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Supplementary material

Crustacean assemblages of coastal wetlands from fragmented and scarcely isolated islands compared with the mainland

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Table S1. List of crustaceans species identified in the Archipelago and Mainland

+ indicates presence; – indicates absence. CLA, Cladocera; OST, Ostracoda; COP, Copepoda; CAL, Calanoida; CYC, Cyclopoida; HAR, Harpacticoida; MAL, Malacostraca; MYS, Mysidacea; AMP, Amphipoda; ISO; Isopoda; TAN, Tanaidacea; DEC, Decapoda

Species	Taxonomic group	Archipelago	Mainland
Alona guttata Sars, 1862	CLA	+	–
Bosmina longirostris (O.F. Müller, 1776)	CLA	–	+
Camptocercus rectirostris Schoedler, 1862	CLA	–	+
Ceriodaphnia laticaudata P.E. Müller, 1867	CLA	–	+
Ceriodaphnia reticulata (Jurine, 1820)	CLA	–	+
Chydorus sphaericus (O.F. Müller, 1785)	CLA	+	+
Coronatella rectangula (Sars, 1861)	CLA	+	+
Daphnia curvirostris Eylman, 1887	CLA	+	–
Daphnia magna Straus, 1820	CLA	+	+
Daphnia pulicaria Forbes, 1893	CLA	+	+
Leydigia acanthocercoides (Fischer, 1854)	CLA	+	–
Leydigia leydigii (Schödler, 1862)	CLA	–	+
Megafenestra aurita (Fischer, 1849)	CLA	–	+
Moina micrura Kurz, 1874	CLA	–	+
Ovalona cf. *anastasia* (Frenzel and Alonso 1988)	CLA	+	–
Oxyurella tenuicaudis (Sars, 1862)	CLA	–	+
Pleuroxus aduncus (Jurine, 1820)	CLA	+	+
Pleuroxus denticulatus Birge, 1879	CLA	–	+
Pleuroxus laevis Sars, 182	CLA	–	+
Scapholeberis mucronata (O.F. Müller, 1776)	CLA	–	+
Scapholeberis rammneri Dumont and Pensaert, 1983	CLA	+	–
Simocephalus exspinosus (DeGeer, 1778)	CLA	+	+
Simocephalus vetulus (O.F. Müller, 1776)	CLA	+	+
Tretocephala ambigua (Lilljeborg, 1900)	CLA	+	–
Bradleystrandesia reticulata (Zaddach, 1844)	OST	–	+
Candona angulata G. W. Müller, 1900	OST	+	–
Candonocypris sp. Sars, 1894	OST	–	+
Cyprideis torosa (Jones, 1850)	OST	+	+
Cypridopsis hartwigi G. W. Müller	OST	+	–
Cypridopsis vidua (O. F. Müller, 1776)	OST	–	+
Cypris bispinosa Lucas, 1849	OST	+	–
Cypris subglobosa Sowerby, 1840	OST	–	+
Eucypris virens (Jurine, 1820)	OST	+	+
Herpetocypris brevicaudata Kaufmann, 1900	OST	–	+
Herpetocypris chevreuxi (Sars, 1896)	OST	+	–
Heterocypris incongruens (Ramdohr, 1808)	OST	+	+
Heterocypris salina (Brady, 1868)	OST	+	+

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Species	Taxonomic group	Archipelago	Mainland
Ilyocypris getica Masi, 1905	OST	+	–
Ilyocypris gibba (Ramdohr, 1808)	OST	–	+
Loxoconcha elliptica Brady, 1868	OST	+	+
Plesiocypridopsis newtoni (Brady & Robertson, 1870)	OST	+	+
Sarscypridopsis aculeata (Costa, 1847)	OST	+	+
Arctodiaptomus salinus (Daday 1885)	COP (CAL)	+	–
Arctodiaptomus wierzejski (Richard, 1888)	COP (CAL)	+	–
Calanipeda aquaedulcis Kritschagin, 1873	COP (CAL)	+	+
Eurytemora velox (Lilljeborg, 1853)	COP (CAL)	–	+
Mixodiaptomus kupelwieseri (Brehm, 1907)	COP (CAL)	–	+
Acanthocyclops gr. *robustus* (Sars, 1863)	COP (CYC)	+	+
Cyclops sp.O. F. Müller, 1776	COP (CYC)	–	+
Diacyclops bicuspidatus (Claus, 1857)	COP (CYC)	–	+
Diacyclops bisetosus (Rehberg, 1880)	COP (CYC)	–	+
Ectocyclops phaleratus (Koch, 1838)	COP (CYC)	–	+
Eucyclops macruroides (Lilljeborg, 1901)	COP (CYC)	–	+
Eucyclops serrulatus (Fischer, 1851)	COP (CYC)	+	+
Halicyclops rotundipes Kiefer, 1935	COP (CYC)	+	+
Macrocyclops albidus (Jurine, 1820)	COP (CYC)	+	+
Megacyclops viridis (Jurine, 1820)	COP (CYC)	+	+
Microcyclops rubellus (Lilljeborg, 1901)	COP (CYC)	+	+
Paracyclops fimbriatus (Fischer, 1853)	COP (CYC)	–	+
Thermocyclops dybowskii (Landé, 1890)	COP (CYC)	+	+
Tropocyclops prasinus (Fischer, 1860)	COP (CYC)	+	+
Canthocamptus staphylinus (Jurine, 1820)	COP (HAR)	+	+
Canuella perplexa T. and A. Scott, 1893	COP (HAR)	+	+
Cletocamptus confluens (Schmeil, 1894)	COP (HAR)	+	+
Cletocamptus retrogressus Schmankevitsch, 1875	COP (HAR)	+	–
Eudactylopus sp. cf. Scott, 1909	COP (HAR)	+	–
Harpacticus littoralis Sars, 1910	COP (HAR)	–	+
Nitocra lacustris (Shmankevich, 1875)	COP (HAR)	–	+
Schizopera sp. (cf. *compacta)* Lint, 1922	COP (HAR)	–	+
Tisbe longicornis (T. and A. Scott,, 1895)	COP (HAR)	+	+
Atyaephyra desmarestii (Millet, 1831)	MAL (DEC)	–	+
Corophium acherusicum Costa, 1857	MAL (AMP)	+	–
Corophium insidiosum Crawford, 1937	MAL (AMP)	+	–
Corophium orientale Schellenberg, 1928	MAL (AMP)	+	+
Corophium sextonae Hurley, 1954	MAL (AMP)	+	–
Cyathura carinata (Kroyer, 1847)	MAL (ISO)	+	–
Echinogammarus pacaudi (Hubault and Ruffo, 1956)	MAL (AMP)	–	+
Echinogammarus stocki Karaman, 1969	MAL (AMP)	+	–
Gammarus aequicauda (Martyinov, 1931)	MAL (AMP)	+	+
Gammarus insensibilis Stock, 1966	MAL (AMP)	+	–

