Documenting Reproductive Phenology using Herbarium Specimens: Experiences from the New England Vascular Plants Project

Patrick W Sweeney‡, Edward Gilbert§

‡ Yale Peabody Museum of Natural History, New Haven, United States of America
§ Arizona State University, Symbiota, Tempe, United States of America

Corresponding author: Patrick W Sweeney (patrick.sweeney@yale.edu)

Received: 18 Aug 2017 | Published: 18 Aug 2017


Abstract

Herbarium specimens and associated label data are valuable sources of phenological data. They can provide information about the phenological state of the specimen and information about how phenology varies in space and time. In an effort to leverage this tremendous phenological resource, the New England Vascular Plants project (NEVP) has worked over the past few years to create a data set catered to the study of the effects of climate change in New England. This project has focused on capturing images, specimen occurrence data, and reproductive phenology from New England specimens housed in 17 herbaria in northeastern North America. Flowering and fruiting state was scored from images of specimens or derived from pre-existing occurrence records. Data was captured through crowdsourcing efforts and by paid staff. To help standardize the scoring process, a controlled reproductive phenology vocabulary was developed with input from the community. This vocabulary prioritized simplicity of use and broad applicability. In this talk, I will give an overview of our efforts, describing the digitization products, controlled vocabulary, scoring process, and method for sharing the scorings with data users. I will also discuss the challenges involved in utilizing uncontrolled phenology data in pre-existing occurrence records.
Keywords

controlled vocabulary, digitization, herbarium specimens, New England, phenology, vascular plants

Presenting author

Patrick W. Sweeney

Acknowledgements

National Science Foundation (Award 1209149)