

Residency and inter-reef connectivity of three gamefishes between natural reefs and a large mitigation artificial reef

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Marine Ecology Progress Series 593: 111–126 (2018)

Table S1. Average transition probability matrix for all Kelp Bass tagged at WNAR, detected by all receivers. Shaded column indicates probability of fish moving away from and remaining on (darkened cell) WNAR. When column and row region match, it is the probability of the fish remaining the region. Probabilities off the diagonal indicate transitions from site j to site i during the course of the study period. Table corresponds with figure 5A.

		FROM:						
		Barn	San Onofre	San Mateo	South Bracket	Trestles	WNAR	North Bracket
TO:	Barn	0	0	0	0	0	0	0
	San Onofre	0	0.96	0.50	0.02	0	0	0
	San Mateo	0	0	0.50	0.02	0	0	0
	South Bracket	0	0.03	0	0.60	0.01	0.001	0
	Trestles	0	0	0	0.11	0.66	0.008	0
	WNAR	0	0	0	0.25	0.34	0.988	0.80
	North Bracket	0	0	0	0	0	0.003	0.19

Table S2. Average transition probability matrix for all Kelp Bass tagged at WNAR, detected by any one receiver. Shaded column indicates probability of fish moving away from and remaining on (darkened cell) WNAR. When column and row region match, it is the probability of the fish remaining the region. Probabilities off the diagonal indicate transitions from site j to site i during the course of the study period. Table corresponds with figure 5B.

		FROM:						
		Barn	San Onofre	San Mateo	South Bracket	Trestles	WNAR	North Bracket
TO:	Barn	0	0	0	0	0	0	0
	San Onofre	0	0.97	0.50	0.02	0	0	0
	San Mateo	0	0	0.50	0.02	0	0	0
	South Bracket	0	0.03	0	0.69	0.04	0.004	0
	Trestles	0	0	0	0.23	0.92	0.008	0
	WNAR	0	0	0	0.04	0.04	0.981	0.42
	North Bracket	0	0	0	0	0	0.008	0.58

Table S3. Average transition probability matrix for all Barred Sand Bass tagged at WNAR, detected by all receivers. Shaded column indicates probability of fish moving away from and remaining (darkened cell) on WNAR. When column and row region match, it is the probability of the fish remaining the region. Probabilities off the diagonal indicate transitions from site j to site i during the course of the study period. Table corresponds with figure 5D.

		FROM:						
		Barn	San Onofre	San Mateo	South Bracket	Trestles	WNAR	North Bracket
TO:	Barn	0	0	0	0	0	0	0
	San Onofre	0	0	0	0	0	0	0
	San Mateo	0	0	0.99	0	0	0	0.07
	South Bracket	0	0	0.01	0.61	0.05	0.001	0
	Trestles	0	0	0	0.16	0.52	0.001	0
	WNAR	0	0	0	0.23	0.44	0.997	0.6
	North Bracket	0	0	0	0	0	0.001	0.33

Table S4. Average transition probability matrix for all Barred Sand Bass tagged at WNAR, detected by any one receiver. Shaded column indicates probability of fish moving away from and remaining on (darkened cell) WNAR. When column and row region match, it is the probability of the fish remaining the region. Probabilities off the diagonal indicate transitions from site j to site i during the course of the study period. Table corresponds with figure 5E.

		FROM:						
		Barn	San Onofre	San Mateo	South Bracket	Trestles	WNAR	North Bracket
TO:	Barn	0	0	0	0	0	0	0
	San Onofre	0	0	0	0	0	0	0
	San Mateo	0	0	0.99	0	0.04	0.001	0.12
	South Bracket	0	0	0.01	0.62	0.12	0.004	0.05
	Trestles	0	0	0	0.31	0.68	0.004	0.1
	WNAR	0	0	0	0.07	0.11	0.987	0.23
	North Bracket	0	0	0	0	0.05	0.004	0.49

Table S5. Average transition probability matrix for all Kelp Bass tagged at any of the three natural reefs (Barn, San Onofre, San Mateo). Shaded areas indicate probability of fish remaining on the natural reefs (darkened cells), or moving to WNAR. When column and row region match, it is the probability of the fish remaining the region. Probabilities off the diagonal indicate transitions from site j to site i during the course of the study period. Table corresponds with figure 5C.

