Appendix 8.1 - Species lists of study areas

Species list for both study areas based on shorebird counts (Banc d'Arguin: 1979-2020, Bijagós Archipelago: 1987-2020) and fisheries data (Banc d'Arguin: 2006-2020, Bijagós Archipelago: 2021). The abbreviation of each species (Abb.) is given, together with the IUCN Red List status of a species (LC = Least Concern, NT = Near Threatened, VU = Vulnerable, EN = Endangered, CR = Critically Endangered) and its population change on a global level (Dec = Decrease, Inc = Increase, Sta = Stable, Unk = Unknown). The presence (Pres.) of the species in the Banc d'Arguin and the Bijagós Archipelago indicates if the species was sampled (and included; Samp.) in this study.

				IUCN Red List		Banc d'Arguin		Bijagós	
	Common name	**Scientific name**	**Abb.**	**Status**	**Pop. change**	**Pres.**	**Samp.**	**Pres.**	**Samp.**
Shorebirds	Common Sandpiper	*Actitis hypoleucos*	*Act hyp*	LC	Dec	X		X	X
	Ruddy Turnstone	*Arenaria interpres*	*Are int*	LC	Dec	X		X	X
	Stone Curlew	*Burhinus oedicnemus*	*Bur oed*	LC	Dec	X			
	Sanderling	*Calidris alba*	*Cal alb*	LC	Unk	X		X	X
	Dunlin	*Calidris alpina*	*Cal alp*	LC	Dec	X		X	
	Red Knot	*Calidris canutus*	*Cal can*	NT	Dec	X	X	X	X
	Curlew Sandpiper	*Calidris ferruginea*	*Cal fer*	NT	Dec	X	X	X	X
	Little Stint	*Calidris minuta*	*Cal min*	LC	Inc	X		X	
	Ruff	*Calidris pugnax*	*Cal pug*	LC	Dec	X			
	Kentish Plover	*Charadrius alexandrinus*	*Cha ale*	LC	Dec	X		X	
	Common Ringed Plover	*Charadrius hiaticula*	*Cha hia*	LC	Dec	X	X	X	X
	Cream-coloured Courser	*Cursorius cursor*	*Cur cur*	LC	Dec	X			
	Eurasian Oystercatcher	*Haematopus ostralegus*	*Hae ost*	NT	Dec	X	X	X	
	Bar-tailed Godwit	*Limosa lapponica*	*Lim lap*	NT	Dec	X	X	X	X
	Black-tailed Godwit	*Limosa limosa*	*Lim lim*	NT	Dec	X			
	Eurasian Curlew	*Numenius arquata*	*Num arq*	NT	Dec	X		X	
	Eurasian Whimbrel	*Numenius phaeopus*	*Num pha*	LC	Dec	X	X	X	X
	Grey Plover	*Pluvialis squatarola*	*Plu squ*	LC	Dec	X	X	X	X
	Avocet	*Recurvirostra avosetta*	*Rec avo*	LC	Unk	X			
	Spotted Redshank	*Tringa erythropus*	*Tri ery*	LC	Sta	X			
	Common Greenshank	*Tringa nebularia*	*Tri neb*	LC	Sta	X		X	X
	Marsh Sandpiper	*Tringa stagnatilis*	*Tri sta*	LC	Dec	X			
	Common Redshank	*Tringa totanus*	*Tri tot*	LC	Unk	X		X	X
Sharks	Spinner Shark	*Carcharhinus brevipinna*	*Car bre*	VU	Dec	X			
	Bull Shark	*Carcharhinus leucas*	*Car leu*	VU	Dec			X	X
	Blacktip Shark	*Carcharhinus limbatus*	*Car lim*	VU	Dec	X		X	X
	Dusky Shark	*Carcharhinus obscurus*	*Car obs*	EN	Dec	X			
	Tiger Shark	*Galeocerdo cuvier*	*Gal cuv*	NT	Dec	X		X	
	Atlantic Nurse Shark	*Ginglymostoma cirratum*	*Gin cir*	VU	Dec	X	X	X	X
	Barbeled Houndshark	*Leptocharias smithii*	*Lep smi*	VU	Dec	X	X	X	
	Common Smoothhound	*Mustelus mustelus*	*Mus mus*	EN	Dec	X			
	Lemon Shark	*Negaprion brevirostris*	*Neg bre*	VU	Dec	X			
	Atlantic Weasel Shark	*Paragaleus pectoralis*	*Par pec*	EN	Dec	X	X		
	Milk Shark	*Rhizoprionodon acutus*	*Rhi acu*	VU	Dec	X	X	X	X
	Scalloped Hammerhead	*Sphyrna lewini*	*Sph lew*	CR	Dec	X	X	X	X
	Great Hammerhead	*Sphyrna mokarran*	*Sph mok*	CR	Dec	X			
	Smooth Hammerhead	*Sphyrna zygaena*	*Sph zyg*	VU	Dec	X	X		
Rays	Duckbill Eagle Ray	*Aetomylaeus bovinus*	*Aet bov*	CR	Dec	X	X	X	
	Brown Stingray	*Bathytoshia lata*	*Bat lat*	VU	Dec	X		X	
	Marbled Stingray	*Dasyatis marmorata*	*Das mar*	NT	Dec	X	X		
	Common Stingray	*Dasyatis pastinica*	*Das pas*	VU	Dec	X			
	Daisy Whipray	*Fontitrygon margarita*	*Fon mar*	VU	Dec	X	X	X	X
	Pearl Whipray	*Fontitrygon margaritella*	*Fon mar*	NT	Dec	X	X	X	X
	Thorny Whipray	*Fontitrygon ukpam*	*Fon ukp*	CR	Dec			X	X
	Blackchin Guitarfish	*Glaucostegus cemiculus*	*Gla cem*	CR	Dec	X	X	X	X
	Spiny Butterfly Ray	*Gymnura altavela*	*Gym alt*	EN	Dec	X	X		
	Seret's Butterfly Ray	*Gymnura sereti*	*Gym ser*	EN	Dec	X		X	X
	Smalltooth Stingray	*Hypanus rudis*	*Hyp rud*	CR	Dec			X	X
	Common Eagle Ray	*Myliobatis aquila*	*Myl aqu*	CR	Dec	X			
	African Brown Skate	*Raja parva*	*Raj par*	NT	Dec	X			
	Whitespotted Guitarfish	*Rhinobatos albomaculatus*	*Rhi alb*	CR	Dec	X			
	Spineback Guitarfish	*Rhinobatos irvinei*	*Rhi irv*	CR	Dec		X		
	Common Guitarfish	*Rhinobatos rhinobatos*	*Rhi rhi*	CR	Dec	X	X	X	
	Lusitanian Cownose Ray	*Rhinoptera marginata*	*Rhi mar*	CR	Dec	X	X	X	X
	African Wedgefish	*Rhynchobatus luebberti*	*Rhy lue*	CR	Dec	X			
	Round Stingray	*Taeniurops grabatus*	*Tae gra*	NT	Dec			X	

Appendix 8.2 - Banc d'Arguin intertidal presence of mesopredators

We used tracking and fisheries data to determine the presence of shorebirds and elasmobranchs in different elevational zones in the Banc d'Arguin. We then determined the probability of presence of each species group in the subtidal, intertidal and supratidal zones using generalized additive mixed models. The observed presence (Obs.) of shorebirds was highest in the intertidal (87.3%) and supratidal zones (77.8%), which is supported by the model predictions with a mean probability (Prob.) of 76.2 ± 3.4% and 77.8 ± 3.4% (mean ± s.e.) respectively. For sharks and rays, the highest observed presence was in the subtidal (27.8% and 38.8%, respectively) and intertidal zones (19.3% and 27.3%), which was also supported by model predictions (subtidal: 40.9 ± 4.9% and 47.0 ± 6.0%, intertidal 23.9 ± 3.7% and 34.5 ± 5.0% for sharks and rays respectively).

	Subtidal		**Intertidal**		**Supratidal**	
Species Group	Obs. N (%)	Prob. (%) (mean ± s.e.)	Obs. N (%)	Prob. (%) (mean ± s.e.)	Obs. N (%)	Prob. (%) (mean ± s.e.)
Shorebirds	428 (48.4)	11.3 ± 2.1	1,967 (87.3)	76.2 ± 3.4	3,567 (78.6)	77.8 ± 3.4
Sharks	222 (27.8)	40.9 ± 4.9	119 (19.3)	23.9 ± 3.7	-	0.4 ± 0.2
Rays	310 (38.8)	47.0 ± 6.0	168 (27.3)	34.5 ± 5.0	-	0.2 ± 0.1

Smooth terms of all three species group generalized additive mixed models were significant. Elevation explained 34.4%, 10.4%, and 10.7% of the deviance for shorebirds, sharks and rays, respectively.

Species Group	**Smooth term**	**d.f.**	**X^2**	**p-value**	**Deviance explained (%)**
Shorebirds	Elevation	5.97	908.17	<0.001	34.38
Sharks	Elevation	4.88	60.01	<0.001	10.40
Rays	Elevation	5.79	52.64	<0.001	10.68

Appendix 8.3 - Prey group details

Overview of prey group sample sizes. Sample sizes based on sampling efforts for this study are shown with additional stable isotope information supplemented with other published studies from the region.

