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Supplement of

A potential explanation for the anomalously low nitrate to phosphate ratio in the well-oxygenated East/Japan Sea

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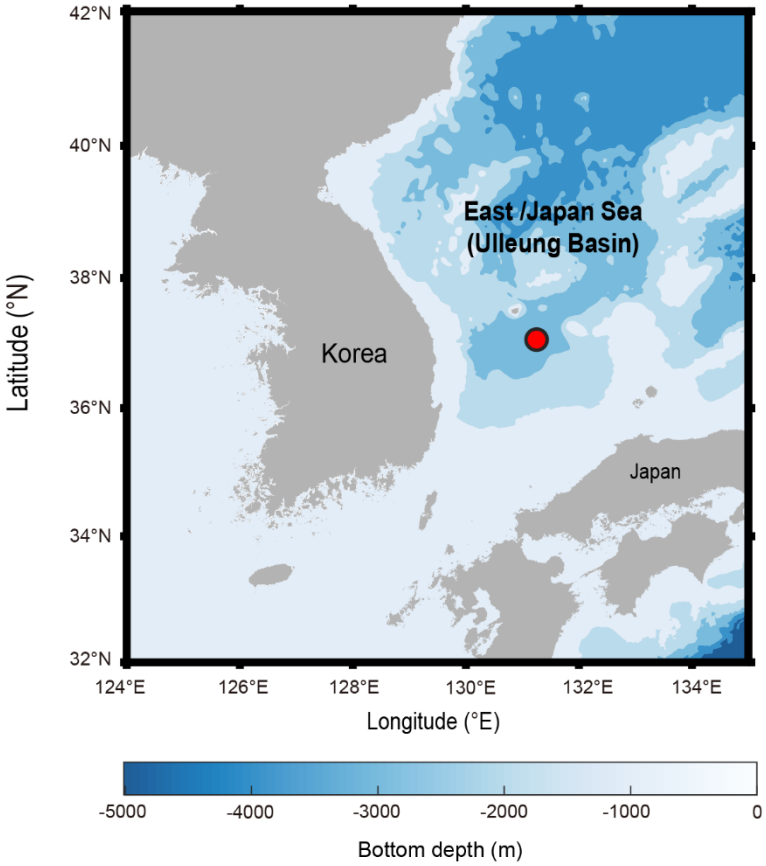

Figure S1. Map of the sampling station in the Ulleung Basin, East/Japan Sea (EJS). Geographic location of the sampling site in the Ulleung Basin (UB), southwestern East/Japan Sea (EJS). The sampling station (37.056°N, 131.251°E), marked by a red circle with a black edge, is located in the central part of the UB–a deep semi-enclosed subregion of the ES.

