

Annex I Swept-area estimates

SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

A. CABINDA-LUANDA. Demersal species shelf.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES						% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	Lower limits. Kg/nm >0 10 30 100 300 1000								- 50m	50-100m	100-200m	200-200m
<i>Brachydeuterus auritus</i>		1	1	2			13	1.61	5.49	0.20		
<i>Synagrops microlepis</i>	3	2	4				28	0.90		1.43	1.10	
<i>Dentex gibbosus</i>	1			1			6	0.71	2.51		0.01	
<i>Dentex angolensis</i>	9	7	2				56	0.65		0.43	1.35	
<i>Chlorophthalmus atlanticus</i>	2	1		1			13	0.53			1.41	
<i>Pagellus bellottii</i>	10	6	1				53	0.52	1.06	0.64	0.02	
<i>Umbrina canariensis</i>	6	1		1			25	0.49		0.07	1.25	
<i>Dentex canariensis</i>	11	1	2				44	0.41	1.13	0.24	0.03	
<i>Spicara alta</i>	7	1	2				31	0.35		0.01	0.92	
<i>Pterothrissus belloci</i>	6	4	1				34	0.33		0.39	0.52	
<i>Dentex congoensis</i>	5	2	1				25	0.32		0.39	0.49	
<i>Dentex barnardi</i>	5		2				22	0.31	0.55	0.43	0.01	
<i>Dentex macrophthalmus</i>	7	2	1				31	0.31		0.02	0.81	
<i>Brotula barbata</i>	9	4					41	0.31		0.27	0.57	
<i>Pentheroscion mbizi</i>	1	1	1				9	0.29	0.16	0.71		
<i>Boops boops</i>	17		1				56	0.28	0.81	0.10	0.05	
<i>Galeoides decadactylus</i>	1		1				6	0.22	0.78			
<i>Miracorvina angolensis</i>	3	1	1				16	0.21		0.20	0.37	
<i>Epinephelus aeneus</i>	3	4					22	0.20	0.31	0.28	0.05	
<i>Raja miraletus</i>	13	2					47	0.20	0.16	0.32	0.14	
<i>Sepia sp.</i>	12	2					44	0.19	0.35	0.27		
<i>Epinephelus haifensis</i>			1				3	0.18			0.48	
<i>Branchiostegus semifasciatus</i>	10	1					34	0.16		0.19	0.25	
<i>Sepia officinalis hierredda</i>	5	1					19	0.14	0.37	0.06	0.03	
<i>Alloteuthis africana</i>	2		1				9	0.14		0.40		
<i>Sparus caeruleostictus</i>	4	2					19	0.12	0.28	0.11		
<i>Zenopsis conchifer</i>	10						31	0.11		0.04	0.26	
<i>Zeus faber</i>	16						44	0.09	0.12	0.09	0.07	
<i>Sparus pagrus africanus</i>	6	1					22	0.09	0.17	0.09	0.03	
<i>Pseudotolithus typus</i>	1	1					6	0.09	0.30	0.03		
<i>Citharus linguatula</i>	18						56	0.09	0.03	0.06	0.17	
<i>Chelidonichthys gabonensis</i>	5	1					19	0.07		0.03	0.15	
<i>Sparus auriga</i>	5						16	0.07	0.14	0.07	0.01	
<i>Uranoscopus polli</i>	11						34	0.06	0.01	0.07	0.10	
<i>Parapenaeus longirostris, fem.</i>	5	1					19	0.06		0.05	0.12	
<i>Epinephelus goreensis</i>	2	1					9	0.06	0.04		0.13	
<i>Argyrosomus hololepidotus</i>	5						16	0.06	0.09	0.09		
<i>Pomadasys incisus</i>	3	1					13	0.06	0.06	0.12		
<i>Anthias anthias</i>	1	1					6	0.06			0.16	
<i>Stromateus fiatola</i>	4						13	0.05	0.09	0.07		
<i>Illex coindetii</i>	12						38	0.05		0.02	0.11	
<i>Scorpaena angolensis</i>	7						22	0.05		0.05	0.08	
<i>Rhinobatos, sp.</i>			1				3	0.05	0.19			
<i>Parapenaeus longirostris, male</i>	5	1					19	0.04		0.02	0.10	
<i>Penaeus notialis, female</i>	1						1	0.01		0.01		
<i>Penaeus notialis, male</i>	1						3					
<i>Parapenaeus longirostris</i>	1						3					
Other fish								0.56	0.88	0.68	0.39	
Sum all species								11.86	16.08	8.75	11.74	
Sum Snappers												
Sum Groupers								0.47	0.45	0.30	0.66	
Sum Grunts								1.71	5.63	0.37	0.01	
Sum Croakers								1.19	0.67	1.14	1.63	
Sum Seabreams								3.79	6.65	2.52	2.81	
Sum Sharks								0.04		0.14		
Sum Rays								0.34	0.49	0.50	0.15	
Sum Squids								0.58	0.74	0.79	0.26	
Sum												
Sum commercial shrimps								0.11		0.08	0.22	

