

Supplementary material:

Species abbreviations in the supplementary figures: C. mic and C. microdon : *Cyclothone microdon*; C. pseudo: *Cyclothone pseudopallida*; C. A and Cyclothone type A: unknown *Cyclothone*, grouped with *C. microdon* in LRA. C. B and Cyclothone type B: unknown *Cylothone* grouped with *C. pseudopallida* in LRA. B. glac and *B. glaciale*: *Benthoosema glaciale*.

Figure S1. Stations, sampling period N: night, D: day, and sampling depth (m) of the 38 mesopelagic fishes. Sampling depths are divided in layers and are used in the following figures. Bold species names are fish identified to species, non-bold are unidentified *Cyclothone* species, A and B as above.

		Station													
		1		2		3	4		5	6	7	8	9	10	
depth Layer	m	N	D	N	D	N	N	D	N	D	N			N	D
1	0														
	100	C.B		C.B						C.mic	B.glac				
	200				C.pseudo										
2	300														
	400														
	500		C.B		C.pseudo										
3	600					C.B									
	700						C.A								
	800														
4	900				C.pseudo										
	1000									C.mic					
	1100														
5	1200														
	1300														
	1400								C.B	C.mic				C.mic	
5	1500														
	1600														
	1700		C.B												
	1800														
	1900														

Figure S2. Saturated (SFA), monounsaturated (MUFA) and polyunsaturated (PUFA) fatty acids. Fatty acid composition of mesopelagic fishes as % total FA. Station numbers and depth layers are as in Figure S1, int: integrated haul.

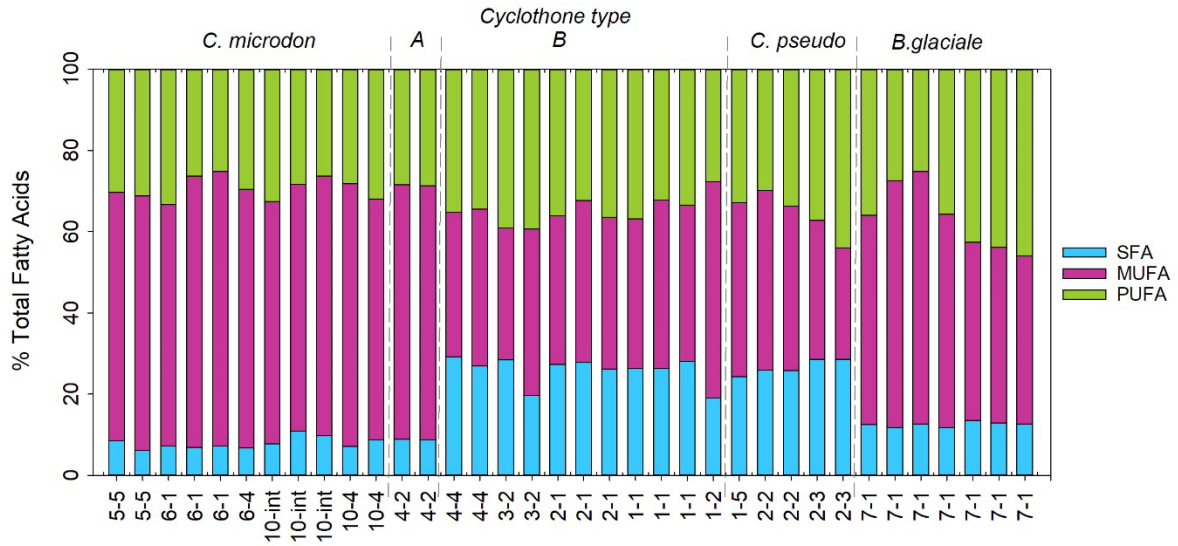


Figure S3. Fatty acid composition of individual mesopelagic fish as % total FA. Station numbers and depth layers as in Figure S1. Composition of the a) SFA group, b) MUFA group c) 16 and 18 length PUFA and d) >20 length PUFA.