Area	Species group		This study	Other studies	Total	Reference(s)
Banc d'Arguin	Bivalves	Bivalves	175	27	202	[2,1]
	Cephalopods	Cephalopods		58	58	[2,3]
	Crustaceans	Crabs	66	9	75	[1]
		Other crustaceans	9	5	14	[1]
		Shrimps	4	3	7	[1]
	Detritus	Detritus	3		3	
	Gastropods	Large gastropods	14	19	33	[2]
		Medium gastropods	13	18	31	[2]
		Small gastropods	1	7	8	[2,1]
	Polychaetes	Polychaetes (deposit)	20	7	27	[2]
		Polychaetes (filter)	4		4	
		Polychaetes (predatory)	10	18	28	[2]
	Producers	Algae	13		13	
		Microphytobenthos	7	3	10	[1]
		POM	1	6	7	[1,2]
		Seagrass	15		15	
	Sediment	Sediment	23		23	
	Teleosts	Benthopelagic teleosts	83	66	149	[2]
		Demersal teleosts	106	116	222	[2]
		Pelagic teleosts	21	15	36	[2]
	Zooplankton	Zooplankton	2	2	4	[1]
Bijagós Archipelago	Bivalves	Bivalves	83	21	104	[1]
	Cephalopods	Cephalopods		53	53	[3]
	Crustaceans	Crabs	113	11	124	[1]
		Hermit crabs	23		23	
		Mud shrimps	23	2	25	[1]

		Shrimps	22	3	25	[1]
	Detritus	Detritus	30		30	
	Gastropods	Small gastropods	6		6	
	Polychaetes	Polychaetes	12		12	
		Polychaetes (deposit)	20	10	30	[1]
		Polychaetes (filter)	10		10	
		Polychaetes (predatory)	23	12	35	[1]
	Producers	Algae	15		15	
		Mangrove	16		16	
		Microphytobenthos	21	4	25	[1]
		POM	4	4	8	[1]
	Sediment	Sediment	11		11	
	Teleosts	Benthopelagic teleosts	113		113	
		Demersal teleosts	103		103	
		Fish larvae and juveniles	20		20	
		Pelagic teleosts	54		54	
	Zooplankton	Zooplankton	3	1	4	[1]

[1.] Catry et al. (2016), [2.] Carlier et al. (2015) & Petersen et al. (2016), [3.] Merten et al. (2017).

Appendix 8.4 - Mesopredator niche characteristics

Overview of sampled (meso)predators from the Banc d'Arguin and the Bijagós Archipelago. For each species, the sample size (n), size range (total length for sharks, disc width for rays; in centimeters), Bayesian Standard Ellipse Area (SEA_b; i.e., total niche space occupied by a species), Eccentricity (E: values close to 0 indicate variation in niche space is driven by both axes/isotopes, values close to 1 indicate one axis/isotope determines variation), Theta (θ: values close to 0 indicate that variation is driven by the x-axis/13C, values close to -90/90 indicate variation is driven by the y-axis/d15N), trophic position (TP) and alpha (α: ratio between 0 and 1 indicating the relative contribution of benthic primary producers compared to pelagic producers) are given. Values in parentheses indicate the 95% credible interval of the Bayesian posterior estimates for SEA_b, TP and α.

Area	Group	Species	n	Size range (cm)	SEA_b	E	θ	TP	α
Banc d'Arguin	Sharks	*Ginglymostoma cirratum*	8	109-181	9.7 (5.2-25.9)	0.98	-36.01	4.3 (3.9-4.8)	0.3 (0.1-0.6)
		Leptocharias smithii	37	57-78	3.2 (2.3- 4.4)	0.93	-61.91	4.1 (4.0-4.3)	0.1 (0.0-0.1)
		Paragaleus pectoralis	25	66-129	7.4 (4.7-10.7)	0.91	-34.14	4.3 (4.1-4.4)	0.2 (0.1-0.3)
		Rhizoprionodon acutus	30	28-107	4.9 (3.2- 6.9)	0.91	-52.16	4.6 (4.5-4.7)	0.1 (0.1-0.2)
		Sphyrna lewini	13	80-126	1.6 (0.8- 2.5)	0.71	67.41	5.1 (4.9-5.2)	0.0 (0.0-0.1)
		Sphyrna zygaena	28	73-160	2.9 (1.9- 4.0)	0.74	-67.80	4.3 (4.2-4.4)	0.0 (0.0-0.1)
	Rays	*Aetomylaeus bovinus*	24	40-135	5.8 (3.6- 8.4)	0.89	-39.37	3.6 (3.4-3.7)	0.1 (0.1-0.2)
		Dasyatis marmorata	20	26-86	8.6 (5.0-12.5)	0.44	-60.05	3.8 (3.6-4.0)	0.1 (0.0-0.2)
		Dasyatis sp.	27	38-139	8.9 (5.7-12.7)	0.93	-65.88	3.5 (3.3-3.7)	0.3 (0.2-0.4)
		Fontitrygon margarita	24	22-39	6.3 (3.9- 9.3)	0.86	-34.92	3.5 (2.9-4.0)	0.2 (0.0-0.4)
		Fontitrygon margaritella	5	25-31	2.4 (1.7-12.6)	0.99	-50.75	3.4 (3.3-3.5)	0.2 (0.1-0.3)
		Glaucostegus cemiculus	47	18-60	8.6 (6.3-11.3)	0.91	-55.55	3.7 (3.6-3.9)	0.3 (0.2-0.4)
		Gymnura altavela	21	48-157	5.1 (3.1- 7.5)	0.90	-46.12	4.3 (4.2-4.5)	0.1 (0.0-0.2)
		Rhinobatos irvinei	15	20-35	3.9 (2.1- 6.1)	0.81	-50.94	3.6 (3.4-3.8)	0.3 (0.2-0.3)
		Rhinobatos rhinobatos	11	19-46	5.9 (3.2-11.8)	0.97	-37.57	3.8 (3.6-4.1)	0.2 (0.1-0.4)
		Rhinoptera marginata	16	60-83	3.0 (1.7- 4.7)	0.91	-64.95	4.0 (3.8-4.1)	0.0 (0.0-0.1)
	Waders	*Calidris canutus*	181		10.1 (8.6-11.5)	0.89	4.84	3.0 (2.9-3.1)	0.0 (0.0-0.1)
		Calidris ferruginea	8		17.7 (6.5-36.8)	0.99	10.45	3.0 (2.5-3.4)	0.3 (0.0-0.8)
		Charadrius hiaticula	9		6.1 (3.6-15.0)	0.98	30.82	3.2 (2.8-3.6)	0.4 (0.1-0.7)
		Haematopus ostralegus	6		1.6 (0.5- 3.2)	0.96	-14.88	3.5 (3.3-3.7)	0.1 (0.0-0.2)
		Limosa lapponica	25		32.4 (19.3-45.5)	0.70	37.90	3.4 (3.1-3.8)	0.1 (0.0-0.3)
		Numenius phaeopus	19		3.2 (1.8- 4.7)	0.91	3.63	3.6 (3.4-3.7)	0.2 (0.1-0.3)
		Pluvialis squatarola	22		21.9 (13.1-31.4)	0.81	22.89	3.2 (2.9-3.5)	0.4 (0.1-0.6)
Bijagós Archipelago	Sharks	*Carcharhinus leucas*	6	83-122	2.1 (1.0- 6.4)	0.98	-43.07	3.9 (3.6-4.3)	0.7 (0.4-0.9)
		Carcharhinus limbatus	24	62-149	1.4 (0.8- 1.9)	0.66	3.17	4.5 (4.2-4.8)	0.5 (0.3-0.7)
		Ginglymostoma cirratum	5	123-190	2.2 (0.6- 4.1)	0.90	9.29	4.6 (4.3-4.9)	0.6 (0.3-0.8)
		Rhizoprionodon acutus	35	40-106	1.2 (0.8- 1.6)	0.75	-75.35	4.3 (4.0-4.7)	0.4 (0.2-0.6)
		Sphyrna lewini	40	44-198	2.3 (1.6- 3.1)	0.93	74.58	4.5 (4.2-4.8)	0.5 (0.3-0.7)
	Rays	*Fontitrygon margarita*	58	12-84	5.2 (3.9- 6.6)	0.84	-42.88	3.5 (3.2-3.8)	0.7 (0.4-1.0)
		Fontitrygon margaritella	161	12-43	7.6 (6.5- 8.8)	0.60	-1.54	3.7 (3.3-3.9)	0.8 (0.5-1.0)
		Fontitrygon ukpam	5	39-58	1.3 (1.9-16.1)	1.00	25.72	2.9 (2.4-3.4)	0.3 (0.1-0.7)
		Glaucostegus cemiculus	141	11-88	6.2 (5.1- 7.2)	0.63	-20.99	3.9 (3.7-4.1)	0.8 (0.5-0.9)
		Gymnura sereti	23	29-74	7.2 (4.4-10.2)	0.85	13.03	3.9 (3.7-4.2)	0.7 (0.4-0.9)
		Hypanus rudis	9	55-88	10.5 (3.9-18.4)	0.90	16.90	3.7 (3.4-4.1)	0.7 (0.4-0.9)
		Rhinoptera marginata	25	32-82	4.4 (2.8- 6.3)	0.70	-19.09	3.5 (3.2-3.7)	0.7 (0.4-0.9)
	Waders	*Actitis hypoleucos*	10		4.2 (1.9- 7.3)	0.97	12.80	3.2 (2.8-3.6)	0.5 (0.1-0.8)
		Arenaria interpres	10		1.5 (0.8- 3.0)	0.96	-28.15	3.8 (3.5-4.2)	0.3 (0.0-0.5)
		Calidris alba	9		2.2 (0.9- 3.9)	0.94	-14.16	3.4 (3.1-3.6)	0.9 (0.5-1.0)
		Calidris canutus	10		1.4 (0.7- 2.3)	0.94	-4.50	3.0 (2.7-3.4)	0.3 (0.1-0.6)
		Calidris ferruginea	10		4.1 (1.8- 7.0)	0.85	-65.20	3.4 (3.1-3.8)	0.9 (0.4-1.0)
		Charadrius hiaticula	10		1.8 (0.8- 3.0)	0.63	33.85	3.4 (3.2-3.6)	0.8 (0.4-0.9)
		Limosa lapponica	6		4.5 (1.5- 9.2)	0.90	-31.53	3.4 (3.0-3.8)	0.7 (0.2-1.0)
		Numenius phaeopus	6		22.4 (7.4-47.4)	0.94	24.84	2.3 (2.0-2.9)	0.4 (0.0-0.9)
		Pluvialis squatarola	10		1.6 (0.9- 3.6)	0.97	-49.14	3.3 (3.0-3.6)	0.9 (0.5-1.0)
		Tringa nebularia	8		4.1 (1.5- 7.3)	0.89	6.88	3.8 (3.4-4.2)	0.3 (0.0-0.6)
		Tringa totanus	10		3.6 (1.6- 6.1)	0.91	18.17	3.3 (3.0-3.7)	0.7 (0.2-0.9)

