

**Lower Colorado River
Multi-Species Conservation Program**

Balancing Resource Use and Conservation

Lake Mohave Update

Remote PIT Scanning
Tequila & Yuma Cove 2014-2016

Jim Stolberg
Bureau of Reclamation
LCR MSCP

Remote PIT Scanning

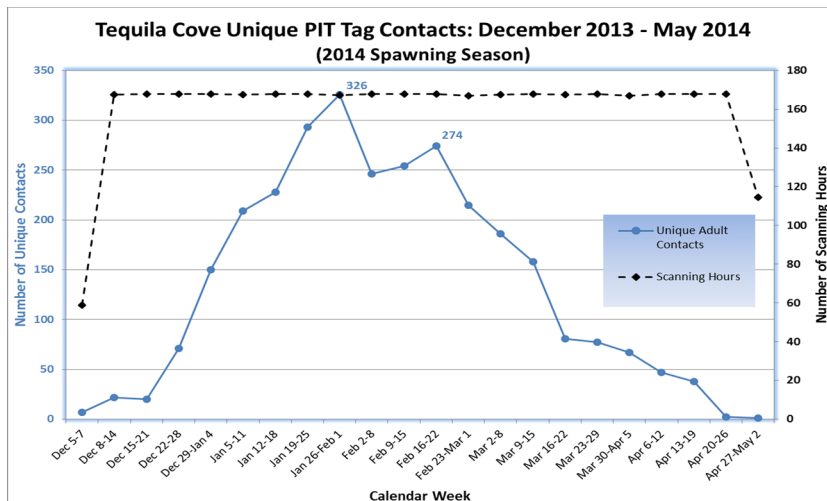
Purpose

- Identify potential reasons for reduced netting captures during annual March roundups

Objectives

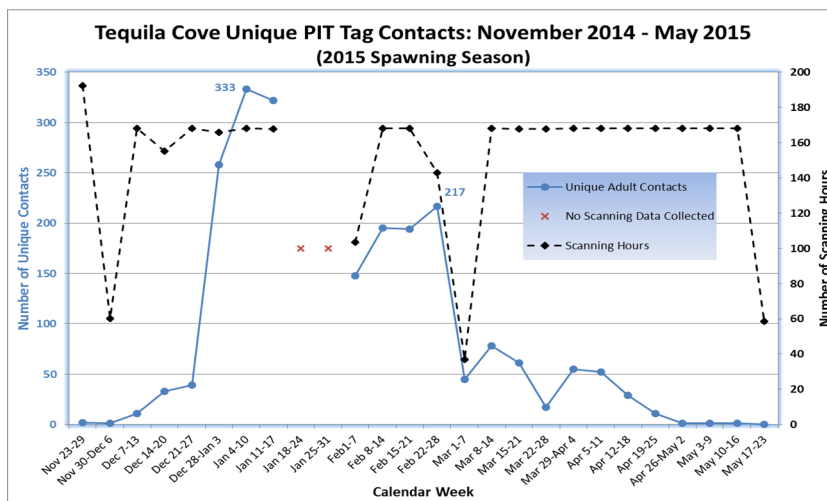
- Determine peak use of major basin spawning areas in Lake Mohave using remote PIT scanning data
- Use scanning data to evaluate current and inform future sampling

Remote PIT Scanning



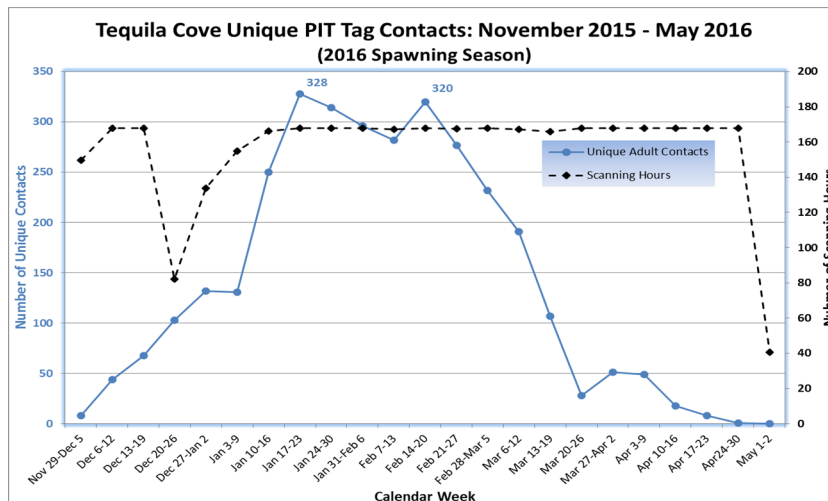
200,700 total contacts, representing 913 unique individuals, were recorded from 12/5/13 – 5/27/14 (3,529 scanning hours) using one 1.9 x 0.7 m shore based PIT scanner.

