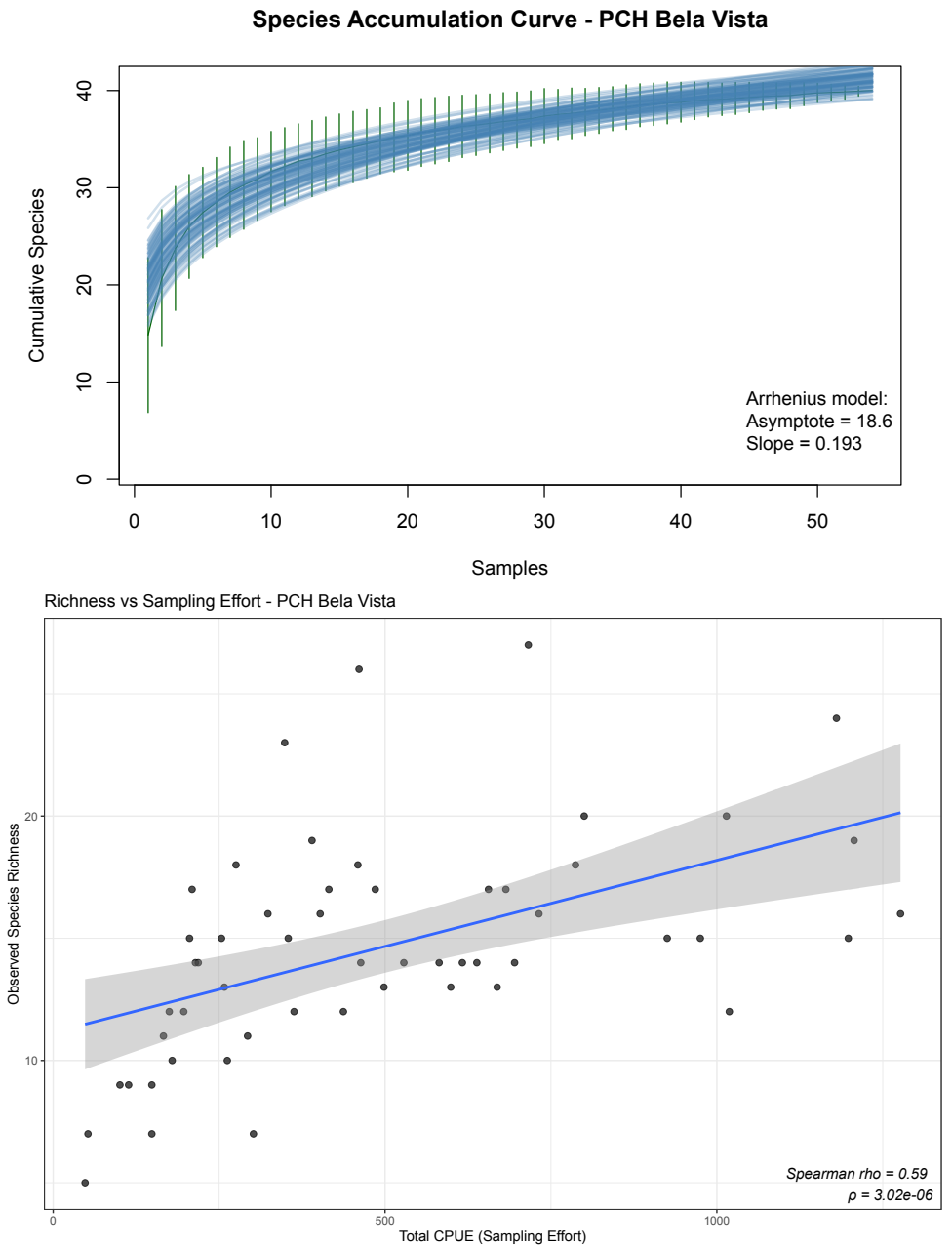


FIGURE S5 | Archive contending species accumulation curves and relationships between sampling effort and observed richness for each hydroelectric power plant.

