The following supplement accompanies the article

Foraging ecology of large pelagic fishes in the US South Atlantic: structured piscivory shapes trophic niche variation

Stephen J. Poland, Frederick S. Scharf*, Michelle D. Staudinger

*Corresponding author: scharff@uncw.edu

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Table S1. All prey species recovered from the stomachs of blackfin tuna, dolphinfish, wahoo, and yellowfin tuna in U.S. South Atlantic waters expressed as percent frequency of occurrence (%FO), mean percent mass ($\overline{\%M}$), and mean percent number ($\overline{\%N}$). The occurrence of intestinal parasites is noted at the bottom of the table.

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
CRUSTACEANS	73.41	46.45	42.93	24.47	10.57	11.77	1.41	Trace	0.37	43.92	21.74	26.31
Amphipoda	15.36	4.36	3.89							43.92	10.59	9.70
Hyperiidae	1.50	0.46	0.33									
Hyperia spp.	1.50	0.46	0.33									
Decapoda	46.44	21.56	20.39	21.84	9.93	10.29	0.70	Trace	0.16	28.57	8.47	11.70
Aristeidae	1.87	0.33	0.31	0.26	0.01	0.08				5.29	1.81	1.73
Plesiopenaeus armatus	1.87	0.33	0.31	0.26	0.01	0.08				4.23	1.78	1.48
Pandalidae	0.37	0.08	0.08	0.26	0.18	0.08						
Pandalus spp.	0.37	0.08	0.08	0.26	0.18	0.08						
Portunidae	2.62	0.88	0.90	16.84	8.26	7.62				5.82	0.54	1.40
Arenaeus cribarius				0.26	0.07	0.08						
Callinectes spp.										0.53	0.17	0.13
Ovalipes ocellatus				0.26	0.26	0.25						
Ovalipes stephensoni	0.37	0.13	0.19									

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Portunus sayi	2.25	0.75	0.72	13.42	6.41	6.24				3.70	0.34	0.93
Portunus spinicarpus				0.26	0.20	0.12						
Scyllaridae	0..37	0.13	0.19							0.53	0.55	0.50
Sicyoniidae	1.12	0.33	0.36	1.32	0.18	0.39						
Euphausiacea	2.62	0.59	0.51									
Isopoda	15.73	4.60	3.91	0.26	0.26	0.21				0.53	0.22	0.20
Stomatopoda	27.34	9.52	9.36	0.53	0.07	0.19				2.12	0.66	0.89
Unidentified crustaceans	21.35	5.82	4.86	2.63	0.32	1.08	0.70	Trace	0.16	5.29	1.80	3.81
FISH	73.78	33.88	32.04	89.74	81.80	77.04	95.07	92.67	83.54	78.31	62.18	53.52
Anguilliformes	0.37	0.04	0.04	0.53	0.07	0.10						
Nemichthyidae	0.37	0.04	0.04	0.53	0.07	0.10						
Labichthys carinatus				0.26	0.07	0.06						
Atheriniformes				1.05	0.65	0.60						
Atherinopsidae				1.05	0.65	0.60						
Menidia menidia				1.05	0.65	0.60						
Beloniformes	12.73	8.47	8.01	23.42	19.70	13.39	5.63	4.16	3.46	4.76	4.07	3.25
Belonidae	0.75	0.21	0.18							0.53	0.20	0.17
Tylosurus crocodilus	0.37	0.13	0.13									
Exocoetidae	11.61	7.98	7.55	22.89	19.18	12.84	4.23	2.96	2.62	3.70	3.33	2.58
Cypselurus spp.				0.26	0.24	0.06						
Exocoetus obtusirostris				0.26	0.26	0.12						
Hemiramphidae				0.53	0.53	0.50	1.41	1.20	0.84	0.53	0.55	0.50
Hemiramphus brasiliensis				0.53	0.53	0.50	1.41	1.20	0.84	0.53	0.55	0.50
Scomberesocidae	0.75	0.29	0.28	0.26	Trace	0.05						
Scomberesox saurus	0.75	0.29	0.28	0.26	Trace	0.05						
Clupeiformes	3.00	1.02	1.00	2.37	1.73	1.65	1.41	0.71	0.47	1.59	1.36	0.75
Clupeidae	1.87	0.54	0.53				0.70	0.06	0.16			
Alosa aestivalis	0.37	0.04	0.03									
Clupea harengus	0.75	0.25	0.24									

