Supplementary Table 1. Equations used to describe the redfish diet according to stomach content analysis.

Equations	
Partial stomach fullness index (PFI)	
$PFI_{ij} = M_{ij} \times L_j^{-b} \times 10^4$	M_{ij} is the mass of prey i in redfish j, L_j is the FL (cm) of redfish j and b is the specific allometric exponent calculated for redfish (b = 3.19), corresponding to the slope of the linear relationship of log(mass) and log(FL) of redfish (Brown-Vuillemin *et al.*, 2022)
Mean PFI	
$PFI_i = \frac{1}{N} \times \sum_{j=1}^{N} PFI_{ij}$	Where N is the number of redfish
Percentage fullness index (%FI)	
$\%FI_i = \frac{PFI_i}{TFI} \times 100$	
Total stomach fullness index (TFI)	
$TFI_j = \sum_{i=1}^{I} PFI_{ij}$ $TFI = \frac{1}{N} \times \sum_{j=1}^{N} TFI_j$	Total stomach fullness index TFI_j was the sum of all PFI_i for a redfish j and I represents the number of different prey taxa found in the sample

Supplementary Table 2. Diet composition of redfish from stomach contents analysis expressed in percentage fullness index (%FI) according to three redfish size classes and subareas (NWG, North-West Gulf; LC, Laurentian Channel and NEG, North-East Gulf).

		All stomachs	< 20				20—30				≥ 30			
			All	NWG	LC	NEG	All	NWG	LC	NEG	All	NWG	LC	NEG
Prey	*n*	213	102	24	48	30	64	21	26	17	47	4	27	16
FISH		**8.2**	**0.8**	**-**	**-**	**2.1**	**5.4**	**5.2**	**17.8**	**0.3**	**19.5**	**45.9**	**43.3**	**2.0**
	Digested Fish	1.1	0.8	-	-	2.1	2.4	1.2	11.3	0.3	0.2	-	-	0.4
Aulopiformes	*Arctozenus risso*	1.4	-	-	-	-	-	-	-	-	4.4	45.6	-	-
Osmeriformes	*Mallotus villosus*	0.3	-	-	-	-	-	-	-	-	0.9	-	-	1.5
	Melanostigma atlanticum	0.9	-	-	-	-	3.0	4.0	6.5	-	T	0.3	-	-
Scorpaeniformes	*Sebastes* sp.*	4.5	-	-	-	-	-	-	-	-	13.9	-	43.3	-
SHRIMP		**38.8**	**15.2**	**-**	**18.6**	**22.5**	**37.1**	**57.2**	**34.1**	**10.3**	**68.9**	**50.8**	**51.7**	**81.4**
	Digested Shrimp	1.5	2.2	-	-	5.6	T	T	-	T	2.0	5.4	3.2	0.8
Pandalidae	*Pandalus borealis**	10.5	-	-	-	-	26.7	41.4	29.7	5.0	8.6	44.8	12.3	0.6
	Pandalus sp.	0.6	-	-	-	-	1.4	-	-	4.0	0.7	0.6	-	1.1
Pasiphaeidae	*Pasiphaea multidentata**	26.2	12.9	-	18.6	16.8	8.9	15.7	4.4	1.3	57.6	-	36.2	78.9
