Lim *et al.* (2025) Testing the Remane diagram: occurrences of benthic macroinvertebrates in oligohaline to hyperhaline salinities. *Water.*

Supplementary materials

Table S1. Summary of the characteristics of the 12 estuaries sampled in southwestern Australia. Information retrieved from [32,36,42] and images from Google Earth.

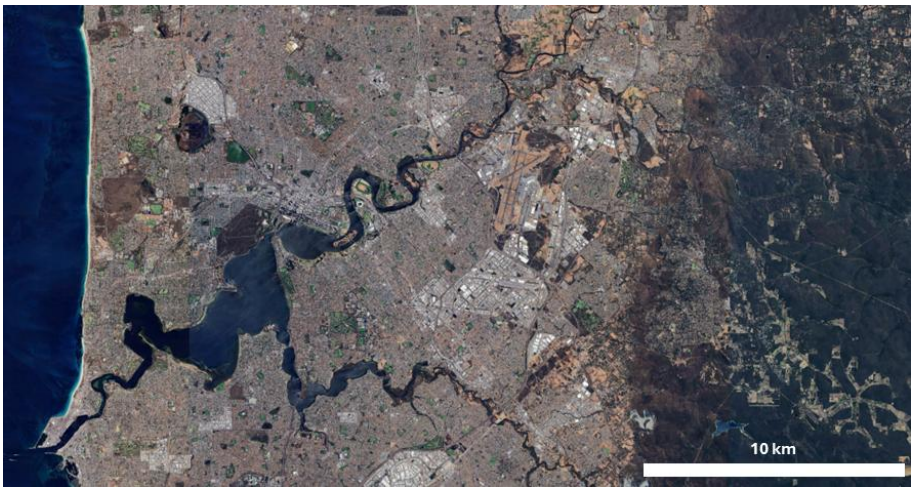
Swan-Canning Estuary

Freshwater source: Swan-Avon and Canning rivers with a mean annual flow of 600,000 ML. Median annual rainfall in the catchment of 409 mm.

Depth: Most < 5 m, with deeper areas in the entrance channel reaching ~20 m and lower parts of the main basin.

Substrate type: Coarse-fine sands in the shallow waters of the entrance channel and basins, with silt in the deeper waters. Silt, mud and gravel in the upper reaches.

Vegetation: *Halophila ovalis* is the dominant seagrass throughout the basins of the estuary, but other species such as *Zostera* spp., *Ruppia megacarpa* and *Halophila decipens* can be found in the entrance channel.



Peel-Harvey Estuary

Freshwater source: Serpentine, Murray and Harvey rivers with a mean annual flow of 810,000 ML. Median annual rainfall in the catchment of 662 mm.

Depth: Mostly < 2 m, with extensive shallow marginal shoals.

Substrate type: Coarse-fine sands in the shallow waters of the entrance channel and basins, with silt in the deeper waters.

Vegetation: A suite of seagrasses, mainly dominated by *Ruppia* spp., with *Halophila*, *Heterozostera* and *Posidonia australis.* Significant accumulations of the green alga *Willeella brachyclados* (formerly *Cladophora montagneana*) can occur.



Vasse-Wonnerup Estuary

Freshwater source: Vasse, Sabina, Abba and Ludlow rivers, with a mean annual flow of 40,300 ML. Median annual rainfall in the catchment of 905 mm.

Depth: Maximum of 2 m, with parts of the upper reaches drying out in summer/autumn.

Substrate type: Mainly coarse-fine sands, with localised areas of black suldific ooze on the upstream side of the Vasse tidal exclusion barrier.

Vegetation: *Ruppia megacarpa* and *Ruppia polycarpa* are found throughout the system. *Stuckenia pectinata* and *Althenia cyulindrocarpa* are found in the lower and upper reaches, respectively. Blooms of the macroalgae *Ulva* spp. and *Cladophora* spp. can occur.



Broke Inlet

Freshwater source: Shannon, Forth and Inlet rivers, with a mean annual flow of 162,000 ML. Median annual rainfall in the catchment of 1,331 mm.

Depth: Extensive marginal shoals (< 2m) in the basin, with a maximum depth of ~5-6 m in the entrance channel.

Substrate type: Medium to coarse siliceous sand throughout the marginal shoals, with sand and silt in deeper waters of the entrance channel and basins, respectively.

Vegetation: Mainly *Ruppia megacarpa. Lamprothanium papulosum* is present in some areas.



Torbay Inlet

Freshwater source: Torbay Drain and Marbelup Brook, with a mean annual flow of 75,300 ML. Median annual rainfall in the catchment of 943 mm.

Depth: Up to 2 - 3 m.

Substrate type: Mainly sand.

Vegetation: The red alga *Gracilaria* spp. has been recorded previously, but not during sampling.



Oyster Harbor

Depth: Average of ~ 5 m but reaches 10 m in some areas.

Substrate type: Medium-coarse to fine sands, silty sands with broken marine shells. Emergent granite boulders support oysters, and beds of cockles can be present in the lower reaches.

Vegetation: *Posidonia australis* is typically in shallow waters and *Posidonia sinuosa* in deeper waters. The macroalgae *Cladophora prolifera* can occur.



Taylor Inlet

Freshwater source: Three small creeks. Mean annual flow of 1,400 ML and a median annual rainfall in the catchment of 800 mm.

Depth: Most ~ 2 m deep, but reaches 5 m in places.

Substrate type: Mainly sand.

Vegetation: Dense stands of *Ruppia* sp. and charophytes were recorded during sampling.



