

APPENDIX B

SMALL TRAWLS

Table B-1. Combined two-year seasonal percent frequency of occurrence for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined.

Scientific Name	Common Name	Fall 03		Winter		Spring		Summer	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Micropogonias undulatus</i>	Atlantic croaker	0.75	0.38					0.19	
<i>Cancer irroratus</i>	Atlantic rock crab	0.25		0.06		0.13	0.13	0.25	
<i>Menidia menidia</i>	Atlantic silverside			0.19	0.13				
<i>Anchoa mitchilli</i>	Bay anchovy	0.25						0.44	
<i>Centropristis striata</i>	Black sea bass					0.06		0.06	
<i>Callinectes sapidus</i>	Blue crab								0.06
<i>Myliobatis freminvillei</i>	Bullnose ray							0.06	
<i>Peprilus triacanthus</i>	Butterfish	0.13	0.13			0.13		0.50	0.38
<i>Busycotypus canaliculatus</i>	Channeled whelk	0.13	0.13			0.06			
<i>Raja eglanteria</i>	Clearnose skate	0.38	0.63				0.19	0.50	0.50
<i>Ovalipes stephensoni</i>	Coarsehand lady crab							0.13	0.25
<i>Gastropoda</i>	Gastropods			0.13	0.19	0.44	0.25		0.25
<i>Echinoidea</i>	Heart urchins					0.13	0.06	0.06	0.25
<i>Limulus polyphemus</i>	Horseshoe crab			0.06			0.06		
<i>Synodus foetens</i>	Inshore lizardfish								0.25
<i>Busycon carica</i>	Knobbed whelk							0.06	
<i>Ovalipes ocellatus</i>	Lady crab	0.50	0.25					0.44	0.31
<i>Hippocampus erectus</i>	Lined seahorse							0.06	
<i>Raja erinacea</i>	Little skate		0.13	0.38	0.25	0.06	0.25		
<i>Polinices</i>	Moon snails		0.25	0.56	0.63	0.50	0.38		0.13
<i>Syngnathus fuscus</i>	Northern pipefish	0.13		0.06					0.06
<i>Sphoeroides maculatus</i>	Northern puffer	0.13	0.13					0.06	
<i>Prionotus carolinus</i>	Northern searobin	0.38	0.50			0.50	0.38	0.75	0.63
<i>Nudibranchia</i>	Nudibranchs			0.13		0.19			
<i>Libinia emarginata</i>	Portly spider crab	0.13			0.06	0.06		0.19	0.13
<i>Urophycis chuss</i>	Red hake			0.06					
<i>Paguridae</i>	Right-handed hermit crabs	0.88	1.00	0.88	0.75	0.63	0.75	0.75	0.88
<i>Crangon septemspinosa</i>	Sand shrimp	0.13	0.13	1.00	0.69	0.31	0.50		
<i>Stenotomus chrysops</i>	Scup	0.50				0.13	0.06	0.56	0.38
<i>Merluccius bilinearis</i>	Silver hake	0.25	0.50			0.19	0.06		
<i>Etropus microstomus</i>	Smallmouth flounder	0.88	0.63	0.38	0.13	0.63	0.50	0.44	0.44
<i>Urophycis regia</i>	Spotted hake	0.63	1.00	0.50	0.50	0.88	0.25	0.19	0.06
<i>Cephalopoda</i>	Squids	0.75	0.25	0.06		0.63	0.44	0.75	0.56
<i>Asteroidea</i>	Starfishes	0.75	0.88	0.50	0.38	0.56	0.56	0.88	0.50
<i>Anchoa hepsetus</i>	Striped anchovy	0.13						0.25	
<i>Ophidion marginatum</i>	Striped cusk-eel							0.13	
<i>Prionotus evolans</i>	Striped searobin					0.06	0.13		
<i>Paralichthys dentatus</i>	Summer flounder				0.13	0.06	0.06	0.13	
<i>Cynoscion regalis</i>	Weakfish							0.06	
<i>Scophthalmus aquosus</i>	Windowpane	0.50	0.38	0.31	0.19	0.19	0.38	0.06	0.25
<i>Raja ocellata</i>	Winter skate	0.63	0.50	0.06		0.13	0.38		

Table B-2. Combined two-year seasonal percent composition for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined. Values that = 0.00 are < 0.005 %.

Scientific Name	Common Name	Fall 03		Winter		Spring		Summer	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Micropogonias undulatus</i>	Atlantic croaker	0.14	0.02					0.00	
<i>Cancer irroratus</i>	Atlantic rock crab	0.01		0.00		0.00	0.02	0.01	
<i>Menidia menidia</i>	Atlantic silverside			0.02	0.01				
<i>Anchoa mitchilli</i>	Bay anchovy	0.04						0.15	
<i>Centropristis striata</i>	Black sea bass					0.01		0.00	
<i>Callinectes sapidus</i>	Blue crab								0.00
<i>Myliobatis freminvillei</i>	Bullnose ray							0.00	
<i>Peprilus triacanthus</i>	Butterfish	0.00	0.00			0.01		0.02	0.03
<i>Busycotypus canaliculatus</i>	Channeled whelk	0.01	0.00			0.00			
<i>Raja eglanteria</i>	Clearnose skate	0.01	0.02				0.01	0.02	0.03
<i>Ovalipes stephensoni</i>	Coarsehand lady crab							0.00	0.01
<i>Gastropoda</i>	Gastropods			0.05	0.18	0.06	0.11		0.06
<i>Echinoidea</i>	Heart urchins					0.00	0.00	0.00	0.01
<i>Limulus polyphemus</i>	Horseshoe crab			0.00		0.00	0.00		
<i>Synodus foetens</i>	Inshore lizardfish								0.01
<i>Busycon carica</i>	Knobbed whelk							0.00	
<i>Ovalipes ocellatus</i>	Lady crab	0.01	0.01					0.02	0.04
<i>Hippocampus erectus</i>	Lined seahorse							0.00	
<i>Raja erinacea</i>	Little skate		0.00	0.02	0.02	0.00	0.01		
<i>Polinices</i>	Moon snails		0.01	0.13	0.15	0.04	0.04		0.00
<i>Syngnathus fuscus</i>	Northern pipefish	0.00		0.00					0.00
<i>Sphoeroides maculatus</i>	Northern puffer	0.00	0.00					0.00	
<i>Prionotus carolinus</i>	Northern searobin	0.01	0.02			0.09	0.02	0.12	0.02
<i>Nudibranchia</i>	Nudibranchs			0.01		0.01			
<i>Libinia emarginata</i>	Portly spider crab	0.00			0.00	0.00		0.00	0.00
<i>Urophycis chuss</i>	Red hake			0.00					
<i>Paguridae</i>	Right-handed hermit crabs	0.19	0.19	0.11	0.20	0.15	0.23	0.08	0.52
<i>Crangon septemspinosa</i>	Sand shrimp	0.00	0.00	0.36	0.28	0.04	0.05		
<i>Stenotomus chrysops</i>	Scup	0.01				0.01	0.00	0.02	0.08
<i>Merluccius bilinearis</i>	Silver hake	0.01	0.02			0.01	0.00		
<i>Etropus microstomus</i>	Smallmouth flounder	0.02	0.04	0.02	0.02	0.04	0.02	0.01	0.01
<i>Urophycis regia</i>	Spotted hake	0.05	0.06	0.13	0.06	0.17	0.01	0.00	0.00
<i>Cephalopoda</i>	Squids	0.25	0.01	0.00		0.18	0.31	0.41	0.10
<i>Asteroidea</i>	Starfishes	0.19	0.52	0.12	0.05	0.16	0.12	0.11	0.08
<i>Anchoa hepsetus</i>	Striped anchovy	0.00						0.01	
<i>Ophidion marginatum</i>	Striped cusk-eel							0.01	
<i>Prionotus evolans</i>	Striped searobin					0.00	0.01		
<i>Paralichthys dentatus</i>	Summer flounder				0.02	0.00	0.00	0.00	
<i>Cynoscion regalis</i>	Weakfish							0.00	
<i>Scophthalmus aquosus</i>	Windowpane	0.02	0.02	0.01	0.01	0.01	0.02	0.00	0.01
<i>Raja ocellata</i>	Winter skate	0.02	0.04	0.00		0.01	0.02		

Table B-3. Combined two-year seasonal mean CPUE for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined.

Scientific Name	Common Name	Fall 03		Winter		Spring		Summer	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Micropogonias undulatus</i>	Atlantic croaker	12.34	0.93					0.28	
<i>Cancer irroratus</i>	Atlantic rock crab	0.80		0.11		0.10	0.71	0.51	
<i>Menidia menidia</i>	Atlantic silverside			0.63	0.17				
<i>Anchoa mitchilli</i>	Bay anchovy	3.80						14.73	
<i>Centropristis striata</i>	Black sea bass					0.44		0.05	
<i>Callinectes sapidus</i>	Blue crab								0.06
<i>Myliobatis freminvillei</i>	Bullnose ray							0.05	
<i>Peprilus triacanthus</i>	Butterfish	0.11	0.10			0.22		1.90	1.28
<i>Busycotypus canaliculatus</i>	Channeled whelk	0.69	0.10			0.05			
<i>Raja eglanteria</i>	Clearnose skate	0.43	0.64				0.22	1.64	1.16
<i>Ovalipes stephensoni</i>	Coarsehand lady crab							0.11	0.22
<i>Gastropoda</i>	Gastropods			1.47	2.70	1.80	3.58		2.66
<i>Echinoidea</i>	Heart urchins					0.10	0.11	0.11	0.44
<i>Limulus polyphemus</i>	Horseshoe crab			0.06			0.05		
<i>Synodus foetens</i>	Inshore lizardfish								0.43
<i>Busycon carica</i>	Knobbed whelk							0.05	
<i>Ovalipes ocellatus</i>	Lady crab	0.67	0.53					1.72	1.71
<i>Hippocampus erectus</i>	Lined seahorse							0.05	
<i>Raja erinacea</i>	Little skate		0.11	0.58	0.35	0.05	0.22		
<i>Polinices</i>	Moon snails		0.34	3.68	2.30	1.10	1.17		0.11
<i>Syngnathus fuscus</i>	Northern pipefish	0.11		0.06					0.06
<i>Sphoeroides maculatus</i>	Northern puffer	0.11	0.11					0.05	
<i>Prionotus carolinus</i>	Northern searobin	0.55	0.65			2.63	0.50	11.99	0.98
<i>Nudibranchia</i>	Nudibranchs			0.16		0.16			
<i>Libinia emarginata</i>	Portly spider crab	0.11			0.07	0.15		0.38	0.12
<i>Urophycis chuss</i>	Red hake			0.05					
<i>Paguridae</i>	Right-handed hermit crabs	16.44	7.87	2.90	2.98	4.53	7.27	7.57	22.27
<i>Crangon septemspinosa</i>	Sand shrimp	0.32	0.11	9.81	4.20	1.27	1.67		
<i>Stenotomus chrysops</i>	Scup	1.24				0.28	0.11	1.82	3.48
<i>Merluccius bilinearis</i>	Silver hake	0.66	0.98			0.16	0.06		
<i>Etropus microstomus</i>	Smallmouth flounder	2.05	1.52	0.48	0.26	1.25	0.73	1.29	0.46
<i>Urophycis regia</i>	Spotted hake	4.06	2.43	3.69	0.87	5.24	0.39	0.38	0.05
<i>Cephalopoda</i>	Squids	21.66	0.42	0.06		5.42	9.84	39.69	4.11
<i>Asteroidea</i>	Starfishes	16.05	21.34	3.30	0.68	4.89	3.74	10.35	3.31
<i>Anchoa hepsetus</i>	Striped anchovy	0.10						0.99	
<i>Ophidion marginatum</i>	Striped cusk-eel							0.60	
<i>Prionotus evolans</i>	Striped searobin					0.15	0.17		
<i>Paralichthys dentatus</i>	Summer flounder				0.23	0.06	0.05	0.16	
<i>Cynoscion regalis</i>	Weakfish							0.22	
<i>Scophthalmus aquosus</i>	Windowpane	1.74	0.89	0.28	0.17	0.16	0.61	0.06	0.30
<i>Raja ocellata</i>	Winter skate	1.30	1.61	0.06		0.16	0.56		