SWEPT AREA ANALYSIS FROM STATION 181 TO STATION 252

B. LUANDA-BENGUELA. Demersal species shelf.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES Lower limits, Kg/nm					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	>0	10	30	100	300			1000	- 50m	50-100m	100-200m
<i>Dentex macropthalmus</i>	3	5	6	2	3	51	5.13				
<i>Synagrops microlepis</i>	3	3	3	3		32	2.04	0.34	3.71	1.95	
<i>Pentheroscion mbizi</i>	1				1	5	1.52			4.02	
<i>Chlorophthalmus atlanticus</i>	3			2		14	1.14			3.00	
<i>Umbrina canariensis</i>	12	2		1		41	0.85		0.15	2.11	
<i>Pagellus bellottii</i>	15	3	1	1		54	0.83	0.10	2.18	0.24	
<i>Merluccius polli</i>	5	2		1		19	0.63	0.02		1.65	
<i>Dentex angolensis</i>	10	5	2			46	0.61		0.16	1.48	
<i>Brachydeuterus auritus</i>	8	2		1		30	0.55	0.28	1.43		
<i>Sepia officinalis hierredda</i>	7		1	1		24	0.50	1.60	0.06		
<i>Dentex canariensis</i>	15	1	2			49	0.48	0.52	0.99	0.01	
<i>Anthias anthias</i>	2		2			11	0.35		0.02	0.92	
<i>Zenopsis conchifer</i>	8	1	2			30	0.32		0.02	0.82	
<i>Brotula barbata</i>	7	3	1			30	0.25		0.05	0.63	
<i>Atractoscion aequidens</i>	4	1	1			16	0.22		0.59	0.06	
<i>Pterothrissus bellocci</i>	11	1				32	0.20		0.07	0.45	
<i>Zeus faber</i>	18	1				51	0.19	0.08	0.12	0.33	
<i>Illex coindetii</i>	11	1	1			35	0.19			0.49	
<i>Branchiostegus semifasciatus</i>	2	3				14	0.19		0.39	0.16	
<i>Sepia sp.</i>	6	3				24	0.13	0.20	0.22		
<i>Spicara alta</i>	6		1			19	0.13		0.02	0.33	
<i>Chelidonichthys capensis</i>	8	1				24	0.12	0.01	0.11	0.21	
<i>Boops boops</i>	3	2				14	0.10		0.13	0.16	
<i>Scorpaena angolensis</i>	9	2				30	0.10	0.01	0.01	0.25	
<i>Torpedo torpedo</i>	6	1				19	0.10		0.06	0.20	
<i>Todaropsis eblanae</i>	7	1				22	0.09			0.23	
<i>Raja miraletus</i>	12					32	0.09	0.07	0.12	0.10	
POMACENTRIDAE		1				3	0.08	0.27			
<i>Alloteuthis africana</i>	5	1				16	0.07	0.06	0.14		
<i>Uranoscopus polli</i>	10					24	0.06		0.05	0.12	
<i>Chelidonichthys gabonensis</i>	6					16	0.05			0.12	
<i>Sparus caeruleostictus</i>	2	1				8	0.05		0.14	0.01	
<i>Squatina oculata</i>	5					14	0.05		0.02	0.11	
<i>Epinephelus goreensis</i>	6					16	0.05		0.02	0.11	
<i>Epinephelus aeneus</i>	3	1				11	0.05	0.02	0.01	0.10	
MACROURIDAE	2	1				8	0.05			0.12	
<i>Lutjanus goreensis</i>		1				3	0.05	0.17			
<i>Citharus linguatula</i>	19					51	0.05		0.05	0.08	
<i>Parapenaeopsis atlantica</i>		1				3	0.03	0.09			
<i>Parapenaeus longirostris, fem.</i>	3					8	0.02		0.02	0.03	
<i>Parapenaeus longirostris</i>	3					8	0.02			0.05	
<i>Parapenaeus longirostris, male</i>	3					8	0.01			0.01	
<i>Penaeus notialis</i>	1					3					
Other fish							0.63	0.43	0.51	0.87	
Sum all species							18.37	4.27	13.96	33.04	
Sum Snappers							0.06	0.20			
Sum Groupers							0.11	0.02	0.05	0.22	
Sum Grunts							0.57	0.31	1.47		
Sum Croakers							2.65	0.03	0.75	6.31	
Sum Seabreams							7.30	0.67	6.07	13.57	
Sum Sharks							0.07		0.02	0.16	
Sum Rays							0.26	0.15	0.29	0.32	
Sum Squids							1.02	1.87	0.46	0.77	
Sum											
Sum commercial shrimps							0.08	0.09	0.02	0.09	

