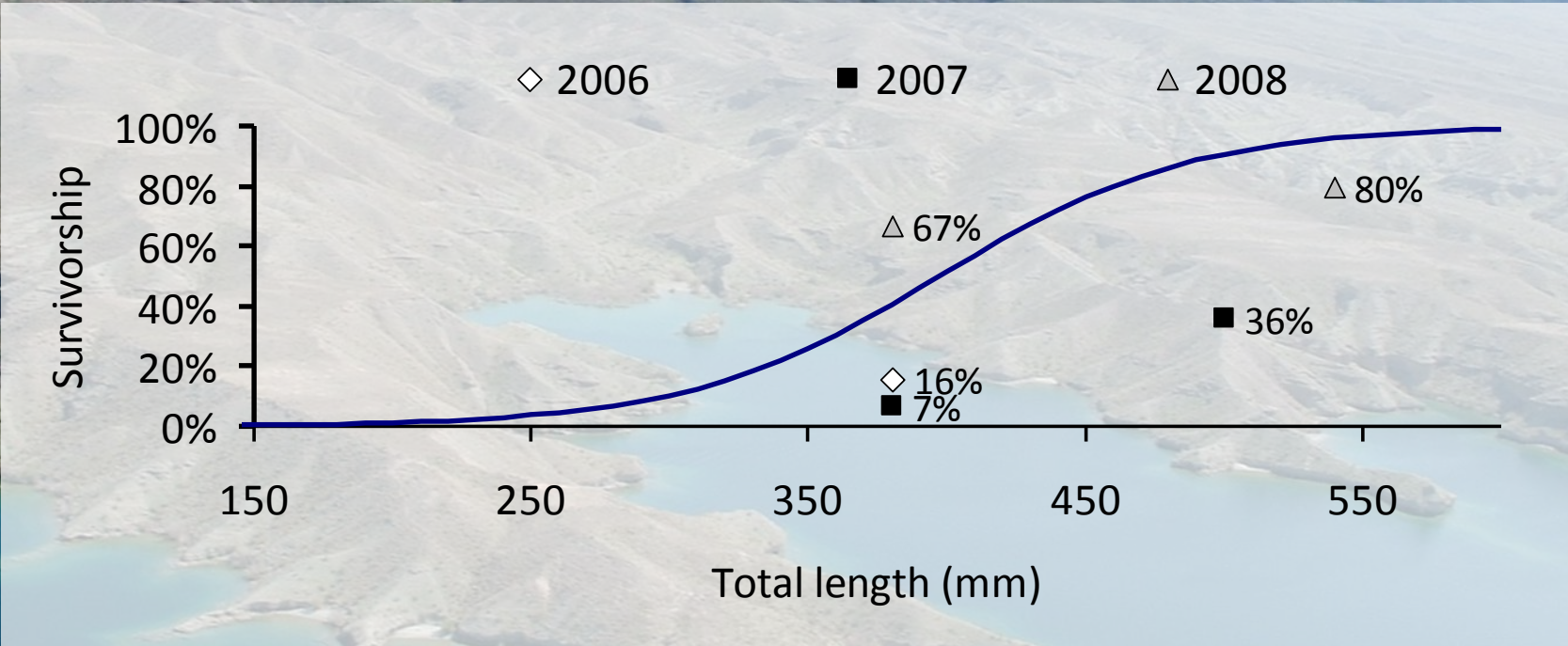


- 40% of the fish contacted in zones where larval collections take place
 - March roundup capture
- Are fish found in the zone above Willow Beach mixing with fish downstream?