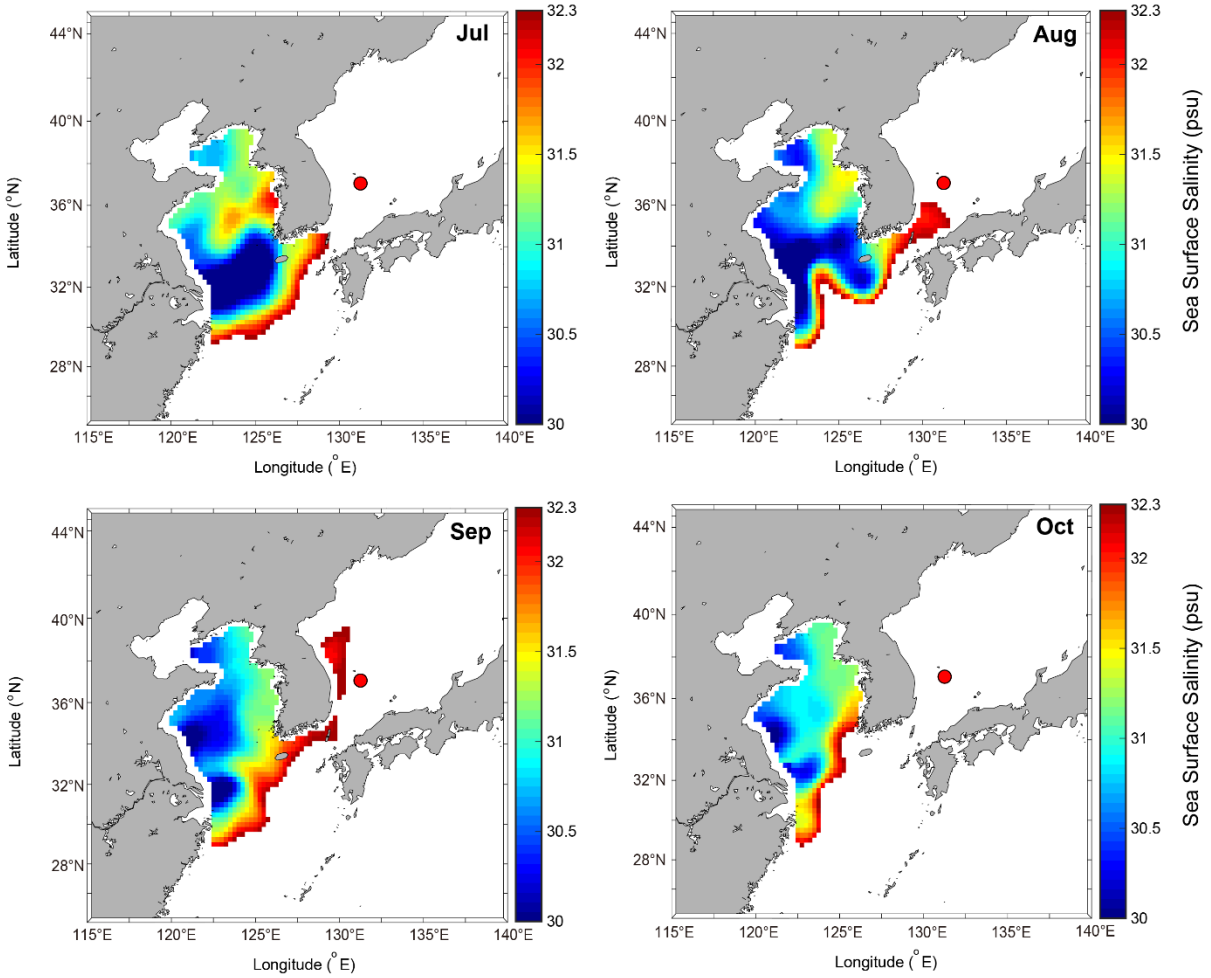

Figure S2. Satellite-based detection of seasonal Changjiang Diluted Water inflow to the East/Japan Sea (EJS). Seasonal distribution of Changjiang Diluted Water (CDW) inferred from satellite-derived sea surface salinity (SSS) data during July–October 2021. Monthly SSS values for the surface layer were obtained from the NASA Ocean Salinity project and visualized using a fixed color scale of 30–32.3 psu. Sampling stations are marked by red circles. Data were derived from Aquarius, SMAP (RSS V5.0), and SMOS MIRAS sensors and provided as Level-4 gridded products with a spatial resolution of 0.25° (~40 km). This figure highlights the seasonal inflow of Yangtze River freshwater, identified as a major source of phosphorus to the surface layer.

