



## The Early Land Plants Today project (ELPT): A community-driven effort and a new partnership with *Phytotaxa*

MATT VON KONRAT<sup>1\*</sup>, LARS SÖDERSTRÖM<sup>2\*</sup> & ANDERS HAGBORG<sup>1\*</sup>

<sup>1</sup>Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605–2496, USA

<sup>2</sup>Department of Biology, Norwegian University of Science and Technology, Trondheim, Norway

\*Authors contributed equally to this paper

### Abstract

There remains a critical need to synthesize the vast amount of nomenclatural, taxonomical and global distributional data for liverworts and hornworts. This is fundamental in the efforts towards developing a working list of all known plant species under the auspices of the Convention on Biological Diversity (CBD). Such a synthesis has far reaching implications and applications, including providing a valuable tool for taxonomists and systematists, analyzing phylogeographic and diversity patterns, aiding in the assessment of floristic and taxonomic knowledge, and identifying geographical gaps in our understanding of the global liverwort and hornwort flora. We here outline and discuss the methodology as part of an international consortium referred to as the Early Land Plants Today (ELPT) project. There are three fundamental components to the project: 1) a worldwide checklist of liverworts and hornworts; 2) regional or local distribution checklists; and 3) the synthesis of the taxonomy, systematics, and nomenclature on a taxonomic group-by-group basis. The latter, in particular, represents the first endeavour of its kind and will appear as a series of forthcoming papers in *Phytotaxa*, where ELPT collaborates closely with taxonomic specialists validating and verifying nomenclatural and type data, authorities, original citations, as well as auxiliary data associated with specific taxonomic groups. A brief account of the compilation of regional or local checklists is also provided; these also will be published periodically.

**Key words:** CBD, classification, distribution, GBIF, hornworts, liverworts, nomenclature, taxonomy

### Introduction

The critical biological, environmental and evolutionary significance of liverworts (Marchantiophyta) and hornworts (Anthocerotophyta) is well documented (e.g., Hallingbäck & Hodgetts 2000, O'Neill 2000, Gignach 2001, Gradstein *et al.* 2001, Shaw & Renzaglia 2004, Qiu *et al.* 2007, Bates 2009). Recently, there has been a major internationally coordinated effort to synthesize the vast amount of nomenclatural, taxonomical and global distributional data for this unique group of land plants (Söderström *et al.* 2008, von Konrat *et al.* 2008a, b). Prior to this effort there remained no central source that attempted to harness core data from the immensely scattered literature. However, there existed two large independent databases with nomenclatural, taxonomical, and distributional data on liverworts and hornworts: Söderström (Trondheim) created and maintained such a database spanning over two decades, and more recently Hagborg and von Konrat (Chicago) developed a similar effort. The merger of these two large datasets formed the basis of the GBIF funded project entitled 'Early Land Plants Today (ELPT).'

ELPT has far reaching implications and applications, including providing a valuable tool for taxonomists and systematists, analyzing phylogeographical and diversity patterns, aiding in the assessment of floristic and taxonomic knowledge, and identifying geographical gaps in our understanding of the global liverwort flora (von Konrat *et al.* 2008a). Moreover, the ELPT project is providing the foundation on which to develop a