AMPHIPOD		**12.3**	**12.2**	**9.4**	**4.2**	**20.7**	**21.2**	**1.4**	**3.0**	**56.7**	**4.5**	**-**	**0.2**	**7.6**
	Digested Amphipod	T	-	-	-	T	-	-	-	-	T	-	T	-
Gammaridea	Digested Gammaridea	0.1	0.2	-	-	0.6	T	-	-	T	-	-	-	-
	Themisto abyssorum	0.5	1.3	-	-	3.3	-	-	-	-	T	-	-	0.1
	Themisto compressa	0.3	0.6	-	-	1.6	0.1	-	-	0.2	0.1	-	-	0.1
	*Themisto libellula**	7.2	1.4	2.8	-	1.6	18.5	-	-	52.4	4.2	-	-	7.3
	Themisto sp.	4.0	8.3	6.6	4.2	12.8	2.5	1.4	3.0	3.7	0.2	-	0.2	0.1
	Digested Lysianassidae	T	-	-	-	T	0.2	-	-	0.5	-	-	-	-
Maeridae	*Maera loveni*	0.1	0.3	-	-	0.8	-	-	-	-	-	-	-	-
COPEPOD		**13.3**	**30.0**	**8.6**	**55.3**	**23.2**	**5.3**	**2.2**	**15.5**	**5.3**	**0.2**	**-**	**0.5**	**0.1**
	Digested Copepod	0.2	0.4	-	0.4	0.8	-	-	-	-	-	-	-	-
Calanoida	Digested Calanoida	2.8	5.9	0.1	6.5	9.4	1.8	2.0	4.7	0.2	-	-	-	-
	Calanus hyperboreus	0.6	1.5	-	4.4	-	T	-	-	0.1	T	-	0.1	-
	Calanus sp.*	9.0	20.5	8.4	41.7	10.7	3.5	0.2	10.7	5.0	0.2	-	0.5	0.1
Euchaetidae	*Paraeuchaeta norvegica*	0.1	0.2	-	-	0.5	-	-	-	-	-	-	-	-
	Metridia sp.	0.6	1.5	T	2.4	1.8	T	-	0.1	-	-	-	-	-
MYSID		**2.1**	**3.0**	**4.6**	**5.4**	**-**	**2.6**	**0.7**	**8.5**	**2.7**	**0.7**	**0.6**	**1.9**	**0.0**
	Boreomysis sp.	1.8	3.0	4.4	5.4	-	1.6	0.7	8.5	-	0.7	0.6	1.9	-
	Mysis sp.	0.3	-	-	-	-	1.0	-	-	2.7	-	-	-	-
	Pseudomma sp.	T	0.1	0.2	-	-	-	-	-	-	-	-	-	-
	Digested Mysidae	T	T	-	T	-	-	-	-	-	T	-	-	T
EUPHAUSIID		**13.5**	**13.3**	**32.2**	**3.8**	**8.7**	**24.1**	**30.5**	**9.4**	**21.7**	**4.2**	**-**	**0.4**	**7.0**
Euphausiidae	*Meganyctiphanes norvegica*	1.1	-	-	-	-	2.3	0.7	9.4	1.4	1.3	-	0.4	2.0
	Thysanoessa sp.*	6.6	9.7	25.0	-	7.5	7.2	2.1	-	17.3	2.5	-	-	4.4
	Digested Euphausiidae	5.8	3.7	7.2	3.8	1.2	14.7	27.6	-	3.0	0.4	-	-	0.7
OTHER INVERTEBRATES		**7.9**	**16.8**	**45.3**	**9.0**	**4.5**	**3.0**	**0.3**	**11.6**	**2.9**	**1.4**	**-**	**0.7**	**2.0**
Cephalopoda	*Rossia sp.*	0.2	-	-	-	-	-	-	-	-	0.5	-	-	0.8
Crustacea	Digested Crustacea	7.7	16.8	45.3	9.0	4.5	3.0	0.3	11.6	2.9	0.9	-	0.7	1.1
DIGESTED / UNIDENTIFIED		**3.9**	**8.6**	**-**	**3.7**	**18.3**	**1.2**	**2.5**	**-**	**-**	**0.6**	**2.7**	**1.2**	**-**

