

Interactive comment on “A bottom-up quantification of foliar mercury uptake fluxes across Europe” by Lena Wohlgemuth et al.

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The manuscript “A bottom-up quantification of foliar mercury uptake fluxes across Europe” by Wohlgemuth et al. is a detailed analysis of foliar uptake of mercury at 10 forest sites along a latitudinal gradient in Central Europe. The authors use these data to extrapolate their measurements to values of foliar mercury uptake for Europe and globally. I must say I review a lot of papers and this has be the cleanest manuscript I have ever read. My hat is off to the authors. Thank you for a very well-written, well organized and comprehensive study of foliar mercury uptake by trees including an analysis of how site level data can be used to scale up estimates of this important transfer of mercury to larger spatial scales. The authors’ analysis and results are consistent with less comprehensive studies in the literature. The authors do a great job of comparing

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the results with observations in the literature. I love the Methods, including figure 2. The methods are very clear. I have virtually no comments on this paper. It is well done and a pleasure to read. Just a few comments: 1. The authors use “between” when they should use “among” on lines 107, 243, 395, 403, 406, 409 and 460. 2. Page 2, line 45. . . . Earth . . . 3. Page 5, line 148. . . . dried and ground for . . . 4. Page 15, line 448. I just reviewed another paper by one of the authors of this paper that provides a global estimate of litter mercury deposition from vegetation which is an order of magnitude greater than the guesstimate provided here (1,730 – 2, 070 Mg yr⁻¹). Given that discrepancy the authors may want to rethink their global estimate of litter mercury deposition in this paper. 5. Page 16, line 476. The authors could note that the U.S National Atmospheric Deposition program has a litter mercury network that could be cited (<http://nadp.slh.wisc.edu/newissues/litterfall/>). This is a terrific paper. I strongly endorse its publication. Kudos to the authors.

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