Remote PIT Scanning



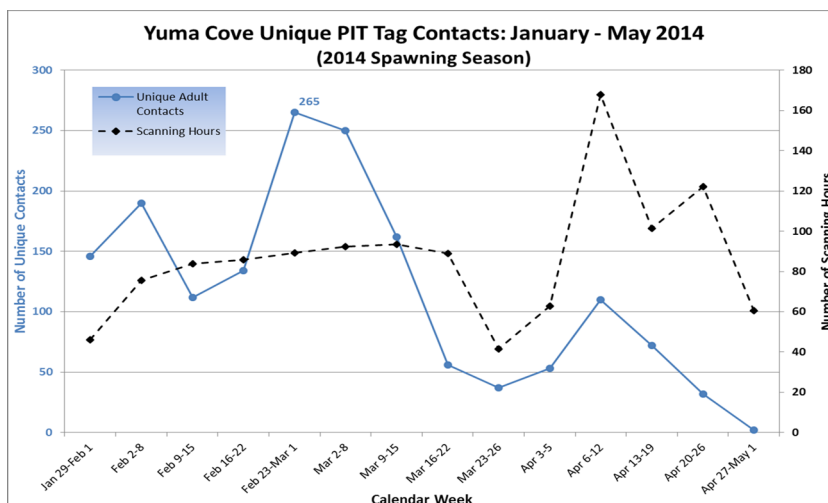
73,796 total contacts, representing 851 unique individuals, were recorded from 11/23/14 – 5/19/15 (3,602 scanning hours) using two mobile PIT scanners (0.8 x 0.8 m and 1.3 x 0.7 m) and one 1.9 x 0.7 m shore based PIT scanner.

Remote PIT Scanning



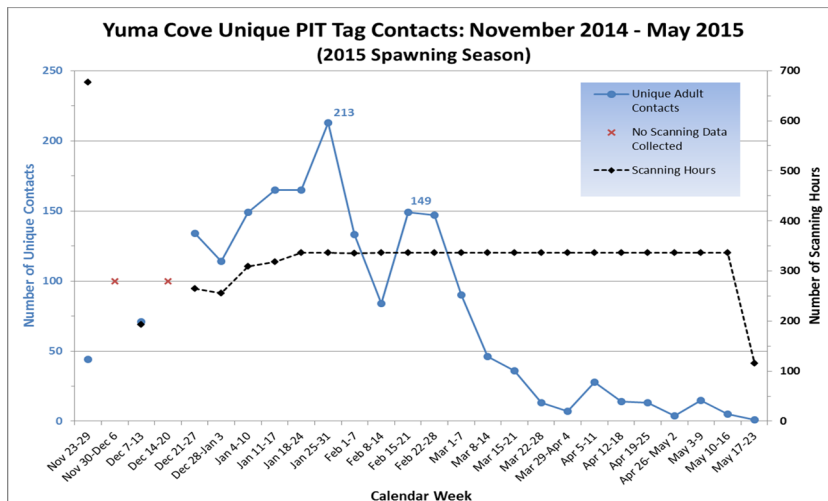
137,761 total contacts, representing 922 unique individuals, were recorded from 11/30/15 – 5/2/16 (3,579 scanning hours) using one 1.3 x 0.7 m mobile PIT scanner and one 1.9 x 0.7 m shore based PIT scanner.

