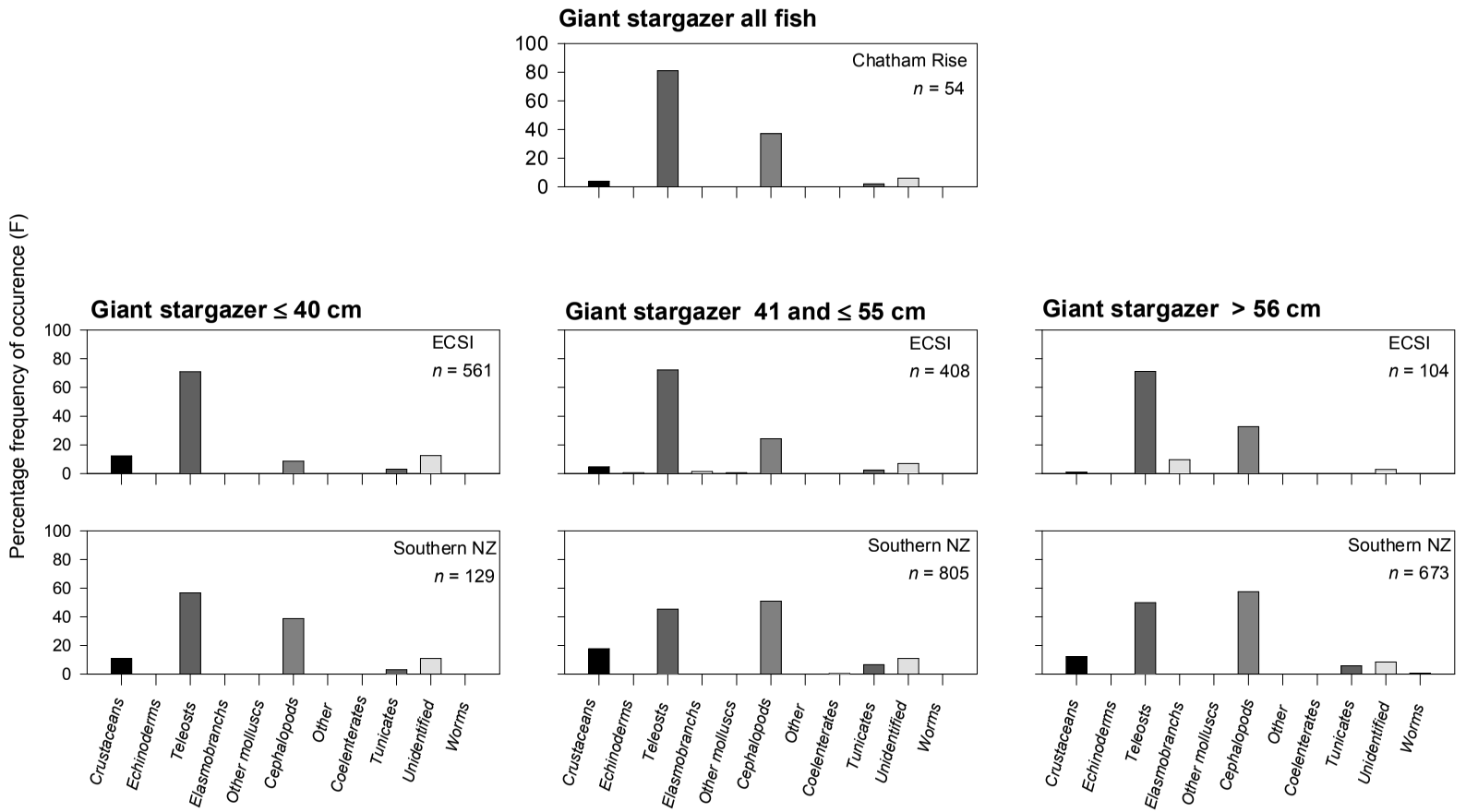

Figure B12c. The importance of major prey groups in the diet of giant stargazer examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

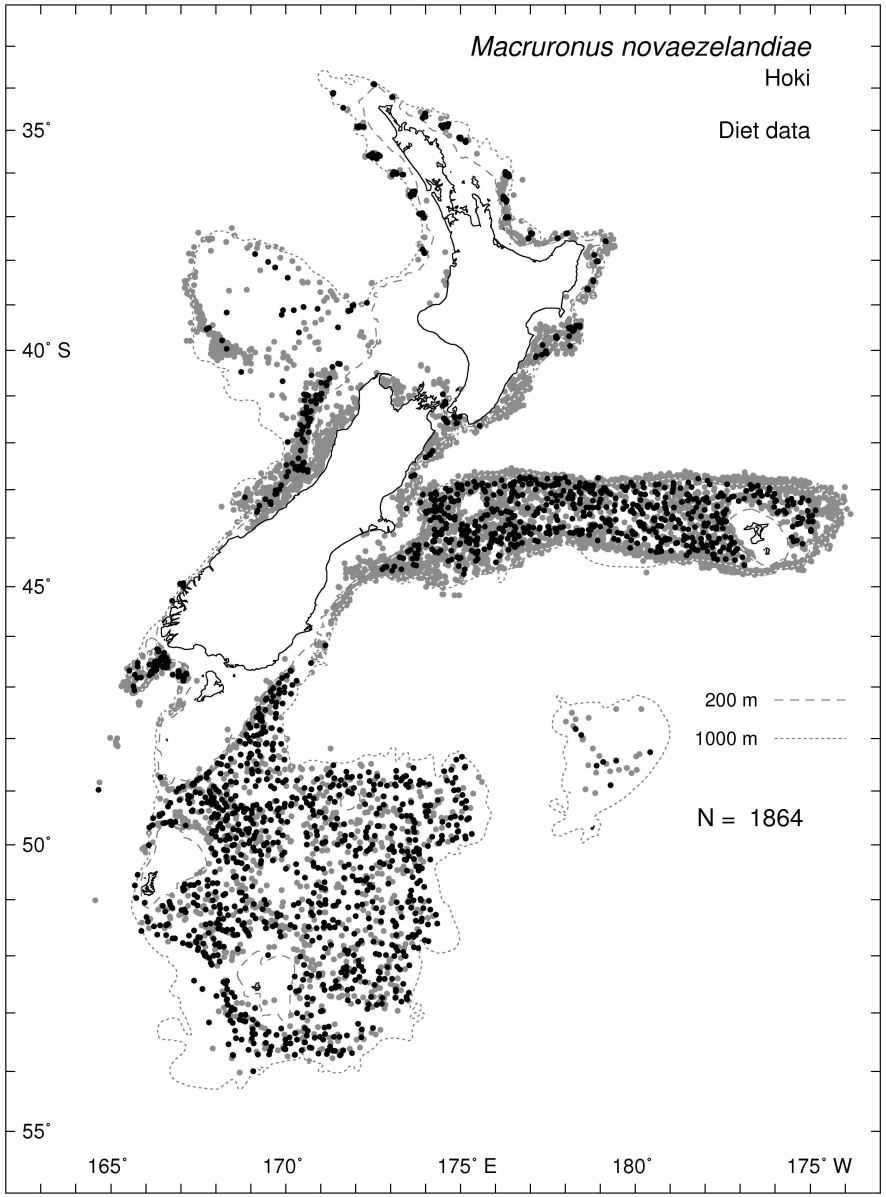

Figure B13a. The distribution of all hoki (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

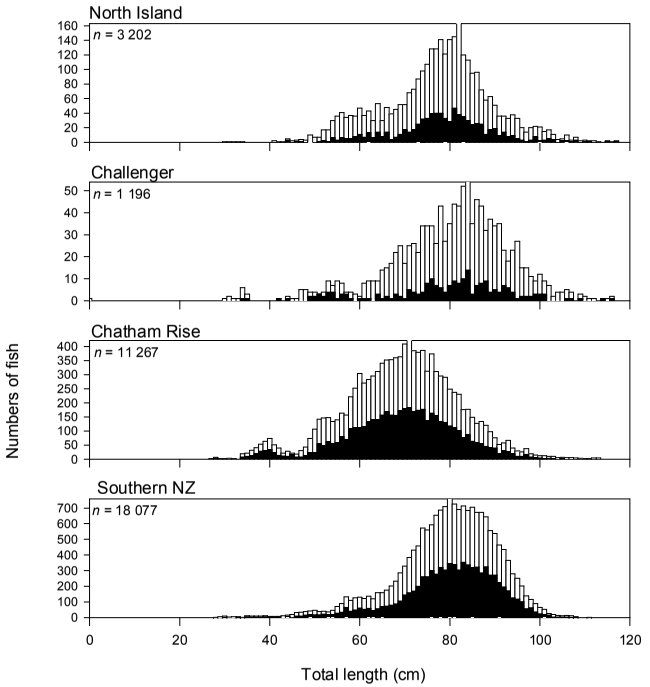

Figure B13b. The length frequency of hoki where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

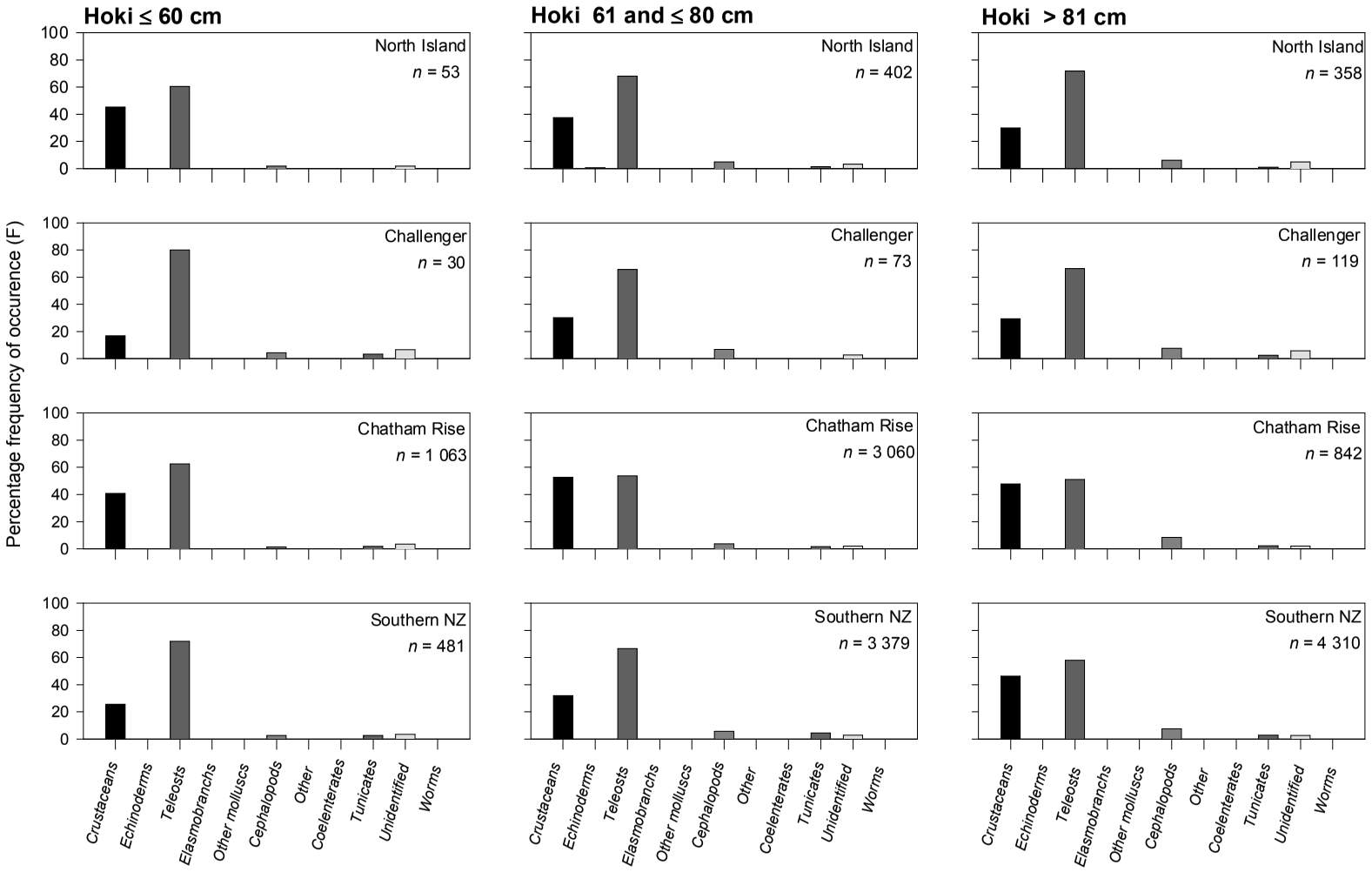

Figure B13c. The importance of major prey groups in the diet of hoki examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

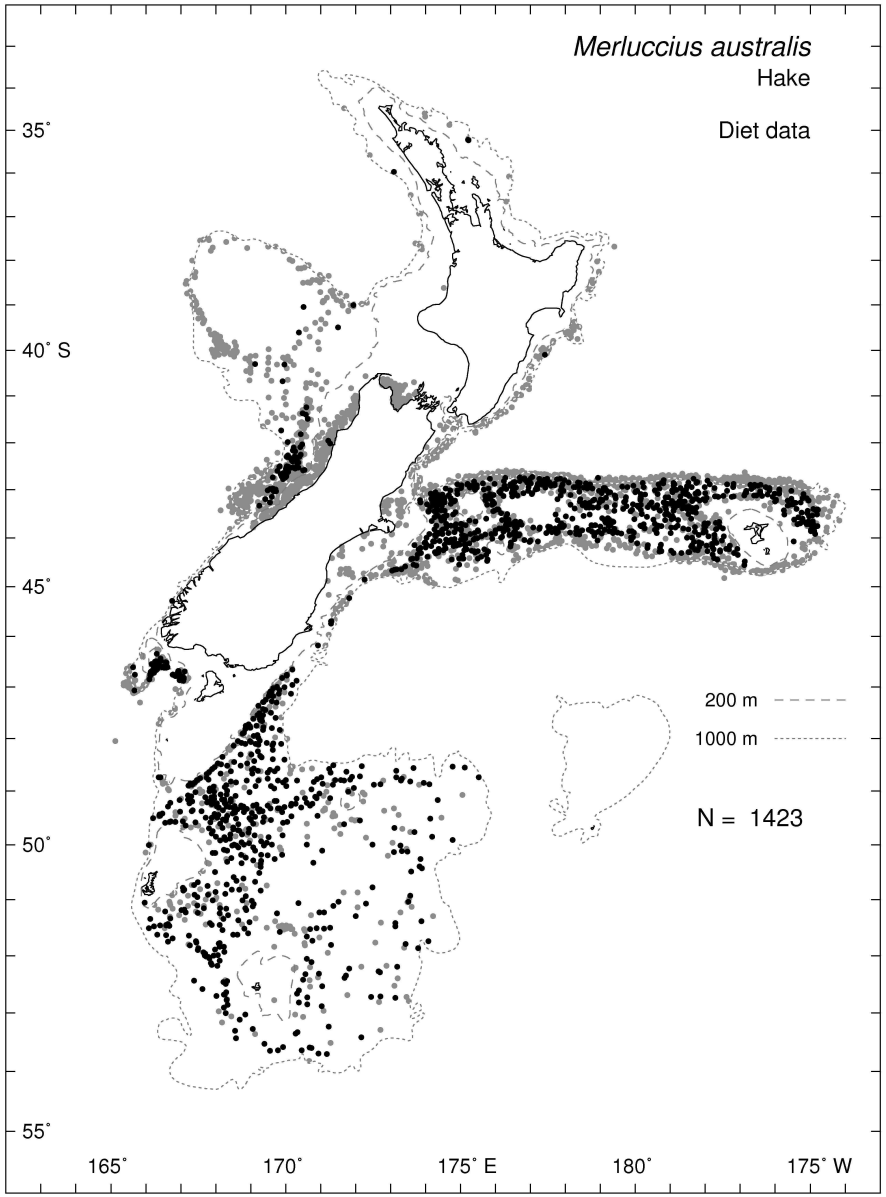

Figure B14a. The distribution of all hake (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

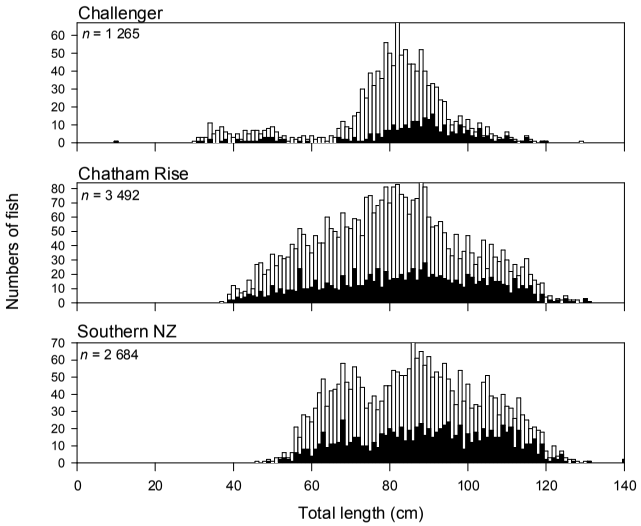

Figure B14b. The length frequency of hake where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

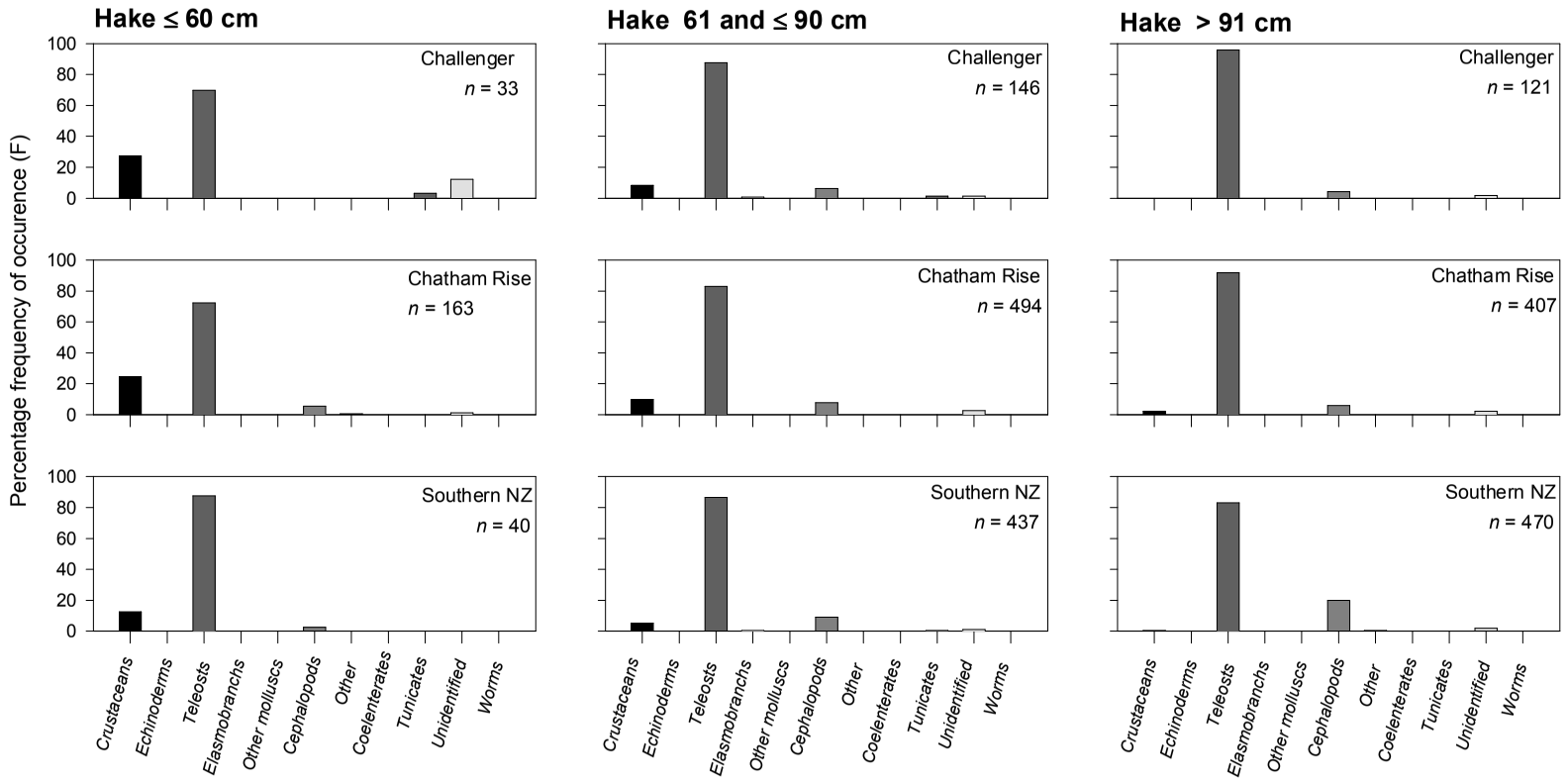

Figure B14c. The importance of major prey groups in the diet of hake examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

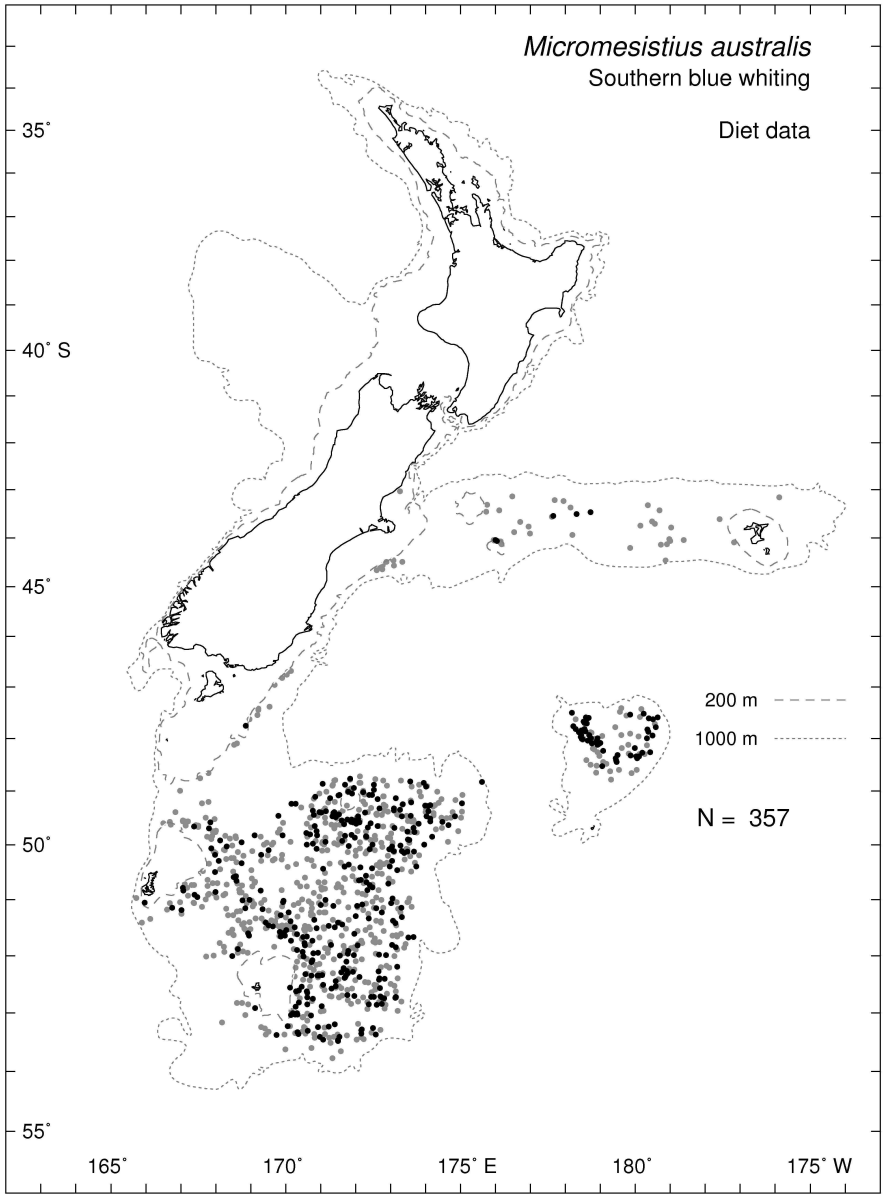

Figure B15a. The distribution of all southern blue whiting (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

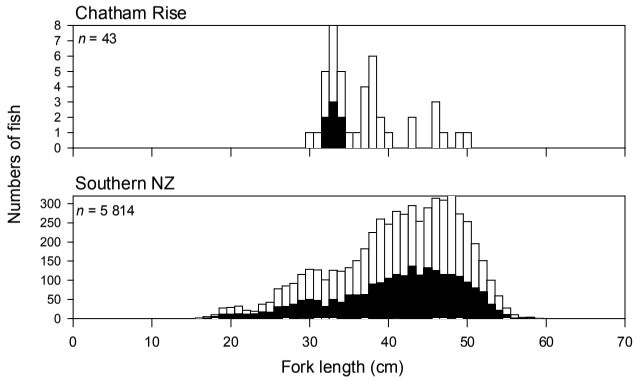

Figure B15b. The length frequency of southern blue whiting where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

