

Supplementary Materials for

Ocean deoxygenation and zooplankton: Very small oxygen differences matter

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This PDF file includes:

- Fig. S1. Map showing the spatial overlap of Wire Flyer transects and MOCNESS tows.
- Fig. S2. Photographs of animals discussed in the paper.
- Fig. S3. *Lucicutia hulsemannae* and *Gennadas* spp. oxygen consumption rates versus body mass and critical oxygen partial pressures.
- Fig. S4. Representative respirometry trials showing the effect of PO₂ on oxygen consumption rates.
- Table S1. Cruise sampling data for all gear.
- Table S2. MOCNESS sampling data and abundances for each net.
- Table S3. Metabolic rates and critical oxygen partial pressures.
- Table S4. Compilation of critical oxygen partial pressures from the literature.
- References (29–88)

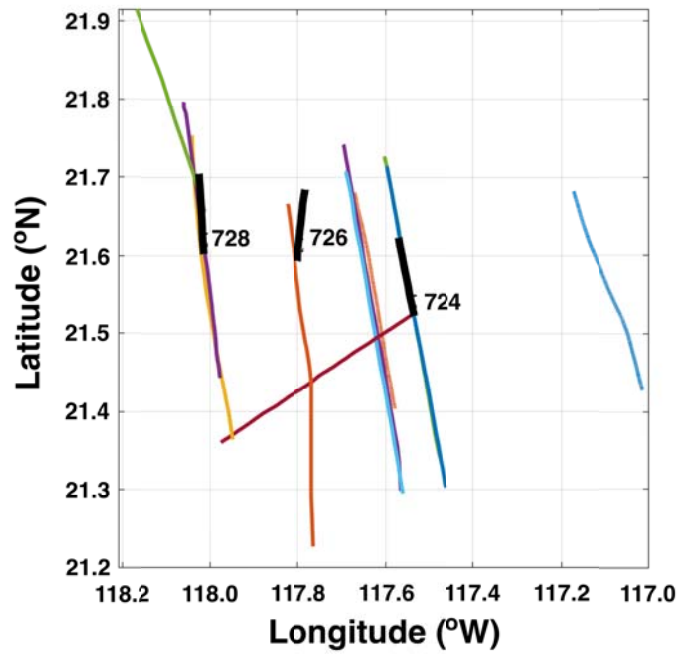


Fig. S1. Map showing the spatial overlap of Wire Flyer transects (colored lines) and MOCNESS tows (black lines and tow numbers).

