

Feeding in a heterogeneous environment: spatial dynamics in summer foraging Barents Sea cod

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Supplement. Stomach content data

Table S1. *Gadus morhua*. Stomach content of cod <30 cm in length. Prey by percentage of occurrence (total n = 3555), mean length and length range of prey that were measured, and mean number of prey per stomach

Prey category	% occur.	Mean prey length (cm) (min;max)	Mean n prey (max)
Cnidaria	0.15		
Anthozoa	0.02		
Actinaria	0.02		
Ctenophora	0.7		
Nemertea	0.54		
Polychaeta	4.42		
Mollusca	0.07		
Gastropoda	0.15		
Bivalvia	0.26		
Cephalopoda	0.04		
Unidentified Crustacea	10.02		
Copepoda	2.94		
Mysida	0.02		
Isopoda	3.46		
Gammarida	3.79		
Hyperiid	3.49		
Euphausiids	24.04		
<i>Meganyctiphanes norvegica</i>	0.04		
Shrimp and prawns			
<i>Pandalus borealis</i>	11.53		
Other shrimp and prawns	4.88		
Crabs and crayfish	1.24		
Priapulida	0.02		
Echinodermata			
Sea stars	0.02		
Brittle stars	0.11		
Sea cucumbers	0.17		
Arrow worms	0.15		
Sea squids	0.04		
Unidentified bony fish	9.94	5.33 (4.5;6)	1.86 (4)
Herring	0.07	14.5 (14.5;14.5)	1 (1)
Capelin	3.68	10.81 (6;15.5)	1.73 (7)

Eelpouts	0.09	4.5 (4.5;4.5)	1 (1)
Laternfishes	0.02		
Redfish	0.07		
Sculpins	0.74	5.61 (3.5;7.5)	1.71 (4)
Atlantic hookear sculpin	0.13	4.17 (3.5;4.5)	1 (1)
<i>Triglops</i> sp.	0.83	6.83 (5.5;8.5)	1.76 (3)
Atlantic poacher	0.09	6 (4.5;7.5)	1 (1)
Snailfishes	0.2	4.83 (2.5;7.5)	1 (1)
Stichidae	2	9.54 (6.5;17.5)	1.57 (9)
<i>Ammodytes</i>	0.07		
Flatfish	0.44	4.47 (2.25;6)	2 (5)
Long rough dab	1.24	3.95 (2.25;6.5)	2.37 (8)
Unidentified cod fish	0.11	6 (6;6)	2 (2)
Norway pout	0.04	6.5 (6.5;6.5)	1 (1)
Haddock	0.02		
Polar cod	2.14	8.76 (3.5;13.5)	1.47 (10)
Cod	0.09	8.75 (6.5;10.5)	1.5 (3)
Indeterminate	5.64		

Table S2. *Gadus morhua*. Stomach content of cod 30 to 50 cm in length. Prey by percentage of occurrence (total n = 4175), mean length and range of prey that were measured, and mean number of prey per stomach

Prey category	% occur.	Mean prey length (cm) (min;max)	Mean n prey (max)
Cnidaria	0.07		
Anthozoa	0.05		
Actinaria	0.43		1.3 (2)
Ctenophora	1.57		
Nemertea	0.51		
Polychaeta	6.09		1.4 (4)
Mollusca	0.04		
Gastropoda	0.46		1 (1)
Bivalvia	1.56		1 (1)
Cephalopoda	0.23		1 (1)
<i>Gonatus</i>	0.03		1 (1)
<i>Oegosida</i>	0.02		1 (1)
Octopoda	0.1		1.3 (2)
Sea spider	0.01		
Unidentified Crustacea	2.87		2 (7)
Copepoda	0.1		
Isopoda	3.07		1.5 (6)
Gammarida	2.76		1 (1)
Hyperiid	4.08		1 (1)
Euphausiids	11.78		13.5 (71)
<i>Meganyctiphanes norvegica</i>	0.03		1 (1)
Decapoda	0.01		
Shrimp and prawns			
<i>Pandalus borealis</i>	16.06		1.9 (20)
Other shrimp and prawns	7.53		1.5 (15)
Crabs and crayfish	3.64		3 (18)
Priapulida	0.03		
Echinodermata	0.02		
Sea stars	0.02		
Brittle stars	0.14		1 (1)
Sea cucumbers	0.22		1 (1)
Arrow worms	0.23		
Unidentified bony fish	12.61	7.8 (4.5;12.5)	1.4 (6)
Herring	0.46	15 (12.5;17.5)	2 (3)
Capelin	7.06	12.4 (5.5;18.5)	2.4 (22)

