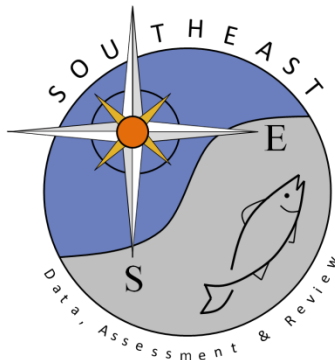


Stress physiology of scalloped and great hammerhead sharks from a bottom longline fishery: Supplemental Tables

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* Summary of best fit models and interpretation for each species and combined (HT-hook time, Spp-species, Temp-water temperature, FL-fork length)

Parameter	Species	Model Formula	r2	Interpretation
Glucose~	Combined SMOK SLEW	Null Null Null		No significant relationships between species or with any fixed effect
Lactate~	Combined SMOK SLEW	FL + Spp + HT + Temp + (FL x Temp) FL + HT + Temp HT	0.51 0.56 0.4	Higher in smaller animals, longer HT, in SMOK vs SLEW, and in lower water temps Higher at higher water temp, larger animals and longer HT Higher with longer HT
pH~	Combined SMOK SLEW	HT HT HT	0.16 0.11 0.23	Decreases with greater HT Decreases with greater HT Decreases with greater HT
Hematocrit~	Combined SMOK SLEW	Spp HT Null	0.23 0.15	Lower in SMOK Decreases with greater HT
Sodium~	Combined SMOK SLEW	FL + Spp + HT + (FL x Spp) + (FL x HT) FL + HT + (FL x HT) Null	0.36 0.77	On average sodium is higher in SMOK than in SLEW for a given HT and FL Increases with FL, decreases with HT, and more so in larger animals
Potassium~	Combined SMOK SLEW	Spp + HT HT HT	0.43 0.23 0.52	SMOK has higher K than SLEW for a given HT Increases with HT Increases with HT
Chloride~	Combined SMOK SLEW	FL + HT + (FL x HT) FL + HT + (FL x HT) Null	0.17 0.54	In larger animals (FL>~175): Chloride decreases with increasing TOL; In smaller animal: Chloride increases with increasing TOL In larger animals (FL>~175): Chloride decreases with increasing TOL; In smaller animal: Chloride increases with increasing TOL
Calcium~	Combined SMOK SLEW	Null Null HT	0.28	Increases with greater HT
Magnesium~	Combined SMOK SLEW	FL + HT + Spp + Temp + (FL x HT) + (FL x Spp) + (FL x Temp) Temp FL + HT + (FL * HT)	0.53 0.2 0.4	Higher in SMOK, lower as temp and FL increases Lower as Temp increases Lower as FL increases

* Combined species global model selection table (HT-hook time, Spp-species, Temp-water temperature, FL-fork length)