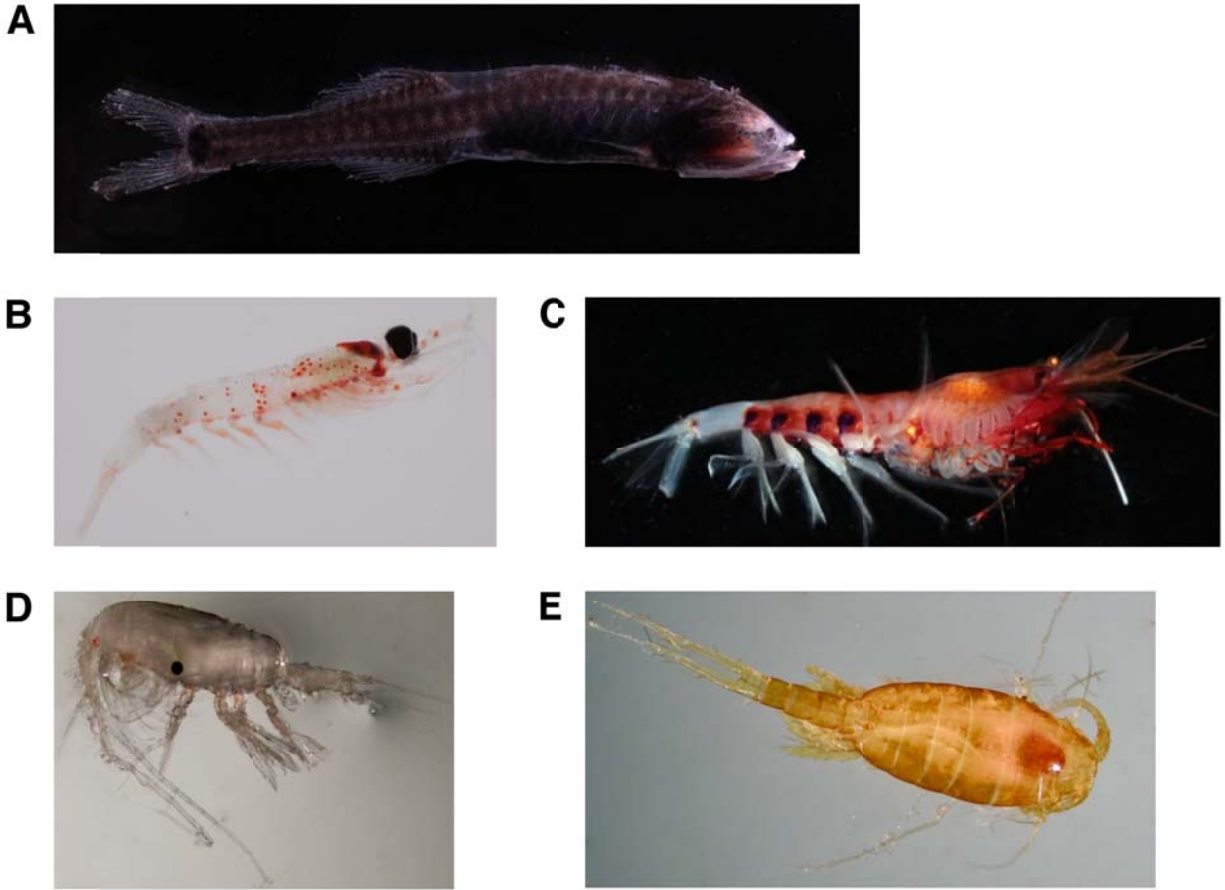


Fig. S2. Photographs of freshly caught animals discussed in the paper, including approximate sizes of specimens collected on this cruise. A. *Cyclothone* spp. (fish, 5 mm – 5 cm), **B.** *Nematobranchion flexipes* (euphausiid, 25 mm), **C.** *Gennadas* spp. (shrimp, 2 – 3 cm), **D.** *Pleuromamma abdominalis*. (copepod, 2 – 4 mm), **E.** *Lucicutia hulsemannae* (copepod, 6 mm).

Photographers: S. Gordon (A, B, C), D. Outram (D, E).

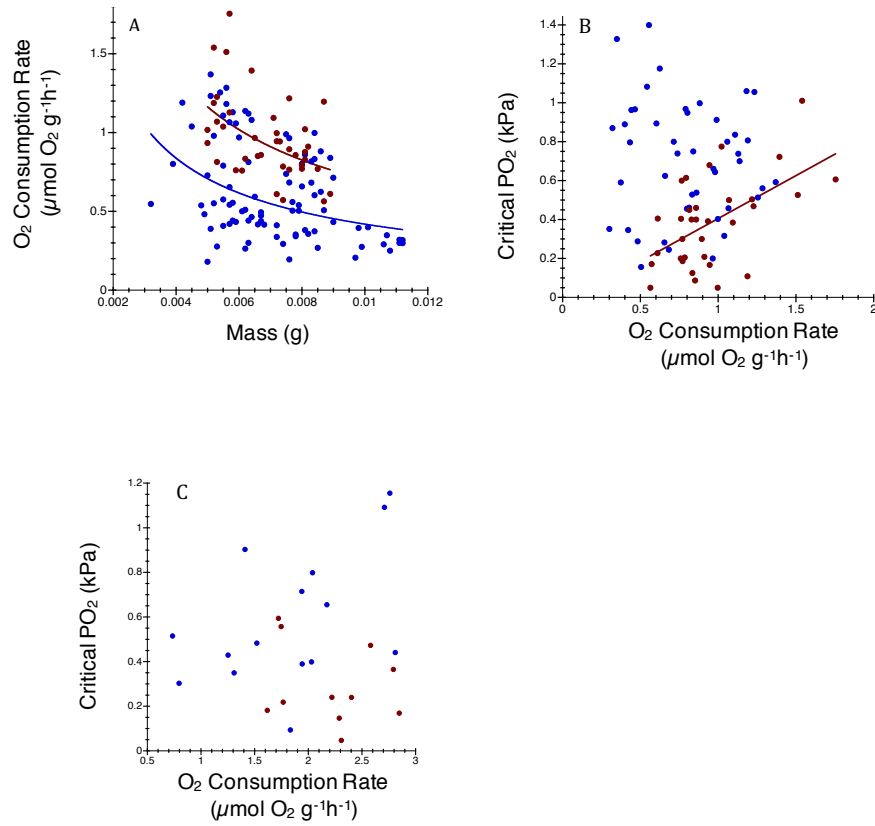


Fig. S3. *Lucicutia hulsemannae* and *Gennadas* spp. oxygen consumption rates versus body mass and critical oxygen partial pressures. *Lucicutia hulsemannae* oxygen consumption rate vs (A) body mass and (B) critical PO₂ at 5°C (blue) and 8°C (red). (C) *Gennadas* spp. P_{crit} vs O₂ consumption rate.