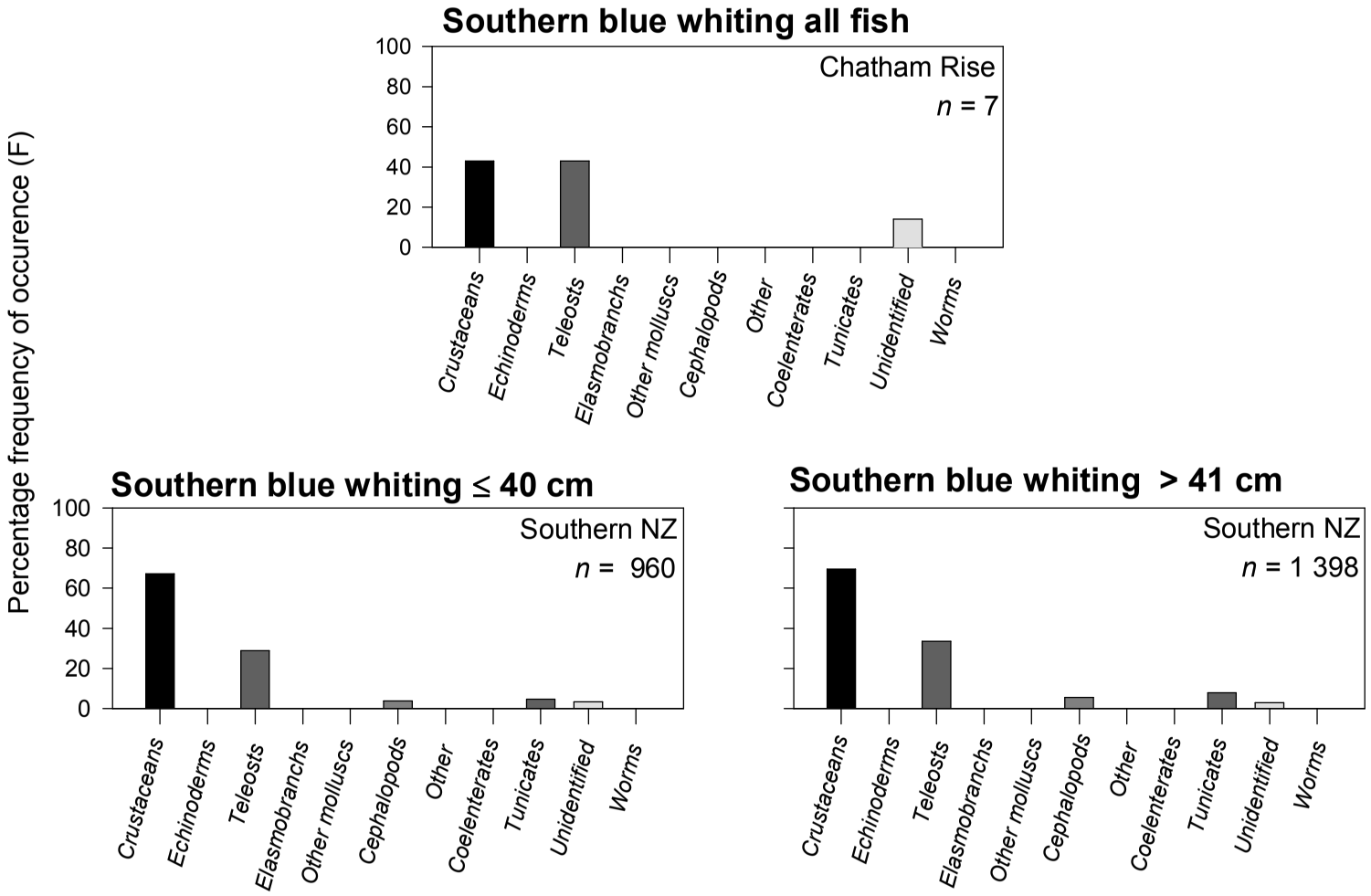

Figure B15c. The importance of major prey groups in the diet of southern blue whiting examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

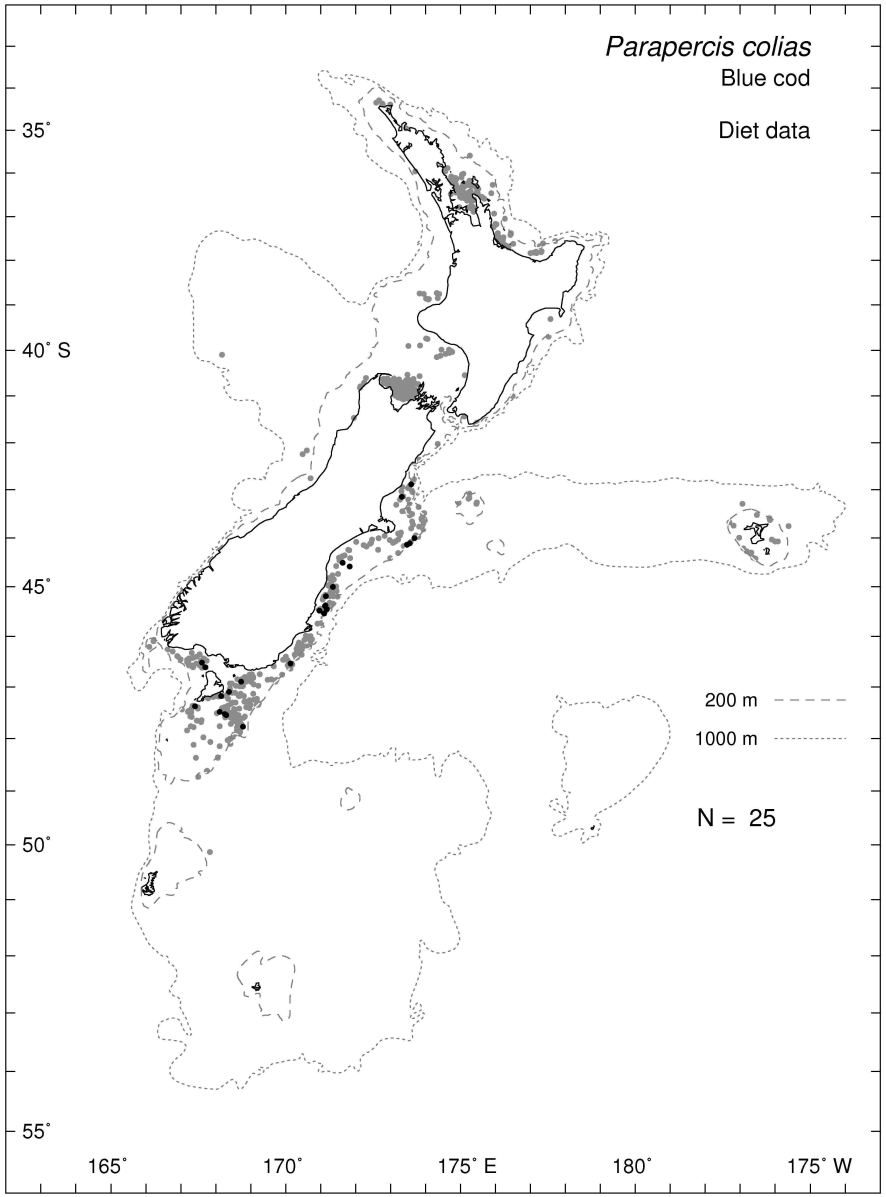

Figure B16a. The distribution of all blue cod (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

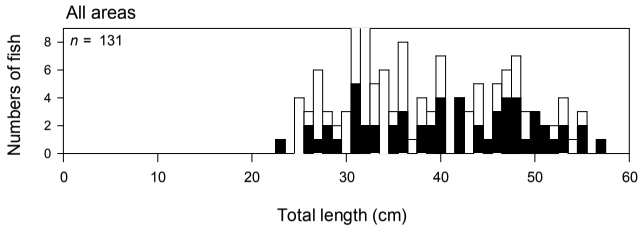

Figure B16b. The length frequency of blue cod where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

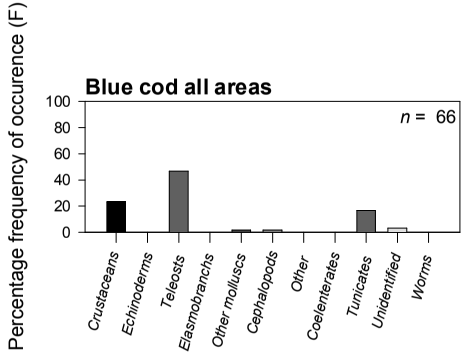

Figure B16c. The importance of major prey groups in the diet of blue cod examined on research trawl surveys. Fish size groups are arbitrary designations. *n*, number of fish examined for diet.

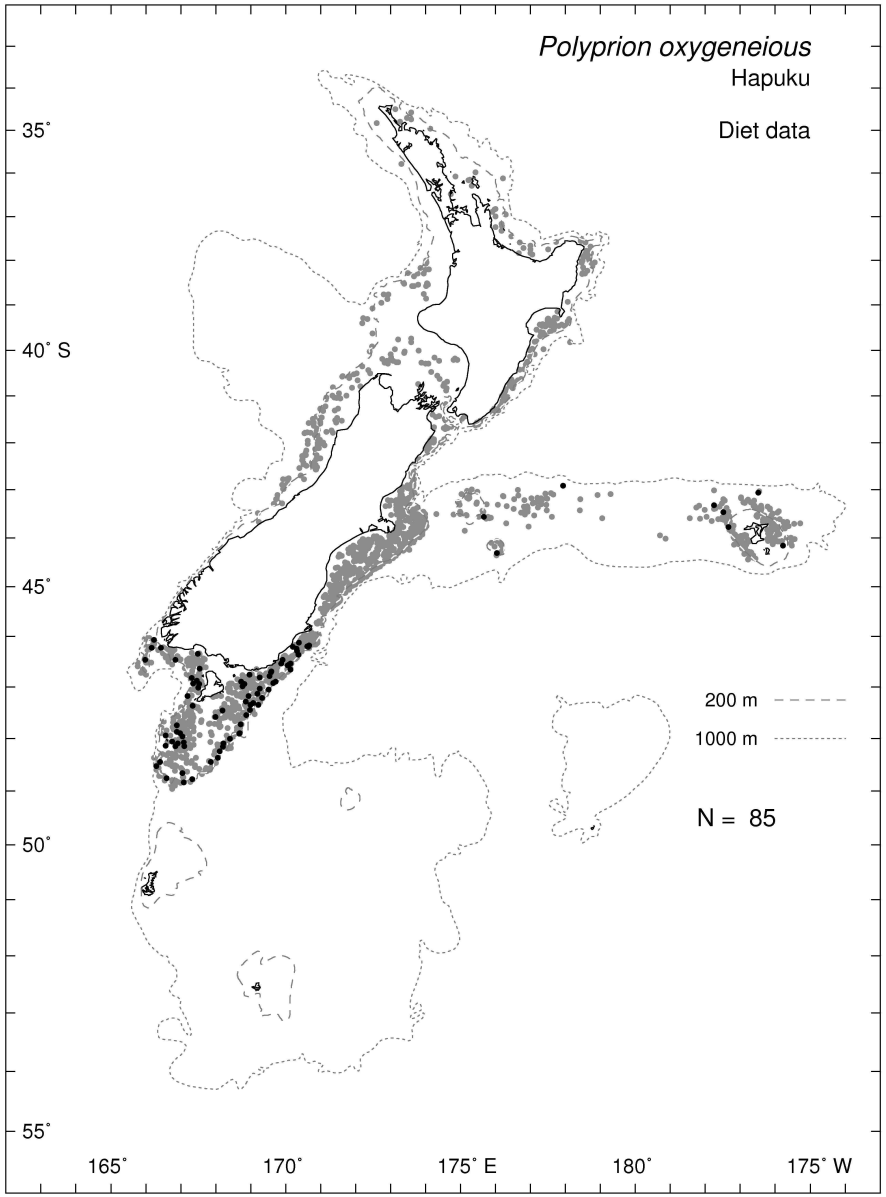

Figure B17a. The distribution of all hapuku (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

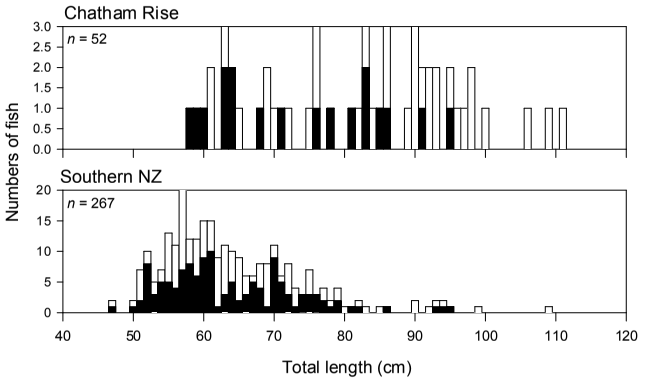

Figure B17b. The length frequency of hapuku where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

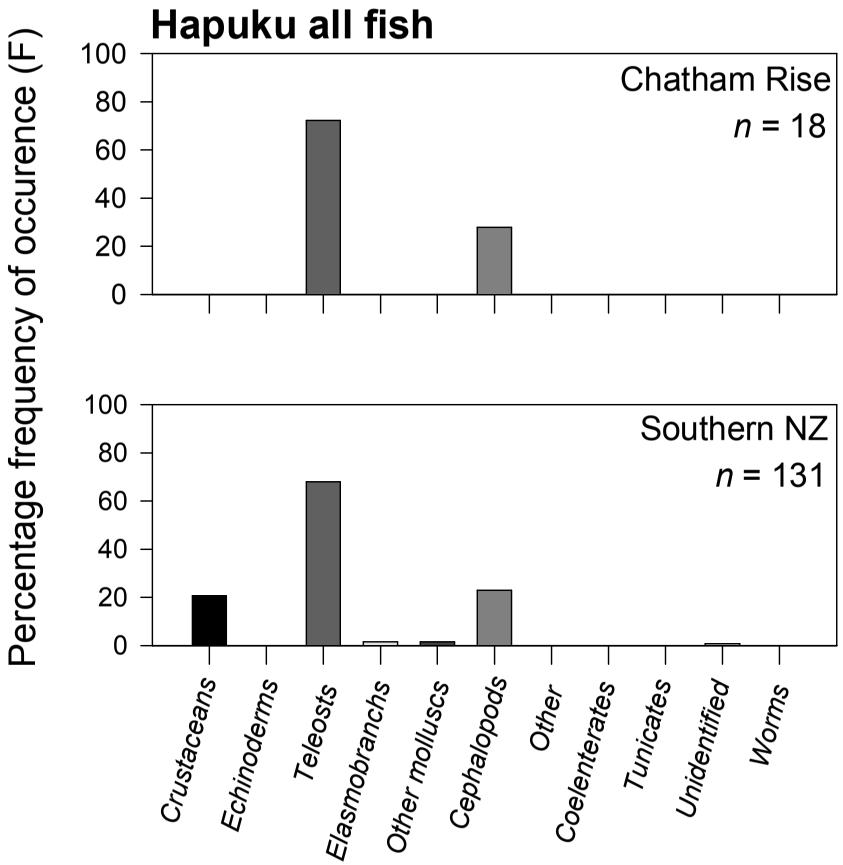

Figure B17c. The importance of major prey groups in the diet of hapuku examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

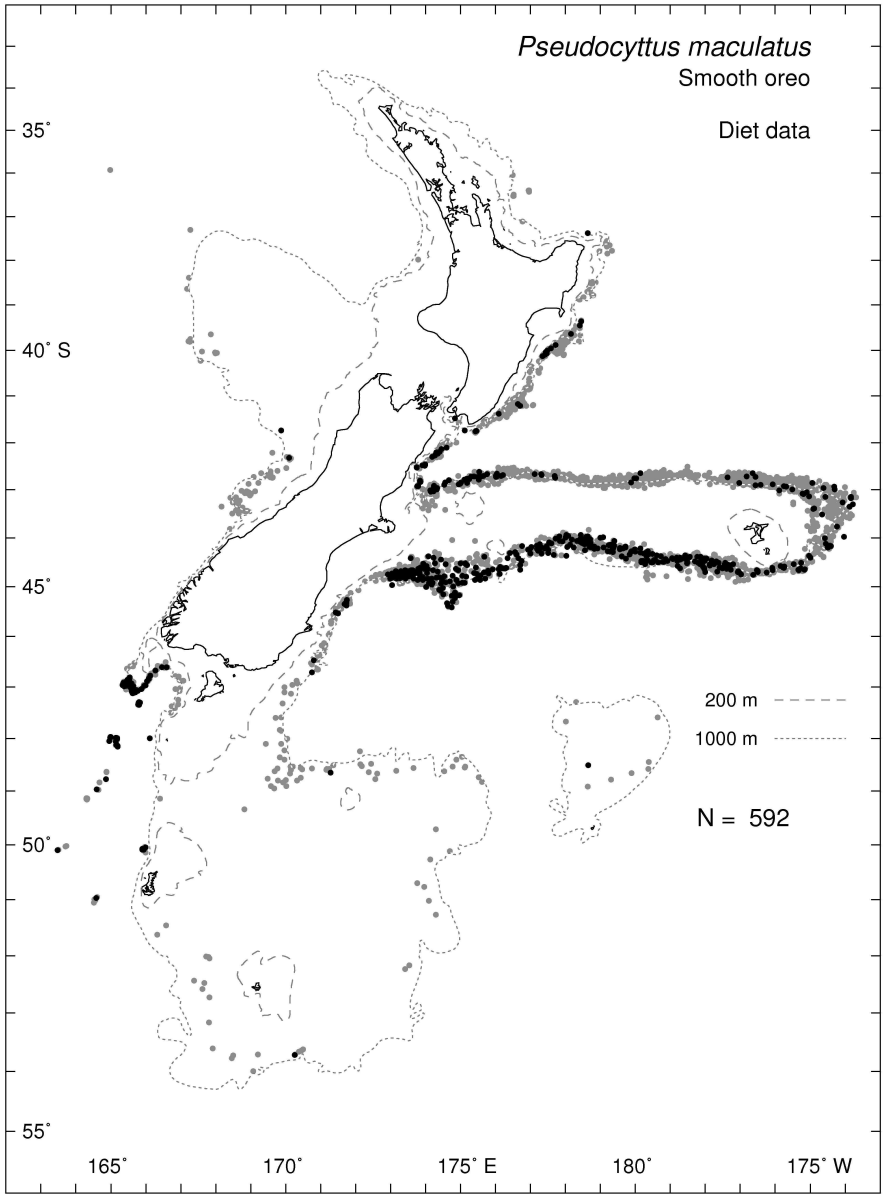

Figure B18a. The distribution of all smooth oreo (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

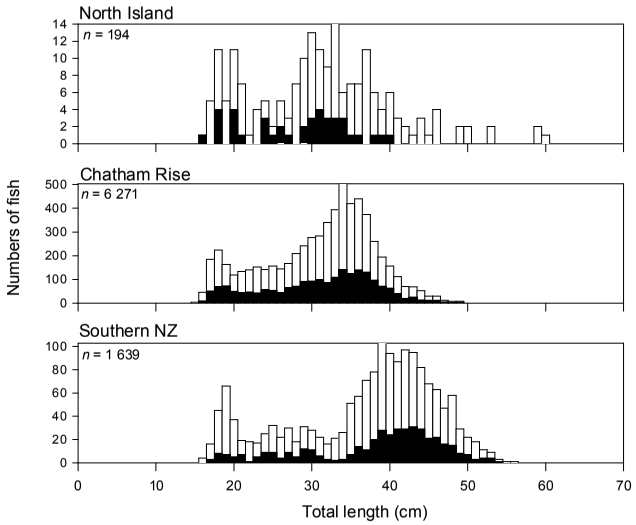

Figure B18b. The length frequency of smooth oreo where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

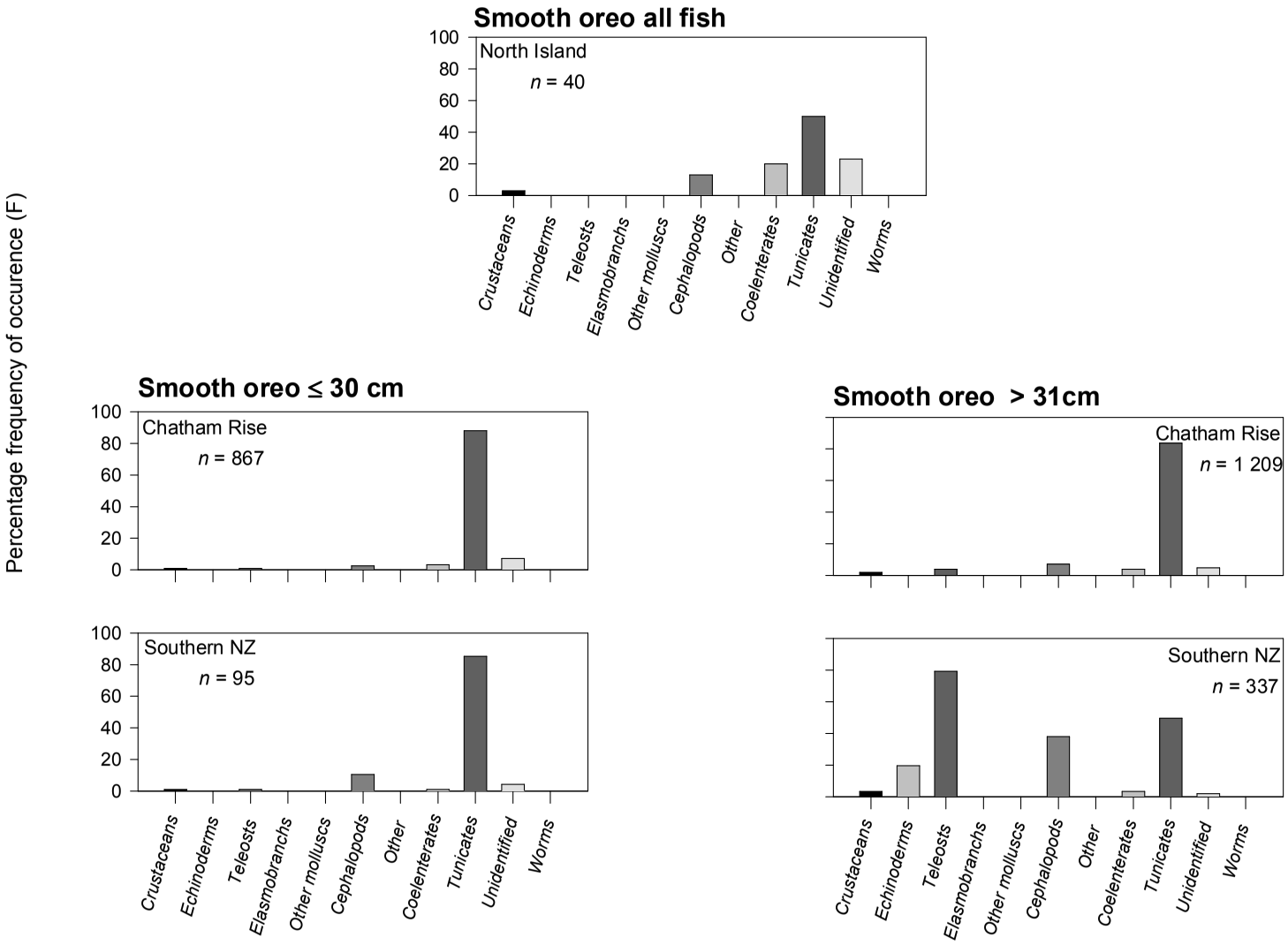

Figure B18c. The importance of major prey groups in the diet of smooth oreo examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

