

Appendix 1 Phospholipid-derived fatty acids (as % of PLFA_{Total}) of North Sea zooplankton collected at North Dogger (ND), the Oyster Grounds (OG) and at the Sean Gas fields in the southern Bight (SB) from February 2007 to April 2008. Results are shown for 16 different PLFAs, plus bacterial and other FAs. Zooplankton taxa: Apa = *Anomalocera patersoni*, Car = *Candacia armata*, Cfi = *Calanus finmarchicus*, Che = *C. helgolandicus*, Cty = *Centropages typicus*, Mlo = *Metridia longa*, Sel = *Sagitta elegans*, Tlo = *Temora longicornis*, Zoe = zoeae, Brachyura; other = minor PLFAs

Site	Date	Taxon	14:0	16:0	16:1 (n-7)	16:2 (n-4)	18:0	18:1 (n-7)	18:1 (n-9)	18:2 (n-6)	18:3 (n-3)	18:4 (n-3)	20:4 (n-3)	20:4 (n-6)	20:5 (n-3)	22:4 (n-6)	22:5 (n-3)	22:6 (n-3)	∑Bacterial FA	Other FA
ND	Feb. 07	Car	2.4	16.5	0.9	1.0	3.4	2.7	0.2	0.3	0.8	2.5	<0.1	0.4	18.1	<0.1	0.9	33.0	4.2	3.7
ND	Feb. 07	Cfi	1.2	20.0	1.1	1.0	2.8	1.3	2.9	0.8	<0.1	0.9	<0.1	<0.1	22.2	<0.1	<0.1	44.5	1.3	<0.1
ND	Feb. 07	Che	1.5	13.7	1.3	<0.1	2.3	0.8	2.2	0.5	<0.1	<0.1	0.4	0.8	22.1	<0.1	0.5	47.3	2.1	2.4
ND	Feb. 07	Sel	1.1	11.7	5.9	<0.1	1.2	1.1	9.5	0.4	<0.1	<0.1	0.5	1.3	21.1	<0.1	0.5	32.7	3.0	4.1
ND	Apr. 07	Car	2.1	16.3	6.4	0.3	1.7	1.3	5.4	0.8	0.9	1.8	0.6	<0.1	18.0	0.4	0.5	26.3	5.0	2.8
ND	Apr. 07	Cfi	1.5	15.7	0.8	<0.1	2.3	0.8	1.4	<0.1	<0.1	<0.1	<0.1	<0.1	23.5	<0.1	0.6	47.6	2.4	2.5
ND	Apr. 07	Che	1.6	17.3	1.0	<0.1	2.8	0.9	1.3	<0.1	<0.1	<0.1	0.3	<0.1	20.9	<0.1	0.4	48.2	2.4	1.9
ND	Apr. 07	Sel	2.8	16.8	1.3	0.9	3.0	3.4	<0.1	0.5	1.2	2.5	<0.1	<0.1	25.6	<0.1	1.1	39.3	4.3	<0.1
ND	May 07	Cfi	2.0	20.4	1.6	<0.1	3.1	1.0	2.5	0.9	<0.1	<0.1	0.2	<0.1	19.8	<0.1	0.4	44.5	1.7	0.8
ND	May 07	Che	1.8	20.8	1.6	<0.1	2.0	1.5	3.3	1.0	<0.1	<0.1	0.2	<0.1	22.6	<0.1	0.4	40.1	2.1	0.7
ND	May 07	Pel	1.7	18.0	0.7	<0.1	<0.1	0.9	2.2	1.5	<0.1	<0.1	<0.1	0.3	19.4	<0.1	0.5	44.1	4.6	1.9
