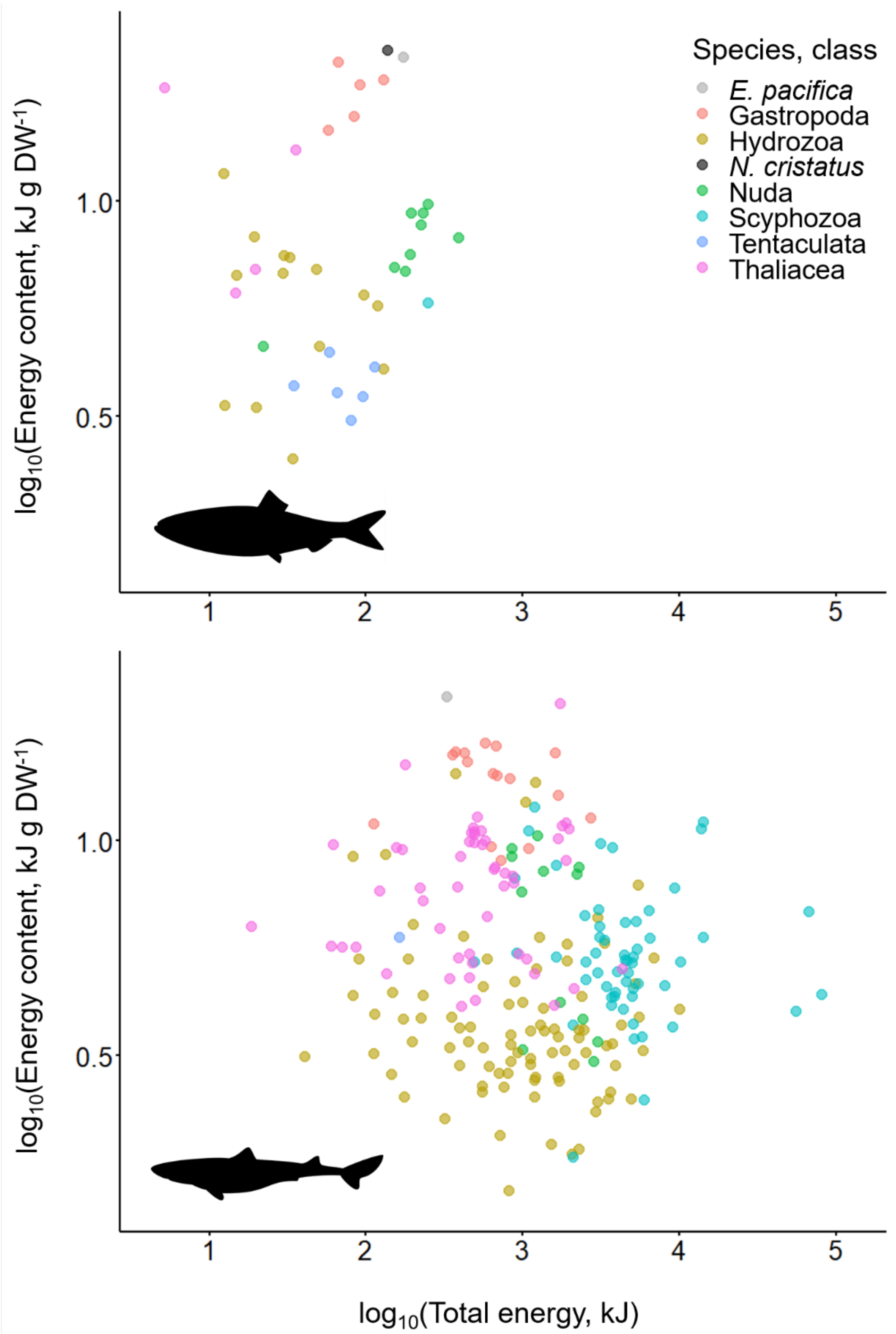

Fig. S1. Relative individual (kJ g DW^{-1}, conversion from Båmstedt 1981) energy content as a function of total energy content (i.e., product of relative energy contents and individual dry weight, kJ specimen^{-1}). *Top panel*: Specimens that are small enough (≤ 20 mm) to be eaten by small pelagic fish, e.g., herring. *Bottom panel*: Specimens that are of appropriate size (21–300 mm) to be consumed by intermediate predators, e.g., dogfish. For species-specific relative energy contents, see Table 5.