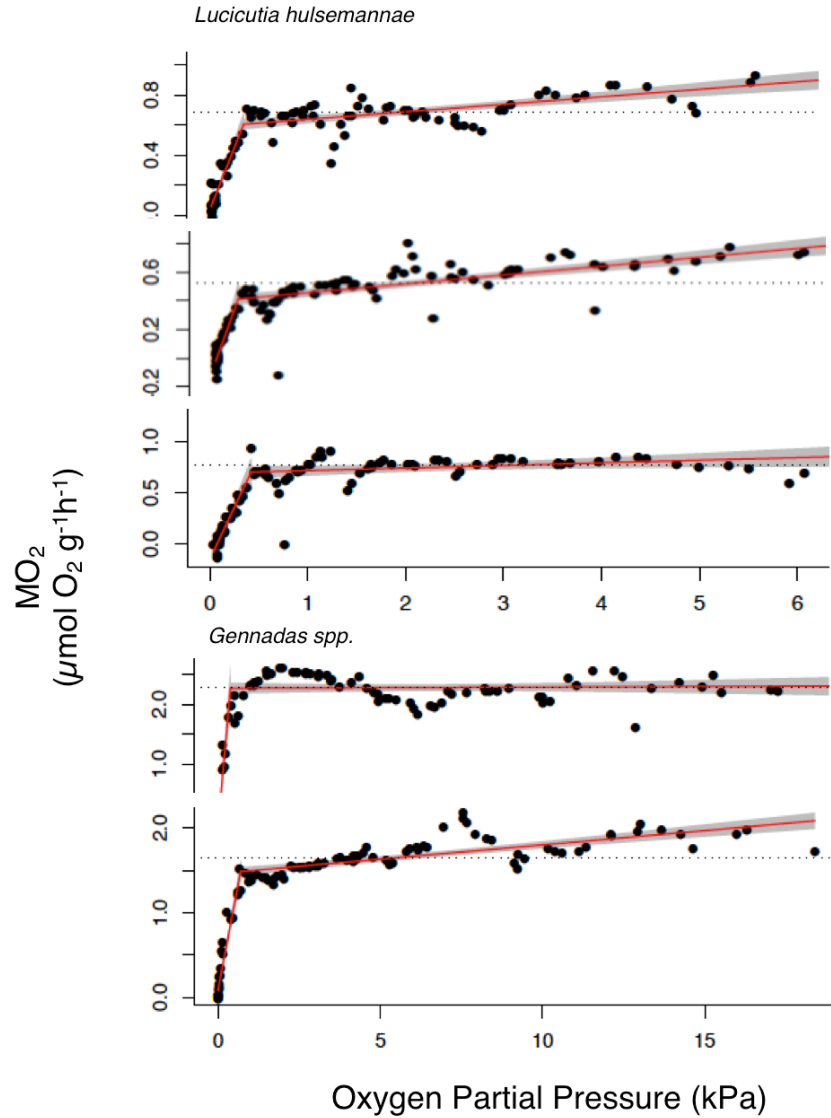


Fig. S4. Representative respirometry trials showing the effect of PO_2 on oxygen consumption rates (MO_2) for *Lucicutia hulsemannae* (top 3 graphs) and *Gennadas spp.* (bottom 2 graphs). The intersection of red lines is the P_{crit} . Dashed lines are mean oxygen consumption rates for the regulated part of the trial.

Table S1. Cruise sampling data for all gear. Location lists the start of the deployment. Time is either the start or total time interval for the deployment. For MOCNESS tows, the time of sample collection (when the net was at the targeted depth) is within the total deployment time interval. Local time is 7 hr earlier than UTC. W, Wire Flyer; MOC, MOCNESS; T, Tucker.

Gear	Cast	Tow Type	Date UTC (mmdd)	Time (UTC)	Lat (°N)	Lon (°W)	Day/ Night	Depth (m)
MOC	715	Lower Oxycline	0124	1540-2122	21.42	116.99	D	600-800
T	4	Oblique	0125	2144	21.70	117.18	D	402-477
MOC	716	Vertically Stratified	0126	0400-0930	21.68	117.21	N	0-1000
T	6	Oblique	0126	2336	21.63	117.65	D	580-621
T	8	Oblique	0128	1715	21.60	117.65	D	354-370
WF	9	OMZ & Upper Oxycline	0204	0609-1521	21.31	117.46	N	0-750
MOC	718	Vertically Stratified	0128	1959-0157	21.58	117.65	D	350-650
MOC	719	Vertically Stratified	0129	1800-2349	21.38	117.58	D	350-650
T	10	Oblique	0130	0330	21.66	117.60	N	55-150
T	11	Oblique	0130	1740	21.39	117.72	D	205-436
T	13	Oblique	0131	1730	21.40	117.59	D	200-463
T	14	Oblique	0201	1547	21.40	117.59	D	415-566
T	15	Oblique	0202	1555	21.71	117.70	D	622-750
T	16	Oblique	0202	1929	21.60	117.69	D	383-515
T	17	Oblique	0204	0116	21.61	117.68	D	443-598
WF	9	OMZ & Upper Oxycline	0204	0609-1521	21.31	117.46	N	0-750
MOC	724	Horizontal Feature (Upper Oxycline)	0204	1700-2217	21.49	117.52	D	~ 425±5
T	18	Oblique	0204	2314	21.66	117.58	D	362-570
MOC	725	Vertically Stratified	0205	1521-2211	21.49	117.52	D	0-1000
T	20	Oblique	0206	0121	21.77	117.62	D	68-98
T	21	Oblique	0206	1513	21.22	117.73	D	620-751
T	22	Oblique	0206	1741	21.29	117.77	D	363-418
WF	10	OMZ & Upper Oxycline	0207	0605-1525	21.22	117.75	N	0-750
MOC	726	Horizontal Feature (Upper Oxycline)	0207	1635-2115	21.55	117.80	D	~ 430±5
T	24	Oblique	0208	2331	21.81	117.92	D	356-530
WF	12	OMZ & Lower Oxycline	0209	0621-1417	21.44	117.98	N	0-850
MOC	728	Horizontal Feature (Lower Oxycline)	0209	1604-2332	21.53	118.00	D	~ 800±5
T	26	Oblique	0209	2352	21.75	118.03	D	194-449
T	28	Oblique	0210	1509	21.54	118.00	D	1076-1487
T	29	Oblique	0210	1859	21.64	117.99	D	345-382
T	31	Oblique	0211	1739	21.56	117.98	D	291-464

