

Supplementary Table 8

Cox proportional hazards models on subset of greater amberjack fitted with internal acoustic transmitters in 2019 and 2020. This subset (n=48 of n=55 total acoustically tagged fish) was tested to examine the influence of all predictors considered in this study after examining for confounding correlations among predictors, except bottom temperature. The full model considered length (fork length), fight time, handling time, descender device (not used or used), bait / jig, fishing injury = an injury assessed attributed to the fish being caught with fishing gear (see Methods for details), tagging injury – an injury assessed to be associated with the tagging procedure and surface temperature. The second best model included depth as a predictor, however, the inclusion of this additional single parameter is within two Δ AICc and is thus likely spurious (Burnham and Anderson 2002). Of n=55 internally acoustically tagged fish, fight time and handling time data were only available among 48 fish. Stepwise model selection by AIC was first conducted on this subset of data to evaluate the influence of all these predictors. Bottom temperature data were not available for 14 fish, so a set of models including bottom temperature data were run separately to consider bottom temperature effects (Supplementary Table 7).

Model		Predictor	Coefficient (b)	SE	Hazard Ratio e ^b	95% CI for e ^b	P	log-rank test χ^2	d.f.	Overall Model P	n
FULL MODEL											
50.23	17.48							9.41	9	0.400	49
		length	0.011	0.006	1.011	0.999 - 1.023	0.061				
		fight time	-0.001	0.005	0.999	0.988 - 1.009	0.786				
		hand. time	-0.004	0.008	0.996	0.980 - 1.011	0.590				
		descender	-0.341	1.356	0.711	0.050 - 10.13	0.801				
		site depth	0.072	0.107	1.075	0.871 - 1.326	0.501				
		bait / jig	-17.45	14750	0.000	0.000 - ∞	0.999				
		fish injury	1.145	1.735	3.142	0.105 - 94.18	0.509				
		tag injury	-15.04	84560	0.000	0.000 - ∞	1.000				
		surface T°	0.082	0.464	1.086	0.437 - 2.697	0.859				
NEXT BEST MODEL											
33.68	0.93							7.6	2	0.020	49
		length	0.010	0.004	1.010	1.002 - 1.017	0.014				
		site depth	0.046	0.038	1.047	0.972 - 1.128	0.228				
BEST MODEL											
32.75	0							6.36	1	0.008	49
		length	0.009	0.004	1.009	1.002 - 1.016	0.016				
NULL MODEL											
37.02	4.27										49

Abbreviations: hand. time = handling time, fish injury = fishing injury, tag injury = tagging injury, T° = temperature