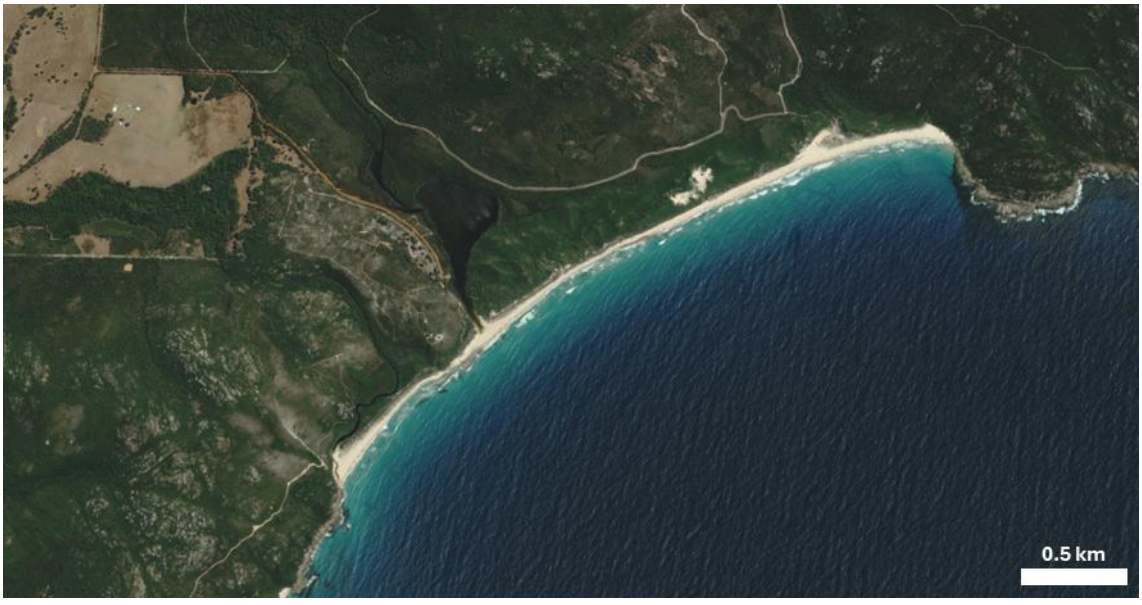
Normans Inlet

Freshwater source: One river, with a mean annual flow of 1,800 ML. Median annual rainfall in the catchment is 810 mm.

Depth: ~ 1 m deep, but decreases after bar breaching.

Substrate type: Firm sandy-muddy sediments in the basin and muddy further upstream.

Vegetation: Dense seagrass beds of *Ruppia* spp. in the basin and *L. papulosum* in the upstream reaches.



Waychinicup Estuary

Freshwater source: Waychinicup River, with a mean annual flow of 1,700 ML. Median annual rainfall in the catchment is 760 mm.

Depth: Reaches a maximum of ~ 22 m are the entrances and decreased upstream to 2 – 3 m.

Substrate type: Coarse sand and gravel in the lower and basin regions, and muddy sediment further upstream.

Vegetation: Shorelines are dominated by Phaeophyceae and Rhodophyta macroalgae, with expansive beds of *Posidonia* spp. and *Halophila* spp. seagrasses.



Cordinup River

Freshwater source: Cordinup River; ~21km long from north and east of Green Range.

Depth: ~2 m deep during bar closure, but ~0.5 m when bar is open.

Substrate type: Predominantly sandy bottomed, with muddy soil in riverine reaches.

Vegetation: *Ruppia* sp. and *Lamprothanium* spp. Are present throughout the basin and upper regions.



Cheyne Inlet

Freshwater source: Eyre River flows for 13 km before feeding into the Cheyne Inlet.

Depth: <1m deep.

Substrate type: The lagoon has silty sand whereas the riverine has both mud and sand. The bar has fine white and quartz sand.

Vegetation: Vegetation such as *Ruppia* spp., used to be common upstream from the bar. *Cladophora* spp., and *Enteromorpha paradoxa* can be abundant in the lagoon.



Beaufort Inlet

Freshwater source: Pallinup iver (250 km long).

Depth: 1-2 m deep basin, with deeper reaches >7 m.

Substrate type: The bar comprises of coarse quartz sand and shell material. Upper region is slightly gravelly sand, whereas the rest of the estuary substrate is comprised from sand.

Vegetation: No macrophytes recorded.



References

32. Brearley, A. Ernest Hodgkin's Swanland, 1st ed.; University of Western Australia Press: Crawley, UK, 2005; p. 550.
36. Krispyn, K.N. *The Fish Faunas of Estuaries in the Albany Region of South-Western Australia*; Murdoch University: Perth, Australia, 2021.
42. Cronin-O'Reilly, S.; Cottingham, A.; Kalnejais, L.H.; Lynch, K.; Tweedley, J.R. Tidal exclusion barriers fragment an invertebrate community into taxonomically and functionally distinct estuarine and wetland assemblages. *J. Mar. Sci. Eng.* **2025**, *13*, 635. https://doi.org/10.3390/jmse13040635.

Table S2. Mean density (100 cm^{-2}), percentage contribution (%C), number of samples (*n*) and frequency of occurrence (%F) of each benthic macroinvertebrate taxon and the minimum, maximum, mean and median salinity and salinity range (R) in which it was recorded in south-western Australian estuaries. An = Annelida; Ar = Arthropoda; Ch = Chordata; Cn = Cnidaria; E = Echinodermata; M = Mollusca; Nt = Nematoda; Ne = Nemertea; Ph =Phoronida; Pl = Platyhelminthes; R = Retaria.