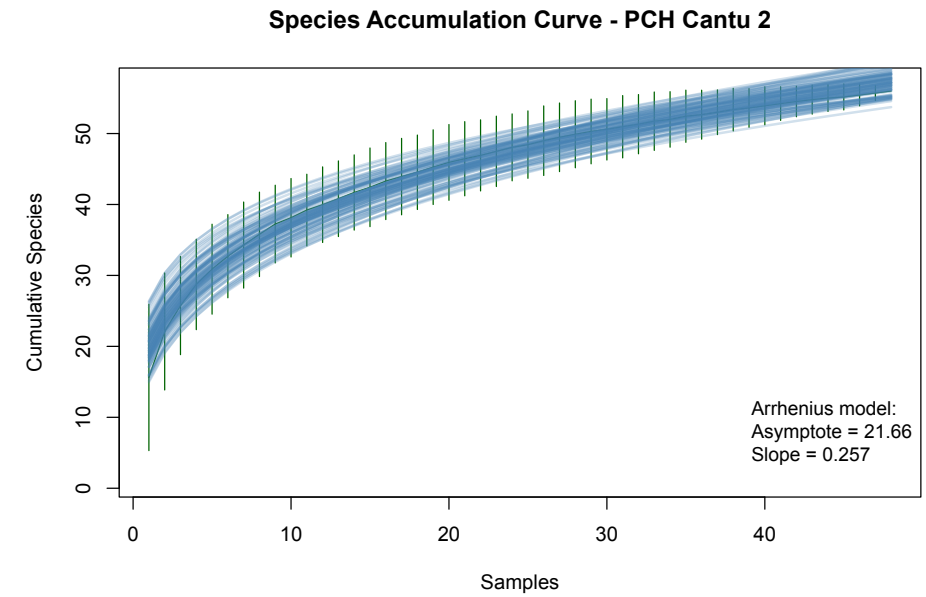
Additional Observations:

This supplementary material presents additional analyses conducted to evaluate the sufficiency of the sampling effort across all hydroelectric power plants included in this study. The goal was to determine whether the observed species richness was adequately captured and whether differences in sampling effort could have biased richness estimates.

First, species accumulation curves were constructed for each hydroelectric facility using presence-absence matrices derived from standardized CPUE (catch per unit effort) data. These curves depict how cumulative species richness increased with each additional sample, allowing visual assessment of whether richness approached an asymptote, a common indicator of sampling completeness. Curves also include fits of non-linear models (arrhenius fitting) and presents asymptote and slope of the fitting.

Second, we tested the relationship between sampling effort and observed species richness. Sampling effort was quantified as the total CPUE per sample, and its association with richness was analyzed using Spearman's rank correlation. This analysis was performed independently for each hydroelectric power plant.

Together, these analyses support the reliability of the richness data and help ensure that variation in sampling intensity did not compromise the comparisons across facilities. The plots and statistical outputs for each site are included below.



