

**The New England Botanical Club
Graduate Student Research Awards
2016 AWARD WINNER**

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**Assessing the risk of Queen Anne's lace (*Daucus carota*) on the
pollination of toothed whitetop aster on Nantucket Island,
Massachusetts**

Queen Anne's Lace (*Daucus carota*, QAL) is the wild progenitor of crop carrot and has been introduced to North America from Europe. It has been documented on Nantucket Island, Massachusetts, since at least the nineteenth century, described as overrunning entire fields. A 2015 survey of QAL was performed on properties owned by Nantucket Conservation Foundation, Linda Loring Foundation, Nantucket Islands Land Bank, and other public properties, and a pollinator observation study was performed on QAL and a native species, Toothed White-top Aster (*Sericocarpus asteroides*, TWTA), to assess the effect that the presence of QAL has on native pollination. Preliminary data indicate that QAL is abundant across the island, with an average density of 12.2 plants/m², and QAL attracted more pollinator families, although both plant species are generalist pollinated. Total pollinator visits and pollinator diversity indices were also higher for TWTA when QAL was present than in sites where TWTA occurs without QAL. The current project is designed to complete the QAL survey and to increase the replicate size of the observation study. A further goal is to determine if heterospecific pollination is occurring on TWTA, even in sites where QAL is not present, and to determine whether pollinator activity on TWTA decreases when QAL flowers are removed from those sites with both species.

The New England Botanical Club offers each year up to \$3,000 total in support of botanical research to be conducted by graduate students. The awards are made to stimulate and encourage botanical research on the New England flora, and to make possible visits to the New England region by those who would not otherwise be able to do so. It is anticipated that two awards will be given, although the actual number and amount of awards will depend on the proposals received. The awards are given to the graduate student(s) submitting the best research proposal dealing with systematic botany, biosystematics, plant ecology, or plant conservation biology.