

Electronic supplement: overview tables of the energy densities of copepods, amphipods, other crustacea, chaetognaths, polychaetes and gastropods of the Southern Ocean.

Article title: Review: the energetic value of zooplankton and nekton species of the Southern Ocean

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Table S1. Overview of the average energy density of copepod species from Donnelly et al. (1994). All values were estimated using proximate composition (PC). *n* represents the number of samples measured. Where this expresses samples of pooled individuals, this is indicated with (p). The standard deviation is given where available (\pm).

Season	Location	<i>n</i>	Mean WW (g)	Water Content (%)	Mean energy density		Method	Source
					kJ g^{-1} WW	kJ g^{-1} DW		
<i>Calanoides acutus</i>								
Autumn	Weddell Sea	2 (p)	0.20	86.0	2.51	17.57	PC	Donnelly et al. 1994*
Winter	Scotia Sea	2 (p)	0.78	84.2 \pm 0.1	2.51	15.48	PC	Donnelly et al. 1994
<i>Calanus propinquus</i>								
Autumn	Weddell Sea	2 (p)	0.19	74.0	5.44	21.34	PC	Donnelly et al. 1994
Winter	Scotia Sea	2 (p)	0.49	84.6 \pm 0.5	2.09	13.39	PC	Donnelly et al. 1994
<i>Euaugaptilis laticeps</i>								
Autumn	Weddell Sea	1 (p)	0.04	83.7	1.67	10.04	PC	Donnelly et al. 1994
<i>Paraeuchaeta antarctica</i>								
Autumn	Weddell Sea	1 (p)	0.22	79.3	4.60	21.76	PC	Donnelly et al. 1994
Winter	Scotia Sea	2 (p)	0.33	84.2 \pm 1.8	3.35	20.08	PC	Donnelly et al. 1994
<i>Euchirella rostromagna</i>								
Winter	Scotia Sea	1 (p)	0.15	84.5	1.26	9.20	PC	Donnelly et al. 1994
<i>Gaetanus tenuispinus</i>								
Autumn	Weddell Sea	1 (p)	0.25	85.0	1.67	12.13	PC	Donnelly et al. 1994
Winter	Scotia Sea	3 (p)	0.19	82.6 \pm 0.9	2.09	12.13	PC	Donnelly et al. 1994
<i>Heterorhabdus austrinus</i>								
Winter	Scotia Sea	1 (p)	0.22	88.7	1.26	12.13	PC	Donnelly et al. 1994
<i>Heterorhabdus farrani</i>								
Winter	Scotia Sea	1 (p)	0.17	89.5	1.26	12.13	PC	Donnelly et al. 1994
<i>Metridia gerlachei</i>								
Autumn	Weddell Sea	1 (p)	0.78	90.4	1.26	10.88	PC	Donnelly et al. 1994
Winter	Scotia Sea	1 (p)	0.46	91.0	0.84	9.62	PC	Donnelly et al. 1994
<i>Rhincalanus gigas</i>								
Autumn	Weddell Sea	1 (p)				12.55	PC	Donnelly et al. 1994
Winter	Scotia Sea	4 (p)	0.82	91.0 \pm 0.3	1.26	13.81	PC	Donnelly et al. 1994

* A factor of 4.19 was used to convert calories to joules

Table S2. Overview of the average energy density of amphipod species. Values were estimated using proximate composition (PC) and one using bomb calorimetry (BC). Energetic values in italics represent values that were converted using information from the given source. *n* represents the number of samples measured. Where this expresses samples of pooled individuals, this is indicated with (p). The standard deviation is given where available (\pm).

Season	Location	<i>n</i>	Mean size (mm)	Water Content (%)	Mean energy density		Method	Source
					<i>kJ g⁻¹ WW</i>	<i>kJ g⁻¹ DW</i>		
<i>Cyphocaris faueri</i> (gammarid)								
Autumn	Weddell Sea	6	22.0	76.4 \pm 5.8	2.42	<i>10.25</i>	PC	Torres et al. 1994*
<i>Cyphocaris richardi</i> (gammarid)								
Autumn	Weddell Sea	5	28.8	74.7 \pm 2.5	2.92	<i>11.54</i>	PC	Torres et al. 1994
Winter	Scotia Sea	5	22.6	74.8 \pm 2.6	3.84	<i>15.24</i>	PC	Torres et al. 1994
<i>Parandania boeckii</i> (gammarid)								
Winter	Scotia Sea	2 (p)	18.5	83.7 \pm 2.3	1.62	<i>9.94</i>	PC	Torres et al. 1994
<i>Eusirus microps</i> (gammarid)								
Summer	Lazarev Sea	1 (p)	44.1 \pm 1.7	80.67 \pm 4.4	4.51	<i>22.25</i>	BC	This study (PS89)
<i>Cylopus lucasii</i> (hyperiid)								
Autumn	Weddell Sea	12	19.8	68.7 \pm 4.2	5.69	<i>18.18</i>	PC	Torres et al. 1994
Winter	Scotia Sea	8	21.3	77.6 \pm 2.1	2.87	<i>12.81</i>	PC	Torres et al. 1994
<i>Hyperia macrocephala</i> (hyperiid)								
Autumn	Weddell Sea	1	30.0	72.8	3.77	<i>13.86</i>	PC	Torres et al. 1994
<i>Hyperiella antarctica</i> (hyperiid)								
Autumn	Weddell Sea	1 (p)	9.6	86.7	1.71	<i>12.86</i>	PC	Torres et al. 1994
<i>Primno macropa</i> (hyperiid)								
Autumn	Weddell Sea	2 (p)	14.3	70.6 \pm 1.7	4.92	<i>16.73</i>	PC	Torres et al. 1994
Winter	Scotia Sea	2 (p)	14.7	76.5 \pm 0.2	3.23	<i>13.74</i>	PC	Torres et al. 1994
<i>Themisto gaudichaudii</i> (hyperiid)								
Winter	Scotia Sea	2 (p)	17.0	77.4 \pm 0.5	2.88	<i>12.74</i>	PC	Torres et al. 1994
	Patagonia	3 (p)	3-12	86.0	3.11	<i>22.19</i>	BC	Ciancio et al. 2007
<i>Vibilia stebbingi</i> (hyperiid)								
Autumn	Weddell Sea	1 (p)	11.5	71.4	4.11	<i>14.37</i>	PC	Torres et al. 1994
Winter	Scotia Sea	3 (p)	10.5	72.5 \pm 5.2	3.83	<i>13.93</i>	PC	Torres et al. 1994