Parameter	Model Formula	AICc	Δ AICc	d.f.	Log Likelihood	R ²
Glucose~	Null	396.1	0	3	-194.9	
	Spp	398.8	2.7	4	-195.2	0.01
	Temp	399.8	3.7	4	-195.7	0.24
	Spp + Temp	401.9	5.8	5	-195.7	0.25
	Spp + Temp + (Spp x Temp)	405.2	9.1	6	-196.2	0.25
Lactate~	FL + Spp + HT + Temp + (FL x Spp) + (Spp x Temp)	707.4	0	8	-345.0	0.53
	FL + Spp + HT + Temp + (FL x Spp) + (FL x Temp) + (Spp x Temp)	709.2	1.8	9	-344.7	0.53
	FL + Spp + HT + Temp + (FL x Temp)	709.2	1.8	7	-347.1	0.51
	FL + Spp + HT + Temp + (FL x Spp) + (FL x Temp) + (Spp x Temp) + (FL x Spp x Temp)	709.4	2	10	-343.6	0.54
	FL + Spp + HT + Temp + (FL x Spp) + (Spp x HT) + (Spp x Temp)	709.6	2.2	9	-344.9	0.53
pH~	Spp + HT	26.1	0	4	-8.8	0.18
	FL + HT	26.5	0.4	4	-9.1	0.18
	HT	27.2	1.1	3	-10.5	0.16
	FL + Spp + HT	27.2	1.1	5	-8.3	0.19
	Spp + HT + (Spp x HT)	27.1	1	5	-8.6	0.19
Hematocrit~	Spp	755.7	0	3	-374.7	0.23
	Spp + Temp	756.8	1.1	4	-374.2	0.24
	Spp + HT	757.1	1.4	4	-374.3	0.25
	FL + Spp	757.1	1.4	4	-374.3	0.24
	FL + Spp + HT	757.9	2.2	5	-373.6	0.25
Sodium~	FL + Spp + HT + (FL x Spp) + (FL x HT)	380.9	0	7	-182.0	0.36
	FL + Spp + HT + (FL x Spp) + (FL x HT) + (Spp x HT)	382.3	1.4	8	-181.3	0.38
	FL + Spp + HT + (FL x Spp) + (FL x HT) + (Spp x HT) + (FL x Spp x HT)	383.7	2.8	9	-180.5	0.40
	FL + Spp + HT + Temp + (FL x Spp) + (FL x HT)	383.8	2.9	8	-182.0	0.36
	FL + Spp + HT + Temp + (FL x Spp) + (FL x HT) + (Spp x HT)	385.3	4.4	9	-181.3	0.38
Calcium~	Spp + HT + (Spp x HT)	8.5	0	5	1.4	0.15
	HT	8.6	0.1	3	-1.0	0.05
	Null	9	0.5	2	-2.4	
	Temp	9.8	1.3	3	-1.6	0.03
	HT + Temp	9.8	1.3	4	-0.5	0.07
Chloride~	FL + Spp + HT + (FL x Spp) + (FL x HT) + (Spp x HT)	372.1	0	8	-176.2	0.32
	FL + Spp + HT + (FL x HT) + (Spp x HT)	373.2	1.1	7	-178.2	0.26
	FL + HT + (FL x HT)	373.6	1.5	5	-181.1	0.17
	FL + Spp + HT + (FL x Spp) + (FL x HT)	374.7	2.6	7	-178.9	0.24
	FL + Spp + HT + Temp + (FL x HT)	375	2.9	6	-180.5	0.19
Magnesium~	FL + HT + Spp + Temp + (FL x HT) + (FL x Spp) + (FL x Temp)	118.1	0	9	-47.7	0.53
	FL + HT + Spp + Temp + (FL x HT) + (FL x Spp) + (FL x Temp) + (Spp x HT)	119.8	1.7	10	-46.9	0.55
	FL + HT + Spp + Temp + (FL x HT) + (FL x Spp) + (FL x Temp) + (Spp x Temp)	121.3	3.2	10	-47.7	0.54
	FL + HT + Spp + Temp + (FL x HT) + (FL x Spp) + (FL x Temp) + (HT x Temp)	121.3	3.2	10	-47.7	0.54
	FL + HT + Spp + Temp + (FL x HT) + (FL x Spp) + (FL x Temp) + (FL x Spp x HT)	122.2	4.1	11	-46.4	0.55
Potassium~	Spp + HT + Temp	186.3	0	5	-87.421	0.46
	Spp + HT	186.4	0.1	4	-88.75	0.43
	SP + HT + Temp + (Spp * HT)	186.5	0.2	6	-86.206	0.5
	Spp + HT + (Spp * HT)	186.8	0.5	5	-87.671	0.46
	Spp + HT + Temp + (Spp * Temp)	187.4	1.1	6	-86.676	0.48

*Model selection table for *Sphyrna mokarran* (H1-hook time, Spp-species, Temp-water temperature, FL-fork length)

Parameter	Model Formula	AICc	Δ AICc	d.f.	Log Likelihood	R ²
Glucose~	Null	200.2	0	3	-96.789	
	Temp	202.1	1.9	4	-96.574	
	FL + Temp + (FL * Temp)	208.7	8.5	4	-99.849	
	HT	210.5	10.3	4	-100.77	
	FL + Temp	211	10.8	5	-99.76	
Lactate~	FL + HT + Temp	311.7	0	5	-150.105	0.56
	FL + HT + Temp + (FL * Temp)	312	0.3	6	-148.941	0.58
	FL + HT + Temp + (FL * HT)	312.2	0.5	6	-149.045	0.58
	FL + HT + Temp + (HT * Temp)	314.3	2.6	6	-150.077	0.56
	FL + HT + Temp + (FL * HT) + (FL * Temp)	314.5	2.8	7	-148.817	0.59
pH~	HT	16.9	0	3	-5.163	0.11
	FL + HT	19	2.1	4	-5.026	0.12
	HT + Temp	19	2.1	4	-5.04	0.12
	Null	20.2	3.3	2	-7.95	
	FL + HT + Temp	21.2	4.3	5	-4.87	0.12
Hematocrit~	HT	247.7	0	3	-120.538	0.15
	FL + HT	250	2.3	4	-120.445	0.15
	HT + Temp	250.2	2.5	4	-120.538	0.15
	Null	252	4.3	2	-123.843	
	HT + Temp + (HT x Temp)	252.2	4.5	5	-120.23	0.16
Sodium~	FL + HT + (FL x HT)	161.2	0	5	-73.945	0.77
	FL + HT + Temp + (FL x HT)	164.3	3.1	6	-73.657	0.78
	FL + HT + Temp + (FL x HT) + (HT x Temp)	165.7	4.5	7	-72.368	0.8
	FL + HT + Temp + (FL x HT) + (FL x Temp)	168.3	7.1	7	-73.636	0.78
	FL + HT + Temp + (FL x HT) + (FL x Temp) + (HT x Temp)	169.7	8.5	8	-72.029	0.8
Calcium~	Null	5.8	0	2	-0.618	
	FL	6.2	0.4	3	0.515	0.09
	Temp	7.6	1.8	3	-0.198	0.03
	FL + Temp	8	2.2	4	1.039	0.13
	HT	8.4	2.6	3	-0.617	0
Chloride~	FL + HT + (FL* HT)	163.3	0	5	-74.983	0.54
	FL + HT + Temp + (FL * HT)	165.8	2.5	6	-74.447	0.56
	FL + HT + Temp + (FL * HT) + (FL * Temp)	169.2	5.9	7	-74.089	0.57
	FL + HT + Temp + (FL * HT) + (Ht * Temp)	169.8	6.5	7	-74.401	0.56
	Null	173.1	9.8	2	-84.248	
Magnesium~	Temp	-1.8	0	3	4.505	0.2
	FL + Temp	0.5	2.3	4	4.782	0.22
	HT + Temp	0.6	2.4	4	4.749	0.22
	Null	1	2.8	2	1.79	
	HT + Temp + (HT * Temp)	2.1	3.9	5	5.602	0.27
Potassium~	HT + Temp	100.9	0	4	-45.388	0.32
	HT	101	0.1	3	-46.878	0.23
	FL + HT	103.4	2.5	4	-46.64	0.24
	HT + Temp + (HT * Temp)	103.6	2.7	5	-45.112	0.33
	FL + HT + Temp	103.7	2.8	5	-45.187	0.33