Table B-4. Seasonal percent frequency of occurrence for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined.															
Scientific Name	Common Name	Winter 03		Spring 03		Summer 03		Fall 03		Winter 04		Spring 04		Summer 04	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Micropogonias undulatus</i>	Atlantic croaker					0.13		0.75	0.38						0.25
<i>Cancer irroratus</i>	Atlantic rock crab			0.13		0.13		0.25		0.13		0.13	0.25		0.38
<i>Menidia menidia</i>	Atlantic silverside	0.13								0.25	0.25				
<i>Anchoa mitchilli</i>	Bay anchovy					0.75		0.25							0.13
<i>Centropristis striata</i>	Black sea bass			0.13											0.13
<i>Callinectes sapidus</i>	Blue crab						0.13								
<i>Myliobatis freminvillei</i>	Bullnose ray														0.13
<i>Peprilus triacanthus</i>	Butterfish			0.13		0.50	0.50	0.13	0.13			0.13		0.50	0.25
<i>Busycotypus canaliculatus</i>	Channeled whelk							0.13	0.13			0.13			
<i>Raja eglanteria</i>	Cleannose skate				0.13	0.38	0.63	0.38	0.63				0.25	0.63	0.38
<i>Ovalipes stephensoni</i>	Coarsehand lady crab						0.50								0.25
<i>Gastropoda</i>	Gastropods						0.50			0.25	0.38	0.88	0.50		
<i>Echinoidea</i>	Heart urchins					0.13	0.13					0.25	0.13		0.38
<i>Limulus polyphemus</i>	Horseshoe crab	0.13			0.13										
<i>Synodus foetens</i>	Inshore lizardfish						0.50								
<i>Busycon carica</i>	Knobbed whelk					0.13									
<i>Ovalipes ocellatus</i>	Lady crab						0.63	0.50	0.25						0.88
<i>Hippocampus erectus</i>	Lined seahorse					0.13									
<i>Raja erinacea</i>	Little skate	0.63	0.50						0.13	0.13		0.13	0.50		
<i>Polinices</i>	Moon snails	0.75	0.50	0.25	0.13		0.25		0.25	0.38	0.75	0.75	0.63		
<i>Syngnathus fuscus</i>	Northern pipefish	0.13					0.13	0.13							
<i>Spherooides maculatus</i>	Northern puffer					0.13		0.13	0.13						
<i>Prionotus carolinus</i>	Northern searobin			0.50	0.25	0.75	0.50	0.38	0.50			0.50	0.50	0.75	0.75
<i>Nudibranchia</i>	Nudibranchs									0.25		0.38			
<i>Libinia emarginata</i>	Portly spider crab		0.13	0.13		0.13	0.25	0.13							0.25
<i>Urophycis chuss</i>	Red hake									0.13					
<i>Paguridae</i>	Right-handed hermit crabs	0.88	0.63	0.50	0.50	0.75	0.88	0.88	1.00	0.88	0.88	0.75	1.00	0.75	0.88
<i>Crangon septemspinosa</i>	Sand shrimp	1.00	0.50	0.13	0.25			0.13	0.13	1.00	0.88	0.50	0.75		
<i>Stenotomus chrysops</i>	Scup			0.13		0.88	0.25	0.50				0.13	0.13	0.25	0.50
<i>Merluccius bilinearis</i>	Silver hake			0.25				0.25	0.50			0.13	0.13		
<i>Etropus microstomus</i>	Smallmouth flounder	0.75	0.25	0.50	0.13	0.25	0.63	0.88	0.63			0.75	0.88	0.63	0.25
<i>Urophycis regia</i>	Spotted hake	1.00	1.00	0.88	0.25	0.25		0.63	1.00			0.88	0.25	0.13	0.13

Table B-4. Continued

Scientific Name	Common Name	Winter 03		Spring 03		Summer 03		Fall 03		Winter 04		Spring 04		Summer 04	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Cephalopoda</i>	Squids	0.13		0.50	0.13	0.50	0.88	0.75	0.25			0.75	0.75	1.00	0.25
<i>Asteroidea</i>	Starfishes	0.38	0.25	0.25	0.38	0.88	0.63	0.75	0.88	0.63	0.50	0.88	0.75	0.88	0.38
<i>Anchoa hepsetus</i>	Striped anchovy					0.50		0.13							
<i>Ophidion marginatum</i>	Striped cusk-eel					0.13								0.13	
<i>Prionotus evolans</i>	Striped searobin			0.13	0.13								0.13		
<i>Paralichthys dentatus</i>	Summer flounder		0.25			0.13						0.13	0.13	0.13	
<i>Cynoscion regalis</i>	Weakfish													0.13	
<i>Scophthalmus aquosus</i>	Windowpane	0.38	0.13		0.25		0.50	0.50	0.38	0.25	0.25	0.38	0.50	0.13	
<i>Raja ocellata</i>	Winter skate			0.13				0.63	0.50	0.13		0.13	0.75		

Table B-5. Seasonal percent composition for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined. A 0.00 value is < 0.005%.

Scientific Name	Common Name	Winter 03		Spring 03		Summer 03		Fall 03		Winter 04		Spring 04		Summer 04	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Micropogonias undulatus</i>	Atlantic croaker					0.00		0.14	0.02					0.00	
<i>Cancer irroratus</i>	Atlantic rock crab			0.01		0.00		0.01		0.01		0.00	0.02	0.01	
<i>Menidia menidia</i>	Atlantic silverside	0.02								0.03	0.02				
<i>Anchoa mitchilli</i>	Bay anchovy					0.51		0.04						0.00	
<i>Centropristis striata</i>	Black sea bass			0.06										0.00	
<i>Callinectes sapidus</i>	Blue crab														0.00
<i>Myliobatis freminvillei</i>	Bullnose ray													0.00	
<i>Peprilus triacanthus</i>	Butterfish			0.01		0.02	0.01	0.00	0.00			0.00		0.02	0.03
<i>Busycotypus canaliculatus</i>	Channeled whelk							0.01	0.00			0.00			
<i>Raja eglanteria</i>	Clearnose skate				0.02	0.01	0.04	0.01	0.02				0.01	0.02	0.02
<i>Ovalipes stephensoni</i>	Coarsehand lady crab													0.00	0.01
<i>Gastropoda</i>	Gastropods									0.12	0.31	0.08	0.12		0.07
<i>Echinoidea</i>	Heart urchins					0.00	0.05					0.00	0.00		0.00
<i>Limulus polyphemus</i>	Horseshoe crab	0.00			0.02										
<i>Synodus foetens</i>	Inshore lizardfish														0.01
<i>Busycon carica</i>	Knobbed whelk					0.00									
<i>Ovalipes ocellatus</i>	Lady crab							0.01	0.01					0.03	0.05
<i>Hippocampus erectus</i>	Lined seahorse					0.00									
<i>Raja erinacea</i>	Little skate	0.03	0.06						0.00	0.00	0.00	0.00	0.00	0.01	
<i>Polinices</i>	Moon snails	0.22	0.18	0.01	0.02				0.01	0.02	0.13	0.04	0.04		0.00
<i>Syngnathus fuscus</i>	Northern pipefish	0.00							0.00						0.00
<i>Sphoeroides maculatus</i>	Northern puffer					0.00			0.00	0.00					
<i>Prionotus carolinus</i>	Northern searobin			0.03	0.04	0.04	0.05	0.01	0.02			0.10	0.01	0.16	0.02
<i>Nudibranchia</i>	Nudibranchs									0.01		0.01			
<i>Libinia emarginata</i>	Portly spider crab		0.01	0.02		0.00		0.00						0.00	0.00
<i>Urophycis chuss</i>	Red hake									0.00					
<i>Paguridae</i>	Right-handed hermit crabs	0.11	0.25	0.21	0.40	0.13	0.17	0.19	0.19	0.10	0.16	0.13	0.21	0.06	0.59
<i>Crangon septemspinosa</i>	Sand shrimp	0.31	0.21	0.01	0.08			0.00	0.00	0.43	0.33	0.05	0.05		
<i>Stenotomus chrysops</i>	Scup			0.01		0.04	0.40	0.01				0.01	0.00	0.01	0.01
<i>Merluccius bilinearis</i>	Silver hake			0.01				0.01	0.02			0.00	0.00		
<i>Etropus microstomus</i>	Smallmouth flounder	0.03	0.04	0.06	0.02	0.00	0.02	0.02	0.04			0.03	0.02	0.02	0.01
<i>Urophycis regia</i>	Spotted hake	0.24	0.14	0.45	0.04	0.01	0.01	0.05	0.06			0.08	0.01	0.00	
<i>Cephalopoda</i>	Squids	0.00		0.05	0.14	0.02	0.03	0.25	0.01			0.22	0.32	0.57	0.11
<i>Asteroidea</i>	Starfishes	0.02	0.07	0.04	0.13	0.16	0.22	0.19	0.52	0.25	0.03	0.20	0.12	0.09	0.05

Table B-5. Continued

Scientific Name	Common Name	Winter 03		Spring 03		Summer 03		Fall 03		Winter 04		Spring 04		Summer 04	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Anchoa hepsetus</i>	Striped anchovy					0.03		0.00							
<i>Ophidion marginatum</i>	Striped cusk-eel					0.01									0.00
<i>Prionotus evolans</i>	Striped searobin			0.02	0.04								0.00		
<i>Paralichthys dentatus</i>	Summer flounder		0.04			0.00						0.00	0.00		0.00
<i>Cynoscion regalis</i>	Weakfish														0.00
<i>Scophthalmus aquosus</i>	Windowpane	0.01	0.01		0.04			0.02	0.02	0.01	0.01	0.01	0.02	0.00	0.01
<i>Raja ocellata</i>	Winter skate			0.01				0.02	0.04	0.00		0.00	0.02		

Table B-6. Seasonal mean CPUE for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined.