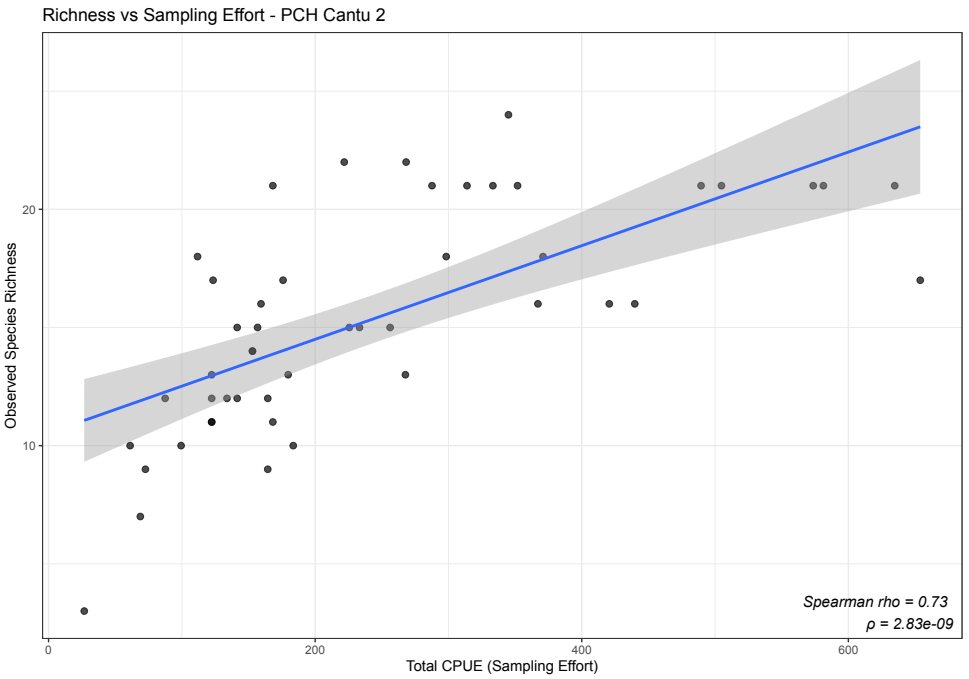


FIGURE S5 | (Continued)

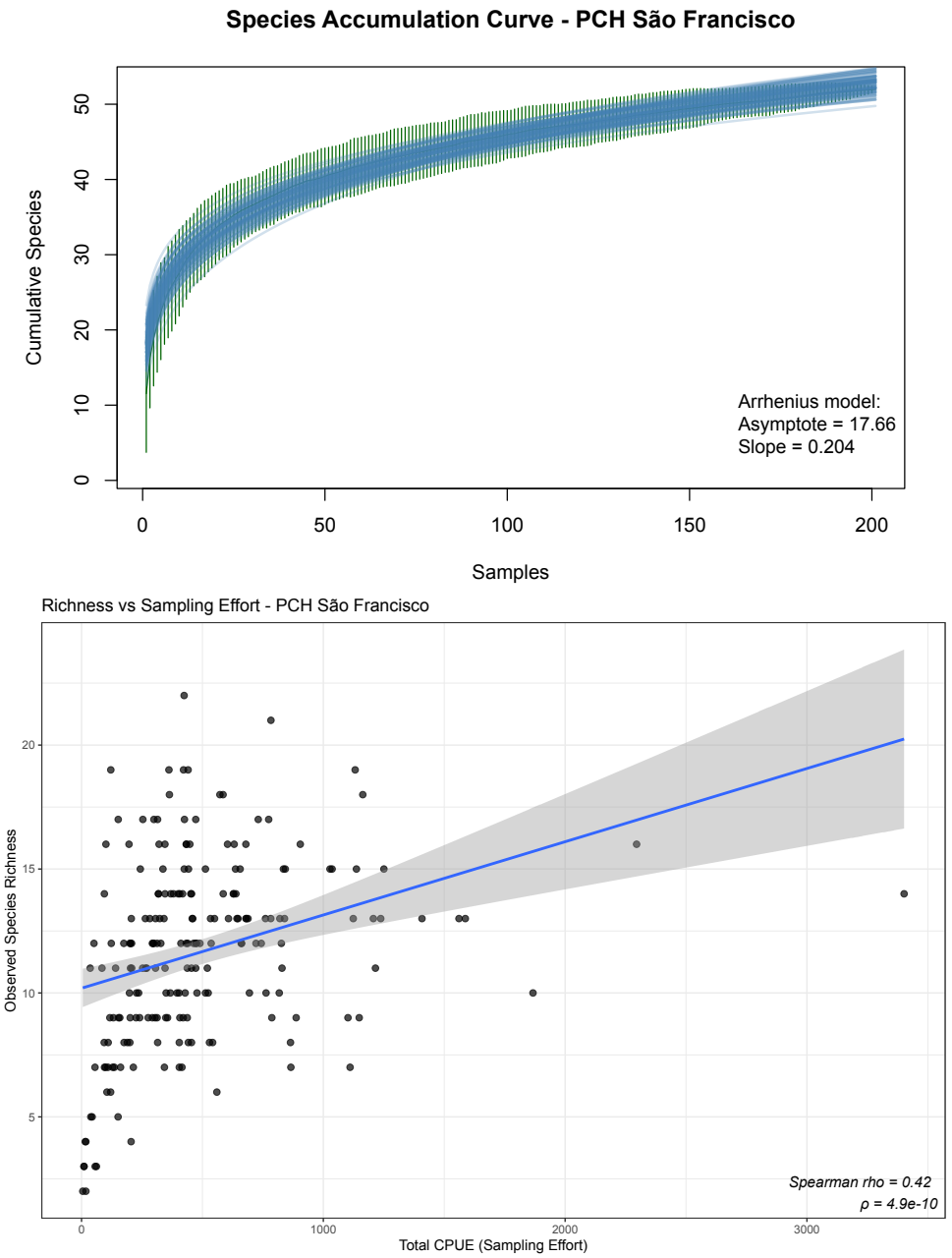
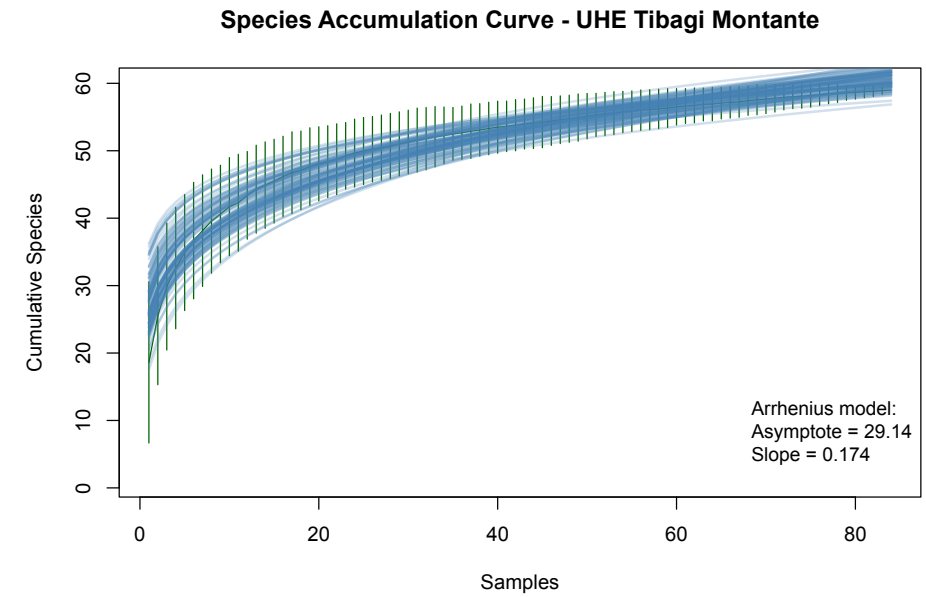