ND	May 07	Sel	2.1	15.3	4.2	<0.1	1.4	0.9	7.3	1.6	<0.1	2.1	0.7	0.3	17.1	<0.1	0.3	29.9	6.6	4.0
ND	Sep. 07	Car	2.7	17.9	0.9	1.3	3.7	2.3	<0.1	0.4	1.0	1.3	<0.1	0.5	20.5	0.4	0.8	44.8	3.0	<0.1
ND	Sep. 07	Car	3.8	18.8	1.6	1.1	3.6	2.4	0.7	0.6	1.4	4.0	0.4	0.3	16.0	<0.1	0.8	36.7	4.9	1.1
ND	Sep. 07	Cfi	1.4	17.8	0.6	1.1	3.0	1.0	3.9	1.2	0.8	0.6	0.6	<0.1	20.9	<0.1	0.7	44.9	1.0	<0.1
ND	Sep. 07	Che	2.3	17.9	0.6	1.6	4.3	0.6	2.1	0.7	0.5	0.8	0.5	0.2	17.8	<0.1	0.4	46.3	2.1	0.5
ND	Sep. 07	Sel	2.2	14.0	3.5	0.8	2.0	1.0	8.2	2.2	1.4	1.5	0.6	0.4	14.8	<0.1	0.4	30.5	4.5	2.3
ND	Oct. 07	Car	2.5	16.3	1.3	1.6	4.6	2.6	<0.1	<0.1	0.8	1.5	<0.1	<0.1	17.9	0.7	0.9	48.1	4.0	<0.1
ND	Oct. 07	Cfi	1.4	19.3	<0.1	0.9	2.4	1.0	4.9	1.6	1.1	<0.1	1.0	<0.1	18.8	<0.1	<0.1	45.3	1.0	<0.1
ND	Oct. 07	Che	1.8	17.5	0.8	1.2	3.7	1.0	4.4	0.9	0.5	0.7	0.7	<0.1	18.2	0.4	0.5	42.7	2.0	<0.1
ND	Oct. 07	Sel	2.0	13.7	5.3	0.8	1.6	1.2	9.5	1.5	1.0	1.1	0.6	0.5	15.0	<0.1	0.4	31.8	4.1	0.9
ND	Oct. 07	Sel	2.0	13.7	5.3	0.8	1.6	1.2	9.5	1.5	1.0	1.1	0.6	0.5	15.0	<0.1	0.4	31.8	4.1	0.9

Appendix 1 continued

Site	Date	Taxon	14:0	16:0	16:1 (n-7)	16:2 (n-4)	18:0	18:1 (n-7)	18:1 (n-9)	18:2 (n-6)	18:3 (n-3)	18:4 (n-3)	20:4 (n-3)	20:4 (n-6)	20:5 (n-3)	22:4 (n-6)	22:5 (n-3)	22:6 (n-3)	∑Bacterial FA	Other FA
ND	Jan. 08	Che	1.8	18.1	0.7	1.3	4.1	1.0	4.3	0.8	0.6	<0.1	<0.1	<0.1	18.0	<0.1	<0.1	48.7	1.0	<0.1
ND	Jan. 08	Mlo	1.1	15.0	0.8	1.5	2.2	1.5	1.7	0.6	0.3	0.5	0.4	1.1	19.6	0.5	0.7	47.5	3.2	0.4
ND	Jan. 08	Sel	2.1	13.0	5.4	0.7	1.0	1.3	7.9	1.0	0.6	0.8	0.6	0.6	15.9	0.4	0.5	33.6	6.7	0.9
ND	Apr. 08	Cfi	1.2	11.7	0.3	0.2	1.3	0.3	0.8	0.9	0.9	2.3	0.5	<0.1	12.1	0.2	0.2	23.2	1.0	1.0
ND	Apr. 08	Che	2.1	20.2	0.6	0.6	2.8	0.7	1.2	1.5	1.0	2.8	1.0	<0.1	19.7	0.6	0.4	39.2	1.8	1.0
ND	Apr. 08	Che	2.1	20.2	0.6	0.6	2.8	0.7	1.2	1.5	1.0	2.8	1.0	<0.1	19.8	0.6	0.4	39.2	1.7	1.0
OG	Feb. 07	Cfi	1.9	18.5	1.8	<0.1	2.4	1.3	1.6	0.3	<0.1	<0.1	0.3	0.3	23.5	<0.1	0.7	43.7	1.8	0.3