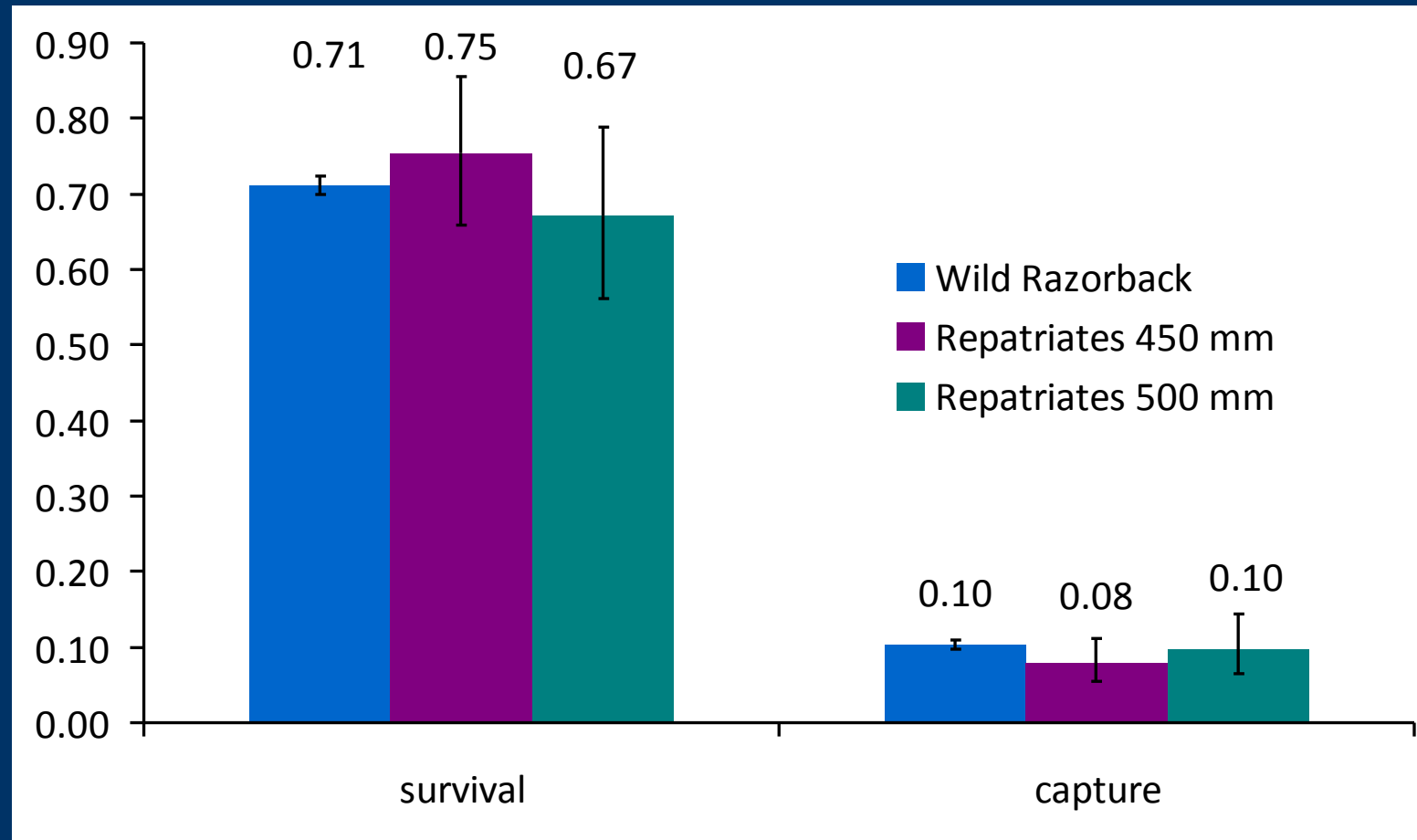
2011 And Beyond

- Newly designed remote PIT-scanners in the river
 - Thanks Kesner's
- Add to J. Nelson's scanner efforts to increase overall number of contacts with PIT tagged fish
 - Better resolution on data
 - Emigration throughout Lake Mohave?
 - Which rearing sources are most successful?
 - Does stocking location/time influence survival?