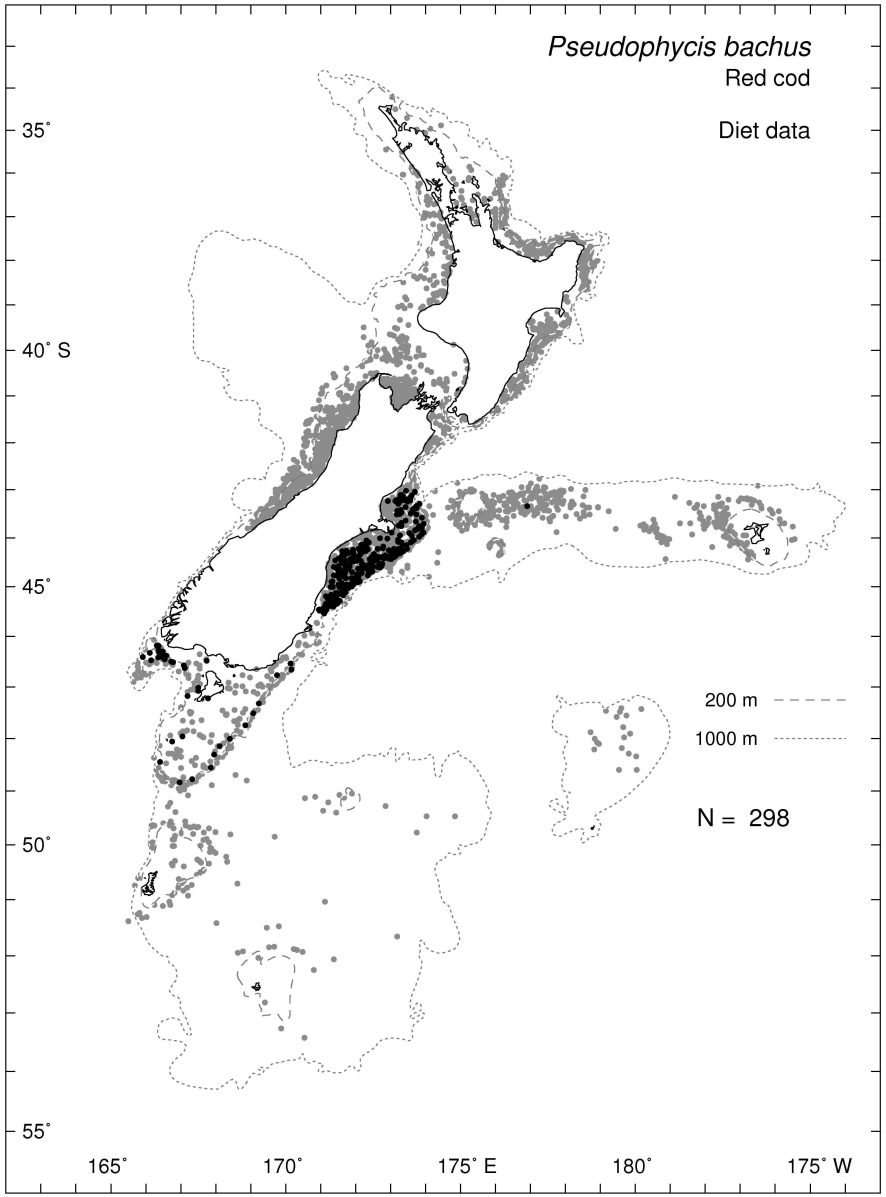

Figure B19a. The distribution of all red cod (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

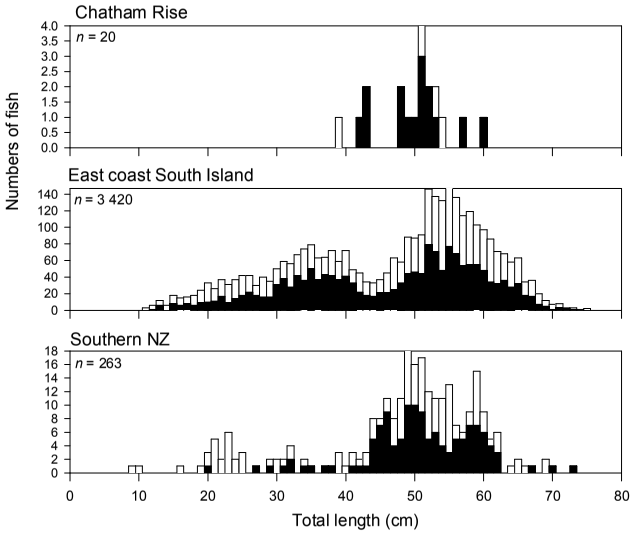

Figure B19b. The length frequency of red cod where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

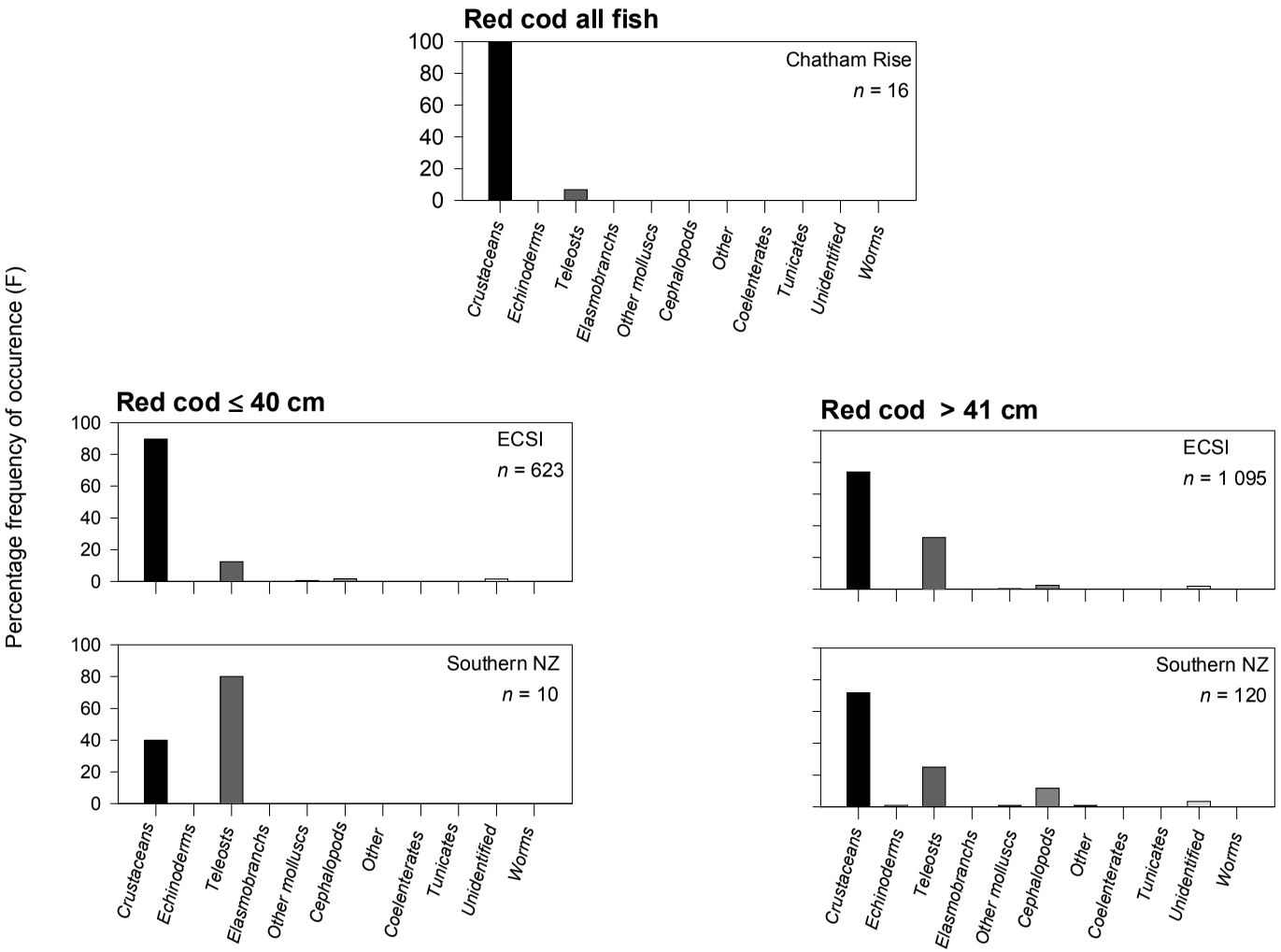

Figure B19c. The importance of major prey groups in the diet of red cod examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

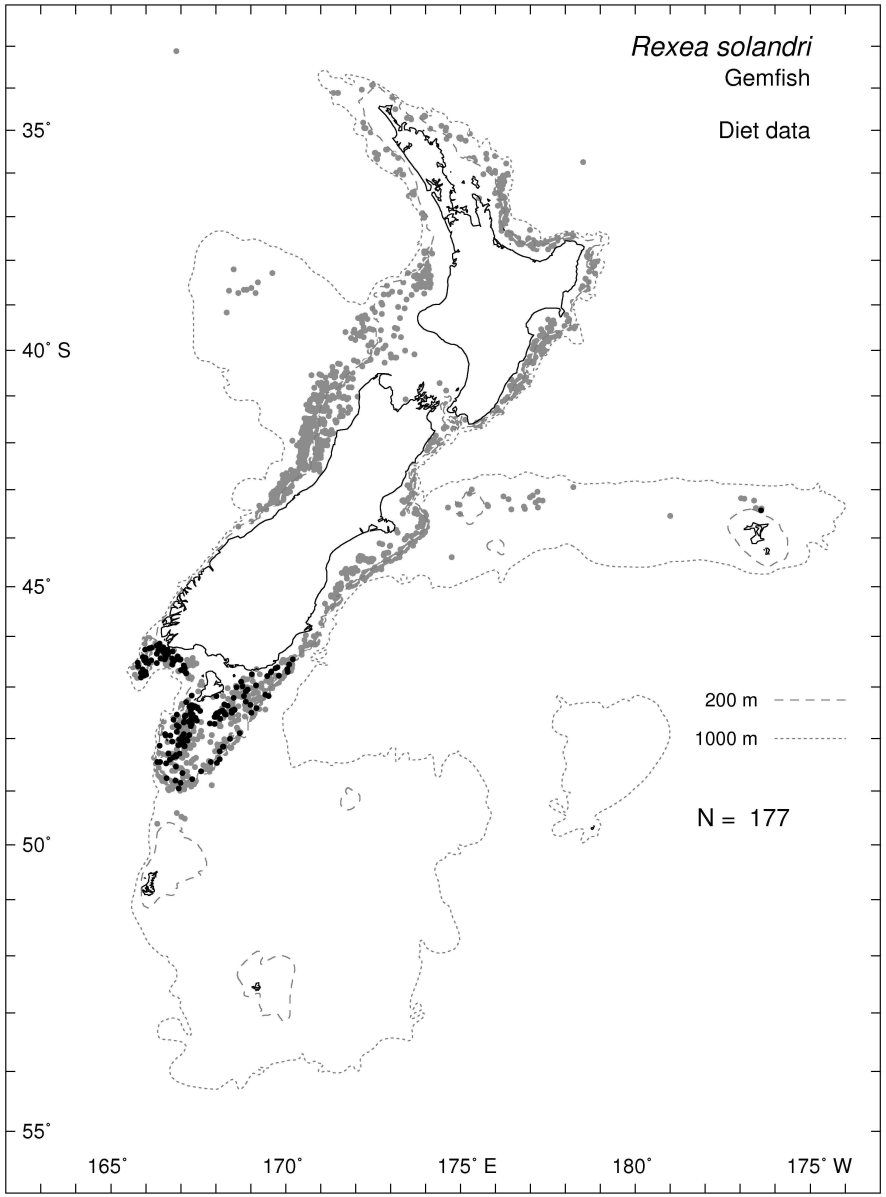

Figure B20a. The distribution of all gemfish (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

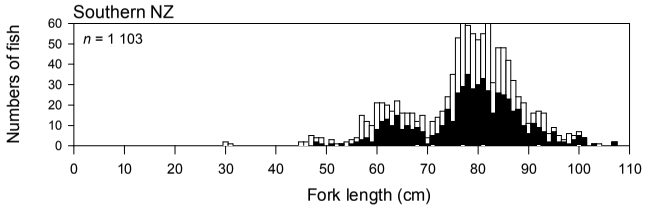

Figure B20b. The length frequency of gemfish where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

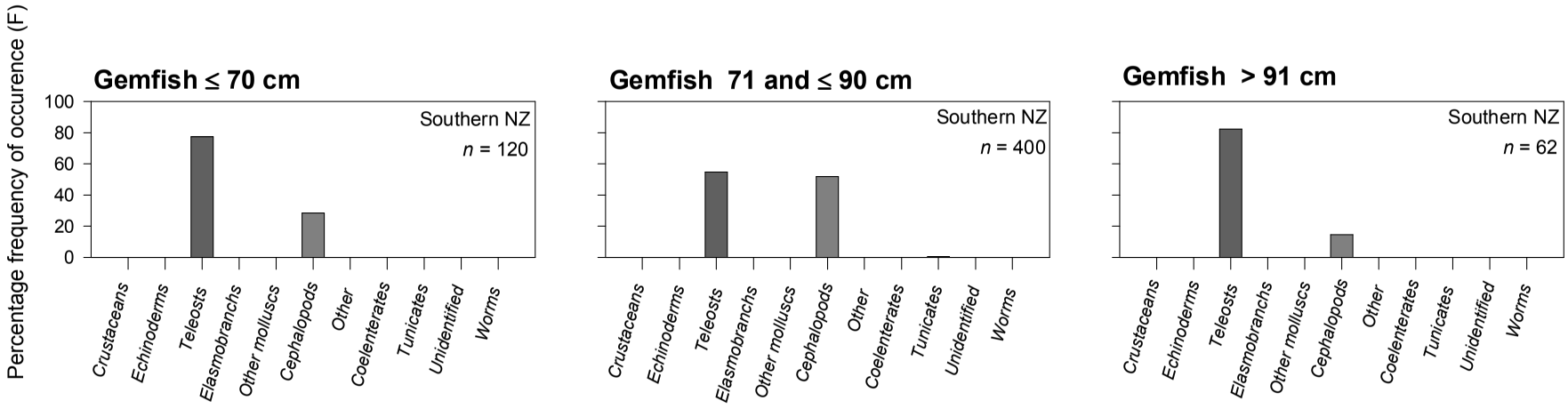

Figure B20c. The importance of major prey groups in the diet of gemfish examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

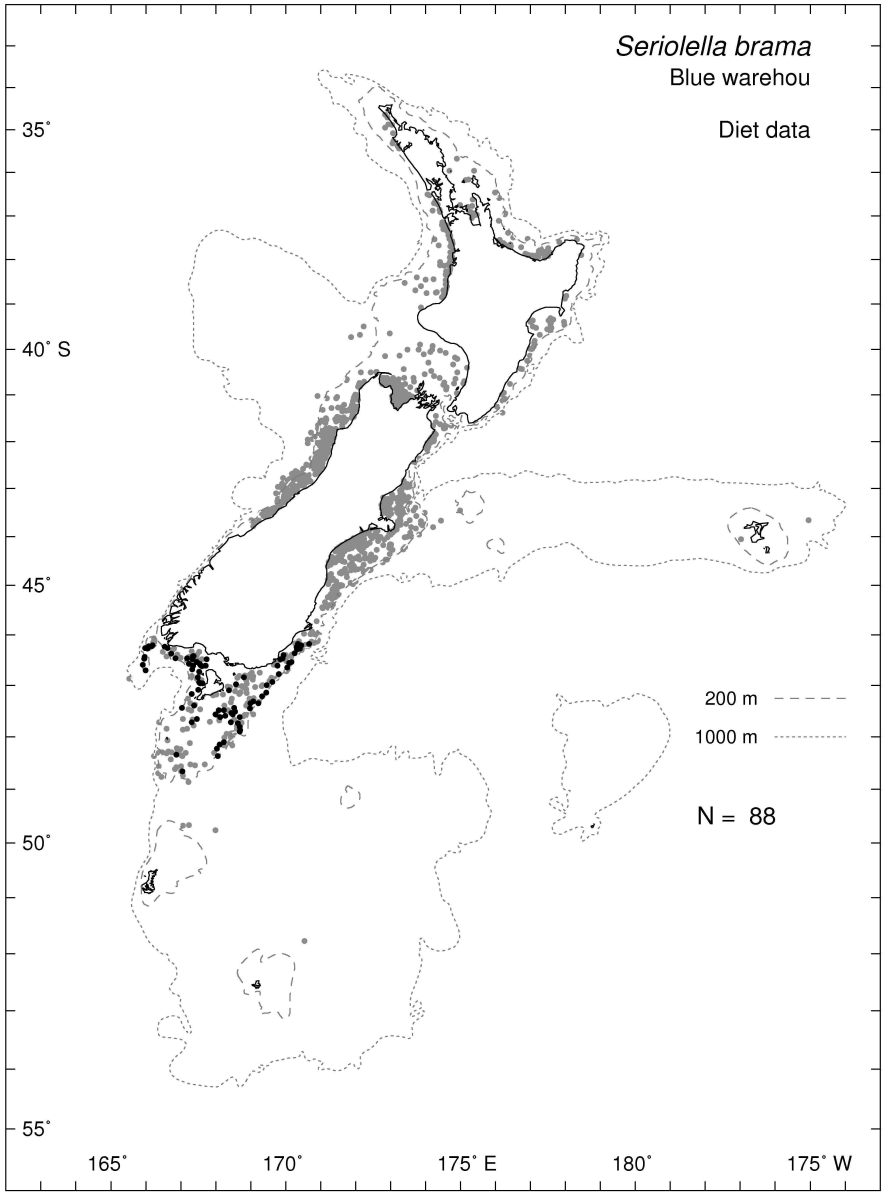

Figure B21a. The distribution of all blue warehou (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

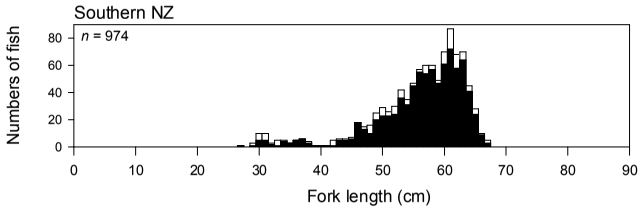

Figure B21b. The length frequency of blue warehou where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

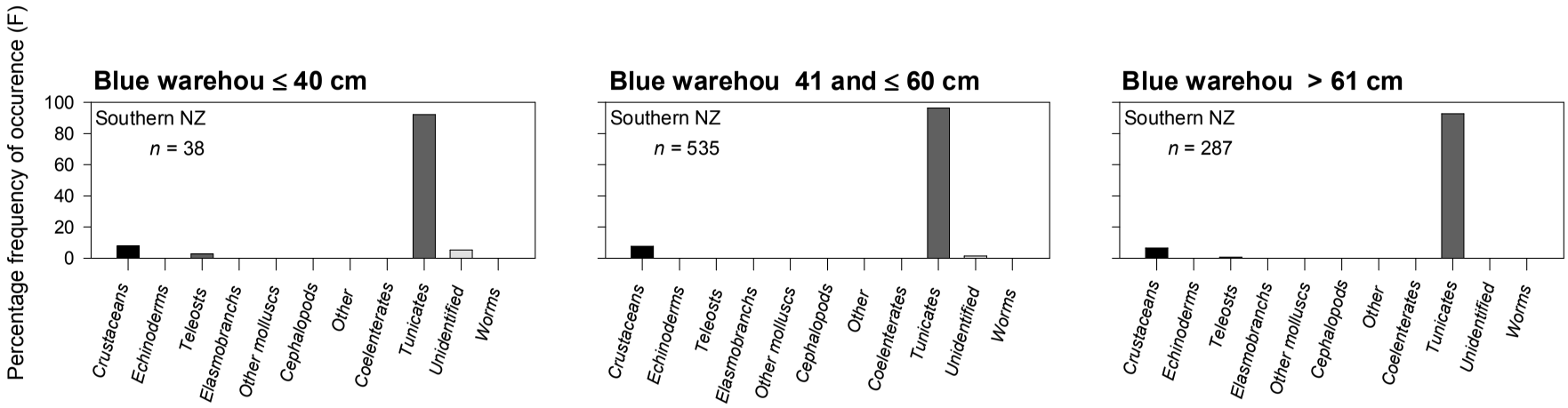

Figure B21c. The importance of major prey groups in the diet of blue warehou examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

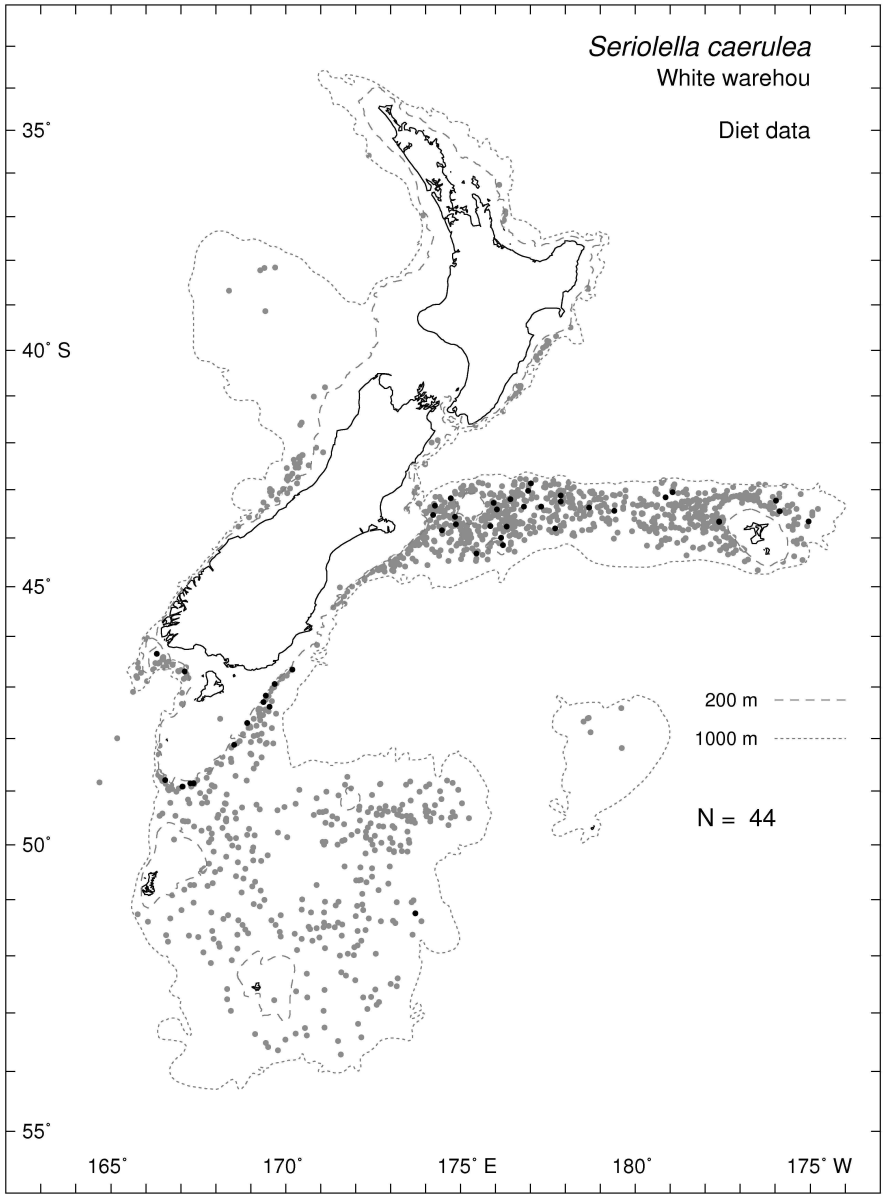

Figure B22a. The distribution of all white warehou (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

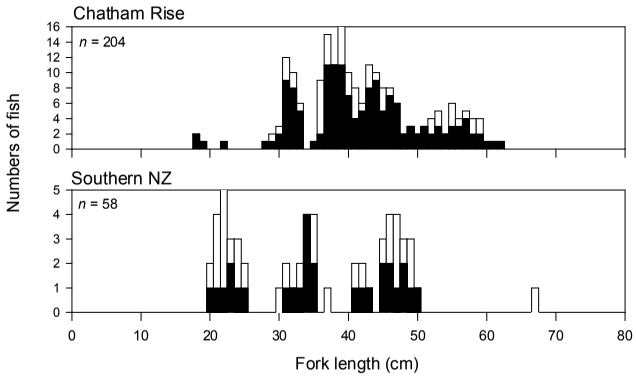

Figure B22b. The length frequency of white warehou where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