Scientific Name	Common Name	Winter 03		Spring 03		Summer 03		Fall 03		Winter 04		Spring 04		Summer 04	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Micropogonias undulatus</i>	Atlantic croaker					0.22		12.34	0.93						0.35
<i>Cancer irroratus</i>	Atlantic rock crab			0.10		0.10		0.80		0.21		0.11	1.42		0.92
<i>Menidia menidia</i>	Atlantic silverside	0.48								0.78	0.34				
<i>Anchoa mitchilli</i>	Bay anchovy					29.21		3.80							0.25
<i>Centropristis striata</i>	Black sea bass			0.87											0.11
<i>Callinectes sapidus</i>	Blue crab														0.12
<i>Myliobatis freminvillei</i>	Bullnose ray														0.11
<i>Peprilus triacanthus</i>	Butterfish			0.22		1.00	0.22	0.11	0.10			0.22		2.81	2.34
<i>Busycotypus canaliculatus</i>	Channeled whelk							0.69	0.10			0.10			
<i>Raja eglanteria</i>	Clearnose skate				0.11	0.51	0.56	0.43	0.64				0.33	2.77	1.76
<i>Ovalipes stephensoni</i>	Coarsehand lady crab													0.22	0.45
<i>Gastropoda</i>	Gastropods									2.94	5.39	3.61	7.17		5.31
<i>Echinoidea</i>	Heart urchins					0.22	0.75					0.21	0.23		0.12
<i>Limulus polyphemus</i>	Horseshoe crab	0.12			0.11										
<i>Synodus foetens</i>	Inshore lizardfish														0.85
<i>Busycon carica</i>	Knobbed whelk					0.11									
<i>Ovalipes ocellatus</i>	Lady crab							0.67	0.53					3.43	3.41
<i>Hippocampus erectus</i>	Lined seahorse					0.10									
<i>Raja erinacea</i>	Little skate	1.06	0.69						0.11	0.10		0.11	0.45		
<i>Polinices</i>	Moon snails	6.80	2.24	0.22	0.11				0.34	0.56	2.36	1.97	2.23		0.23
<i>Syngnathus fuscus</i>	Northern pipefish	0.12							0.11						0.12
<i>Spherooides maculatus</i>	Northern puffer					0.10			0.11	0.11					
<i>Prionotus carolinus</i>	Northern searobin			0.54	0.22	2.34	0.73	0.55	0.65			4.72	0.78	21.64	1.23
<i>Nudibranchia</i>	Nudibranchs									0.32		0.33			
<i>Libinia emarginata</i>	Portly spider crab		0.14	0.29		0.11		0.11						0.66	0.25
<i>Urophycis chuss</i>	Red hake									0.10					
<i>Paguridae</i>	Right-handed hermit crabs	3.49	3.06	3.22	2.08	7.16	2.48	16.44	7.87	2.30	2.90	5.85	12.46	7.97	42.06
<i>Crangon septemspinosa</i>	Sand shrimp	9.51	2.59	0.11	0.44			0.32	0.11	10.11	5.81	2.43	2.90		
<i>Stenotomus chrysops</i>	Scup			0.10		2.45	5.97	1.24				0.47	0.23	1.20	0.98
<i>Merluccius bilinearis</i>	Silver hake			0.21				0.66	0.98			0.11	0.11		
<i>Etropus microstomus</i>	Smallmouth flounder	0.97	0.52	0.94	0.11	0.21	0.22	2.05	1.52			1.56	1.35	2.37	0.69
<i>Urophycis regia</i>	Spotted hake	7.38	1.74	7.00	0.21	0.43	0.10	4.06	2.43				0.56	0.32	
<i>Cephalopoda</i>	Squids	0.12		0.78	0.75	0.90	0.46	21.66	0.42			10.06	18.93	78.48	7.76
<i>Asteroidea</i>	Starfishes	0.74	0.81	0.56	0.68	8.90	3.28	16.05	21.34	5.86	0.55	9.22	6.80	11.79	3.34

Table B-6. Continued

Scientific Name	Common Name	Winter 03		Spring 03		Summer 03		Fall 03		Winter 04		Spring 04		Summer 04	
		Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal	Ref	Shoal
<i>Anchoa hepsetus</i>	Striped anchovy					1.98		0.10							
<i>Ophidion marginatum</i>	Striped cusk-eel					0.54									0.65
<i>Prionotus evolans</i>	Striped searobin			0.30	0.22								0.11		
<i>Paralichthys dentatus</i>	Summer flounder		0.46			0.21						0.12	0.11		0.12
<i>Cynoscion regalis</i>	Weakfish														0.43
<i>Scophthalmus aquosus</i>	Windowpane	0.35	0.10		0.22			1.74	0.89	0.21	0.23	0.32	1.00	0.11	0.60
<i>Raja ocellata</i>	Winter skate			0.11				1.30	1.61	0.11		0.22	1.11		

Table B-7. Combined two-year seasonal percent frequency of occurrence for all species collected in small trawls at eight sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. FS – Fenwick Island Shoal; FR – Fenwick Island Reference; BS – Shoal B; BR – Shoal B Reference; DS – Shoal D; DR – Shoal D Reference; WS – Weaver Shoal; WR – Weaver Shoal Reference.

Scientific Name	Common Name	Fall 03								Winter								Spring								Summer							
		FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR
<i>Micropogonias undulatus</i>	Atlantic croaker		1.00		1.00	1.00		0.50	1.00																		0.25		0.25				0.25
<i>Cancer irroratus</i>	Atlantic rock crab				1.00				0.50				0.25					0.25			0.50	0.25					0.50		0.50				
<i>Menidia menidia</i>	Atlantic silverside													0.25	0.25	0.25	0.50																
<i>Anchoa mitchilli</i>	Bay anchovy								1.00																		0.75		0.50				0.50
<i>Centropristis striata</i>	Black sea bass																				0.25								0.25				
<i>Callinectes sapidus</i>	Blue crab																															0.25	
<i>Myliobatis freminvillei</i>	Bullnose ray																															0.25	
<i>Peprilus triacanthus</i>	Butterfish					1.00		1.00													0.25				0.25	0.25	1.00	0.25		0.50	1.00	0.50	
<i>Busycotypus canaliculatus</i>	Channeled whelk				1.00				0.50																							0.25	
<i>Raja eglanteria</i>	Clearnose skate			1.00		1.00	1.00	1.00	0.50									0.50						0.25		0.25	1.00	0.75	0.75	0.25	0.25	0.75	
<i>Ovalipes stephensoni</i>	Coarsehand lady crab																											0.50		0.50	0.50		
<i>Gastropoda</i>	Gastropods											0.50	0.25	0.25	0.25				0.50	0.50	0.50	0.50	0.50		0.25			0.50		0.50			
<i>Echinoidea</i>	Heart urchins																		0.25					0.25	0.25	0.25		0.25		0.25		0.25	
<i>Limulus polyphemus</i>	Horseshoe crab														0.25									0.25								0.50	
<i>Synodus foetens</i>	Inshore lizardfish																									0.50							0.50
<i>Busycon carica</i>	Knobbed whelk																																0.25
<i>Ovalipes ocellatus</i>	Lady crab		1.00		1.00			1.00	0.50																		0.50	0.50	0.50	0.25	0.50	0.50	0.25
<i>Hippocampus erectus</i>	Lined seahorse																															0.25	
<i>Raja erinacea</i>	Little skate							0.50		0.25	0.25		0.25	0.25	0.50	0.50	0.50	0.25				0.25	0.25	0.50									
<i>Polinices</i>	Moon snails	1.00						0.50		0.75	1.00	0.50	0.50	0.50	0.75	0.75	0.25	0.50	0.25	0.75	0.50	0.50	0.50	0.25			0.25		0.25				
<i>Syngnathus fuscus</i>	Northern pipefish		1.00										0.25													0.25							
<i>Spherooides maculatus</i>	Northern puffer				1.00	1.00																						0.25					
<i>Prionotus carolinus</i>	Northern searobin	1.00			1.00	1.00	1.00	0.50										0.50	0.75	0.25	0.75	0.50	0.25	0.25	0.25	0.50	1.00	0.50	0.75	0.50	0.75	1.00	0.50
<i>Nudibranchia</i>	Nudibranchs												0.25		0.25				0.25		0.50												
<i>Libinia emarginata</i>	Portly spider crab								0.50	0.25											0.25					0.25	0.25		0.25			0.25	0.25
<i>Urophycis chuss</i>	Red hake												0.25																				
<i>Paguridae</i>	Right-handed hermit crabs	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.75	0.75	0.75	0.75	1.00	0.75	0.50	0.75	1.00	0.50	0.50	1.00	0.50	0.75	1.00	1.00	1.00	0.75	0.50	1.00	0.50
<i>Crangon septemspinosa</i>	Sand shrimp	1.00			1.00					0.75	1.00	0.75	1.00	0.50	1.00	0.75	1.00	0.50	0.50	0.75	0.50	0.25		0.50	0.25								
<i>Stenotomus chrysops</i>	Scup				1.00		1.00	0.50											0.25		0.25	0.25				0.25	0.75	0.50	0.75	0.50	0.25	0.25	0.50
<i>Merluccius bilinearis</i>	Silver hake			1.00	1.00	1.00													0.25		0.25	0.25	0.25										
<i>Etropus microstomus</i>	Smallmouth flounder	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.25	0.50		0.50	0.25		0.50	0.25	0.50	0.50	0.75	0.50	0.50	0.75	0.75	0.25	0.50	0.50	0.50	0.75	0.25	0.25	0.50	
<i>Urophycis regia</i>	Spotted hake	1.00	1.00	1.00	1.00	1.00		1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		1.00	0.25	0.75	0.50	1.00	0.25	0.75			0.25	0.25	0.25		0.25		
<i>Cephalopoda</i>	Squids		1.00		1.00	1.00	1.00				0.25							0.75	0.75	0.25	0.75	0.25	0.50	0.50	0.50	0.25	0.75	1.00	0.75	0.50	1.00	0.50	0.50
<i>Asteroidea</i>	Starfishes	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.75	0.50	0.50	0.75		0.50	0.25	0.25	0.50	0.75	0.25	0.25	0.75	0.50	0.75	0.75	0.50	1.00		1.00	0.50	1.00	1.00	0.50
<i>Anchoa hepsetus</i>	Striped anchovy								0.50																				0.50			0.50	
<i>Ophidion marginatum</i>	Striped cusk-eel																												0.25			0.25	
<i>Prionotus evolans</i>	Striped searobin																				0.25			0.50									
<i>Paralichthys dentatus</i>	Summer flounder											0.25		0.25					0.25			0.25					0.25						
<i>Cynoscion regalis</i>	Weakfish																												0.25				
<i>Scophthalmus aquosus</i>	Windowpane	1.00			1.00		1.00	0.50	0.50	0.25	0.25	0.25	0.25		0.25	0.25	0.50	0.50	0.25	0.25	0.25	0.25		0.50	0.25	0.25		0.50		0.25	0.25		
<i>Raja ocellata</i>	Winter skate	1.00	1.00		1.00		1.00	1.00	0.50										0.50	0.25	0.25	0.25	0.50		0.25								

Table B-8. Combined two-year seasonal percent composition for all species collected in small trawls at eight sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. FS – Fenwick Island Shoal; FR – Fenwick Island Reference; BS – Shoal B; BR – Shoal B Reference; DS – Shoal D; DR – Shoal D Reference; WS – Weaver Shoal; WR – Weaver Shoal Reference. A 0.00 value is < 0.005%.