Table S2. MOCNESS sampling data and abundances for each net within a tow for species and taxa, plus total zooplankton biomass. In the Ox column, H indicates nets included in the high oxygen category for statistical testing, while L indicates nets in the low oxygen category (only done for horizontal tows). Nets with blanks in the Ox column were not included in those tests. *P. abd* = *Pleuromamma abdominalis*. *L. hul* = *Lucicutia hulsemannae*. *N. flex* = *Nematobranchion flexipes*.

Moc	Net	Ox	Depth m	Vol Fil m ³	<i>P. abd</i> #/1000 m ³	<i>L. hul</i> #/1000 m ³	Euphausiids #/1000 m ³	<i>N. flex</i> #/1000 m ³	Cyclothone #/1000 m ³	Biomass mg/ m ³
716	1		800-1000	2623	0.00	1.14	0.38	0.00	1.14	2.32
	2		700-800	905	0.00	18.78	1.10	0.00	5.52	3.17
	3		600-700	1069	0.94	18.71	0.00	0.00	8.42	3.14
	4		500-600	956	0.00	24.06	0.00	0.00	6.28	13.11
	5		400-500	990	0.00	2.02	2.02	1.01	41.41	6.69
	6		300-400	827	0.00	0.00	1.21	0.00	10.88	6.05
	7		200-300	778	0.00	1.29	19.28	7.71	1.29	11.45
	8		100-200	1041	5.76	0.00	143.13	14.41	0.00	16.55
	9		0-100	1971	64.94	4.06	231.35	0.00	0.00	31.53
724	1		420	1100	0.00	0.00	120.91	0.00	23.64	9.45
	2		420-425	1143	100.61	0.00	328.96	5.25	25.37	15.66
	3	H	425	1179	105.17	0.00	100.08	1.70	24.60	16.01
	4	L	425	956	0.00	0.00	23.01	0.00	3.14	9.15
	5	L	425	1123	0.89	0.00	98.84	0.00	57.88	9.76
	6		425	812	2.46	0.00	136.70	4.93	151.48	16.21
	7	H	425	1034	236.94	0.00	187.62	11.61	131.53	13.89
	8	H	425	1185	54.01	0.00	313.08	13.50	143.46	19.07
725	1		800-1000	2407	0.00	2.08	0.00	0.00	5.40	5.12
	2		700-800	1667	0.00	21.60	0.00	0.00	7.20	9.14
	3		600-700	1472	0.00	38.72	0.00	0.00	8.83	4.87
	4		500-600	1087	0.92	81.88	1.84	0.00	18.40	13.29
	5		400-500	850	2.35	0.00	74.12	4.71	82.35	10.26
	6		300-400	1122	15.15	0.00	346.70	1.78	49.91	20.43
	7		200-300	886	4.51	0.00	148.98	0.00	0.00	11.87
	8		100-200	1088	0.00	0.00	28.49	0.00	0.92	14.44
	9		0-100	1161	1.72	9.47	13.78	0.00	3.45	24.38
726	1	L	425-430	950	3.16	0.00	20.00	0.00	15.79	5.63
	2	L	428-430	804	0.00	0.00	4.98	0.00	2.49	6.87
	3	L	428-434	904	0.00	0.00	13.27	0.00	0.00	6.64
	4		427-434	1010	0.99	0.00	40.59	0.00	27.72	5.79
	5	H	426-427	726	166.67	0.00	84.02	1.38	75.76	10.55
	6	H	426-430	1065	59.15	0.00	113.62	5.63	120.19	9.96
	7	H	430-435	990	89.90	0.00	50.51	0.00	204.04	10.71
	8	H	425-435	975	167.18	0.00	76.92	1.03	35.90	10.57
728	1	L	800-802	1012	0.00	11.86	0.00	0.00	11.86	5.11
	2	L	800-801	1110	27.03	16.22	0.90	0.00	9.01	6.82
	3	L	801-803	1146	0.00	12.22	0.87	0.00	14.83	6.57
	4	H	802-803	1135	0.00	1.76	0.88	0.00	7.05	7.89
	5	H	800-802	1124	0.89	1.78	0.00	0.00	4.45	2.97
	6	H	800-801	1111	0.00	1.80	1.80	0.00	4.50	6.14
	7	H	797-801	1109	0.00	0.90	2.71	0.00	2.71	11.89
	8	H	797-800	1124	0.00	6.23	8.01	0.00	11.57	12.36