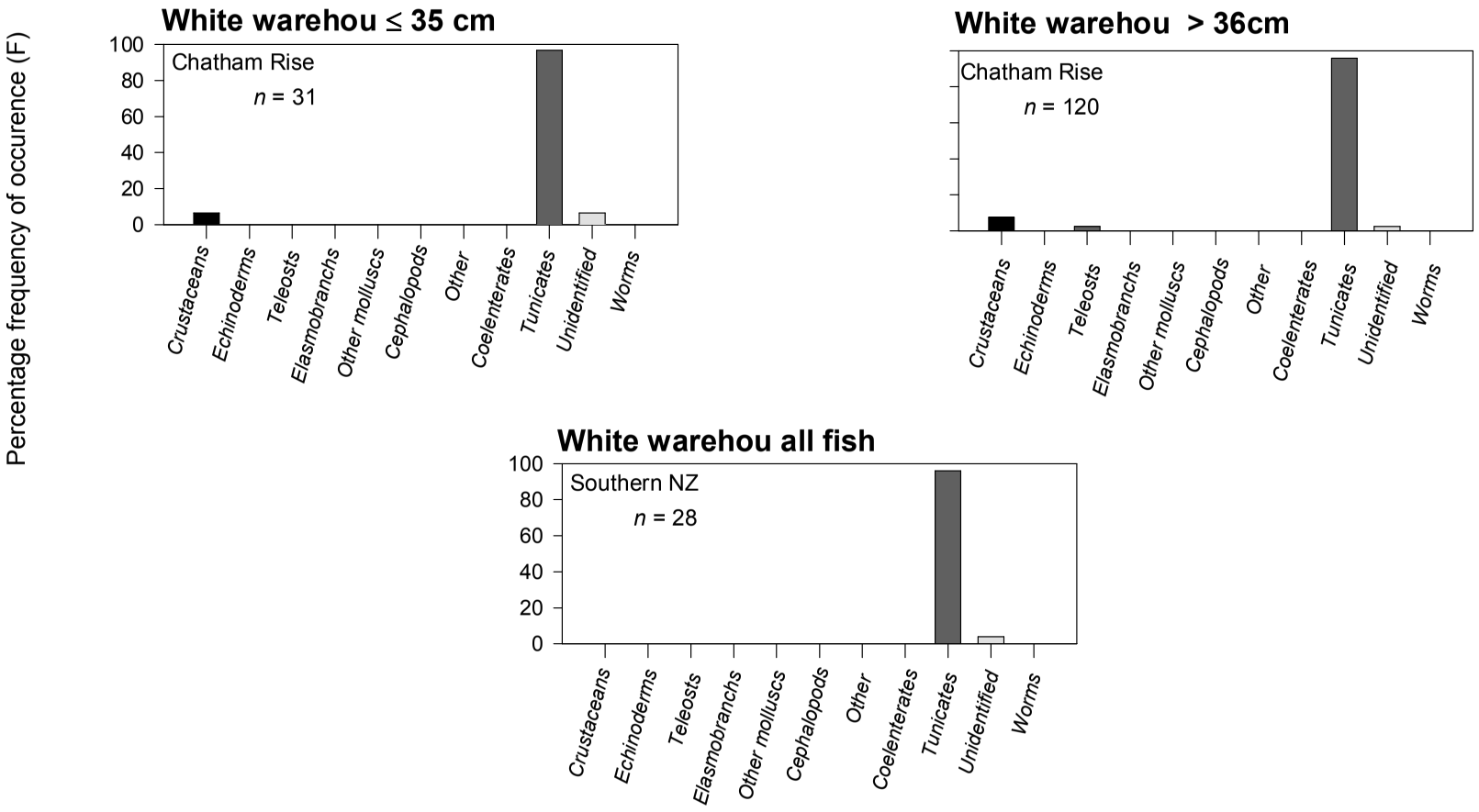

Figure B22c. The importance of major prey groups in the diet of white warehou examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

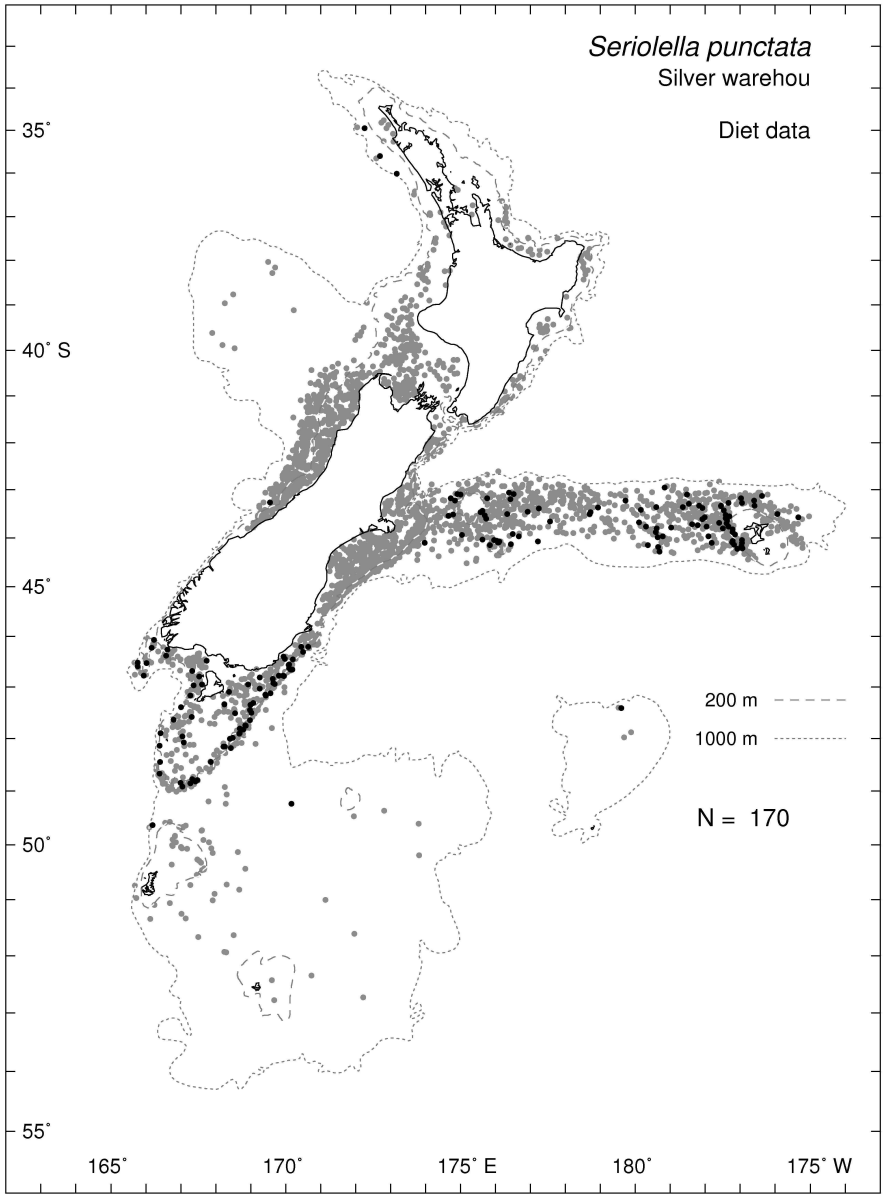

Figure B23a. The distribution of all silver warehou (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

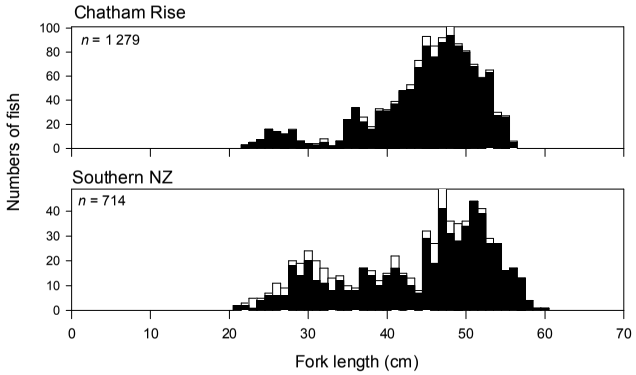

Figure B23b. The length frequency of silver warehou where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

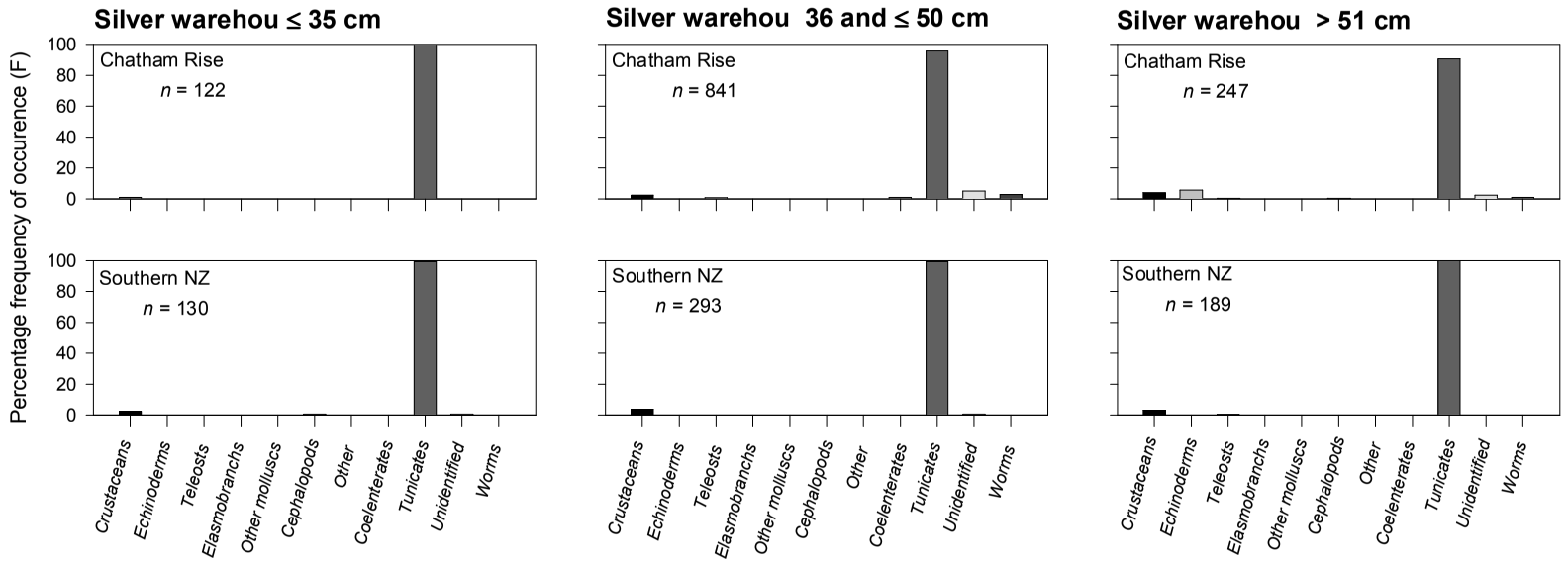

Figure B23c. The importance of major prey groups in the diet of silver warehou examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

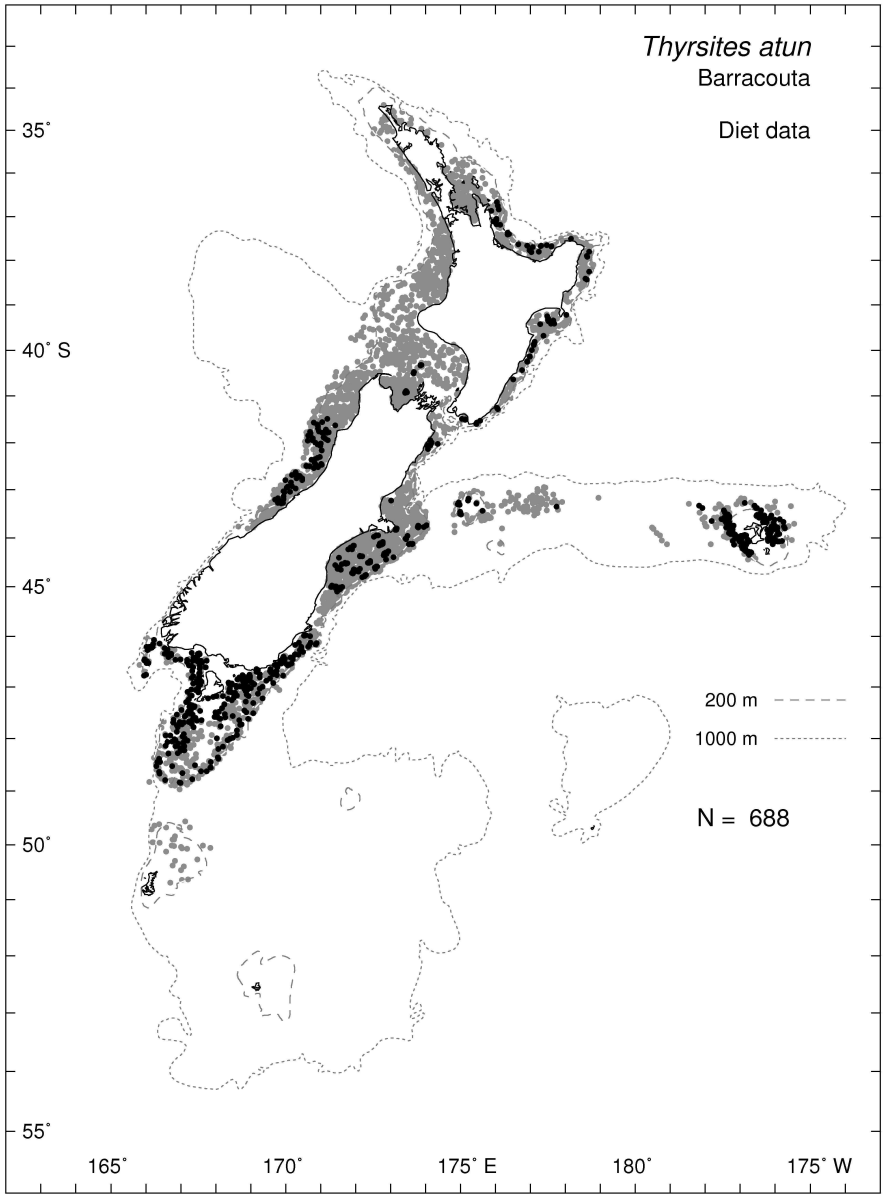

Figure B24a. The distribution of all barracouta (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

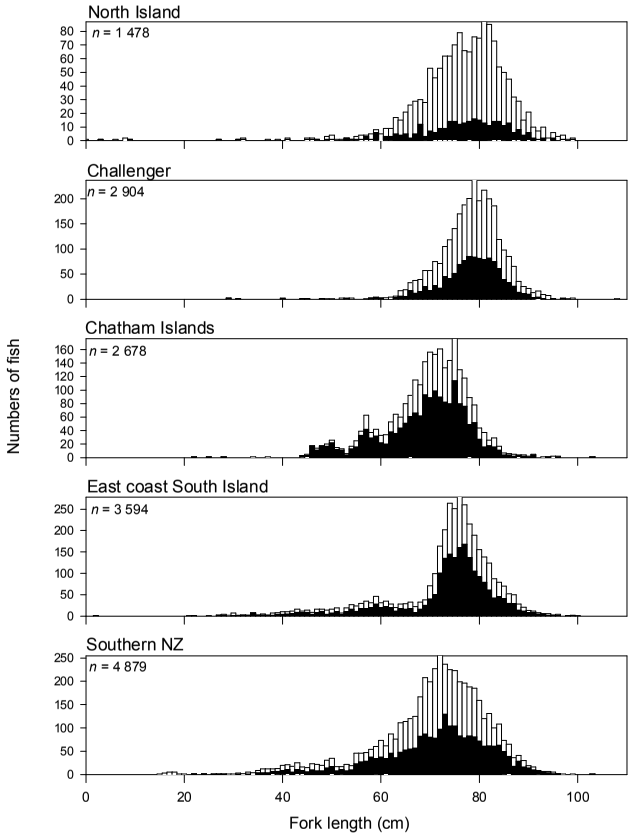

Figure B24b. The length frequency of barracouta where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

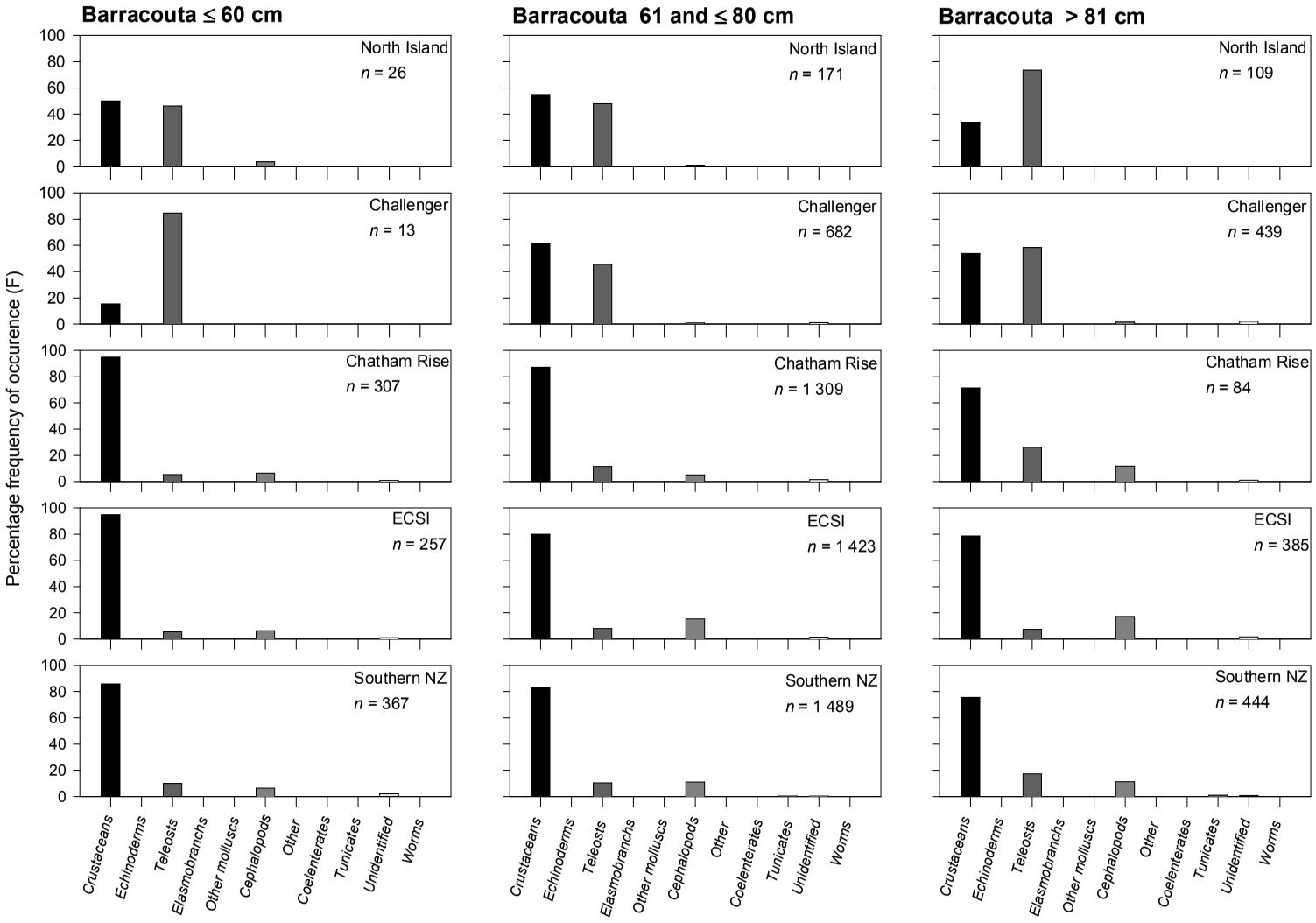

Figure B24c. The importance of major prey groups in the diet of barracouta examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

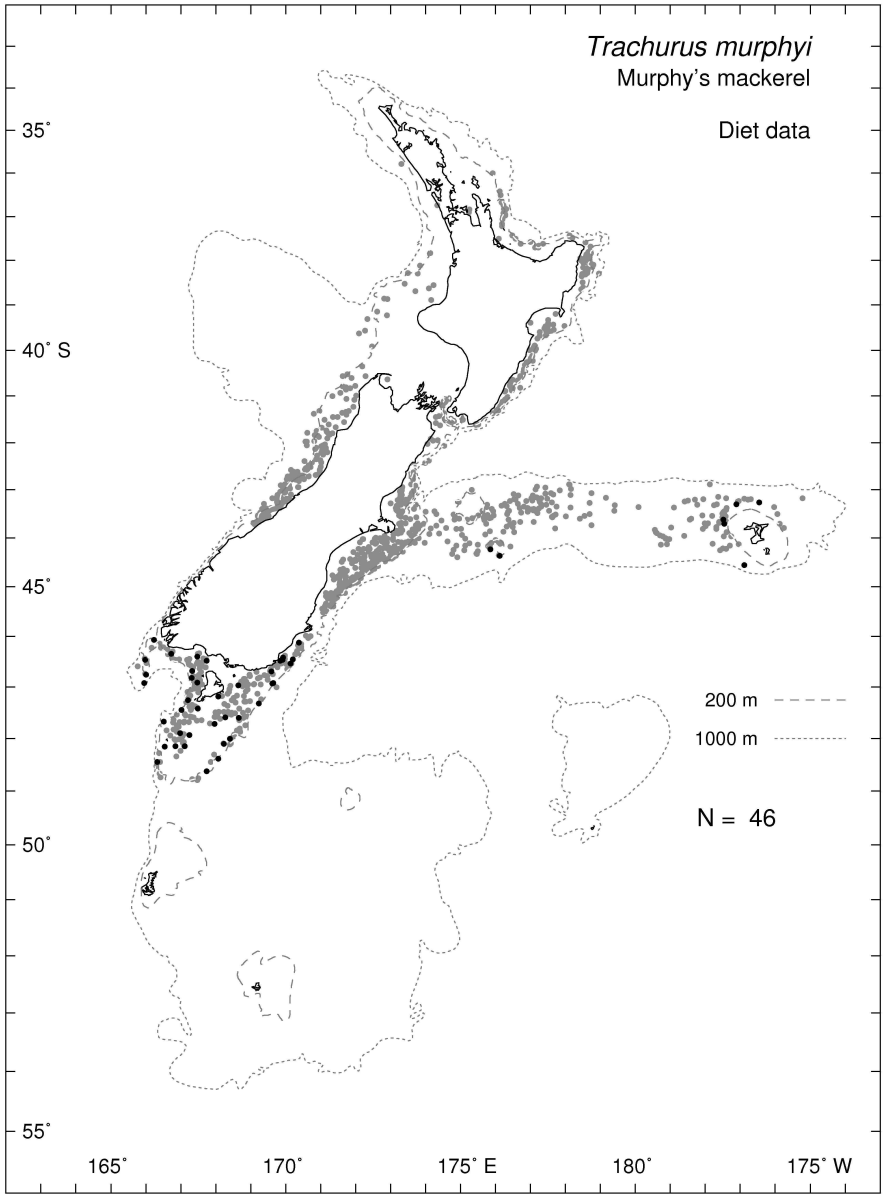

Figure B25a. The distribution of all Murphy's mackerel (left panel) caught (grey dots) and those examined for diet (black dots) in research trawls 1960–2000. N, number of fish examined for diet.

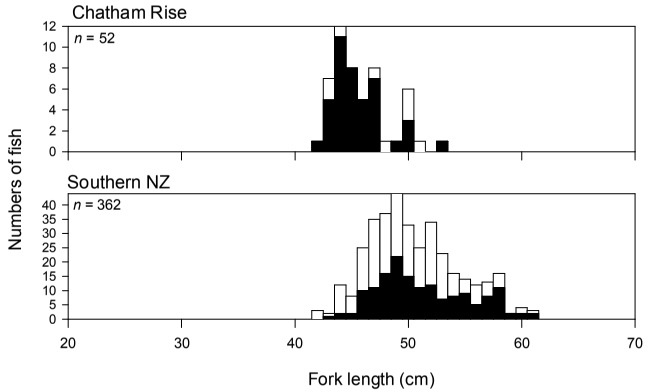

Figure B25b. The length frequency of Murphy's mackerel where feeding data was recorded. Fish with empty stomachs are presented as white bars and fish containing prey items as black bars. Areas are defined on p. 9. *n*, number of fish examined for diet.

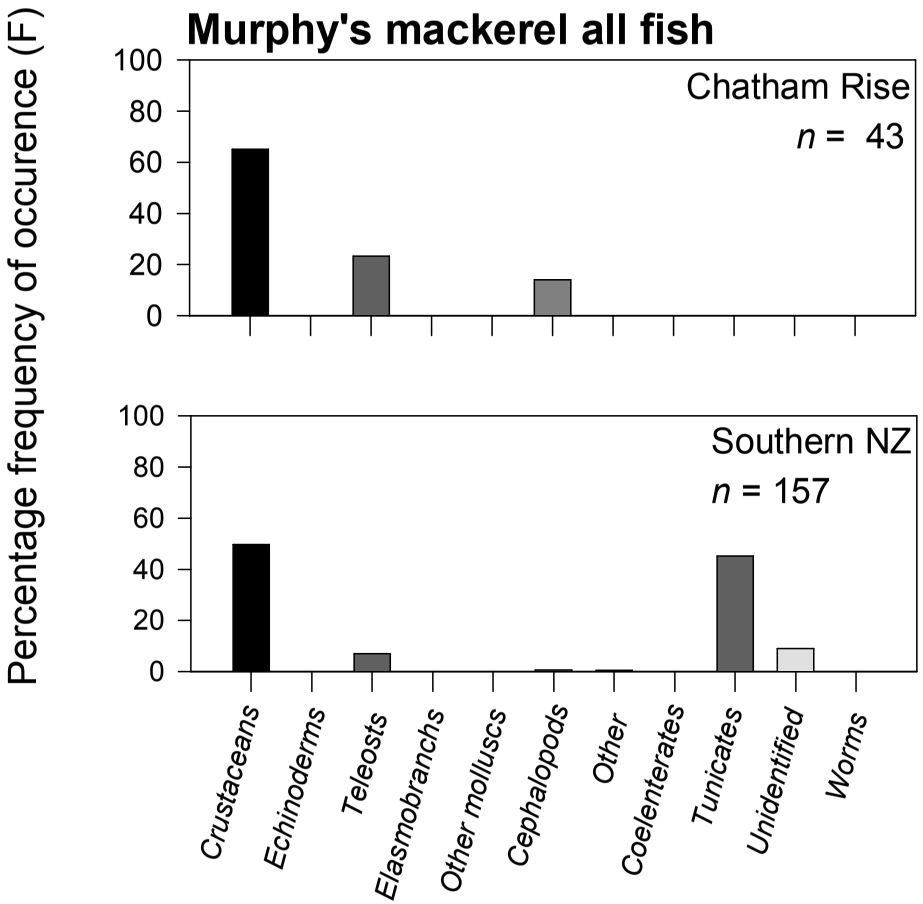

Figure B25c. The importance of major prey groups in the diet of Murphy's mackerel examined on research trawl surveys. Fish size groups are arbitrary designations. Areas are defined on p. 9. *n*, number of fish examined for diet.