			Abund. & occurrence				Salinity (ppt)				
Taxa	**Phylum**	**Order/Class**	**D**	**%C**	***n***	**%F**	**Min**	**Max**	**Mean**	**Med**	**R**
Hirudinea spp.	An	Hirudinea	0.01	0.012	5	0.3	12.1	28.4	23.3	24.7	17
Enchytraeidae sp.	An	Oligochaeta	0.00	0.001	2	0.1	27.8	27.8	27.8	27.8	1
Naididae sp.	An	Oligochaeta	0.00	0.001	2	0.1	31.9	32.2	32.0	32.0	2
Oligochaeta spp.	An	Oligochaeta	1.80	2.304	252	13.3	0.8	86.0	26.0	31.1	87
Aglaophamus australiensis	An	Polychaeta	0.00	0.002	2	0.1	35.2	35.3	35.3	35.3	1
Ampharetinae sp.	An	Polychaeta	0.00	0.002	1	0.1	31.6	31.6	31.6	31.6	1
Aricidea (*Acmira*) *lopezi*	An	Polychaeta	0.05	0.061	20	1.1	32.8	37.3	34.4	34.1	6
Armandia intermedia	An	Polychaeta	0.43	0.545	152	8.0	20.0	45.1	32.2	31.8	26
Australonereis ehlersi	An	Polychaeta	0.17	0.216	57	3.0	8.7	39.5	32.1	34.8	32
Australospio trifida	An	Polychaeta	0.00	0.001	4	0.2	7.4	30.9	14.0	8.9	24
Barantolla lepte	An	Polychaeta	0.18	0.225	39	2.1	16.1	37.6	30.1	32.2	22
Boccardia chilensis	An	Polychaeta	0.02	0.025	5	0.3	25.9	42.8	35.6	35.3	18
Boccardiella limnicola	An	Polychaeta	0.33	0.425	100	5.3	1.0	39.0	17.7	16.0	39
Brania sp.	An	Polychaeta	0.03	0.036	9	0.5	5.0	45.3	24.0	25.9	41
Capitella spp. (includes *C. capitata*)	An	Polychaeta	0.89	1.133	77	4.1	0.8	102.9	26.9	28.4	102
Carazziella victoriensis	An	Polychaeta	0.34	0.440	52	2.7	6.6	44.3	29.1	33.2	39
Caulleriella sp.	An	Polychaeta	0.02	0.019	9	0.5	31.6	34.8	33.8	34.0	4
Chrysopetalum occidentale	An	Polychaeta	0.01	0.011	8	0.4	34.2	35.4	34.7	34.7	2
Cirriformia sp.	An	Polychaeta	0.00	0.004	2	0.1	34.5	35.3	34.9	34.9	2
Desdemona ornata	An	Polychaeta	2.48	3.177	277	14.6	2.0	43.2	18.8	19.2	42
Dipolydora socialis	An	Polychaeta	0.04	0.045	9	0.5	29.1	41.5	35.0	36.8	13
Eunice vittata	An	Polychaeta	0.01	0.008	7	0.4	33.4	37.1	35.1	35.3	5
Eusyllis sp.	An	Polychaeta	0.10	0.130	28	1.5	31.0	35.4	34.2	34.5	5
Exogone heterosetosa	An	Polychaeta	0.01	0.017	3	0.2	31.6	45.4	37.8	36.5	15
Exogone sp.	An	Polychaeta	0.07	0.095	31	1.6	30.0	37.0	34.3	34.5	7
Exogoninae sp.	An	Polychaeta	0.00	0.001	1	0.1	34.9	34.9	34.9	34.9	1
Ficopomatus enigmaticus	An	Polychaeta	0.23	0.294	38	2.0	5.4	38.8	22.9	22.2	34
Galathowenia sp.	An	Polychaeta	0.01	0.007	2	0.1	30.2	41.2	35.7	35.7	12
Glycera sp.	An	Polychaeta	0.00	0.006	6	0.3	17.0	37.6	33.1	35.9	21
Glycera tridactyla	An	Polychaeta	0.00	0.002	1	0.1	36.5	36.5	36.5	36.5	1
Harmothoe praeclara	An	Polychaeta	0.01	0.011	2	0.1	31.0	31.0	31.0	31.0	1
Heteromastus filiformis	An	Polychaeta	0.66	0.850	92	4.9	2.5	47.1	33.9	35.3	46
Lumbrineris latreilli	An	Polychaeta	0.00	0.004	4	0.2	34.0	36.6	35.0	34.7	4
Lysidice unicornis	An	Polychaeta	0.00	0.003	2	0.1	34.7	34.8	34.8	34.8	1
Magelona sp.	An	Polychaeta	0.00	0.002	1	0.1	36.5	36.5	36.5	36.5	1
Malacoceros spp.	An	Polychaeta	0.01	0.017	5	0.3	29.9	39.4	35.5	38.6	11
Maldanidae sp.	An	Polychaeta	0.00	0.001	1	0.1	37.6	37.6	37.6	37.6	1
Manayunkia cf. *athalassia*	An	Polychaeta	0.00	0.001	1	0.1	39.5	39.5	39.5	39.5	1
Marphysa cf. *sanguinea*	An	Polychaeta	0.03	0.035	50	2.6	2.5	42.2	22.3	25.8	41
Mediomastus sp.	An	Polychaeta	0.02	0.026	7	0.4	27.9	37.6	34.5	35.3	11
Micromaldane sp.	An	Polychaeta	0.01	0.010	2	0.1	31.6	36.5	34.0	34.0	6
Naineris australis	An	Polychaeta	0.00	0.004	6	0.3	3.4	36.3	29.5	34.4	34
Namanereis sp.	An	Polychaeta	0.04	0.056	20	1.1	31.3	37.6	34.9	35.2	7
Neanthes cricognatha	An	Polychaeta	0.01	0.016	13	0.7	31.3	38.6	34.7	34.7	8
Neodexiospira sp.	An	Polychaeta	0.01	0.016	2	0.1	33.5	34.5	34.0	34.0	2
Nepthys sp.	An	Polychaeta	0.01	0.019	5	0.3	25.5	38.9	33.1	36.5	14
Nereididae spp.	An	Polychaeta	0.19	0.245	21	1.1	34.0	37.5	35.3	34.9	5
Notomastus annulus	An	Polychaeta	0.00	0.001	2	0.1	20.0	24.0	22.0	22.0	5
Notomastus esturius	An	Polychaeta	0.00	0.003	4	0.2	26.1	36.5	32.4	33.5	11
Onuphis holobranchiata	An	Polychaeta	0.01	0.012	5	0.3	34.5	34.8	34.7	34.7	1