Scientific Name	Common Name	Fall 03								Winter								Spring								Summer							
		FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR
<i>Micropogonias undulatus</i>	Atlantic croaker	0.25			0.07	0.09		0.02	0.51																	0.00			0.00				0.01
<i>Cancer irroratus</i>	Atlantic rock crab				0.02				0.01		0.01							0.01			0.01	0.07				0.01			0.01				
<i>Menidia menidia</i>	Atlantic silverside													0.02	0.02	0.02	0.10																
<i>Anchoa mitchilli</i>	Bay anchovy								0.22																	0.12			0.02				0.65
<i>Centropristis striata</i>	Black sea bass																				0.05								0.00				
<i>Callinectes sapidus</i>	Blue crab																																0.00
<i>Myliobatis freminvillei</i>	Bullnose ray																																0.00
<i>Peprilus triacanthus</i>	Butterfish					0.02	0.00														0.01				0.02	0.01	0.04	0.01		0.11	0.04	0.01	
<i>Busycotypus canaliculatus</i>	Channeled whelk				0.02				0.00																0.01								
<i>Raja eglanteria</i>	Clearnose skate			0.05		0.06	0.01	0.01	0.01									0.02						0.00		0.01	0.02	0.12	0.02	0.01	0.01	0.02	
<i>Ovalipes stephensoni</i>	Coarsehand lady crab																											0.02		0.01	0.01		
<i>Gastropoda</i>	Gastropods											0.42	0.01	0.49	0.17						0.29	0.05	0.31	0.04	0.03			0.17		0.17			
<i>Echinoidea</i>	Heart urchins																	0.09	0.01					0.01	0.01	0.02		0.01		0.02		0.00	0.01
<i>Limulus polyphemus</i>	Horseshoe crab														0.01									0.00									
<i>Synodus foetens</i>	Inshore lizardfish																									0.02							0.01
<i>Busycon carica</i>	Knobbed whelk																																0.00
<i>Ovalipes ocellatus</i>	Lady crab		0.03		0.01				0.02	0.01																	0.02	0.07	0.01	0.01	0.03	0.07	0.00
<i>Hippocampus erectus</i>	Lined seahorse																																0.00
<i>Raja erinacea</i>	Little skate								0.00	0.02	0.01		0.02	0.02	0.02	0.05	0.04	0.01				0.01	0.01	0.01									
<i>Polinices</i>	Moon snails	0.03							0.00	0.23	0.37	0.07	0.08	0.04	0.05	0.22																0.01	
<i>Syngnathus fuscus</i>	Northern pipefish		0.03										0.01													0.01							
<i>Sphoeroides maculatus</i>	Northern puffer				0.00	0.02																					0.01		0.00				
<i>Prionotus carolinus</i>	Northern searobin	0.04			0.00	0.06	0.00		0.02										0.02	0.02	0.02	0.03	0.29	0.00	0.02	0.02	0.23	0.02	0.06	0.02	0.18	0.03	0.01
<i>Nudibranchia</i>	Nudibranchs												0.01		0.01				0.01		0.01												
<i>Libinia emarginata</i>	Portly spider crab								0.01	0.02											0.02					0.01	0.00		0.01			0.00	0.00
<i>Paguridae</i>	Right-handed hermit crabs	0.19	0.03	0.21	0.35	0.34	0.10	0.16	0.08	0.17	0.13	0.11	0.11	0.15	0.05	0.31	0.16	0.16	0.11	0.19	0.31	0.09	0.06	0.39	0.09	0.85	0.13	0.23	0.09	0.05	0.03	0.66	0.03
<i>Crangon septemspinosa</i>	Sand shrimp	0.01			0.01					0.33	0.21	0.24	0.48	0.18	0.31	0.33	0.47	0.07	0.06	0.09	0.07	0.03		0.04	0.01								
<i>Stenotomus chrysops</i>	Scup				0.02		0.01		0.01										0.02		0.01	0.01				0.02	0.03	0.19	0.01	0.20	0.01	0.02	0.03
<i>Merluccius bilinearis</i>	Silver hake			0.16	0.02	0.11													0.01		0.01	0.01	0.01										
<i>Etropus microstomus</i>	Smallmouth flounder	0.07	0.03		0.03	0.10	0.01	0.02	0.04	0.05	0.02		0.03	0.02		0.03		0.01	0.01	0.04	0.07	0.03	0.03	0.03	0.06	0.01	0.03	0.02	0.01	0.02	0.01	0.00	0.01
<i>Urophycis regia</i>	Spotted hake	0.07	0.10	0.26	0.09	0.11		0.03	0.04	0.08	0.22	0.07	0.16	0.04	0.04	0.05	0.14		0.23	0.02	0.13	0.03	0.09	0.00	0.27			0.01	0.01	0.00			0.01
<i>Cephalopoda</i>	Squids		0.21		0.03	0.08	0.67				0.01							0.62	0.24	0.27	0.11	0.02	0.06	0.32	0.36	0.01	0.19	0.11	0.68	0.25	0.53	0.06	0.12
<i>Asteroidea</i>	Starfishes	0.41	0.31	0.32	0.29	0.02	0.17	0.70		0.10	0.03	0.06	0.07		0.30	0.01	0.03	0.02	0.15	0.04	0.03	0.25	0.39	0.11	0.07	0.02	0.17		0.05	0.13	0.14	0.11	0.07
<i>Anchoa hepsetus</i>	Striped anchovy								0.01																				0.01				0.04
<i>Ophidion marginatum</i>	Striped cusk-eel																												0.01				0.02
<i>Prionotus evolans</i>	Striped searobin																				0.02			0.01									
<i>Paralichthys dentatus</i>	Summer flounder											0.02		0.05					0.01			0.01					0.00						0.01
<i>Cynoscion regalis</i>	Weakfish																												0.01				
<i>Scophthalmus aquosus</i>	Windowpane	0.09			0.02		0.02	0.00	0.04	0.01	0.01	0.02	0.01		0.01	0.01	0.02	0.04	0.01	0.02	0.01	0.01		0.01	0.01	0.01				0.00	0.01		
<i>Pleuronectes americanus</i>	Winter flounder																																
<i>Raja ocellata</i>	Winter skate	0.08	0.03		0.01		0.01	0.04	0.03							0.01		0.02	0.01	0.02	0.01	0.02		0.01		0.02							

Table B-9. Combined two-year seasonal mean CPUE for all species collected in small trawls at eight sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.
 FS – Fenwick Island Shoal; FR – Fenwick Island Reference; BS – Shoal B; BR – Shoal B Reference; DS – Shoal D; DR – Shoal D Reference; WS – Weaver Shoal; WR – Weaver Shoal Reference.

Species Name	Common Name	Fall 03								Winter								Spring								Summer							
		FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR	FS	FR	BS	BR	DS	DR	WS	WR
<i>Micropogonias undulatus</i>	Atlantic croaker	4.22			9.71	2.07		1.63	35.41																	0.48		0.22				0.44	
<i>Cancer irroratus</i>	Atlantic rock crab				2.75				0.43			0.43					0.22		0.41	2.62					0.98		1.06						
<i>Menidia menidia</i>	Atlantic silverside												0.22	0.65	0.46	1.86																	
<i>Anchoa mitchilli</i>	Bay anchovy								15.19																13.08		2.47				43.37		
<i>Centropristis striata</i>	Black sea bass																		1.75								0.22						
<i>Callinectes sapidus</i>	Blue crab																														0.25		
<i>Myliobatis freminvillei</i>	Bullnose ray																														0.22		
<i>Peprilus triacanthus</i>	Butterfish					0.41	0.43												0.43						0.44	0.24	4.32	0.24		4.20	3.29	0.44	
<i>Busycotypus canaliculatus</i>	Channeled whelk				2.75				0.41																						0.20		
<i>Raja eglanteria</i>	Clearnose skate			0.47		1.25	1.31	0.83	0.43								0.66						0.22		0.23	2.76	2.98	2.65	0.21	1.14	1.21		
<i>Ovalipes stephensoni</i>	Coarsehand lady crab																										0.45		0.44		0.45		
<i>Gastropoda</i>	Gastropods											4.72	0.21	6.07	5.67				3.52	3.43	1.78	10.90	1.32				4.09		6.53				
<i>Echinoidea</i>	Heart urchins																		0.21				0.46	0.20	0.65		0.24		0.61		0.25	0.44	
<i>Limulus polyphemus</i>	Horseshoe crab														0.23								0.22										
<i>Synodus foetens</i>	Inshore lizardfish																								0.95						0.76		
<i>Busycon carica</i>	Knobbed whelk																														0.22		
<i>Ovalipes ocellatus</i>	Lady crab	0.44		1.80				2.11	0.43																2.67	1.58	1.32	0.21	2.69	5.03	0.20		
<i>Hippocampus erectus</i>	Lined seahorse																														0.20		
<i>Raja erinacea</i>	Little skate							0.43		0.27	0.25		0.73	0.22	0.71	0.89	0.63	0.22			0.22	0.22	0.45										
<i>Polinices</i>	Moon snails	0.93						0.43			10.65	0.73	2.46	0.44	1.61	4.01		0.65	1.12	0.21	1.76	2.44	0.90	1.36	0.60			0.23		0.23			
<i>Syngnathus fuscus</i>	Northern pipefish		0.44										0.24												0.24								
<i>Spherooides maculatus</i>	Northern puffer				0.46	0.42			4.02																			0.21					
<i>Prionotus carolinus</i>	Northern searobin	1.36		0.46	1.25	0.43			1.29									0.44	0.68	0.23	0.85	1.12	8.54	0.22	0.43	0.96	25.39	0.45	7.05	0.62	14.89	1.91	0.63
<i>Nudibranchia</i>	Nudibranchs											0.21		0.44					0.21		0.44												
<i>Libinia emarginata</i>	Portly spider crab								0.43	0.27															0.24	0.24		1.08			0.25	0.22	
<i>Urophycis chuss</i>	Red hake											0.21																					
<i>Paguridae</i>	Right-handed hermit crabs	6.36	0.44	1.92	48.08	7.54	11.73	15.68	5.52	3.02	3.63	1.23	3.23	1.90	1.78	5.77	2.95	5.48	4.21	2.21	10.60	3.34	1.67	18.04	1.64	36.35	15.08	5.42	11.01	1.73	2.48	45.56	1.69
<i>Crangon septemspinosa</i>	Sand shrimp	0.43			1.26					5.77	6.11	2.69	14.27	2.27	10.38	6.10	8.46	2.42	2.41	1.12	2.44	1.09	2.04	0.22									
<i>Stenotomus chrysops</i>	Scup				3.21		1.31		0.43										0.93		0.19	0.45			0.72	3.37	4.56	1.23	7.39	1.00	1.25	1.68	
<i>Merluccius bilinearis</i>	Silver hake			1.45	2.64	2.49													0.23		0.19	0.23	0.22										
<i>Etropus microstomus</i>	Smallmouth flounder	2.28	0.44		3.90	2.12	1.31	1.69	2.54	0.82	0.50		0.98	0.22			0.45	0.22	0.46	0.45	2.51	0.89	0.91	1.35	1.14	0.47	3.39	0.46	0.88	0.65	0.46	0.25	0.42
<i>Urophycis regia</i>	Spotted hake	2.28	1.69	2.41	11.97	2.52		2.52	2.58	1.35	6.22	0.74	4.68	0.50	1.42	0.89	2.44		8.62	0.21	4.50	1.12	2.64	0.21	5.20			0.65	0.21	0.20		0.65	
<i>Cephalopoda</i>	Squids		3.48		4.01	1.69	79.13				0.25							20.76	9.37	3.16	3.69	0.66	1.78	14.77	6.85	0.48	21.86	2.74	86.44	9.43	42.72	3.79	7.75
<i>Asteroidea</i>	Starfishes	13.58	5.10	2.93	39.56	0.41	19.56	68.45		1.85	0.75	0.66	2.00		10.00	0.22	0.45	0.66	5.65	0.42	1.14	8.90	11.40	4.97	1.36	0.95	18.78		6.40	5.06	11.23	7.23	4.98
<i>Anchoa hepsetus</i>	Striped anchovy								0.39																				1.23			2.73	
<i>Ophidion marginatum</i>	Striped cusk-eel																												1.29			1.09	
<i>Prionotus evolans</i>	Striped searobin																				0.60		0.67										
<i>Paralichthys dentatus</i>	Summer flounder											0.26		0.67					0.23			0.22				0.24						0.41	
<i>Cynoscion regalis</i>	Weakfish																												0.86				
<i>Scophthalmus aquosus</i>	Windowpane	3.12			2.22		2.17	0.43	2.58	0.23	0.25	0.24	0.24		0.21	0.20	0.42	1.33	0.21	0.23	0.23	0.45		0.45	0.20	0.23		0.45			0.23	0.51	
<i>Raja ocellata</i>	Winter skate	2.66	0.44		1.72		0.87	3.78	2.15									0.23	0.67	0.23	0.21	0.43	0.66		0.68								