APPENDIX C: Summaries of stomach content analyses from the MFish Research Trawl Database 1960–2000, for 25 key species.

APPENDIX C: Summaries of stomach content analyses from the MFish Research Trawl Database 1960–2000, for 25 key species.

Table C1: Diet of black oreo, *Allocyttus niger*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	20–45		25–45		20–45	
Species or group	*n*	F	*n*	F	*n*	F
Coelenterata	**5**	**0.9**			**5**	**0.6**
Scyphozoa (jellyfish)	1	0.2			1	0.1
Anthozoa (sea anemones)	4	0.7			4	0.5
Tunicata	**176**	**31.4**	**31**	**10.0**	**207**	**23.7**
Thaliacea (salps)	176	31.4	31	10.0	207	23.7
Crustacea	**255**	**45.5**	**61**	**19.6**	**316**	**36.2**
crustacean (unident.)	33	5.9	22	7.1	55	6.3
Copepoda	3	0.5			3	0.3
Amphipoda	7	1.2	4	1.3	11	1.3
Isopoda	1	0.2			1	0.1
Mysidacea	3	0.5	13	4.2	16	1.8
mysid (unident.)	3	0.5	5	1.6	8	0.9
Neognathophausia sp.			8	2.6	8	0.9
Euphausiacea	37	6.6	5	1.6	42	4.8
Natant decapods	176	31.4	19	6.1	195	22.4
natant decapod (unident.)	158	28.2	12	3.9	170	19.5
natant decapod - pelagic	14	2.5			14	1.6
Acanthephyra spp.	2	0.4	2	0.6	4	0.5
A. pelagica			1	0.3	1	0.1
Pasiphaea spp.	2	0.4	3	1.0	5	0.6
Sergestes spp.	1	0.2	1	0.3	2	0.2
Paguridae	1	0.2			1	0.1
Mollusca	**9**	**1.6**	**42**	**13.5**	**51**	**5.8**
Cephalopoda	**9**	**1.6**	**42**	**13.5**	**51**	**5.8**
Octopoda			1	0.3	1	0.1
octopus (unident.)			1	0.3	1	0.1
Teuthoidea (squid)	9	1.6	41	13.2	50	5.7
squid (unident.)	6	1.1	40	12.9	46	5.3
Cranchiidae	1	0.2	1	0.3	2	0.2
Histioteuthis spp.	2	0.4			2	0.2
Osteichthyes						
Teleostei	**189**	**33.7**	**225**	**72.3**	**414**	**47.5**
teleost (unident.)	168	29.9	199	64.0	367	42.1
scales	2	0.4			2	0.2

Table C1 (continued)

Area	Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	20–45		25–45		20–45	
Species or group	*n*	F	*n*	F	*n*	F
mesopelagics	18	3.2	28	9.0	46	5.3
Astronesthidae			2	0.6	2	0.2
Avocettina spp.			1	0.3	1	0.1
Bathylagus spp.	1	0.2			1	0.1
Chauliodus sloani	1	0.2	3	1.0	4	0.5
Cyclothone spp.			1	0.3	1	0.1
Lampanyctus spp.			1	0.3	1	0.1
Malacosteidae (unident.)	1	0.2	1	0.3	2	0.2
Melamphaidae (unident.)			3	1.0	3	0.3
Myctophidae (unident.)	7	1.2	12	3.9	19	2.2
Nemichthys scolopaceus	1	0.2			1	0.1
Photichthys argenteus	9	1.6	1	0.3	10	1.1
Sternoptychidae (unident.)	1	0.2	2	0.6	3	0.3
Stomias spp.			3	1.0	3	0.3
other teleosts	3	0.5	4	1.3	7	0.8
Alepocephalidae (unident.)			2	0.6	2	0.2
Macrouridae (unident.)	1	0.2			1	0.1
Platytroctidae (unident.)			1	0.3	1	0.1
Rosenblattia robusta			1	0.3	1	0.1
Unidentifiable	**16**	**2.9**	**9**	**2.9**	**25**	**2.9**
Unidentified	**19**	**3.4**	**6**	**1.9**	**25**	**2.9**
No. of fish examined	4 944		1 338		6 282	
No. stomachs with food	561		311		872	
% with empty stomachs	18		22		19	
% with everted stomachs	70		55		67	
No. of prey items	677		384		1061	

Table C2: Diet of alfonsino, *Beryx splendens*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	North Island		Chatham Rise		All areas	
Fork length range (cm)	20–50		30–50		20–50	
Species or group	*n*	F	*n*	F	*n*	F
Crustacea	**106**	**82.2**	**6**	**18.2**	**112**	**69.1**
crustacean (unident.)			2	6.1	2	1.2
Mysid / euphausid (unident.)	1	0.8			1	0.6
Mysidacea	3	2.3			3	1.9
Euphausiacea	4	3.1			4	2.5
Natant decapods	104	80.6	5	15.2	109	67.3
natant decapod (unident.)	7	5.4	4	12.1	11	6.8
natant decapod - benthic	1	0.8			1	0.6
natant decapod - pelagic	96	74.4			96	59.3
Lipkius holthuisi			1	3.0	1	0.6
Mollusca	**4**	**3.1**	**5**	**15.2**	**9**	**5.6**
Cephalopoda	**4**	**3.1**	**5**	**15.2**	**9**	**5.6**
Teuthoidea (squid)	4	3.1	5	15.2	9	5.6
squid (unident.)	4	3.1			4	2.5
Onykia (*Moroteuthis*) spp.			1	3.0	1	0.6
Nototodarus spp.			4	12.1	4	2.5
Osteichthyes						
Teleostei	**39**	**30.2**	**26**	**78.8**	**65**	**40.1**
teleost (unident.)	9	7.0	15	45.5	24	14.8
mesopelagics	30	23.3	11	33.3	41	25.3
Maurolicus australis			8	24.2	8	4.9
Myctophidae (unident.)	30	23.3			30	18.5
Photichthys argenteus			3	9.1	3	1.9
Unidentified	**3**	**2.3**			**3**	**1.9**
No. of fish examined		304		61		365
No. stomachs with food		129		33		162
% with empty stomachs		56		46		55
% with everted stomachs		1		0		1
% with regurgitated stomachs		0		0		0
No. of prey items		158		38		196

Table C3: Diet of red gurnard, *Cheilidonichthys kumu*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	East Coast South Island		Southern N.Z.		All areas	
Total length range (cm)	20–55		40		20–55	
Species or group	*n*	F	*n*	F	*n*	F
Crustacea	**169**	**56.5**			**169**	**56.5**
crustacean (unident.)	34	11.4			34	11.4
Natant decapod	1	0.3			1	0.3
Galatheidae						
Munida spp.	59	19.7			59	19.7
Crab (Brachyura / Anomura, unident.)	36	12.0			36	12.0
Brachyura						
Ovalipes catharus	53	17.7			53	17.7
Mollusca	**4**	**1.3**			**4**	**1.3**
mollusc (unident.)	1	0.3			1	0.3
Gastropod						
Whelk	1	0.3			1	0.3
Cephalopoda	**2**	**0.7**			**2**	**0.7**
Teuthoidea (squid)	2	0.7			2	0.7
Nototodarus spp.	2	0.7			2	0.7
Osteichthyes						
Teleostei	**129**	**43.1**			**129**	**43.1**
teleost (unident.)	99	33.1			99	33.1
other teleosts (i.e., not mesopelagics)	30	10.0			30	10.0
Arnoglossus scapha	2	0.7			2	0.7
Hemerocoetes spp.	4	1.3			4	1.3
Kathetostoma giganteum	4	1.3			4	1.3
Peltorhamphus novaezeelandiae	1	0.3			1	0.3
Pseudophycis bachus	19	6.4			19	6.4
Sprattus spp.	1	0.3			1	0.3
Mud	**1**	**0.3**			**1**	**0.3**
Unidentifiable	**4**	**1.3**			**4**	**1.3**
Unidentified	**9**	**3.0**			**9**	**3.0**
No. of fish examined		986		1		987
No. stomachs with food		299		0		299
% with empty stomachs		56		100		56
% with everted stomachs		13		0		13
% with regurgitated stomachs		0		0		0
No. of prey items		331		0		331

Table C4: Diet of lookdown dory, *Cyttus traversi*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	15–55		25–40		30–50		30–45		15–55	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Crustacea	**154**	**82.4**	**2**	**66.6**	**7**	**63.6**			**163**	**79.1**
Mysid / euphausid (unident.)	2	1.1							2	1.0
Euphausiacea	3	1.6							3	1.5
Natant decapod	139	74.3	2	66.6	5	45.5			146	70.9
natant decapod (unident.)	10	5.3	2	66.6	5	45.5			17	8.3
natant decapod - benthic	51	27.3							51	24.8
natant decapod - pelagic	79	42.2							79	38.3
Nephropidae										
Metanephrops challengeri	5	2.7							5	2.4
Galatheidae	11	5.9			2	18.2			13	6.3
galatheid (unident.)	11	5.9							11	5.3
Munida spp.					2	18.2			2	1.0
Osteichthyes										
Teleostei	**38**	**20.3**			**5**	**45.5**	**5**	**100**	**48**	**23.3**
teleost (unident.)	20	10.7			4	36.4	4	80.0	28	13.6
mesopelagics	4	2.1							4	1.9
Myctophidae (unident.)	4	2.1							4	1.9
other teleosts	15	8.0			1	9.1	1	20.0	17	8.3
Caelorinchus oliverianus	2	1.1							2	1.0
Capromimus abbreviatus	3	1.6							3	1.5
Euclichthys polynemus	1	0.5							1	0.5
Hoplostethus mediterraneus	4	2.1							4	1.9
Lepidorhynchus denticulatus	1	0.5			1	9.1	1	20.0	3	1.5
Paralepididae (unident.)	1	0.5							1	0.5
Paratrachichthys trailli	1	0.5							1	0.5
Rexea solandri	2	1.1							2	1.0
Unidentified	**4**	**2.1**	**1**	**33.3**					**5**	**2.4**
No. of fish examined	509		3		20		17		549	
No. stomachs with food	187		3		11		5		206	
% with empty stomachs	61		0		45		71		60	
% with everted stomachs	3		0		0		0		2	
% with regurgitated stomachs	0		0		0		0		0	
No. of prey items	204		3		12		5		224	

Table C5: Diet of ling, *Genypterus blacodes*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	50–150		35–150		15–165		35–140		15–165	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Coelenterata							**1**	**0.0**	**1**	**0.0**
Scyphozoa (jellyfish)							1	0.0	1	0.0
Tunicata					**4**	**0.1**	**2**	**0.1**	**6**	**0.1**
Thaliacea (salps)					4	0.1	2	0.1	6	0.1
Polychaeta					**3**	**0.1**	**4**	**0.1**	**7**	**0.1**
Crustacea	**54**	**47.8**	**45**	**39.1**	**1 501**	**50.5**	**1 093**	**27.4**	**2 693**	**37.5**
crustacean (unident.)			2	1.7	125	4.2	36	0.9	163	2.3
Copepoda					1	0.0	1	0.0	2	0.0
Amphipoda	3	2.7			2	0.1	8	0.2	13	0.2
Isopoda	1	0.9			22	0.7	156	3.9	179	2.5
Mysidacea					1	0.0			1	0.0
Euphausiacea					60	2.0	71	1.8	131	1.8
Natant decapods	34	30.1	3	2.6	238	8.0	774	19.4	1 049	14.6
natant decapod (unident.)			3	2.6	231	7.8	741	18.6	975	13.6
natant decapod - benthic	9	8.0							9	0.1
natant decapod - pelagic	25	22.1							25	0.3
Camplyonotus rathbonae					1	0.0	31	0.8	32	0.4
Lipkius holthuisi					5	0.2	4	0.1	9	0.1
Pasiphaea spp.							2	0.1	2	0.0
Sergia potens					1	0.0			1	0.0
Nephropidae										
Metanephrops challengeri	12	10.6	14	12.2	143	4.8	7	0.2	176	2.4
Palinuridae										
Jasus edwardsii					5	0.2	1	0.0	6	0.1
Scyllaridae										
Ibacus alticrenatus							4	0.1	4	0.1
Galatheidae	12	10.6	29		992	33.4	50	1.3	1 083	15.1
galatheid (unident.)	12	10.6			23	0.8			35	0.5
Munida spp.			29	25.2	969	32.6	50	1.3	1 049	14.6
Crab (Brachyura / Anomura, unident.)			2	1.7	83	2.8	33	0.8	118	1.6
Brachyura	4	3.5			1	0.0	1	0.0	6	0.1
brachyuran (unident.)	4	3.5			1	0.0			5	0.1
Nectocarcinus antarcticus							1	0.0	1	0.0
Mollusca	**4**	**3.5**	**4**	**3.5**	**100**	**3.4**	**123**	**3.1**	**231**	**3.2**
mollusc (unident.)					1	0.0	3	0.1	4	0.1
Shell fragments							3	0.1	3	0.0
Bivalva										
Pectinidae (Scallops)					2	0.1	2	0.1	4	0.1

Table C5 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	50–150		35–150		15–165		35–140		15–165	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Mollusca – *continued*										
Gastropoda					1	0.0	9	0.2	10	0.1
gastropod (unident.)					1	0.0	5	0.1	6	0.1
sea hare (O. Aplysiomorpha)							4	0.1	4	0.1
Cephalopoda	**4**	**3.5**	**4**	**3.5**	**95**	**3.2**	**105**	**2.6**	**208**	**2.9**
cephalopod (unident.)		0.0			5	0.2	2	0.1	7	0.1
Octopoda			1	0.9	24	0.8	9	0.2	34	0.5
octopod (unident.)			1	0.9	24	0.8	8	0.2	33	0.5
Graneledone spp.							1	0.0	1	0.0
Teuthoidea (squid)	4	3.5	3	2.6	67	2.3	93	2.3	167	2.3
squid (unident.)	4	3.5	2	1.7	64	2.2	75	1.9	145	2.0
Onykia (*Moroteuthis*) spp.							1	0.0	1	0.0
O. (*M*). *ingens*							1	0.0	1	0.0
Nototodarus spp.			1	0.9	3	0.1	16	0.4	20	0.3
Sepiolidae							1	0.0	1	0.0
Echinodermata							**2**	**0.1**	**2**	**0.0**
echinoderm (unident.)							1	0.0	1	0.0
Holothuroidea										
Stichopus mollis							1	0.0	1	0.0
Chondrichthyes					**14**	**0.5**	**2**	**0.1**	**16**	**0.2**
egg cases					3	0.1	1	0.0	4	0.1
Elasmobranchii					**5**	**0.2**			**5**	0.1
Echinorhinus cookei					3	0.1			3	0.0
Brochiraja asperula					1	0.0			1	0.0
Squalus acanthias					1	0.0			1	0.0
Holocephali					**6**	**0.2**	**1**	0.0	**7**	0.1
Hydrolagus bemisi					3	0.1	1	0.0	4	0.1
H. novaezealandiae					3	0.1			3	0.0
Osteichthyes										
Teleostei	**63**	**55.8**	**74**	**64.3**	**1 598**	**53.8**	**2 971**	**74.5**	**4 706**	**65.5**
teleost (unident.)	18	15.9	59	51.3	1 200	40.4	2 305	57.8	3 583	49.8
fragments, bones					5	0.2	14	0.4	19	0.3
scales					1	0.0	1	0.0	2	0.0
otoliths					1	0.0	1	0.0	2	0.0
fish eggs							3	0.1	3	0.0
mesopelagics					7	0.2	4	0.1	11	0.2
Gonostoma elongatum					1	0.0			1	0.0
Maurolicus australis					3	0.1			3	0.0
Myctophidae (unident.)					2	0.1	3	0.1	5	0.1
Nemichthyidae (unident.)					1	0.0	1	0.0	2	0.0

Table C5 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	50–150		35–150		15–165		35–140		15–165	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Teleostei – *continued*										
other teleosts	46	40.7	16	13.9	407	13.7	696	17.4	1 150	16.0
Anguilliformes (unident.)					1	0.0	7	0.2	8	0.1
Alertichthys blacki							4	0.1	4	0.1
Allocyttus niger					4	0.1			4	0.1
Antipodocottus galatheae					1	0.0			1	0.0
Argentina elongata					1	0.0	6	0.2	7	0.1
Arnoglossus scapha	1	0.9			4	0.1	3	0.1	8	0.1
Austrophycis marginata					15	0.5	88	2.2	103	1.4
Azygopus pinnifasciatus					2	0.1	5	0.1	7	0.1
Bassanago bulbiceps	2	1.8			1	0.0	2	0.1	5	0.1
B. hirsutus					2	0.1	1	0.0	3	0.0
Benthodesmus spp.	1	0.9	4	3.5	1	0.0			6	0.1
Brama brama					1	0.0			1	0.0
Caelorinchus acanthiger	2	1.8			1	0.0			3	0.0
C. aspercephalus					8	0.3	15	0.4	23	0.3
C. bollonsi					8	0.3	3	0.1	11	0.2
C. fasciatus					8	0.3	65	1.6	73	1.0
C. innotabilis					12	0.4	4	0.1	16	0.2
C. oliverianus			2	1.7	51	1.7	43	1.1	96	1.3
C. parvifasciatus	1	0.9			1	0.0			2	0.0
Centriscops humerosus	1	0.9							1	0.0
Chlorophthalmus nigripinnis	4	3.5							4	0.1
Conger spp.			1	0.9			1	0.0	2	0.0
Coryphaenoides serrulatus	1	0.9							1	0.0
C. subserrulatus							1	0.0	1	0.0
Euclichthys polynemus					4	0.1	6	0.2	10	0.1
Genypterus blacodes					5	0.2			5	0.1
Gnathophis habenatus							3	0.1	3	0.0
Gonorynchus gonorynchus					1	0.0	1	0.0	2	0.0
Helicolenus spp.	1	0.9	2	1.7	2	0.1			5	0.1
Hemerocoetes spp.			1	0.9	12	0.4	18	0.5	31	0.4
Hoplichthys haswelli	2	1.8			4	0.1	1	0.0	7	0.1
Hoplostethus atlanticus					1	0.0			1	0.0
H. mediterraneus	2	1.8							2	0.0
Kathetostoma giganteum					1	0.0			1	0.0
Lepidoperca aurantia					1	0.0			1	0.0
Lepidorhynchus denticulatus	5	4.4			14	0.5	19	0.5	38	0.5
Macrorhamphosodes uradoi					1	0.0			1	0.0
Macrouridae (unident.)	2	1.8	3	2.6	112	3.8	291	7.3	408	5.7
Macruronus novaezelandiae	18	15.9	3	2.6	105	3.5	77	1.9	203	2.8
Magnisudis prionosa							1	0.0	1	0.0
Micromesistius australis							21	0.5	21	0.3
Mora moro					1	0.0			1	0.0
Neoachiropsetta milfordi					1	0.0	7	0.2	8	0.1
Neocyttus rhomboidalis					1	0.0			1	0.0

Table C5 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	50–150		35–150		15–165		35–140		15–165	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
other teleosts – *continued*										
Neophrynichthys angustus					1	0.0			1	0.0
Notacanthus sexspinis					4	0.1	3	0.1	7	0.1
Oreosomatidae (unident.)					1	0.0			1	0.0
Paralepididae (unident.)	1	0.9							1	0.0
Paranotothenia spp.							2	0.1	2	0.0
Peltorhamphus latus					2	0.1			2	0.0
Pleuronectiformes (unident.)					3	0.1	10	0.3	13	0.2
Pseudophycis bachus					5	0.2	2	0.1	7	0.1
Regalecus glesne					1	0.0			1	0.0
Rexea solandri	1	0.9							1	0.0
Rhombosolea plebeia							1	0.0	1	0.0
Solegnathus spinosissimus					1	0.0			1	0.0
Trachurus spp.	1	0.9			9	0.3			10	0.1
T. murphyi					7	0.2	1	0.0	8	0.1
Trachyscorpia capensis	1	0.9							1	0.0
Ventrifossa nigromaculata					1	0.0	1	0.0	2	0.0
Mud					**1**	**0.0**			**1**	**0.0**
Unidentifiable					**7**	**0.2**	**5**	**0.1**	**12**	**0.2**
Unidentified	**1**	**0.9**	**1**	**0.9**	**19**	**0.6**	**99**	**2.5**	**120**	**1.7**
No. of fish examined		374		238		6 386		11 004		18 002
No. stomachs with food		113		115		2 972		3 989		7 189
% with empty stomachs		69		48		52		63		59
% with everted stomachs		1		1		1		1		1
% with regurgitated stomachs		0		5		0		2		1
No. of prey items		136		130		3 458		4 424		8 148

Table C6: Diet of sea perch, *Helicolenus percoides*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	Challenger / WCSI		Chatham Rise		East Coast South Island		All areas	
Total length range (cm)	35–40		25–45		15–40		15–45	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F
Tunicata			**8**	**44.4**	**1**	**0.9**	**9**	**7.3**
Thaliacea (salps)			8	44.4	1	0.9	9	7.3
Polychaeta					**2**	**1.9**	**2**	**1.6**
Crustacea			**6**	**33.3**	**66**	**62.3**	**72**	**58.1**
crustacean (unident.)					16	15.1	16	12.9
Nephropidae								
Metanephrops challengeri			2	11.1			2	1.6
Palinuridae								
Jasus edwardsii			4	22.2			4	3.2
Galatheidae								
Munida spp.					44	41.5	44	35.5
Crab (Brachyura / Anomura, unident.)					7	6.6	7	5.6
Mollusca			**1**	**5.6**	**4**	**3.8**	**5**	**4.0**
Cephalopoda			**1**	**5.6**	**4**	**3.8**	**5**	**4.0**
Teuthoidea (squid)			1	5.6	4	3.8	5	4.0
squid (unident.)			1	5.6			1	0.8
Nototodarus spp.					4	3.8	4	3.2
Osteichthyes								
Teleostei			**4**	**22.2**	**19**	**17.9**	**23**	**18.5**
teleost (unident.)			1	5.6	18	17.0	19	15.3
other teleosts			3	16.7	2	1.9	5	4.0
Caelorinchus oliverianus			3	16.7			3	2.4
Thyrsites atun					2	1.9	2	1.6
Unidentifiable					**4**	**3.8**	**4**	**3.2**
Unidentified					**16**	**15.1**	**16**	**12.9**
No. of fish examined	2		28		266		296	
No. stomachs with food	0		18		106		124	
% with empty stomachs	100		36		58		56	
% with everted stomachs	0		0		2		2	
% with regurgitated stomachs	0		0		0		0	
No. of prey items	0		19		114		133	