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Dussumieriidae	1.12	0.48	0.47	2.37	1.73	1.65	0.70	0.66	0.31	1.59	1.36	0.75
Etrumeus teres	1.12	0.48	0.47	2.37	1.73	1.65	0.70	0.66	0.31	1.59	1.36	0.75
Gadiformes	0.37	0.10	0.09									
Phycidae	0.37	0.10	0.09									
Urophycis spp.	0.37	0.10	0.09									
Lophiiformes				0.53	0.53	0.37						
Antennariidae				0.53	0.53	0.37						
Histrio histrio				0.53	0.53	0.37						
Mugiliformes				0.26	0.22	0.12	0.70	0.70	0.31			
Mugilidae				0.26	0.22	0.12	0.70	0.70	0.31			
Myctophiformes	1.12	0.18	0.18	0.26	0.05	0.12	0.70	Trace	0.21			
Myctophidae	1.12	0.18	0.18	0.26	0.05	0.12	0.70	Trace	0.21			
Diaphus spp.				0.26	0.05	0.12	0.70	Trace	0.21			
Myctophum selenops	0.37	0.04	0.04									
Ophidiiformes				0.26	0.06	0.12						
Ophidiidae				0.26	0.06	0.12						
Lepophidium cervinum				0.26	0.06	0.12						
Perciformes	17.60	8.00	7.74	27.89	16.65	14.94	50.00	46.32	32.65	30.69	26.88	21.07
Ariommatidae										0.53	0.55	0.50
Ariomma bondi										0.53	0.55	0.50
Bramidae	0.75	0.23	0.41	0.26	0.03	0.04	0.70	0.70	0.63	1.59	0.70	0.70
Brama brama							0.70	0.70	0.63			
Pterycombus brama										1.06	0.69	0.60
Carangidae	3.75	1.21	1.05	16.84	9.01	8.08	3.52	1.79	1.57	4.76	3.61	2.83
Caranx bartholomaei				1.58	0.62	0.73						
Caranx crysos				0.53	0.18	0.15						
Caranx ruber				0.26	0.01	0.08						
Caranx spp.				2.63	1.07	0.89						
Chloroscombrus chrysurus				1.32	0.83	0.68				0.53	0.55	0.50
Decapterus punctatus				0.26	0.26	0.25						
Decapterus spp.	1.12	0.21	0.08	2.37	1.13	1.21	2.11	1.06	1.05	2.12	1.52	1.17

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Hemicaranx amblyrhynchus				0.53	0.29	0.28						
Naucrates ductor				0.26	0.07	0.06						
Selene setapinnis	0.37	0.19	0.19									
Selene spp.				0.26	0.04	0.05						
Selene vomer				1.05	0.53	0.39						
Seriola dumerili				0.53	0.53	0.50						
Seriola spp.				0.26	0.03	0.05						
Seriola zonata				0.79	0.26	0.29						
Trachurus lathami	0.75	0.32	0.31	0.53	0.29	0.13	0.70	0.13	0.21			
Uraspis secunda				0.53	0.31	0.37						
Coryphaenidae				2.89	1.70	1.81						
Coryphaena hippurus				2.89	1.70	1.81						
Echeneidae	1.50	0.60	0.59				0.70	0.59	0.31	0.53	0.09	0.25
Echeneis spp.	0.37	0.10	0.09									
Remora spp.										0.53	0.09	0.25
Gempylidae	0.37	0.13	0.13				0.70	0.28	0.10			
Gempylus serpens							0.70	0.28	0.10			
Istiophoridae				0.26	0.14	0.08						
Priacanthidae										0.53	Trace	Trace
Sciaenidae				0.26	0.17	0.12						
Scombridae	5.99	3.43	3.11	4.21	3.34	2.43	43.66	41.68	28.72	20.63	20.00	14.89
Auxis spp.	3.37	1.74	1.57	2.11	1.98	1.16	23.94	22.88	14.68	12.17	11.97	8.58
Katsuwonus pelamis				0.26	0.13	0.06				0.53	0.19	0.17
Sarda sarda				0.53	0.28	0.28						
Thunnus albacares							0.70	0.70	0.63	0.53	0.54	0.25
Serranidae	.75	0.21	0.21	1.05	0.37	0.31	1.41	0.53	0.52	1.59	0.66	0.83
Centropristis spp.				0.26	0.17	0.08						
Epinephelus spp.	0.37	0.04	0.04									
Mycteroperca spp.				0.26	0.09	0.12				0.53	0.01	0.25
Synagrops spp.							0.70	0.35	0.31			
Sphyraenidae	0.37	0.13	0.09							0.53	0.31	0.17