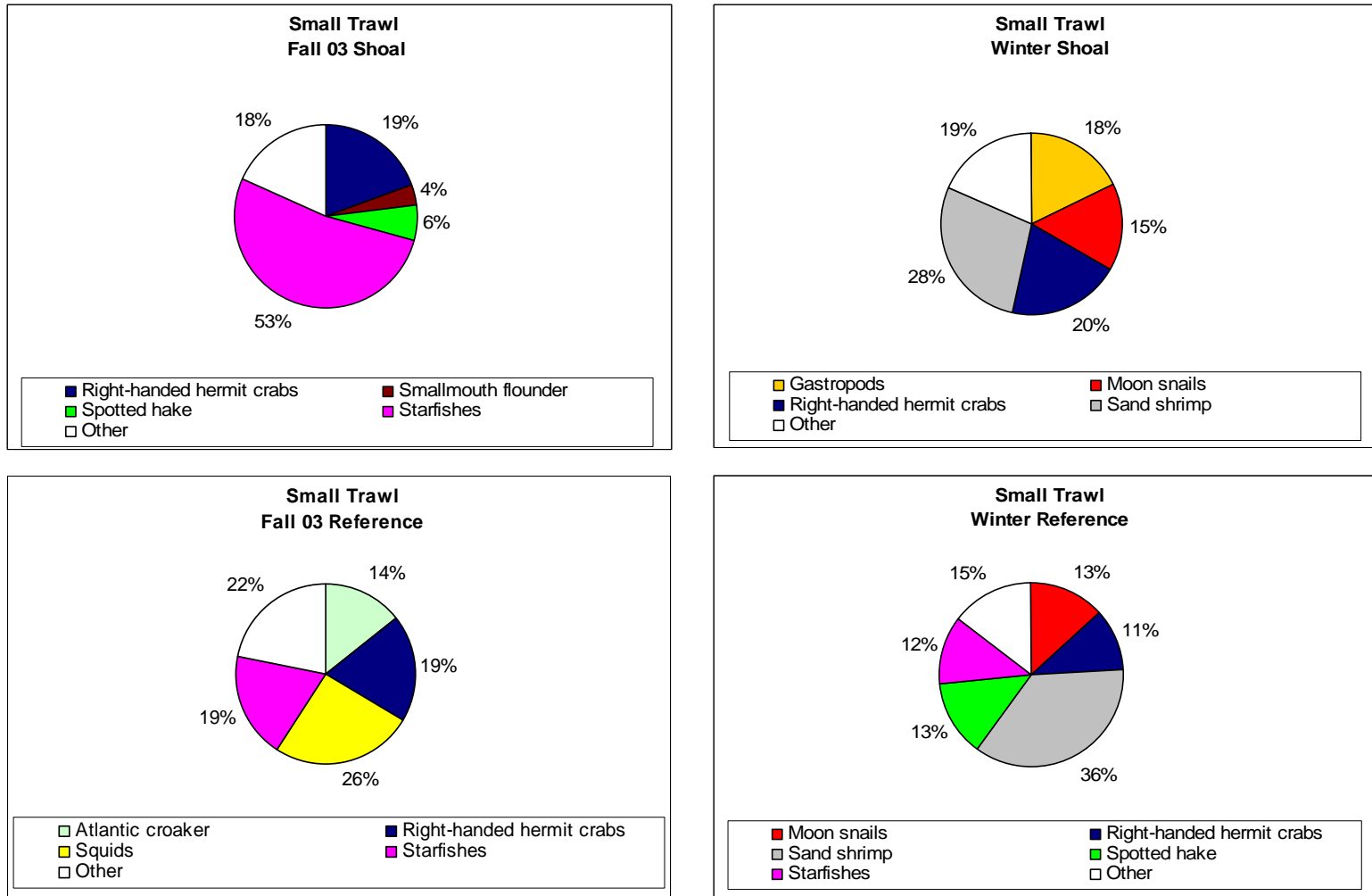


Figure B-1. Fall 2003 and combined two-year winter percent species composition for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined.

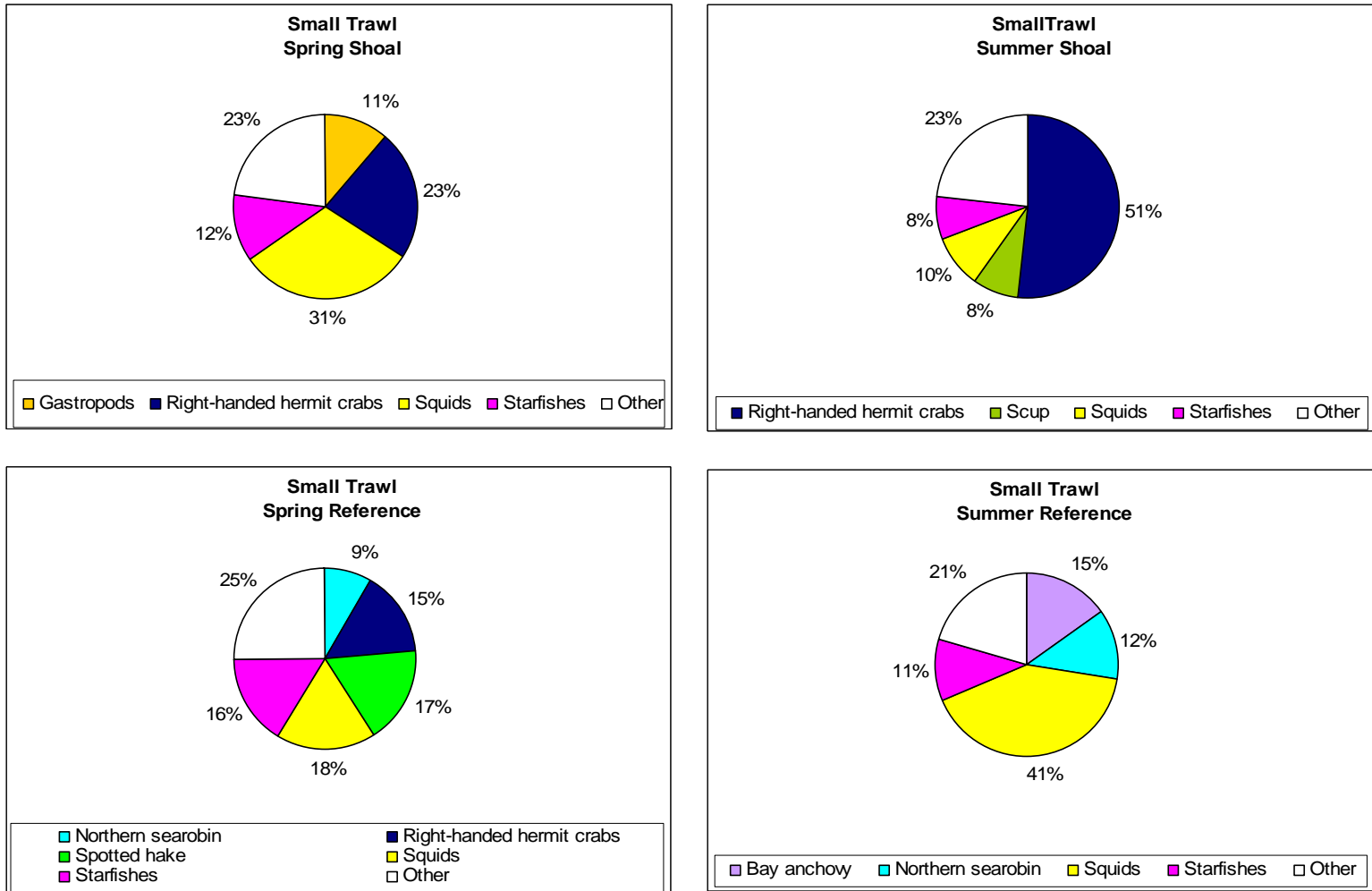


Figure B-2. Combined two-year spring and summer percent species composition for all species collected in small trawls at four shoal and four reference sites in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004. Ref – All reference sites combined. Shoal – All shoal sites combined.