Table C7: Diet of orange roughy, *Hoplostethus atlanticus*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Standard length range (cm)	10–45		10–45		10–45		10–45		10–45	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Coelenterata	**1**	**0.0**			**3**	**0.0**	**2**	**0.1**	**6**	**0.0**
Scyphozoa (jellyfish)	1	0.0			3	0.0	2	0.1	6	0.0
Tunicata	**23**	**0.3**	**26**	**0.4**	**60**	**0.4**	**8**	**0.3**	**117**	**0.4**
Thaliacea (salps)	23	0.3	26	0.4	60	0.4	8	0.3	117	0.4
Polychaeta	**1**	**0.0**			**1**	**0.0**			**2**	**0.0**
Chaetognatha	**1**	**0.0**			**1**	**0.0**			**2**	**0.0**
Crustacea	**4 579**	**59.4**	**3 918**	**62.0**	**7 582**	**56.5**	**1 680**	**54.9**	**17 759**	**58.2**
crustacean (unident.)	1 667	21.6	542	8.6	2 296	17.1	280	9.2	4 785	15.7
Ostracoda	2	0.0							2	0.0
Copepoda	12	0.2	3	0.0	25	0.2			40	0.1
Amphipoda	106	1.4	451	7.1	251	1.9	573	18.7	1 381	4.5
amphipod (unident.)	101	1.3	453	7.2	251	1.9	573	18.7	1 275	4.2
amphipod - pelagic	5	0.1	5	0.1					10	0.0
Isopoda	11	0.1	8	0.1	27	0.2	4	0.1	50	0.2
Mysid / euphausid (unident.)	78	1.0	10	0.2	16	0.1	32	1.0	136	0.4
Mysidacea	223	2.9	250	4.0	135	1.0	85	2.8	693	2.3
mysid (unident.)	189	2.5	131	2.1	110	0.8	46	1.5	476	1.6
mysid - benthic	10	0.1	4	0.1	1	0.0			15	0.0
Neognathophausia sp.	24	0.3	115	1.8	24	0.2	39	1.3	202	0.7
Euphausiacea	369	4.8	64	1.0	870	6.5	204	6.7	1507	4.9
Natant decapods	2 212	28.7	2 795	44.3	4 315	32.2	680	22.2	10 002	32.8
natant decapod (unident.)	1 503	19.5	1 728	27.4	2 667	19.9	414	13.5	6 312	20.7
natant decapod - benthic	14	0.2	2	0.0	48	0.4			64	0.2
natant decapod - pelagic	312	4.0	57	0.9	667	5.0			1 036	3.4
Acanthephyra spp.	14	0.2	157	2.5	42	0.3	107	3.5	320	1.0
A. pelagica	2	0.0	25	0.4	38	0.3	7	0.2	72	0.2
A. quadrispinosa	2	0.0	4	0.1	3	0.0			9	0.0
Aristaeomorpha foliacea	31	0.4	8	0.1					39	0.1
Lipkius holthuisi	6	0.1	19	0.3	64	0.5	3	0.1	92	0.3
Notopandalus magnoculus	1	0.0							1	0.0
Notostomus auriculatus					1	0.0			1	0.0
Oplophorus novaezeelandiae	4	0.1	279	4.4	35	0.3	14	0.5	332	1.1
O. spinosus					1	0.0			1	0.0
Pasiphaea spp.	247	3.2	313	5.0	618	4.6	88	2.9	1 266	4.2
P. aff. *tarda*	1	0.0			17	0.1	17	0.6	35	0.1
Penaeus spp.			43	0.7					43	0.1
Sergestes spp.	88	1.1	322	5.1	156	1.2	47	1.5	613	2.0
Thalassinoidea					2	0.0			2	0.0

Table C7 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Standard length range (cm)	10–45		10–45		10–45		10–45		10–45	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Crustacea – *continued*										
Scyllaridae										
Ibacus alticrenatus	2	0.0	3	0.0					5	0.0
Galatheidae										
Munida spp.					4	0.0			4	0.0
Crab (Brachyura / Anomura, unident.)			1	0.0			1	0.0	2	0.0
Brachyura	1	0.0	23	0.4					24	0.1
brachyuran (unident.)	1	0.0							1	0.0
Nematocarcinus sp.			23	0.4					23	0.1
Mollusca	**682**	**8.8**	**687**	**10.9**	**1 175**	**8.8**	**469**	**15.3**	**3 013**	**9.9**
Gastropoda	15	0.2			3	0.0			18	0.1
limpet (unident.)					1	0.0			1	0.0
sea hare (unident.)	15	0.2			2	0.0			17	0.1
Bivalva	4	0.1			54	0.4			58	0.2
Mytilidae (Mussels)	3	0.0							3	0.0
Pectinidae (Scallops)	1	0.0			54	0.4			55	0.2
Cephalopoda	**659**	**8.5**	**619**	**9.8**	**1 093**	**8.1**	**468**	**15.3**	**2 839**	**9.3**
Octopoda	1	0.0	1	0.0	7	0.1	1	0.0	10	0.0
octopod (unident.)	1	0.0	1	0.0	4	0.0			6	0.0
Graneledone spp.					1	0.0			1	0.0
Opisthoteuthis spp.					3	0.0			3	0.0
Teuthoidea (squid)	655	8.5	613	9.7	1 084	8.1	468	15.3	2 820	9.2
squid (unident.)	626	8.1	589	9.3	994	7.4	423	13.8	2 632	8.6
Cranchiidae (unident.)	11	0.1	13	0.2	2	0.0	13	0.4	39	0.1
Histioteuthis spp.	13	0.2	12	0.2	73	0.5	29	0.9	127	0.4
Onykia (*Moroteuthis*) spp.	4	0.1			9	0.1	1	0.0	14	0.0
O. (*M*). *ingens*					2	0.0			2	0.0
Octopoteuthiidae (unident.)	1	0.0			1	0.0			2	0.0
Ommastrephes bartrami					3	0.0	2	0.1	5	0.0
Sepiolidae	3	0.0	5	0.1	1	0.0			9	0.0
Sepioloidea spp.					1	0.0			1	0.0
Spirula spirula	3	0.0	5	0.1					8	0.0
Echinodermata	**1**	**0.0**	**1**	**0.0**					**2**	**0.0**
echinoderm (unident.)			1	0.0					1	0.0
Ophiuroidea	1	0.0							1	0.0

Table C7 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Standard length range (cm)	10–45		10–45		10–45		10–45		10–45	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Chondrichthyes										
Elasmobranchii	**4**	**0.1**			**9**	**0.1**	**1**	**0.0**	**14**	**0.0**
Centrophorus squamosus	1	0.0			3	0.0	1	0.0	5	0.0
Cirrhigaleus barbifer	1	0.0							1	0.0
Etmopterus baxteri					1	0.0			1	0.0
Squalidae (unident.)					4	0.0			4	0.0
Torpedo fairchildi	2	0.0			1	0.0			3	0.0
Osteichthyes										
Teleostei	**3 088**	**40.1**	**2 273**	**36.0**	**5 602**	**41.8**	**1 585**	**51.8**	**12 548**	**41.1**
teleost (unident.)	2 570	33.3	1 830	29.0	4 902	36.5	1 292	42.2	10 594	34.7
scales	86	1.1	9	0.1	146	1.1	1	0.0	242	0.8
otoliths	1	0.0							1	0.0
fish oil	1	0.0							1	0.0
mesopelagics	350	4.5	389	6.2	332	2.5	224	7.3	1 295	4.2
Anoplogaster cornuta	1	0.0	1	0.0	3	0.0			5	0.0
Argyropelecus gigas	1	0.0							1	0.0
Astronesthidae	1	0.0			1	0.0	6	0.2	8	0.0
Bathylagus spp.	25	0.3	43	0.7	59	0.4	17	0.6	144	0.5
Ceratoscopelus warmingi	4	0.1							4	0.0
Chauliodus sloani	9	0.1	93	1.5	33	0.2	16	0.5	151	0.5
Chiasmodontidae (unident.)	1	0.0							1	0.0
Cyclothone spp.	6	0.1	6	0.1	2	0.0	10	0.3	24	0.1
Diplophos spp.			1	0.0	2	0.0			3	0.0
Evermanella indica					1	0.0			1	0.0
Gonostoma elongatum	1	0.0	6	0.1					7	0.0
Haplophryne mollis					1	0.0			1	0.0
Idiacanthus spp.	2	0.0	25	0.4	7	0.1	3	0.1	37	0.1
Kali indica	2	0.0							2	0.0
Lampadena spp.	5	0.1							5	0.0
Lampanyctodes hectoris	16	0.2							16	0.1
Lampanyctus spp.	12	0.2	9	0.1	8	0.1	5	0.2	34	0.1
Lampichthys procerus	2	0.0							2	0.0
Linophryne arborifera			2	0.0	2	0.0			4	0.0
Luciosudus spp.					1	0.0			1	0.0
Malacosteidae (unident.)	5	0.1	6	0.1	9	0.1	8	0.3	28	0.1
Maurolicus australis							1	0.0	1	0.0
Melamphaidae (unident.)	30	0.4			19	0.1	10	0.3	59	0.2
Melanonus gracilis	10	0.1	4	0.1	7	0.1	2	0.1	23	0.1
M. zugmayeri					1	0.0			1	0.0
Melanostigma gelatinosum	1	0.0			2	0.0			3	0.0
Melanostomias spp.			1	0.0	1	0.0	1	0.0	3	0.0
Melanostomiidae (unident.)							1	0.0	1	0.0
Microstoma microstoma	1	0.0							1	0.0
Myctophidae (unident.)	157	2.0	181	2.9	154	1.1	117	3.8	609	2.0
Nansenia spp.			2	0.0					2	0.0

Table C7 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Standard length range (cm)	10–45		10–45		10–45		10–45		10–45	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
mesopelagics – *continued*										
Nemichthyidae (unident.)			1	0.0					1	0.0
Nemichthys scolopaceus			1	0.0					1	0.0
Neoscopelus sp.	1	0.0							1	0.0
Opostomias micripnus					1	0.0			1	0.0
Photichthys argenteus	48	0.6	4	0.1	16	0.1	8	0.3	76	0.2
Poromitra capito					1	0.0			1	0.0
Protomyctophum spp.					1	0.0			1	0.0
Scopelarchus sp.					1	0.0			1	0.0
Scopelosaurus sp.	1	0.0	1	0.0	1	0.0			3	0.0
Serrivomer sp.	3	0.0	2	0.0	1	0.0			6	0.0
Sternoptychidae (unident.)	6	0.1	2	0.0	1	0.0	3	0.1	12	0.0
Stomias spp.	2	0.0	5	0.1	1	0.0	19	0.6	27	0.1
other teleosts	101	1.3	81	1.3	252	1.9	86	2.8	520	1.7
Alepisaurus brevirostris	1	0.0							1	0.0
Alepocephalidae (unident.)	2	0.0	2	0.0	12	0.1	9	0.3	25	0.1
Alepocephalus sp.	2	0.0			2	0.0			4	0.0
A. australis	1	0.0			6	0.0	1	0.0	8	0.0
Anguilliformes (unident.)	1	0.0					1	0.0	2	0.0
Antimora rostrata							2	0.1	2	0.0
Argentina elongata					1	0.0			1	0.0
Bassanago bulbiceps	1	0.0			2	0.0			3	0.0
Benthodesmus spp.	1	0.0							1	0.0
Benthosema suborbitale							1	0.0	1	0.0
Caelorinchus acanthiger							1	0.0	1	0.0
C. aspercephalus	1	0.0							1	0.0
C. fasciatus					2	0.0	1	0.0	3	0.0
C. innotabilis	1	0.0	10	0.2	15	0.1	3	0.1	29	0.1
C. oliverianus			1	0.0	7	0.1			8	0.0
Capromimus abbreviatus			3	0.0					3	0.0
Coryphaenoides dossenus	1	0.0							1	0.0
C. murrayi			1	0.0					1	0.0
C. serrulatus	1	0.0	2	0.0	2	0.0			5	0.0
C. striaturus					3	0.0			3	0.0
C. subserrulatus	23	0.3	15	0.2	82	0.6	20	0.7	140	0.5
Cubiceps spp.	3	0.0			3	0.0			6	0.0
Diretmus argenteus			1	0.0					1	0.0
Echiodon cryomargarites					4	0.0			4	0.0
Epigonus lenimen					2	0.0			2	0.0
E. robustus					1	0.0			1	0.0
E. telescopus					3	0.0			3	0.0
Gadomus aoteanus					1	0.0			1	0.0
Genypterus blacodes					1	0.0			1	0.0
Gonorynchus gonorynchus					1	0.0			1	0.0
Halargyreus johnsonii							1	0.0	1	0.0

Table C7 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Standard length range (cm)	10–45		10–45		10–45		10–45		10–45	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
other teleost – *continued*										
Helicolenus spp.	1	0.0							1	0.0
Hoplichthys haswelli			1	0.0					1	0.0
Hoplostethus atlanticus	2	0.0			2	0.0			4	0.0
H. mediterraneus	1	0.0							1	0.0
Howella brodiei			1	0.0	1	0.0	1	0.0	3	0.0
Lepidion inosimae							1	0.0	1	0.0
L. microcephalus					1	0.0	1	0.0	2	0.0
Lepidorhynchus denticulatus			6	0.1	3	0.0	11	0.4	20	0.1
Lucigadus nigromaculatus					1	0.0			1	0.0
Macrorhamphosus scolopax	1	0.0							1	0.0
Macrouridae (unident.)	9	0.1	8	0.1	39	0.3	13	0.4	69	0.2
Magnisudis prionosa	1	0.0	6	0.1	12	0.1	1	0.0	20	0.1
Mora moro	1	0.0							1	0.0
Paralepididae (unident.)	21	0.3	15	0.2	20	0.1	2	0.1	58	0.2
Paranotothenia spp.	4	0.1							4	0.0
P. magellanica					3	0.0			3	0.0
Persparsia kopua	4	0.1	2	0.0	1	0.0	7	0.2	14	0.0
Platytroctidae (unident.)							4	0.1	4	0.0
Rosenblattia robusta	8	0.1	1	0.0	6	0.0	2	0.1	17	0.1
Rouleina sp.	1	0.0			1	0.0			2	0.0
Seriolella labyrinthica	1	0.0							1	0.0
Simenchelys parasiticus					1	0.0			1	0.0
Synaphobranchidae (unident.)					1	0.0	4	0.1	5	0.0
Tetragonurus cuvieri			1	0.0					1	0.0
Xenodermichthys spp.	2	0.0	5	0.1	6	0.0			13	0.0
Mud					**4**	**0.0**			**4**	**0.0**
Unidentifiable	**7**	**0.1**	**3**	**0.0**	**9**	**0.1**	**2**	**0.1**	**21**	**0.1**
Unidentifed	**148**	**1.9**	**330**	**5.2**	**362**	**2.7**	**35**	**1.1**	**875**	**2.9**
No. of fish examined	24 006		23 034		52 881		6 067		105 988	
No. stomachs with food	7 710		6 316		13 414		3 058		30 498	
% with empty stomachs	68		72		75		49		71	
% with everted stomachs	0		0		0		0		0	
% with regurgitated stomachs	0		0		0		0		0	
No. of prey items	8 667		7 615		15 215		3 999		35 496	

Table C8: Diet of pale ghost shark, *Hydrolagus bemisi*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Chimera length range (cm)	40–100		35–85		30–80		30–100	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F
Tunicata	**1**	**7.7**	**9**	**27.3**	**20**	**64.5**	**30**	**39.0**
Thaliacea (salps)	1	7.7	9	27.3	20	64.5	30	39.0
Polychaeta					**1**	**3.2**	**1**	**1.3**
Crustacea	**2**	**15.4**	**16**	**48.5**	**4**	**12.9**	**22**	**28.6**
crustacean (unident.)					4	12.9	4	5.2
Amphipoda								
amphipod - benthic			1	3.0			1	1.3
Isopoda			1	3.0			1	1.3
Natant decapod	1	7.7	1	3.0			2	2.6
Nephropidae								
Metanephrops challengeri			2	6.1			2	2.6
Galatheidae								
Munida spp.			2	6.1			2	2.6
Crab (Brachyura / Anomura, unident.)	1	7.7	9	27.3			10	13.0
Mollusca	**5**	**38.5**	**5**	**15.2**	**2**	**6.5**	**12**	**15.6**
mollusc (unident.)	1	7.7	2	6.1			3	3.9
Shell fragments	3	23.1					3	3.9
Gastropoda	1	7.7	3	9.1			4	5.2
Cephalopoda					**2**	**6.5**	**2**	**2.6**
Teuthoidea (squid)					2	6.5	2	2.6
Echinodermata	**11**	**84.6**	**7**	**21.2**			**18**	**23.4**
echinoderm (unident.)	3	23.1					3	3.9
starfish (Asteroidea / Ophiuroidea)	8	61.5	3	9.1			11	14.3
Echinoidea (sea urchins)			5	15.2			5	6.5
Osteichthyes								
Teleostei			**1**	**3.0**			**1**	**1.3**
Coryphaenoides sp.			1	3.0			1	1.3
Mud	**5**	**38.5**					**5**	**6.5**
Unidentified			**8**	**24.2**	**7**	**22.6**	**15**	**19.5**
No. of fish examined		17		45		47		109
No. stomachs with food		13		33		31		77
% with empty stomachs		24		27		32		28
% with everted stomachs		0		0		2		1
% with regurgitated stomachs		0		0		0		0
No. of prey items		24		47		34		105

Table C9: Diet of dark ghost shark, *Hydrolagus novaezealandiae*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Chimera length range (cm)	98		40–75		30–75		30–75	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F
Tunicata					**6**	**10.2**	**6**	**6.6**
Thaliacea (salps)					6	10.2	6	6.6
Polychaeta			**6**	**18.8**	**1**	**1.7**	**7**	**7.7**
Crustacea			**21**	**65.6**	**31**	**52.5**	**52**	**57.1**
crustacean (unident.)					6	10.2	6	6.6
Amphipoda (unident.)					2	3.4	2	2.2
Natant decapod			6	18.8	3	5.1	9	9.9
Galatheidae								
Munida spp.					19	32.2	19	20.9
Crab (Brachyura / Anomura, unident.)			15	46.9	2	3.4	17	18.7
Mollusca			**1**	**3.1**	**7**	**11.9**	**8**	**8.8**
mollusc (unident.)			1	3.1			1	1.1
Shell					3	5.1	3	3.3
Bilvalva								
Pectinidae (Scallops)					3	5.1	3	3.3
Cephalopoda					**1**	**1.7**	**1**	**1.1**
Octopoda					1	1.7	1	1.1
octopod (unident.)					1	1.7	1	1.1
Echinodermata			**7**	**21.9**			**7**	**7.7**
echinoderm (unident.)			1	3.1			1	1.1
starfish (Asteroidea / Ophiuroidea)			5	15.6			5	5.5
Echinoidea (sea urchins)			1	3.1			1	1.1
Osteichthyes								
Teleostei			**1**	**3.1**	**9**	**15.3**	**10**	**11.0**
teleost (unident.)			1	3.1	7	11.9	8	8.8
fish eggs					2	3.4	2	2.2
mesopelagics					1	1.7	1	1.1
Myctophidae					1	1.7	1	1.1
Unidentifiable					**3**	**5.1**	**3**	**3.3**
Unidentified			**7**	**21.9**	**18**	**30.5**	**25**	**27.5**
No. of fish examined	1		50		175		226	
No. stomachs with food	0		32		59		91	
% with empty stomachs	100		36		65		59	
% with everted stomachs	0		0		1		1	
% with regurgitated stomachs	0		0		0		0	
No. of prey items	0		43		77		120	

Table C10: Diet of bluenose, *Hyperoglyphe antarctica*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	50–90		60–80		45–95		75–90		45–95	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Coelenterata	**2**	**4.5**							**2**	**3.2**
Scyphozoa (jellyfish)	2	4.5							2	3.2
Tunicata	**23**	**52.3**			**10**	**58.8**	**1**	**100**	**34**	**54.8**
Thaliacea (salps)	23	52.3			10	58.8	1	100	34	54.8
Crustacea	**6**	**13.6**			**2**	**11.8**			**8**	**12.9**
Natant decapod	6	13.6			2	11.8			8	12.9
natant decapod (unident.)					2	11.8			2	3.2
natant decapod - benthic	4	9.1							4	6.5
natant decapod - pelagic	3	6.8							3	4.8
Mollusca	**9**	**20.5**			**7**	**41.2**	**1**	**100**	**17**	**27.4**
Cephalopoda	**9**	**20.5**			**7**	**41.2**	**1**	**100**	**17**	**27.4**
Octopoda	1	2.3							1	1.6
octopod (unident.)	1	2.3							1	1.6
Teuthoidea (squid)	8	18.2			7	41.2	1	100	16	25.8
squid (unident.)	5	11.4			5	29.4	1	100	11	17.7
Histioteuthis spp.	2	4.5			2	11.8			4	6.5
Nototodarus spp.	1	2.3							1	1.6
Osteichthyes										
Teleostei	**10**	**22.7**			**1**	**5.9**			**11**	**17.7**
teleost (unident.)	1	2.3			1	5.9			2	3.2
mesopelagics	5	11.4							5	8.1
Idiacanthus spp.	1	2.3							1	1.6
Myctophidae (unident.)	4	9.1							4	6.5
Sternoptychidae	2	4.5							2	3.2
other teleosts	6	13.6							6	9.7
Benthodesmus spp.	2	4.5							2	3.2
Notacanthus sexspinis	1	2.3							1	1.6
Paralepididae (unident.)	3	6.8							3	4.8
Unidentified	**2**	**4.5**							**2**	**3.2**
No. of fish examined	165		4		52		3		224	
No. stomachs with food	44		0		17		1		62	
% with empty stomachs	66		100		58		33		64	
% with everted stomachs	7		0		10		33		8	
% with regurgitated stomachs	0		0		0		0		0	
No. of prey items	57		0		20		2		79	

Table C11: Diet of banded stargazer, *Kathetostoma binigrasella*, and giant stargazer, *Kathetostoma giganteum*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

	K. binigrasella		***K. giganteum***							
Area	Southern N.Z.		Chatham Rise		East Coast South Island		Southern N.Z.		All areas	
Total length range (cm)	20–70		40–80		10–80		15–80		15–80	
Species or group	n	F	*n*	F	*n*	F	*n*	F	*n*	F
Porifera							**2**	**0.1**	**2**	**0.1**
Coelenterata							**4**	**0.2**	**4**	**0.1**
Scyphozoa (jellyfish)							4	0.2	4	0.1
Tunicata	**11**	**3.0**	**1**	**1.9**	**26**	**2.4**	**96**	**6.0**	**123**	**4.5**
Thaliacea (salps)	11	3.0	1	1.9	26	2.4	96	6.0	123	4.5
Polychaeta							**5**	**0.3**	**5**	**0.2**
Crustacea	**8**	**2.2**	**2**	**3.7**	**88**	**8.2**	**239**	**14.9**	**329**	**12.0**
crustacean (unident.)			2	3.7	31	2.9	25	1.6	58	2.1
Amphipoda							1	0.1	1	0.0
Isopoda							3	0.2	3	0.1
Euphausiacea							4	0.2	4	0.1
Natant decapod	1	0.3			1	0.1	2	0.1	3	0.1
natant decapod (unident.)					1	0.1	2	0.1	3	0.1
Sergia potens	1	0.3								
Nephropidae										
Metanephrops challengeri							1	0.1	1	0.0
Palinuridae										
Jasus edwardsii	1	0.3								
Galatheidae										
Munida spp.					49	4.6	13	0.8	62	2.3
Crab (Brachyura / Anomura, unident.)	6	1.6			5	0.5	175	10.9	180	6.6
Brachyura										
Ovalipes catharus					2	0.2	21	1.3	23	0.8
Mollusca	**244**	**65.9**	**20**	**37.0**	**182**	**17.0**	**848**	**52.8**	**1 050**	**38.4**
mollusc (unident.)	1	0.3			2	0.2	2	0.1	4	0.1
Gastropoda										
Whelk (unident.)					1	0.1			1	0.0
Bivalva										
Pectinidae (Scallops)							1	0.1	1	0.0
Cephalopoda	**243**	**65.7**	**20**	**37.0**	**180**	**16.8**	**845**	**52.6**	**1 045**	**38.2**
Octopoda	35	9.5	1	1.9	25	2.3	117	7.3	143	5.2
octopod (unident.)	34	9.2	1	1.9	25	2.3	116	7.2	142	5.2
Graneledone spp.	1	0.3					1	0.1	1	0.0

Table C11 (continued)

	K. binigrasella		***K. giganteum***							
Area	Southern N.Z.		Chatham Rise		East Coast South Island		Southern N.Z.		All areas	
Total length range (cm)	20–70		40–80		10–80		15–80		15–80	
Species or group	n	F	*n*	F	*n*	F	*n*	F	*n*	F
Cephalopoda – *continued*										
Teuthoidea (squid)	217	58.6	19	35.2	157	14.6	759	47.2	935	34.2
squid (unident.)	87	23.5	13	24.1	1	0.1	428	26.6	442	16.2
Onykia (*Moroteuthis*) spp.							1	0.1	1	0.0
Nototodarus spp.	27	7.3	5	9.3	156	14.5	58	3.6	219	8.0
N. sloanii	103	27.8	1	1.9			273	17.0	274	10.0
Echinodermata					**2**	**0.2**	**2**	**0.1**	**4**	**0.1**
starfish (Asteroidea / Ophiuroidea)							1	0.1	1	0.0
Echinoidea							1	0.1	1	0.0
Holothuroidea										
Stichopus mollis					2	0.2			2	0.1
Chondrichthyes					**15**	**1.4**	**4**	**0.2**	**19**	**0.7**
Elasmobranchii					**3**	0.3	**2**	0.1	**5**	**0.2**
Skate (Rajidae / Arhynchobatidae)							2	0.1	2	0.1
Squalus acanthias					3	0.3			3	0.1
Holocephali					**13**	**1.2**	**2**	**0.1**	**15**	**0.5**
Callorhinchus milii					1	0.1			1	0.0
Hydrolagus bemisi					5	0.5			5	0.2
H. novaezealandiae					7	0.7	2	0.1	9	0.3
Osteichthyes										
Teleostei	**191**	**51.6**	**44**	**81.5**	**765**	**71.3**	**773**	**48.1**	**1 582**	**57.9**
teleost (unident.)	139	37.6	37	68.5	640	59.6	528	32.9	1 205	44.1
mesopelagics							1	0.1	1	0.0
Maurolicus australis							1	0.1	1	0.0
other teleosts	59	15.9	13	24.1	146	13.6	291	18.1	450	16.5
Argentina elongata	1	0.3					9	0.6	9	0.3
Arnoglossus scapha	6	1.6			15	1.4	10	0.6	25	0.9
Austrophycis marginata							1	0.1	1	0.0
Beryx splendens			1	1.9					1	0.0
Blenniidae (unident.)	1	0.3								
Caelorinchus aspercephalus					1	0.1			1	0.0
C. fasciatus							1	0.1	1	0.0
C. oliverianus			1	1.9					1	0.0
Callionymidae (unident.)							1	0.1	1	0.0
Capromimus abbreviatus							3	0.2	3	0.1
Chelidonichthys kumu					2	0.2	4	0.2	6	0.2
Chlorophthalmus nigripinnis					1	0.1			1	0.0
Conger spp.					1	0.1	6	0.4	7	0.3
Cyttus novaezealandiae			1	1.9			3	0.2	4	0.1