Remote PIT Scanning



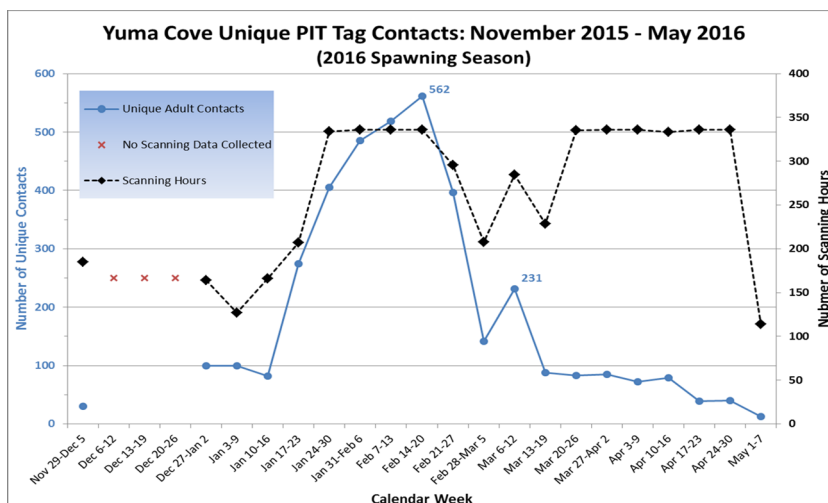
18,394 total contacts, representing 715 unique individuals, were recorded from 1/29/14 – 5/1/14 (1,212 scanning hours) using one 1.9 x 0.7 m shore based PIT scanner.

Remote PIT Scanning



12,115 total contacts, representing 736 unique individuals, were recorded from 11/24/14 – 5/19/15 (7,845 scanning hours) using twelve mobile scanners (0.8 x 0.8 m [11], 1.3 x 0.7 m [1]), and two 1.9 x 0.7 m shore based PIT scanners.

Remote PIT Scanning



77,335 total contacts, representing 1,207 unique individuals, were recorded from 11/30/15 – 5/3/16 (5,334 scanning hours) using four 1.3 x 0.7 m mobile scanners and two 1.9 x 0.7 m shore based PIT scanners.