Species	Taxonomic group	Archipelago	Mainland
Heterotanais oerstedi (Kroyer, 1842)	MAL (TAN)	–	+
Lekanesphaera hookeri (Leach, 1814)	MAL (ISO)	+	+
Leptocheirus pilosus Zaddach, 1844	MAL (AMP)	–	+
Mesopodopsis slabberi (Van Beneden, 1861)	MAL (MYS)	–	+
Microdeutopus sp.Costa, 1853	MAL (AMP)	+	–
Orchestia gammarellus (Pallas, 1766)	MAL (AMP)	+	–
Orchestia platensis Hayat, 1998	MAL (AMP)	+	–
Palaemon elegans Rathke, 1837	MAL (DEC)	+	–
Palaemon longirostris Milne-Edwards, 1837	MAL (DEC)	–	+
Palaemonetes varians (Leach, 1814)	MAL (DEC)	+	–
Palaemonetes zariquieyi Sollaud, 1939	MAL (DEC)	–	+
Proasellus coxalis (Dollfus, 1892)	MAL (ISO)	+	+
Procambarus clarkii (Girard, 1852)	MAL (DEC)	+	+
Total species	93	58	67
Exclusive species		26	35

Table S2. Summary of the LME results for the variable species richness

The significance between regions was assessed using the conditional *F*-test of the intercept values (see Table S3), while the slopes inform about the relationship between the dependent variable (species richness) and the independent variables (continuous environmental parameters). Slope values of independent variables retained in each mixed effects model are shown for each region; when non-significant differences were detected for the slopes of each region (i.e. the same slope for both regions) then 'overall slope' is shown. The *t*-test obtained from each mixed effects model, indicating the significance of the slopes, is shown. The regional effect ('Region', i.e. Archipelago *v*. Mainland) is highlighted in bold. Cond, conductivity; Pho, phosphate; DIN, dissolved inorganic nitrogen; Chl-*a*, chlorophyll-*a*

Species richness	Variable	Slopes				
		Archipelago	Mainland	Overall	*t*-Student	*P*-value
	Phosphate			0.74	3.24	0.002
Cladocera	Conductivity			–1.81	–7.93	0.000
d.f. = 121	**Region × DIN**	–0.66	–0.03		3.31	0.001
Ostracoda	Size			0.29	4.12	0.000
d.f. = 123	Chl-*a*			0.41	2.17	0.032
	Region					
Copepoda	Conductivity			–0.58	–2.75	0.007
d.f. = 123	Temperature			–1.18	–2.27	0.025
	Region					
	Chl-*a*			–0.59	–2.15	0.034
Malacostraca	**Region × DIN**	0.43	–0.15		–2.18	0.032
d.f. = 118	**Region × Pho**	0.97	–0.63		–2.56	0.012
	Region × Cond	1.70	0.20		–2.51	0.014

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Table S3. Complementary table to Table S2, where intercept values are shown

P-values < 0.05 show significant differences in the intercept values of Mainland and Archipelago, i.e. significant differences of species richness between both regions

	Intercept					
Species richness	Archipelago	Mainland	*F*	d.f.1	d.f.2	*P*-value
Cladocera	2.75	2.63	0.19	1	121	0.667
Ostracoda	–0.03	–0.48	6.8	1	123	0.010
Copepoda	2.86	4.25	62.51	1	123	<0.0001
Malacostraca	–0.36	1.79	6.5	1	118	0.012