

**The New England Botanical Club  
Graduate Student Research Awards  
2018 AWARD WINNER**

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**Diversity and Host Specificity in the Genus *Sarea* Fr. (Ascomycota)**

The genus *Sarea* comprises two accepted species of resinicolous discomycete fungi found across the northern hemisphere on members of 13 conifer genera in the Pinaceae and Cupressaceae, including all New England native species of *Pinus*, *Abies*, *Picea*, *Larix*, *Thuja* and *Chamaecyparis*, and one native species of *Juniperus*. While little work has been done on the genus since the advent of molecular methods, what sequences have been obtained show a high amount of intraspecific variation. However, not enough data have been collected to determine if this variation follows patterns of host preference, geographical distribution, or morphological variation. Ample collections of mature specimens will be made at several locations in New England, with particular focus on substrates infrequently collected from, such as *Tsuga canadensis*, *Thuja occidentalis* and *Juniperus virginiana*, to provide good host taxon sampling. Fresh specimens from Europe and California will also be analyzed to provide more reliable geographic sampling. Each specimen will have its Internal Transcribed Spacer and nuclear Ribosomal Large Subunit regions amplified and sequenced for comparison with existing sequence data. Morphological variation will also be assessed by collecting various morphometric measurements of mature apothecia. The integration of all of this information will allow for more accurate assessment of the intraspecific variation in *Sarea difformis* and *S. resinae* and may reveal cryptic species in this broadly distributed genus.

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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.