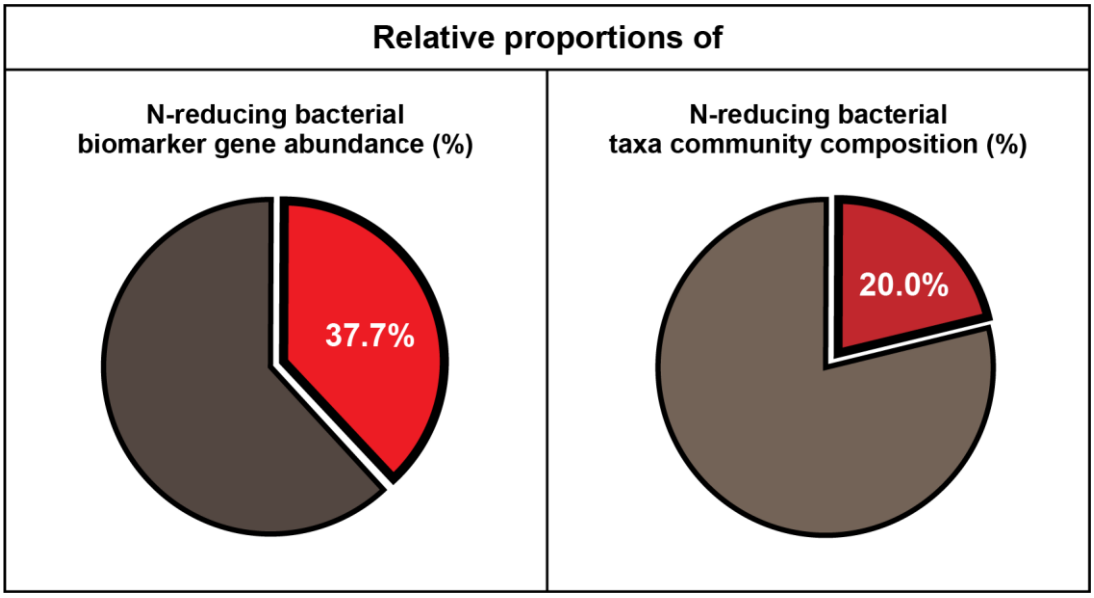

Figure S3. Proportional composition of N-reducing bacterial biomarker genes and taxa integrated across all depths and sampling months. Proportion composition of nitrogen (N)-reducing genes and associated bacterial taxa across five depths (0−1000m) during the sampling period (February, April, June, August, and October). The left panel shows the relative abundance of genes involved in nitrate reduction (*nap* and *nar*) and denitrification (*nap, nar, nir, nor,* and *nos*), calculated as a percentage of total N-transformation genes. The right panel illustrates the composition of bacterial communities predicted to perform these N-reducing functions. Proportions were computed by dividing the abundance of N-reducing genes (or bacterial taxa) by the total abundance of all N-transformation genes (or the entire bacterial community), then multiplying by 100. Corresponding depth- and month-specific profiles for each gene and taxon are shown in Fig. 3 and Fig. 4.

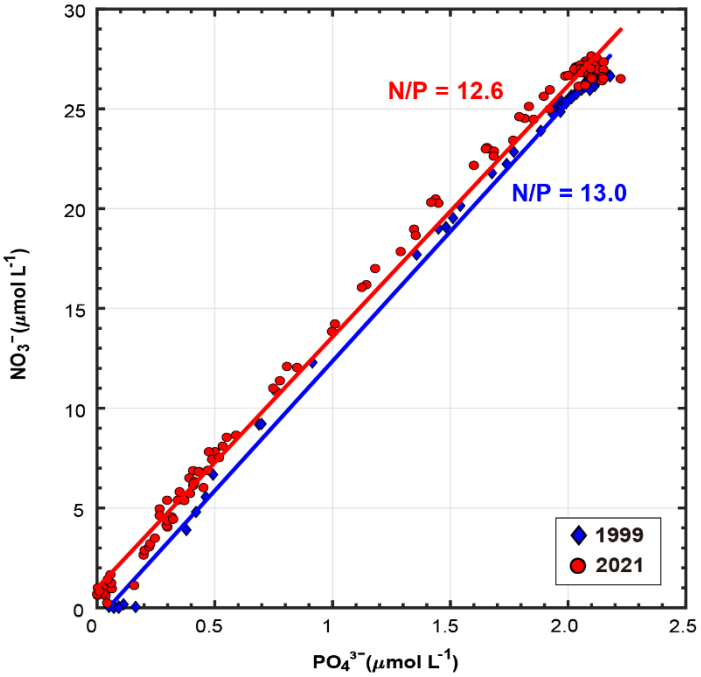

Figure S4. Decadal shift in N:P stoichiometry near the East/Japan Sea (EJS) study site. Nitrate-to-phosphate (NO_3^-:PO_4^{3-}) ratios at the 2021 sampling station (red circle) and three nearby stations from the 1999 CREAMS survey (blue diamonds; Station 1: 37.05°N, 130.93°E; Station 2: 37.41°N, 131.41°E; Station 3: 37.05°N, 131.68°E). This figure compares local N:P ratios between 1999 and 2021, capturing decadal changes in nutrient stoichiometry (Linear regressions of PO_4^{3-} (x-axis) versus NO_3^- (y-axis) show strong correlations in both years, with $R^2 = 0.95$ and $p < 0.05$ for 1999, and $R^2 = 0.92$ and $p < 0.05$ for 2021).