Number of stations included in analysis, total and by depth strata

37 11 12 14

SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

C. CABINDA-LUANDA. Demersal species slope.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES					% incidence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	Lower limits, Kg/nm							200-300m	300-400m	400-500m	500-500m
	>0	10	30	100	300	1000					
<i>Chlorophthalmus atlanticus</i>	12	3	3	3	1		76	4.17	5.56	6.53	
<i>Synagrops microlepis</i>	7	2	4	3			55	2.71	6.74	1.13	
<i>Merluccius polli</i>	6	10	6	2			79	2.24	0.94	4.22	1.47
<i>Nematocarcinus africanus</i>	5	1	3	2			38	1.81		2.05	3.55
<i>Centrophorus granulosus</i>	7	2		1			34	0.83	0.13	0.09	2.45
MACROURIDAE	14	8					76	0.67	0.14	1.01	0.89
<i>Dentex angolensis</i>	3	6	1				34	0.65	1.69	0.18	0.01
GOBIIDAE	2		2				14	0.42	1.23		
<i>Pterothrissus bellocci</i>	10	2	1				45	0.31	0.76	0.13	
<i>Miracorvina angolensis</i>	3		1				14	0.22	0.65		
<i>Parapenaeus longirostris</i> , fem.	14	1					52	0.20	0.31	0.28	
<i>Zenopsis conchifer</i>	8	1					31	0.13	0.36	0.01	
<i>Hoplostethus mediterraneus</i>	3	2					17	0.13			0.41
<i>Squatina aculeata</i>	1	1					7	0.12	0.34		
<i>Parapenaeus longirostris</i> , male	15						52	0.10	0.20	0.10	
LOPHIIDAE	14						48	0.10	0.02	0.13	0.16
<i>Conger conger</i>	1	1					7	0.10	0.28		
<i>Gephyroberyx darwini</i>			1				3	0.09	0.26		
<i>Illex coindetii</i>	13						45	0.09	0.06	0.18	0.01
S H A R K S	3	1					14	0.07	0.01	0.19	
<i>Brotula barbata</i>	2	1					10	0.07	0.21		
<i>Todaropsis eblanae</i>	10						34	0.06	0.11	0.06	0.01
<i>Scorpaena normani</i>	3	1					14	0.06	0.14	0.03	
GONOSTOMATIDAE	8						28	0.06		0.01	0.17
<i>Hoplostethus atlanticus</i>			1				3	0.05		0.14	
<i>Centroscymnus crepidater</i>			1				3	0.05			0.16
<i>Aristeus varidens</i> , male	8						28	0.04			0.13
<i>Aristeus varidens</i> , female	8						28	0.03		0.01	0.10
<i>Solenocera africana</i>	3						10	0.01	0.01	0.01	
<i>Glyphus marsupialis</i>	3						10				0.01
<i>Parapenaeus longirostris</i>	3						10		0.01	0.01	
<i>Plesionika martia</i>	1						3			0.01	
<i>Parapandalus narval</i>	1						3			0.01	
<i>Aristeus varidens</i>	4						14			0.01	
Other fish								0.68	0.71	0.60	0.83
Sum all species								16.27	20.87	17.12	10.36
Sum Snappers											0.01
Sum Groupers											
Sum Grunts											
Sum Croakers								0.25	0.74	0.01	0.01
Sum Seabreams								0.72	1.69	0.18	0.23
Sum Sharks								1.12	0.49	0.35	2.67
Sum Rays								0.04	0.06		0.04
Sum Squids								0.20	0.19	0.26	0.14
Sum											
Sum commercial shrimps								2.19	0.53	2.48	3.79

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

C. CABINDA-LUANDA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES Lower limits, Kg/nm					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	>0	10	30	100	300			1000	500-600m	600-800m	800-800m
Nematocarcinus africanus	3		3	1		58	3.05	5.96	0.15		
MACROURIDAE	4	4	4			100	2.25	1.21	3.30		
Hoplostethus cadenati	5	1	1			58	0.83	0.62	1.05		
GONOSTOMATIDAE	8	3				92	0.65	0.86	0.45		
Hoplostethus mediterraneus	2		1			25	0.49	0.04	0.93		
Scyllarides herklotsii	10					83	0.33	0.23	0.42		
Merluccius polli	4	1				42	0.23	0.43	0.04		
Aristeus varidens, female	8					67	0.13	0.17	0.08		
Centrophorus sp.	3	1				33	0.11	0.18	0.03		
Geryon maritae	8					67	0.11	0.06	0.16		
Aristeus varidens, male	7					58	0.10	0.13	0.06		
Paromola cuvieri	1					8	0.07		0.15		
Hoplostethus sp.	2					17	0.06	0.10	0.02		
OPHICHTHIDAE	2					17	0.05	0.02	0.08		
ALEPOCEPHALIDAE	1					8	0.05		0.10		
Glyphus marsupialis	4					33	0.02		0.03		
Aristeus varidens	3					25	0.01	0.01	0.01		
Solenocera africana	1					8					
Plesiopenaeus edwardsianus	1					8					
Other fish							0.26	0.22	0.31		
Sum all species							8.80	10.24	7.37		
Sum Snappers											
Sum Groupers											
Sum Grunts											
Sum Croakers											
Sum Seabreams											
Sum Sharks							0.21	0.34	0.05		
Sum Rays							0.04		0.10		
Sum Squids							0.02	0.01	0.03		
Sum											
Sum commercial shrimps							3.31	6.27	0.33		

