# Zebra Mussel (Dreissena polymorpha) Preference for Colonization on Mcrophytes in Lake Minnetonka, MN

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The purpose of our study was to investigate the affinity of zebra mussels (Dreissena polymorpha) towards fresh water macrophytes and determine locations on the macrophytes where the mussels prefer to settle. Samples of three macrophytes —coontail (Ceratophyllum demersum), Eurasian watermilfoil (Myriophyllum spicatum), and clasping leaf pondweed (Potamogeton richardsonii)—were sampled via snorkling from three bays (Gray's Bay, Cook's Bay, and North Arm) in Lake Minnetonka, MN, over the course of 12 weeks during the summer of 2014. The mussel density (mussels/g dry mass) was determined for each species of macrophytes as well as on each section (top, bottom, and middle) of the macrophytes. Results showed that zebra mussels showed significant preference for Eurasian watermilfoil compared to coontail and clasping leaf pondweed ($p < 0.05$). Preference for the top section of the macrophytes was significantly less than for the bottom and middle sections ($p < 0.05$). Our study is novel in the field of D. polymorpha biology. Given our results, targeting areas where Eurasian watermilfoil grows prolifically with new treatments, such as Zequanox®, should be most effective. Our results also suggest that applying the treatments from the bottom of the plants should also prove to be most effective.

**Awards Won:**