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Sphyraena spp.	0.37	0.13	0.09							0.53	0.31	0.17
Stromateidae	5.24	1.85	1.81	3.42	1.45	1.66	0.70	0.70	0.63	1.59	0.20	0.35
Hyperoglyphe spp.	0.75	0.48	0.47	0.53	0.43	0.33						
Peprilus alepidotus										0.53	Trace	0.10
Peprilus burti	0.37	0.19	0.19	0.53	0.04	0.21						
Peprilus paru	0.37	0.19	0.19	0.79	0.29	0.33				0.53	0.02	0.08
Peprilus spp.	1.87	0.37	0.37	0.26	0.06	0.12						
Peprilus triacanthus	1.50	0.42	0.41	0.53	0.27	0.28	0.70	0.70	0.63	0.53	0.17	0.17
Psenes spp.				0.26	0.09	0.08						
Trichiuridae	1.12	0.21	0.34	1.05	0.33	0.28	0.70	0.04	0.16	1.59	0.75	0.54
Trichiurus lepturus										0.53	0.03	0.08
Xiphiidae				0.26	0.10	0.12						
Xiphias gladius				0.26	0.10	0.12						
Scorpaeniformes	0..7	0.10	0.09	0.26	0.01	0.04	0.70	0.16	0.21	0.53	0.01	0.17
Dactylopteridae				0.26	0.01	0.04	0.70	0.16	0.21	0.53	0.01	0.17
Dactylopterus volitans				0.26	0.01	0.04	0.70	0.16	0.21	0.53	0.01	0.17
Triglidae	0.37	0.10	0.09									
Stomiiformes	0.75	0.07	0.07									
Sternoptychidae	0.75	0.07	0.07									
Sygnathformes	4.12	0.71	0.79	1.58	0.60	0.77				2.12	0.41	0.64
Centriscidae	1.12	0.11	0.11									
Macroramphosus gracilis	0.37	0.04	0.04									
Macroramphosus scolopax	0.37	0.03	0.03									
Macroramphosus spp.	0.37	0.04	0.03									
Syngnathidae	3.75	0.61	0.69	1.58	0.60	0.77				2.12	0.41	0.64
Hippocampus erectus	1.12	0.20	0.20	0.26	0.02	0.12				1.06	0.13	0.29
Hippocampus reidi	0.37	0.08	0.08									
Hippocampus spp.	1.50	0.17	0.21	0.79	0.31	0.46				0.53	0.07	0.10
Tetraodontiformes	7.49	1.69	1.59	31.05	16.03	15.69	9.86	6.56	6.29	10.05	4.07	3.75
Balistidae	0.75	0.08	0.08	3.68	1.43	1.33	1.41	0.85	0.73	1.06	0.27	0.25