Repatriate adult survival



Lake Mohave stocking

- Nearly 20,000 razorback sucker were released between January 2008 and May 2010
 - 385 were greater than 500 mm TL
- 200 razorback sucker greater than 500 mm TL were released prior to January 2008

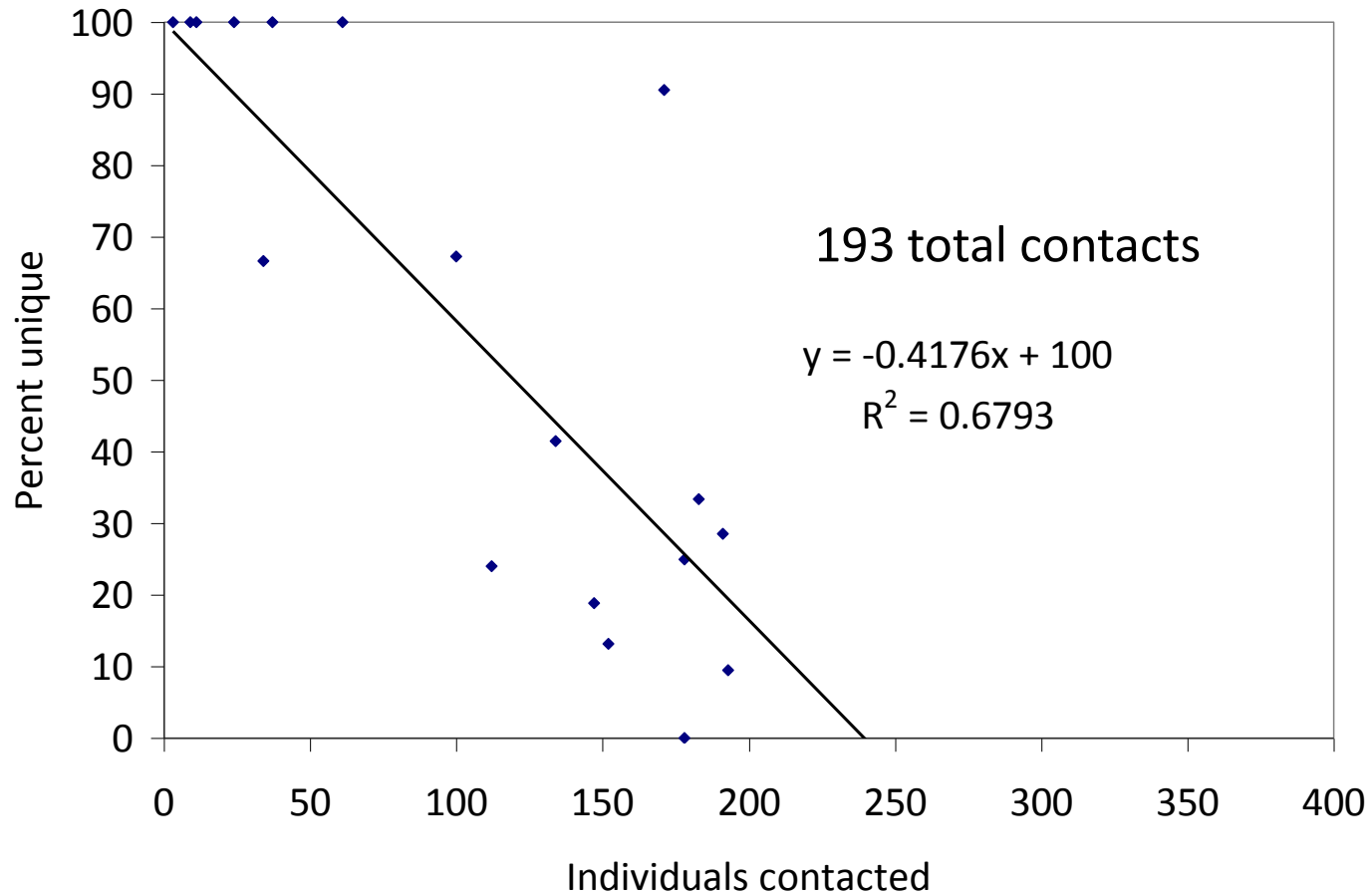


Remote Sensing