Table C11 (continued)

	K. binigrasella		*K. giganteum*							
Area	Southern N.Z.		Chatham Rise		East Coast South Island		Southern N.Z.		All areas	
Total length range (cm)	20–70		40–80		10–80		15–80		15–80	
Species or group	n	F	*n*	F	*n*	F	*n*	F	*n*	F
other teleosts – *continued*										
Emmelichthys nitidus					1	0.1	11	0.7	12	0.4
Genypterus blacodes					7	0.7	1	0.1	8	0.3
Gilloblennius sp.							1	0.1	1	0.0
Gnathophis habenatus	5	1.4					60	3.7	60	2.2
Gonorynchus gonorynchus							11	0.7	11	0.4
Helicolenus spp.	4	1.1			7	0.7	1	0.1	8	0.3
Hemerocoetes spp.	24	6.5	1	1.9	26	2.4	67	4.2	94	3.4
Hippocampus abdominalis					2	0.2			2	0.1
Hoplichthys haswelli			1	1.9					1	0.0
Kathetostoma giganteum					2	0.2	4	0.2	6	0.2
Lepidorhynchus denticulatus			2	3.7			2	0.1	4	0.1
Lepidotrigla brachyoptera					2	0.2	13	0.8	15	0.5
Macrouridae (unident.)	1	0.3	4	7.4	18	1.7	12	0.7	34	1.2
Macruronus novaezelandiae			2	3.7	1	0.1	18	1.1	21	0.8
Magnisudis prionosa							1	0.1	1	0.0
Nemadactylus macropterus					14	1.3			14	0.5
Neophrynichthys latus							1	0.1	1	0.0
Notopogon lilliei					5	0.5			5	0.2
Parapercis colias	2	0.5			2	0.2			2	0.1
P. gilliesi	2	0.5					6	0.4	6	0.2
Pelotretis flavilatus					3	0.3			3	0.1
Pleuronectiformes (unident.)	2	0.5			1	0.1	3	0.2	4	0.1
Pseudocyttus maculatus			1	1.9					1	0.0
Pseudophycis bachus	13	3.5	1	1.9	22	2.1	42	2.6	65	2.4
Seriolella punctata					4	0.4	9	0.6	13	0.5
Solegnathus spinosissimus							1	0.1	1	0.0
Sprattus spp.					1	0.1	2	0.1	3	0.1
Syngnathidae					1	0.1	1	0.1	2	0.1
Thyrsites atun					22	2.1	6	0.4	28	1.0
Trachurus spp.	2	0.5			2	0.2	1	0.1	3	0.1
T. murphyi	1	0.3								
Unidentifiable	**30**	**8.1**	**1**	**1.9**	**62**	**5.8**	**99**	**6.2**	**162**	**5.9**
Unidentified	**24**	**6.5**	**2**	**3.7**	**39**	**3.6**	**60**	**3.7**	**101**	**3.7**
No. of fish examined		406		78		1 475		1 917		3 470
No. stomachs with food		370		54		1 073		1 607		2 734
% with empty stomachs		9		31		27		16		21
% with everted stomachs		0		0		0		0		0
% with regurgitated stomachs		0		0		0		0		0
No. of prey items		529		78		1221		2236		3535

Table C12: Diet of hoki, *Macruronus novaezelandiae*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	30–120		30–120		30–120		30–120		30–120	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Coelenterata							**4**	**0.0**	**4**	**0.0**
Scyphozoa (jellyfish)							4	0.0	4	0.0
Tunicata	**8**	**1.0**	**4**	**1.8**	**89**	**1.8**	**284**	**3.5**	**385**	**2.7**
Thaliacea (salps)	8	1.0	4	1.8	89	1.8	284	3.5	385	2.7
Polychaeta					**1**	**0.0**	**1**	**0.0**	**2**	**0.0**
Crustacea	**281**	**34.6**	**62**	**27.9**	**2 466**	**49.7**	**3 210**	**39.3**	**6 019**	**42.5**
crustacean (unident.)	1	0.1	1	0.5	83	1.7	241	2.9	326	2.3
Copepoda					1	0.0	1	0.0	2	0.0
Amphipoda	6	0.7			73	1.5	205	2.5	284	2.0
amphipod (unident.)	5	0.6			73	1.5	205	2.5	283	2.0
amphipod - pelagic	1	0.1							1	0.0
Isopoda					1	0.0	4	0.0	5	0.0
Mysid / euphausid (unident.)	3	0.4					1	0.0	4	0.0
Mysidacea	14	1.7	5	2.3	21	0.4			40	0.3
Euphausiacea	27	3.3	1	0.5	1 005	20.2	683	8.4	1 716	12.1
Natant decapods	232	28.5	55	24.8	1 329	26.8	2 186	26.8	3 802	26.8
natant decapod (unident.)	34	4.2	46	20.7	1 318	26.5	2 162	26.5	3 560	25.1
natant decapod - benthic	22	2.7	2	0.9					24	0.2
natant decapod - pelagic	177	21.8	7	3.2					184	1.3
Acanthephyra spp.			2	0.9			1	0.0	3	0.0
Lipkius holthuisi					3	0.1	3	0.0	6	0.0
Oplophorus novaezeelandiae					1	0.0	1	0.0	2	0.0
Pasiphaea spp.					7	0.1	14	0.2	21	0.1
P. aff. *tarda*							1	0.0	1	0.0
Sergia potens							5	0.1	5	0.0
Sergestes spp.							2	0.0	2	0.0
Nephropidae										
Metanephrops challengeri					1	0.0			1	0.0
Galatheidae										
Munida spp.	2	0.2					1	0.0	3	0.0
Crab (Brachyura / Anomura unident.)					2	0.0			2	0.0
Mollusca	**42**	**5.2**	**14**	**6.3**	**176**	**3.5**	**474**	**5.8**	**706**	**5.0**
Gastropoda										
sea hare (O. Aplysiomorpha)							2	0.0	2	0.0
Cephalopoda	**42**	**5.2**	**14**	**6.3**	**176**	**3.5**	**473**	**5.8**	**705**	**5.0**
cephalopod (unident.)					4	0.1	6	0.1	10	0.1

Table C12 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	30–120		30–120		30–120		30–120		30–120	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Cephalopoda – *continued*										
Octopoda					6	0.1	19	0.2	25	0.2
octopod (unident.)					6	0.1	19	0.2	25	0.2
Teuthoidea (squid)	42	5.2	11	5.0	163	3.3	397	4.9	616	4.3
squid (unident.)	38	4.7	2	0.9	139	2.8	303	3.7	482	3.4
Cranchiidae (unident.)					1	0.0	1	0.0	2	0.0
Enoploteuthis spp.							1	0.0	1	0.0
Histioteuthis spp.	4	0.5			1	0.0	7	0.1	12	0.1
Mastigoteuthis sp.					1	0.0			1	0.0
Onykia (*Moroteuthis*) spp. (unident.)					4	0.1	7	0.1	11	0.1
M. (*O.*) *ingens*					1	0.0	4	0.0	5	0.0
Nototodarus spp. (unident.)			9	4.1	11	0.2	58	0.7	78	0.6
N. sloanii					5	0.1	17	0.2	22	0.2
Sepiolidae			3	1.4	3	0.1	51	0.6	57	0.4
Osteichthyes										
Teleostei	**562**	**69.1**	**151**	**68.0**	**2 738**	**55.1**	**5 089**	**62.3**	**8 540**	**60.3**
teleost (unident.)	224	27.6	96	43.2	1 841	37.1	4 047	49.5	6 208	43.8
fragments, bones							2	0.0	2	0.0
scales					5	0.1	5	0.1	10	0.1
otoliths					5	0.1	3	0.0	8	0.1
fish eggs			1	0.5					1	0.0
mesopelagics	291	35.8	33	14.9	846	17.0	904	11.1	2 074	14.6
Anotopterus pharao							2	0.0	2	0.0
Argyropelecus hemigymnus							8	0.1	8	0.1
Astronesthidae (unident.)							1	0.0	1	0.0
Bathylagus spp.	1	0.1					1	0.0	2	0.0
Chauliodus sloani			4	1.8	3	0.1	7	0.1	14	0.1
Chiasmodon niger					2	0.0			2	0.0
Eurypharynx pelecanoides							4	0.0	4	0.0
Gonostoma elongatum					3	0.1	25	0.3	28	0.2
Gonostomatidae (unident.)							1	0.0	1	0.0
Idiacanthus spp.	2	0.2							2	0.0
Lampanyctodes hectoris					36	0.7	13	0.2	49	0.3
Malacosteidae (unident.)					6	0.1	5	0.1	11	0.1
Maurolicus australis					44	0.9	22	0.3	66	0.5
Melamphaidae (unident.)							3	0.0	3	0.0
Melanonus gracilis							1	0.0	1	0.0
Myctophidae (unident.)	272	33.5	29	13.1	732	14.7	784	9.6	1 817	12.8
Myctophum spp.					3	0.1			3	0.0
Nemichthyidae (unident.)							1	0.0	1	0.0
Photichthys argenteus	17	2.1			14	0.3	27	0.3	58	0.4
Serrivomer sp.					1	0.0	1	0.0	2	0.0
Sternoptychidae (unident.)	2	0.2			7	0.1	9	0.1	18	0.1
Stomias spp.	1	0.1	1	0.5			1	0.0	3	0.0

Table C12 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	30–120		30–120		30–120		30–120		30–120	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Teleostei – *continued*										
other teleosts	56	6.9	26	11.7	58	1.2	183	2.2	323	2.3
Alepisaurus ferox							1	0.0	1	0.0
Anguilliformes (unident.)							1	0.0	1	0.0
Argentina elongata			11	5.0	4	0.1	19	0.2	34	0.2
Austrophycis marginata							34	0.4	34	0.2
Azygopus pinnifasciatus					1	0.0			1	0.0
Benthodesmus spp.	17	2.1	6	2.7			2	0.0	25	0.2
Caelorinchus aspercephalus							1	0.0	1	0.0
C. fasciatus							5	0.1	5	0.0
C. oliverianus	2	0.2	2	0.9	14	0.3	16	0.2	34	0.2
Chlorophthalmus nigripinnis	1	0.1							1	0.0
Conger spp.							1	0.0	1	0.0
Coryphaenoides subserrulatus					1	0.0			1	0.0
Cubiceps spp.					1	0.0			1	0.0
Cyttus novaezealandiae			1	0.5					1	0.0
Diretmus argenteus							2	0.0	2	0.0
Emmelichthys nitidus							1	0.0	1	0.0
Euclichthys polynemus							1	0.0	1	0.0
Genypterus blacodes							1	0.0	1	0.0
Gonorynchus gonorynchus					2	0.0	4	0.0	6	0.0
Hemerocoetes spp.							2	0.0	2	0.0
Hoplichthys haswelli					1	0.0			1	0.0
Hoplostethus mediterraneus	7	0.9							7	0.0
Lepidocybium flavobrunneum					1	0.0			1	0.0
Lepidopus caudatus	1	0.1					1	0.0	2	0.0
Lepidorhynchus denticulatus	5	0.6			13	0.3	31	0.4	49	0.3
Macrouridae (unident.)	2	0.2			11	0.2	27	0.3	40	0.3
Macruronus novaezelandiae			4	1.8	7	0.1	5	0.1	16	0.1
Magnisudis prionosa							2	0.0	2	0.0
Merluccius australis							1	0.0	1	0.0
Micromesistius australis							17	0.2	17	0.1
Neophrynichthys angustus							2	0.0	2	0.0
Paradiplospinus gracilis							1	0.0	1	0.0
Paralepididae (unident.)	18	2.2	1	0.5			3	0.0	22	0.2
Paratrachichthys trailli	1	0.1							1	0.0
Persparsia kopua	3	0.4			1	0.0			4	0.0
Pleuronectiformes (unident.)							2	0.0	2	0.0
Trachipterus trachypterus			1	0.5					1	0.0
Xenodermichthys spp.					1	0.0			1	0.0
Unidentifiable					**24**	**0.5**	**37**	**0.5**	**61**	**0.4**
Unidentified	**31**	**3.8**	**11**	**5.0**	**89**	**1.8**	**176**	**2.2**	**307**	**2.2**
No. of fish examined	3 202		1 198		11 267		18 078		33 745	
No. stomachs with food	813		222		4 965		8 170		14 170	
% with empty stomachs	69		80		54		52		56	
% with everted stomachs	6		2		2		3		2	
% with regurgitated stomachs	0		0		0		0		0	
No. of prey items	943		250		5 655		9 459		16 307	

Table C13: Diet of hake, *Merluccius australis*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	70–90		30–120		40–130		40–130		30–130	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Seaweed							**1**	**0.1**	**1**	**0.0**
Porifera					**1**	**0.1**	**1**	**0.1**	**2**	**0.1**
Tunicata			**3**	**1.0**	**1**	**0.1**	**2**	**0.2**	**6**	**0.3**
Thaliacea (salps)			3	1.0	1	0.1	2	0.2	6	0.3
Crustacea			**21**	**7.0**	**97**	**9.1**	**30**	**3.2**	**148**	**6.4**
crustacean (unident.)			1	0.3	3	0.3	3	0.3	7	0.3
Mysidacea					2	0.2			2	0.1
Euphausiacea			1	0.3	16	1.5			17	0.7
Natant decapods			19	6.3	76	7.1	27	2.9	122	5.3
natant decapod (unident.)			15	5.0	73	6.9	26	2.7	114	4.9
Lipkius holthuisi					2	0.2			2	0.1
Pasiphaea aff. *tarda*							1	0.1	1	0.0
Sergestes spp.			4	1.3					4	0.2
Sergia potens					1	0.1			1	0.0
Mollusca			**14**	**4.7**	**71**	**6.7**	**134**	**14.1**	**219**	**9.5**
Cephalopoda			**14**	**4.7**	**71**	**6.7**	**134**	**14.1**	**219**	**9.5**
cephalopod (unident.)							2	0.2	2	0.1
Octopoda										
octopod (unident.)					1	0.1	3	0.3	4	0.2
Teuthoidea (squid)			14	4.7	70	6.6	129	13.6	213	9.2
squid (unident.)			2	0.7	50	4.7	75	7.9	127	5.5
Histioteuthis spp			1	0.3			3	0.3	4	0.2
Onykia (*Moroteuthis*) spp. (unident.)					3	0.3	11	1.2	14	0.6
M. (*O.*) *ingens*					2	0.2	7	0.7	9	0.4
Nototodarus spp. (unident.)			11	3.7	10	0.9	2	0.2	23	1.0
N. sloanii					4	0.4	30	3.2	34	1.5
Ommastrephes bartrami					1	0.1	1	0.1	2	0.1
Todarodes filippovae					1	0.1			1	0.0
Echinodermata					**2**	**0.2**			**2**	**0.1**
Echinoidea (sea urchins)					2	0.2			2	0.1
echinoid (unident.)					2	0.2			2	0.1
Chondrichthyes										
Elasmobranchii			**1**	**0.3**			**2**	**0.2**	**3**	**0.1**
Etmopterus lucifer			1	0.3			1	0.1	2	0.1
Brochiraja asperula							1	0.1	1	0.0

Table C13 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	70–90		30–120		40–130		40–130		30–130	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Osteichthyes										
Teleostei	**4**	**100**	**267**	**89.0**	**901**	**84.7**	**803**	**84.8**	**1 975**	**85.3**
teleost (unident.)	2	50.0	121	40.3	486	45.7	394	41.6	1 003	43.3
fragments, bones					1	0.1	2	0.2	3	0.1
scales					1	0.1			1	0.0
otoliths					1	0.1			1	0.0
fish offal			2	0.7					2	0.1
fish eggs			1	0.3					1	0.0
mesopelagics			13	4.3	15	1.4	11	1.2	39	1.7
Bathylagus spp.							1	0.1	1	0.0
Gonostomatidae (unident.)							1	0.1	1	0.0
Lampanyctodes hectoris					1	0.1			1	0.0
Malacosteidae (unident.)					1	0.1			1	0.0
Melanostomias spp.			1	0.3					1	0.0
Myctophidae (unident.)			12	4.0	9	0.8	8	0.8	29	1.3
Photichthys argenteus					3	0.3			3	0.1
Scopelarchus sp.					1	0.1	1	0.1	2	0.1
other teleosts	2	50.0	133	44.3	410	38.5	419	44.2	964	41.6
Anguilliformes (unident.)							1	0.1	1	0.0
Argentina elongata			2	0.7	2	0.2	20	2.1	24	1.0
Austrophycis marginata							1	0.1	1	0.0
Benthodesmus spp.			1	0.3					1	0.0
Beryx spp. (unident.)					2	0.2			2	0.1
B. splendens					1	0.1			1	0.0
Caelorinchus aspercephalus							6	0.6	6	0.3
C. bollonsi					4	0.4	1	0.1	5	0.2
C. fasciatus							7	0.7	7	0.3
C. innotabilis					2	0.2			2	0.1
C. oliverianus					15	1.4	27	2.9	42	1.8
Centriscops humerosus					1	0.1			1	0.0
Centrolophus niger					1	0.1	1	0.1	2	0.1
Coryphaenoides serrulatus							1	0.1	1	0.0
C. subserrulatus							7	0.7	7	0.3
Epigonus lenimen					2	0.2			2	0.1
E. robustus					2	0.2			2	0.1
E. telescopus					1	0.1			1	0.0
Euclichthys polynemus					1	0.1			1	0.0
Halargyreus johnsonii					1	0.1	1	0.1	2	0.1
Halosaurus pectoralis	1	25.0			1	0.1			2	0.1
Helicolenus spp.			3	1.0	4	0.4			7	0.3
Holtbyrnia sp.							1	0.1	1	0.0
Lepidopus caudatus			1	0.3					1	0.0
Lepidorhynchus denticulatus			11	3.7	104	9.8	182	19.2	297	12.8
Macrouridae (unident.)			7	2.3	13	1.2	45	4.8	65	2.8

Table C13 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	70–90		30–120		40–130		40–130		30–130	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
other teleosts – *continued*										
Macruronus novaezelandiae			105	35.0	268	25.2	140	14.8	513	22.2
Merluccius australis			3	1.0			1	0.1	4	0.2
Micromesistius australis							9	1.0	9	0.4
Moridae (unident.)			1	0.3					1	0.0
Notacanthus sexspinis							1	0.1	1	0.0
Persparsia kopua							2	0.2	2	0.1
Rosenblattia robusta					1	0.1			1	0.0
Sprattus spp.			1	0.3					1	0.0
Trachurus murphyi					1	0.1			1	0.0
Ventrifossa nigromaculata					1	0.1			1	0.0
Xenodermichthys spp.	1	25.0			3	0.3			4	0.2
Unidentifiable					**5**	**0.5**	**1**	**0.1**	**6**	**0.3**
Unidentified			**8**	**2.7**	**19**	**1.8**	**13**	**1.4**	**40**	**1.7**
No. of fish examined		11		1 265		3 492		2 684		7 452
No. stomachs with food		4		300		1 064		947		2 315
% with empty stomachs		55		74		67		60		66
% with everted stomachs		9		2		2		5		3
% with regurgitated stomachs		0		0		0		1		0
No. of prey items		4		319		1 132		1 045		2500

Table C14: Diet of southern blue whiting, *Micromesisteus australis*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	30–50		15–60		15–60	
Species or group	*n*	F	*n*	F	*n*	F
Tunicata			**157**	**6.7**	**157**	**6.7**
Thaliacea (salps)			157	6.7	157	6.7
Polychaeta			**2**	0.1	**2**	0.1
Crustacea	**3**	**42.9**	**1 658**	**70.5**	**1 661**	**70.4**
crustacean (unident.)			26	1.1	26	1.1
Copepoda			23	1.0	23	1.0
Amphipoda			343	14.6	343	14.5
Isopoda			2	0.1	2	0.1
Euphausiacea			861	36.6	861	36.5
Natant decapods	3	42.9	563	23.9	566	24.0
natant decapod (unident.)	3	42.9	562	23.9	565	24.0
Pasiphaea spp.			2	0.1	2	0.1
Mollusca			**43**	**1.8**	**43**	**1.8**
Cephalopoda			**43**	**1.8**	**43**	**1.8**
Octopoda			2	0.1	2	0.1
. octopod (unident.)			2	0.1	2	0.1
Teuthoidea (squid)			27	1.1	27	1.1
squid (unident.)			24	1.0	24	1.0
Nototodarus spp.			3	0.1	3	0.1
Sepiolidae			14	0.6	14	0.6
Osteichthyes						
Teleostei	**3**	**42.9**	**746**	**31.7**	**749**	**31.8**
teleost (unident.)	2	28.6	495	21.1	497	21.1
otoliths			3	0.1	3	0.1
fish eggs			9	0.4	9	0.4
mesopelagics			239	10.2	239	10.1
Argyropelecus hemigymnus			1	0.0	1	0.0
Gonostoma elongatum			1	0.0	1	0.0
Gonostomatidae (unident.)			5	0.2	5	0.2
Lampanyctodes hectoris			1	0.0	1	0.0
Maurolicus australis			4	0.2	4	0.2
Myctophidae (unident.)			226	9.6	226	9.6
Sternoptychidae (unident.)			1	0.0	1	0.0
other teleosts	1	14.3	8	0.3	9	0.4
Austrophycis marginata			3	0.1	3	0.1
Genypterus blacodes			1	0.0	1	0.0
Hemerocoetes spp.			1	0.0	1	0.0
Lepidorhynchus denticulatus	1	14.3	1	0.0	2	0.1
Macrorhamphosus scolopax			1	0.0	1	0.0
Macrouridae (unident.)			1	0.0	1	0.0

Table C14 (continued)

Area	Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	30–50		15–60		15–60	
Species or group	*n*	F	*n*	F	*n*	F
Unidentifiable			**3**	**0.13**	**3**	**0.13**
Unidentified	**1**	**14.3**	**67**	**2.85**	**68**	**2.88**
No. of fish examined		43		5 814		5 857
No. stomachs with food		7		2 351		2 358
% with empty stomachs		81		43		44
% with everted stomachs		14		16		16
% with regurgitated stomachs		0		0		0
No. of prey items		7		2 845		2 852

Table C15: Diet of blue cod, *Parapercis colias*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	East Coast South Island		Southern N.Z.		All areas	
Total length range (cm)	25–55		25–55		25–55	
Species or group	*n*	F	*n*	F	*n*	F
Tunicata			**10**	**55.6**	**10**	**16.7**
Thaliacea (salps)			10	55.6	10	16.7
Crustacea	**13**	**31.0**	**1**	**5.6**	**14**	**23.3**
crustacean (unident.)	3	7.1			3	5.0
Natant decapod	1	2.4			1	1.7
Galatheidae						
Munida spp.	6	14.3	1	5.6	7	11.7
Crab (Brachyura / Anomura, unident.)	1	2.4			1	1.7
Brachyura						
Ovalipes catharus	2	4.8			2	3.3
Mollusca	**1**	**2.4**			**1**	**1.7**
Bivalva						
Pectinidae (Scallops)	1	2.4			1	1.7
Cephalopoda	**1**	**2.4**			**1**	**1.7**
Octopoda	1	2.4			1	1.7
octopod (unident.)	1	2.4			1	1.7
Osteichthyes						
Teleostei	**21**	**50.0**	**7**	**38.9**	**28**	**46.7**
teleost (unident.)	19	45.2	4	22.2	23	38.3
other teleosts	2	4.8	3	16.7	5	8.3
Conger spp.	1	2.4			1	1.7
Hemerocoetes spp.			2	11.1	2	3.3
Kathetostoma giganteum			1	5.6	1	1.7
Macruronus novaezelandiae	1	2.4			1	1.7
Unidentifiable	**5**	**11.9**			**5**	**8.3**
Unidentified	**4**	**9.5**	**3**	**16.7**	**7**	**11.7**
No. of fish examined		92		39		131
No. stomachs with food		42		18		60
% with empty stomachs		57		54		54
% with everted stomachs		0		0		0
% with regurgitated stomachs		0		0		0
No. of prey items		45		21		66