Table S3. Metabolic rates and critical oxygen partial pressures. Data are mean \pm SE.

Supplemental Table: Metabolic Rates and Critical PO₂ measured in present study.					
Taxa	Species	Temp. °C	Mean Mass g (range)	Mean MO₂ μmol O₂/g*h (range, n,)	Mean P_{crit} kPa (range, n)
Copepoda	<i>Lucicutia hulsemannae</i>	5	0.0067 \pm 0.0014	0.63 \pm 0.032 (0.18-1.37, 91)	0.67 \pm 0.04 (0.16-1.51, 43)
		8	0.0067 \pm 0.0014	0.97 \pm 0.04 (0.56-1.75, 39)	0.38 \pm 0.04 (0.05-1.01, 34)
	<i>Megacalanus</i> spp.	5	0.04 (0.02-0.05)	0.85 \pm 0.11 (0.45-1.64)	1.01 \pm 0.10 (0.55-1.65)
		10	0.031 (0.02-0.04)	1.53 \pm 0.095 (1.11-2.02)	0.91 \pm 0.08 (0.52-1.32)
	<i>Gaussia intermedia</i>	10	0.032 \pm 0.003	2.61 \pm 0.32 (2.27-3.34, 5)	1.09 \pm 0.17 (0.92-1.29, 5)
	Decapoda	<i>Gennadas</i> spp.	5	0.29 \pm 0.03 (0.13-0.56)	1.72 \pm 0.16 (0.73-2.81; 17)
Euphausiacea		10	0.37 \pm 0.01 (0.23-0.64)	2.25 \pm 0.11 (1.61-2.85; 13)	0.29 + 0.05 (0.04-0.59; 11)
	<i>Benthoeuphausia amblyops</i>	5	0.195	2.05 (n=2)	0.873 (n=2)
	<i>Nematobranchion flexipes</i>	10	0.089 \pm 0.004 (0.07-0.10)	4.92 \pm 0.48 (2.78-6.76; n = 9)	0.68 \pm 0.08 (0.367 – 1.1; n = 7)
		20	0.045 \pm 0.005 (0.045 – 0.112)	8.56 \pm 2.37 (2.48-14.96; n= 5)	1.58 \pm 0.41 (1.12-3.63; n=5)

Table S4. Compilation of critical oxygen partial pressures from the literature. Critical Oxygen Partial Pressures (P_{crit} , kPa, blue), measured as the PO_2 below which the rate of oxygen consumption was no longer maintained independent of PO_2 , for every marine crustacean available in the literature. The measurement temperature (red) and references are also provided.

Species	Family	Temp	Pcrit (kPa)	Reference
Shrimp-like species (Dendobranchiata, Caridea, Euphausiacea, Lophogastrida)				
<i>Acantheephyra acutifrons</i>	Oplophoridae	5	3.93	Cowles et al., 1991 (43)
		10	3.85	
<i>Acantheephyra curtirostris</i>	Oplophoridae	5	3.75	Cowles et al., 1991 (43)
		10	3.85	
		5.5	1.07	Childress, 1975 (39)
<i>Acantheephyra purpurea</i>	Oplophoridae	7	3.73	Donnelly and Torres 1988 (48)
		14	4.27	
<i>Acantheephyra smithi</i>	Oplophoridae	5	3.60	Cowles et al., 1991 (43)
		10	3.64	
		20	3.40	
<i>Pandalus borealis</i>	Pandaidae	5	1.89	Dupont-Prinet et al., 2013, (49)
		8	2.90	
<i>Funchalia villosa</i>	Penaeidae	5	3.07	Donnelly and Torres 1988 (48)
		20	4.40	
<i>Gennadas valens</i>	Benthescymidae	14	3.73	Donnelly and Torres 1988 (48)
		20	4.40	
<i>Nostostomus gibbosus</i>	Oplophoridae	5	1.89	Cowles et al., 1991 (43)
		10	3.73	
<i>Notostomus elegans</i>	Oplophoridae	5	2.20	Cowles et al., 1991 (43)
		10	3.04	
<i>Oplophorus glacilirostris</i>	Oplophoridae	7	3.33	Donnelly and Torres 1988 (48)
		20	4	