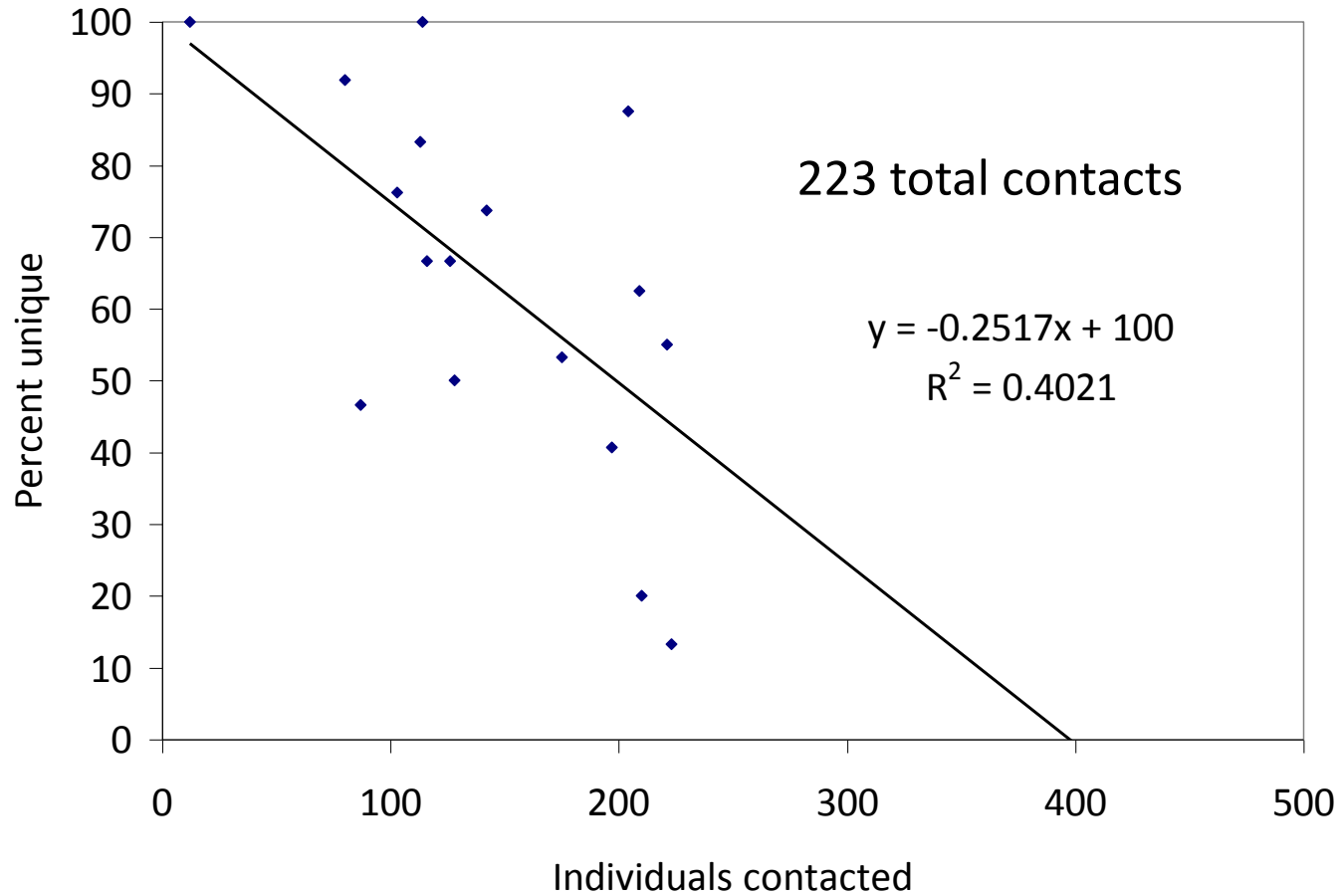
- 711 individuals have been contacted at least once since remote scanning began in 2008.
- By year:
 - 176 individuals in 2008
 - 194 individuals in 2009
 - 477 individuals in 2010
- In contrast there have been less than 1,400 unique repatriate captures since 1993 during the annual March roundup.



