Supporting Information for

Deposition of Mercury in Forests Across a Montane Elevation Gradient: Elevational and Seasonal Patterns in Methylmercury Inputs and Production

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Introduction

This supporting information provides a map of Whiteface Mountain and the study sites; boxplots of THg concentration, MeHg concentration, and percent MeHg by soil horizon; temperature and precipitation during the sampling period; and a summary table for QAQC results for all analyses.

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Supporting Figures

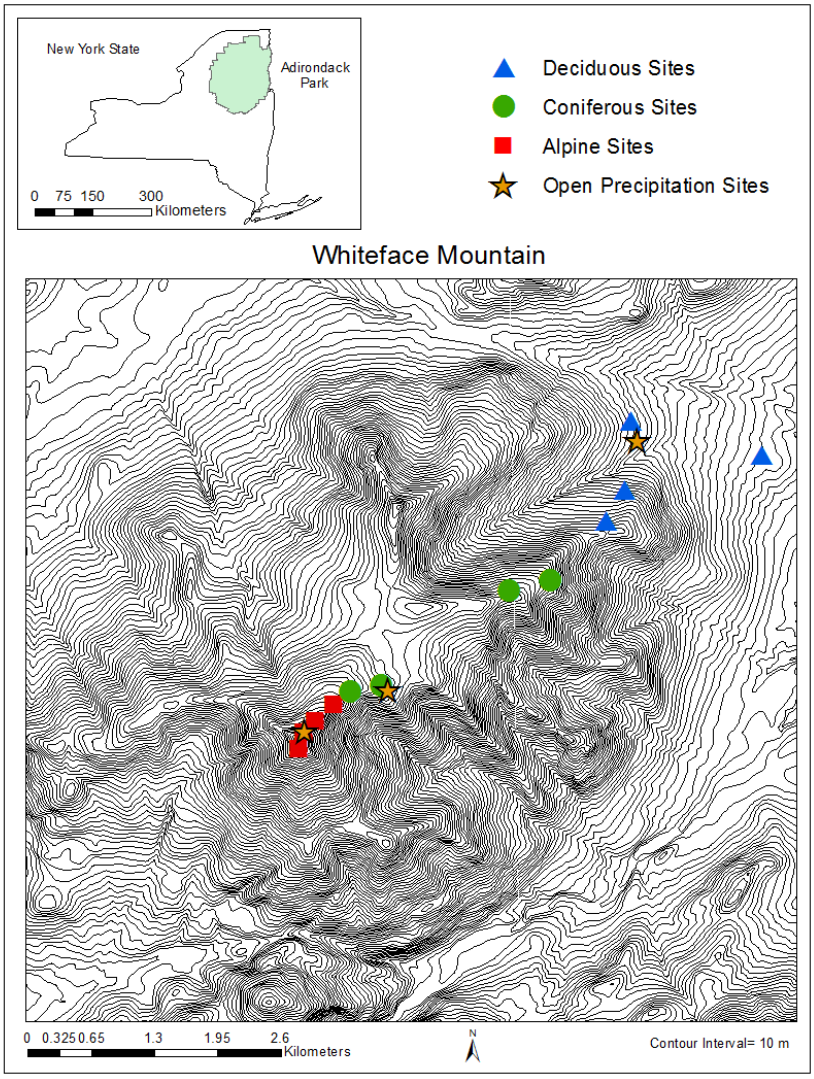


Figure A1: Map of Whiteface Mountain in the Adirondack region of New York State. Alpine (n=4), coniferous (n=4), deciduous (n=4), and open plot zones (n=3) are delineated across the eastern slope of Whiteface Mountain. Five plots were established within each forest cover type: four sites were established under canopy cover (n=12) and one in an open area (n=3) for each forest cover type.