<i>Oplophorus gracilirostris</i>	Oplophoridae	5	4.67	Cowles et al., 1991 (43)
		10	5.40	
		20	6.36	
		5	4.39	
		10	2.43	
		20	7.07	
<i>Pandalus borealis</i>	Pandaidae	5	1.89	Dupont-Prinet et al 2013 (49)
		8	2.90	
		5	3.26	
		8	4.66	
<i>Penaeus aztecus</i>	Penaeidae	20	12.27	Chu and Gale (41)
		30	16.27	
<i>Sergestes bisulcatus</i>	Sergestidae	5	3.51	Cowles et al., 1991 (43)
		10	5.23	
		20	9.97	
<i>Sergestes fulgens</i>	Sergestidae	5	3.49	Cowles et al., 1991 (43)
		10	5.31	
		20	11.60	
<i>Sergestes tenuiremis</i>	Sergestidae	5	3.39	Cowles et al., 1991 (43)
		10	4.25	
		20	7.28	
<i>Sergia grandis</i>	Sergestidae	14	4.40	Donnelly and Torres 1988 (48)
		20	6.27	
<i>Sysellaspis debilis</i>	Oplophoridae	7	3.33	Donnelly and Torres 1988 (48)
		14	4	
		20	4.93	
<i>Sysellaspis debilis</i>	Oplophoridae	5	3.23	Cowles et al., 1991 (43)
		10	4.67	
		20	5.80	
<i>Gnathophausia ingens</i>	Gnathophausiidae	5.5	0.80	Childress 1975 (39)
<i>Gnathophausia zoea</i>	Gnathophausiidae	5.5	0.93	Childress 1975 (39)

<i>Gnathophausia gigas</i>	Gnathophausiidae	4	1.33	Childress 1975 (39)
<i>Gnathophausia gracilis</i>	Gnathophausiidae	4	1.36	Childress 1975 (39)
<i>Boreomysis californica</i>	Mysidae	5.5	0.41	Childress 1975 (39)
<i>Sergestes phorcus</i>	Sergestidae	5.5	0.80	Childress 1975 (39)
<i>Sergestes similis</i>	Sergestidae	10	2.73	Childress 1975 (39)
<i>Gennadas propinquus</i>	Benthesicymidae	5.5	1.07	Childress 1975 (39)
<i>Systemaspis cristata</i>	Oplophoridae	5.5	0.97	Childress 1975 (39)
<i>Hymenodora frontalis</i>	Acantheephyridae	5.5	1.03	Childress 1975 (39)
<i>Nostotomus</i> spp.	Oplophoridae	4	1.87	Childress 1975 (39)
<i>Pasiphaea pacifica</i>	Pasiphaeidae	7.5	1.60	Childress 1975 (39)
<i>Pasiphaea chacei</i>	Pasiphaeidae	7.5	2.40	Childress 1975 (39)
<i>Pasiphaea emarginata</i>	Pasiphaeidae	5.5	0.57	Childress 1975 (39)
<i>Plesionika</i> sp.	Pandalidae	5.5	0.8	Childress 1975 (39)
<i>Euphausia superba</i> (Fall Size Class 4)	Euphausiidae	0.5	5.60	Torres et al 1994 (78)
		0.5	4.67	
		0.5	5.60	
		0.5	5.87	
		0.5	6.93	
		0.5	4.00	
<i>Bentheuphausia amblyops</i>	Bentheuphausiidae	1.5	2.40	Torres and Childress 1985 (77)
		3.5	2.40	
		5.5	2.40	
		7.5	5.33	
		9.5	8.00	
<i>Euphausia eximia</i>	Euphausiidae	10	2.10	Seibel et al., 2016 (15)
<i>Thysanoessa macrura</i>	Euphausiidae	0.5	4.27	Torres et al 1994 (78)

