WHITNEY DOTSON*, JAMES WALTERS*, *Dept. of Applied Science and Mathematics, Bluefield State College, Bluefield, WV 24701. Population Density of Crayfish between Two Macro habitats

Crayfish are significantly important to our streams and ecosystems and more work remains to be done to sample or evaluate the consistency of sampling methods of crayfish in sections of the Pather State Park stream in West Virginia. Crayfish serve as food source, they help control nuisance water weeds, and break down decaying matter. In order to better understand crayfish population distribution and help conserve their habitat it is important to sample and map these habitats. The hypothesis of this experiment is that crayfish will prefer the macro habitat runs over riffles. The experiment will be conducted by choosing three runs and three riffles while measuring substrate size, stream velocity, and stream cover. We have identified two methods for classifying runs and riffles; the empirical method and the Froude number. We welcome the opportunity meet experts at WVAS to help us determine the most efficient method for our sampling. The study is limited to primary habitat of crayfish which consists of substrate larger than 16mm, because areas of sand, silt, and substrate smaller than 16mm would yield little to no crayfish. Crayfish will be caught using a Quadrat sampler and the crayfish will be counted to record densities. Crayfish morphology will be measured with pictures to further identify the species. Anticipated findings of the experiment would be to determine densities of cray fish in macro habitats, measure, and identify crayfish.