OG	Feb. 07	Che	1.7	15.3	5.8	<0.1	1.6	1.4	10.3	0.3	<0.1	<0.1	<0.1	0.5	18.9	0.4	0.5	28.2	6.7	4.5
OG	Feb. 07	Sel	1.6	13.5	6.1	<0.1	2.6	1.4	4.7	0.3	<0.1	<0.1	<0.1	1.4	16.0	0.3	0.6	26.7	3.4	17.2
OG	Feb. 07	Mlo	1.7	20.7	2.1	0.6	1.7	1.7	0.8	0.5	0.4	1.3	0.6	0.6	25.2	0.4	0.9	34.8	4.0	0.6
OG	Feb. 07	Tlo	2.9	27.0	2.6	<0.1	3.0	5.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	27.3	<0.1	2.5	29.4	5.3	<0.1
OG	Apr. 07	Apa	3.0	21.7	1.4	<0.1	2.6	1.5	<0.1	<0.1	<0.1	0.8	<0.1	<0.1	25.3	<0.1	0.9	42.8	1.5	<0.1
OG	Apr. 07	Car	2.8	20.1	2.5	0.8	3.5	3.4	0.7	0.4	0.7	2.3	<0.1	0.4	18.1	0.3	0.7	37.8	7.2	0.4
OG	Apr. 07	Cfi	2.3	17.5	1.9	<0.1	2.8	1.5	1.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	38.6	2.7	2.5
OG	Apr. 07	Che	2.3	19.8	1.7	<0.1	2.6	1.2	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	25.4	0.2	1.1	42.5	1.8	0.8
OG	Apr. 07	Zoe	1.1	17.7	2.6	<0.1	8.2	<0.1	5.1	<0.1	<0.1	<0.1	<0.1	0.3	37.0	0.2	<0.1	17.5	1.1	4.7
OG	Apr. 07	Sel	0.1	17.2	7.0	<0.1	<0.1	2.6	5.5	<0.1	<0.1	<0.1	0.7	0.6	21.6	<0.1	1.0	28.8	10.3	3.6
OG	Apr. 07	Tlo	3.4	23.2	1.5	<0.1	2.7	4.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	33.6	5.3	2.4
OG	May 07	Cfi	2.3	21.5	0.8	<0.1	3.6	0.8	1.2	0.4	<0.1	<0.1	0.2	<0.1	21.5	<0.1	0.2	41.6	1.6	4.0
OG	May 07	Che	1.9	20.4	0.8	<0.1	3.6	1.2	2.1	0.7	<0.1	<0.1	0.3	<0.1	24.6	<0.1	0.3	41.1	1.6	1.3
OG	May 07	Cty	3.7	22.9	<0.1	<0.1	4.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	19.5	<0.1	<0.1	49.0	<0.1	<0.1
OG	May 07	Sel	1.2	14.6	6.2	<0.1	1.8	1.8	7.4	1.7	<0.1	<0.1	0.5	0.3	20.3	<0.1	0.7	31.3	4.0	3.8
OG	May 07	Tlo	2.8	19.5	1.0	<0.1	3.6	1.9	1.8	0.7	<0.1	<0.1	0.4	<0.1	22.4	<0.1	0.6	41.4	3.0	1.2

Appendix 1 continued

Site	Date	Taxon	14:0	16:0	16:1 (n-7)	16:2 (n-4)	18:0	18:1 (n-7)	18:1 (n-9)	18:2 (n-6)	18:3 (n-3)	18:4 (n-3)	20:4 (n-3)	20:4 (n-6)	20:5 (n-3)	22:4 (n-6)	22:5 (n-3)	22:6 (n-3)	∑Bacterial FA	Other FA