Pipefish	0.01	26.5 (26.5;26.5)	1 (1)
Eelpouts	0.23	13.1 (8.5;16.5)	1 (1)
Redfish	0.08	9.1 (8.5;10.5)	1 (1)
Sculpins	0.91	7.5 (3.5;13.5)	1.6 (11)
Atlantic hookear sculpin	0.39	6.8 (3.5;9.5)	1.2 (3)
<i>Triglops</i> sp.	1.66	7.9 (4.5;13.5)	2.1 (12)
Atlantic poacher	0.28	7.2 (1.5;15.5)	2.4 (10)
Snailfishes	0.23	6.3 (4.5;9.5)	2.6 (12)
Wolfishes	0.05	6.8 (5.5;8.5)	1 (1)
Stichidae	3.65	11.3 (4.5;26.5)	2.7 (25)
<i>Ammodytes</i>	0.41	9 (8.5;9.5)	1 (1)
Flatfish	0.21	7.5 (3.5;11.5)	1 (1)
Long rough dab	0.78	6.6 (3.5;15.5)	1.5 (5)
Greenland halibut	0.01		
Unidentified cod fish	0.12	10.3 (6;14.5)	1.3 (2)
Saithe	0.02	9.5 (9.5;9.5)	10 (10)
Blue whiting	0.26	18.2 (15.5;22.5)	1.1 (2)
Norway pout	0.08	14.5 (11.5;16.5)	1.2 (3)
Haddock	0.31	13.6 (10.5;19.5)	1.2 (3)
Polar cod	3.58	10 (2.75;19.5)	3.3 (35)
Cod	0.53	9.4 (6.5;13.5)	1.4 (4)
Indeterminate	2.3		

Table S3. *Gadus morhua*. Stomach content of cod 50 to 75 cm in length. Prey by percentage of occurrence (total n = 4013), mean length and range of prey that were measured, and mean number of prey per stomach

Prey category	% occur.	Mean prey length (cm) (min;max)	Mean n prey (max)
Poriphera	0.01		
Cnidaria	0.13		1 (1)
Anthozoa	0.08		
Actinaria	0.55		3.7 (12)
Ctenophora	4.27		
Nemertea	0.21		1 (1)
Polychaeta	4.61		1.5 (9)
Mollusca	0.08		
Gastropoda	0.54		1.4 (2)
Bivalvia	1.09		1 (1)
Cephalopoda	0.31		1.2 (2)
<i>Gonatus</i>	0.02		1 (1)
<i>Oegosida</i>	0.07		1 (1)
Squid	0.02		1 (1)
Octopoda	0.24		1.2 (3)
Sea spider	0.02		
Unidentified Crustacea	1.39		2.1 (7)
Copepoda	0.07		
Isopoda	3.16		1.8 (14)
Gammarida	1.87		1.5 (6)
Hyperiidia	6.94		1.6 (4)
Euphasids	9.64		10.5 (71)
<i>Meganyctiphanes norvegica</i>	0.01		1 (1)
Decapoda	0.01		
Shrimp and prawns			
<i>Pandalus borealis</i>	12.47		2.3 (50)
Other shrimp and prawns	5.65		1.7 (17)
Crabs and crayfish	4.1		3.4 (25)
Priapulida	0.01		1 (1)
Echinodermata	0.01		
Sea star	0.04		1 (1)

Brittle star	0.21		1 (1)
Echinozoa	0.01		
Sea cucumber	0.3		1.1 (2)
Arrow worm	0.15		
Sea squids	0.02		7 (13)
Lamprey	0.01		
Unidentified bony fish	12.26	11 (8.5;15.5)	1.8 (23)
Herring	0.95	20.1 (5.5;32.5)	2.1 (11)
Capelin	7.51	13.2 (5.5;19.5)	3 (40)
Pipefish	0.01	28 (26.5;31.5)	1 (1)
Stickelbacks	0.01		
Eelpouts	0.62	15.2 (7.5;30.5)	1.2 (3)
Redfish	0.23	9.7 (5.5;19.5)	1 (1)
Sculpins	1.2	8 (3.5;17.5)	2.2 (16)
Atlantic hookear sculpin	0.49	7.5 (1.25;11.5)	1.5 (8)
<i>Triglops</i> sp.	1.8	8.1 (3.5;14.5)	3.1 (59)
Atlantic poacher	0.34	8.5 (3.5;17.5)	2.8 (24)
Snailfishes	0.53	10 (4.5;16.5)	3.8 (27)
Lumpsucker	0.01	6.5 (6.5;6.5)	1 (1)
Wolffishes	0.05	10.8 (5.5;20.5)	1 (1)
Stichidae	3.49	12.6 (2.5;32.5)	2.8 (25)
<i>Ammodytes</i>	0.6	8.2 (6;9.5)	1.1 (2)
Flatfish	0.12	9.3 (3.5;23.5)	1 (1)
Long rough dab	1.04	9.2 (3.5;25.5)	1.4 (10)
Greenland halibut	0.06	11.4 (5.5;32.5)	3 (17)
Unidentified cod fish	0.25	12.4 (5.5;18.5)	1.8 (8)
Saithe	0.06	11.1 (6.5;18.5)	1 (1)
Blue whiting	1.45	21.9 (9.5;36.5)	1.2 (4)
Norway pout	0.19	14 (7.5;19.5)	1.6 (12)
Haddock	0.62	16.2 (6.5;28.5)	1.6 (14)
Polar cod	5.62	10.9 (2.5;20.5)	3.3 (35)
Cod	0.97	13.4 (6.5;36.5)	1.6 (20)
Indeterminate	1.23		3.1 (8)