			Abund. & occurrence				Salinity (ppt)				
Taxa	**Phylum**	**Order/Class**	**D**	**%C**	***n***	**%F**	**Min**	**Max**	**Mean**	**Med**	**R**
Paralepidonotus cf. *ampulliferus*	An	Polychaeta	0.00	0.001	1	0.1	34.7	34.7	34.7	34.7	1
Perinereis nuntia	An	Polychaeta	0.00	0.001	1	0.1	29.8	29.8	29.8	29.8	1
Phyllodoce cf. *longipes*	An	Polychaeta	0.00	0.004	3	0.2	32.2	37.6	35.0	35.4	6
Phyllodoce cf. *novaehollandiae*	An	Polychaeta	0.00	0.001	1	0.1	35.3	35.3	35.3	35.3	1
Phyllodoce spp.	An	Polychaeta	0.01	0.010	5	0.3	34.0	42.0	38.2	38.3	8
Plakosyllis brevipes	An	Polychaeta	0.00	0.004	3	0.2	34.0	34.7	34.2	34.0	2
Platynereis dumerilii antipoda	An	Polychaeta	0.00	0.003	3	0.2	34.3	35.3	34.8	34.7	2
Polydora spp.	An	Polychaeta	0.00	0.005	8	0.4	5.4	36.2	29.0	34.9	32
Polynoidae sp.	An	Polychaeta	0.00	0.002	1	0.1	35.2	35.2	35.2	35.2	1
Prionospio auklandica	An	Polychaeta	0.04	0.056	17	0.9	3.3	37.6	33.0	34.7	35
Prionospio cirrifera	An	Polychaeta	2.83	3.621	422	22.3	2.5	50.5	24.4	24.1	49
Prionospio multipinnulata	An	Polychaeta	0.05	0.063	3	0.2	22.4	36.5	30.2	31.6	15
Prionospio queenslandica	An	Polychaeta	0.01	0.011	3	0.2	33.5	34.5	34.1	34.3	2
Prionospio spp.	An	Polychaeta	0.00	0.001	2	0.1	31.5	33.1	32.3	32.3	3
Protodorvillea biarticulata	An	Polychaeta	0.00	0.003	1	0.1	35.3	35.3	35.3	35.3	1
Pseudopolydora cf. *kempi*	An	Polychaeta	4.07	5.204	448	23.7	1.1	107.2	22.7	21.7	107
Pseudopolydora paucibranchiata	An	Polychaeta	0.04	0.049	17	0.9	17.4	35.6	32.8	34.5	19
Pseudopolydora sp.	An	Polychaeta	0.04	0.051	18	1.0	16.8	34.9	27.4	29.3	19
Scalibregmatidae sp.	An	Polychaeta	0.00	0.001	1	0.1	37.0	37.0	37.0	37.0	0
Schistomeringos loveni	An	Polychaeta	0.01	0.013	7	0.4	33.5	35.3	34.4	34.7	3
Scoloplos normalis	An	Polychaeta	1.39	1.773	610	32.3	1.0	54.3	24.8	26.6	54
Scoloplos simplex	An	Polychaeta	0.01	0.018	11	0.6	1.1	35.3	25.2	34.3	35
Serpulidae sp.	An	Polychaeta	0.00	0.002	1	0.1	39.0	39.0	39.0	39.0	1
Simplisetia aequisetis	An	Polychaeta	5.18	6.622	794	42.0	1.0	63.6	25.2	28.9	63
Sphaerosyllis sp.	An	Polychaeta	0.01	0.017	3	0.2	17.0	31.6	24.5	24.7	15
Spio blakei	An	Polychaeta	0.03	0.033	11	0.6	33.3	36.8	34.6	34.4	4
Spionidae spp.	An	Polychaeta	0.22	0.278	52	2.7	3.0	51.3	21.6	20.4	50
Spirorbis sp.	An	Polychaeta	0.75	0.958	28	1.5	30.7	35.6	34.4	35.3	6
Syllidae spp.	An	Polychaeta	0.06	0.074	26	1.4	31.2	36.6	34.4	34.6	6
Tharyx sp.	An	Polychaeta	0.00	0.004	3	0.2	32.9	34.4	33.8	34.2	3
Thelepus australiensis	An	Polychaeta	0.00	0.004	3	0.2	34.3	35.3	34.8	34.8	2
Sipuncula spp.	An	Sipuncula	0.01	0.016	12	0.6	28.2	44.9	34.4	34.9	17
Daphnia sp.	Ar	Branchiopoda	0.00	0.001	1	0.1	52.7	52.7	52.7	52.7	1
Daphniidae spp.	Ar	Branchiopoda	0.01	0.007	7	0.4	1.8	34.8	9.5	5.4	34
Calanoida spp.	Ar	Copepoda	0.01	0.007	8	0.4	5.4	39.3	23.1	27.2	35
Copepoda spp.	Ar	Copepoda	0.02	0.029	3	0.2	10.8	36.5	20.3	13.5	27
Cyclopoida spp.	Ar	Copepoda	0.02	0.028	13	0.7	2.3	35.6	24.1	27.8	34
Harpacticoida spp.	Ar	Copepoda	0.01	0.018	3	0.2	27.7	27.8	27.7	27.8	1
Acritoptila globosa	Ar	Hexapoda	0.01	0.011	9	0.5	3.0	8.5	4.1	3.8	7
Aedes sp.	Ar	Hexapoda	0.00	0.001	1	0.1	7.7	7.7	7.7	7.7	1
Agraptocorixa sp.	Ar	Hexapoda	0.00	0.003	2	0.1	31.9	31.9	31.9	31.9	1
Berosus spp.	Ar	Hexapoda	0.02	0.032	46	2.4	0.8	96.5	14.7	6.2	97
Caenidae spp.	Ar	Hexapoda	0.00	0.005	2	0.1	2.1	2.3	2.2	2.2	1
Calliphora albifrontalis	Ar	Hexapoda	0.00	0.001	1	0.1	11.6	11.6	11.6	11.6	1
Ceratopogonidae spp.	Ar	Hexapoda	0.03	0.033	25	1.3	2.3	102.8	33.3	15.7	101
Chironominae spp.	Ar	Hexapoda	0.83	1.060	204	10.8	0.6	71.0	17.1	12.5	71
Chironomous occidentalis	Ar	Hexapoda	0.08	0.102	33	1.7	1.8	27.9	8.4	3.9	27
Chironomus alternans	Ar	Hexapoda	0.00	0.005	4	0.2	5.2	27.9	17.2	17.9	23
Chrironomidae spp.	Ar	Hexapoda	0.33	0.418	33	1.7	2.1	48.8	25.4	30.2	47
Coleoptera spp.	Ar	Hexapoda	0.00	0.005	3	0.2	2.7	5.4	3.7	3.1	4
Collembola sp.	Ar	Hexapoda	0.00	0.001	1	0.1	8.0	8.0	8.0	8.0	0
Coquillettidia spp.	Ar	Hexapoda	0.00	0.001	3	0.2	2.1	16.8	7.8	4.5	15
Corixidae sp.	Ar	Hexapoda	0.00	0.002	2	0.1	27.9	31.9	29.9	29.9	5
Culicidae spp.	Ar	Hexapoda	0.02	0.029	31	1.6	0.8	86.0	12.0	6.6	87
Curculionidae sp.	Ar	Hexapoda	0.00	0.000	1	0.1	29.9	29.9	29.9	29.9	1