Remote PIT Scanning

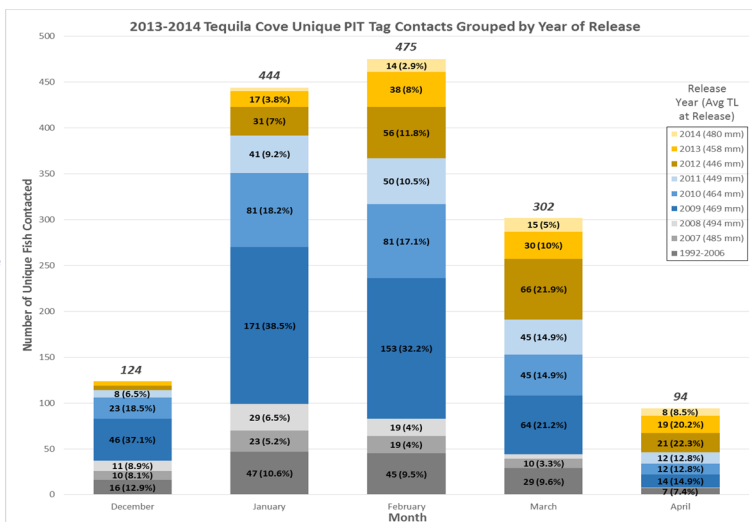


Summary

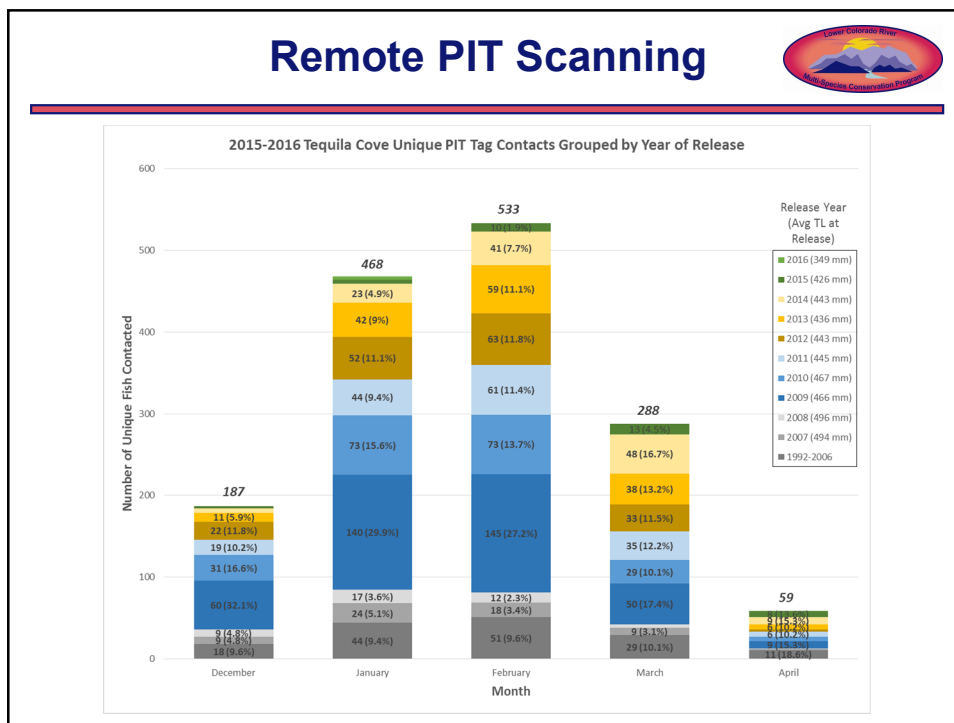
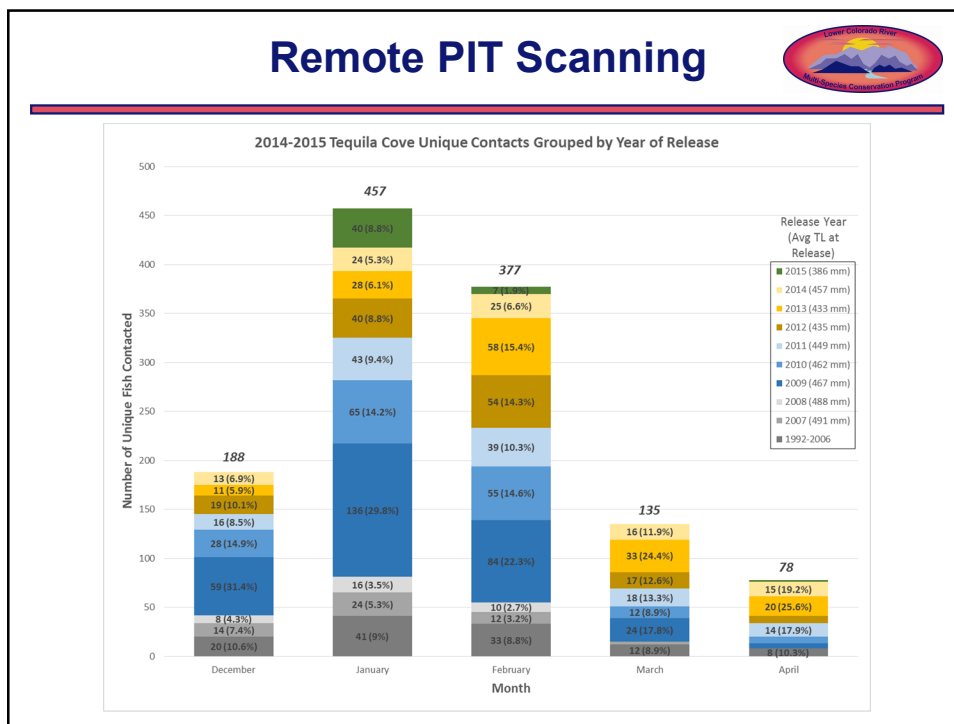
Year	Tequila Cove Unique Contacts	Yuma Cove Unique Contacts	Number of Fish Contacted at both	Total Unique Contacts	% Contacted at both sites
2014	913	715	274	1,354	20.2
2015	851	736	224	1,363	16.4
2016	922	1207	468	1,661	28.2

- 1,354 – 1,661 unique fish were contacted at these two sites during the 3-year period evaluated
- So what do we know about these individuals?