T, Trace (%FI < 0.1). The contribution of the eight broad taxonomic categories is in bold. *= Main prey specific taxa.

Supplementary Table 3. Fatty acid composition (% total fatty acid) of prey species. Values are mean ± standard error.

Prey analysed	FISH		SHRIMP		AMPHIPOD			COPEPOD
	M. villosus	***Sebastes* sp.**	***P. borealis***	***P. multidentata***	***T. compressa***	***T. libellula***	***T. abyssorum***	***Calanus* sp.**
Fatty acid *n*	5	5	5	4	5	4	5	5
Saturated FA								
14:0	5.21 ± 0.23	4.23 ± 0.47	4.28 ± 0.29	3.99 ± 0.24	6.98 ± 0.90	7.76 ± 0.10	6.14 ± 0.29	5.75 ± 0.12
15:0	0.72 ± 0.09	0.54 ± 0.16	0.59 ± 0.16	-	1.08 ± 0.31	0.71 ± 0.07	0.86 ± 0.06	0.37 ± 0.16
16:0	20.99 ± 1.71	17.33 ± 1.40	19.32 ± 0.49	15.95 ± 1.21	16.54 ± 1.58	17.98 ± 0.51	15.23 ± 0.55	5.67 ± 0.23
17:0	0.05 ± 0.05	0.32 ± 0.10	0.29 ± 0.08	-	0.26 ± 0.16	0.40 ± 0.04	0.45 ± 0.03	-
18:0	2.64 ± 0.26	5.76 ± 0.87	2.89 ± 0.22	3.82 ± 0.27	3.82 ± 0.40	2.19 ± 0.15	2.50 ± 0.15	-
20:0	0.54 ± 0.15	1.02 ± 0.18	0.37 ± 0.16	1.41 ± 0.84	2.09 ± 0.38	0.88 ± 0.15	0.79 ± 0.09	-
Subtotal	**30.14 ± 1.92**	**29.20 ± 2.44**	**27.72 ± 0.75**	**25.17 ± 2.46**	**30.77 ± 3.19**	**29.92 ± 2.83**	**25.97 ± 0.72**	**11.79 ± 0.35**
Monounsaturated FA								
16:1n7	11.18 ± 0.51	13.48 ± 2.52	7.29 ± 0.29	6.59 ± 0.70	13.01 ± 1.68	26.33 ± 0.46	13.11 ± 0.92	25.82 ± 0.58
17:1n?	0.21 ± 0.09	0.40 ± 0.20	0.69 ± 0.25	1.32 ± 0.49	0.30 ± 0.19	0.47 ± 0.06	0.51 ± 0.03	1.09 ± 0.11
18:1n9	16.32 ± 1.67	17.56 ± 2.06	18.49 ± 0.81	20.08 ± 1.28	16.17 ± 1.21	19.49 ± 1.09	21.74 ± 0.75	7.22 ± 0.52
20:1n?	14.32 ± 2.04	17.48 ± 1.73	7.47 ± 0.44	8.57 ± 0.95	17.82 ± 2.66	12.26 ± 0.61	21.74 ± 0.57	16.36 ± 0.29
22:1n9	15.60 ± 2.51	17.32 ± 1.52	16.34 ± 1.78	11.01 ± 1.77	18.35 ± 2.20	8.54 ± 0.72	13.39 ± 0.57	16.66 ± 0.19
24:1n9	2.12 ± 0.25	1.45 ± 0.45	2.79 ± 0.07	3.66 ± 0.30	1.00 ± 0.26	0.66 ± 0.06	0.69 ± 0.06	2.06 ± 0.13
Subtotal	**59.75 ± 3.22**	**67.68 ± 2.83**	**53.06 ± 1.33**	**51.24 ± 2.70**	**66.64 ± 2.76**	**67.75 ± 4.21**	**71.17 ± 0.79**	**69.21 ± 0.71**
Polyunsaturated FA								
18:2n6	1.86 ± 0.28	1.35 ± 0.25	2.52 ± 0.31	3.61 ± 0.30	1.89 ± 0.51	1.43 ± 0.09	1.74 ± 0.14	2.03 ± 0.20
18:3n3	0.76 ± 0.13	-	0.78 ± 0.09	1.56 ± 0.14	-	0.20 ± 0.12	0.22 ± 0.14	1.06 ± 0.10
20:2n?	0.50 ± 0.11	0.12 ± 0.12	0.49 ± 0.08	1.15 ± 0.10	0.47 ± 0.20	0.44 ± 0.04	0.51 ± 0.03	-
20:4n6	0.63 ± 0.21	-	1.85 ± 0.19	2.07 ± 0.16	-	-	-	0.27 ± 0.27
20:3n3	-	-	-	-	-	-	-	-
20:5n3	3.44 ± 0.74	0.56 ± 0.37	7.52 ± 0.21	8.38 ± 0.16	0.11 ± 0.11	0.09 ± 0.09	0.20 ± 0.12	11.76 ± 0.17
22:6n3	2.91 ± 0.61	1.09 ± 0.60	6.06 ± 0.21	6.82 ± 0.68	0.13 ± 0.13	0.17 ± 0.10	0.18 ± 0.11	3.88 ± 0.09
Subtotal	**10.11 ± 1.57**	**3.12 ± 1.18**	**19.22 ± 0.63**	**23.59 ± 1.18**	**2.59 ± 0.65**	**2.33 ± 0.19**	**2.86 ± 0.50**	**19.00 ± 0.43**

?, position of the double bond closest to the terminal methyl group unknown

Supplementary Table 4. Statistical comparison of FA composition of common prey species of redfish: PERMANOVA results followed by pairwise comparisons, including FAs that contributed most to dissimilarity.