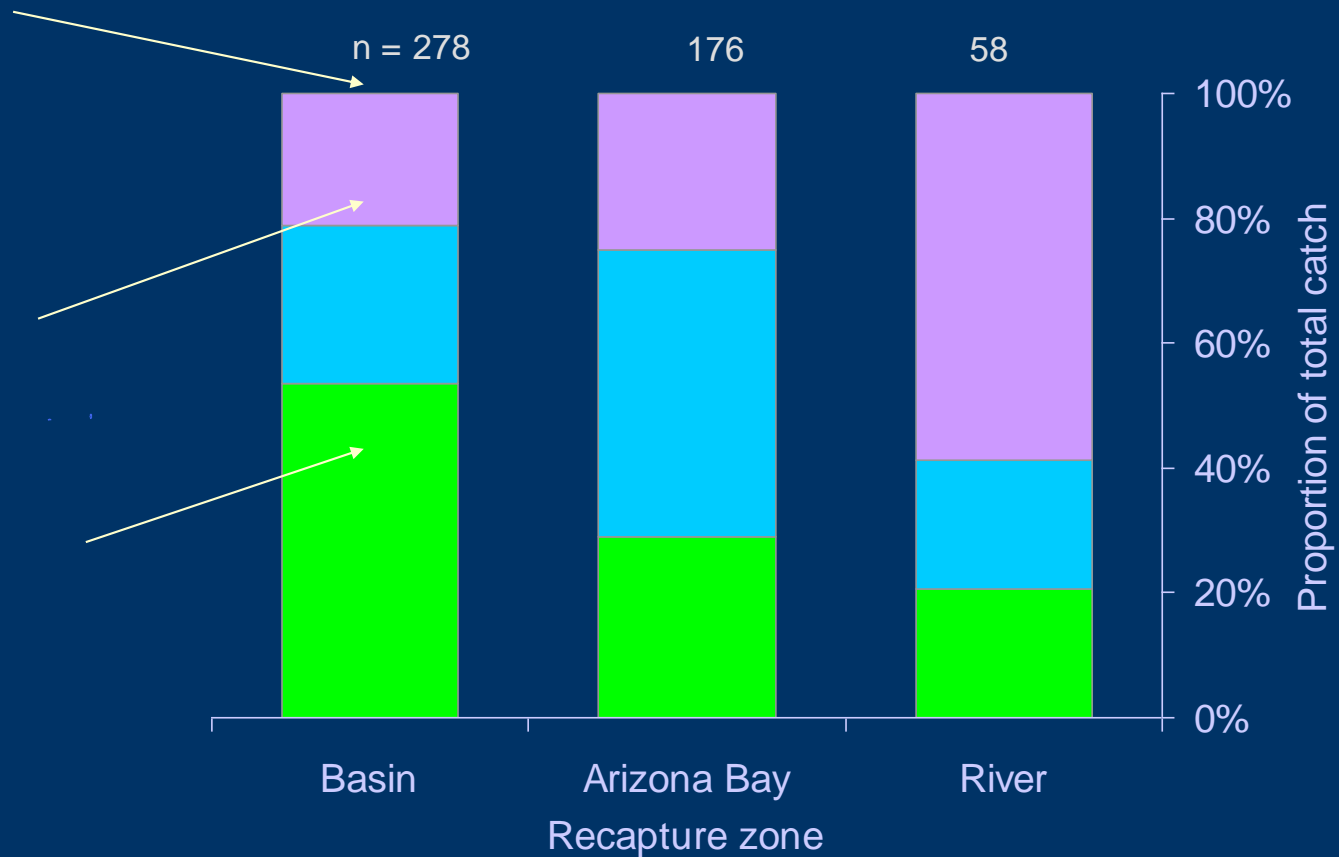
Tequila Cove 2010



Yuma Cove 2010



Repatriate site fidelity



22 fish released in Lower Lake, recaptured in Arizona Bay or Basin (6 and 16 respectively). No fish recaptured in Lower Lake.

Remote sensing 2011

Contact 40 to 60% of the total 134 kHz PIT tagged repatriate population in Lake Mohave

- Continue deployment of remote sensing equipment in the basin Feb – May 2011
- In addition, deploy remote sensing equipment in the river upstream of Willow Beach during the same interval



Remote sensing 2011



Acknowledgements

