POPULATION VARIATION IN ALLELOPATHIC AND COMPETITIVE EFFECTS OF LONICERA MAACKII ON THE NATIVE ANNUAL PILEA PUMILA. Dan M. Romanek and Don Cipollini, Graduate Student, Department of Biological Sciences, Wright State University, Dayton, OH 45435**,** Professor**,** Department of Biological Sciences, Wright State University, Dayton, OH 45435**.**

Recent studies suggest the common forest invader *Lonicera maackii* possesses allelopathic potential. However, no research has effectively determined if allelopathic potential of *L. maackii* is a significant contributor to its invasiveness relative to its ability to compete for below ground resources. Also, most studies have only focused on single populations of *L. maackii* in determining any allelopathic effects. We conducted a full factorial multi-population study to isolate the competitive and allelopathic effects *L. maackii* on the native forest annual *Pilea pumila*. Individual *P. pumila* plants were grown in pots in the greenhouse in commercial potting soil containing a transplanted 2-3 yr old *L. maackii* from one of six Ohio populations. *Pilea pumila* grown alone served as a control. Activated carbon was incorporated into the soil of half the pots from each treatment in order to ameliorate effects of potential allelochemicals and to account for direct effects of carbon treatment. The effect of *L. maackii* on final total, above, and below ground biomass of *P. pumila* was compared between treatments using ANOVA. After accounting for initial size, the presence of *L. maackii* strongly decreased the final total biomass of *P. pumila* overall, but populations did not vary in their effects. Activated carbon strongly increased total biomass of *P. pumila* in the absence of *L. maackii*, but the benefit was limited in the presence of *L. maackii* in a similar fashion across populations. Activated carbon benefited the above ground biomass of *P. pumila* to a lesser extent than below ground biomass in the presence or absence of *L. maackii*. Final biomass of *L. maackii* was independent of the presence of carbon. We conclude that Ohio populations of *L. maackii* do not vary in their ability to compete for below ground resources or in their allelopathic potential. The lack of response of *L. maackii* to activated carbon and its ability to inhibit the positive effects of carbon on *P. pumila* suggest that *L. maackii* exerts its effects through some combination of resource competition and allelopathy.

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