OG	Sep. 07	Che	2.4	17.0	1.3	1.1	4.5	1.1	1.5	0.8	<0.1	<0.1	<0.1	0.8	21.9	0.9	1.5	44.3	1.1	<0.1
OG	Sep. 07	Cty	3.3	20.5	1.0	1.2	5.0	1.5	0.7	0.7	0.4	0.9	<0.1	0.5	15.9	0.6	0.7	42.8	3.4	0.5
OG	Sep. 07	Sel	2.6	13.3	5.2	1.0	4.9	1.3	2.7	0.6	0.9	1.3	0.5	0.6	13.2	<0.1	0.5	43.3	4.0	1.9
OG	Sep. 07	Zoe	1.6	19.7	3.1	1.2	7.4	3.8	4.5	0.9	0.8	1.1	0.4	1.1	21.7	0.4	0.6	22.3	7.3	1.5
OG	Sep. 07	Zoe	1.2	18.3	3.1	1.0	8.3	4.3	3.8	0.9	0.4	0.4	0.4	2.0	26.8	0.4	0.7	22.0	5.9	1.0
OG	Oct. 07	Che	1.9	20.2	1.8	1.0	4.9	2.7	2.7	<0.1	<0.1	<0.1	<0.1	<0.1	20.4	<0.1	0.8	39.8	2.7	<0.1
OG	Oct. 07	Cty	2.2	21.3	1.4	1.1	5.3	3.9	0.6	0.4	<0.1	0.8	<0.1	<0.1	16.1	0.8	1.0	44.0	4.5	0.8
OG	Oct. 07	Sel	1.5	6.2	4.2	0.9	4.1	1.3	2.4	0.4	0.5	1.0	0.3	<0.1	11.6	0.2	0.6	45.2	4.4	5.0
OG	Jan. 08	Che	1.8	19.7	1.0	1.2	3.8	1.6	2.5	<0.1	<0.1	<0.1	<0.1	<0.1	19.3	<0.1	<0.1	49.2	1.6	<0.1
OG	Jan. 08	Sel	1.2	11.1	6.1	1.3	3.8	2.0	4.2	0.4	0.5	0.7	0.5	1.0	16.8	0.3	0.7	35.5	5.9	4.6
OG	Jan. 08	Tlo	1.1	3.0	5.4	<0.1	1.4	4.6	6.0	<0.1	<0.1	<0.1	<0.1	<0.1	3.1	<0.1	<0.1	3.9	12.3	3.3
OG	Apr. 08	Tlo	2.9	20.7	1.4	0.3	1.7	1.8	0.6	1.1	0.8	3.1	0.5	<0.1	25.9	<0.1	0.7	34.1	3.0	2.1
SB	Feb. 07	Che	1.8	19.4	1.4	1.2	3.5	1.6	2.4	0.5	<0.1	<0.1	<0.1	<0.1	24.6	<0.1	0.6	39.3	3.0	1.7
SB	Feb. 07	Sel	1.6	15.2	5.5	1.3	3.5	1.9	4.2	0.3	<0.1	0.5	0.4	1.9	20.1	<0.1	0.7	33.3	5.2	2.2
SB	Feb. 07	Sel	2.9	26.5	3.5	<0.1	2.8	2.7	2.5	0.9	<0.1	<0.1	<0.1	0.7	46.5	<0.1	1.4	<0.1	4.2	2.5
SB	Feb. 07	Tlo	2.9	19.2	1.5	0.9	2.9	3.7	<0.1	<0.1	<0.1	1.8	<0.1	0.9	20.0	0.9	1.9	25.6	4.4	2.9
SB	Apr. 07	Cfi	1.3	17.1	1.0	<0.1	2.3	1.2	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	25.8	<0.1	0.6	42.0	3.2	2.9
SB	Apr. 07	Che	1.4	17.3	0.9	<0.1	2.7	1.0	1.3	<0.1	<0.1	<0.1	<0.1	<0.1	22.8	<0.1	0.6	46.4	2.7	2.2
SB	Apr. 07	Cty	2.0	10.4	<0.1	<0.1	2.4	1.9	7.9	<0.1	<0.1	<0.1	<0.1	<0.1	9.0	<0.1	<0.1	18.8	11.2	<0.1
SB	Apr. 07	Sel	1.8	19.2	5.9	0.6	3.3	2.1	5.5	0.5	0.3	0.7	0.4	0.6	21.7	0.5	0.9	25.8	4.5	1.7