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 181 TO STATION 252

D. LUANDA-BENGUELA. Demersal species slope.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	Lower limits, Kg/nm >0 10 30 100 300 1000							200-300m	300-400m	400-500m	500-500m
<i>Chlorophthalmus atlanticus</i>	9	2	1	5	2	76	6.34	16.45	2.94	0.04	
<i>Pentheroscion mbizi</i>	2		2		1	20	2.98	9.29	0.01		
<i>Merluccius polli</i>	6	11	4	1		88	2.63	4.07	1.78	2.13	
<i>Hoplostethus cadenati</i>	5	3	3			44	1.09		0.94	2.35	
<i>Dentex macrophthalmus</i>	1	1	1	1		16	0.87	2.73			
<i>Synagrops microlepis</i>	3	2		1		24	0.66	2.00	0.07		
<i>Nematocarcinus africanus</i>	6	4	1			44	0.57	0.01	0.26	1.48	
<i>Laemonema laureysi</i>	5	6				40	0.53	0.03	0.68	0.88	
<i>Gephyroberyx darwini</i>	7		1			32	0.51	0.17	1.24	0.03	
MACROURIDAE	17	3				76	0.47	0.44	0.52	0.45	
<i>Pterothrissus belloci</i>	9	5				56	0.46	0.74	0.61		
<i>Erythrocles monodi</i>	1		1			8	0.36	1.11			
<i>Parapenaeus longirostris, fem.</i>	8	4				48	0.28	0.54	0.30		
<i>Centrophorus granulosus</i>	4	2				24	0.28	0.28	0.27	0.31	
GOBIIDAE			1	1		8	0.24	0.58		0.18	
S H A R K S	8	2				40	0.22		0.05	0.63	
<i>Parapenaeus longirostris, male</i>	9	2				44	0.19	0.42	0.15		
<i>Aristeus varidens, female</i>	8	1				36	0.17		0.01	0.50	
GONOSTOMATIDAE	7	2				36	0.17		0.02	0.49	
<i>Zenopsis conchifer</i>	12	1				48	0.16	0.44	0.05	0.01	
Deepwater fish mixture		1				4	0.10		0.27		
<i>Aristeus varidens, male</i>	9					36	0.08		0.01	0.25	
LOPHIIDAE	12					48	0.08		0.09	0.15	
<i>Illex coindetii</i>	13					52	0.07	0.04	0.06	0.09	
<i>Geryon maritae</i>	12					48	0.07	0.02	0.09	0.10	
<i>Todaropsis eblanae</i>	5					20	0.05	0.15	0.01		
<i>Parapenaeus longirostris</i>	2					8	0.02	0.05			
<i>Plesiopenaeus edwardsianus</i>	2					8	0.01		0.03		
<i>Solenocera africana</i>	4					16			0.01		
<i>Glyphus marsupialis</i>	4					16				0.01	
<i>Aristeus varidens</i>	1					4					
Other fish							0.68	0.91	0.77	0.35	
Sum all species							20.34	40.47	11.24	10.43	
Sum Snappers											
Sum Groupers											
Sum Grunts											
Sum Croakers							2.99	9.32	0.01		
Sum Seabreams							0.93	2.91			
Sum Sharks							0.53	0.28	0.37	0.96	
Sum Rays							0.01	0.03	0.01		
Sum Squids							0.13	0.21	0.07	0.09	
Sum											
Sum commercial shrimps							1.32	1.02	0.77	2.24	

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 181 TO STATION 252

D. LUANDA-BENGUELA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES Lower limits, Kg/nm					% inci- dence	Mean dens. t/nm²	Mean densities by bottom depth strata t/nm²			
	>0	10	30	100	300			1000	500-600m	600-800m	800-800m
Nematocarcinus africanus	4		1	1		75	2.64	4.11	0.21		
MACROURIDAE	4	2	2			100	1.77	0.70	3.55		
Merluccius polli	2	5				88	1.21	1.83	0.19		
GONOSTOMATIDAE	6	1	1			100	1.13	0.85	1.60		
Hoplostethus cadenati	6		2			100	1.03	0.83	1.36		
Aristeus varidens, female	6	1				88	0.31	0.35	0.25		
Scyllarides herklotsii	7					88	0.31	0.18	0.52		
Geryon maritae	6					75	0.16	0.15	0.17		
Aristeus varidens, male	7					88	0.14	0.18	0.08		
OPHIDIIDAE	2					25	0.14	0.11	0.19		
C R A B S	1					13	0.12		0.32		
Etmopterus spinax	5					63	0.11	0.16	0.01		
Centrophorus granulosus	1					13	0.11	0.17			
OPHICHTHIDAE	2					25	0.10	0.15	0.01		
Deepwater fish mixture	1					13	0.09	0.14			
CONGRIDAE	4					50	0.08	0.04	0.14		
LOPHIIDAE	5					63	0.06	0.08	0.03		
NETTASTOMATIDAE	2					13	0.05		0.13		
Plesiopterus edwardsianus	4					50	0.01	0.01	0.01		
Aristeus varidens	1					13	0.01		0.02		
Glyphus marsupialis	1					13			0.01		
Other fish							0.15	0.14	0.21		
Sum all species							9.73	10.18	9.01		
Sum Snappers											
Sum Groupers							0.01		0.03		
Sum Grunts											
Sum Croakers											
Sum Seabreams											
Sum Sharks							0.22	0.33	0.01		
Sum Rays											
Sum Squids							0.08	0.10	0.07		
Sum											
Sum commercial shrimps							3.11	4.65	0.58		