* A factor of 4.19 was used to convert calories to joules

Table S3. Overview of the average energy density of other crustacean species. All values were estimated using proximate composition (PC). Energetic values in italics represent values that were converted using information from the given sources. The mean size of the decapods and mysids represents the carapace length, for ostracods it represents the sphere diameter. *n* represents the number of samples measured. Where this expresses samples of pooled individuals, this is indicated with (p). The standard deviation is given where available (\pm).

Season	Location	<i>n</i>	Mean size (mm)	Water content (%)	Mean energy density		Method	Source
					<i>kj g⁻¹ WW</i>	<i>kj g⁻¹ DW</i>		
<i>Pasiphaea scotiae</i> (decapod)								
Autumn	Weddell Sea	6	21.7	63.2 \pm 2.7	8.40	22.82	PC	Torres et al. 1994*
Winter	Scotia Sea	8	21.3	63.3 \pm 2.1	6.97	19.00	PC	Torres et al. 1994
<i>Petalidium foliacium</i> (decapod)								
Autumn	Weddell Sea	1	17.0	71.8	5.58	19.77	PC	Torres et al. 1994
Winter	Scotia Sea	3	13.3	67.4 \pm 3.3	8.24	25.27	PC	Torres et al. 1994
<i>Boreomysis rostrata</i> (mysid)								
Winter	Scotia Sea	2	10.0	75.8 \pm 0.9	4.40	18.17	PC	Torres et al. 1994
<i>Eucopeia australis</i> (mysid)								
Winter	Scotia Sea	2	13.0	77.8 \pm 1.8	5.32	23.96	PC	Torres et al. 1994
<i>Gnathophausia gigas</i> (mysid)								
Winter	Scotia Sea	4	16.8	69.4 \pm 4.4	5.95	19.43	PC	Torres et al. 1994
<i>Conchoecia antipoda</i> (ostracod)								
Winter	Scotia Sea	1 (p)		87.8	1.67	11.72	PC	Donnelly et al. 1994*
<i>Conchoecia belgicae</i> (ostracod)								
Winter	Scotia Sea	1 (p)		85.9	1.26	7.95	PC	Donnelly et al. 1994
<i>Conchoecia hettacra</i> (ostracod)								
Winter	Scotia Sea	1 (p)		84.1	1.26	7.11	PC	Donnelly et al. 1994
<i>Gigantocypros mulleri</i> (ostracod)								
Winter	Scotia Sea	4	16.3	91.3 \pm 0.4	0.70	8.06	PC	Torres et al. 1994

* A factor of 4.19 was used to convert calories to joules

Table S4. Average energy density of chaetognath, polychaete and a gastropod species. Energy densities in italics represent values that were converted using information from the given sources. *n* represents the number of samples measured. Where this expresses samples of pooled individuals, this is indicated with (p). Standard deviation is given where available. All measurements were done using proximate composition (PC).

Season	Location	<i>n</i>	Mean WW (mg)	Water content (%)	Mean energy density		Method	Source
					<i>kJ g⁻¹ WW</i>	<i>kJ g⁻¹ DW</i>		
<i>Eukrohnia hamata</i>								
Autumn	Weddell Sea	1 (p)	0.455	95.0	0.42	7.53	PC	Donnelly et al. 1994*
Winter	Scotia Sea	1 (p)	1.998	91.8	0.84	11.72	PC	Donnelly et al. 1994
<i>Sagitta gazellae</i>								
Autumn	Weddell Sea	1 (p)	4.36	95.1	0.42	5.02	PC	Donnelly et al. 1994
Winter	Scotia Sea	3 (p)	1.36	93.5 ± 1.1	0.42	7.53	PC	Donnelly et al. 1994
<i>Sagitta marri</i>								
Winter	Scotia Sea	1 (p)	0.67	90.8	1.26	11.30	PC	Donnelly et al. 1994
<i>Vanadis antarctica</i>								
Autumn	Weddell Sea	1	1.09	86.3	2.09	14.23	PC	Donnelly et al. 1994
<i>Tomopteris carpenteri</i>								
Winter	Scotia Sea	1 (p)	0.757	87.7	1.26	9.20	PC	Donnelly et al. 1994
Summer	South Georgia	5		84.5	1.92	12.37 ¹	PC	Clarke et al. 1992
<i>Clione limacina antarctica</i>								
Spring/summer	McMurdo Sound	4 (p)				24.81 ²	PC	Bryan et al. 1995

¹calculated using the values 39.5 kJ g⁻¹ for lipids and 23.9 kJ g⁻¹ for protein

²calculated using 39.5 kJ g⁻¹ for lipids

* A factor of 4.19 was used to convert calories to joules