

**The New England Botanical Club
Graduate Student Research Awards
2015 AWARD WINNER**

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**Systematics of *Huperzia* (Lycopodiaceae) and taxonomic revision
of the North American species**

The homosporous lycophytes (Lycopodiaceae) remain perhaps the most poorly understood group in the North American seed-free vascular plant flora. The taxonomic history of this group is dominated in large part by long-standing and unresolved debates about generic and species-level boundaries, and many taxa remain poorly characterized. Among these, perhaps the most challenging group for botanists are the gemmiferous firmosses of the genus *Huperzia*, which is widely distributed across North America. On account of a lack of detailed monographic work, and abundance of sterile hybrids, and the similarity of most species to the circumboreal *Huperzia selago*, taxonomy of this group in North America has remained largely intractable. In this work, I seek to resolve the taxonomy of the group through a combined approach of DNA sequencing and morphological study of *Huperzia* collections from across North America. The goals of this study are: 1) to place North American *Huperzia* within the context of a global phylogeny, 2) to identify cryptic species in the genus, 3) characterize the morphology, abundance, and distribution of a number of undescribed hybrids, and 4) produce a revision of the group in North America. This work represents a first step towards a global phylogeny and revision of the Lycopodiaceae.

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.