

Supporting Information for

Mercury Isotope Study of Sources and Exposure Pathways of Methylmercury in Estuarine Food Webs in the Northeastern U.S

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Figure captions

Figure 1S. Map of the Northeast coast, USA representing the sampling locations (Maine; ME, Massachusetts; MA, Rhode Island, RI; Connecticut, CT, New Jersey; NJ). Aquatic biota were sampled at sites indicated in black circles. Birds were sampled at three locations in ME and MA and are represented with white circles. This map has been modified from *nationalatlas.gov*.



Table 1. THg concentrations (ng/g), % MMHg, stable carbon and nitrogen values and Hg isotope ratios of all sediment and estuarine biotas.

	THg (ng/g)	% MMHg	$\delta^{15}\text{N}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{202}\text{Hg}$ (‰)	$\Delta^{201}\text{Hg}$ (‰)	$\Delta^{199}\text{Hg}$ (‰)
<i>Sediment</i>							
WELLS, ME	9.43	2.96			-0.67	0.09	0.19
	9.43	2.96			-0.63	0.02	0.10
BUZZ, MA	5.70	1.74			-0.89	0.17	0.10
BOLD, RI	221	0.20			-0.82	0.01	0.01
	221	0.20			-0.60	0.01	0.02
BARN, CT	42.0	0.13			-0.72	0.15	-0.01
	42.0	0.13			-0.77	0.18	0.02
MILL, NJ	2962	0.32			-0.40	0.01	-0.02
	2962	0.32			-0.38	0.02	-0.04
<i>Mussel</i> <i>Filter feeder; particulate organic matter</i>							
WELLS, ME	109	58.7	6.16	-19.60	-0.20	0.09	0.41
BUZZ, MA	187	53.4	8.43	-18.67	0.03	0.02	0.47
	169				0.00	0.23	0.40
BOLD, RI	192	63.9	7.80	-18.97	0.77	0.06	0.52
	61.2				0.34	0.27	0.33
BARN, CT	190	56.1	7.08	-20.08	-0.23	0.04	0.32
	113				-0.31	0.12	0.21
<i>average</i>	<i>146</i>	<i>58.0</i>	<i>7.37</i>	<i>-19.33</i>	<i>0.06</i>	<i>0.12</i>	<i>0.38</i>
<i>Crab</i> <i>Epibenthic consumer; benthic microalgae, benthic invertebrates</i>							
WELLS, ME	68.1	80.0	9.37	-16.78	-0.39	0.03	0.68
	26.4				-0.45	0.45	0.57
BUZZ, MA	58.3	86.5	7.83	-14.72	0.15	0.05	0.87
	84.6				0.01	0.72	0.82

BOLD, RI	68.3	84.6	13.54	-18.26	0.05	0.03	0.39
	25.8				-0.05	0.45	0.23
<i>average</i>	<i>55.3</i>	<i>83.7</i>	<i>10.25</i>	<i>-16.59</i>	<i>-0.11</i>	<i>0.29</i>	<i>0.59</i>

Fish *Epibenthic/water column consumer; zooplankton, microalgae, benthic invertebrates, detritus*

WELLS, ME	67.4	91.7	8.99	-14.87	-0.20	0.70	0.91
	25.5	91.3	7.80	-14.95	-0.24	0.75	0.84
BUZZ, MA	96.5	77.3	9.84	-16.12	0.19	0.77	0.98
	122	94.1	11.68	-16.38	-0.10	0.73	0.87
BOLD, RI	79.4	95.8	15.70	-16.07	0.19	0.54	0.72
	45.2	93.8	15.78	-16.58	0.23	0.63	0.67
BARN, CT	120	93.1	10.02	-16.13	-0.34	0.33	0.44
	54.5	88.1	7.80	-17.14	-0.05	0.46	0.60
MILL, NJ	631	97.3	13.91	-24.02	0.07	0.29	0.37
<i>average</i>	<i>138</i>	<i>91.4</i>	<i>11.28</i>	<i>-16.92</i>	<i>-0.03</i>	<i>0.58</i>	<i>0.71</i>

Bird *Epibenthic and water column consumer; bivalves, mollusks, crustaceans, fish*

WELLS, ME	208 ^{SA}				0.71	0.59	0.74
	363 ^{SA}				0.84	0.63	0.82
	453 ^{SC}				1.39	0.46	0.62
BUZZ, MA	1755 ^{PL}				0.70	0.46	0.66
	1536 ^{PL}				0.59	0.51	0.68
<i>average</i>	<i>863</i>	<i>(98)</i>	<i>(13.2)</i>	<i>(17.4)</i>	<i>0.85</i>	<i>0.53</i>	<i>0.70</i>

Detailed feeding strategies are found in Chen et al^{12,13}.

Values in bracket are derived from Wayland et al⁴², and Hobson et al⁴⁵.

SA, SC, and PL refer to Saco Bay, ME, Scarborough Marsh, ME, and Plum Island Sound, MA, respectively.