Source	DF	Pseudo-F	*P*-value
Prey taxa (Figure 5)	7	17.127	**0.001**
Residuals	30		

Levels	*P*-value	Contribution (%) to dissimilarity
M. villosus : *Sebastes* sp.	0.100	
M. villosus : *P. borealis*	**0.016**	20:1n? (19); 22:1n9 (14); 20:5n3 (11); 16:1n7 (11); 18:1n9 (11); 22:6n3 (9); 16:0 (8)
M. villosus : *P. multidentata*	**0.016**	20:1n? (13); 22:1n9 (13); 16:0 (11); 20:5n3 (10); 18:1n9 (10); 16:1n7 (10); 22:6n3 (8); 18:2n6 (4); 24:1n9 (3)
M. villosus : *T. compressa*	**0.033**	20:1n? (15); 22:1n9 (15); 16:0 (13); 18:1n9 (9); 20:5n3 (9); 22:6n3 (7); 16:1n7 (7); 14:0 (5): 20:0 (4)
M. villosus : *T. libellula*	**0.007**	16:1n7 (31); 22:1n9 (16); 18:1n9 (9); 20:1n? (8); 16:0 (70; 20:5n3 (7); 22:6n3 (6)
M. villosus : *T. abyssorum*	**0.007**	20:1n? (20); 18:1n9 (15); 16:0 (15); 22:1n9 (12); 20:5n3 (9); 22:6n3 (7); 16:1n7 (6)
M. villosus : *Calanus* sp.	**0.009**	16:0 (24); 16:1n7 (23); 18:1n9 (14); 20:5n3 (13); 22:1n9 (7)
Sebastes sp. : *P. borealis*	**0.004**	20:1n? (20); 20:5n3 (14); 16:1n7 (12); 22:6n3 (10); 18:1n9 (8); 22:1n9 (8); 16: 0 (7); 18:0 (6)
Sebastes sp. : *P. multidentata*	**0.010**	20:1n? (15); 20:5n3 (13); 16:1n7 (12); 22:1n9 (11); 22:6n3 (10); 18:1n9 (8); 16:0 (5); 18:2n6 (4); 24:1n9 (4)
Sebastes sp. : *T. compressa*	0.587	
Sebastes sp. : *T. libellula*	**0.007**	16:1n7 (28); 22:1n9 (19); 20:1n? (12); 18:1n9 (9); 18:0 (8); 14:0 (8)
Sebastes sp. : *T. abyssorum*	0.109	
Sebastes sp. : *Calanus sp.*	**0.008**	16:1n7 (18); 16:0 (17); 20:5n3 (17); 18:1n9 (15); 18:0 (9); 20:1n? (5)
P. borealis : *P. multidentata*	**0.007**	22:1n9 (22); 16:0 (14); 18:1n9 (10); 20:1n? (7); 20:0 (5); 16:1n7 (5); 22:6n3 (5); 18:2n6 (4); 17:1n? (4); 18:0 (4)
P. borealis : *T. compressa*	**0.006**	20:1n? (20); 20:5n3 (14); 22:6n3 (11); 16:1n7 (11); 22:1n9 (9); 16:0 (6); 14:0 (5); 18:1n9 (5)
P. borealis : *T. libellula*	**0.010**	16:1n7 (32); 22:1n9 (13); 20:5n3 (12); 22:6n3 (10); 20:1n? (8); 14:0 (6)
P. borealis : *T. abyssorum*	**0.010**	20:1n? (27); 20:5n3 (14); 22:6n3 (11); 16:1n7 (11); 16:0 (8); 22:1n9 (7); 18:1n9 (6)
P. borealis : *Calanus* sp.	**0.009**	16:1n7 (26); 16:0 (19); 18:1n9 (16); 20:1n9 (12); 20:5n3 (6); 22:1n9 (5)
P. multidentata : *T. compressa*	**0.011**	20:1n? (15); 20:5n3 (13); 22:1n9 (12); 22:6n3 (11); 16:1n7 (10); 18:1n9 (6); 16:0 (5); 14:0 (5); 24:1n9 (4)
P. multidentata : *T. libellula*	**0.022**	16:1n7 (30); 20:5n3 (13); 22:6n3 (10); 14:0 (6); 20:1n? (6); 22:1n9 (6); 24:1n9 (5); 18:1n9 (4) 16:0 (4)
P. multidentata : *T. abyssorum*	**0.006**	20:1n? (23); 20:5n3 (14); 22:6n3 (11); 16:1n7 (11); 22:1n9 (5); 24:1n9 (5); 18:1n9 (5); 14:0 (4); 16:0 (4)
P. multidentata : *Calanus* sp.	**0.009**	16:1n7 (25); 18:1n9 (17); 16:0 (13); 20:1n? (10); 22:1n9 (7); 18:0 (5); 20:5n3 (4)
T. compressa : *T. libellula*	**0.020**	16:1n7 (30); 22:1n9 (22); 20:1n? (13); 18:1n9 (9); 16:0 (6)
T. compressa : *T. abyssorum*	**0.017**	20:1n? (19); 18:1n9 (18); 22:1n9 (16); 16:1n7 (12); 16:0 (10); 14:0 (5); 18:0 (4)
T. compressa : *Calanus* sp.	**0.004**	16:1n7 (18); 20:5n3 (17); 16:0 (16); 18:1n9 (13); 20:1n? (7); 18:0 (5); 22:6n3 (5)
T. libellula : *T. abyssorum*	**0.005**	16:1n7 (36); 20:1n? (26); 22:1n9 (13); 16:0 (8)
T. libellula : *Calanus* sp.	**0.015**	16:0 (19); 18:1n9 (19); 20:5n3 (18); 22:1n9 (13); 20:1n? (6); 22:6n3 (6)
T. abyssorum : *Calanus* sp.	**0.010**	18:1n9 (21); 16:1n7 (18); 20:5n3 (17); 16:0 (14); 20:1n? (8); 22:6n3 (5)