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Balistes capriscus				0.53	0.15	0.15	0.70	0.70	0.63			
Balistes spp.	0.37	0.04	0.04									
Canthidermis sufflamen				0.26	0.26	0.12	0.70	0.15	0.10			
Diodontidae				10.26	4.51	4.50	4.23	2.13	2.62	1.59	0.30	0.42
Chilomycterus antennatus				0.26	0.12	0.05						
Chilomycterus reticulatus							0.70	0.70	0.63			
Chilomycterus spp.				0.53	0.30	0.19						
Diodon eydouxii				0.26	0.04	0.04						
Diodon holocanthus				5.26	2.48	1.89						
Diodon hystrix				0.26	0.20	0.04						
Diodon spp.				3.42	1.04	1.64	1.41	0.72	0.73	1.59	0.30	0.42
Monacanthidae	4.87	1.14	0.99	20.00	8.83	8.52	2.82	1.81	1.36	6.88	2.60	2.06
Aluterus heudelotii				0.53	0.10	0.08						
Aluterus monoceros				0.53	0.43	0.2				0.53	0.34	0.13
Aluterus scriptus				1.05	0.53	0.32						
Aluterus spp.	0.75	0.23	0.16	3.16	0.97	1.06				0.53	0.27	0.17
Cantherhines pullus				3.68	1.45	1.11						
Cantherhines spp.				0.53	0.10	0.07						
Cantherhines sufflamen				0.26	0.17	0.08						
Monacanthus ciliatus	0.37	0.19	0.13									
Monacanthus spp.	0.75	0.12	0.13	1.84	0.32	0.64	0.70	0.70	0.63	0.53	0.08	0.25
Stephanolepis hispidus	0.37	0.06	0.05	3.95	1.75	1.55						
Stephanolepis setifer				0.79	0.36	0.23						
Stephanolepis spp.				1.32	0.33	0.38						
Tetraodontidae	2.62	0.47	0.52	2.63	1.26	1.34	2.11	1.77	1.57	3.70	0.90	1.02
Canthigaster rostrata				0.26	0.09	0.08						
Lagocephalus spp.	0.75	0.07	0.07	0.53	0.44	0.13	1.41	1.41	1.26	1.06	0.39	0.27
Zeiformes										0.53	0.15	0.07
Zeidae										0.53	0.15	0.07
Zenopsis conchifera										0.53	0.15	0.07

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Unidentified fish	49.06	13.50	12.44	45.26	25.49	29.12	45.77	34.05	39.94	44.44	25.23	23.82
INSECTA				0.79	0.02	0.31				1.06	0.67	0.33
Odonata				0.26	0.02	0.12						
MOLLUSKS	58.43	19.67	25.03	16.32	7.60	10.88	14.08	7.33	16.09	33.33	15.41	19.84
Cephalopoda	50.19	15.39	20.50	14.21	6.99	9.91	14.08	7.33	16.09	32.28	15.18	19.20
Octopoda	11.99	2.20	3.01	5.79	2.37	3.43	4.23	2.76	3.46	4.23	1.97	4.28
Alloposidae				0.79	0.01	0.19						
Haliphron atlanticus				0.79	0.01	0.19						
Argonautidae	8.24	1.66	2.05	5.00	2.21	3.11	4.23	2.17	3.09	3.17	1.41	3.16
Argonauta spp.	8.24	1.66	2.05	5.00	2.21	3.11	4.23	2.17	3.09	2.65	1.10	2.99
Octopodidae							0.70	0.59	0.21			
Octopus vulgaris							0.70	0.59	0.16			
Teuthida	43.82	11.67	15.93	7.89	4.06	5.69	11.27	4.05	11.84	27.51	13.11	14.63
Ancistrocheiridae				0.26	Trace	0.05						
Ancistrocheirus lesueurii				0.26	Trace	0.05						
Chiroteuthidae							0.70	0.18	0.16			
Chiroteuthis veranyi							0.70	0.18	0.16			
Cranchiidae	0.75	0.11	0.11	0.26	Trace	0.05						
Cranchia Scabra	0.75	0.11	0.11									
Enoploteuthidae	0.75	0.08	0.09							1.59	0.22	0.54
Abralia spp.	0.37	0.05	0.05									
Abralia veranyi	0.37	0.03	0.03							1.06	Trace	0.29
Abraliopsis spp.										0.53	0.22	0.25
Histioteuthidae				0.53	0.26	0.25	0.70	0.18	0.16	0.53	0.55	0.50
Histioteuthis bonnellii				0.53	0.26	0.25	0.70	0.18	0.16			
Octopoteuthidae	1.50	0.33	0.33									
Octopoteuthis spp.	1.50	0.33	0.33									
Loliginidae	4.87	1.24	1.35	0.53	0.51	0.36	2.82	0.41	1.52			