Table S1. Summary of N-transformation gene abundance across five depths and sampling months.

month	depth	*gdh2+ureC*	*pmo-amo*	*hao*	*nxr*	*nar+nap*	*nir*	*nor*	*nos*
Feb	0	1.81×10^{-4}	3.15×10^{-4}	7.48×10^{-8}	6.50×10^{-6}	1.18×10^{-5}	3.74×10^{-4}	7.56×10^{-6}	1.90×10^{-6}
	150	3.33×10^{-4}	4.07×10^{-4}	5.33×10^{-8}	1.33×10^{-5}	2.50×10^{-5}	4.86×10^{-4}	1.93×10^{-5}	4.01×10^{-6}
	300	2.60×10^{-4}	2.77×10^{-4}	2.33×10^{-7}	2.55×10^{-5}	5.18×10^{-5}	3.41×10^{-4}	2.14×10^{-5}	5.62×10^{-6}
	750	1.66×10^{-4}	6.85×10^{-5}	8.78×10^{-8}	3.22×10^{-5}	7.54×10^{-5}	1.01×10^{-4}	2.27×10^{-5}	9.71×10^{-6}
	1000	1.82×10^{-4}	4.09×10^{-5}	4.29×10^{-8}	1.81×10^{-5}	4.38×10^{-5}	6.21×10^{-5}	1.81×10^{-5}	7.77×10^{-6}
Apr	0	3.64×10^{-5}	2.99×10^{-5}	0	6.40×10^{-6}	8.48×10^{-6}	5.59×10^{-5}	1.05×10^{-5}	1.67×10^{-6}
	150	2.59×10^{-4}	4.36×10^{-4}	9.28×10^{-9}	9.18×10^{-6}	1.28×10^{-5}	5.21×10^{-4}	1.91×10^{-5}	2.77×10^{-6}
	300	2.67×10^{-4}	4.17×10^{-4}	5.77×10^{-8}	1.12E-05	2.13×10^{-5}	4.98×10^{-4}	1.65×10^{-5}	3.08×10^{-6}
	750	2.12×10^{-4}	7.96×10^{-5}	1.53×10^{-7}	2.20×10^{-5}	5.81×10^{-5}	1.21×10^{-4}	2.17×10^{-5}	8.81×10^{-6}
	1000	1.65×10^{-4}	6.33×10^{-5}	5.42×10^{-8}	3.96×10^{-5}	9.45×10^{-5}	9.36×10^{-5}	3.51×10^{-5}	1.14×10^{-5}
Jun	0	1.36×10^{-5}	1.24×10^{-7}	2.30×10^{-8}	4.4×10^{-6}	7.41E-06	7.64×10^{-6}	6.93×10^{-6}	1.18×10^{-6}
	150	2.86×10^{-4}	4.80×10^{-4}	6.20×10^{-9}	1.02×10^{-5}	1.45×10^{-5}	5.76×10^{-4}	2.97×10^{-5}	3.43×10^{-6}
	300	2.80×10^{-4}	3.46×10^{-4}	6.24×10^{-8}	3.08×10^{-5}	5.05×10^{-5}	4.29×10^{-4}	3.18×10^{-5}	4.04×10^{-6}
	750	1.58×10^{-4}	1.73×10^{-4}	4.09×10^{-8}	1.81×10^{-5}	3.67×10^{-5}	2.10×10^{-4}	1.17×10^{-5}	4.48×10^{-6}
	1000	3.11×10^{-4}	2.23×10^{-5}	1.87×10^{-8}	4.68×10^{-5}	8.07×10^{-5}	4.41×10^{-5}	3.06×10^{-5}	1.42×10^{-5}
Aug	0	2.48×10^{-4}	3.28×10^{-7}	1.46×10^{-7}	5.53×10^{-6}	7.47×10^{-5}	4.37×10^{-6}	3.04×10^{-6}	1.12×10^{-6}
	150	3.54×10^{-4}	5.06×10^{-4}	6.21×10^{-8}	1.49×10^{-5}	2.39×10^{-5}	6.14×10^{-4}	3.88×10^{-5}	7.35×10^{-6}
	300	3.21×10^{-4}	3.80×10^{-4}	1.83×10^{-7}	1.18×10^{-5}	3.66×10^{-5}	4.75×10^{-4}	4.25×10^{-5}	1.22×10^{-5}
	750	3.46×10^{-4}	9.32×10^{-5}	2.12×10^{-7}	1.67×10^{-5}	5.10×10^{-5}	1.33×10^{-4}	2.63×10^{-5}	1.13×10^{-5}
	1000	4.52×10^{-4}	4.08×10^{-5}	5.32×10^{-8}	2.67×10^{-5}	7.44×10^{-5}	8.78×10^{-5}	4.09×10^{-5}	1.92×10^{-5}
Oct	0	3.09×10^{-5}	3.48×10^{-6}	1.58×10^{-8}	1.76×10^{-6}	8.89×10^{-6}	4.37×10^{-7}	1.70×10^{-6}	8.51×10^{-7}
	150	3.60×10^{-4}	5.04×10^{-4}	1.52×10^{-8}	1.57×10^{-5}	3.22×10^{-5}	6.57×10^{-6}	2.65×10^{-5}	8.21×10^{-6}
	300	3.11×10^{-4}	4.00×10^{-4}	4.98×10^{-8}	1.26×10^{-5}	3.31×10^{-5}	7.38×10^{-6}	2.40×10^{-5}	9.06×10^{-6}
	750	2.90×10^{-4}	9.05×10^{-5}	9.29×10^{-8}	1.37×10^{-5}	5.20×10^{-5}	1.14×10^{-5}	3.34×10^{-5}	1.60×10^{-5}
	1000	1.47×10^{-4}	6.05×10^{-5}	2.77×10^{-7}	1.79×10^{-5}	4.33×10^{-5}	4.41×10^{-6}	1.91×10^{-5}	8.48×10^{-6}