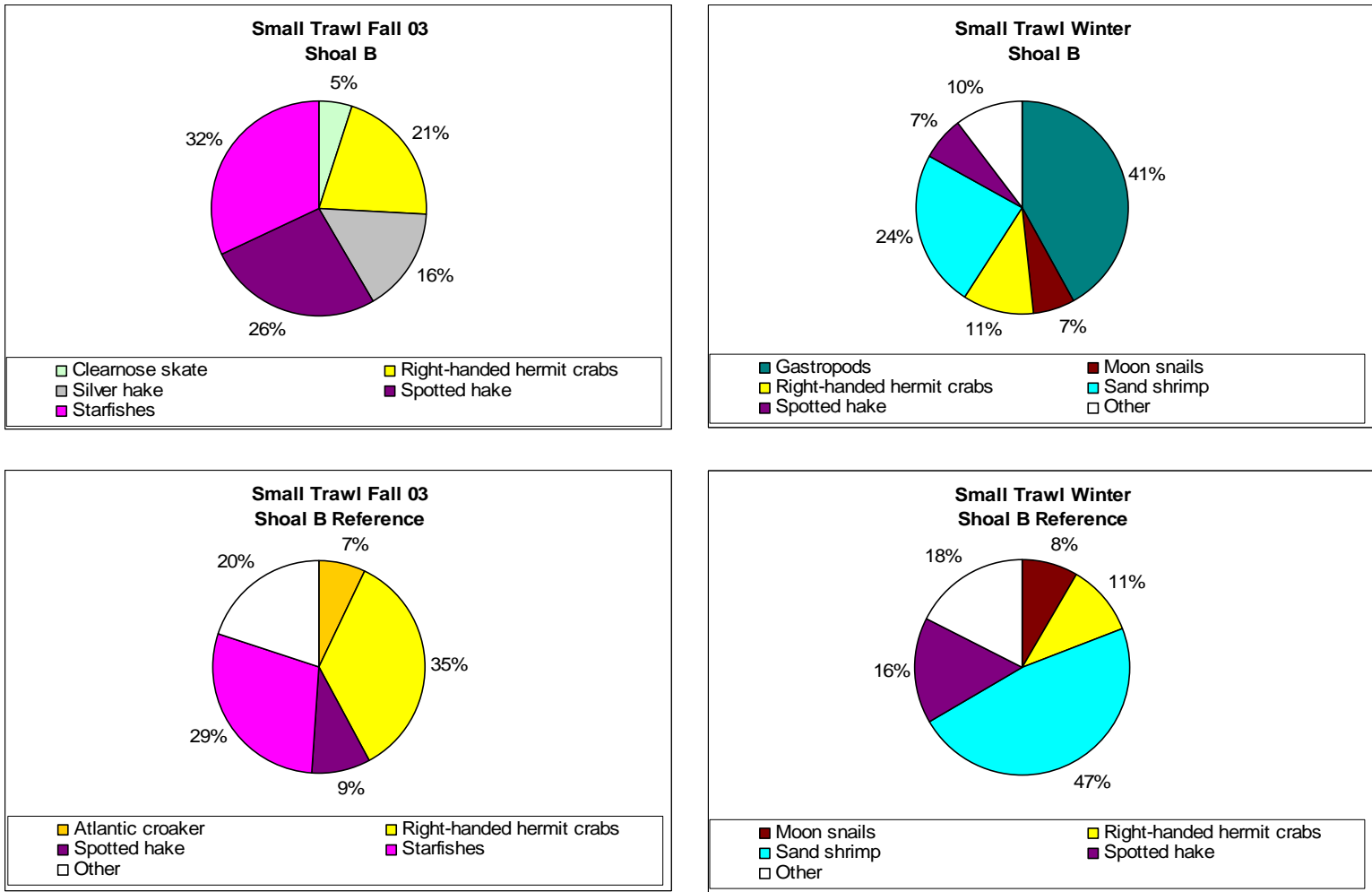


Figure B-3. Fall 2003 and combined two-year winter percent composition for all species collected in small trawls at Shoal B and Shoal B Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

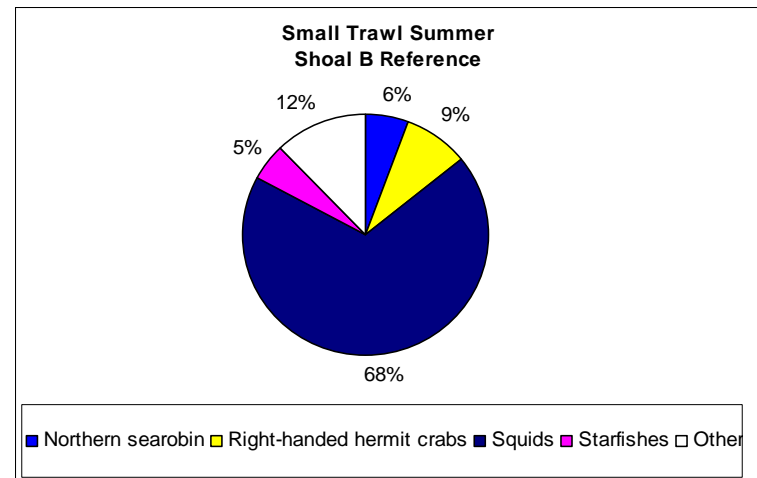
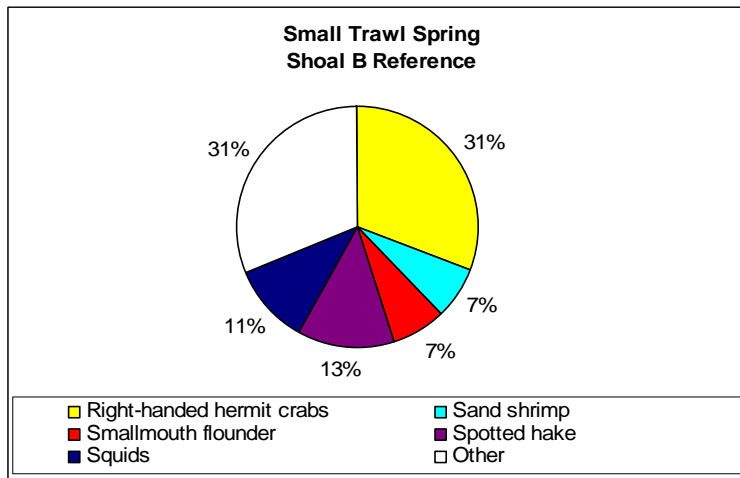
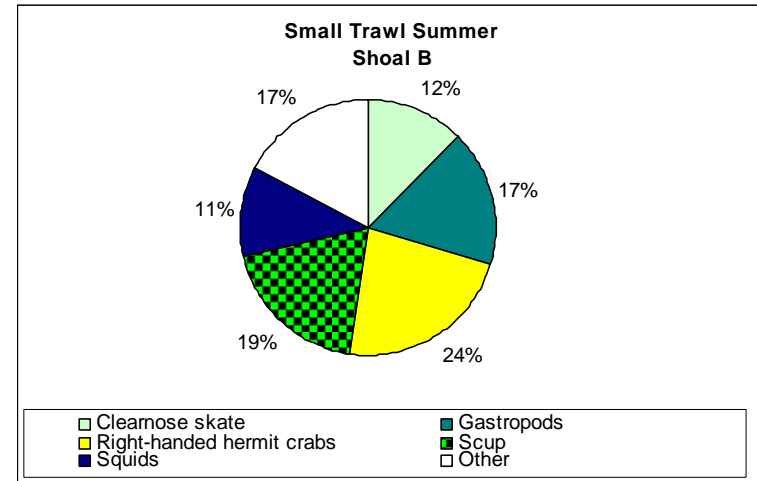
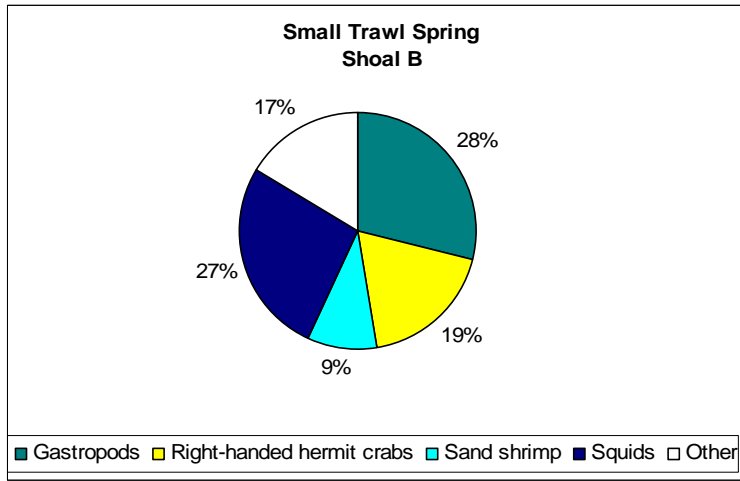


Figure B-4. Combined two-year spring and summer percent composition for all species collected in small trawls at Shoal B and Shoal B Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

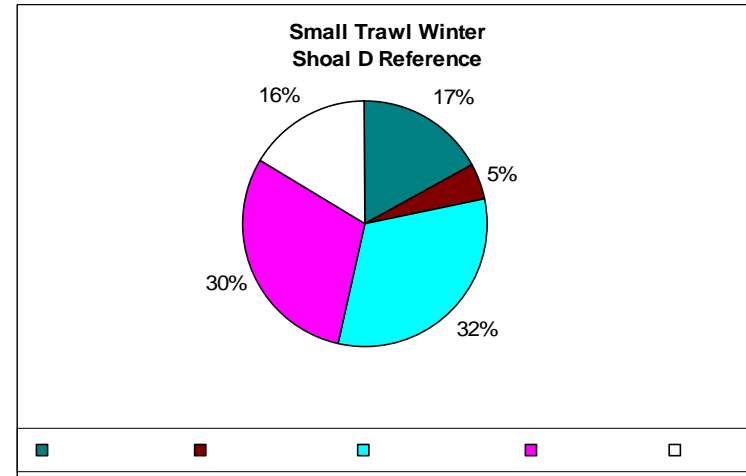
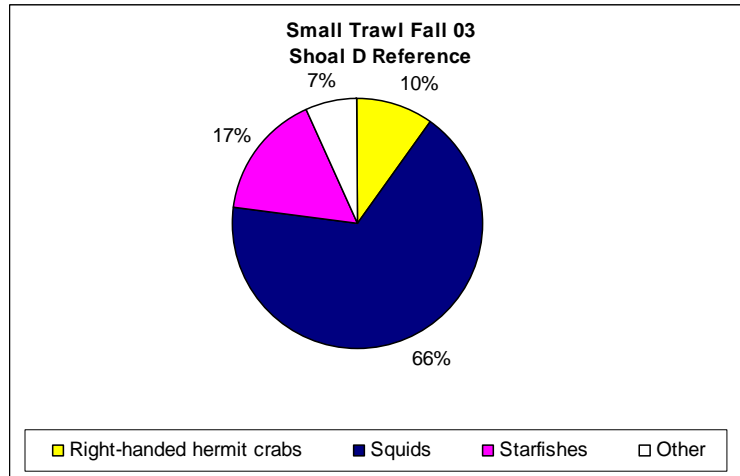
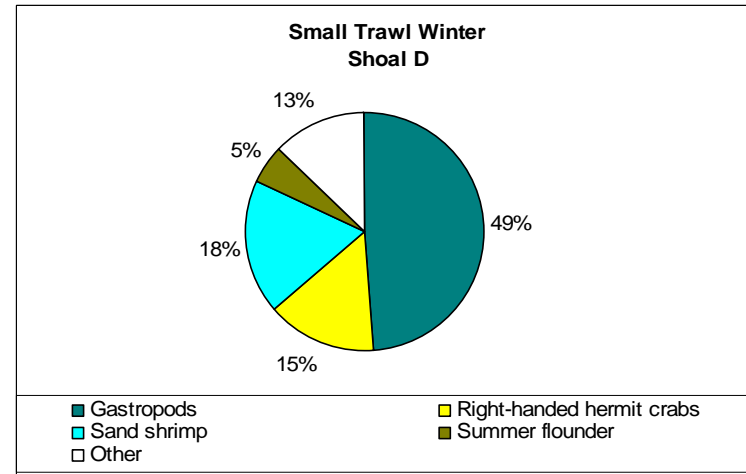
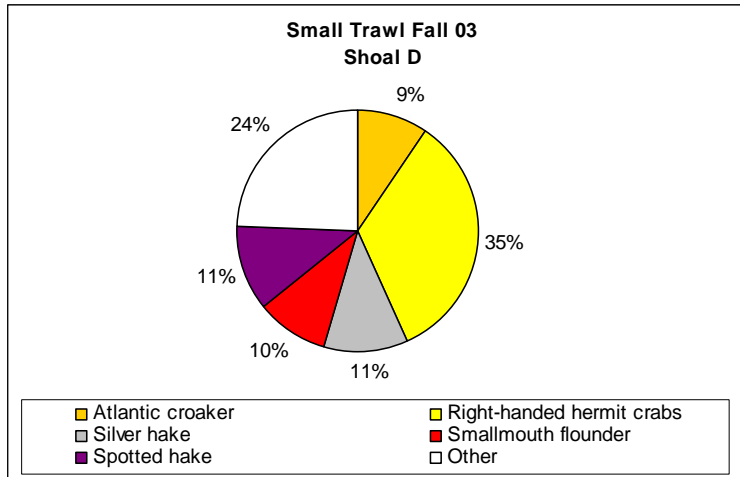