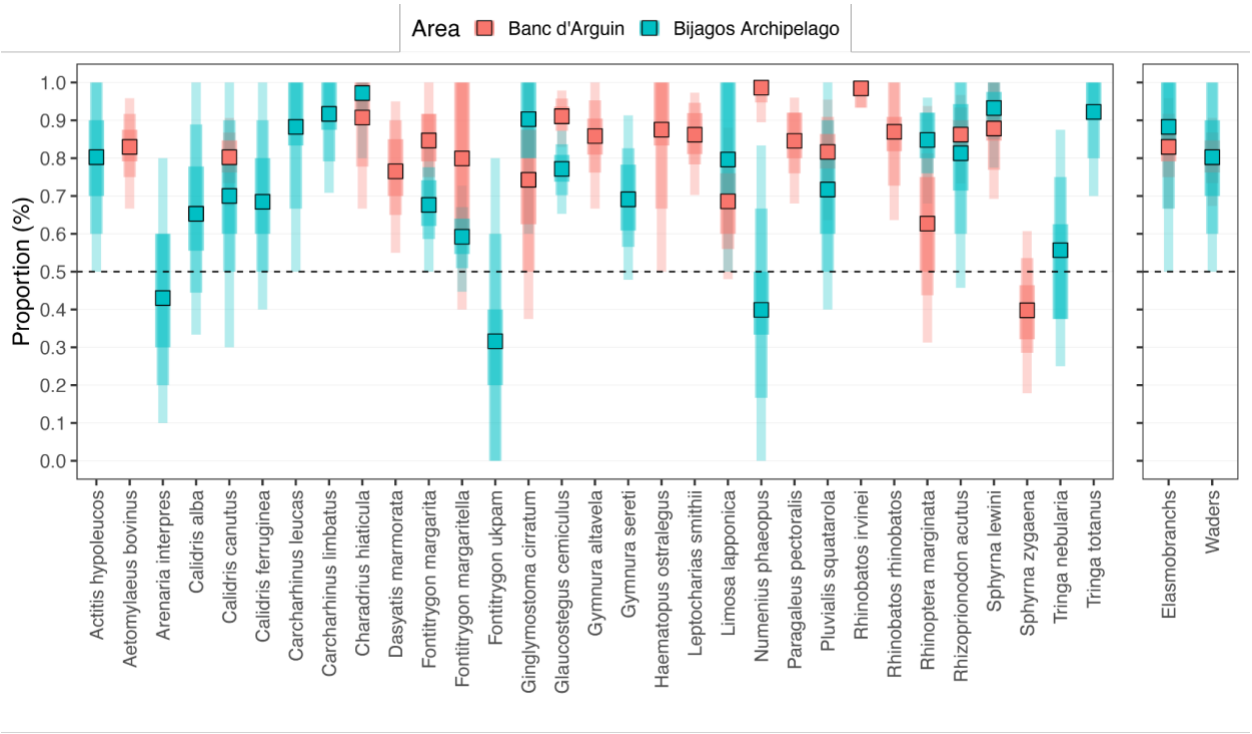
Appendix 8.5 - Mixing model details

Gelman-Rubin diagnostics for convergence for all mesopredator mixing models. We ran each model with chain lengths of 100,000, 300,000, 1,000,000, and 3,000,000 iterations and determined the proportion of variables with a Gelman-Rubin (GR) diagnostic of >1.1 (Phillips *et al.* 2014). A value of 0.00 means total convergence of the mixing model as all variables are GR <1.1. We used the model with a chain length of 3,000,000 iterations as all species models converged for both areas. Gray cells indicate the prey species of which species groups were included in the model for each mesopredator.

		Markov Chain length (x100.000)				Polychaetes	Bivalves	Gastropods	Crustaceans	Demersal teleosts	Benthopelagic teleosts	Cephalopods	Stingrays	Benthopelagic rays	Guitarfish	Sharks
Area	**Species**	**1**	**3**	**10**	**30**											
Banc d'Arguin	*Aetomylaeus bovinus*	2.08	4.17	0.00	0.00											
	Calidris canutus	6.93	1.98	0.00	0.00											
	Charadrius hiaticula	0.00	0.00	0.00	0.00											
	Dasyatis marmorata	0.00	0.00	0.00	0.00											
	Fontitrygon margarita	6.38	2.13	0.00	0.00											
	Fontitrygon margaritella	0.00	0.00	0.00	0.00											
	Ginglymostoma cirratum	2.22	2.22	0.00	0.00											
	Glaucostegus cemiculus	5.48	1.37	0.00	0.00											
	Gymnura altavela	4.17	0.00	0.00	0.00											
	Haematopus ostralegus	0.00	0.00	0.00	0.00											
	Leptocharias smithii	24.69	18.52	2.47	0.00											
	Limosa lapponica	0.00	0.00	0.00	0.00											
	Numenius phaeopus	7.50	2.50	0.00	0.00											
	Paragaleus pectoralis	14.49	2.90	1.45	0.00											
	Pluvialis squatarola	0.00	0.00	0.00	0.00											
	Rhinobatos irvinei	4.88	0.00	0.00	0.00											
	Rhinobatos rhinobatos	0.00	0.00	0.00	0.00											
	Rhinoptera marginata	10.00	5.00	2.50	0.00											
	Rhizoprionodon acutus	12.68	4.23	1.41	0.00											
	Sphyrna lewini	20.00	14.55	0.00	0.00											
	Sphyrna zygaena	30.00	31.43	7.14	0.00											
Bijagos Archipelago	*Actitis hypoleucos*	0.00	0.00	0.00	0.00											
	Arenaria interpres	9.38	3.12	0.00	0.00											
	Calidris alba	0.00	0.00	0.00	0.00											
	Calidris canutus	0.00	6.25	0.00	0.00											
	Calidris ferruginea	0.00	0.00	0.00	0.00											
	Carcharhinus leucas	2.50	2.50	0.00	0.00											
	Carcharhinus limbatus	14.04	3.51	0.00	0.00											
	Charadrius hiaticula	0.00	0.00	0.00	0.00											
	Fontitrygon margarita	2.53	2.53	0.00	0.00											
	Fontitrygon margaritella	3.30	2.75	0.00	0.00											
	Fontitrygon ukpam	0.00	0.00	0.00	0.00											
	Ginglymostoma cirratum	8.33	2.78	0.00	0.00											
	Glaucostegus cemiculus	3.64	1.21	0.00	0.00											
	Gymnura sereti	0.00	0.00	0.00	0.00											
	Limosa lapponica	0.00	0.00	0.00	0.00											
	Numenius phaeopus	0.00	0.00	0.00	0.00											
	Pluvialis squatarola	0.00	0.00	0.00	0.00											
	Rhinoptera marginata	0.00	0.00	0.00	0.00											
	Rhizoprionodon acutus	19.12	23.53	1.47	0.00											
	Sphyrna lewini	12.16	5.41	0.00	0.00											
	Tringa nebularia	0.00	0.00	0.00	0.00											
	Tringa totanus	0.00	0.00	0.00	0.00											

Appendix 8.6 - Coverage of predator isotopic space by potential prey

To determine if the food web in each study area was sufficiently sampled for each predator species (i.e., if the sampled prey species covered the TDF-corrected niche space of the predator; Stock *et al.* 2018), we determined the coverage of predator isotopic tracer values by the isotopic space of selected prey. For this, we used 1,000 Monte Carlo iterations of the convex hull between the means of predator isotopic values and determined the coverage of resampled predator isotopic values for each iteration. We then determined if most predator tracer values (>50%) were covered by the isotopic space of prey species as input to the mixing model. This indicated that the means of *Arenaria interpres*, *Fontitrygon ukpam*, *Numenius phaeopus* in the Bijagós Archipelago and *Sphyrna zygaena* in the Banc d'Arguin were below 50%. As their 95% credible intervals were not different from 50% (i.e., included 50% coverage), we still included these species in the mixing model results but indicated their uncertainty with an asterisk (*) in Figure 8.4.