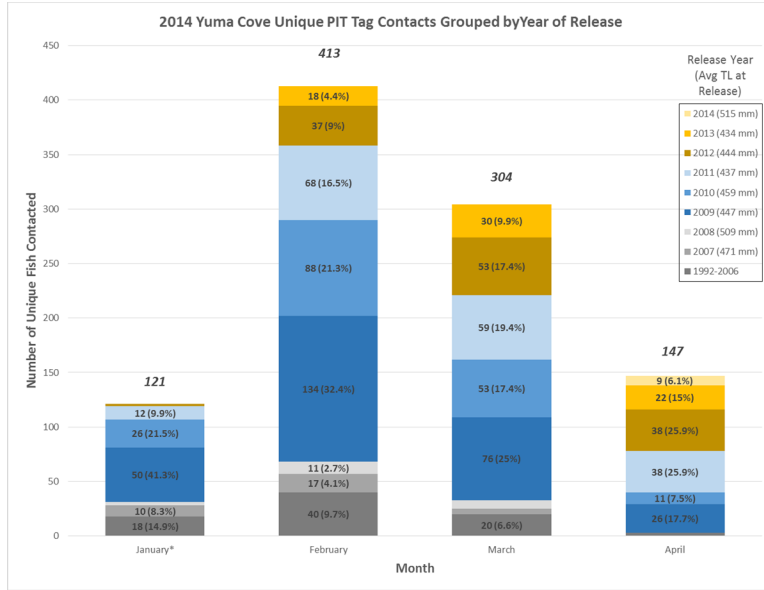
Remote PIT Scanning



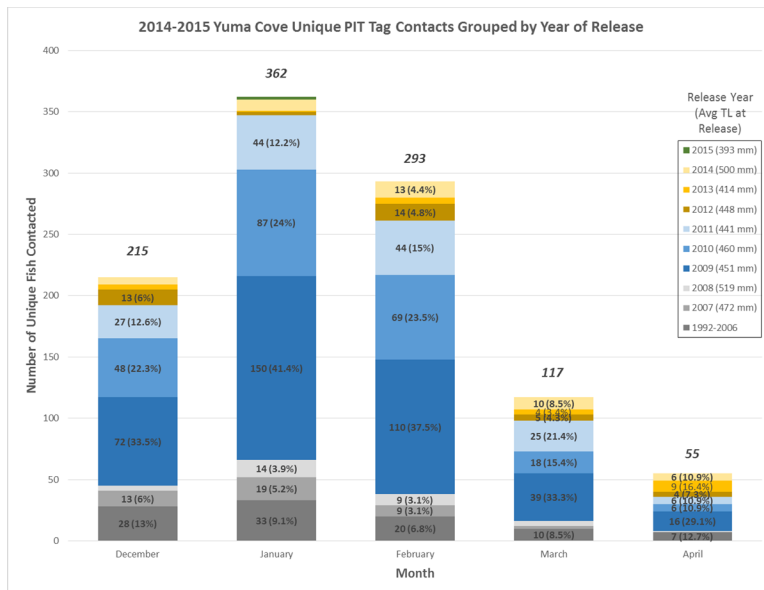
- Size
- Age Structure
- Proportion
- Rearing