Table C16: Diet of hapuku, *Polyprion oxygeneios*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	60–110		50–100		50–110	
Species or group	*n*	F	*n*	F	*n*	F
Crustacea			**27**	**20.6**	**27**	**18.1**
Amphipoda			1	0.8	1	0.7
Galatheidae						
Munida spp.			11	8.4	11	7.4
Crab (Brachyura / Anomura, unident.)			15	11.5	15	10.1
Brachyura						
Nectocarcinus antarcticus			1	0.8	1	0.7
Mollusca	**5**	**27.8**	**32**	**24.4**	**37**	**24.8**
Shell			1	0.8	1	0.7
Bivalva						
Pectinidae (Scallops)			1	0.8	1	0.7
Cephalopoda	**5**	**27.8**	**30**	**22.9**	**35**	**23.5**
Octopoda			4	3.1	4	2.7
octopod (unident.)			4	3.1	4	2.7
Teuthoidea (squid)	5	27.8	26	19.8	31	20.8
squid (unident.)	4	22.2	7	5.3	11	7.4
Nototodarus sloanii			12	9.2	12	8.1
Nototodarus spp.	1	5.6	7	5.3	8	5.4
Chondrichthyes			**2**	**1.5**	**2**	**1.3**
egg cases			1	0.8	1	0.7
Elasmobranchii			**1**	**0.8**	**1**	**0.7**
Squalus acanthias			1	0.8	1	0.7
Osteichthyes						
Teleostei	**13**	**72.2**	**89**	**67.9**	**102**	**68.5**
teleost (unident.)	12	66.7	50	38.2	62	41.6
other teleosts	1	5.6	47	35.9	48	32.2
Argentina elongata			1	0.8	1	0.7
Arnoglossus scapha			2	1.5	2	1.3
Caelorinchus aspercephalus			5	3.8	5	3.4
Caesioperca lepidoptera			1	0.8	1	0.7
Centriscops humerosus			2	1.5	2	1.3
Emmelichthys nitidus			1	0.8	1	0.7
Gnathophis habenatus			3	2.3	3	2.0
Gonorynchus gonorynchus			1	0.8	1	0.7
Hemerocoetes spp.			1	0.8	1	0.7
Kathetostoma giganteum			3	2.3	3	2.0
Macrouridae (unident.)			2	1.5	2	1.3
Macruronus novaezelandiae	1	5.6			1	0.7
Parapercis gilliesi			1	0.8	1	0.7
Pleuronectiformes (unident.)			1	0.8	1	0.7
Pseudophycis bachus			27	20.6	27	18.1

Table C16 (continued)

Area	Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	60–110		50–100		50–110	
Species or group	*n*	F	*n*	F	*n*	F
Unidentified			**1**	**0.8**	**1**	**0.7**
No. of fish examined		52		267		319
No. stomachs with food		18		131		149
% with empty stomachs		48		47		47
% with everted stomachs		17		4		6
% with regurgitated stomachs		0		0		0
No. of prey items		18		164		182

Table C17: Diet of smooth oreo, *Pseudocyttus maculatus*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	15–60		30–60		15–50		15–55		15–60	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Coelenterata	**8**	**20.0**			**74**	**3.6**	**12**	**2.8**	**94**	**3.7**
Scyphozoa (jellyfish)	8	20.0			58	2.8	12	2.8	78	3.1
Anthozoa (sea anemones)					16	0.8			16	0.6
Tunicata	**20**	**50.0**	**1**	**12.5**	**1 774**	**85.4**	**248**	**57.4**	**2 043**	**79.9**
Thaliacea (salps)	20	50.0	1	12.5	1 774	85.4	248	57.4	2 043	79.9
Crustacea	**1**	**2.5**			**53**	**2.6**	**12**	**2.8**	**66**	**2.6**
crustacean (unident.)	1	2.5			6	0.3	2	0.5	9	0.4
Copepoda					2	0.1			2	0.1
Amphipoda					33	1.6	3	0.7	36	1.4
Euphausiacea					1	0.0	1	0.2	2	0.1
Natant decapods					14	0.7	6	1.4	20	0.8
natant decapod (unident.)					13	0.6	4	0.9	17	0.7
Sergestes spp.					1	0.0	2	0.5	3	0.1
Mollusca	**5**	**12.5**	**1**	**12.5**	**87**	**4.2**	**138**	**31.9**	**231**	**9.0**
Bivalva			1	12.5	1	0.0			1	0.0
Pectinidae (Scallops)					1	0.0			1	0.0
Cephalopoda	**5**	**12.5**	**1**	**12.5**	**86**	**4.1**	**138**	**31.9**	**230**	**9.0**
Octopoda					28	1.3	8	1.9	36	1.4
octopod (unident.)					28	1.3	4	0.9	32	1.5
Graneledone spp.							4	0.9	4	0.2
Teuthoidea (squid)	5	12.5	1	12.5	58	2.8	132	30.6	196	7.7
squid (unident.)	4	10.0			53	2.6	127	29.4	184	7.2
Cranchiidae	1	2.5					1	0.2	2	0.1
Histioteuthis spp.			1	12.5	5	0.2	4	0.9	10	0.4
Ommastrephes bartrami							1	0.2	1	0.0
Echinodermata					**3**	**0.1**			**3**	**0.1**
Osteichthyes										
Teleostei			**4**	**50.0**	**56**	**2.7**	**67**	**15.5**	**127**	**5.0**
teleost (unident.)			1	12.5	36	1.7	45	10.4	82	3.2
scales					2	0.1			2	0.1
fish eggs					1	0.0			1	0.0
mesopelagics			3	37.5	3	0.1	16	3.7	22	0.9
Astronesthidae							2	0.5	2	0.1
Chauliodus sloani							3	0.7	3	0.1
Cryptopsaras couesi			3	37.5			1	0.2	4	0.2
Gonostomatidae							1	0.2	1	0.0
Idiacanthus spp.							2	0.5	2	0.1
Linophryne arborifera					1	0.0			1	0.0

Table C17 (continued)

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Total length range (cm)	15–60		30–60		15–50		15–55		15–60	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
mesopelagics – *continued*										
Malacosteidae (unident.)							2	0.5	2	0.1
Melamphaidae					1	0.0	1	0.2	2	0.1
Photichthys argenteus					1	0.0	1	0.2	2	0.1
Stomias spp.							3	0.7	3	0.1
other teleosts					16	0.8	8	1.9	24	0.9
Holtbyrnia sp.					16	0.8	8	1.9	24	0.9
Mud							**1**	**0.2**	**1**	**0.0**
Unidentifiable	**3**	**7.5**			**54**	**2.6**	**4**	**0.9**	**61**	**2.4**
Unidentified	**6**	**15.0**	**2**	**25.0**	**65**	**3.1**	**6**	**1.4**	**79**	**3.1**
No. of fish examined		194		21		6 271		1 639		8 125
No. stomachs with food		40		8		2 077		432		2 557
% with empty stomachs		54		52		39		53		42
% with everted stomachs		25		10		28		21		26
% with regurgitated stomachs		0		0		0		0		0
No. of prey items		43		8		2 169		493		2 713

Table C18: Diet of red cod, *Pseudophycis bachus*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	Chatham Rise		East Coast South Island		Southern N.Z.		All areas	
Total length range (cm)	40–60		10–75		10–75		10–75	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F
Seaweed			**1**	**0.1**			**1**	**0.1**
Undaria pinnatifida			1	0.1			1	0.1
Crustacea	**16**	**100**	**1 366**	**79.5**	**89**	**68.5**	**1 471**	**78.9**
crustacean (unident.)			213	12.4	5	3.8	218	11.7
Amphipoda					2	1.5	2	0.1
Isopoda			1	0.1			1	0.1
Euphausiacea			2	0.1	8	6.2	10	0.5
Natant decapod	10	62.5	8	0.5			18	1.0
Palinuridae								
Jasus edwardsii	1	6.3					1	0.1
Galatheidae								
Munida spp.	12	75.0	1 092	63.6	29	22.3	1 133	60.8
Crab (Brachyura / Anomura, unident.)			45	2.6	31	23.8	76	4.1
Brachyura								
Ovalipes catharus			42	2.4	19	14.6	61	3.3
Mollusca			**45**	**2.6**	**15**	**11.5**	**60**	**3.2**
mollusc (unident.)			4	0.2			4	0.2
Gastropoda			3	0.2			3	0.2
Scutus breviculus			1	0.1			1	0.1
Whelk (unident.)			2	0.1			2	0.1
Bilvalva			2	0.1	1	0.8	3	0.2
Austrovenus stutchburyi			2	0.1			2	0.1
Pectinidae (Scallops)					1	0.8	1	0.1
Cephalopoda			**37**	**2.2**	**14**	**10.8**	**51**	**2.7**
Octopoda			2	0.1			2	0.1
octopod (unident.)			2	0.1			2	0.1
Teuthoidea (squid)			35	2.0	14	10.8	49	2.6
squid (unident.)					6	4.6	6	0.3
Nototodarus spp. (unident.)			35	2.0			35	1.9
N. sloanii					8	6.2	8	0.4
Echinodermata					**1**	**0.8**	**1**	**0.1**
Holothuroiea								
Stichopus mollis					1	0.8	1	0.1
Chondrichthyes								
Holocephali			**1**	**0.1**			**1**	**0.1**
Hydrolagus bemisi			1	0.1			1	0.1

Table C18 (continued)

Area	Chatham Rise		East Coast Sth. Island		Southern N.Z.		All areas	
Total length range (cm)	40–60		10–75		10–75		10–75	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F
Osteichthyes								
Teleostei	**1**	**6.3**	**435**	**25.3**	**37**	**28.5**	**473**	**25.4**
teleost (unident.)			339	19.7	31	23.8	370	19.8
other teleosts	1	6.3	105	6.1	7	5.4	113	6.1
Argentina elongata			1	0.1	1	0.8	2	0.1
Arnoglossus scapha			12	0.7			12	0.6
Caelorinchus aspercephalus			1	0.1			1	0.1
Chelidonichthys kumu			4	0.2			4	0.2
Emmelichthys nitidus			1	0.1			1	0.1
Genypterus blacodes			1	0.1			1	0.1
Gnathophis habenatus					1	0.8	1	0.1
Helicolenus spp.			5	0.3			5	0.3
Hemerocoetes spp.			10	0.6	2	1.5	12	0.6
Hippocampus abdominalis			1	0.1			1	0.1
Kathetostoma giganteum			18	1.0			18	1.0
Latridopsis ciliaris			1	0.1			1	0.1
Lepidorhynchus denticulatus			1	0.1			1	0.1
Macrouridae (unident.)			7	0.4			7	0.4
Macruronus novaezelandiae					1	0.8	1	0.1
Merluccius australis	1	6.3					1	0.1
Nemadactylus macropterus			13	0.8			13	0.7
Notopogon lilliei			3	0.2	2	1.5	5	0.3
Parapercis colias			1	0.1			1	0.1
Pleuronectiformes (unident.)			1	0.1			1	0.1
Pseudophycis bachus			23	1.3			23	1.2
Sprattus spp.			4	0.2			4	0.2
Thyrsites atun			7	0.4			7	0.4
Mud			**1**	**0.1**			**1**	**0.1**
Sea bird					**1**	**0.8**	**1**	**0.1**
Unidentifiable			**19**	**1.1**	**4**	**3.1**	**23**	**1.2**
Unidentified			**10**	**0.6**			**10**	**0.5**
No. of fish examined		20		3 420		263		3 703
No. stomachs with food		16		1 718		130		1 864
% with empty stomachs		5		45		38		44
% with everted stomachs		15		6		12		6
% with regurgitated stomachs		0		0		0		0
No. of prey items		24		1 935		153		2 112

Table C19: Diet of gemfish, *Rexea solandri*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	85–105		30–105		30–105	
Species or group	*n*	F	*n*	F	*n*	F
Tunicata			**2**	**0.3**	**2**	**0.3**
Thaliacea (salps)			2	0.3	2	0.3
Crustacea			**1**	**0.2**	**1**	**0.2**
Euphausiacea			1	0.2	1	0.2
Mollusca			**250**	**43.4**	**250**	**43.0**
Cephalopoda			**250**	**43.4**	**250**	**43.0**
Teuthoidea (squid)			250	43.4	250	43.0
squid (unident.)			82	14.2	82	14.1
Nototodarus spp. (unident.)			12	2.1	12	2.1
N. sloanii			156	27.1	156	26.9
Osteichthyes						
Teleostei	**5**	**100**	**363**	**63.0**	**368**	**63.3**
teleost (unident.)	1	20.0	225	39.1	226	38.9
mesopelagics			10	1.7	10	1.7
Myctophidae (unident.)			10	1.7	10	1.7
other teleosts	4	80.0	134	23.3	138	23.8
Argentina elongata			4	0.7	4	0.7
Bassanago bulbiceps			5	0.9	5	0.9
Brama brama			2	0.3	2	0.3
Cyttus novaezealandiae			1	0.2	1	0.2
Emmelichthys nitidus			6	1.0	6	1.0
Gonorynchus gonorynchus			10	1.7	10	1.7
Hemerocoetes spp.			1	0.2	1	0.2
Kathetostoma giganteum			2	0.3	2	0.3
Lepidorhynchus denticulatus			3	0.5	3	0.5
Macrouridae (unident.)			2	0.3	2	0.3
Macruronus novaezelandiae	3	60.0	19	3.3	22	3.8
Mendosoma lineatum			1	0.2	1	0.2
Mora moro			1	0.2	1	0.2
Nemadactylus macropterus			1	0.2	1	0.2
Parapercis colias			2	0.3	2	0.3
Paratrachichthys trailli	1	20.0	2	0.3	3	0.5
Pseudophycis bachus			8	1.4	8	1.4
Seriolella punctata			5	0.9	5	0.9
Thyrsites atun			8	1.4	8	1.4
Trachurus spp. (unident.)			17	3.0	17	2.9
T. declivis			1	0.2	1	0.2
T. murphyi			36	6.3	36	6.2
Unidentified			**1**	**0.2**	**1**	**0.2**
No. of fish examined		6		1 103		1 109
No. stomachs with food		5		576		581
% with empty stomachs		17		48		48
% with everted stomachs		0		0		0
% with regurgitated stomachs		0		0		0
No. of prey items		5		626		631

Table C20: Diet of blue warehou, *Seriolella brama*, and white warehou, *S. caerulea*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

	S. brama						*S. caerulea*	
Area	Southern N.Z.		Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	25–65		20–60		20–50		20–50	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F
Tunicata	**817**	**96.8**	**145**	**96.0**	**27**	**96.4**	**172**	**96.1**
Thaliacea (salps)	817	96.8	145	96.0	27	96.4	172	96.1
Crustacea	**64**	**7.6**	**11**	**7.3**			**11**	**6.1**
crustacean (unident.)	1	0.1	2	1.3			1	0.6
Amphipoda	1	0.1	6	4.0			7	3.9
Isopoda	2	0.2						
Euphausiacea	59	7.0	3	2.0			3	1.7
Galatheidae								
Munida spp.	1	0.1						
Crab (Brachyura / Anomura, unident.)	1	0.1						
Osteichthyes								
Teleostei	**3**	**0.4**	**3**	**2.0**			**3**	**1.7**
teleost (unident.)	3	0.4	2	1.3			2	1.1
other teleosts			1	0.7			1	0.6
Pseudophycis bachus			1	0.7			1	0.6
Unidentifiable	**1**	**0.1**						
Unidentified	**8**	**0.9**	**5**	**3.3**	**1**	**3.6**	**6**	**3.4**
No. of fish examined		974		204		58		262
No. stomachs with food		844		151		28		179
% with empty stomachs		13		26		52		32
% with everted stomachs		0		0		0		0
% with regurgitated stomachs		0		0		0		0
No. of prey items		894		164		28		192

Table C21: Diet of silver warehou, *Seriolella punctata*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	48–55		53		20–55		20–60		20–60	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Coelenterata	**1**	**50.0**			**7**	**0.6**			**8**	**0.4**
Scyphozoa (jellyfish)	1	50.0			7	0.6			8	0.4
Tunicata	**1**	**50.0**			**1 151**	**95.1**	**609**	**99.5**	**1 761**	**96.5**
Thaliacea (salps)	1	50.0			1 151	95.1	609	99.5	1 761	96.5
Polychaeta					**26**	**2.1**			**26**	**1.4**
Crustacea					**33**	**2.7**	**20**	**3.3**	**53**	**2.9**
Amphipoda					15	1.2			15	0.8
Isopoda					3	0.2			3	0.2
Euphausiacea					11	0.9	20	3.3	31	1.7
Natant decapods					7	0.6			7	0.4
Mollusca					**1**	**0.1**	**1**	**0.2**	**2**	**0.2**
Cephalopoda					**1**	**0.1**	**1**	**0.2**	**2**	**0.2**
Octopoda					1	0.1			1	0.1
Graneledone spp.					1	0.1			1	0.1
Teuthoidea (squid)							1	0.2	1	0.1
Echinodermata					**14**	**1.2**			**14**	**0.8**
Osteichthyes										
Teleostei					**7**	**0.6**	**1**	**0.2**	**8**	**0.4**
teleost (unident.)					6	0.5	1	0.2	7	0.4
other teleosts					1	0.1			1	0.1
Seriolella punctata					1	0.1			1	0.1
Unidentifiable					**34**	**2.8**			**34**	**1.9**
Unidentified					**15**	**1.2**	**3**	**0.5**	**18**	**1.0**
No. of fish examined	28		1		1 279		714		2 022	
No. stomachs with food	2		0		1 210		612		1 824	
% with empty stomachs	93		100		5		14		10	
% with everted stomachs	0		0		0		0		0	
% with regurgitated stomachs	0		0		0		0		0	
No. of prey items	2		0		1 291		634		1 927	

Table C22: Diet of barracouta, *Thyrsites atun*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food; WCSI, west coast South Island

Area	North Island		Challenger / WCSI		Chatham Islands		East Coast South Island		Southern N.Z.		All areas	
Fork length range (cm)	40–100		50–100		50–90		2–100		30–100		30–100	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
Seaweed					**1**	**0.1**					**1**	**0.0**
Tunicata									**13**	**0.6**	**13**	**0.2**
Thaliacea (salps)									13	0.6	13	0.2
Crustacea	**142**	**46.4**	**661**	**58.3**	**1 488**	**87.5**	**1629**	**78.9**	**1883**	**81.9**	**5 803**	**77.3**
crustacean (unident.)							1	0.0	7	0.3	8	0.1
Amphipoda			1	0.1	6	0.4			15	0.7	22	0.3
Isopoda					3	0.2					3	0.0
Euphausiacea	133	43.5	658	58.0	1 482	87.2	1 451	70.3	1 799	78.2	5 523	73.6
Natant decapod	11	3.6			2	0.1	1	0.0	2	0.1	16	0.2
Galatheidae												
Munida spp.			2	0.2			188	9.1	75	3.3	265	3.5
Mollusca	**3**	**1.0**	**13**	**1.1**	**97**	**5.7**	**310**	**15.0**	**222**	**9.7**	**645**	**8.6**
Cephalopoda	**3**	**1.0**	**13**	**1.1**	**97**	**5.7**	**310**	**15.0**	**222**	**9.7**	**645**	**8.6**
Teuthoidea (squid)	3	1.0	13	1.1	97	5.7	310	15.0	222	9.7	645	8.6
squid (unident.)			3	0.3	4	0.2	151	7.3	89	3.9	247	3.3
Nototodarus spp. (uniden	3	1.0	10	0.9	92	5.4	160	7.7	31	1.3	296	3.9
N. sloanii					1	0.1			103	4.5	104	1.4
Echinodermata	**1**	**0.3**									**1**	**0.0**
Chondrichthyes												
Elasmobranchii									**1**	**0.0**	**1**	**0.0**
Galeorhinus galeus									1	0.0	1	0.0
Osteichthyes												
Teleostei	**170**	**55.6**	**544**	**48.0**	**177**	**10.4**	**182**	**8.8**	**265**	**11.5**	**1 338**	**17.8**
teleost (unident.)	126	41.2	215	19.0	106	6.2	149	7.2	129	5.6	725	9.7
mesopelagics	8	2.6	3	0.3	11	0.6	5	0.2	84	3.7	111	1.5
Maurolicus australis	7	2.3	2	0.2					19	0.8	28	0.4
Myctophidae (unident.)	1	0.3	1	0.1	11	0.6	5	0.2	67	2.9	85	1.1
other teleosts	39	12.7	349	30.8	72	4.2	29	1.4	56	2.4	545	7.3
Argentina elongata			3	0.3	18	1.1			6	0.3	27	0.4
Caelorinchus aspercepha	1	0.3									1	0.0
Capromimus abbreviatus			44	3.9							44	0.6
Cepola aotea	1	0.3									1	0.0
Chlorophthalmus nigripinnis			2	0.2							2	0.0
Cyttus novaezealandiae					1	0.1			2	0.1	3	0.0
Emmelichthys nitidus					39	2.3			6	0.3	45	0.6
Engraulis australis	2	0.7	12	1.1							14	0.2
Helicolenus spp.									1	0.0	1	0.0
Hemerocoetes spp.					1	0.1			11	0.5	12	0.2

Table C22 (continued)

Area	North Island		Challenger / WCSI		Chatham Islands		East Coast South Island		Southern N.Z.		All areas	
Fork length range (cm)	40–100		50–100		50–90		2–100		30–100		30–100	
Species or group	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F	*n*	F
other teleosts – *continued*												
Lepidopus caudatus	1	0.3	2	0.2							3	0.0
Lepidotrigla brachyoptera			4	0.4	1	0.1					5	0.1
Lethrinidae (unident.)							1	0.0			1	0.0
Macruronus novaezelandiae			270	23.8	2	0.1			2	0.1	274	3.7
Merluccius australis			1	0.1							1	0.0
Moridae (unident.)					1	0.1					1	0.0
Pseudophycis bachus	1	0.3	1	0.1	1	0.1	5	0.2	8	0.3	16	0.2
Rexea solandri			2	0.2							2	0.0
Sardinops neopilchardus	14	4.6									14	0.2
Scomberesox saurus					5	0.3					5	0.1
Seriolella punctata			1	0.1	1	0.1					2	0.0
Sprattus spp			16	1.4			23	1.1	9	0.4	48	0.6
Thyrsites atun			1	0.1	3	0.2			10	0.4	14	0.2
Trachurus spp. (unident.)	20	6.5	1	0.1							21	0.3
T. murphyi									1	0.0	1	0.0
Rubbish (non fish)			**1**	**0.1**	**1**	**0.1**					**2**	**0.0**
Unidentifiable			**1**	**0.1**	**3**	**0.2**	**1**	**0.0**	**12**	**0.5**	**17**	**0.2**
Unidentified	**1**	**0.3**	**17**	**1.5**	**21**	**1.2**	**34**	**1.6**	**8**	**0.3**	**81**	**1.1**
No. of fish examined		1 487		2 904		2 678		3 594		4 879		15 542
No. stomachs with food		306		1 134		1 700		2 065		2 300		7 505
% with empty stomachs		79		61		37		43		53		52
% with everted stomachs		0		0		0		0		0		0
% with regurgitated stomachs		0		0		0		0		0		0
No. of prey items		323		1 271		1 806		2 170		2 426		7 996

Table C23: Diet of Murphy's mackerel, *Trachurus murphyi*, from research trawls. n, number of stomachs with each prey item or group; F, percent occurrence in stomachs with food

Area	Chatham Rise		Southern N.Z.		All areas	
Fork length range (cm)	40–55		40–60		40–60	
Species or group	*n*	F	*n*	F	*n*	F
Tunicata			**71**	**45.2**	**71**	**35.5**
Thaliacea (salps)			71	45.2	71	35.5
Crustacea	**33**	**76.7**	**78**	**49.7**	**111**	**55.5**
crustacean (unident.)			2	1.3	2	1.0
Copepoda			1	0.6	1	0.5
Amphipoda	5	11.6	20	12.7	25	12.5
Euphausiacea	28	65.1	47	29.9	75	37.5
Natant decapods			1	0.6	1	0.5
Pasiphaea spp.			1	0.6	1	0.5
Galatheidae						
Munida spp.			12	7.6	12	6.0
Mollusca	**1**	**2.3**	**1**	**0.6**	**2**	**1.0**
Cephalopoda	**1**	**2.3**	**1**	**0.6**	**2**	**1.0**
Teuthoidea (squid)	1	2.3	1	0.6	2	1.0
squid (unident.)	1	2.3			1	0.5
Enoploteuthis spp.			1	0.6	1	0.5
Osteichthyes						
Teleostei	**10**	**23.3**	**11**	**7.0**	**21**	**10.5**
teleost (unident.)	10	23.3	9	5.7	19	9.5
scales			1	0.6	1	0.5
mesopelagics			1	0.6	1	0.5
Myctophidae (unident.)			1	0.6	1	0.5
Unidentifiable			**7**	**4.5**	**7**	**3.5**
Unidentified			**8**	**5.1**	**8**	**4.0**
No. of fish examined		52		362		414
No. stomachs with food		43		157		200
% with empty stomachs		17		57		52
% with everted stomachs		0		0		0
% with regurgitated stomachs		0		0		0
No. of prey items		44		181		225