Table S2. Class and phylum-level classification of 42 bacterial orders identified during bimonthly surveys in the East/Japan Sea in 2021.

Phylum	Class	Order
Proteobacteria	Gammaproteobacteria	*Xanthomonadales*
		Thiotrichales
		Nevskiales
		Cellvibrionales
		Vibrionales
		Enterobacterales
		Oceanospirillales
		Alteromonadales
		Pseudomonadales
		unclassified
		Salinisphaerales
	Alphaproteobacteria	*Pelagibacterales*
		Maricaulales
		Rhizobiales
		Rhodobacterales
		Caulobacterales
		Sphingomonadales
		Hyphomonadales
		Kordiimonadales
		Rhodospirillales
	Betaproteobacteria	*Burkholderiales*
	Deltaproteobacteria	*Myxococcales*
Bacteroidetes	Saprospiria	*Saprospirales*
	Cytophagia	*Cytophagales*
	Flavobacteriia	*Flavobacteriales*
	Bacteroidia	*Bacteroidales*
	Sphingobacteriia	*Sphingobacteriales*
	Chitinophagia	*Chitinophagales*
Actinobacteria	Actinomycetia	*Corynebacteriales*
		Propionibacteriales
		Micrococcales
		Geodermatophilales
Balneolaeota	Balneolia	*Balneolales*
Cyanobacteria	unclassified	*Synechococcales*
Fusobacteria	Fusobacteriia	*Fusobacteriales*
Firmicutes	Bacilli	*Bacillales*
		Lactobacillales
Planctomycetes	Planctomycetia	*Pirellulales*
		Planctomycetales
Verrucomicrobia	Verrucomicrobiae	*Verrucomicrobiales*
Lentisphaerae	Lentisphaeria	*Lentisphaerales*
Thaumarchaeota	unclassified	*Nitrosopumilales*

Table S3. Bacterial community composition (%) by depth and sampling month. Bacterial community composition (%) is presented for five depths (0, 150, 300, 750 and 1000 m) across five sampling months (February, April, June, August and October). A total of 42 bacterial orders were identified, and relative abundance values at each depth are denoted by labels **a**–**e**, respectively.

a

Order	Feb (0m)	Apr (0m)	Jun (0m)	Aug (0m)	Oct (0m)
Oceanospirillales	0.318	0.065	0.039	0.231	0.186
Pelagibacterales	67.537	75.064	86.269	58.607	93.267
Flavobacteriales	2.212	8.025	1.363	1.283	1.792
Maricaulales	0.032	0.173	0.019	0.007	0.000
Rhizobiales	0.030	0.022	0.014	0.076	0.049
Rhodobacterales	14.198	14.364	11.696	5.426	1.198
Alteromonadales	1.475	0.232	0.235	2.151	0.571
Pseudomonadales	0.000	0.032	0.006	0.000	0.000
Nitrosopumilales	12.477	1.245	0.008	0.014	0.145
Caulobacterales	0.005	0.000	0.002	0.000	0.000
Corynebacteriales	0.005	0.078	0.006	0.007	0.000
Balneolales	0.000	0.000	0.002	0.000	0.003
Micrococcales	0.002	0.000	0.000	0.000	0.005
unclassified	0.037	0.013	0.008	0.000	0.000
Synechococcales	0.005	0.002	0.044	30.596	2.244
Burkholderiales	0.016	0.004	0.000	0.000	0.000
Geodermatophilales	0.002	0.000	0.002	0.007	0.015
Salinisphaerales	0.000	0.000	0.052	0.003	0.000
Fusobacteriales	0.021	0.015	0.009	0.007	0.010
Bacillales	0.014	0.000	0.003	0.000	0.000
Thiotrichales	0.103	0.002	0.002	0.000	0.000
Hyphomonadales	0.011	0.420	0.038	0.083	0.101
Sphingomonadales	0.018	0.006	0.013	0.169	0.080
Pirellulales	0.082	0.019	0.008	0.000	0.124
Vibrionales	0.005	0.011	0.022	1.074	0.072
Propionibacteriales	0.014	0.067	0.017	0.014	0.013
Verrucomicrobiales	0.385	0.102	0.038	0.014	0.000
Cytophagales	0.000	0.000	0.023	0.114	0.005
Cellvibrionales	0.000	0.000	0.000	0.003	0.000
Kordiimonadales	0.005	0.006	0.000	0.007	0.010
Rhodospirillales	0.018	0.013	0.008	0.041	0.065
Lentisphaerales	0.962	0.009	0.055	0.062	0.018
Lactobacillales	0.005	0.002	0.002	0.007	0.003
Bacteroidales	0.005	0.006	0.000	0.000	0.023
Sphingobacteriales	0.005	0.000	0.000	0.000	0.000