Table S4. Stomach content of cod ≥ 75 cm in length. Prey by weight % (all stomachs pooled), percentage of occurrence (total n = 1756), mean length and range of prey that were measured prey, and mean number of prey per stomach

Prey category	% occur.	Mean prey length (cm) (min;max)	Mean n prey (max)
Poriphera	0.04		1 (1)
Cnidaria	0.18		
Anthozoa	0.11		1 (1)
Actinaria	0.51		3.2 (12)
Ctenophora	5.44		
Nemertea	0.11		1 (1)
Polychaeta	2.16		1 (1)
Mollusca			
Gastropoda	0.44		1.3 (2)
Bivalvia	0.58		1.7 (2)
<i>Limacina</i>	0.02		
Cephalopoda	0.39		1.5 (3)
<i>Gonatus</i>	0.05		2 (3)
<i>Oipeda</i>	0.09		
Squids	0.02		1 (1)
Octapoda	0.42		1.8 (4)
Sea spider	0.02		
Unidentified Crustacea	0.67		1 (1)
Isopoda	3.07		2 (10)
Gammarida	0.79		1.7 (3)
Hyperiid	7.28		10.5 (20)

Euphasids	4.35		7.3 (22)
Decapods			
Shrimps and prawns			
<i>Pandalus borealis</i>	10.75		2.5 (26)
Other shrimp and prawns	5.46		2.2 (29)
Crabs and crayfish	2.77		3.6 (17)
Priapulida	0.02		
Echinodermata			
Sea star	0.07		1 (1)
Brittle star	0.23		1 (1)
Echinozoa	0.02		
Sea cucumber	0.44		1.1 (2)
Arrow worm	0.19		
Sea squids	0.04		14 (14)
Lamprey	0.04		
Skates	0.05	18.5 (18.5;18.5)	1 (1)
Unidentified bony fish	13.04	34.5 (34.5;34.5)	2.3 (8)
Herring	0.95	19.6 (7.5;32.5)	1.6 (4)
Capelin	10.05	13.3 (6.5;25.5)	3.8 (36)
Eelpouts	1.39	19.8 (9.5;35.5)	1.5 (9)
Lanternfishes	0.02	20.5 (20.5;20.5)	1 (1)
Redfish	0.56	9.8 (5.5;18.5)	1.2 (2)
Sculpins	1.23	9.5 (3.5;21.5)	1.5 (7)
Atlantic hookear sculpin	0.51	8.8 (6.5;11.5)	1.5 (4)
<i>Triglops</i> sp.	2.07	8.2 (3.5;18.5)	2.7 (45)
Atlantic poacher	0.47	12.4 (2.5;17.5)	1.4 (3)
Snailfishes	0.93	7.5 (2.5;13.5)	11 (66)
Lumpsucker	0.02		
Wolffishes	0.11	17.9 (2.25;45.5)	1 (1)
Stichidae	1.65	10.8 (5.5;21.5)	1.4 (7)
<i>Ammodytes</i>	0.25	7.3 (6;8.5)	8 (8)
Flatfish	0.46	26.6 (18.5;38.5)	1.2 (3)
Long rough dab	2.35	18.9 (3.5;32.5)	1.1 (5)
Greenland halibut	0.09	35.5 (35.5;35.5)	1 (1)
Unidentified cod fish	0.95	15.6 (9.5;30.5)	1.7 (8)
Saithe	0.02		
Blue whiting	2.67	23.5 (7.5;35.5)	1.4 (6)
Norway pout	0.44	15.1 (8.5;19.5)	1.2 (3)
Haddock	2.44	21.6 (6.5;45)	1.4 (9)
Polar cod	7.11	11.9 (2.75;20.5)	4.4 (65)
Cod	2.84	18 (6.5;50.5)	2.2 (30)
Indeterminate	0.65		1.5 (2)