Bold indicates significant values adjusted (P < 0.05). DF, degrees of freedom.

Supplementary Table 5. Fatty acid composition (% total fatty acid) of the redfish livers according to three redfish size classes and subareas. Values are mean ± standard error.

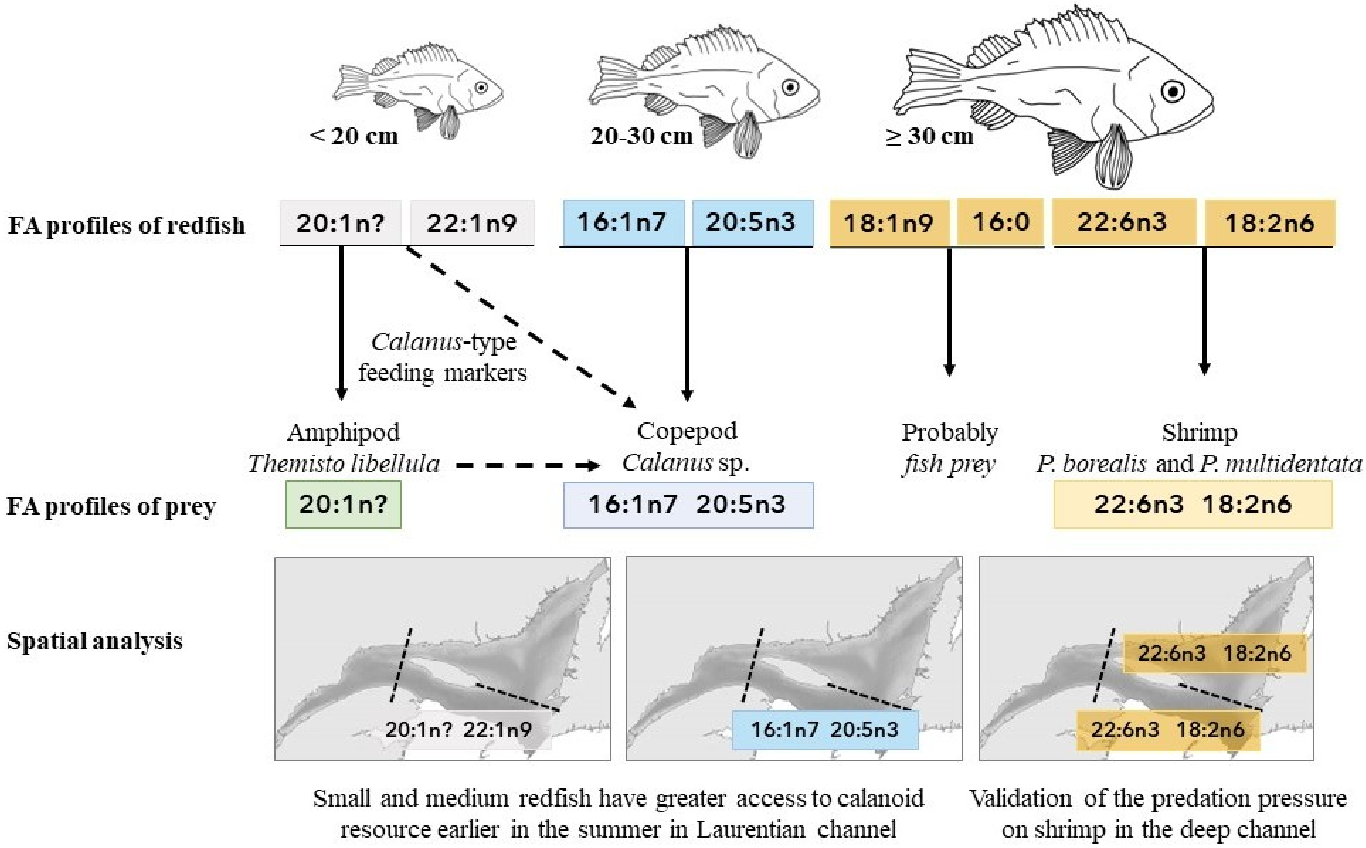
	All livers	< 20				20—30				≥ 30			
		All	**NWG**	**LC**	**NEG**	**All**	**NWG**	**LC**	**NEG**	**All**	**NWG**	**LC**	**NEG**
Fatty acid *n*	350	159	47	67	45	96	28	36	32	95	7	61	27
Saturated FA													
14:0	1.84 ± 0.04	1.86 ± 0.06	1.78 ± 0.12	2.01 ± 0.10	1.71 ± 0.09	1.73 ± 0.05	1.78 ± 0.10	1.78 ± 0.08	1.65 ± 0.08	1.90 ± 0.07	1.43 ± 0.12	1.86 ± 0.08	2.13 ± 0.16
15:0	0.24 ± 0.01	0.25 ± 0.01	0.23 ± 0.02	0.26 ± 0.01	0.25 ± 0.02	0.23 ± 0.01	0.26 ± 0.02	0.22 ± 0.01	0.20 ± 0.02	0.25 ± 0.02	0.26 ± 0.03	0.27 ± 0.03	0.20 ± 0.04
16:0	8.94 ± 0.13	7.78 ± 0.10	7.92 ± 0.22	7.80 ± 0.13	7.62 ± 0.18	8.62 ± 0.19	9.70 ± 0.47	7.88 ± 0.18	8.50 ± 0.28	11.20 ± 0.30	10.70 ± 0.61	10.84 ± 0.38	12.17 ± 0.55
17:0	0.10 ± 0.01	0.10 ± 0.01	0.11 ± 0.02	0.09 ± 0.01	0.10 ± 0.01	0.10 ± 0.01	0.11 ± 0.02	0.10 ± 0.01	0.09 ± 0.01	0.08 ± 0.01	0.14 ± 0.04	0.06 ± 0.01	0.11 ± 0.02
18:0	2.75 ± 0.08	2.72 ± 0.13	2.88 ± 0.31	2.34 ± 0.13	3.11 ± 0.26	2.61 ± 0.16	2.97 ± 0.41	2.11 ± 0.18	2.86 ± 0.21	2.94 ± 0.12	3.21 ± 0.59	2.77 ± 0.14	3.24 ± 0.25
20:0	0.11 ± 0.01	0.13 ± 0.01	0.14 ± 0.02	0.14 ± 0.02	0.12 ± 0.02	0.12 ± 0.01	0.11 ± 0.02	0.13 ± 0.02	0.11 ± 0.02	0.05 ± 0.01	0.09 ± 0.03	0.06 ± 0.01	0.02 ± 0.01
