QPD INSECT UPDATE – APRIL 2020

For the first two years of the study, insect diversity was shown to vary seasonally and significantly between years. Treatment effect was shown to be marginally significant for antifreeze-based pitfalls, showing promise for additional years of sampling. Of the three varying insect traps within the area, traps caught similar rates of insects despite catching different species. The invasive bark beetle, *Xylosandrus germanus*, far outnumbered all other bark beetles and made up over half of all individuals of species of concern caught. The presence of this invasive species can signal a susceptibility to disease in the stand and could support a need for increased plant diversity to offset this threat. Species accumulation curves modeled for each trap type showed that increasing the number of panel traps in the stand has a capacity to catch additional insect species.

Insect data for years three (2018-2019) and four (2019-2020) has been collected and processed with additional sampling ongoing. Shannon and Simpson diversity indices, as well as the analysis between treatments, will continue to be developed for these years. Tree harvesting proceeded beginning in February of 2020 and traps in extracted plots were taken up accordingly. By mid-April, this consisted of five plots removed, leaving ten plots remaining with traps as harvest and sampling continues.