Appendix 8.7 - Trophic Discrimination Factors

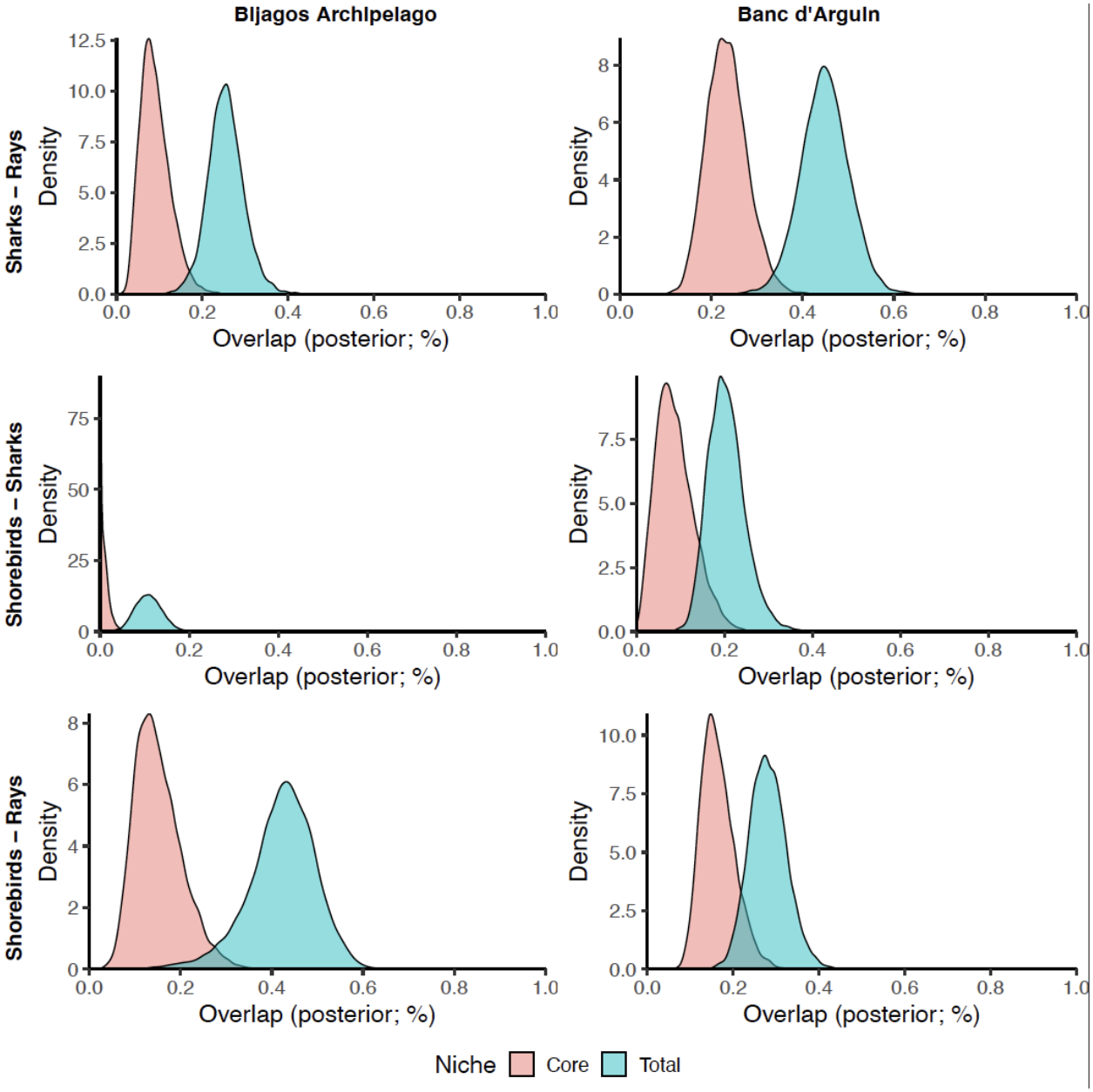
For sharks and rays, three primary studies describing different Trophic Discrimination Factors (TDFs) are often cited in studies utilizing stable isotope analysis. Kim *et al.* (2011), Caut *et al.* (2009, and Hussey *et al.* (2010) describe TDFs for ^{13}C and ^{15}N in muscle tissue based on (semi-)controlled feeding studies. The former two studies are based on relatively small shark species, whereas the latter is based on two larger shark species. Hence, the former two are often used in stable isotope analysis studies to study small-bodied sharks, early life stages, and rays (see table). For this reason, we used these TDFs to determine the trophic position (Appendix 8.9) of sharks and rays in this study and also used these TDFs for the isotopic mixing models (Appendix 8.11). We do, however, show the influence of other TDFs and combinations of TDFs on the posterior estimates of trophic position (Supplementary Information 7). For shorebirds, TDFs of a controlled feeding study of red knots (*Calidris canutus*) were available. As this is one of the focal species of this study, we used the TDFs described by Oortwijn *et al.* 2023.

Species	**Reference**	**$\Delta^{13}C$ (SD; ‰)**	**$\Delta^{15}N$ (SD; ‰)**	**Used for (example references):**	**This study (Y/N)**
Triakis semifasciata	Kim *et al.* 2011	1.7 (0.5)	3.7 (0.4)	Sharks (multi-species)[1,3] Small/juvenile sharks[2,3] Stingrays[3,4]	Y
Scyliorhinus canicula	Caut *et al.* 2009	0.8 (0.1)	2.8 (0.1)	Sharks (multi-species)[1] Small/juvenile sharks[5]	Y
Carcharias taurus *Negaprion brevirostris*	Hussey *et al.* 2010	0.9 (0.3)	2.3 (0.2)	Sharks (multi-species)[1] Large-bodied/adult sharks[6,7]	N
Calidris canutus	Oortwijn *et al.* 2023	2.9 (0.1)	3.3 (0.3)	Shorebirds	Y

[1.] Bird, C. S., *et al*. (2018). *Nature Ecology & Evolution*. https://doi.org/10.1038/s41559-017-0432-z
[2.] Carlisle, A. B., *et al.* (2021). *Scientific Reports*. https://doi.org/10.1038/s41598-021-89903-z
[3.] Tilley, A., *et al.* (2013). *PLoS ONE*. https://doi.org/10.1371/journal.pone.0079560
[4.] Martins, A. P. B., *et al.* (2022). *Marine and Freshwater Research*. https://doi.org/10.1071/mf21292
[5.] Caut, S., *et al.* (2013). *Marine Ecology Progress Series*. https://doi.org/10.3354/meps10478
[6.] Raoult, V., *et al.* (2019). *Journal of Fish Biology*. https://doi.org/10.1111/jfb.14160
[7.] Hussey, N., *et al.* (2012). *Global Perspectives on the Biology and Life History of the White Shark*. https://doi.org/10.1201/b11532-5

Appendix 8.8 - Species group niche space overlap

The posterior distributions for group overlap (Figures 8.2C and 8.3C) are based on mean species-pair niche overlap. Generally, overlap in the core niche (red: 40% of individuals of each species) is highest between shorebirds and rays. However, the overlap of total niche space (blue: 95% of individuals of each species) is higher between sharks and rays in the Banc d'Arguin.