			Abund. & occurrence				Salinity (ppt)				
Taxa	**Phylum**	**Order/Class**	**D**	**%C**	***n***	**%F**	**Min**	**Max**	**Mean**	**Med**	**R**
Dicrotendipes sp.	Ar	Hexapoda	0.20	0.256	17	0.9	17.7	25.6	20.0	18.0	9
Diptera spp.	Ar	Hexapoda	0.04	0.056	26	1.4	0.9	101.3	36.7	15.5	102
Dolichopodidae sp.	Ar	Hexapoda	0.00	0.001	2	0.1	3.0	39.1	21.1	21.1	37
Dytiscidae sp. 1	Ar	Hexapoda	0.00	0.006	13	0.7	0.8	27.8	9.5	5.7	28
Dytiscidae sp. 2	Ar	Hexapoda	0.00	0.001	1	0.1	1.3	1.3	1.3	1.3	1
Haliplus sp.	Ar	Hexapoda	0.01	0.011	16	0.8	1.8	56.3	14.2	3.5	56
Hydrochus spp.	Ar	Hexapoda	0.01	0.014	2	0.1	27.8	45.8	36.8	36.8	19
Hydrophilidae spp.	Ar	Hexapoda	0.00	0.005	8	0.4	15.7	57.1	29.3	23.2	43
Hydroptila sp.	Ar	Hexapoda	0.01	0.007	1	0.1	3.9	3.9	3.9	3.9	1
Leptoceridae spp.	Ar	Hexapoda	0.01	0.017	18	1.0	1.5	96.5	35.9	28.7	96
Megaporus sp.	Ar	Hexapoda	0.01	0.007	13	0.7	1.1	38.5	12.2	6.2	38
Micronecta robusta	Ar	Hexapoda	0.00	0.005	5	0.3	12.3	31.9	21.6	18.4	20
Notonectidae sp.	Ar	Hexapoda	0.00	0.003	4	0.2	16.9	58.5	39.6	41.5	43
Orthocladiinae sp.	Ar	Hexapoda	0.00	0.006	9	0.5	1.8	28.4	25.1	27.9	28
Paranisops sp.	Ar	Hexapoda	0.00	0.000	1	0.1	31.9	31.9	31.9	31.9	1
Paratanytrus grimmii	Ar	Hexapoda	0.02	0.032	31	1.6	4.8	20.8	6.8	5.3	17
Plecoptera sp.	Ar	Hexapoda	0.00	0.002	1	0.1	26.0	26.0	26.0	26.0	1
Pontomyia sp.	Ar	Hexapoda	0.28	0.353	148	7.8	5.9	40.8	23.8	26.7	36
Procladius sp.	Ar	Hexapoda	0.54	0.687	128	6.8	0.8	86.0	20.7	17.4	87
Procladius villosimanus	Ar	Hexapoda	0.02	0.026	14	0.7	2.4	16.7	9.6	11.0	15
Scarabaeidae sp.	Ar	Hexapoda	0.00	0.001	2	0.1	3.0	19.3	11.1	11.1	17
Stratiomyidae spp.	Ar	Hexapoda	0.00	0.005	8	0.4	10.1	50.8	31.4	36.2	41
Tabanidae sp.	Ar	Hexapoda	0.00	0.001	3	0.2	1.8	1.8	1.8	1.8	1
Tanypodinae spp.	Ar	Hexapoda	0.03	0.035	31	1.6	1.3	27.2	9.6	9.0	27
Tanytarsus barbitarsis	Ar	Hexapoda	1.34	1.720	68	3.6	4.9	121.8	82.4	92.1	118
Tipulidae sp.	Ar	Hexapoda	0.00	0.000	1	0.1	17.7	17.7	17.7	17.7	1
Trichoptera spp.	Ar	Hexapoda	0.01	0.007	6	0.3	1.1	60.3	19.9	17.3	60
Triplectides australis	Ar	Hexapoda	0.00	0.001	2	0.1	16.8	30.9	23.9	23.9	15