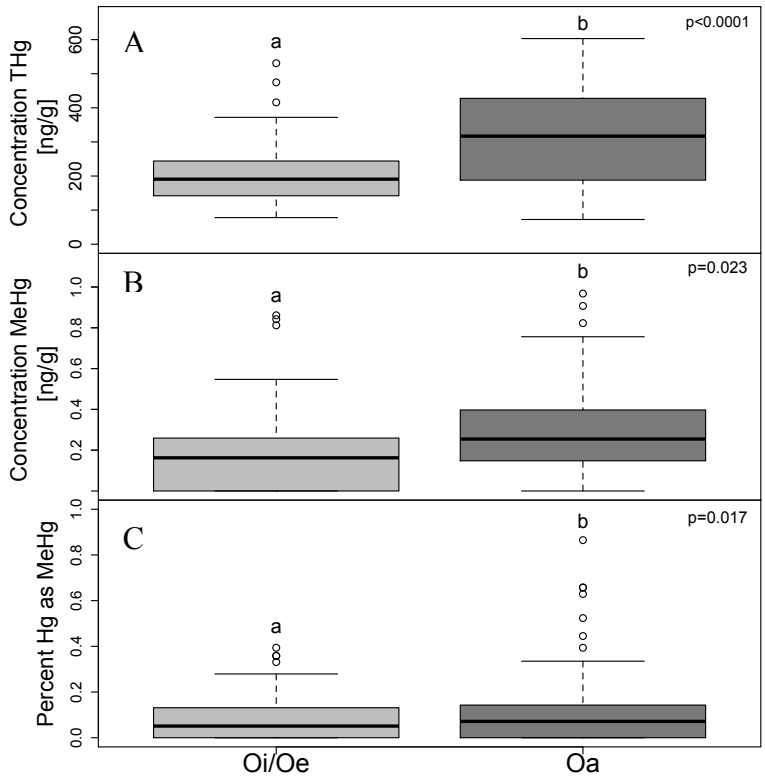
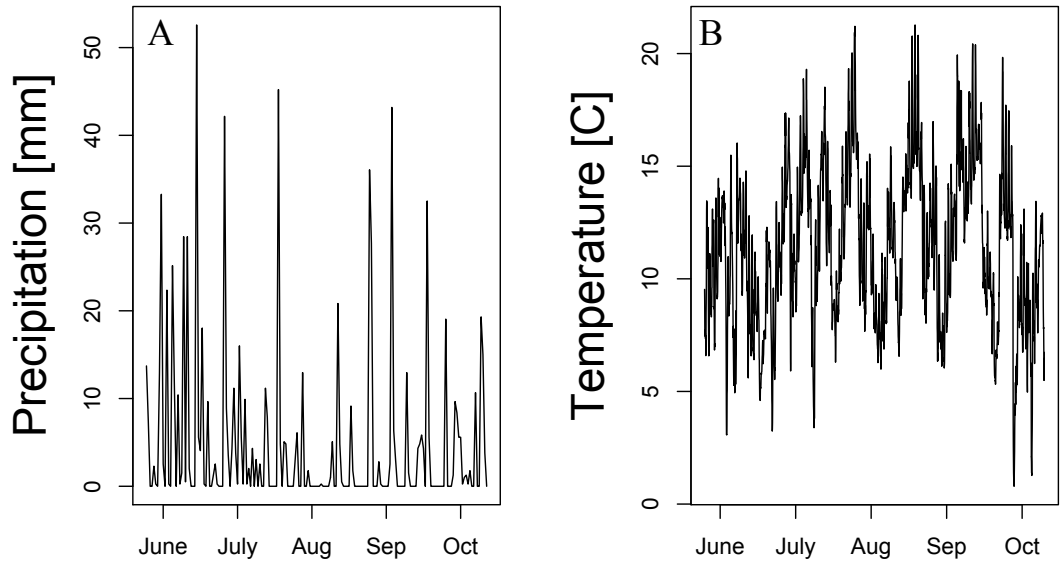


Figure A2: Concentrations of A) total mercury, B) methylmercury, and C) percent mercury as methylmercury in soil Oi/Oe and Oa horizons at Whiteface Mountain using composite data for all sampling dates and plots. Box-and-whisker plots show median values, Q1, and Q3 within the boxes, and the whiskers represent Q1 - 1.5*interquartile range and Q3 + 1.5*interquartile range (n=108 for each soil horizon). Only outliers within the given bounds are shown. Letters denote significant differences using Tukey's *post-hoc* adjustment at an alpha level of 0.05.



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29 Figure A3: A) Precipitation and B) temperature from June to October using data from the

30 summit atmospheric monitoring station at Whiteface Mountain.

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Supporting Table

Table A1: Summary of quality control results for all analyses. Values given represent the range of results, with the mean value given in parentheses.

Soil and Litterfall

	THg	MeHg	%C	%N	%S
Continuous Calibration Verification (CCV)	90-110% (97%)	81-120% (95%)	100-102% (101%)	97-101% (99%)	90-112% (105%)
Quality Control Standard (QCS)	89-105% (96%)	76-98% (85%)	99-102% (101%)	98-101% (99%)	95-112% (103%)
Matrix Spike (MS)	89-116% (95%)	81-138% (119%)	--	--	--
Ongoing Precision and Recovery (OPR)	--	96-111% (101%)	--	--	--
Laboratory Control Standard (LCS)	--	87-108% (92%)	--	--	--
Method Detection Limit (MDL)	--	0.0031-0.0021 (ng/g) (0.0011 ng/g)	--	--	--
Relative Percent Recovery (RPD; %)	0.02-10% (4%)	--	--	--	--
Calibration blank	BDL	BDL	BDL	BDL	BDL

Throughfall, Open Precipitation, and Cloudwater

	THg	MeHg	DOC	IC
Continuous Calibration Verification (CCV)	87-115% (101%)	86-115% (100%)	90-110% (99%)	100-109% (107%)
Quality Control Standard (QCS)	92-97% (94%)	--	--	--
Matrix Spike (MS)	86-117% (100%)	--	--	--
Ongoing Precision and Recovery (OPR)	97-113% (98%)	98-110% (102%)	--	--
Method Detection Limit (MDL)	0.20-0.25 ng/L (0.23 ng/L)	0.0016-0.0020 ng/L (0.0018 ng/L)	--	--
Relative Percent Recovery (RPD; %)	0.4-11% (6%)	--	--	--
Calibration blank	BDL	BDL	BDL	BDL