82 **b**

Order	Feb (150m)	Apr (150m)	Jun (150m)	Aug (150m)	Oct (150m)
Oceanospirillales	0.662	0.128	0.290	0.662	1.340
Pelagibacterales	45.304	63.973	63.677	52.732	52.303
Flavobacteriales	1.294	1.038	0.856	2.337	1.421
Maricaulales	0.042	0.013	0.026	0.000	0.003
Rhizobiales	0.279	0.088	0.120	0.305	0.492
Rhodobacterales	8.594	11.386	9.346	12.366	8.150
Alteromonadales	12.843	0.807	1.144	4.918	2.686
Chitinophagales	0.000	0.002	0.000	0.000	0.000
Pseudomonadales	0.058	0.002	0.041	0.006	0.000
Nitrosopumilales	25.235	20.374	22.712	23.959	30.663
Caulobacterales	0.053	0.025	0.000	0.017	0.010
Corynebacteriales	0.132	0.065	0.054	0.026	0.201
Balneolales	0.005	0.000	0.002	0.000	0.010
Micrococcales	0.000	0.000	0.004	0.009	0.010
unclassified	0.013	0.061	0.021	0.023	0.019
Synechococcales	0.003	0.002	0.002	0.081	0.013
Burkholderiales	0.061	0.055	0.054	0.046	0.000
Geodermatophilales	0.000	0.000	0.079	0.000	0.026
Salinisphaerales	0.000	0.000	0.006	0.009	0.003
Fusobacteriales	0.003	0.010	0.036	0.015	0.019
Bacillales	0.074	0.036	0.051	0.105	0.016
Thiotrichales	1.218	0.000	0.000	0.026	0.006
Hyphomonadales	0.324	0.648	0.272	0.636	0.450
Sphingomonadales	0.058	0.034	0.103	0.221	0.317
Enterobacterales	0.003	0.000	0.002	0.009	0.000
Pirellulales	0.211	0.153	0.079	0.218	0.395
Vibrionales	0.235	0.078	0.103	0.139	0.223
Propionibacteriales	0.224	0.080	0.144	0.253	0.236
Verrucomicrobiales	1.885	0.614	0.182	0.017	0.013
Cytophagales	0.013	0.002	0.051	0.017	0.003
Cellvibrionales	0.018	0.004	0.006	0.070	0.016
Saprospirales	0.029	0.000	0.000	0.000	0.000
Kordiimonadales	0.026	0.015	0.011	0.000	0.074
Rhodospirillales	0.214	0.023	0.051	0.235	0.809
Lentisphaerales	0.849	0.275	0.463	0.537	0.045
Lactobacillales	0.011	0.008	0.004	0.000	0.023
Bacteroidales	0.016	0.002	0.002	0.006	0.003
Xanthomonadales	0.003	0.000	0.002	0.000	0.000
Sphingobacteriales	0.011	0.000	0.000	0.000	0.000