Triplectidina sp.	Ar	Hexapoda	0.00	0.001	1	0.1	61.8	61.8	61.8	61.8	1
Zygoptera spp.	Ar	Hexapoda	0.02	0.022	8	0.4	1.6	36.0	15.9	9.3	36
Ampelisca sp.	Ar	Malacostraca	0.01	0.012	5	0.3	33.8	34.7	34.2	34.0	2
Amphipoda spp.	Ar	Malacostraca	0.06	0.072	10	0.5	25.2	37.0	33.5	34.9	12
Ampithoe lacertosa	Ar	Malacostraca	0.01	0.018	14	0.7	31.2	35.6	35.0	35.3	5
Ampithoe sp.	Ar	Malacostraca	0.01	0.007	1	0.1	34.4	34.4	34.4	34.4	1
Ampithoe valida	Ar	Malacostraca	0.00	0.001	2	0.1	31.2	33.0	32.1	32.1	3
Anthuridae sp.	Ar	Malacostraca	0.01	0.008	6	0.3	33.1	34.8	34.1	34.1	2
Aora maculata	Ar	Malacostraca	0.01	0.018	6	0.3	33.1	35.3	34.3	34.1	3
Aoridae spp.	Ar	Malacostraca	0.05	0.061	14	0.7	10.8	38.6	31.2	34.6	29
Austrochiltonia subtenuis	Ar	Malacostraca	0.21	0.268	59	3.1	0.8	51.6	12.6	6.2	52
Barnardomelita matilda	Ar	Malacostraca	0.69	0.884	101	5.3	2.0	56.2	25.7	30.0	55
Birubius eake	Ar	Malacostraca	0.01	0.011	11	0.6	33.4	35.6	34.4	34.5	3
Branardomelita matilda	Ar	Malacostraca	0.17	0.221	94	5.0	5.2	42.8	22.7	25.4	38
Calcinus sp.	Ar	Malacostraca	0.00	0.001	2	0.1	33.4	35.4	34.4	34.4	3
Caprella scaura	Ar	Malacostraca	0.18	0.233	57	3.0	28.4	42.8	35.3	35.3	15
Cirolanidae sp.	Ar	Malacostraca	0.05	0.066	45	2.4	3.7	40.4	19.4	17.1	38
Corophium minor	Ar	Malacostraca	5.16	6.604	424	22.4	1.7	92.1	27.0	30.9	92
Cruranthura simplicia	Ar	Malacostraca	0.01	0.007	6	0.3	19.5	37.5	32.8	34.9	19
Cumacea spp.	Ar	Malacostraca	0.01	0.010	3	0.2	20.0	38.9	29.7	30.2	20
Cyathura hakea	Ar	Malacostraca	0.56	0.717	248	13.1	2.1	45.1	24.5	27.8	44
Cymothoidae sp.	Ar	Malacostraca	0.00	0.001	2	0.1	19.7	35.3	27.5	27.5	17
Dexaminidae sp. 1	Ar	Malacostraca	0.00	0.003	2	0.1	35.3	35.9	35.6	35.6	1
Dexaminidae sp. 2	Ar	Malacostraca	0.00	0.006	6	0.3	33.4	35.3	34.6	34.6	3
Diastylidae sp.	Ar	Malacostraca	0.00	0.003	3	0.2	35.3	37.0	36.2	36.5	2
Diogenidae sp.	Ar	Malacostraca	0.00	0.001	1	0.1	35.1	35.1	35.1	35.1	1
Ericthonius parabrasiliensis	Ar	Malacostraca	0.03	0.044	13	0.7	30.7	37.1	33.4	34.8	8
Eusiridae spp.	Ar	Malacostraca	0.14	0.184	18	1.0	2.1	44.3	31.3	35.4	43