Subtotal	**13.97 ± 0.18**	**12.84 ± 0.19**	**13.05 ± 0.50**	**12.64 ± 0.26**	**12.91 ± 0.24**	**13.41 ± 0.30**	**14.93 ± 0.73**	**12.23 ± 0.30**	**13.41 ± 0.43**	**16.42 ± 0.41**	**15.83 ± 1.01**	**15.85 ± 0.52**	**17.87 ± 0.72**
Monounsaturated FA													
16:1n7	11.15 ± 0.19	11.84 ± 0.29	10.56 ± 0.73	12.46 ± 0.34	12.27 ± 0.41	12.13 ± 0.39	11.00 ± 1.03	13.06 ± 0.56	12.08 ± 0.41	8.99 ± 0.21	7.80 ± 0.50	8.71 ± 0.26	9.91 ± 0.41
17:1n?	0.30 ± 0.01	0.24 ± 0.01	0.22 ± 0.03	0.20 ± 0.02	0.31 ± 0.02	0.28 ± 0.02	0.37 ± 0.04	0.21 ± 0.02	0.28 ± 0.03	0.43 ± 0.02	0.45 ± 0.04	0.43 ± 0.03	0.43 ± 0.05
18:1n9	28.41 ± 0.53	23.30 ± 0.63	27.00 ± 1.35	19.96 ± 0.66	24.40 ± 1.16	28.72 ± 0.98	32.28 ± 2.02	25.21 ± 1.33	29.55 ± 1.62	36.66 ± 0.73	44.53 ± 1.61	36.40 ± 0.83	35.21 ± 1.52
20:1n?	16.37 ± 0.21	18.35 ± 0.22	17.24 ± 0.49	19.28 ± 0.25	18.12 ± 0.40	16.48 ± 0.40	14.69 ± 0.79	18.06 ± 0.41	16.28 ± 0.78	12.96 ± 0.37	10.38 ± 1.11	13.69 ± 0.41	11.98 ± 0.79
22:1n9	17.79 ± 0.37	21.73 ± 0.44	22.12 ± 0.84	23.47 ± 0.58	18.74 ± 0.80	17.47 ± 0.61	15.72 ± 1.17	20.25 ± 0.88	15.87 ± 0.98	11.52 ± 0.51	8.65 ± 1.12	12.17 ± 0.66	10.78 ± 0.93
24:1n9	0.56 ± 0.02	0.60 ± 0.02	0.66 ± 0.05	0.55 ± 0.03	0.60 ± 0.04	0.48 ± 0.02	0.55 ± 0.04	0.47 ± 0.03	0.43 ± 0.04	0.58 ± 0.04	0.61 ± 0.14	0.63 ± 0.06	0.47 ± 0.08
Subtotal	**74.59 ± 0.26**	**76.06 ± 0.33**	**77.80 ± 0.64**	**75.92 ± 0.51**	**74.45 ± 0.47**	**75.56 ± 0.41**	**74.60 ± 0.85**	**77.25 ± 0.56**	**74.49 ± 0.62**	**71.14 ± 0.53**	**72.42 ± 1.26**	**72.03 ± 0.64**	**68.78 ± 1.01**