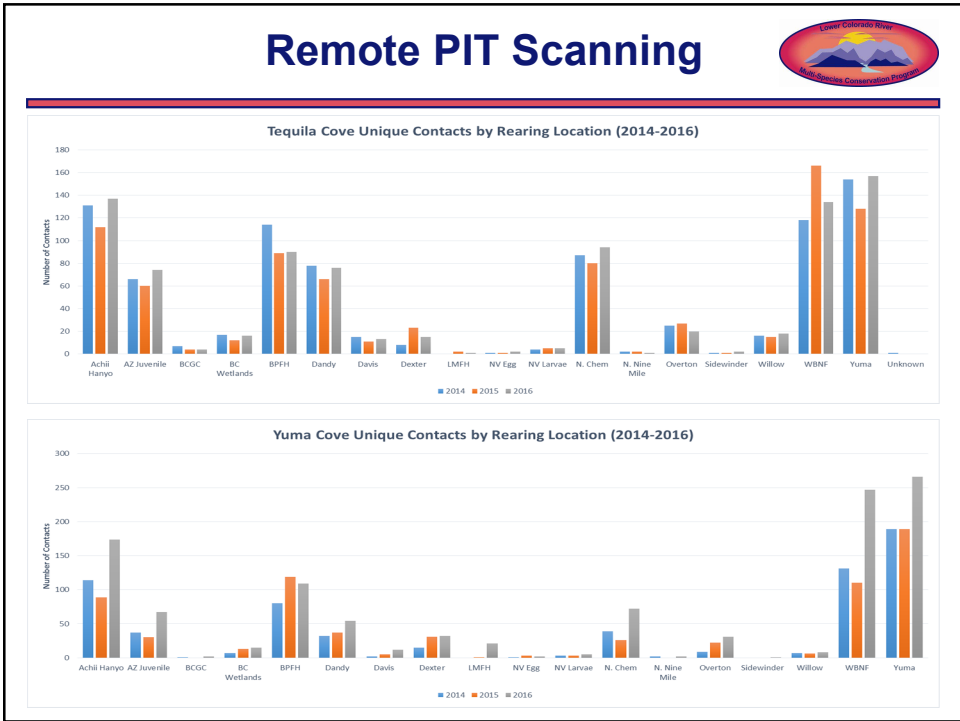
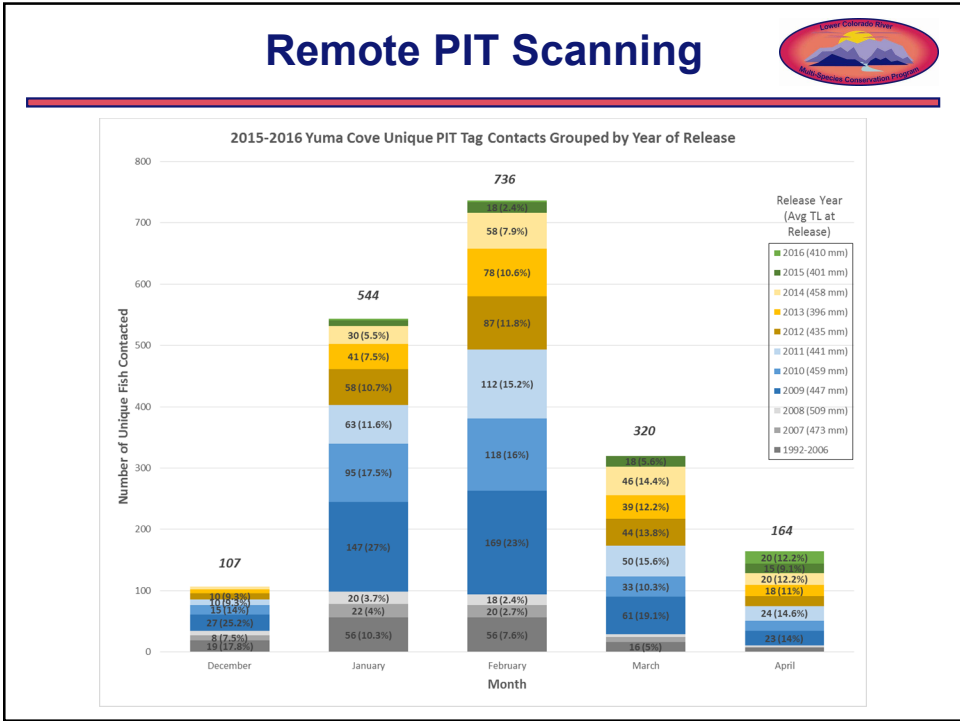


Remote PIT Scanning



Remote PIT Scanning





Remote PIT Scanning



Discussion

- March roundup week \neq peak spawning site use
- More individuals are currently contacted earlier in the year
- Trammel net captures have trended downward in recent years with fewer fish handled and fewer genetic samples collected

Year	2010	2011	2012	2013	2014	2015	2016
Captures	286	194	170	219	148	145	94

- Sampling outside of the peak use period may however be a good thing:
 - > disruption of spawning activity and larval production may be reduced
 - > may help to ensure attaining target larval numbers for future augmentation
- With the above points in mind, renewed efforts during the winter roundup (Nov/Dec) could help increase annual trammel net captures, providing additional opportunities to collect biodata and acquire genetic samples, while potentially having less impact on spawning activity and larval production
- Thoughts?