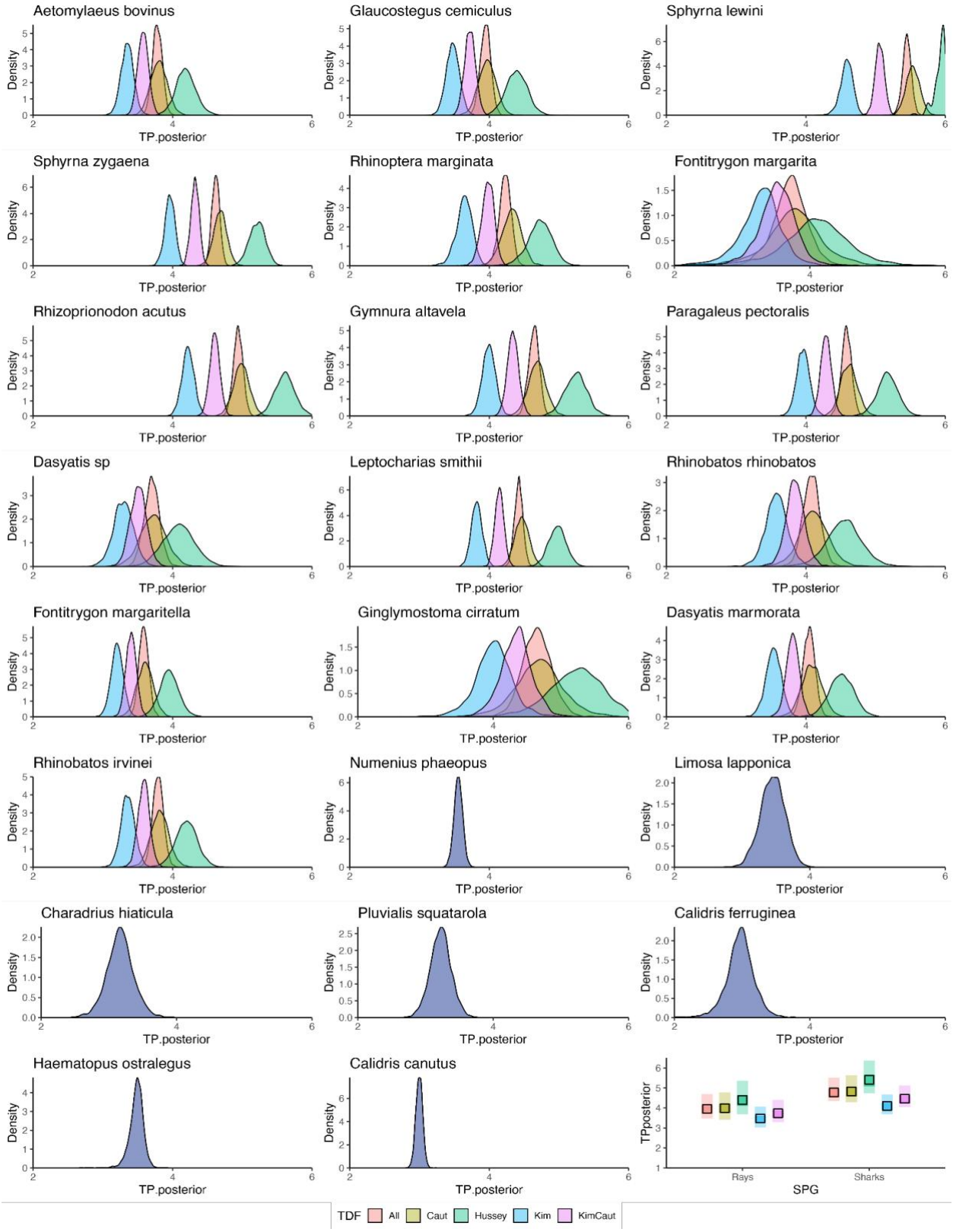


Appendix 8.9 - Trophic position and alpha estimates

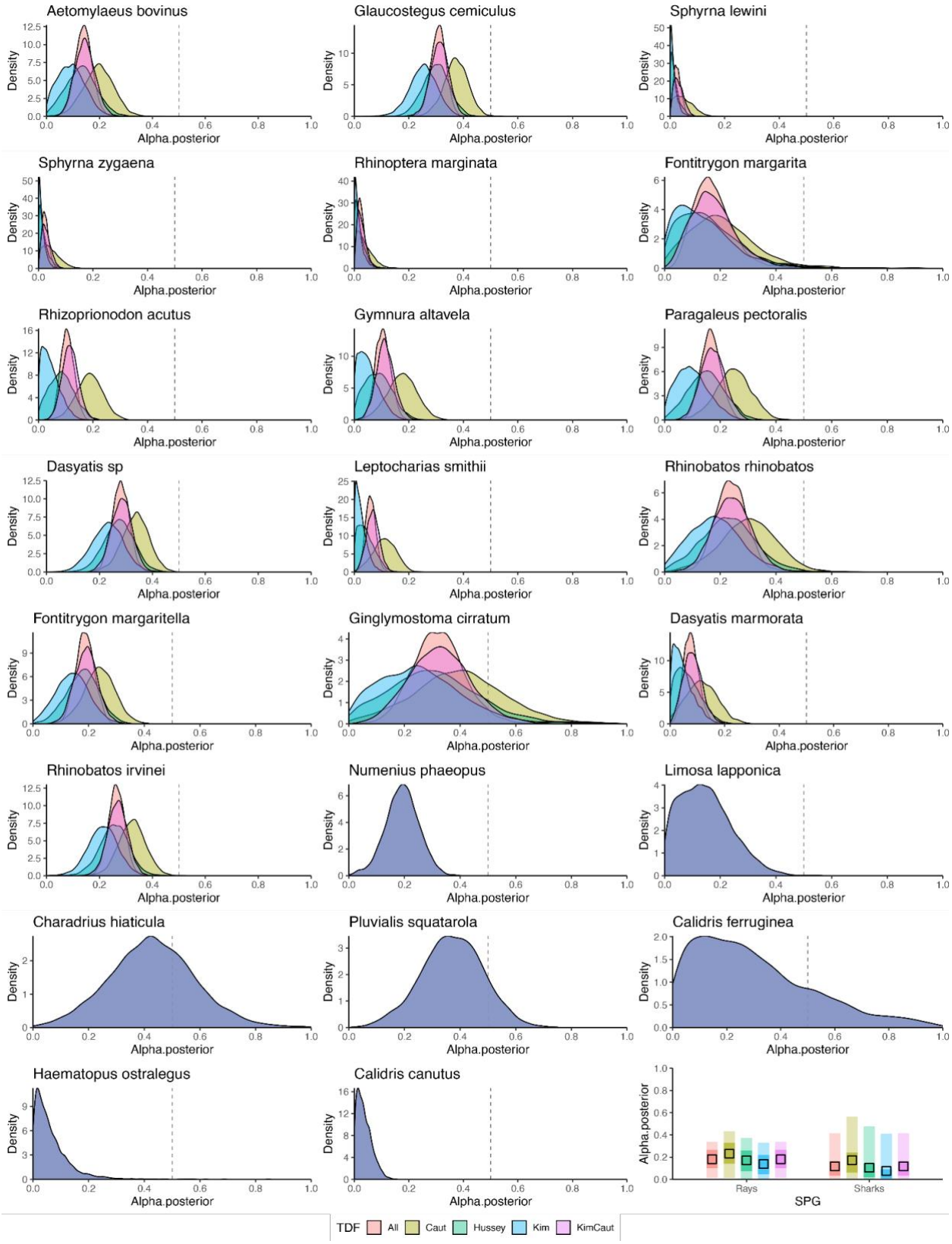
The estimates for trophic position (TP) and alpha (α) based on the trophic discrimination factors (TDFs) of Kim et al. (2011) and Caut *et al.* (2009) are provided. We compared the posterior distributions of the trophic position and α based on different (combinations of) TDFs (Appendix 8.7) for each species group and in each study area. For sharks and rays, these are TDFs described by Kim *et al.* (2011), Caut *et al.* (2009), and Hussey *et al.* (2010), and a combination of TDFs described for small-bodied species (Kim et al. 2011 and Caut *et al.* 2009; used in this study) and all TDFs. For shorebirds, TDFs of a controlled feeding study of red knots (*Calidris canutus*) were available. As this is one of the focal species of this study, we used the TDFs described by Oortwijn *et al.* 2023.

The posterior estimates of trophic niches for sharks and rays differed slightly with different TDFs used, with the TDFs based on larger-bodied sharks (described by Hussey *et al.* 2010) resulting in higher trophic position estimates compared to the TDF-combination used in this study (TDFs described by Kim *et al.* 2010 and Caut *et al.* 2009; Appendix 8.7). The posterior alpha (α) estimates differed less across different TDFs, with no influence on the analysis outcomes.

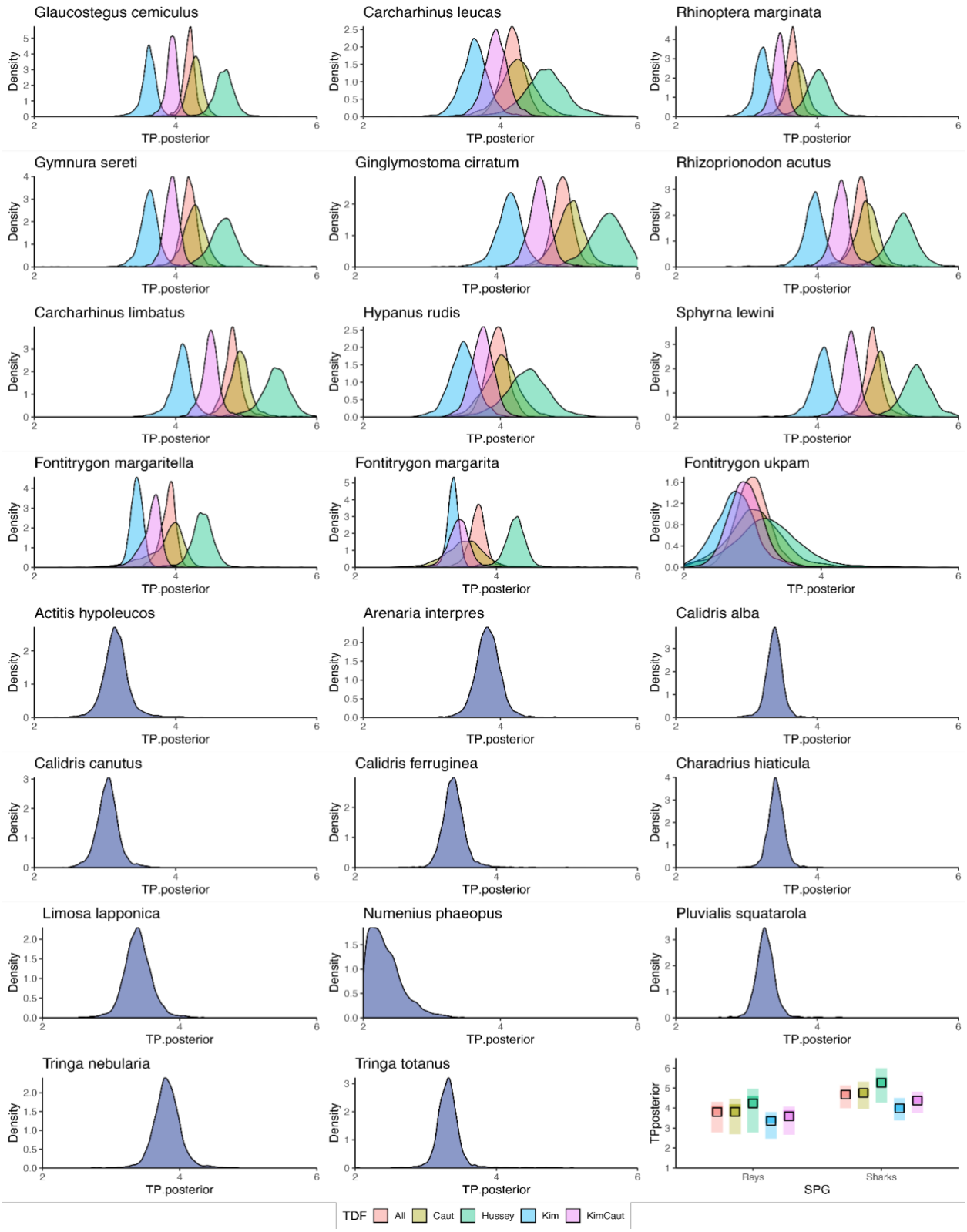
Banc d'Arguin: *posterior distribution of trophic position estimates*