FIGURE S5 | (Continued)



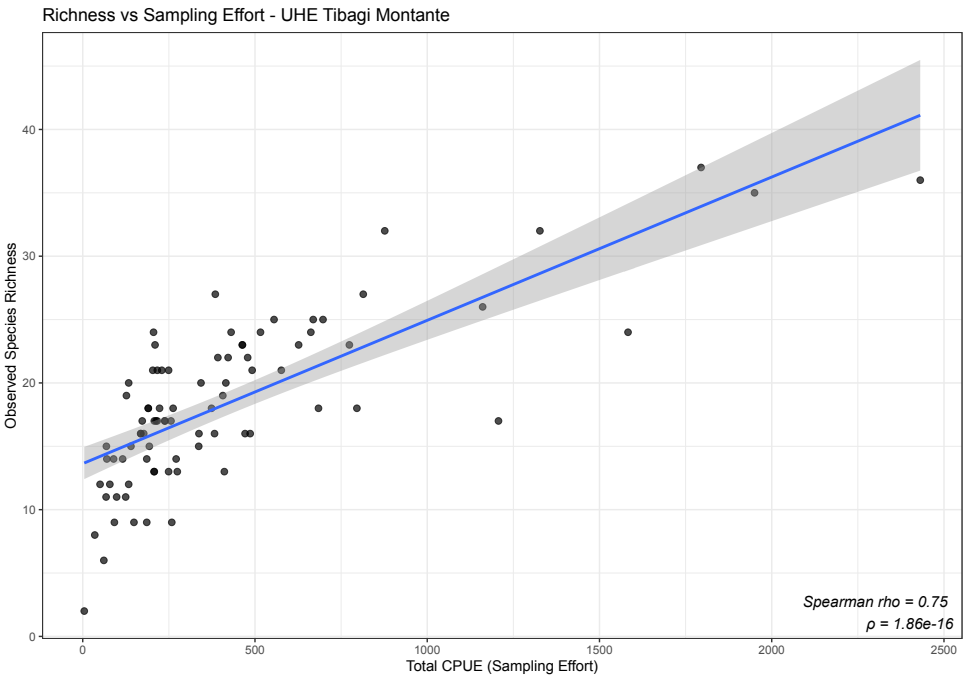


FIGURE S5 | (Continued)