Number of stations included in analysis, total and by depth strata

8 5 3

SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

A. CABINDA-LUANDA. Demersal species shelf.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES Lower Limits, Kg/nm					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	>0	10	30	100	300			1000	- 50m	50-100m	100-200m
<i>Brachydeuterus auritus</i>		1	1	2		13	1.61	5.49	0.20		
<i>Synagrops microlepis</i>	3	2	4			28	0.90		1.43	1.10	
<i>Dentex gibbosus</i>	1			1		6	0.71	2.51		0.01	
<i>Dentex angolensis</i>	9	7	2			56	0.65		0.43	1.35	
<i>Chlorophthalmus atlanticus</i>	2	1		1		13	0.53			1.41	
<i>Pagellus bellottii</i>	10	6	1			53	0.52	1.06	0.64	0.02	
<i>Umbrina canariensis</i>	6	1		1		25	0.49		0.07	1.25	
<i>Dentex canariensis</i>	11	1	2			44	0.41	1.13	0.24	0.03	
<i>Spicara alta</i>	7	1	2			31	0.35		0.01	0.92	
<i>Pterothrissus belloci</i>	6	4	1			34	0.33		0.39	0.52	
<i>Dentex congoensis</i>	5	2	1			25	0.32		0.39	0.49	
<i>Dentex barnardi</i>	5		2			22	0.31	0.55	0.43	0.01	
<i>Dentex macrophthalmus</i>	7	2	1			31	0.31		0.02	0.81	
<i>Brotula barbata</i>	9	4				41	0.31		0.27	0.57	
<i>Pentheroscion mbizi</i>	1	1	1			9	0.29	0.16	0.71		
<i>Boops boops</i>	17		1			56	0.28	0.81	0.10	0.05	
<i>Galeoides decadactylus</i>	1		1			6	0.22	0.78			
<i>Miracorvina angolensis</i>	3	1	1			16	0.21		0.20	0.37	
<i>Epinephelus aeneus</i>	3	4				22	0.20	0.31	0.28	0.05	
<i>Raja miraletus</i>	13	2				47	0.20	0.16	0.32	0.14	
<i>Sepia sp.</i>	12	2				44	0.19	0.35	0.27		
<i>Epinephelus haifensis</i>			1			3	0.18			0.48	
<i>Branchiostegus semifasciatus</i>	10	1				34	0.16		0.19	0.25	
<i>Sepia officinalis hierredda</i>	5	1				19	0.14	0.37	0.06	0.03	
<i>Alloteuthis africana</i>	2		1			9	0.14		0.40		
<i>Sparus caeruleostictus</i>	4	2				19	0.12	0.28	0.11		
<i>Zenopsis conchifer</i>	10					31	0.11		0.04	0.26	
<i>Zeus faber</i>	16					44	0.09	0.12	0.09	0.07	
<i>Sparus pagrus africanus</i>	6	1				22	0.09	0.17	0.09	0.03	
<i>Pseudotolithus typus</i>	1	1				6	0.09	0.30	0.03		
<i>Citharus linguatula</i>	18					56	0.09	0.03	0.06	0.17	
<i>Chelidonichthys gabonensis</i>	5	1				19	0.07		0.03	0.15	
<i>Sparus auriga</i>	5					16	0.07	0.14	0.07	0.01	
<i>Uranoscopus polli</i>	11					34	0.06	0.01	0.07	0.10	
<i>Parapenaeus longirostris, fem.</i>	5	1				19	0.06		0.05	0.12	
<i>Epinephelus goreensis</i>	2	1				9	0.06	0.04		0.13	
<i>Argyrosomus hololepidotus</i>	5					16	0.06	0.09	0.09		
<i>Pomadasyus incisus</i>	3	1				13	0.06	0.06	0.12		
<i>Anthias anthias</i>	1	1				6	0.06			0.16	
<i>Stromateus fiatola</i>	4					13	0.05	0.09	0.07		
<i>Illex coindetii</i>	12					38	0.05		0.02	0.11	
<i>Scorpaena angolensis</i>	7					22	0.05		0.05	0.08	
<i>Rhinobatos sp.</i>			1			3	0.05	0.19			
<i>Parapenaeus longirostris, male</i>	5	1				19	0.04		0.02	0.10	
<i>Penaeus notialis, female</i>	1						0.01		0.01		
<i>Penaeus notialis, male</i>	1					3					
<i>Parapenaeus longirostris</i>	1					3					
Other fish							0.56	0.88	0.68	0.39	
Sum all species							11.86	16.08	8.75	11.74	
Sum Snappers							0.47	0.45	0.30	0.66	
Sum Groupers							1.71	5.63	0.37	0.01	
Sum Grunts							1.19	0.67	1.14	1.63	
Sum Croakers							3.79	6.65	2.52	2.81	
Sum Seabreams							0.04		0.14		
Sum Sharks							0.34	0.49	0.50	0.15	
Sum Rays							0.58	0.74	0.79	0.26	
Sum Squids											
Sum commercial shrimps							0.11		0.08	0.22	