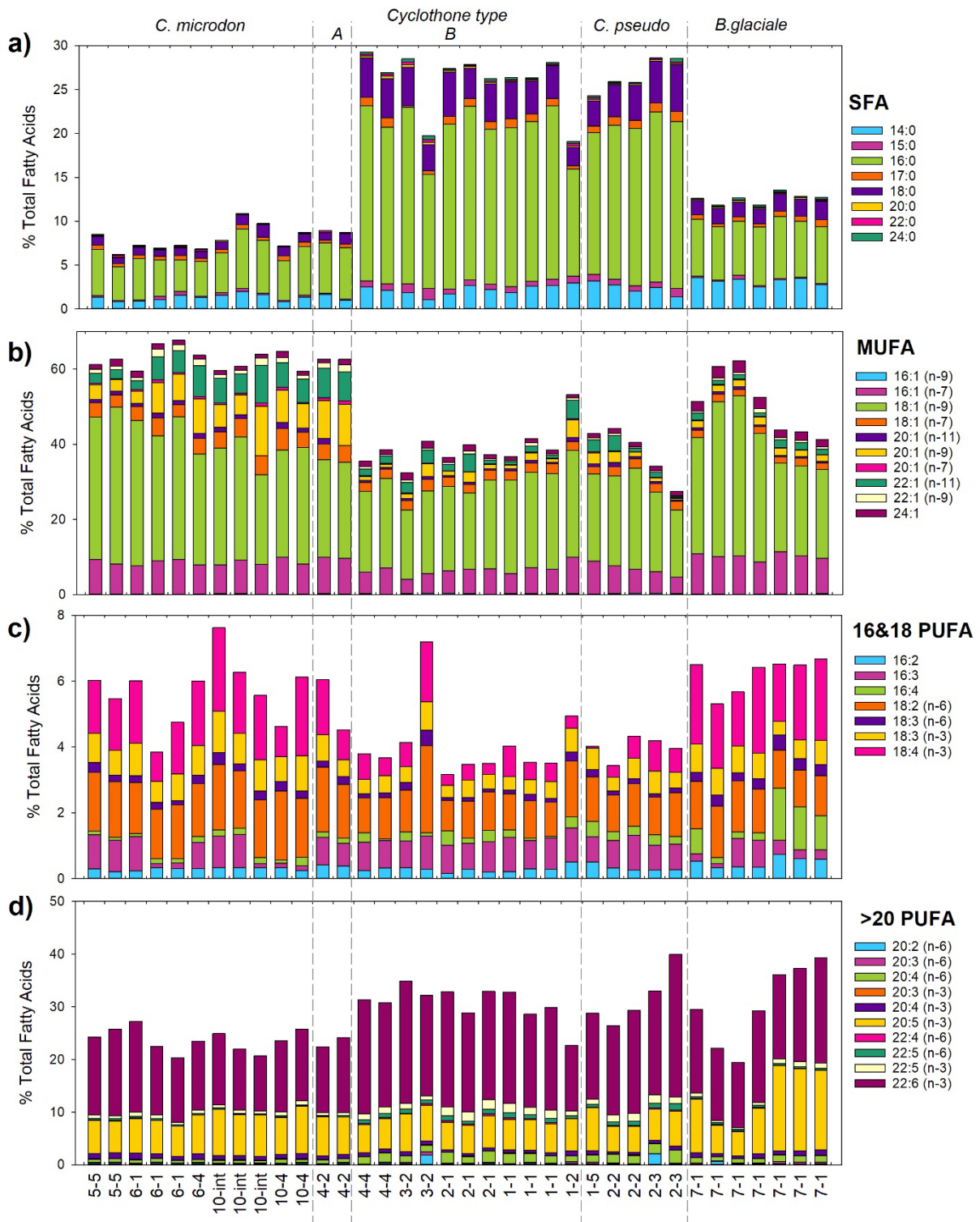


Figure S4. Fatty alcohol (FAlc) composition of mesopelagic fish as % total FAlc. Composition of the a) SFAlc group, b) MUFAIc group. Station numbers and depth layers as in Figure S1.