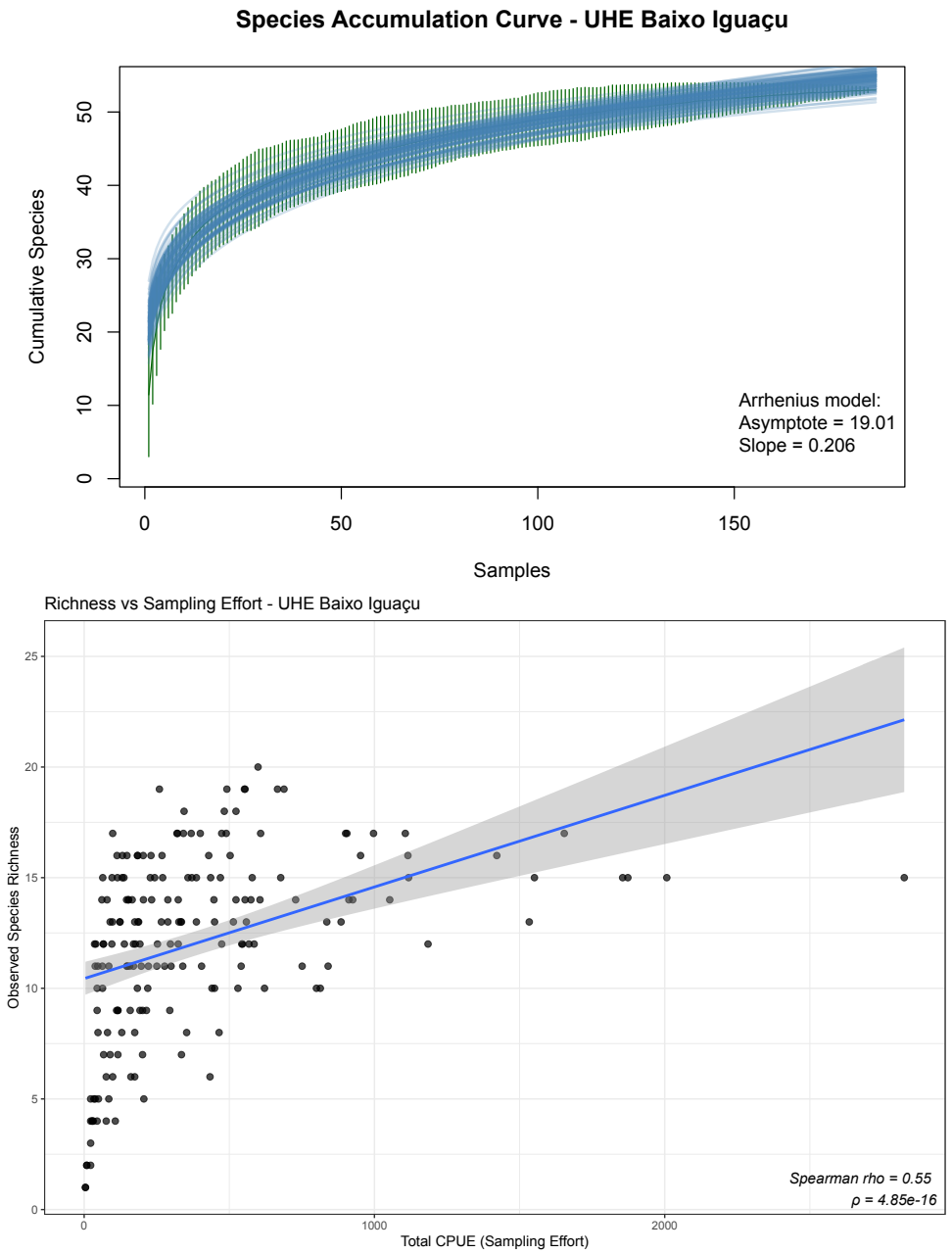


FIGURE S5 | (Continued)