			Abund. & occurrence				Salinity (ppt)				
Taxa	**Phylum**	**Order/Class**	**D**	**%C**	***n***	**%F**	**Min**	**Max**	**Mean**	**Med**	**R**
Exosphaeroma serventii	Ar	Malacostraca	0.03	0.032	17	0.9	2.0	6.2	4.0	3.9	5
Gastrosaccinae sp.	Ar	Malacostraca	0.00	0.001	2	0.1	35.3	35.5	35.4	35.4	1
Gastrosaccus sorrentoensis	Ar	Malacostraca	0.01	0.013	16	0.8	10.8	41.9	29.6	31.6	32
Gastrosaccus sp.	Ar	Malacostraca	0.00	0.000	1	0.1	7.7	7.7	7.7	7.7	1
Grandidierella spp. (*G. japonica* and *G. propodentata*)	Ar	Malacostraca	1.47	1.886	299	15.8	1.1	101.3	25.9	29.4	101
Halicarcinus ovatus	Ar	Malacostraca	0.00	0.004	4	0.2	26.2	35.3	32.0	33.3	10
Haplostylus tenuicaudus	Ar	Malacostraca	0.00	0.002	3	0.2	33.7	34.6	34.0	33.7	2
Hyssuridae sp.	Ar	Malacostraca	0.00	0.002	2	0.1	34.9	35.6	35.3	35.3	2
Isopoda spp.	Ar	Malacostraca	0.00	0.006	4	0.2	5.7	34.8	27.5	34.7	30
Leptochelia spp.	Ar	Malacostraca	0.08	0.106	28	1.5	25.9	35.3	33.7	34.5	11
Lucascinus bedfordi	Ar	Malacostraca	0.01	0.011	12	0.6	17.4	38.6	32.5	35.1	22
Mysidae spp.	Ar	Malacostraca	0.02	0.023	12	0.6	25.8	44.9	35.2	35.0	20
Nasutoplax rostrata	Ar	Malacostraca	0.00	0.005	4	0.2	24.1	36.5	32.5	34.8	13
Oedicerotidae sp.	Ar	Malacostraca	0.03	0.033	3	0.2	28.4	33.1	30.6	30.2	6
Oniscidea spp.	Ar	Malacostraca	0.01	0.010	13	0.7	4.8	30.2	13.3	10.2	27
Ovalipes australiensis	Ar	Malacostraca	0.00	0.001	1	0.1	34.6	34.6	34.6	34.6	1
Palaemon australis	Ar	Malacostraca	0.06	0.081	45	2.4	2.4	52.2	25.2	27.9	51
Palaemon mundusnovus	Ar	Malacostraca	0.00	0.002	2	0.1	33.0	35.3	34.1	34.1	4
Paracerceis sculpta	Ar	Malacostraca	0.01	0.017	11	0.6	19.3	38.6	32.6	31.3	20
Paracorophium excavatum	Ar	Malacostraca	2.13	2.728	238	12.6	1.1	49.4	19.6	17.8	49
Penaeus latisulcatus	Ar	Malacostraca	0.00	0.002	4	0.2	1.8	34.9	19.5	20.8	34
Perthia sp.	Ar	Malacostraca	0.05	0.060	35	1.9	1.1	56.3	19.6	18.0	56
Philocheras victoriensis	Ar	Malacostraca	0.00	0.001	1	0.1	37.1	37.1	37.1	37.1	1
Pilumnopeus serratifrons	Ar	Malacostraca	0.00	0.003	3	0.2	35.1	35.6	35.4	35.5	1
Platynympha longicaudata	Ar	Malacostraca	0.00	0.004	3	0.2	36.3	37.1	36.7	36.6	2
Quadrimaera cf. *viridis*	Ar	Malacostraca	0.01	0.019	7	0.4	34.0	35.4	34.5	34.4	3
Sphaeroma quoianum	Ar	Malacostraca	0.00	0.001	2	0.1	36.7	38.5	37.6	37.6	3
Sphaeromatidae spp.	Ar	Malacostraca	0.04	0.046	7	0.4	2.1	42.2	16.5	7.3	41
Syncassidina aestuaria	Ar	Malacostraca	0.04	0.045	19	1.0	5.9	38.0	24.1	30.3	34
Tanaidacea sp.	Ar	Malacostraca	0.62	0.790	11	0.6	26.9	48.4	40.7	43.3	23
Tanais dulongii	Ar	Malacostraca	1.16	1.478	42	2.2	2.3	38.6	33.4	34.9	37
Varunidae sp.	Ar	Malacostraca	0.00	0.001	1	0.1	31.6	31.6	31.6	31.6	1
Alboa worooa	Ar	Ostracoda	0.02	0.024	33	1.7	1.5	74.4	21.5	12.7	74
Bennelongia australis	Ar	Ostracoda	0.00	0.000	1	0.1	40.3	40.3	40.3	40.3	1
Candonocypris novaezelandiae	Ar	Ostracoda	0.00	0.006	11	0.6	1.7	46.2	15.9	3.3	46
Cyprididae sp.	Ar	Ostracoda	0.00	0.004	5	0.3	27.7	28.4	28.1	27.9	2
Mytilocypris ambiguosa	Ar	Ostracoda	0.10	0.123	46	2.4	0.8	63.6	14.7	4.7	64
Mytilocypris mytiloides	Ar	Ostracoda	0.53	0.682	101	5.3	1.1	67.2	15.4	9.1	67
Ostracoda sp.	Ar	Ostracoda	0.00	0.001	2	0.1	22.6	34.9	28.8	28.8	13
Salpida sp.	Ch	Thaliacea	0.00	0.001	1	0.1	19.9	19.9	19.9	19.9	1
Actiniaria spp.	Cn	Hexacorallia	0.04	0.048	11	0.6	24.8	46.2	38.1	34.9	23
Rhizostomeae sp.	Cn	Scyphozoa	0.00	0.001	1	0.1	36.0	36.0	36.0	36.0	0
Asterinidae sp.	E	Asteroidea	0.00	0.001	1	0.1	34.0	34.0	34.0	34.0	1
Echinoidea sp.	E	Echinoidea	0.00	0.001	1	0.1	34.8	34.8	34.8	34.8	1
Temnopleuridae sp.	E	Echinoidea	0.00	0.001	1	0.1	36.6	36.6	36.6	36.6	1
Ophiomyxa australis	E	Ophiuroidea	0.01	0.007	3	0.2	34.7	35.4	35.0	34.8	2
Ophiuroidea sp.	E	Ophiuroidea	0.00	0.002	1	0.1	36.5	36.5	36.5	36.5	1
Foraminifera sp.	F		0.00	0.001	1	0.1	52.7	52.7	52.7	52.7	1
Arcuatula senhousia	M	Bivalvia	0.43	0.556	28	1.5	17.7	35.6	34.2	34.9	19
Arthritica semen	M	Bivalvia	8.77	11.217	699	37.0	1.0	54.3	22.8	22.7	54
Brachidontes erosus	M	Bivalvia	0.00	0.001	1	0.1	34.1	34.1	34.1	34.1	1
Fluviolanatus subtortus	M	Bivalvia	3.31	4.235	231	12.2	1.8	45.1	18.4	18.9	45
Hiatula biradiata	M	Bivalvia	0.89	1.134	210	11.1	1.0	44.9	29.3	34.8	44
Irus crenatus	M	Bivalvia	0.00	0.005	5	0.3	34.9	38.2	36.6	37.4	5