83 **c**

Order	Feb (300m)	Apr (300m)	Jun (300m)	Aug (300m)	Oct (300m)
Oceanospirillales	0.637	0.182	0.688	0.983	1.888
Pelagibacterales	46.886	49.597	49.239	43.153	52.195
Flavobacteriales	4.928	3.550	3.828	9.556	1.968
Maricaulales	0.086	0.000	0.000	0.032	0.018
Rhizobiales	0.763	0.273	2.878	0.444	0.618
Rhodobacterales	6.732	5.599	7.736	7.027	5.500
Alteromonadales	9.091	2.441	1.601	7.007	2.932
Chitinophagales	0.000	0.005	0.514	0.000	0.000
Pseudomonadales	0.199	0.051	0.282	0.011	0.004
Nitrosopumilales	20.457	28.856	24.814	27.504	31.709
Caulobacterales	0.184	0.008	2.146	0.000	0.004
Corynebacteriales	0.128	0.230	0.146	0.080	0.133
Balneolales	0.000	0.000	0.000	0.000	0.004
Micrococcales	0.031	0.003	0.600	0.000	0.000
unclassified	0.015	0.011	0.022	0.011	0.031
Synechococcales	0.002	0.008	0.000	0.550	0.000
Burkholderiales	0.325	0.080	0.097	0.109	0.018
Geodermatophilales	0.144	0.000	0.029	0.000	0.013
Salinisphaerales	0.000	0.000	0.042	0.000	0.000
Fusobacteriales	0.095	0.003	0.011	0.037	0.004
Bacillales	2.237	0.046	0.077	0.209	0.049
Thiotrichales	1.603	0.000	0.044	0.040	0.036
Hyphomonadales	0.745	1.380	0.137	0.803	0.564
Sphingomonadales	0.489	0.059	1.171	0.209	0.280
Enterobacterales	0.042	0.013	0.000	0.003	0.000
Pirellulales	0.102	0.311	0.262	0.333	0.333
Vibrionales	0.097	0.091	0.079	0.198	0.142
Propionibacteriales	0.694	0.319	0.452	0.232	0.173
Verrucomicrobiales	0.780	5.599	0.505	0.361	0.120
Cytophagales	0.000	0.000	0.013	0.092	0.004
Cellvibrionales	0.027	0.008	0.004	0.000	0.000
Saprospirales	0.188	0.000	0.000	0.000	0.076
Kordiimonadales	0.471	0.005	0.864	0.000	1.137
Rhodospirillales	1.114	0.021	0.697	0.327	0.018
Lentisphaerales	0.004	1.248	0.000	0.674	0.018
Lactobacillales	0.049	0.000	0.000	0.003	0.000
Myxococcales	0.102	0.000	0.002	0.000	0.000
Bacteroidales	0.000	0.003	1.019	0.009	0.000
Nevskiales	0.013	0.000	0.000	0.000	0.000
Xanthomonadales	0.539	0.000	0.000	0.000	0.000
Planctomycetales	0.000	0.000	0.000	0.000	0.009
Sphingobacteriales	0.000	0.000	0.000	0.000	0.009

d

Order	Feb (750m)	Apr (750m)	Jun (750m)	Aug (750m)	Oct (750m)
Oceanospirillales	1.526	1.811	2.290	2.454	3.361
Pelagibacterales	68.162	58.310	65.389	44.747	65.707
Flavobacteriales	1.206	5.526	2.488	4.483	2.145
Maricaulales	0.223	0.000	0.048	0.069	0.024
Rhizobiales	1.500	2.812	0.718	1.299	1.007
Rhodobacterales	1.459	2.175	3.100	2.842	1.503
Alteromonadales	7.007	6.003	2.599	28.745	9.364
Chitinophagales	0.000	0.640	0.000	0.000	0.000
Pseudomonadales	0.208	0.804	0.945	0.023	0.019
Nitrosopumilales	5.889	8.110	14.083	6.782	8.264
Caulobacterales	0.602	0.372	0.376	0.240	0.073
Corynebacteriales	0.220	0.288	0.096	0.178	0.341
Balneolales	0.191	0.000	0.005	0.000	0.141
Micrococcales	0.000	0.155	0.010	0.007	0.005
unclassified	0.276	0.073	0.092	0.112	0.277
Synechococcales	0.003	0.003	0.024	0.760	0.024
Burkholderiales	0.537	0.220	0.010	0.187	0.156
Geodermatophilales	0.000	0.000	0.053	0.030	0.010
Salinisphaerales	0.000	0.000	0.010	0.039	0.000
Fusobacteriales	0.038	0.017	0.101	0.026	0.010
Bacillales	0.660	0.652	0.000	0.164	0.078
Thiotrichales	1.741	0.068	0.000	0.007	0.049
Hyphomonadales	2.498	8.212	1.046	0.905	1.445
Sphingomonadales	0.572	0.680	1.162	0.651	0.336
Enterobacterales	0.141	0.116	0.000	0.010	0.019
Pirellulales	0.000	0.118	0.391	0.599	0.204
Vibrionales	0.346	0.319	0.318	0.191	0.491
Propionibacteriales	1.723	0.739	0.241	0.191	0.540
Verrucomicrobiales	0.713	0.260	3.442	1.789	0.978
Cytophagales	0.200	0.093	0.039	0.095	0.000
Cellvibrionales	0.029	0.000	0.024	0.020	0.024
Saprospirales	0.144	0.000	0.000	0.000	0.000
Kordiimonadales	0.402	0.214	0.024	0.043	0.233
Rhodospirillales	1.383	0.310	0.159	0.862	2.617
Lentisphaerales	0.000	0.700	0.627	1.414	0.472
Lactobacillales	0.194	0.003	0.063	0.010	0.034
Myxococcales	0.000	0.090	0.000	0.000	0.000
Bacteroidales	0.205	0.000	0.029	0.003	0.010
Nevskiales	0.000	0.000	0.000	0.000	0.039
Xanthomonadales	0.000	0.000	0.000	0.007	0.000
Planctomycetales	0.000	0.000	0.000	0.000	0.000
Sphingobacteriales	0.000	0.107	0.000	0.016	0.000

