

Table S1. Results of Wald’s tests of generalized linear mixed effects models testing for differences in the re-encounter probability of bonytail at-large for varying numbers of days as function of river temperature at stocking, stocking habitat, total length (TL) at stocking, and the interactive effect of stocking habitat and TL. Marginal R^2 and conditional R^2 represent the variation explained by the model due to the fixed effects alone and the fixed and random effects combined, respectively. **Bold:** statistically significant effects

Time at large	Variable	χ^2	df	p	Marginal R^2	Conditional R^2
≥ 14 days	Temperature	0.07	1	0.784	0.03	0.43
	Habitat	4.02	1	0.045		
	TL	103.93	1	<0.001		
	Habitat*TL	27.20	1	<0.001		
≥ 30 days	Temperature	0.01	1	0.935	0.02	0.36
	Habitat	1.51	1	0.219		
	TL	52.55	1	<0.001		
	Habitat*TL	15.49	1	<0.001		
≥ 90 days	Temperature	0.08	1	0.778	0.01	0.18
	Habitat	1.58	1	0.210		
	TL	81.76	1	<0.001		
	Habitat*TL	0.12	1	0.732		
≥ 270 days	Temperature	8.04	1	0.005	<0.01	0.02
	Habitat	2.13	1	0.145		
	TL	3.29	1	0.070		
	Habitat*TL	1.07	1	0.302		
≥ 365 days	Temperature	0.143	1	0.705	<0.01	0.01
	Habitat	1.37	1	0.242		
	TL	0.01	1	0.909		
	Habitat*TL	2.34	1	0.127		

Table S2. Number of bonytail stocking events with river temperature data (°C) at time of stocking from 2013-2021 across the upper Colorado River basin.

Year	Stocking events	Range	Mean	Median
2013	7	16.0-19.7	18.1	18.5
2014	24	12.4-21.4	18.1	18.0
2015	23	5.5-22.8	18.1	18.4
2016	27	5.1-20.7	16.2	17.9
2017	29	5.6-24.2	20.4	21.0
2018	29	2.3-25.2	16.4	15.7
2019	32	2.5-22.2	15.0	16.0
2020	17	4.6-23.5	15.4	16.2
2021	23	6.5-25.4	18.1	19.2

Table S3. Total number of bonytail stocked per year across the upper Colorado River basin and the number of individuals re-encountered by either physical recapture or detection on PIT-tag antennas each year.

Stocking year	Number stocked	Number re-encountered									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	10133	641	108	3	1	0	0	0	0	0	1
2014	42094		3950	161	16	6	2	3	1	0	0
2015	41547			580	63	8	1	5	1	1	1
2016	39350				1324	281	10	5	3	3	4
2017	39283					2446	59	5	2	2	0
2018	39371						1439	143	4	0	1
2019	47209							4732	176	16	14
2020	31088								8320	249	20
2021	34979									6733	333

