

## A very long term tag recovery of a California Scorpionfish (*Scorpaena guttata*)

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During the four-year period from 21 November 2002 to 24 July 2006, we performed a mark-recapture study on nearshore groundfish off southern and central California (Hanan and Curry 2012). For the study, volunteer fishermen aboard chartered commercial passenger fishing vessels (CPFV) caught by hook and line, 32 species of groundfish (32,366 total fish), including 2,751 California Scorpionfish, *Scorpaena guttata*; these fish were marked with Floy FD-94 tags and released. As of the date of the Hanan and Curry paper, 257 scorpionfish were reported as recaptured with an average days at liberty (DAL) of 408.8 days (431.6 SD; range 2 - 2,126 days). A total of 76 (33%) of these recaptured scorpionfish were recaptured within 1 km of their original tagging site, 155 (67%) were within 5 km, and 17 (1%) were recaptured at distances of 50 km or more from the original tagging site with a range of 68 to 1,788 DAL.

On 21 November 2017, a tagged California scorpionfish was reported caught by Mr. Robert Rosenberg, a recreational angler, on a one-day trip aboard the CPFV *New Del Mar* out of Marina Del Rey, California. He had previously caught three other of our tagged scorpionfish during 2003 and 2004, which likely aided in his recognition of the bryozoan-encrusted tag. He removed the tag (#14769, which he sent to the authors) and released the fish “unharmred and looking very healthy” (R. Rosenberg, personal communication).

This scorpionfish was tagged on 26 January 2004 aboard the CPFV *Redondo Special*. The fish was at liberty for nearly 14 years (5,048 days), which is substantially longer than the maximum days at liberty (DAL) reported for this species. In previous studies, Hanan and Curry (2012) reported tagged-recaptured scorpionfish remaining at liberty for 2,126 days. Love et al. (1987) reported a maximum DAL of 915 days for this species. Hartmann (1987) documented a scorpionfish at liberty for 670 days, and Turner et al. (1969) recovered a tagged scorpionfish that had been at liberty for 507 days.

The fish was recaptured in about 30 m (100 ft) of water approximately 3 km off El Segundo (R. Rosenberg, personal communication). The fish was originally captured and tagged at 33°52'5"N, 118°27'4"W in 34 m (112 ft) of water, approximately 3.2 km south-

west of El Segundo. Based on the description of the recapture site, we surmise that the fish was certainly recaptured within 50 km and probably within 5 km of the original capture-tag-and-release site. While this species has been documented to move distances as great as 200 km (Hanan and Curry 2012), mark-recapture studies have also shown that this species demonstrates strong site fidelity (Turner et al. 1969, Hartmann 1987, Love et al. 1987, Hanan and Curry 2012), especially to known spawning grounds during the spawning season (May–September) (Love et al. 1987). However, as this fish was originally tagged in January, during the non-spawning season and recovered in November, also the non-spawning season, in generally the same location, this may indicate some site fidelity for non-spawning sites.

At the time of recapture the fish was at least 20 inches in length, and weighed at least 2 pounds (R. Rosenberg, personal communication). At the time of tagging in 2004 this fish was measured at 265 mm (~10.5 inches) fork length. Sex was not determined. Using the von Bertalanffy equations completed by Love et al. (1987), we estimate that this fish was 5 to 6 years of age at the time of tagging. Given the DAL, we estimate the fish to be 19 to 20 years old at the time of recapture. This is close to the maximum reported age for females (21 years) and exceeds the maximum reported age for males (15 years) (Love 2011).

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