Polyunsaturated FA													
18:2n6	1.23 ± 0.03	1.20 ± 0.05	1.11 ± 0.06	1.19 ± 0.09	1.33 ± 0.09	0.99 ± 0.04	1.01 ± 0.07	0.88 ± 0.05	1.11 ± 0.07	1.53 ± 0.08	1.19 ± 0.13	1.53 ± 0.09	1.59 ± 0.17
18:3n3	0.54 ± 0.02	0.57 ± 0.03	0.51 ± 0.03	0.56 ± 0.05	0.66 ± 0.06	0.43 ± 0.02	0.47 ± 0.04	0.37 ± 0.02	0.47 ± 0.04	0.60 ± 0.04	0.55 ± 0.08	0.58 ± 0.05	0.68 ± 0.09
20:2n?	0.29 ± 0.01	0.25 ± 0.01	0.30 ± 0.03	0.21 ± 0.01	0.28 ± 0.02	0.23 ± 0.01	0.25 ± 0.02	0.18 ± 0.01	0.26 ± 0.03	0.42 ± 0.03	0.29 ± 0.05	0.42 ± 0.03	0.45 ± 0.06
20:4n6	0.55 ± 0.02	0.41 ± 0.02	0.52 ± 0.04	0.33 ± 0.02	0.41 ± 0.03	0.46 ± 0.03	0.64 ± 0.07	0.32 ± 0.03	0.46 ± 0.05	0.87 ± 0.04	0.82 ± 0.08	0.90 ± 0.05	0.83 ± 0.08
20:3n3	0.19 ± 0.01	0.16 ± 0.02	0.13 ± 0.03	0.16 ± 0.03	0.18 ± 0.04	0.16 ± 0.02	0.08 ± 0.02	0.22 ± 0.04	0.17 ± 0.04	0.28 ± 0.04	0.09 ± 0.06	0.30 ± 0.05	0.28 ± 0.06
20:5n3	5.41 ± 0.11	5.49 ± 0.17	3.71 ± 0.17	6.09 ± 0.24	6.46 ± 0.30	5.85 ± 0.21	4.52 ± 0.31	5.97 ± 0.32	6.86 ± 0.34	4.83 ± 0.21	4.27 ± 0.52	4.73 ± 0.26	5.20 ± 0.43
22:6n3	3.23 ± 0.07	3.01 ± 0.08	2.87 ± 0.14	2.89 ± 0.11	3.34 ± 0.19	2.91 ± 0.11	3.49 ± 0.25	2.58 ± 0.14	2.77 ± 0.12	3.92 ± 0.17	4.55 ± 0.29	3.67 ± 0.21	4.31 ± 0.36
Subtotal	**11.45 ± 0.17**	**11.10 ± 0.25**	**9.15 ± 0.31**	**11.44 ± 0.36**	**12.64 ± 0.48**	**11.03 ± 0.26**	**10.47 ± 0.41**	**10.52 ± 0.43**	**12.10 ± 0.46**	**12.44 ± 0.36**	**11.75 ± 0.90**	**12.12 ± 0.42**	**13.35 ± 0.83**

