

## Biodiversity e-Science Development in China

Jin-Zhong Cui<sup>1</sup>, Zhe-Ping Xu<sup>1</sup>, Ke-Ping Ma<sup>1</sup>, Hai-Ning Qin<sup>1</sup>  
Institute of Botany, the Chinese Academy of Sciences, Beijing

### Abstract:

Biodiversity Informatics is a young and rapidly growing field. As it develops, more and more biodiversity e-Science infrastructure appears, such as LifeWatch (<http://www.lifewatch.eu/>, Europe), NBII (National Biological Information Infrastructure, <http://www.nbii.gov/>, USGS), DataONE (Data Observation Network for Earth, <http://www.dataone.org/>, USGS) and ALA (Atlas of Living Australia, <http://www.ala.gov.au>, Australia). China has rich biodiversity data, such as specimens, images, scientific literatures, field survey data, lab data. However, for a long time, many data are neither available nor accessible. In recent few years, especially after the cooperation with Species 2000, EOL (Encyclopedia of Life), BHL (Biodiversity Heritage Library) and other related international projects, biodiversity information in China has been organized and shared in a good way, more and more researchers in China have began working on collection, collation and dissemination of biodiversity information. Also in this time, with the help of biodiversity informatics, the concept of biodiversity e-Science infrastructure has come to appear. In this paper, we suggest a biodiversity e-Science infrastructure based on a Service-Oriented Architect (SOA) and OGC ISO 19119 service standards. Related data, tool, metadata standards, service, annotation, community and application will be integrated into one platform, which may play an important role in the development and application of biodiversity research in the future of China.

**Key words:** biodiversity, e-science, informatics, China, SOA