*Model selection table for *Sphyrna lewini* (HI-hook time, Spp-species, Temp-water temperature, FL-tork length)

Parameter	Model Formula	AICc	Δ AICc	d.f.	Log Likelihood	R ²
Glucose~	Null	193	0	3	-93.268	
	Temp	198.3	5.3	4	-94.759	
	FL	204.2	11.2	4	-97.719	
	HT	2051	1858	4	-98.168	
	FL + Temp	209.5	16.5	5	-99.199	
Lactate~	HT	396.1	0	3	-194.831	0.4
	HT + Temp	398.1	2	4	-194.715	0.4
	FL + HT	398.3	2.2	4	-194.786	0.4
	FL + HT + (FL * HT)	398.9	2.8	5	-193.909	0.42
	HT + Temp + (HT * Temp)	400.1	4	5	-194.518	0.41
pH~	HT	13	0	3	-3.308	0.23
	FL + HT	14.8	1.8	4	-3.062	0.23
	HT + Temp	15.3	2.3	4	-3.3	0.23
	FL + HT + (FL x HT)	17.1	4.1	5	-3.008	0.23
	FL + HT + Temp	17.2	4.2	5	-3.062	0.23
Hematocrit~	Null	412.9	0	2	-204.364	
	Temp	413.9	1	3	-203.745	0.02
	HT	415.1	2.2	3	-204.354	0
	FL	415.2	2.3	3	-204.364	0
	FL + Temp	416.2	3.3	4	-203.716	0.02
Sodium~	FL	203.3	0	3	-98.053	0.11
	Null	203.4	0.1	2	-99.425	
	HT	205.5	2.2	3	-99.156	0.02
	FL + HT	205.7	2.4	4	-97.773	0.02
	Temp	205.7	2.4	3	-99.226	0.02
Calcium~	HT	2.7	0	3	2.226	0.28
	FL + HT	4.4	1.7	4	2.832	0.32
	HT + Temp	5.3	2.6	4	2.418	0.29
	FL + HT + Temp	5.6	2.9	5	3.878	0.37
	FL + HT + Temp + (FL * Temp)	6.3	3.6	6	5.344	0.44
Chloride~	Null	199.8	0	2	-97.621	
	FL	201	1.2	3	-96.894	0.06
	HT	201.4	1.6	3	-97.119	0.04
	FL + HT + (FL * HT)	201.7	1.9	5	-94.202	0.25
	Temp	201.8	2	3	-97.307	0.03
Magnesium~	FL + HT + Temp + (FL * HT) + (FL * Temp)	81.4	0	7	-30.195	0.57
	FL + HT + (FL * HT)	81.9	0.5	5	-34.293	0.4
	FL + HT + Temp + (FL * HT)	82.2	0.8	6	-32.614	0.47
	FL + Temp + (FL * Temp)	82.3	0.9	5	-34.504	0.38
	FL	82.6	1.2	3	-37.678	0.2
Potassium~	HT	86.7	0	3	-39.75	0.52
	FL + HT	89.2	2.5	4	-39.532	0.53
	HT + Temp	89.3	2.6	4	-39.593	0.52
	FL + HT + (FL * HT)	89.9	3.2	5	-38.294	0.57
	HT + Temp + (HT * Temp)	92.1	5.4	5	-39.399	0.53