SAMUEL CANFIELD, Dept of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074. Evaluation of habitat characteristics associated with *Podostemum ceratophyllum* Michx. (Hornleaf riverweed), a foundation species in eastern North American rivers

Podostemum ceratophyllum Michx. (Podostemaceae) is the only macrophyte within the genus that inhabits mid-order montane and piedmont rivers in eastern North America. *Podostemum* is considered a "foundation species" because the plant strongly influences benthic habitat structure and function by increasing habitat heterogeneity for macroinvertebrates and fishes, contributing to food webs, and sequestering water column nutrients. The conservation status of *Podostemum* remains data deficient in many states (e.g. WV, PA), but some states, such as CT, KY, MA, ME, NY, and OH, classify *Podostemum* as threatened, endangered, or of special concern. Over the past 35 years, there has been documented local decline and extirpation of *Podostemum* in NH, VT, VA, and PA. The decline of *Podostemum* has been postulated to be the result of stream degradation, including excessive sedimentation, flow and water chemistry alteration, and nutrient enrichment. However, because no study has specifically investigated stream water physiochemical properties or environmental stressors associated with *Podostemum*, there is currently no reliable way to predict how water quality impacts the plant. The proposed study includes two primary objectives. The first objective is to determine the physiochemical and physical habitat characteristics conducive to the growth and survival of *Podostemum*. The second is to model the distribution and possible decline of *Podostemum* based on historical records and field surveys. Physiochemical and habitat surveys will be conducted in West Virginia mid-order rivers and will be analyzed using logistic regression modeling. The outcomes of this research will be put towards an updated conservation strategy for this foundation species.