SWEPT AREA ANALYSIS FROM STATION 181 TO STATION 252

B. LUANDA-BENGUELA. Demersal species shelf.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES Lower limits, Kg/nm					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	>0	10	30	100	300			1000	- 50m	50-100m	100-200m
<i>Dentex macrophthalmus</i>	3	5	6	2	3	51	5.13		2.39	11.51	
<i>Synagrops microlepis</i>	3	3	3	3		32	2.04	0.34	3.71	1.95	
<i>Pentheroscion mbizi</i>	1				1	5	1.52			4.02	
<i>Chlorophthalmus atlanticus</i>	3			2		14	1.14			3.00	
<i>Umbrina canariensis</i>	12	2		1		41	0.85		0.15	2.11	
<i>Pagellus bellottii</i>	15	3	1	1		54	0.83	0.10	2.18	0.24	
<i>Merluccius polli</i>	5	2		1		19	0.63	0.02		1.65	
<i>Dentex angolensis</i>	10	5	2			46	0.61		0.16	1.48	
<i>Brachydeuterus auritus</i>	8	2		1		30	0.55	0.28	1.43		
<i>Sepia officinalis hierredda</i>	7		1	1		24	0.50	1.60	0.06		
<i>Dentex canariensis</i>	15	1	2			49	0.48	0.52	0.99	0.01	
<i>Anthias anthias</i>	2		2			11	0.35		0.02	0.92	
<i>Zenopsis conchifer</i>	8	1	2			30	0.32		0.02	0.82	
<i>Brotula barbata</i>	7	3	1			30	0.25		0.05	0.63	
<i>Atractoscion aequidens</i>	4	1	1			16	0.22		0.59	0.06	
<i>Pterothrissus belloci</i>	11	1				32	0.20		0.07	0.45	
<i>Zeus faber</i>	18	1				51	0.19	0.08	0.12	0.33	
<i>Illex coindetii</i>	11		1			35	0.19			0.49	
<i>Branchiostegus semifasciatus</i>	2	3				14	0.19		0.39	0.16	
<i>Sepia sp.</i>	6	3				24	0.13	0.20	0.22		
<i>Spicara alta</i>	6		1			19	0.13		0.02	0.33	
<i>Chelidonichthys capensis</i>	8	1				24	0.12	0.01	0.11	0.21	
<i>Boops boops</i>	3	2				14	0.10		0.13	0.16	
<i>Scorpaena angolensis</i>	9	2				30	0.10	0.01	0.01	0.25	
<i>Torpedo torpedo</i>	6	1				19	0.10		0.06	0.20	
<i>Todaropsis eblanae</i>	7	1				22	0.09			0.23	
<i>Raja miraletus</i>	12					32	0.09	0.07	0.12	0.10	
POMACENTRIDAE		1				3	0.08	0.27			
<i>Alloteuthis africana</i>	5	1				16	0.07	0.06	0.14		
<i>Uranoscopus polli</i>	10					24	0.06		0.05	0.12	
<i>Chelidonichthys gabonensis</i>	6					16	0.05			0.12	
<i>Sparus caeruleostictus</i>	2	1				8	0.05		0.14	0.01	
<i>Squatina oculata</i>	5					14	0.05		0.02	0.11	
<i>Epinephelus goreensis</i>	6					16	0.05		0.02	0.11	
<i>Epinephelus aeneus</i>	3	1				11	0.05	0.02	0.01	0.10	
MACROURIDAE	2	1				8	0.05			0.12	
<i>Lutjanus goreensis</i>		1				3	0.05	0.17			
<i>Citharus linguatula</i>	19					51	0.05		0.05	0.08	
<i>Parapenaeopsis atlantica</i>		1				3	0.03	0.09			
<i>Parapenaeus longirostris, fem.</i>	3					8	0.02		0.02	0.03	
<i>Parapenaeus longirostris</i>	3					8	0.02			0.05	
<i>Parapenaeus longirostris, male</i>	3					8	0.01			0.01	
<i>Penaeus notialis</i>	1					3					
Other fish							0.63	0.43	0.51	0.87	
Sum all species							18.37	4.27	13.96	33.04	
Sum Snappers							0.06	0.20			
Sum Groupers							0.11	0.02	0.05	0.22	
Sum Grunts							0.57	0.31	1.47		
Sum Croakers							2.65	0.03	0.75	6.31	
Sum Seabreams							7.30	0.67	6.07	13.57	
Sum Sharks							0.07		0.02	0.16	
Sum Rays							0.26	0.15	0.29	0.32	
Sum Squids							1.02	1.87	0.46	0.77	
Sum											
Sum commercial shrimps							0.08	0.09	0.02	0.09	

