EMMA MCCLELLAND and ZACHARY LOUGHMAN, Dept. of Natural Sciences & Mathematics, West Liberty University, West Liberty, WV, 26074. Assessment of snail communities in fragmented habitats.

Forest fragmentation is an increasing commonality with the continued rise in disturbances from extractive industries and various anthropogenic activities. While research has observed negative effects of fragmentation such as ecotones, the impact on specific organisms is unknown. Sites were selected in three forests that have been fragmented by power lines, three forests fragmented by pipelines, and three primarily undisturbed forests to assess snail communities. Beginning at the edge of the disturbance, every 25, 50, 75, and 100m into the forest, two 1m² quadrats were sampled on each side. Environmental data was collected along with snails visible to the naked eye; leaf litter was placed in bags and sieved for microsnails. Abundance and species richness were highest among the control sites, followed by power line rights-of-way. Since power lines have been around longer than pipelines, hypotheses conclude that snail communities need substantial time to repopulate fragmented forests. Species richness may never completely recover due to generalist and/or invasive species overtaking and outcompeting native species in these disturbed habitats. Surprisingly, environmental factors such as vegetation heterogeneity, soil temperature, and canopy cover showed no significant correlations with snail abundance or species richness. Besides site type, the driving force behind snail abundance and species richness appears to be distance from disturbance. Species richness significantly increased with distance from the disturbance. While abundance was not significant given distance from the disturbance, there was a clear observable trend. More sites should be sampled in the future as trends may likely display significance with more available data.