Figure B-5. Fall 2003 and combined two-year winter percent composition for all species collected in small trawls at Shoal D and Shoal D Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

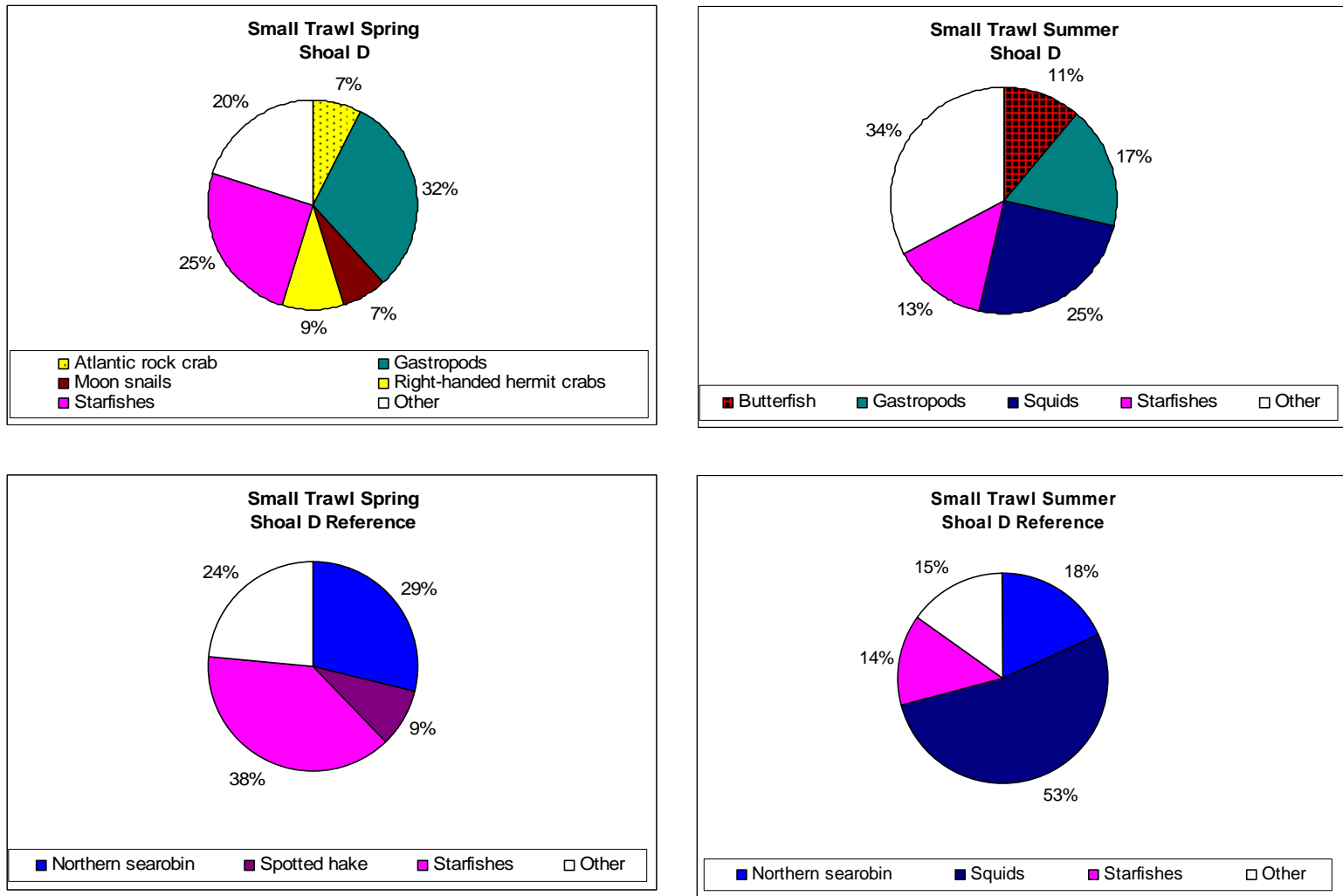


Figure B-6. Combined two-year spring and summer percent composition for all species collected in small trawls at Shoal D and Shoal D Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

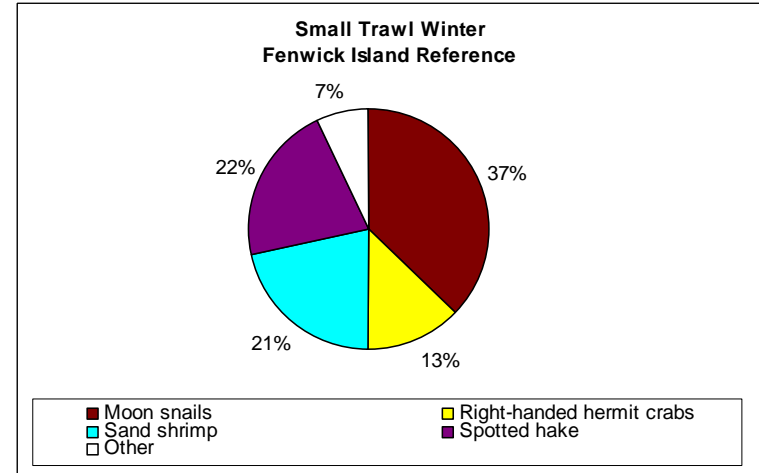
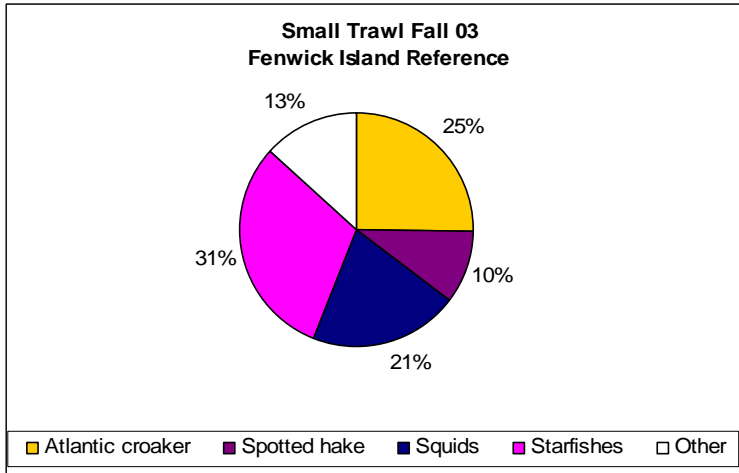
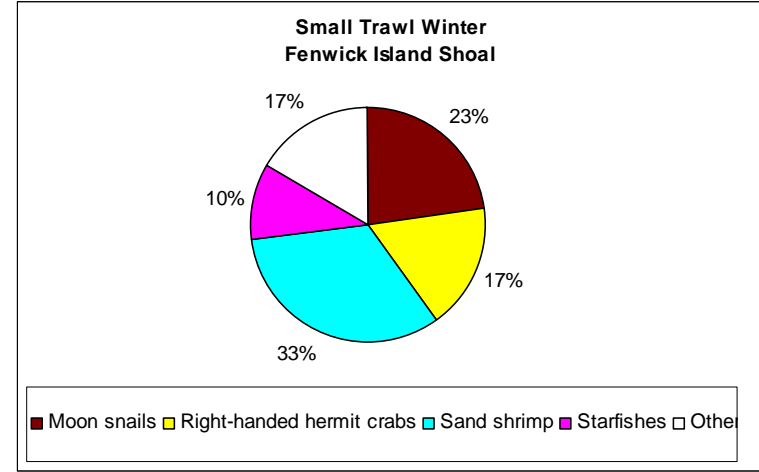
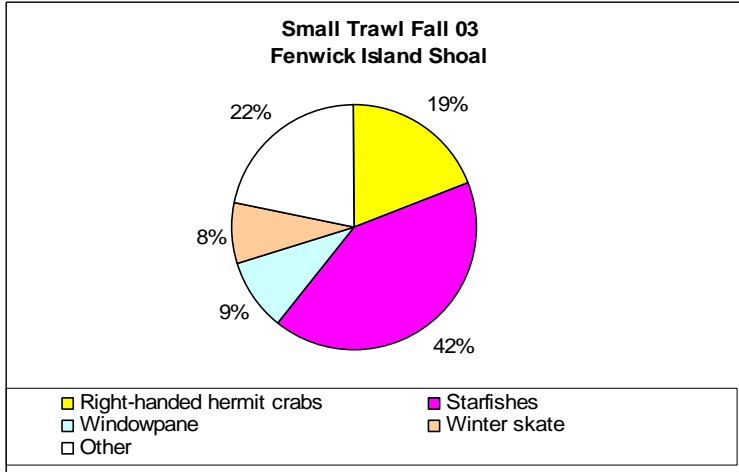


Figure B-7. Fall 2003 and combined two-year percent composition for all species collected in small trawls at Fenwick Island Shoal and Fenwick Island Shoal Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

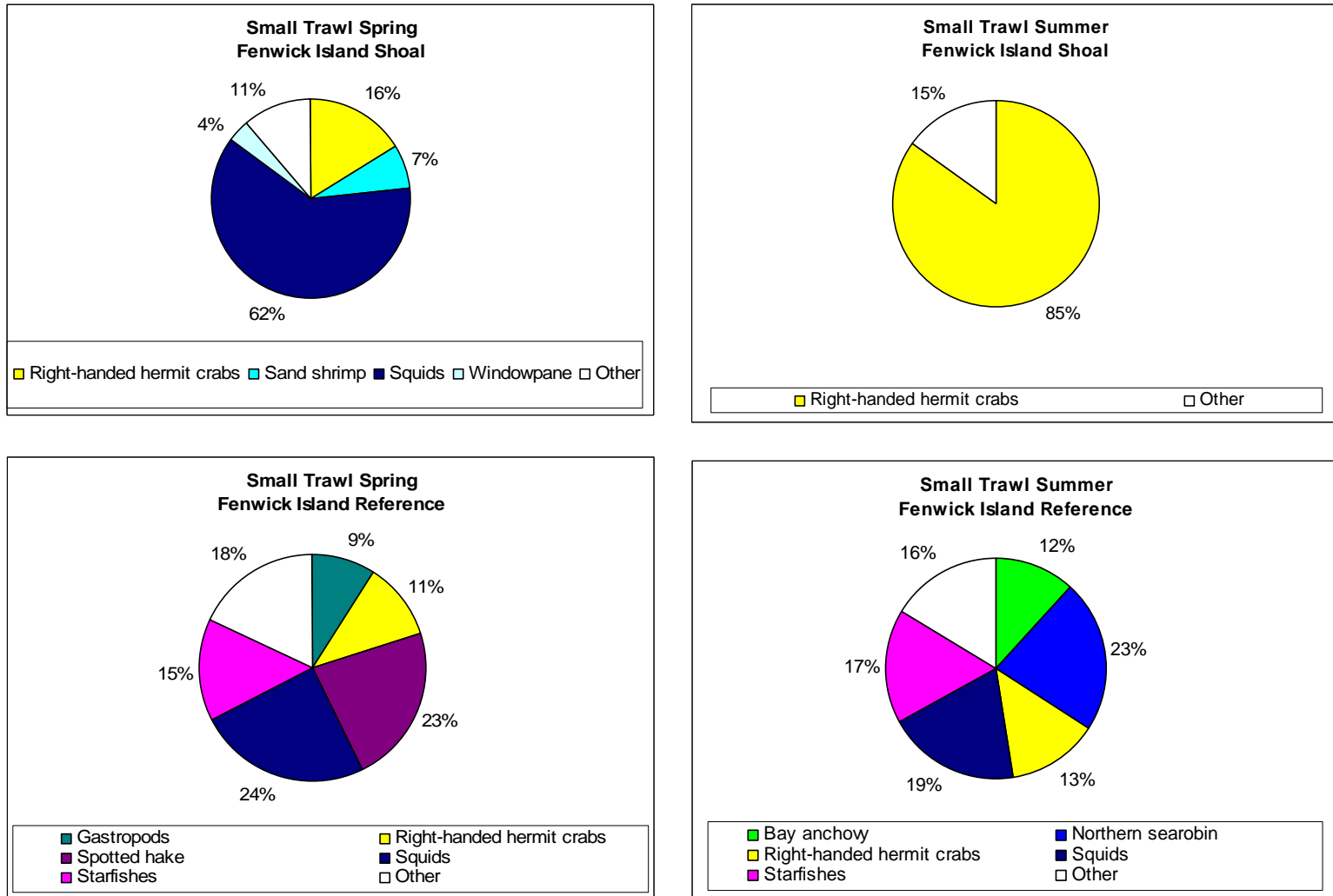


Figure B-8. Combined two-year spring and summer percent composition for all species collected in small trawls at Fenwick Island Shoal and Fenwick Island Shoal Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

