

Table S1. Comparison of mean total length ( $L_T$ ), total weight ( $W$ ), and condition factor ( $K$ ) for female yellow eels from the 6 coastal habitats (WBS, Wismar Bay/Salzhaff; DZB, Darss-Zingst Bodden chain; BR, Bodden around Ruegen island; WDS, Area west of the Darss Sill; EDS, Area east of the Darss Sill; NER, Area north and east of Ruegen island) of the Baltic Sea in the Federal State of Mecklenburg-Vorpommern (Germany) (nested ANOVAs followed by Kruskal-Wallis test resp. Mann-Whitney test, d.f. = 1,  $p < 0.05$ ).

Parameter	NER
$L_T$	BR U-test = 3205, $p = 0.006^*$
$W$	BR U-test = 2843, $p = 0.0002^*$
$K$	BR U-test = 2692, $p = 0.00002^*$ WBS U-test = 2189, $p = 0.004^*$

\* Significant after the Bonferroni correction was applied to adjust p-values

Table S2. Results of the mixed effect logistic regression (*A. crassus* presence/absence). TL: total length; OCW: Open coastal waters

Random effects	Variance	SD				
Place (Intercept)	0.23	0.48				
Fixed effects	Estimate	SE	CI lower	CI upper	z	p
Intercept	0.88	0.58	-0.26	2.03	1.51	0.13
OCW	-1.35	0.44	-2.20	-0.50	-3.10	0.002
TL (cm)	-0.02	0.01	-0.04	0.002	-1.78	0.08
Number of obs.	728					
	Min	1. Q.	Median	3. Q.	Max	
Scaled residuals	-1.33	-0.62	-0.34	0.82	3.39	
	AIC	BIC	LL	Deviance	D.f. res.	
	753.6	771.9	-372.8	745.6	724	

Table S3. Results of the mixed regression model for ordinal data investigating the influence of open and inner coastal waters and habitats on the expected probability of damaged swim bladders (Hartmann classes after Hartmann 1994).

Random effects	Variance	SD				
Place (Intercept)	0.18	0.42				
Fixed effects	Estimate	SE	CI lower	CI upper	z	p
OCW	-1.38	0.41	-2.19	-0.57	-3.35	0.0008
TL (cm)	0.001	0.01	-0.02	0.03	0.10	0.92
Threshold coefficients						
1 2	1.02	0.67	-0.29	2.33	1.52	
2 3	2.45	0.69	1.10	3.79	3.56	
3 4	3.40	0.72	2.00	4.81	4.70	
4 5	4.51	0.83	2.88	6.14	5.42	
LL	-359.27					
AIC	732.55					
Nagelkerke pseudo $r^2$	0.11					
McFadden	0.07					
Likelihood ratio test	D.f. diff.	LL diff.	Chi <sup>2</sup>	p		
	-3	-27.45	54.91	< 0.0001		

TL total length, OCW Open coastal water

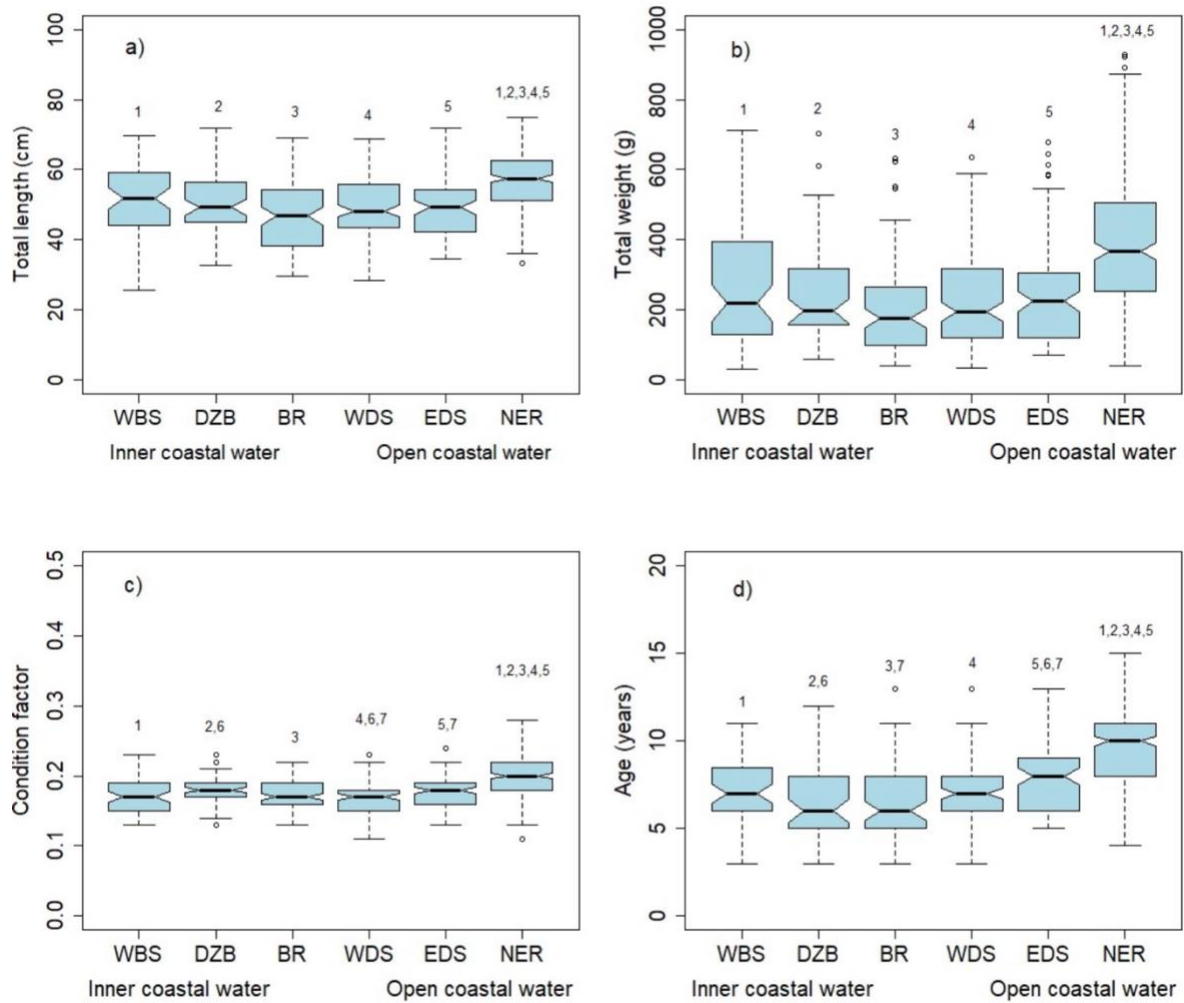


Fig. S1. Total length (a), total weight (b), condition factor (c), and age (d) of eels. Habitats from west to east: Wismar Bay/Salzhauff (WBS), Darss Zingst Bodden (DZB), Bodden around Ruegen island (BR), Area west of the Darss Sill (WDS), Area east of the Darss Sill (EDS), Area north and east of Ruegen island (NER). Same numbers above the boxes indicate significant differences according to post hoc pairwise Wilcoxon signed rank tests with Bonferroni adjustment. For example, the age of eels (d) differed between the habitats DZB and NER and between the habitats DZB and EDS.