



Honey Bee Pollination... The Cornerstone of Agricultural Bounty

March 5, 2011

An Open Letter Regarding the Eradication of Star Thistle (Spotted Knapweed)

The Michigan Beekeepers' Association is a state level beekeeping organization representing all beekeepers in the state of Michigan, from home hobbyist to large scale commercial operator. Recently, our organization has been made aware of the efforts by Dr. Doug Landis, Department of Entomology at Michigan State University, to introduce bio-control insects for Star Thistle control and eradication.

The Michigan Beekeepers' Association officially opposes the statewide eradication of Star Thistle.

Michigan beekeepers are currently facing a crisis. With the loss of native pollinator habitats, Colony Collapse Disorder (CCD), diseases and parasitic pests, we are told that we are to expect our next and newest obstacle; the eradication of Star Thistle.

Star Thistle is a non-native plant, but one that has significant benefit. Primarily, it grows and blooms at a time of the year when there is little forage for honey bees. This period typically occurs around the end of June, after clover has finished flowering, and lasts for about 6 weeks. This nectar collection is vital for the survival of the honey bees, as they are busy storing food for the upcoming winter.

Humans also benefit from Star Thistle. In addition to the aesthetics of its delicate purple blooms, it provides beekeepers with an extremely flavorful honey, in significant volumes. Many beekeepers have cited that a significant amount of their honey crop (up to 75%) comes from Star Thistle, and many of their customers specifically request it. Star Thistle honey is widely regarded as a premium honey, with Michigan as a primary producer of it. In fact, over \$4 million dollars per year can be attributed directly to its sale.

Financially, this is only the tip of the iceberg. Dr. Landis' plan of eradication and control is far reaching and devastating for all of Michigan's citizens. If his plan is successful, large commercial beekeepers that rely upon the Star Thistle honey crop will be forced to move their operations out of the state. Several of these honey farms have been in business for generations, employing hundreds of tax paying workers. As more large beekeepers leave the state, pollination fees will increase for fruits and vegetables. This will create greater stresses and financial burdens for Michigan's already strapped farmers, who, in turn, will be forced to pass the increased costs on to the consumer.

Unfortunately, Dr. Landis' plan is already being carried out. In the summer of 2010, he released two insects as a form of bio-control for Star Thistle. These insects are the Root Weevil (*Cyphocleonus achates*) and Seed Head Weevils (*Larinus minutus* and *L. obtusus*) and were released on public lands listed as Sharonville, Camp Grayling, Lake Superior State, Flat River and Porter Ranch, forming a chain through the center of the state. His stated plan is to use these areas as test plots and observe the results, although it is not clear as to why areas where these weevils were released in previous years could not be observed, or why surrounding states that have had their Star Thistle destroyed couldn't be studied.

Dr. Landis has a second part to his plan. He has proposed to replant areas, where Star Thistle is wiped out, with a species of plant, native to Michigan. Serious questions have been raised about the suitability or appropriateness of the plants that have been suggested and might be used as replacement for star thistle.* Dr. Landis has outlined his proposed plants in his publication "*Attracting Beneficial Insects with Native Flowering Plants*" (*Extension bulletin E-2973*). Many of the proposed plants prefer moist environments or are components of prairie communities and require sustained inputs and management (usually, fire) in order to withstand pressure from invading woody species. How such management could be carried out given the mix of land ownership and parcel size now typical in Michigan is unclear. In addition, their long-term competitiveness on coarse, acidic soils now dominated by star thistle is untested. Some flower too early or late to be of value to the honey bee. Finally, the quality and quantity of honey produced by these species under actual field conditions in Michigan are both unknown.

Star Thistle is a beneficial plant that grows in poor soil conditions. It can even thrive in sandy conditions, helping to prevent erosion. It often grows where other plants cannot. And, with regards to land management, it can easily be controlled by other methods (burning, mowing or herbicidal sprays). But, releasing non-native insects as a control method is not something the Michigan Beekeepers' Association can get behind. These weevils are indiscriminant and will move off of public managed lands and on to private lands in a short amount of time. The seed mixtures Dr. Landis proposes will go unplanted, as the current stands of Star Thistle on private lands are in areas where it is not possible or profitable to farm. Finding land owners to plant these seeds will be near impossible, as there are reasons why these areas aren't farmed in the first place. In essence, if the farmer were willing to plant seed, there wouldn't be a stand of Star Thistle there in the first place.

Dr. Landis' plan may be well meaning, but is not a plan the Michigan Beekeepers' Association can approve. He has not performed an economic impact study, nor has he provided appropriate environmental studies before his release of the weevils. We, as an organization, oppose his plan.

Signed, The Michigan Beekeepers' Association

* For further information regarding this matter, contact Dr. Jay R. Harman, Professor Emeritus, Department of Geography, Michigan State University, at harman@msu.edu or 517-353-9030. His research interests include plant geography and bee plants of North America.