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

C. CABINDA-LUANDA. Demersal species slope.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	Lower limits, Kg/nm							200-300m	300-400m	400-500m	500-500m
	>0	10	30	100	300	1000					
<i>Chlorophthalmus atlanticus</i>	12	3	3	3	1		76	4.17	5.56	6.53	
<i>Synagrops microlepis</i>	7	2	4	3			55	2.71	6.74	1.13	
<i>Merluccius polli</i>	6	10	6	2			79	2.24	0.94	4.22	1.47
<i>Nematocarcinus africanus</i>	5	1	3	2			38	1.81		2.05	3.55
<i>Centrophorus granulatus</i>	7	2		1			34	0.83	0.13	0.09	2.45
MACROURIDAE	14	8					76	0.67	0.14	1.01	0.89
<i>Dentex angolensis</i>	3	6	1				34	0.65	1.69	0.18	0.01
GOBIIDAE	2		2				14	0.42	1.23		
<i>Pterothrissus belloci</i>	10	2	1				45	0.31	0.76	0.13	
<i>Miracorvina angolensis</i>	3		1				14	0.22	0.65		
<i>Parapenaeus longirostris</i> , fem.	14	1					52	0.20	0.31	0.28	
<i>Zenopsis conchifer</i>	8	1					31	0.13	0.36	0.01	
<i>Hoplostethus mediterraneus</i>	3	2					17	0.13			0.41
<i>Squatina aculeata</i>	1	1					7	0.12	0.34		
<i>Parapenaeus longirostris</i> , male	15						52	0.10	0.20	0.10	
LOPHIIDAE	14						48	0.10	0.02	0.13	0.16
<i>Conger conger</i>	1	1					7	0.10	0.28		
<i>Gephyroberyx darwini</i>		1					3	0.09	0.26		
<i>Illex coindetii</i>	13						45	0.09	0.06	0.18	0.01
S H A R K S	3	1					14	0.07	0.01	0.19	
<i>Brotula barbata</i>	2	1					10	0.07	0.21		
<i>Todaropsis eblanae</i>	10						34	0.06	0.11	0.06	0.01
<i>Scorpaena normani</i>	3	1					14	0.06	0.14	0.03	
GONOSTOMATIDAE	8						28	0.06		0.01	0.17
<i>Hoplostethus atlanticus</i>		1					3	0.05		0.14	
<i>Centroscymnus crepidater</i>		1					3	0.05			0.16
<i>Aristeus varidens</i> , male	8						28	0.04			0.13
<i>Aristeus varidens</i> , female	8						28	0.03		0.01	0.10
<i>Solenocera africana</i>	3						10	0.01	0.01	0.01	
<i>Glyphus marsupialis</i>	3						10				0.01
<i>Parapenaeus longirostris</i>	3						10		0.01	0.01	
<i>Plesionika martia</i>	1						3			0.01	
<i>Parapandalus narval</i>	1						3				
<i>Aristeus varidens</i>	4						14			0.01	
Other fish								0.68	0.71	0.60	0.83
Sum all species								16.27	20.87	17.12	10.36
Sum Snappers											
Sum Groupers											0.01
Sum Grunts											
Sum Croakers								0.25	0.74	0.01	0.01
Sum Seabreams								0.72	1.69	0.18	0.23
Sum Sharks								1.12	0.49	0.35	2.67
Sum Rays								0.04	0.06		0.04
Sum Squids								0.20	0.19	0.26	0.14
Sum											
Sum commercial shrimps								2.19	0.53	2.48	3.79

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 108 TO STATION 180

C. CABINDA-LUANDA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²				
	Lower limits, Kg/nm							500-600m	600-800m	800-800m	800-800m	
	>0	10	30	100	300	1000						
Nematocarcinus africanus	3		3	1			58	3.05	5.96	0.15		
MACROURIDAE	4	4	4				100	2.25	1.21	3.30		
Hoplostethus cadenati	5	1	1				58	0.83	0.62	1.05		
GONOSTOMATIDAE	8	3					92	0.65	0.86	0.45		
Hoplostethus mediterraneus	2		1				25	0.49	0.04	0.93		
Scyllarides herklotsii	10						83	0.33	0.23	0.42		
Merluccius polli	4	1					42	0.23	0.43	0.04		
Aristeus varidens, female	8						67	0.13	0.17	0.08		
Centrophorus sp.	3	1					33	0.11	0.18	0.03		
Geryon maritae	8						67	0.11	0.06	0.16		
Aristeus varidens, male	7						58	0.10	0.13	0.06		
Paromola cuvieri	1						8	0.07		0.15		
Hoplostethus sp.	2						17	0.06	0.10	0.02		
OPHICHTHIDAE	2						17	0.05	0.02	0.08		
ALEPOCEPHALIDAE	1						8	0.05		0.10		
Glyphus marsupialis	4						33	0.02		0.03		
Aristeus varidens	3						25	0.01	0.01	0.01		
Solenocera africana	1						8					
Plesiopenaeus edwardsianus	1						8					
Other fish								0.26	0.22	0.31		
Sum all species								8.80	10.24	7.37		
Sum Snappers												
Sum Groupers												
Sum Grunts												
Sum Croakers												
Sum Seabreams												
Sum Sharks								0.21	0.34	0.05		
Sum Rays								0.04		0.10		
Sum Squids								0.02	0.01	0.03		
Sum												
Sum commercial shrimps								3.31	6.27	0.33		