		0.5	5.33	
<i>Euphausia pacifica</i>	Euphausiidae	10	3	Childress, 1975 (39)
<i>Euphausia mucronata</i>	Euphausiidae	13	0.6	Kiko et al., 2016 (20)
<i>Euphausia gibboides</i>	Euphausiidae	13	2.4	Kiko et al., 2016 (20)
<i>Calocaris macandreae</i>	Axiidae	10	2.00	Anderson et al 2012 (33)
<i>Palaemon adspersus</i>	Palaemonidae	10	8.95	Hagerman and Weber 1981 (52)
		24	7.77	Nielsen and Hagerman 1998 (63)
<i>Palaemon elegans</i>	Palaemonidae	10	1.90	Morris and Taylor 1985 (61)
<i>Palaemon varians</i>	Palaemonidae	24	6.56	Nielsen and Hagerman 1998 (63)
<i>Pandalus platyceros</i>	Pandaidae	9	3.07	<i>Chu and Gale (41)</i>
		9		
<i>Archaeomysis grebnitzkii</i>	Mysidae	10	6.67	Jawed 1973 (53)
<i>Neomysis awatschensis</i>	Mysidae	10	6.67	Jawed 1973 (53)
<i>Neotrypaea californiensis</i>	Callianassidae	10	1.25	Thompson and Pritchard 1969 (76)
<i>Upogebia pugettensis</i>	Upogebiidae	10	5.33	Thompson and Pritchard 1969 (76)
<i>Penaeus californiensis</i>	Penaeidae	27	5.15	Villarreal and Ocampo 1993 (81)
<i>Penaeus indicus</i>	Penaeidae	28.2	7.02	Subrahmanyam 1962 (73)
<i>Penaeus monodon</i>	Penaeidae	27.1	1.41	Allan and Maguire 1991 (31)
<i>Penaeus esculentus</i>	Penaeidae	25	3.74	Dall 1986 (45)
<i>Trypaea australiensis</i>	Callianassidae	22	4.63	Paterson and Thorne 1995 (66)
<i>Palaemonetes pugio</i>	Palaemonidae	30	5.20	Cochran and Burnett 1996 (42)
<i>Deosergestes corniculum</i>	Sergestidae	20	4.67	Donnelly and Torres 1988 (48)
<i>Gennadas scutatus</i>	Benthescymidae	20	4.00	Donnelly and Torres 1988 (48)

<i>Parasergestes armatus</i>	Sergestidae	14	3.33	Donnelly and Torres 1988 (48)
<i>Sergia splendens</i>	Sergestidae	20	4.67	Donnelly and Torres 1988 (48)
<i>Sergia talismani</i>	Pandalidae	20	4.67	Donnelly and Torres 1988 (48)
<i>Stylopandalus richardi</i>	Oplophoridae	17	3.33	Donnelly and Torres 1988 (48)
<i>Pandalus borealis</i>	Pandalidae	5	1.89	Dupont-Prinet et al 2013 (49)
		8	2.90	
		5	3.26	
		8	4.66	
<i>Lepidophthalmus jamaicense</i>	Callinassidae	25	1.33	Felder 1979 (50)
<i>Menippe mercenaria</i>	Menippidae	25	7.40	Leffler 1973 (55)
<i>Palaemonetes pugio</i>	Palaemonidae	30	6.13	Stickle et al 1989 (72)
<i>Penaeus aztecus</i>	Panaeidae	20	5.86	Zou and Stueben 2006 (88)
<i>Nihonotrypaea japonica</i>	Callianassidae	20.5	2.07	Mukai and Koike 1984 (62)
<i>Metapenaeus ensis</i>	Penaeidae	22	1.85	Wu et al 2002 (87)
Amphipoda				
<i>Melita longidactyla</i>	Melitidae	20	4.05	Wu and Or 2005 (86)
<i>Gammarus duebeni</i>	Gammaridae	20	1.34	Agnew and Jones 1986 (29)
		20	2.67	
<i>Echinogammarus obtusatus</i>	Gammaridae	13	2.20	Agnew and Taylor 1985 (30)
<i>Echinogammarus pirloti</i>	Gammaridae	15	2.20	Agnew and Taylor 1985 (30)
<i>Phronima sedentaria</i>	Phronimidae	10	2.13	Childress 1975 (39)
<i>Hyperia galba</i>	Hyperidae	10	2.47	Childress 1975 (39)
<i>Paracallisoma coecus</i>	Scopelocheiridae	5.5	1.07	Childress 1975 (39)

<i>Eusirus antarcticus</i>	Eusiridae	0.5	5.60	Torres et al 1994 (78)
<i>Cylopus lucasii</i>	Cylloppodidae	0.5	4.13	Torres et al 1994 (78)
		0.5	5.47	
<i>Cyphocaris faurei</i>	Cyphocarididae	0.5	4.40	Torres et al 1994 (78)
<i>Cyphocaris richardi</i>	Cyphocarididae	0.5	4.13	Torres et al 1994 (78)
		0.5	4.13	
		0.5	4.13	
<i>Primno macropa</i>	Phrosinidae	0.5	4.67	Torres et al 1994 (78)
		0.5	4.27	
		0.5	4.93	
<i>Vibilia stebbingi</i>	Vibiliidae	0.5	3.87	Torres et al 1994 (78)
		0.5	4.67	