		FROM:						
		Barn	San Onofre	San Mateo	South Bracket	Trestles	WNAR	North Bracket
TO:	Barn	1	0	0	0	0	0	0
	San Onofre	0	0.971	0.004	0	0	0	0
	San Mateo	0	0.029	0.963	0.418	0.250	0	0
	South Bracket	0	0	0.031	0.545	0.333	0.429	0
	Trestles	0	0	0.002	0.030	0.333	0	0
	WNAR	0	0	0	0.007	0.083	0.571	0
	North Bracket	0	0	0	0	0	0	0

Table S6. Transition probability matrix for one average Barred Sand Bass tagged at any of the three natural reefs (Barn, San Onofre, San Mateo). Shaded areas indicate probability of fish remaining on the natural reefs, or moving to WNAR. When column and row region match, it is the probability of the fish remaining the region. Probabilities off the diagonal indicate transitions from site j to site i during the course of the study period. The one in the WNAR-WNAR cell is from a single fish that moved from San Mateo to WNAR and was never detected again. Table corresponds with figure 5F.

FROM:

	Barn	San Onofre	San Mateo	South Bracket	Trestles	WNAR	North Bracket
Barn	1	0	0	0	0	0	0
San Onofre	0	0.977	0.001	0	0	0	0
San Mateo	0	0.023	0.993	0.6	0	0	0
South Bracket	0	0	0.004	0.4	0	0	0
Trestles	0	0	0	0	0	0	0
WNAR	0	0	0.0007	0	0	1	0
North Bracket	0	0	0	0	0	0	0

TO:

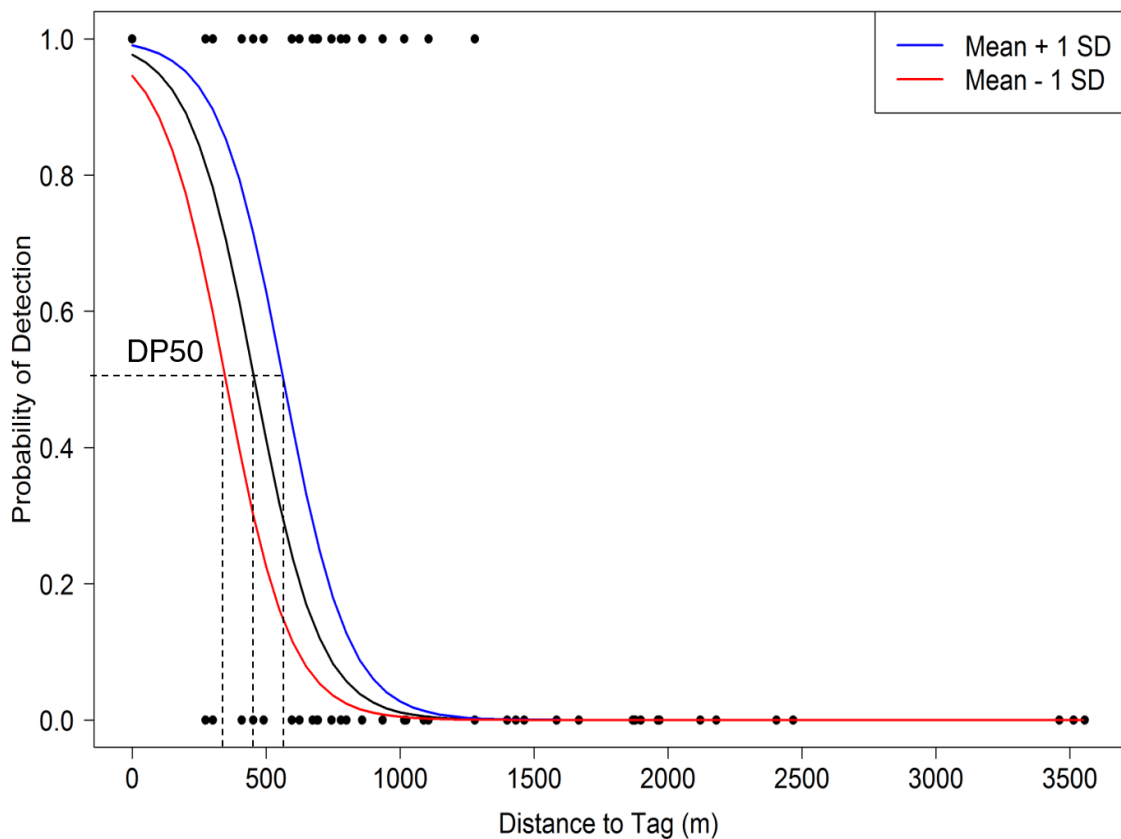


Figure S1. Effect on the detection distance curve at which 50% of the signals were detected (DP50) from the sync tag with a ± 1 SD change the mean kelp cover (km^2) with respect to distance away from the tag. Binomial data of actual tag detection distances shown.