PROCEEDINGS OF TDWG

Biodiversity Information Science and Standards 1: e20347
doi: 10.3897/tdwgproceedings.1.20347

OPEN ACCESS

Conference Abstract

Using ontologies to explore floral evolution in a non-model plant clade

Annika L Smith ‡

‡ University of Florida, Gainesville, United States of America

Corresponding author: Annika L Smith (annikals@ufl.edu)

Received: 16 Aug 2017 | Published: 16 Aug 2017

Citation: Smith A (2017) Using ontologies to explore floral evolution in a non-model plant clade. Proceedings of TDWG 1: e20347. https://doi.org/10.3897/tdwgproceedings.1.20347

Abstract

The ability to successfully address the complex, multidimensional process of plant character evolution requires approaches that integrate across domains: genetics, evolution, development, and ecology. Additionally, in order to understand the patterns of plant character evolution across a broad phylogenetic scale, we must continue to extend beyond current model organisms and identify new candidate genes implicated in phenotypic evolution. I will explore the potential of ontologies to link the phenotypes and developmental processes of non-model plant clades to underlying candidate genes identified from the model plant *Arabidopsis,* with the overall goal of generating candidate gene hypotheses in non-model plants. This presentation will explore the process of building an ontology specific for a non-model clade which can be integrated with existing ontologies and repositories for model plants, using the genus *Tropaeolum*, commonly known as nasturtiums. As well as highlighting the resources and pipelines that facilitate the development of an ontology in a non-model clade, I will also discuss the broader challenges and the potential inherent in an ontological approach.

Keywords

Ontology, Character Evolution

Presenting author

Annika Smith