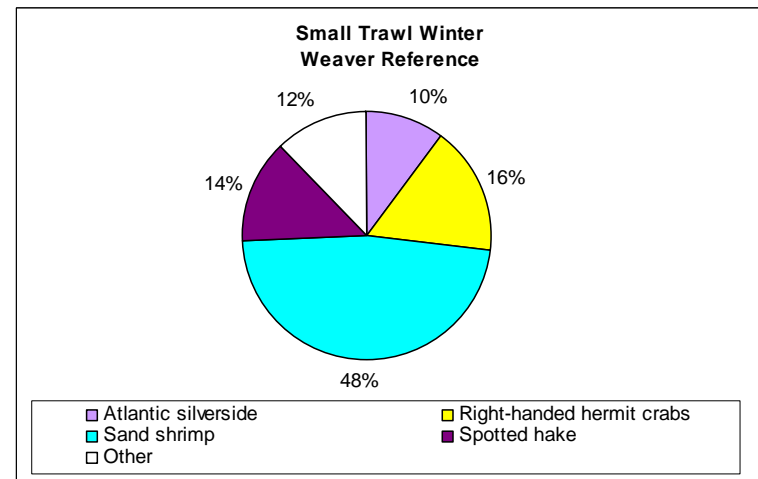
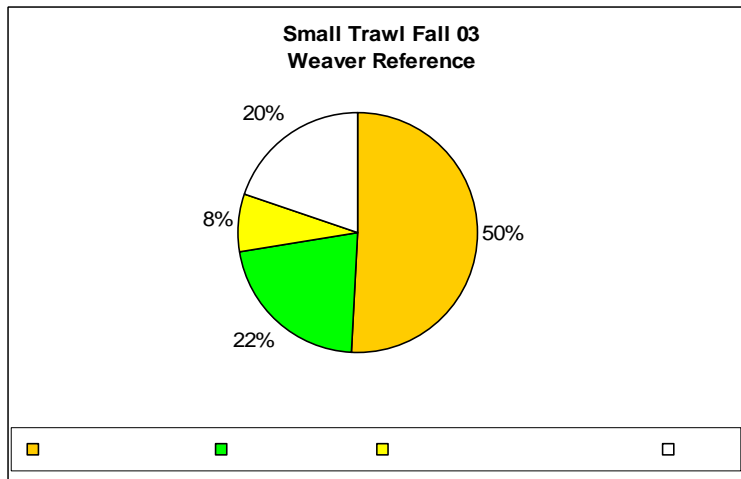
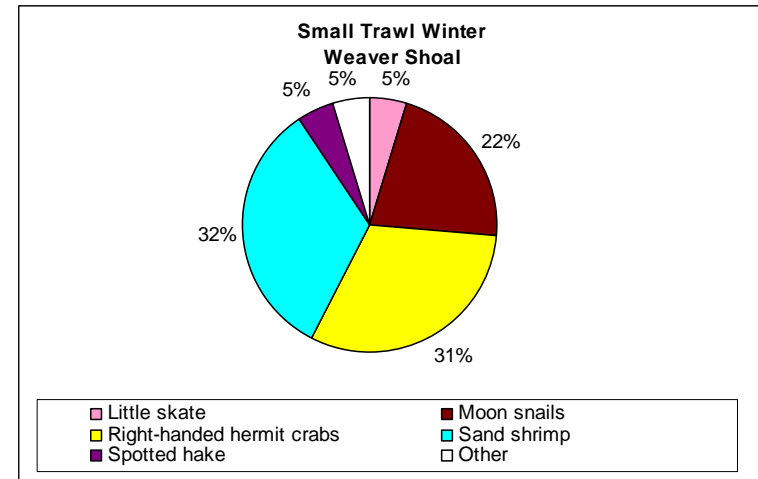
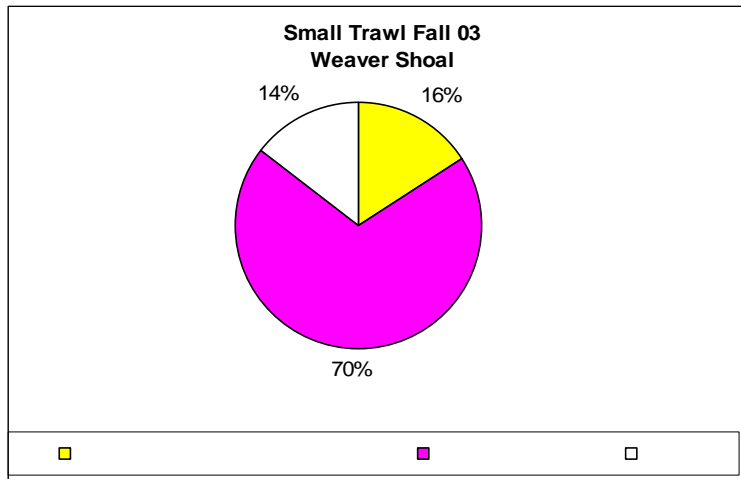


Figure B-9. Fall 2003 and combined two-year winter percent composition for all species collected in small trawls at Weaver Shoal and Weaver Shoal Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.

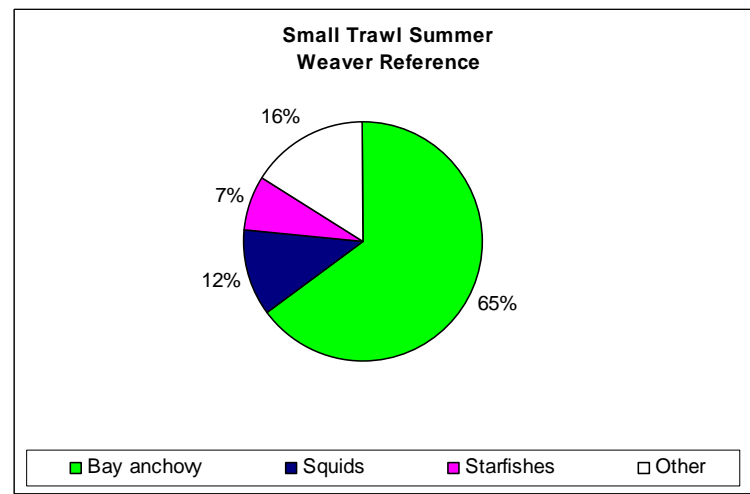
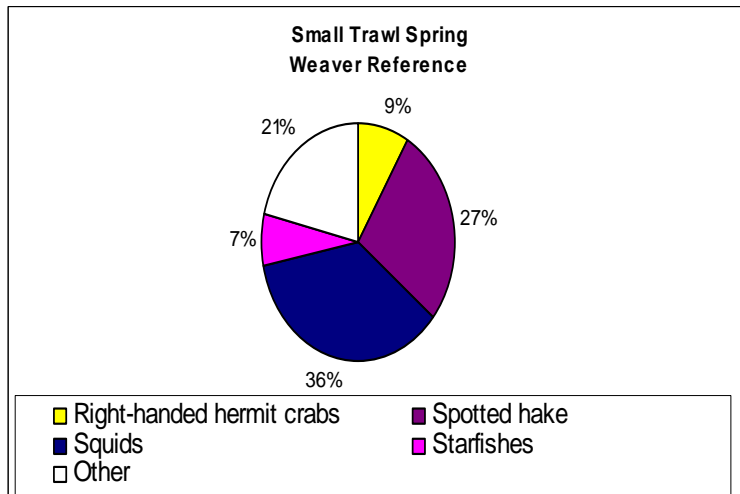
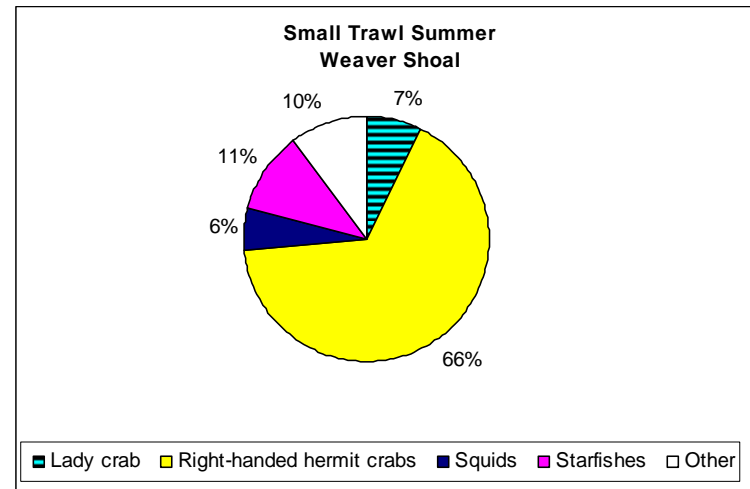
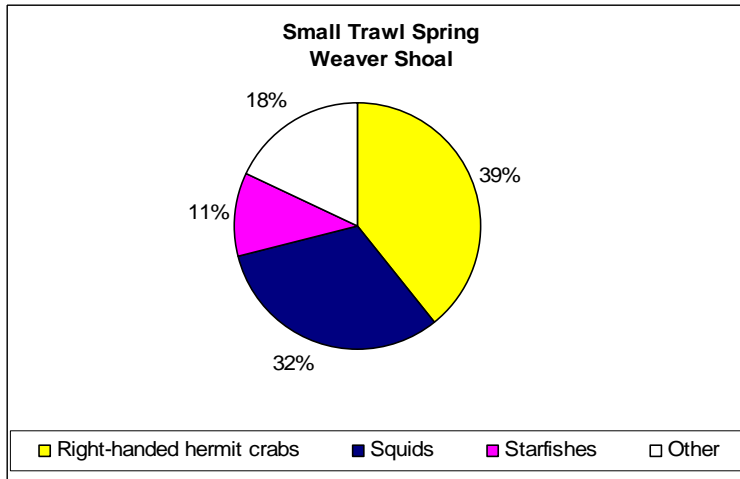


Figure B-10. Combined two-year spring and summer percent composition for all species collected in small trawls at Weaver Shoal and Weaver Shoal Reference site in the Atlantic Ocean off the coast of Maryland and Delaware from November 2002 to September 2004.