

Protecting our Lands with help from Biological Controls:

(Successful Adult emergence)

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Our Invasive Species Program via SLELO PRISM recently partnered with multiple agencies to release a second round of insects for targeted suppression of one of New York's most aggressive terrestrial invasive species – pale swallow-wort (*Cynanchum rossicum*). Dozens of moth pupae known as *Hypena opulenta* were released in four sites along Eastern Lake Ontario and along the St. Lawrence River - **the epicenter of swallowwort in North America.**

Native to Ukraine, swallowwort was likely introduced to North America as an ornamental plant, soon spreading to several northeastern states. The plant creates extremely dense monocultures spreading over acres upon acres of otherwise biologically diverse natural systems. The biological control, *Hypena opulenta*, is also from the Ukraine and feeds exclusively on swallowwort.

Partnering with the NYS Invasive Species Research Institute, the Thousand Islands Land Trust, SUNY ESF, University of Rhode Island, The USDA Agricultural Research Service and local volunteers, our SLELO PRISM assisted with caged releases of *Hypena opulenta* at four sites within the Eastern Lake Ontario and St. Lawrence Region. This important work will help to restore Priority Conservation Areas (PCA's) to their natural ecological function.



Hypena opulenta pupae being readied for release.



One of four 6'x6'x6' research cages.



Pupae remain in the release bucket until they mature into egg-laying adults inside the screened cage.

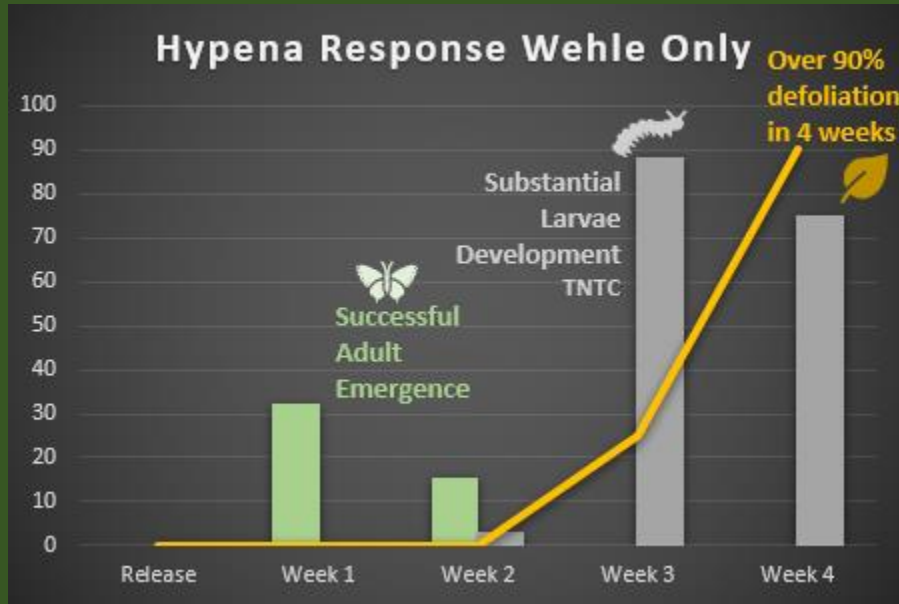


This year many egg-laying adult moths emerged
= **success!**

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In 2020, four cages were deployed, two in shaded mainland areas and two in partial sun island settings. Varying levels of adult *Hypena* emergence was observed. The mainland cages saw limited adult emergence in one cage and very good adult emergence in the other. One of the island cages saw limited adult emergence the other saw none.

Within four-week period adults emerged, deposited eggs followed by larvae development and nearly 100% defoliation of the cage bound swallowwort plants. Below is a chart that shows the successful development and adult emergence at the primary mainland site.



Additional releases are planned for the foreseeable future depending on the availability of *Hypena opulenta* insects. The insects being used for this project are lab-raised, which is difficult at best. Rearing healthy insects in sufficient quantities is the primary challenge to supply massive swallowwort populations with enough insects to suppress swallowwort growth. It is the hope of researchers and managers that these insects will successfully over-winter, reproduce and create a sustainable population. Below, *Hypena opulenta* larvae.



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