			Abund. & occurrence				Salinity (ppt)				
Taxa	**Phylum**	**Order/Class**	**D**	**%C**	***n***	**%F**	**Min**	**Max**	**Mean**	**Med**	**R**
Lasaea australis	M	Bivalvia	0.00	0.002	3	0.2	30.2	38.4	34.5	34.8	9
Macomona deltoidalis	M	Bivalvia	0.05	0.062	44	2.3	19.1	39.7	32.8	34.9	21
Mysella spp.	M	Bivalvia	0.56	0.720	27	1.4	2.8	46.2	32.7	31.7	45
Mytilus sp.	M	Bivalvia	0.00	0.001	1	0.1	26.2	26.2	26.2	26.2	1
Solemya australis	M	Bivalvia	0.00	0.002	3	0.2	34.1	34.8	34.6	34.8	1
Spisula trigonella	M	Bivalvia	0.20	0.253	41	2.2	2.5	52.4	28.0	27.4	51
Theora lubrica	M	Bivalvia	0.02	0.031	7	0.4	27.9	43.4	34.8	33.6	17
Venerupis galactites	M	Bivalvia	0.01	0.011	6	0.3	25.8	37.1	32.4	32.6	13
Xenostrobus inconstans	M	Bivalvia	0.00	0.001	1	0.1	5.4	5.4	5.4	5.4	1
Xenostrobus securis	M	Bivalvia	0.02	0.020	81	4.2	2.1	38.8	19.5	22.4	37
Ascorhis occidua	M	Gastropoda	0.27	0.346	40	2.1	1.6	46.7	11.2	5.8	46
Assiminea sp.	M	Gastropoda	0.00	0.005	2	0.1	2.5	30.2	16.3	16.3	29
Batillaria australis	M	Gastropoda	0.37	0.477	105	5.6	5.9	39.5	34.2	35.3	35
Bedeva paivae	M	Gastropoda	0.00	0.001	1	0.1	38.2	38.2	38.2	38.2	1
Cacozeliana granarium	M	Gastropoda	0.01	0.007	2	0.1	32.9	34.5	33.7	33.7	3
Coxiella striatula	M	Gastropoda	0.00	0.003	6	0.3	3.0	69.9	23.0	11.9	68
Cypraeidae sp.	M	Gastropoda	0.00	0.004	1	0.1	34.8	34.8	34.8	34.8	1
Hydrococcus brazieri	M	Gastropoda	0.01	0.008	6	0.3	7.7	54.3	37.9	40.6	48
Janthina exigua	M	Gastropoda	0.00	0.001	1	0.1	31.2	31.2	31.2	31.2	1
Mitrella lincolnensis	M	Gastropoda	0.00	0.001	1	0.1	35.3	35.3	35.3	35.3	1
Munditia subquadrata	M	Gastropoda	0.00	0.001	1	0.1	34.7	34.7	34.7	34.7	1
Nassarius particeps	M	Gastropoda	0.00	0.002	2	0.1	34.8	34.8	34.8	34.8	1
Nassarius spp.	M	Gastropoda	0.03	0.032	23	1.2	16.5	35.6	29.7	34.9	20
Naticidae sp.	M	Gastropoda	0.00	0.001	1	0.1	20.0	20.0	20.0	20.0	1
Olividae sp.	M	Gastropoda	0.00	0.002	1	0.1	44.3	44.3	44.3	44.3	1
Physa sp.	M	Gastropoda	0.00	0.001	1	0.1	0.8	0.8	0.8	0.8	1
Planorbidae sp.	M	Gastropoda	0.00	0.000	1	0.1	36.3	36.3	36.3	36.3	1
Potamopyrgus spp.	M	Gastropoda	1.28	1.633	158	8.4	0.6	96.5	26.4	26.5	97
Scutellastra laticostata	M	Gastropoda	0.00	0.003	1	0.1	34.8	34.8	34.8	34.8	1
Tanea sp.	M	Gastropoda	0.12	0.148	6	0.3	31.7	56.2	44.2	44.9	26
Tatea rufilabris	M	Gastropoda	0.03	0.041	19	1.0	1.1	24.0	16.3	19.7	23
Tatea sp.	M	Gastropoda	0.00	0.002	3	0.2	5.9	19.1	13.3	14.9	15
Tritia burchardi	M	Gastropoda	0.15	0.198	116	6.1	16.1	45.8	30.9	34.9	30
Acanthochitonidae sp.	M	Polyplacophora	0.00	0.001	1	0.1	35.3	35.3	35.3	35.3	1
Leptochiton matthewsianus	M	Polyplacophora	0.00	0.001	1	0.1	37.1	37.1	37.1	37.1	1
Paradentalium hemileuron	M	Scaphopoda	0.00	0.002	2	0.1	34.3	35.3	34.8	34.8	2
Nematoda spp.	Nt		1.45	1.858	108	5.7	0.8	46.5	29.9	34.9	47
Nemertea spp.	Ne		0.11	0.146	83	4.4	4.5	44.3	30.4	33.4	41
Phoronis sp.	Ph		0.00	0.002	1	0.1	38.9	38.9	38.9	38.9	1
Platyhelminthes spp.	Pl		0.00	0.001	2	0.1	36.3	40.6	38.5	38.5	5
Polycladida sp.	Pl		0.02	0.025	20	1.1	34.8	35.6	35.2	35.3	2
Rhabditophora sp.	Pl		0.00	0.001	2	0.1	34.9	34.9	34.9	34.9	1