CAITLIN DE VRIES, Dept of Biological Sciences, West Liberty University, West Liberty, WV, 26074.
Water Quality Monitoring for the Central Appalachian Coalfields Crayfish.

Primary economic drivers over the years in the central Appalachian coalfields include coal mining, timbering, fossil fuel extraction, and all-terrain vehicle tourism. These industries cause impacts such as sedimentation, elimination of headwater streams (resulting from valley fills), destruction of riparian vegetation, and increased physiochemical pollution in montane streams. As a result of this significant habitat destruction, two species of endemic crayfishes, *Cambarus callainus* and *Cambarus veteranus*, were both federally listed in April 2016. This study will sample 12 selected sites – four degraded streams, four medium-impacted streams, and four reference condition streams – within the coalfields region of Kentucky, Virginia, and West Virginia. Sampling will occur for one year, alternating monthly between two sets of six sites. General crayfish sampling will occur at each site to document the crayfish community present. Water quality monitoring will be split into four categories: long-term, point-source, photometer, and water samples analyzed for heavy metal content. Understanding the chemical composition of the target species' habitat will enable us to properly and efficiently aid *C. callainus* and *C. veteranus* conservation efforts.