Copepoda

<i>Tigriopus brevicornis</i>	Harpacticidae	20	1.20	McAllen et al., 1999 (57)
		30	2.13	
<i>Gaussia princeps</i>	Metridinidae	5	1.33	Childress, 1976 (40)
		7	1.40	
		10	1.47	
<i>Bathycalanus bradyi</i>	Megacalanidae	4	0.53	Childress 1975 (39)
<i>Bathycalanus princeps</i>	Megacalanidae	5.5	0.97	Childress 1975 (39)
<i>Calanus finmarchicus</i>	Calanidae	15	6.91	Marshall et al. 1935 (56)
<i>Pleuromamma abdominalis</i>	Calanidae	11	1.90	Kiko et al., 2016 (20)
		23	6.30	
<i>Undinula vulgaris</i>	Calanidae	11	2.70	Kiko et al., 2016 (20)
		23	6.60	

Isopoda

<i>Idotea emarginata</i>	Idoteidae	15	8.00	Vetter et al 1999 (80)
		10	6.00	
		5	4.00	
<i>Idotea baltica</i>	Idoteidae	10	5.00	Vetter et al 1999 (80)

		15	7.00	
<i>Anuropus bathypelagicus</i>	Anuropidae	5.5	1.87	Childress 1975 (39)
Brachyuran Crabs				
<i>Bythograea thermydron</i>	Bythograeidae	2	1.20	Mickel and Childress, 1982 (60)
		12	1.87	
		25	2.53	
<i>Callinectes sapidus</i>	Portunidae	17	3.57	Brill et al. (2015) (36)
		23	4.2	
		28	7.98	Tankersley and Wieber 2000 (74)
		25	5.00	
		25	12.00	
<i>Callinectes danae</i>	Portunidae	25	12.93	Rantin et al 1996 (68)
<i>Callinectes similis</i>	Portunidae	24	5.73	Das and Stickle 1993 (46)
<i>Rhithropanopeus harrisi</i>	Panopeidae	10	1.77	Diamond et al 1989 (47)
<i>Panopeus herbstii</i>	Panopeidae	25	3.75	Leffler 1973 (55)
<i>Carcinus maenas</i>	Portunidae	15	1.30	Forgue et al 1992 (51)
		7	2.85	
		15	3.76	Robertson et al. 2002 (69)
		22	8.03	
		15	8.80	
		10	5.33	
		18	8.00	
		10	8.00	
<i>Cancer pagurus</i>	Cancridae	10	8.00	Bradford and Taylor 1982 (34)
<i>Corystes cassivelaunus</i>	Corystidae	10	3.33	Bridges and Brand 1980 (35)
<i>Maja brachydactyla</i>	Majidae	18.74	7.69	Cerezo Valverde et al 2012 (79)
		17.79	8.18	
		18.57	7.65	
		19.29	7.32	
		18.67	5.06	
		22.14	11.18	
		21.83	8.99	

		23.06	9.32	
		25.95	9.5718	
		26.33	10.3803	
<i>Eriocheir sinensis</i>	Varunidae	15	2.10	Forgue et al 1992 (51)
<i>Metacarcinus magister</i>	Bythograeidae	8	4.00	McMahon et al 1979 (59)
<i>Lithodes santolla</i>	Lithodidae	12	6.00	Paschke et al 2010 (65)
		11	4.70	Alter et al 2015 (32)
<i>Pugettia producta</i>	Epialtidae	15	9.33	Weymouth et al 1944 (83)
<i>Chionoecetes opilio</i>	Oregoniidae	2.2	5.27	McLeese and Watson 1968 (58)
Anomuran and Galatheid Crabs				
<i>Petrolisthes laevigatus</i> (Juvenile)	Porcellanidae	11	5.20	Alter et al 2015 (32)
<i>Munida quadrispina</i>	Munididae	10	0.43	Burd 1985 (37)
		9	0.64	Chu and Gale (41)
<i>Pleuroncodes monodon</i> (adult)	Munididae	13	0.50	Kiko et al 2015 (54)
<i>Pleuroncodes planipes</i>	Munididae	10	0.28	Quetin and Childress, 1976 (67)
		15	0.3	
		20	0.42	
		25	0.63	
<i>Galathea strigosa</i> (11.8 g) (47.3 g)	Galatheididae	10	7.33	Bridges and Brand 1980 (35)
		10	6.00	
Astacidea (lobsters)				
<i>Jasus edwardsii</i>	Palinuridae	13	7.31	Waldron 1991 (82)
		15	10.40	
<i>Panulirus interruptus</i>	Palinuridae	20	5.18	Winget 1969 (85)
		13	5.23	
		20	6.58	Ocampo et al 2003 (64)
		27	7.61	
<i>Panulirus cygnus</i>	Palinuridae	15	4.66	Crear and Forteach 2001 (44)
		23	5.66	

		31	6.69	
<i>Nephrops norvegicus</i>	Nephropidae	12	6.30	Schmitt and Uglow 1998 (70)
<i>Homarus gammarus</i>	Nephropidae	15	4.36	Spoek 1974 (71)