Table S1. Sampling details of eleven cruises performed between 2014 and 2020.

Year	Months	Sampling area	Ship	Gear	Mesh size (µm)	Towing depth (m)	Mouth opening (m^2)	Towing speed ($m\ s^{-1}$)	Orientation
2014	Jul	HS, QCSN	CCGS W.E. Ricker	CanTrawl250	6400 (cod end)	20–30	120	2.6	horizontal
2014	Oct	HS, QCSN	CCGS W.E. Ricker	CanTrawl250	6400 (cod end)	20–30	120	2.6	horizontal
2015	Oct	HS, QCSN	CCGS W.E. Ricker	CanTrawl250	6400 (cod end)	20–30	120	2.6	horizontal
2018	Jun	Line P	CCGS John P. Tully	Bongo net	236	250 and 1200	0.25	1.0	vertical
2019	Feb/Mar	GoA	R/V Professor Kaganovskiy	Juday net	250	250	0.25	1.0	vertical
2019	Jun	Line P	CCGS John P. Tully	Bongo net	236	250 and 1200	0.25	1.0	vertical
				Multinet Medi	250	1000	0.25	1.0	vertical
2019	Aug	QCSN, QCST, SoG, JFS	F/V Sea Crest	Bongo net	250	max. 250	0.20	1.0	vertical
				Dip net		sub-surface			
				Midwater trawl				2.0–2.6	horizontal
2019	Aug	Line P	CCGS John P. Tully	Bongo net	236	250 and 1200	0.25	1.0	vertical
2019	Sep	QCSN, QCST, SoG, WCVI	CCGS John P. Tully	Bongo net	236	max. 250	0.25	1.0	vertical
				Neuston net	500	top 20	0.25	1.0–1.5	horizontal
				Dip net		sub-surface			
2020	Feb	Line P	CCGS John P. Tully	Bongo net	236	250 and 1200	0.25	1.0	vertical
2020	Mar/Apr	GoA	F/V Pacific Legacy No. 1	Bongo net	250	250	0.25	1.0	vertical

GoA: Gulf of Alaska, HS: Hecate Strait, JFS: Juan de Fuca Strait, QCST: Queen Charlotte Strait, QCSN: Queen Charlotte Sound, SoG: Strait of Georgia, WCVI: West coast of Vancouver Island

Table S2. (In Supplement 2 at www.int-res.com/articles/suppl/m665p019_supp2.xlsx).

Table S3. Conversions from carbon (C) or ash-free dry weight (AFDW) contents of dry weight (DW) to energy contents (E). 1 cal = 4.1868 J.

Conversion	X	Y	Reference
$Y = -227 + 152 \times X$	C % DW	E (cal g DW^{-1})	Platt et al. (1969)
$Y = 0.0604 \times X - 0.420$	AFDW % DW	E (kcal g DW^{-1})	Thayer et al. (1973)
$Y = 0.2086 \times X^{1.0659}$	AFDW % DW	E (J mg DW^{-1})	Båmstedt (1981)

Table S4. Wet weights (WW, g) of seven gelatinous and soft-bodied zooplankton species as a function of size, i.e., umbrella diameter (d, in case of hydro- and scyphomedusae) or total length (L, in case of gastropods) following power function $WW = a \times d^b$ or $a \times L^b$. N = number of specimens, R^2 = correlation coefficient. All $p < 0.001$.

Species	*N*	Size range (mm)	*a*	*b*	R^2
Aequorea sp.	40	30–250	0.0012	2.37	0.90
Aurelia labiata	43	80–470	0.0005	2.57	0.91
Carinaria japonica	30	40–126	0.0062	1.50	0.57
Chrysaora fuscescens	13	95–421	0.0001	2.83	0.96
Chrysaora melanaster	15	70–200	0.0023	2.25	0.96
Cyanea capillata	26	270–770	0.0002	2.72	0.88
Phacellophora camtschatica	7	80–420	0.0025	2.22	0.98

Table S5. Analysis of variance (ANOVA) and Tukey-HSD post hoc test results for $\log_{10}$-transformed organic contents (AFDW % DW) of specimens from six classes. Significant differences are indicated in bold if $p < 0.05$.