Prey taxon	Blackfin tuna			Dolphinfish			Wahoo			Yellowfin tuna		
	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$	%FO	$\overline{\%M}$	$\overline{\%N}$
Doryteuthis pealeii	4.87	1.24	1.35	0.53	0.51	0.36	2.82	0.41	1.52			
Ommastrephidae	16.85	5.25	5.70	4.21	2.70	2.79	5.63	2.22	3.30	19.58	9.78	7.84
Illex illecebrosus	16.48	4.95	5.37	3.16	1.90	2.00	3.52	1.08	2.41	17.99	9.63	7.30
Ornithoteuthis antillarum	1.12	0.15	0.17	0.53	0.27	0.30	2.11	1.14	0.89	1.06	Trace	0.29
Onychoteuthidae	2.25	0.40	0.43	0.26	Trace	0.12						
Onychoteuthis banksii	2.25	0.40	0.43	0.26	Trace	0.12						
Onykia spp.												
Sepiolidae	1.87	0.68	0.67									
Rossia moelleri	1.50	0.29	0.29									
Rossia spp.	0.37	0.39	0.38									
Gastropoda	13.48	4.18	4.43	2.11	0.61	0.97				1.59	0.22	0.64
Aeolidioidae										0.53	0.17	Trace
Glaucidae										0.53	0.17	Trace
Glaucus atlanticus										0.53	0.17	Trace
Cavolinioidae	6.74	2.13	2.33	0.79	0.03	0.25						
Cavoliniidae	6.74	2.13	2.33	0.79	0.03	0.25						
Cavolinia tridentata				0.26	Trace	0.12						
Cavolinia uncinata	0.37	0.10	0.13									
Diacria trispinosa	1.12	0.46	0.45									
Pterotracheoidea	3.00	0.67	0.66	0.53	0.26	0.37				0.53	0.04	0.20
Atlantidae	3.00	0.67	0.66	0.53	0.26	0.37				0.53	0.04	0.20
Unidentified mollusks	0.37	0.10	0.09									
Parasite	13.11			2.63			94.04			18.42		
Trematoda	12.73			2.63			93.62			17.89		
Plagiorchiida	12.73			2.63			93.62			17.89		
Hirudinellidae	12.73			2.63			93.62			17.89		
Hirudinella ventricosa	12.73			2.63			93.62			17.89		
Unclassified	0.37						0.85			0.53		

Table S2. Results from quantile regression models fit to relative prey size - predator body size relationships (minimum relative prey size = $5^{th}/10^{th}$ quantile, median relative prey size = 50th quantile, maximum relative prey size = $90^{th}/95^{th}$ quantile). Parameter estimates (β_0 and β_1) are presented with bootstrapped estimates of standard error (SE). P = the significance level for the regression coefficient (β_1).

Predator species	Quantile	β_0 (SE)	β_1 (SE)	p
Blackfin tuna (n = 742)				
	5th	–0.012 (0.005)	0.0004 (0.0001)	<0.01
	50th	–0.039 (0.015)	0.0013 (0.0002)	<0.01
	95th	0.036 (0.074)	0.0034 (0.0010)	<0.01
Dolphinfish (n = 873)				
	5th	0.020 (0.008)	0.0000 (0.0001)	1.00
	50th	0.094 (0.006)	–0.0004 (0.0001)	<0.01
	95th	0.075 (0.031)	0.0020 (0.0003)	<0.01
Wahoo (n = 88)				
	10th	0.094 (0.032)	–0.0005 (0.0003)	0.08
	50th	–0.040 (0.093)	0.0012 (0.0008)	0.12
	90th	–0.229 (0.157)	0.0035 (0.0013)	<0.01
Yellowfin tuna (n = 450)				
	5th	0.020 (0.006)	0.0000 (0.0001)	1.00
	50th	0.020 (0.004)	0.0003 (0.0001)	<0.01
	95th	0.482 (0.164)	–0.0018 (0.0015)	0.23