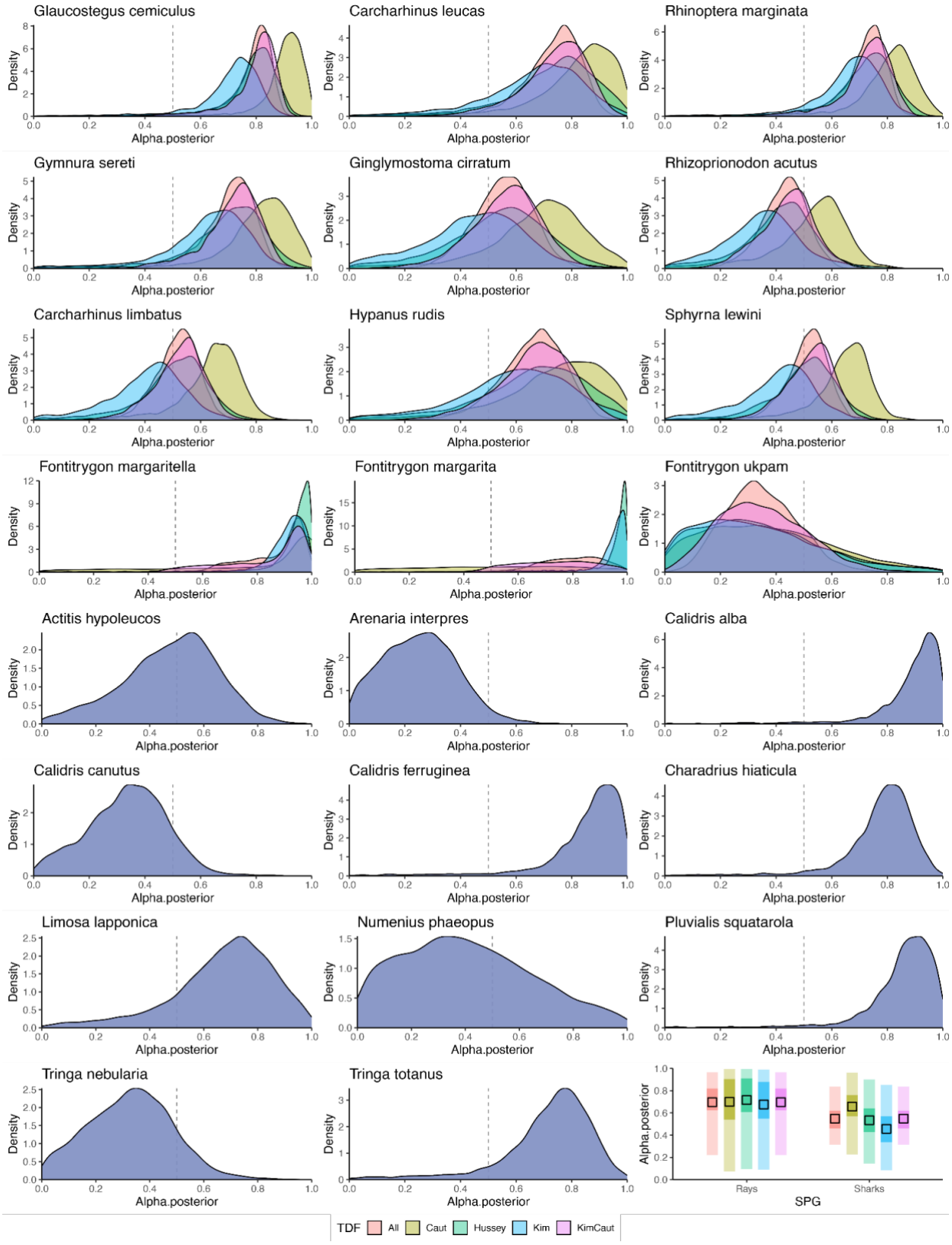
Banc d'Arguin: *posterior distribution of alpha (α) estimates*



Bijagós Archipelago: *posterior distribution of trophic position estimates*



Bijagós Archipelago: *posterior distribution of alpha (α) estimates*



Appendix 8.10 - Species niche space overlap with species group

The overlap between a species of shorebird, shark and ray and other species groups was calculated to determine which other species groups occupied most of the niche space of the species. Here, we show the posterior distribution (mean and 95% credible intervals; black dot and red bar, respectively) of this overlap for each species in the two study areas. We show the proportion of the total (i.e., 95% of niche space) and core (i.e., 40% of niche space) niche space of that species that overlapped with other species of shorebird, shark or ray.

Banc d'Arguin

	Total (95%)			Core (40%)		
Species	**Sharks**	**Rays**	**Shorebirds**	**Sharks**	**Rays**	**Shorebirds**
Aetomylaeus bovinus	0.6 (0.4-0.8)	1.0 (0.9-1.0)	0.9 (0.6-1.0)	0.0 (0.0-0.2)	1.0 (0.8-1.0)	0.4 (0.0-0.8)
Calidris canutus	0.5 (0.4-0.6)	0.7 (0.6-0.8)	1.0 (0.9-1.0)	0.1 (0.0-0.2)	0.6 (0.5-0.8)	0.7 (0.2-1.0)
Calidris ferruginea	0.3 (0.0-0.4)	0.3 (0.1-0.6)	0.7 (0.3-1.0)	0.1 (0.0-0.3)	0.2 (0.0-0.5)	0.6 (0.0-1.0)
Charadrius hiaticula	0.3 (0.1-0.5)	0.4 (0.2-0.7)	1.0 (0.8-1.0)	0.0 (0.0-0.3)	0.0 (0.0-0.1)	0.9 (0.4-1.0)
Dasyatis marmorata	0.6 (0.5-0.8)	0.9 (0.7-1.0)	0.8 (0.5-1.0)	0.3 (0.0-0.6)	0.9 (0.6-1.0)	0.2 (0.0-0.6)
Dasyatis sp.	0.6 (0.4-0.8)	0.9 (0.7-1.0)	0.9 (0.7-1.0)	0.1 (0.0-0.4)	0.9 (0.6-1.0)	0.6 (0.4-0.9)
Fontitrygon margarita	0.5 (0.3-0.7)	0.9 (0.8-1.0)	0.9 (0.7-1.0)	0.0 (0.0-0.1)	0.8 (0.5-1.0)	0.5 (0.1-0.9)
Fontitrygon margaritella	0.5 (0.0-1.0)	1.0 (0.7-1.0)	0.8 (0.5-1.0)	0.0 (0.0-0.0)	0.9 (0.5-1.0)	0.3 (0.0-0.9)
Ginglymostoma cirratum	0.6 (0.3-0.9)	0.6 (0.3-0.9)	0.8 (0.5-1.0)	0.4 (0.0-0.9)	0.2 (0.0-0.6)	0.5 (0.1-0.9)
Glaucostegus cemiculus	0.8 (0.6-0.9)	0.9 (0.8-1.0)	0.9 (0.7-1.0)	0.4 (0.1-0.7)	0.8 (0.6-1.0)	0.7 (0.4-1.0)
Gymnura altavela	1.0 (0.9-1.0)	0.9 (0.7-1.0)	0.8 (0.6-1.0)	0.9 (0.7-1.0)	0.4 (0.1-0.8)	0.2 (0.0-0.6)
Haematopus ostralegus	1.0 (0.7-1.0)	1.0 (0.9-1.0)	1.0 (1.0-1.0)	0.4 (0.0-0.9)	0.8 (0.1-1.0)	1.0 (0.7-1.0)
Leptocharias smithii	0.9 (0.8-1.0)	1.0 (0.9-1.0)	0.8 (0.6-1.0)	0.7 (0.3-1.0)	0.9 (0.6-1.0)	0.1 (0.0-0.5)
Limosa lapponica	0.3 (0.2-0.4)	0.4 (0.3-0.5)	0.8 (0.5-0.9)	0.1 (0.0-0.3)	0.3 (0.1-0.4)	0.7 (0.5-0.9)
Numenius phaeopus	0.6 (0.3-1.0)	0.6 (0.5-0.8)	1.0 (1.0-1.0)	0.2 (0.0-0.8)	0.0 (0.0-0.2)	1.0 (1.0-1.0)
Paragaleus pectoralis	0.9 (0.7-1.0)	0.8 (0.7-1.0)	0.8 (0.6-1.0)	0.7 (0.4-0.9)	0.7 (0.4-1.0)	0.3 (0.0-0.7)
Pluvialis squatarola	0.3 (0.1-0.4)	0.3 (0.2-0.5)	0.9 (0.7-1.0)	0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.7 (0.3-1.0)
Rhinobatos irvinei	0.7 (0.5-1.0)	1.0 (1.0-1.0)	1.0 (0.8-1.0)	0.1 (0.0-0.4)	1.0 (0.9-1.0)	0.7 (0.3-1.0)
Rhinobatos rhinobatos	0.8 (0.6-1.0)	0.9 (0.7-1.0)	0.9 (0.6-1.0)	0.5 (0.2-0.8)	0.9 (0.7-1.0)	0.6 (0.1-1.0)
Rhinoptera marginata	0.8 (0.6-1.0)	1.0 (0.9-1.0)	0.7 (0.4-1.0)	0.3 (0.0-0.7)	0.7 (0.3-1.0)	0.0 (0.0-0.4)
Rhizoprionodon acutus	0.9 (0.8-1.0)	0.8 (0.6-1.0)	0.8 (0.5-1.0)	0.8 (0.5-1.0)	0.3 (0.0-0.7)	0.1 (0.0-0.5)
Sphyrna lewini	0.9 (0.7-1.0)	0.6 (0.3-0.9)	0.6 (0.1-1.0)	0.4 (0.0-1.0)	0.0 (0.0-0.1)	0.0 (0.0-0.0)
Sphyrna zygaena	0.9 (0.8-1.0)	1.0 (1.0-1.0)	0.8 (0.4-1.0)	0.7 (0.3-1.0)	0.7 (0.4-1.0)	0.0 (0.0-0.4)