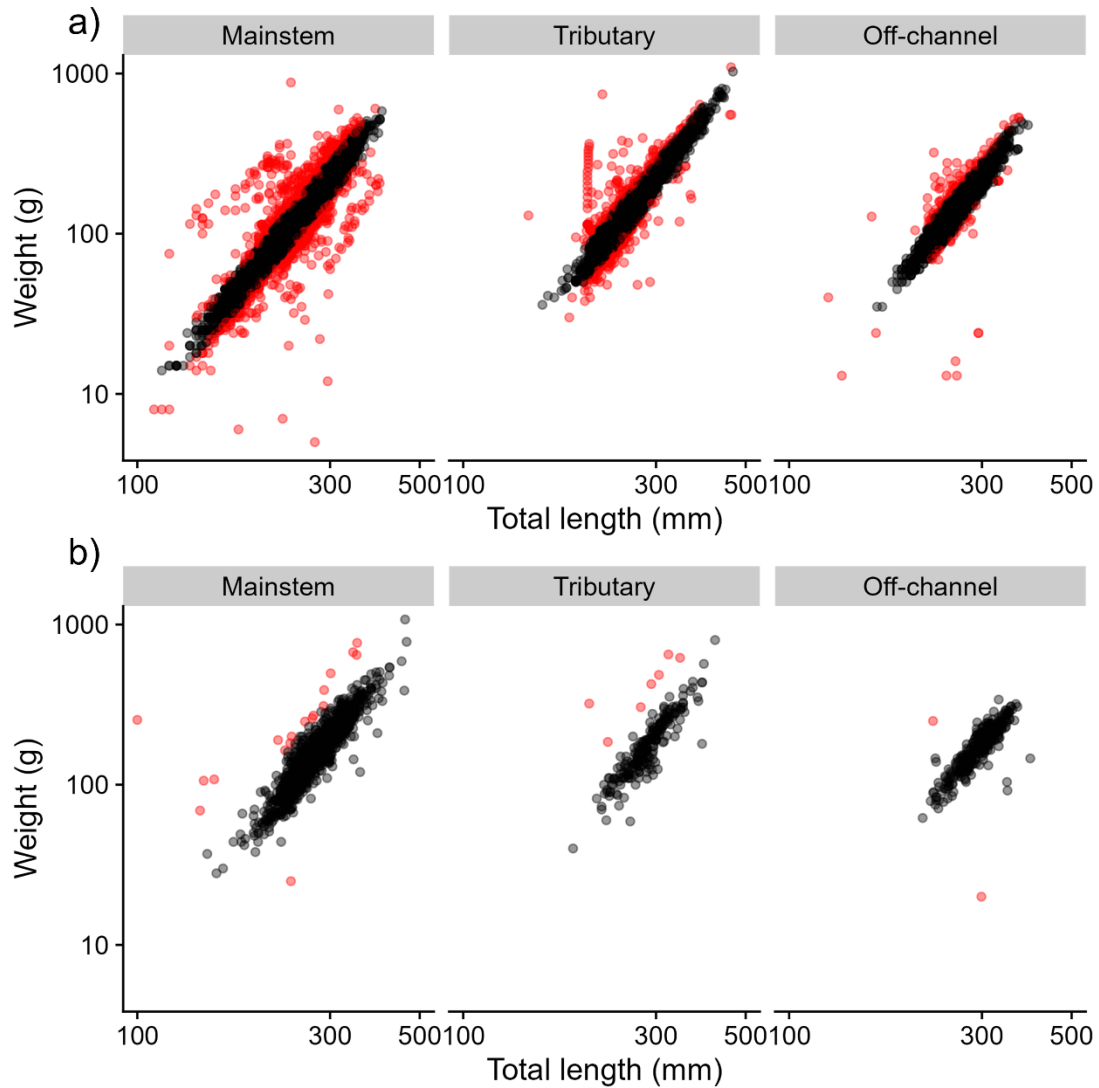


Fig. S1. Weight and total length of bonytail at stocking (a) and at recapture (b) in three habitat types. “Far out” outliers are identified as red points as determined with Tukey’s fences (Tukey 1977). The y- and x-axes are scaled with a log₁₀-transformation and transparency of points was adjusted to show overlapping points.

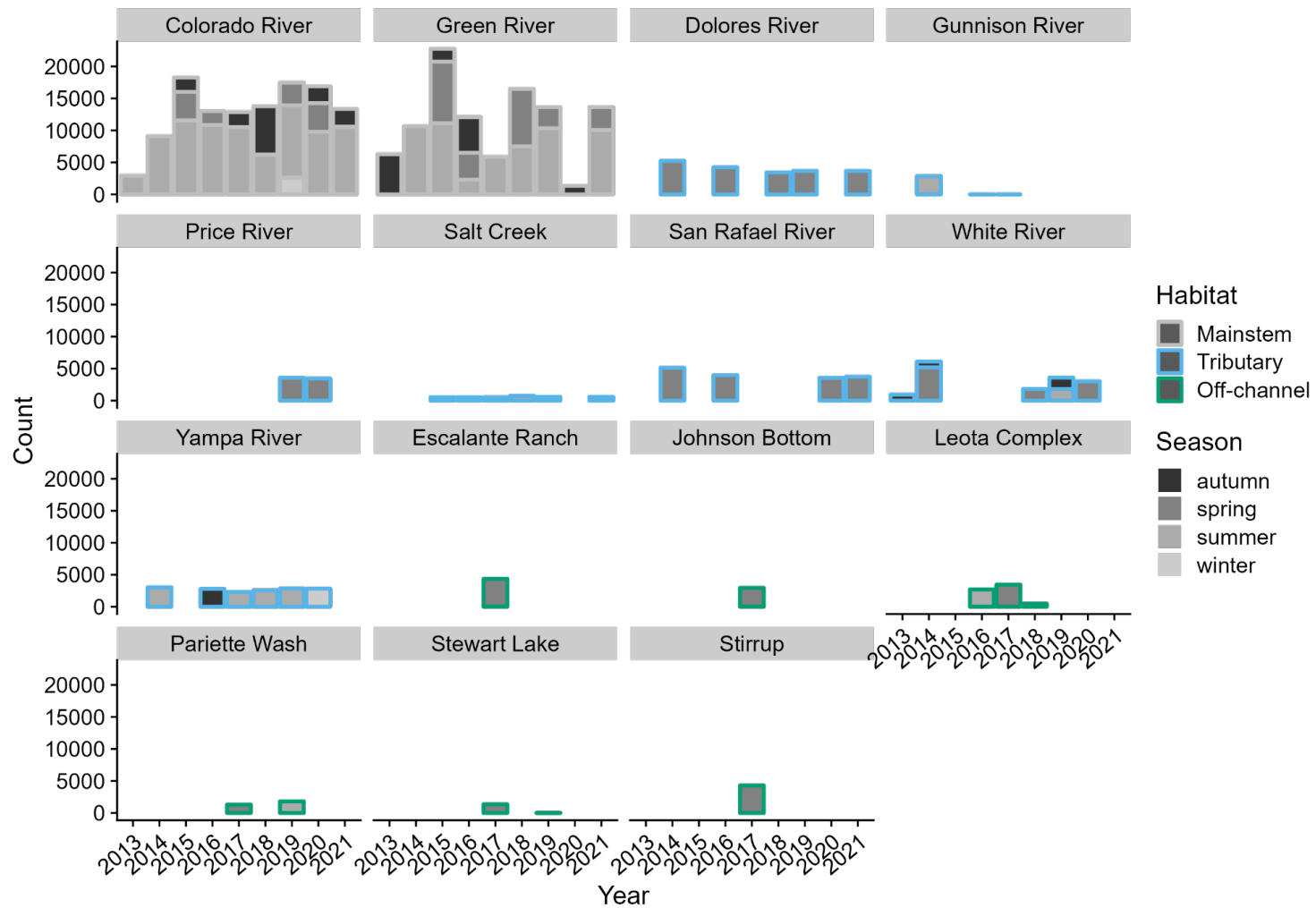


Fig. S2. Number of bonytail stocked seasonally into mainstem (grey outline), tributary (blue outline), and off-channel (green outline) habitats across the upper Colorado River basin. Seasons were defined as: Autumn = September-October, Spring = March-May, Summer = June-August, Winter = November.