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Order	Feb (1000m)	Apr (1000m)	Jun (1000m)	Aug (1000m)	Oct (1000m)
Oceanospirillales	1.894	0.390	2.257	3.650	2.370
Pelagibacterales	68.690	60.112	52.751	30.453	74.110
Flavobacteriales	1.634	4.596	3.407	4.191	3.280
Maricaulales	0.000	0.000	0.143	0.226	0.000
Rhizobiales	0.720	0.744	1.333	1.177	0.936
Rhodobacterales	1.809	2.675	4.404	1.185	1.017
Alteromonadales	7.211	7.136	18.795	44.891	4.887
Chitinophagales	0.000	0.000	0.010	0.132	0.000
Pseudomonadales	0.109	0.394	0.670	0.144	0.046
Nitrosopumilales	3.563	5.121	2.105	2.358	4.938
Caulobacterales	0.035	0.040	0.194	0.409	0.025
Corynebacteriales	0.113	0.784	0.140	0.093	0.178
Balneolales	0.000	0.000	0.098	0.000	0.000
Micrococcales	0.957	0.033	0.441	0.165	1.088
unclassified	0.012	0.652	0.006	0.496	0.010
Synechococcales	0.311	0.004	1.019	0.459	0.122
Burkholderiales	0.070	2.486	0.130	0.953	0.137
Geodermatophilales	0.000	0.029	4.845	0.000	0.203
Salinisphaerales	0.016	0.000	0.010	0.368	0.010
Fusobacteriales	0.825	0.098	0.873	0.502	0.163
Bacillales	6.250	1.057	1.486	1.307	0.010
Thiotrichales	1.241	0.095	0.203	0.002	1.312
Hyphomonadales	0.420	3.568	1.448	0.236	0.870
Sphingomonadales	0.047	0.973	0.086	1.990	0.025
Enterobacterales	0.148	0.036	0.000	0.195	0.356
Pirellulales	0.039	0.160	0.251	0.116	0.483
Vibrionales	0.432	0.230	0.797	0.280	0.285
Propionibacteriales	1.462	1.225	1.718	0.791	1.449
Verrucomicrobiales	0.062	6.801	0.000	1.750	0.031
Cytophagales	0.027	0.000	0.000	0.230	0.137
Cellvibrionales	0.000	0.047	0.003	0.083	0.005
Saprospirales	0.296	0.000	0.000	0.000	0.041
Kordiimonadales	1.342	0.000	0.000	0.154	0.748
Rhodospirillales	0.202	0.102	0.308	0.595	0.488
Lentisphaerales	0.004	0.168	0.013	0.000	0.173
Lactobacillales	0.004	0.098	0.006	0.183	0.015
Myxococcales	0.000	0.000	0.051	0.000	0.005
Bacteroidales	0.058	0.055	0.000	0.000	0.046
Nevskiales	0.000	0.000	0.000	0.000	0.000
Xanthomonadales	0.000	0.000	0.051	0.110	0.005
Planctomycetales	0.000	0.000	0.000	0.000	0.000
Sphingobacteriales	0.058	0.091	0.000	0.128	0.046