EMMA MCCLELLAND and ZACHARY LOUGHMAN, Dept. of Natural Sciences & Mathematics, West Liberty University, West Liberty, WV, 26074. Effects of forest fragmentation on terrestrial macro-snail populations.

Forest fragmentation is an increasing commonality with the continued rise in the extractive industries and various anthropogenic disturbances. While research has discovered negative effects of fragmentation such as ecotones, the impact on specific organisms is unknown. Sites were selected in a forest that has been fragmented for 25+ years, one fragmented within the past 10 years, and a primarily undisturbed forest (control) to assess macro-snail populations as well as additional environmental parameters. Preliminary data suggests differences in both snail abundance and diversity among the sites sampled. The newly fragmented site had the most snails present (n = 126) in comparison to both the control (n = 99) and the oldest fragmented site (n = 5). The older fragment had significantly less snails than both the recent fragment and control site. Even though the recent fragment had the highest snail abundance, only 31% were live specimens compared to 44% at the control site. Diversity at the control site was twice as high as the recent fragment in which 85% of specimens collected consisted of the same genera. While this is just a trial run, we can hypothesize from this preliminary data that diversity of terrestrial macro-snails declines with time since fragmentation and may ultimately lead to extirpation. Additional sites will be sampled in the near future to further investigate the impacts of fragmentation on snail abundance and diversity.