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 181 TO STATION 252

D. LUANDA-BENGUELA. Demersal species slope.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	Lower limits, Kg/nm >0 10 30 100 300 1000							200-300m	300-400m	400-500m	500-500m
<i>Chlorophthalmus atlanticus</i>	9	2	1	5	2	76	6.34	16.45	2.94	0.04	
<i>Pentheroscion mbizi</i>	2		2		1	20	2.98	9.29	0.01		
<i>Merluccius polli</i>	6	11	4	1		88	2.63	4.07	1.78	2.13	
<i>Hoplostethus cadenati</i>	5	3	3			44	1.09		0.94	2.35	
<i>Dentex macrophthalmus</i>	1	1	1	1		16	0.87	2.73			
<i>Synagrops microlepis</i>	3	2		1		24	0.66	2.00	0.07		
<i>Nematocarcinus africanus</i>	6	4	1			44	0.57	0.01	0.26	1.48	
<i>Laemonema laureysi</i>	5	6				40	0.53	0.03	0.68	0.88	
<i>Gephyroberyx darwini</i>	7		1			32	0.51	0.17	1.24	0.03	
MACROURIDAE	17	3				76	0.47	0.44	0.52	0.45	
<i>Pterothrissus belloci</i>	9	5				56	0.46	0.74	0.61		
<i>Erythrocles monodi</i>	1		1			8	0.36	1.11			
<i>Parapenaeus longirostris, fem.</i>	8	4				48	0.28	0.54	0.30		
<i>Centrophorus granulosus</i>	4	2				24	0.28	0.28	0.27	0.31	
GOBIIDAE		1	1			8	0.24	0.58		0.18	
S H A R K S	8	2				40	0.22		0.05	0.63	
<i>Parapenaeus longirostris, male</i>	9	2				44	0.19	0.42	0.15		
<i>Aristeus varidens, female</i>	8	1				36	0.17		0.01	0.50	
GONOSTOMATIDAE	7	2				36	0.17		0.02	0.49	
<i>Zenopsis conchifer</i>	12	1				48	0.16	0.44	0.05	0.01	
Deepwater fish mixture		1				4	0.10		0.27		
<i>Aristeus varidens, male</i>	9					36	0.08		0.01	0.25	
LOPHIIDAE	12					48	0.08		0.09	0.15	
<i>Illex coindetii</i>	13					52	0.07	0.04	0.06	0.09	
<i>Geryon maritae</i>	12					48	0.07	0.02	0.09	0.10	
<i>Todaropsis eblanae</i>	5					20	0.05	0.15	0.01		
<i>Parapenaeus longirostris</i>	2					8	0.02	0.05			
<i>Plesiopenaeus edwardsianus</i>	2					8	0.01		0.03		
<i>Solenocera africana</i>	4					16			0.01		
<i>Glyphus marsupialis</i>	4					16				0.01	
<i>Aristeus varidens</i>	1					4					
Other fish							0.68	0.91	0.77	0.35	
Sum all species							20.34	40.47	11.24	10.43	
Sum Snappers											
Sum Groupers											
Sum Grunts											
Sum Croakers							2.99	9.32	0.01		
Sum Seabreams							0.93	2.91			
Sum Sharks							0.53	0.28	0.37	0.96	
Sum Rays							0.01	0.03	0.01		
Sum Squids							0.13	0.21	0.07	0.09	
Sum											
Sum commercial shrimps							1.32	1.02	0.77	2.24	

Number of stations included in analysis, total and by depth strata

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SWEPT AREA ANALYSIS FROM STATION 181 TO STATION 252

D. LUANDA-BENGUELA. Demersal species slope cont.

SPECIES NAME	SAMPLE DISTRIB. BY CATCH CLASSES Lower limits, Kg/nm					% inci- dence	Mean dens. t/nm ²	Mean densities by bottom depth strata t/nm ²			
	>0	10	30	100	300			1000	500-600m	600-800m	800-800m
Nematocarcinus africanus	4		1	1		75	2.64	4.11	0.21		
MACROURIDAE	4	2	2			100	1.77	0.70	3.55		
Merluccius polli	2	5				88	1.21	1.83	0.19		
GONOSTOMATIDAE	6	1	1			100	1.13	0.85	1.60		
Hoplostethus cadenati	6		2			100	1.03	0.83	1.36		
Aristeus varidens, female	6	1				88	0.31	0.35	0.25		
Scyllarides herklotsii	7					88	0.31	0.18	0.52		
Geryon maritae	6					75	0.16	0.15	0.17		
Aristeus varidens, male	7					88	0.14	0.18	0.08		
OPHIDIIDAE	2					25	0.14	0.11	0.19		
C R A B S	1					13	0.12		0.32		
Etmopterus spinax	5					63	0.11	0.16	0.01		
Centrophorus granulosus	1					13	0.11	0.17			
OPHICHTHIDAE	2					25	0.10	0.15	0.01		
Deepwater fish mixture	1					13	0.09	0.14			
CONGRIDAE	4					50	0.08	0.04	0.14		
LOPHIIDAE	5					63	0.06	0.08	0.03		
NETTASTOMATIDAE	2					13	0.05		0.13		
Plesiopenaeus edwardsianus	4					50	0.01	0.01	0.01		
Aristeus varidens	1					13	0.01		0.02		
Glyphus marsupialis	1					13			0.01		
Other fish							0.15	0.14	0.21		
Sum all species							9.73	10.18	9.01		
Sum Snappers											
Sum Groupers							0.01		0.03		
Sum Grunts											
Sum Croakers											
Sum Seabreams											
Sum Sharks							0.22	0.33	0.01		
Sum Rays											
Sum Squids							0.08	0.10	0.07		
Sum											
Sum commercial shrimps							3.11	4.65	0.58		

Number of stations included in analysis, total and by depth strata

8 5 3