Bijagós Archipelago

	Total (95%)			Core (40%)		
Species	**Sharks**	**Rays**	**Shorebirds**	**Sharks**	**Rays**	**Shorebirds**
Actitis hypoleucos	0.2 (0.0-0.4)	0.9 (0.6-1.0)	0.8 (0.6-1.0)	0.0 (0.0-0.2)	0.8 (0.3-1.0)	0.3 (0.0-0.9)
Arenaria interpres	0.4 (0.2-0.6)	1.0 (0.9-1.0)	0.9 (0.6-1.0)	0.0 (0.0-0.2)	0.2 (0.0-0.9)	0.5 (0.0-1.0)
Calidris alba	0.0 (0.0-0.1)	0.5 (0.1-0.9)	0.9 (0.7-1.0)	0.0 (0.0-0.0)	0.0 (0.0-0.0)	0.7 (0.1-1.0)
Calidris canutus	0.3 (0.1-0.5)	1.0 (1.0-1.0)	0.9 (0.4-1.0)	0.0 (0.0-0.1)	1.0 (0.7-1.0)	0.3 (0.0-1.0)
Calidris ferruginea	0.1 (0.0-0.3)	0.6 (0.4-0.7)	0.8 (0.6-1.0)	0.0 (0.0-0.0)	0.0 (0.0-0.2)	0.7 (0.4-1.0)
Carcharhinus leucas	0.4 (0.2-0.7)	1.0 (0.7-1.0)	0.8 (0.5-1.0)	0.0 (0.0-0.3)	0.9 (0.6-1.0)	0.2 (0.0-0.7)
Carcharhinus limbatus	0.9 (0.8-1.0)	1.0 (0.9-1.0)	0.6 (0.1-1.0)	0.8 (0.6-1.0)	0.2 (0.0-0.9)	0.0 (0.0-0.0)
Charadrius hiaticula	0.1 (0.0-0.3)	0.8 (0.6-1.0)	1.0 (0.9-1.0)	0.0 (0.0-0.0)	0.0 (0.0-0.1)	0.9 (0.6-1.0)
Fontitrygon margarita	0.3 (0.2-0.5)	1.0 (0.9-1.0)	0.9 (0.7-1.0)	0.2 (0.0-0.4)	1.0 (0.9-1.0)	0.5 (0.2-0.9)
Fontitrygon margaritella	0.2 (0.2-0.4)	0.9 (0.7-1.0)	0.9 (0.8-1.0)	0.1 (0.0-0.2)	0.7 (0.5-0.9)	0.6 (0.3-0.9)
Fontitrygon ukpam	0.1 (0.0-0.3)	0.4 (0.0-0.9)	0.6 (0.0-1.0)	0.0 (0.0-0.1)	0.1 (0.0-0.6)	0.1 (0.0-0.9)
Ginglymostoma cirratum	0.8 (0.4-1.0)	0.9 (0.7-1.0)	0.6 (0.0-1.0)	0.6 (0.1-1.0)	0.2 (0.0-0.7)	0.0 (0.0-0.2)
Glaucostegus cemiculus	0.5 (0.4-0.6)	1.0 (0.9-1.0)	0.9 (0.6-1.0)	0.2 (0.1-0.4)	0.9 (0.8-1.0)	0.2 (0.0-0.7)
Gymnura sereti	0.4 (0.3-0.6)	0.9 (0.8-1.0)	0.8 (0.5-1.0)	0.2 (0.1-0.4)	0.9 (0.6-1.0)	0.2 (0.0-0.6)
Hypanus rudis	0.3 (0.2-0.5)	0.8 (0.5-1.0)	0.8 (0.5-1.0)	0.1 (0.0-0.3)	0.7 (0.1-1.0)	0.2 (0.0-0.7)
Limosa lapponica	0.1 (0.0-0.4)	0.8 (0.5-1.0)	0.9 (0.7-1.0)	0.0 (0.0-0.0)	0.2 (0.0-0.8)	0.8 (0.4-1.0)
Numenius phaeopus	0.1 (0.0-0.2)	0.4 (0.1-0.7)	0.2 (0.0-0.4)	0.0 (0.0-0.0)	0.1 (0.0-0.4)	0.0 (0.0-0.3)
Pluvialis squatarola	0.1 (0.0-0.4)	0.7 (0.5-0.9)	1.0 (0.8-1.0)	0.0 (0.0-0.0)	0.0 (0.0-0.3)	0.8 (0.4-1.0)
Rhinoptera marginata	0.3 (0.2-0.4)	1.0 (0.9-1.0)	0.9 (0.6-1.0)	0.0 (0.0-0.1)	0.8 (0.4-1.0)	0.3 (0.0-0.9)
Rhizoprionodon acutus	1.0 (0.8-1.0)	0.9 (0.8-1.0)	0.5 (0.0-1.0)	0.7 (0.4-1.0)	0.2 (0.0-0.9)	0.0 (0.0-0.0)
Sphyrna lewini	0.6 (0.5-0.8)	0.9 (0.7-1.0)	0.6 (0.2-1.0)	0.7 (0.5-0.9)	0.2 (0.0-0.7)	0.0 (0.0-0.1)
Tringa nebularia	0.3 (0.0-0.6)	0.9 (0.6-1.0)	0.8 (0.6-1.0)	0.0 (0.0-0.1)	0.2 (0.0-0.9)	0.3 (0.0-0.8)
Tringa totanus	0.1 (0.0-0.3)	0.8 (0.5-1.0)	0.9 (0.6-1.0)	0.0 (0.0-0.0)	0.2 (0.0-0.7)	0.7 (0.3-1.0)

Appendix 8.11 - Mixing model outcomes

We used the mixing models with Markov chain lengths of 3,000,000 iterations as final models (Appendix 8.5) with the trophic discrimination factors (TDFs) described by Kim *et al.* 2010 and Caut *et al.* 2009 (combined) for sharks and rays, and the TDFs for feathers of shorebirds described by Oortwijn *et al.* 2023. Sources (prey) were grouped *a posteriori* (e.g., Phillips *et al.* 2014) into main prey species groups (Appendix 8.3). For each of the mesopredator species in both study areas, we determined the posterior distribution of the proportion that a source contributes to the diet of that predator. The mean of these posterior distributions was reported in Figures 8.4. The following tables show the mean (black dot) and the 95%, 75% and 50% credible intervals (increasing bar size), respectively. The gray bar represents the scale from 0 to 1 (100% contribution), and the text indicates the mean with a 95% credible interval of the posterior distribution.

Based on these model posterior distributions, we also determined the specialization index (ε) for each predator, as described by Newsome *et al.* (2012). The table in this supplementary information shows the mean and 95% credible interval of the posterior distribution of the specialization index for each mesopredator in each study area (these are also included in Figure 8.4).

