

Background

Due to the density of trees surrounding the oxbow lake, the leaf litter entering the oxbow laterally should be greater than the leaf litter entering the oxbow lake vertically. We expected this to be true because of the amount of trees inland compared to above the water, so there was higher chance of lateral litter flow. To find this answer we asked: would more leaf litter fall vertically or laterally into the river?

Methods

3 laundry baskets were placed at a site near the shore under tree coverage, as a way to catch the leaf litter that came in vertically. 3 bags, made from zip ties and aluminum mesh, that collected the leaf litter that came in laterally were placed on shore a few feet away from the water. Leaf litter was collected from only one week due to complications. The litter was then dried in an oven at 60° C and weighed.

Results

We were unable to attain enough data to come to a result. Due to multiple issues, we were only able to collect data from one week instead of three which was not enough to make a conclusion. From the data we did gather, lateral leaf litter input was greater than vertical.

Discussion

Our litter baskets were poorly constructed and were not reliable enough to collect litterfall. There should have been ~10 replicates of our baskets. We did not leave enough time to collect meaningful data. If we were to do this experiment again, we would have left ~6 weeks for collection. From comparison of our data to other similar experiments, the vertical input is seen to be higher than the lateral input for a body of water like the oxbow. Our data could have been skewed due to an outlier and the few replicates we had being too unreliable.

Leaf litter collection experiments are best conducted over a period of several weeks, with many replicates, and well constructed litter baskets.

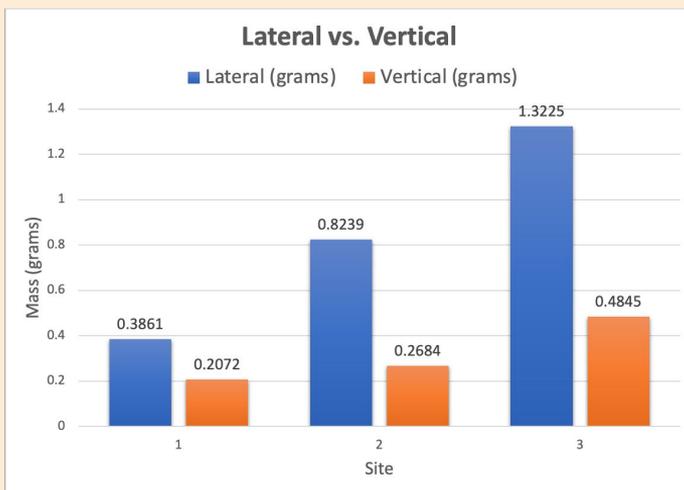


Figure 1.

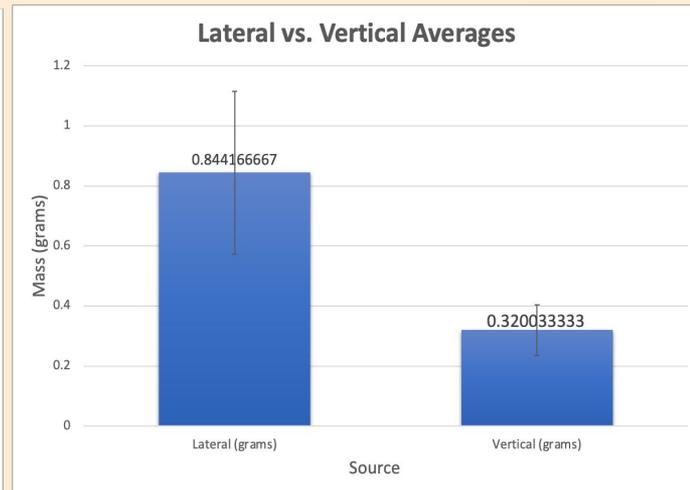


Figure 2.

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