	Gastropoda	Hydrozoa	Nuda	Scyphozoa	Tentaculata
Gastropoda					
Hydrozoa	**< 0.001**				
Nuda	**< 0.001**	**< 0.001**			
Scyphozoa	**< 0.001**	**< 0.001**	**0.034**		
Tentaculata	**< 0.001**	0.994	**< 0.001**	0.894	
Thaliacea	**< 0.001**	**< 0.001**	0.684	**< 0.001**	**< 0.001**

Table S6. Overview of size (length or diameter), *N*: number of analytical samples, organic contents (AFDW % DW), carbon and nitrogen contents (C and N % DW), C/N, and energy contents (E) of planulae and ephyrae. Organic contents of planulae and ephyrae were not accounted for residual water. Mean ± SD is indicated.

Class, Species	Stage	Size (µm)	*N*	AFDW % DW	C % DW	N % DW	C/N	Reference
Anthozoa								
Heteroxenia fuscescens	Planula			97.80 ± 0.01				Ben-David-Zaslow & Benayahu (2000)
Pocillopora damicornis	Planula		3	> 98.00				Richmond (1987)
Scyphozoa								
Aurelia aurita	Planula	255 ± 26	6		39.00	9.00	4.5 ± 0.4	Schneider & Weisse (1985)
			50		40.53 ± 5.57	8.16 ± 2.16	5.1 ± 0.9	Schneider (1988)
Aurelia coerulea	Planula[a]	305 ± 75						Suzuki et al. (2019)
	Planula[b]	679 ± 142						
Aurelia labiata	Planula[c]		7	42.77 ± 23.50	7.74 ± 3.68	1.48 ± 0.69	5.1 ± 0.3	This study
Scyphozoa								
Aurelia aurita	Ephyra	< 10000	14	35.20				Lucas (1994)
			157	38.00				Båmstedt et al. (1999)
Aurelia labiata	Ephyra[c]	2000–6000	5	29.13 ± 14.12	1.07 ± 1.06	0.23 ± 0.32	8.8 ± 4.5	This study
Aurelia sp.	Ephyra	4000–12000			37.46	8.72	4.3	Chen & Li (2017)

[a]metagenetic development, [b]direct development, [c]taken from a public aquarium

Table S7. Analysis of variance (ANOVA) and Tukey-HSD post hoc test results for log_{10}-transformed C/N of specimens from six classes. Significant differences are indicated in bold if $p < 0.05$.

	Gastropoda	Hydrozoa	Nuda	Scyphozoa	Tentaculata
Gastropoda					
Hydrozoa	**< 0.001**				
Nuda	0.096	0.989			
Scyphozoa	**< 0.001**	0.600	0.632		
Tentaculata	0.999	0.057	0.390	**0.006**	
Thaliacea	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**

Table S8. Organic content (AFDW % DW), elemental composition, elemental ratio, and energy content of the two with gelatinous zooplankton in the Northeast Pacific co-occurring crustaceans *Euphausia pacifica* and *Neocalanus cristatus*.

Species	AFDW % DW	C % DW	N % DW	C/N	E (kJ g DW^{-1})	Reference
Euphausia pacifica	54.50	17.00	2.50	6.8		Lasker (1966)
					21.60	Small (1967)
	91.75	39.15	10.40	3.8		Omori (1969)
	57.90	23.00	4.40	5.2		Iguchi and Ikeda (1998)
	88.72	35.57	9.45	3.8		Kim et al. (2010)
Mean ± SD	73.22 ± 19.74	28.68 ± 10.42	6.69 ± 3.84	4.9 ± 1.4	21.60	
Neocalanus cristatus					26.55	Ikeda (1972)
	92.70	50.50	8.70	5.8		Ikeda and Hirakawa (1998)
		53.53	7.89	7.9		Lindsay (2003)
	95.05	57.35	7.55	4.9		Ikeda et al. (2004)
					18.29	Jahncke et al. (2005)
Mean ± SD	93.88 ± 1.66	53.79 ± 3.43	8.05 ± 0.59	6.2 ± 1.6	22.42 ± 5.84	

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