SB	Apr. 07	Tlo	3.1	22.6	1.4	<0.1	2.5	2.9	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	28.9	<0.1	1.8	32.5	4.2	1.7
SB	Apr. 07	Zoe	0.7	17.1	2.1	<0.1	8.7	<0.1	6.0	<0.1	<0.1	<0.1	<0.1	<0.1	37.2	<0.1	<0.1	13.6	2.2	6.8

Appendix 1 continued

Site	Date	Taxon	14:0	16:0	16:1	16:2	18:0	18:1	18:1	18:2	18:3	18:4	20:4	20:4	20:5	22:4	22:5	22:6	∑Bacterial	Other
					(n-7)	(n-4)	(n-7)	(n-9)	(n-6)	(n-3)	(n-3)	(n-3)	(n-6)	(n-3)	(n-6)	(n-3)	(n-3)	FA	FA	
SB	May 07	Apa	4.3	20.3	1.2	<0.1	4.8	1.6	1.0	0.2	<0.1	<0.1	0.1	0.5	16.0	<0.1	0.3	37.2	6.0	3.7
SB	May 07	Cfi	2.1	18.8	<0.1	<0.1	3.9	<0.1	6.5	<0.1	<0.1	<0.1	<0.1	<0.1	18.6	<0.1	<0.1	35.4	1.6	<0.1
SB	May 07	Che	2.3	21.0	0.8	1.1	4.1	1.3	2.2	0.4	0.7	2.0	1.9	1.0	17.2	0.6	0.7	39.0	3.2	<0.1
SB	May 07	Tlo	4.0	19.9	1.4	<0.1	<0.1	2.9	1.7	<0.1	<0.1	<0.1	<0.1	1.6	19.7	<0.1	1.0	37.4	4.0	5.4
SB	May 07	Zoe	1.9	16.2	1.1	<0.1	6.4	5.8	11.9	0.8	<0.1	<0.1	0.7	2.0	19.9	<0.1	0.4	0.1	8.5	24.7
SB	Sep. 07	Car	3.6	20.6	1.3	1.6	4.9	1.8	0.2	0.3	1.1	3.0	0.3	0.7	17.6	0.7	0.8	35.7	4.9	0.8
SB	Sep. 07	Zoe	1.4	23.1	<0.1	2.5	15.5	7.7	6.5	1.2	0.5	0.9	0.8	<0.1	1.1	1.3	1.1	24.9	10.1	4.1
SB	Oct. 07	Che	1.9	21.4	1.4	1.4	3.7	1.0	1.5	0.4	0.4	0.7	0.4	<0.1	21.4	0.3	0.4	39.9	2.6	1.3
SB	Oct. 07	Cty	2.5	18.4	0.6	1.8	5.6	1.8	<0.1	0.6	<0.1	1.0	<0.1	<0.1	18.7	<0.1	0.8	46.3	2.8	0.9
SB	Oct. 07	Tlo	3.3	22.4	1.4	<0.1	3.4	3.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	22.9	<0.1	<0.1	43.3	3.2	<0.1
SB	Jan. 08	Sel	2.0	13.0	6.6	1.2	3.3	2.0	3.5	0.3	0.4	0.4	0.4	1.4	17.9	<0.1	0.5	34.1	5.6	2.3
SB	Apr. 08	Cfi	2.8	26.5	2.0	0.5	2.4	1.0	0.6	0.2	<0.1	0.5	0.3	<0.1	20.3	0.3	0.9	35.2	2.7	0.6
SB	Apr. 08	Che	2.2	21.1	1.3	0.5	2.7	1.1	0.7	0.3	0.2	0.8	0.6	0.3	22.8	0.4	1.0	36.5	3.1	1.3
SB	Apr. 08	Pel	2.0	21.6	1.5	0.5	2.2	2.1	1.2	0.5	<0.1	1.1	0.8	<0.1	26.9	0.6	2.0	31.1	3.2	1.1
SB	Apr. 08	Sel	1.8	10.5	0.7	0.2	0.7	0.7	2.9	1.2	1.3	3.0	0.6	<0.1	10.2	0.3	0.2	16.1	3.5	2.7