?, position of the double bond closest to the terminal methyl group unknown

Supplementary Table 6. Statistical comparison of FA composition between the three size classes of redfish and subareas: PERMANOVA results followed by pairwise comparisons, including FAs that contributed most to dissimilarity.

Source		**DF**	**Pseudo-F**	***P*-value**	
Three redfish size classes (Figure 6a)		2	68.113	**0.001**	
Residuals		347			
	Levels			***P*-value**	**Contribution (%) to dissimilarity**
	Small redfish (< 20 cm) : Medium redfish (20–30 cm)			**0.001**	18:1n9 (30); 22:1n9 (21); 16:1n7 (12); 20:1n? (11); 20:5n3 (7); 16:0 (5)
	Medium redfish (20–30 cm) : Large redfish (≥ 30 cm)			**0.001**	18:1n9 (28); 22:1n9 (19); 20:1n? (12); 16:1n7 (10); 16:0 (8); 20:5n3 (6)
	Large redfish (≥ 30 cm) : Small redfish (< 20 cm)			**0.001**	18:1n9 (30); 22:1n9 (22); 20:1n? (12); 16:1n7 (8); 16:0 (8)
Source		**DF**	**Pseudo-F**	***P*-value**	
Three subareas (Figure 6b)		2	10.554	**0.001**	
Residuals		156			
	Levels			***P*-value**	**Contribution (%) to dissimilarity**
	NWG : LC			**0.001**	18:1n9 (30); 22:1n9 (17); 16:1n7 (14); 20:1n? (10); 20:5n3 (8); 16:0 (5)
Small redfish (< 20 cm)	**LC : NEG**			**0.001**	18:1n9 (27); 22:1n9 (22); 16:1n7 (10); 20:1n? (9); 20:5n3 (7); 18:0 (5)
	NEG : NWG			**0.004**	18:1n9 (28); 22:1n9 (19); 16:1n7 (13); 20:1n? (10); 20:5n3 (8); 18:0 (5)
Source		**DF**	**Pseudo-F**	***P*-value**	
Three subareas (Figure 6c)		2	6.183	**0.003**	
Residuals		93			
	Levels			***P*-value**	**Contribution (%) to dissimilarity**
	NWG : LC			**0.005**	18:1n9 (30); 22:1n9 (17); 16:1n7 (14); 20:1n? (10); 20:5n3 (8); 18:0 (5)
Medium redfish (20–30 cm)	**LC : NEG**			**0.008**	18:1n9 (27); 22:1n9 (22); 16:1n7 (10); 20:1n? (9); 20:5n3 (7); 18:0 (5)
	NEG : NWG			0.111	
Source		**DF**	**Pseudo-F**	***P*-value**	
Three subareas (Figure 6d)		2	2.946	**0.013**	
Residuals		92			
	Levels			***P*-value**	**Contribution (%) to dissimilarity**
	NWG : LC			**0.009**	18:1n9 (29); 22:1n9 (16); 20:1n? (14); 16:0 (8); 16:1n7 (6); 20:3n3 (6); 22:6n3 (5)
Large redfish (≥ 30 cm)	**LC : NEG**			0.119	
	NEG : NWG			**0.036**	18:1n9 (32); 22:1n9 (13); 20:1n? (12); 16:0 (8); 16:1n7 (8); 20:3n3 (6); 22:6n3 (4)

Bold indicates significant values adjusted (P < 0.05). DF, degrees of freedom.



Supplementary Figure 1. Conceptual figure representing the main findings of the present study, linking size-related and spatial differences in fatty acid (FA) profiles to key prey taxa for redfish. The FA profiles of small and medium redfish is associated to *Calanus* sp., particularly in Laurentian channel subarea while FA signatures of large redfish suggested an integration of shrimp to the diet, especially in deep channels.