Banc d'Arguin

Species	Polychaetes	Bivalves	Gastropods	Crustaceans	Demersal teleosts	Benthopelagic teleosts	Cephalopods	Stingrays	Benthopelagic rays	Guitarfish	Sharks
Aetomylaeus bovinus	0.1 (0.0-0.3)	0.5 (0.4-0.7)	0.1 (0.0-0.4)	0.1 (0.0-0.2)	0.2 (0.0-0.3)						
Dasyatis marmorata	0.1 (0.0-0.3)	0.5 (0.3-0.7)	0.0 (0.0-0.1)	0.0 (0.0-0.1)	0.3 (0.2-0.4)						
Fontitrygon margarita	0.1 (0.0-0.4)	0.6 (0.4-0.7)	0.1 (0.0-0.2)	0.1 (0.0-0.2)	0.2 (0.1-0.3)						
Fontitrygon margaritella	0.2 (0.0-0.5)	0.4 (0.1-0.7)	0.1 (0.0-0.3)	0.1 (0.0-0.4)	0.2 (0.0-0.4)						
Ginglymostoma cirratum	0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.2 (0.0-0.4)	0.2 (0.0-0.5)	0.1 (0.0-0.3)	0.2 (0.0-0.5)			
Glaucostegus cemiculus	0.1 (0.0-0.3)	0.3 (0.1-0.4)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.1 (0.0-0.3)			0.4 (0.0-0.6)			
Gymnura altavela	0.1 (0.0-0.2)	0.2 (0.0-0.3)	0.1 (0.0-0.3)	0.0 (0.0-0.1)	0.2 (0.0-0.5)			0.4 (0.0-0.7)			
Leptocharias smithii	0.0 (0.0-0.1)	0.3 (0.1-0.4)	0.0 (0.0-0.2)	0.0 (0.0-0.1)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.2 (0.0-0.5)	0.2 (0.0-0.5)			
Rhinobatos irvinei	0.1 (0.0-0.4)	0.4 (0.2-0.5)	0.1 (0.0-0.2)	0.1 (0.0-0.2)	0.1 (0.0-0.3)			0.2 (0.0-0.4)			
Rhinobatos rhinobatos	0.1 (0.0-0.3)	0.3 (0.0-0.4)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.2 (0.0-0.4)			0.3 (0.0-0.6)			
Rhinoptera marginata	0.0 (0.0-0.2)	0.5 (0.4-0.6)	0.0 (0.0-0.2)	0.0 (0.0-0.1)	0.4 (0.3-0.5)						
Paragaleus pectoralis	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.1 (0.0-0.4)	0.2 (0.0-0.4)	0.2 (0.0-0.5)			
Rhizoprionodon acutus				0.1 (0.0-0.1)	0.1 (0.0-0.2)	0.1 (0.0-0.4)	0.3 (0.1-0.4)	0.2 (0.0-0.5)	0.1 (0.0-0.4)	0.1 (0.0-0.3)	0.1 (0.0-0.3)
Sphyrna lewini				0.0 (0.0-0.1)	0.2 (0.0-0.5)	0.1 (0.0-0.4)	0.3 (0.1-0.5)	0.1 (0.0-0.3)	0.1 (0.0-0.5)	0.1 (0.0-0.2)	0.1 (0.0-0.3)
Sphyrna zygaena				0.0 (0.0-0.1)	0.0 (0.0-0.1)	0.1 (0.0-0.3)	0.7 (0.2-0.9)	0.1 (0.0-0.2)	0.0 (0.0-0.1)	0.0 (0.0-0.1)	0.0 (0.0-0.1)
Calidris canutus	0.1 (0.0-0.3)	0.6 (0.4-0.9)	0.0 (0.0-0.1)	0.0 (0.0-0.1)	0.2 (0.0-0.4)						
Charadrius hiaticula	0.2 (0.0-0.7)	0.3 (0.0-0.6)	0.2 (0.0-0.5)	0.1 (0.0-0.4)	0.1 (0.0-0.3)						
Limosa lapponica	0.2 (0.0-0.6)	0.4 (0.1-0.7)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.2 (0.0-0.5)						
Numenius phaeopus	0.2 (0.0-0.5)	0.3 (0.1-0.5)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.3 (0.1-0.5)						
Pluvialis squatarola	0.3 (0.0-0.7)	0.3 (0.0-0.6)	0.2 (0.0-0.4)	0.1 (0.0-0.4)	0.1 (0.0-0.4)						
Haematopus ostralegus	0.1 (0.0-0.5)	0.4 (0.1-0.7)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.3 (0.1-0.5)						

Bijagós Archipelago

Species	Polychaetes	Bivalves	Gastropods	Crustaceans	Demersal teleosts	Benthopelagic teleosts	Cephalopods	Stingrays	Benthopelagic rays	Guitarfish	Sharks
Carcharhinus leucas				0.2 (0.0-0.5)	0.1 (0.0-0.4)	0.1 (0.0-0.3)	0.2 (0.0-0.5)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.1 (0.0-0.2)
Carcharhinus limbatus				0.1 (0.0-0.2)	0.1 (0.0-0.2)	0.2 (0.0-0.5)	0.2 (0.0-0.4)	0.1 (0.0-0.2)	0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.2 (0.0-0.4)
Fontitrygon margarita	0.1 (0.0-0.4)	0.2 (0.0-0.5)	0.1 (0.0-0.5)	0.1 (0.0-0.3)	0.4 (0.2-0.7)						
Fontitrygon margaritella	0.1 (0.0-0.4)	0.2 (0.0-0.4)	0.1 (0.0-0.4)	0.2 (0.0-0.5)	0.4 (0.1-0.6)						
Fontitrygon ukpam	0.2 (0.0-0.5)	0.2 (0.0-0.6)	0.2 (0.0-0.6)	0.3 (0.0-0.7)	0.1 (0.0-0.4)						
Ginglymostoma cirratum			0.1 (0.0-0.2)	0.1 (0.0-0.2)	0.2 (0.0-0.5)	0.4 (0.1-0.7)	0.1 (0.0-0.4)	0.2 (0.0-0.5)			
Glaucostegus cemiculus	0.2 (0.0-0.4)	0.2 (0.0-0.4)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.2 (0.0-0.5)			0.2 (0.0-0.4)			
Gymnura sereti	0.2 (0.0-0.5)	0.2 (0.0-0.4)	0.1 (0.0-0.3)	0.2 (0.0-0.4)	0.3 (0.0-0.5)			0.2 (0.0-0.4)			
Rhinoptera marginata	0.2 (0.0-0.5)	0.4 (0.0-0.7)	0.1 (0.0-0.4)	0.2 (0.0-0.5)	0.1 (0.0-0.4)						
Rhizoprionodon acutus				0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.3 (0.1-0.6)	0.2 (0.0-0.4)	0.1 (0.0-0.3)	0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.1 (0.0-0.3)
Sphyrna lewini				0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.2 (0.0-0.5)	0.2 (0.0-0.4)	0.1 (0.0-0.3)	0.1 (0.0-0.2)	0.1 (0.0-0.2)	0.2 (0.0-0.4)
Actitis hypoleucos	0.2 (0.0-0.6)	0.3 (0.0-0.6)	0.1 (0.0-0.4)	0.2 (0.0-0.6)	0.2 (0.0-0.5)						
Arenaria interpres	0.1 (0.0-0.4)	0.1 (0.0-0.4)	0.1 (0.0-0.3)	0.2 (0.0-0.5)	0.5 (0.1-0.7)						
Calidris alba	0.2 (0.0-0.5)	0.3 (0.0-0.6)	0.2 (0.0-0.5)	0.2 (0.0-0.6)	0.2 (0.0-0.5)						
Calidris canutus	0.1 (0.0-0.4)	0.3 (0.1-0.6)	0.1 (0.0-0.3)	0.4 (0.0-0.7)	0.2 (0.0-0.5)						
Calidris ferruginea	0.2 (0.0-0.5)	0.2 (0.0-0.6)	0.2 (0.0-0.5)	0.2 (0.0-0.5)	0.2 (0.0-0.6)						
Charadrius hiaticula	0.2 (0.0-0.6)	0.2 (0.0-0.5)	0.1 (0.0-0.4)	0.2 (0.0-0.5)	0.2 (0.0-0.5)						
Limosa lapponica	0.2 (0.0-0.6)	0.2 (0.0-0.6)	0.1 (0.0-0.4)	0.2 (0.0-0.5)	0.2 (0.0-0.5)						
Numenius phaeopus	0.1 (0.0-0.4)	0.4 (0.1-0.6)	0.2 (0.0-0.5)	0.2 (0.0-0.6)	0.1 (0.0-0.3)						
Pluvialis squatarola	0.2 (0.0-0.4)	0.4 (0.0-0.7)	0.2 (0.0-0.5)	0.2 (0.0-0.5)	0.2 (0.0-0.5)						
Tringa nebularia	0.2 (0.0-0.5)	0.1 (0.0-0.4)	0.1 (0.0-0.3)	0.2 (0.0-0.5)	0.4 (0.1-0.7)						
Tringa totanus	0.2 (0.0-0.6)	0.2 (0.0-0.6)	0.1 (0.0-0.4)	0.2 (0.0-0.6)	0.2 (0.0-0.4)						

Specialization indices (ε)

Species	Bijagós Archipelago	Banc d'Arguin
Actitis hypoleucos	0.4 (0.1-0.6)	
Aetomylaeus bovinus		0.5 (0.3-0.6)
Arenaria interpres	0.5 (0.2-0.7)	
Calidris alba	0.4 (0.2-0.6)	
Calidris canutus	0.4 (0.2-0.7)	0.6 (0.3-0.9)
Calidris ferruginea	0.4 (0.2-0.6)	
Carcharhinus leucas	0.3 (0.2-0.5)	
Carcharhinus limbatus	0.3 (0.2-0.5)	
Charadrius hiaticula	0.3 (0.1-0.6)	0.4 (0.2-0.6)
Dasyatis marmorata		0.5 (0.3-0.6)
Fontitrygon margarita	0.4 (0.2-0.6)	0.5 (0.3-0.7)
Fontitrygon margaritella	0.4 (0.2-0.6)	0.4 (0.2-0.7)
Fontitrygon ukpam	0.4 (0.2-0.7)	
Ginglymostoma cirratum	0.4 (0.2-0.6)	0.3 (0.2-0.5)
Glaucostegus cemiculus	0.3 (0.2-0.5)	0.4 (0.2-0.5)
Gymnura altavela		0.4 (0.2-0.7)
Gymnura sereti	0.3 (0.2-0.5)	
Haematopus ostralegus		0.4 (0.2-0.6)
Leptocharias smithii		0.4 (0.3-0.5)
Limosa lapponica	0.3 (0.1-0.6)	0.4 (0.2-0.7)
Numenius phaeopus	0.4 (0.2-0.6)	0.3 (0.2-0.5)
Paragaleus pectoralis		0.3 (0.2-0.5)
Pluvialis squatarola	0.4 (0.2-0.7)	0.3 (0.1-0.6)
Rhinobatos irvinei		0.4 (0.2-0.5)
Rhinobatos rhinobatos		0.4 (0.2-0.5)
Rhinoptera marginata	0.4 (0.2-0.6)	0.5 (0.4-0.6)
Rhizoprionodon acutus	0.4 (0.2-0.6)	0.3 (0.2-0.5)
Sphyrna lewini	0.3 (0.2-0.5)	0.4 (0.2-0.5)
Sphyrna zygaena		0.7 (0.3-0.9)
Tringa nebularia	0.4 (0.2-0.7)	
Tringa totanus	0.3 (0.1-0.6)	