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Conference Abstract

Bringing a Semantic MediaWiki Flora to Life

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Abstract

The existing web representation of the Flora of North America (FNA) project needs improvement. Despite being electronically available, it has little more functionality than its printed counterpart. Over the past few years, our team has been working diligently to build a new more effective online presence for the FNA. The main objective is to capitalize on modern Natural Language Processing (NLP) tools built for biodiversity data (Explorer of Taxon Concepts or ETC; Cui et al. 2016), and present the FNA online in both machine and human readable formats. With machine-comprehensible data, the mobilization and usability of flora treatments is enhanced and capabilities for data linkage to a Biodiversity Knowledge Graph (Page 2016) are enabled. For example, usability of treatments increases when morphological statements are parsed into finely grained pieces of data using ETC, because these data can be easily traversed across taxonomic groups to reveal trends. Additionally, the development of new features in our online FNA is facilitated by FNA data parsing and processing in ETC, including a feature to enable users to explore all treatments and illustrations generated by an author of interest. The current status of the ongoing project to develop a Semantic MediaWiki (SMW) platform for the FNA is presented here. New features recently implemented are introduced, challenges in assembling the Semantic MediaWiki are discussed, and future opportunities, which include the integration

of additional floras and data sources, are explored. Furthermore, implications of standardization of taxonomic treatments, which work such as this entails, will be discussed.

Keywords

Flora of North America, Taxonomic Treatments, Morphological Data, Natural Language Processing, Explorer of Taxon Concepts, Data Mobilization, Biodiversity Knowledge Graph, Semantic MediaWiki

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