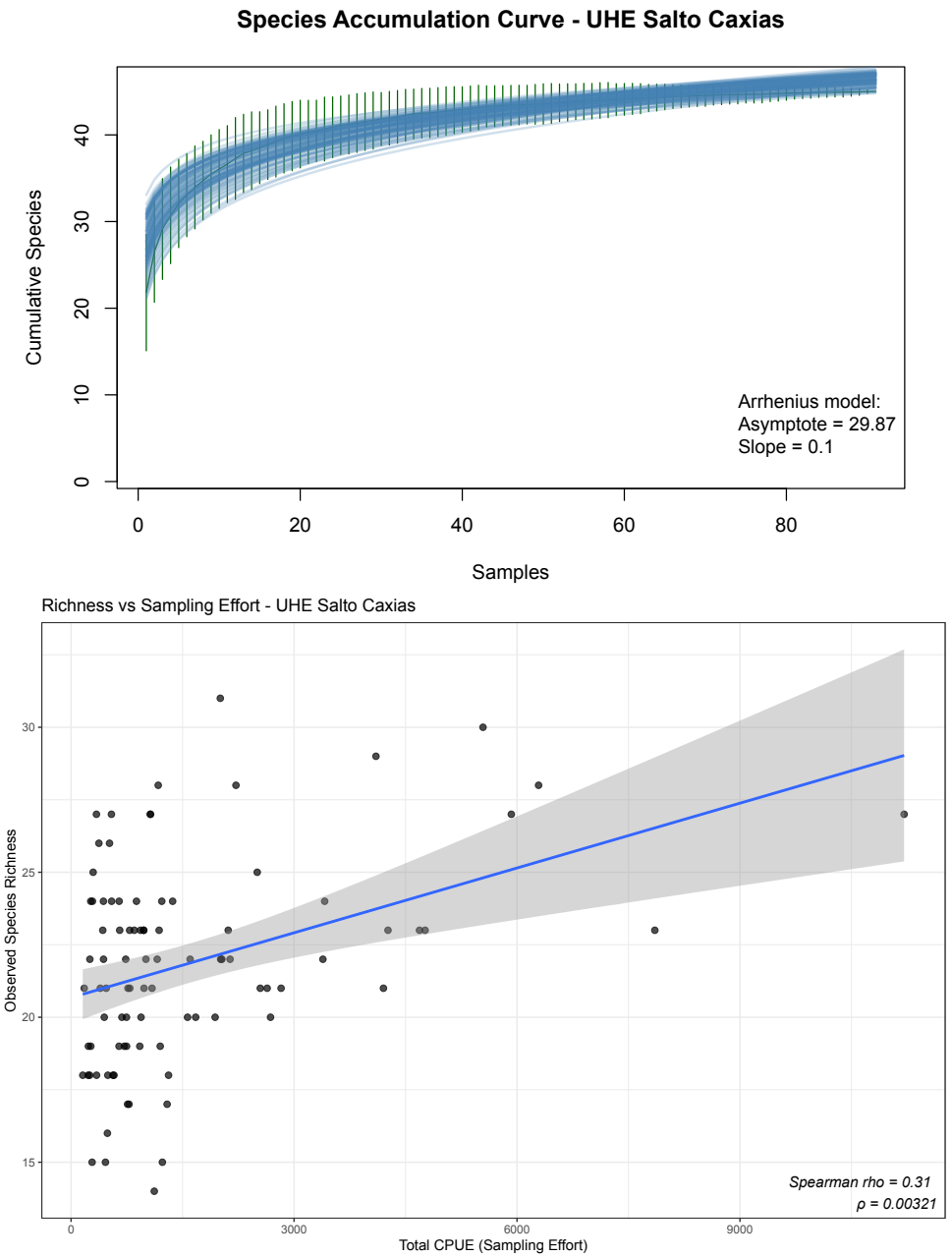


FIGURE S5 | (Continued)

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