Data Exchange and Processing in Digital Science Infrastructure Platforms for Biodiversity Information

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The digital science platforms Biodiversity Heritage Library (BHL and BHL Europe), Catalogue of Life (CoL), Encyclopedia of Life (EoL), Global Biodiversity Information Facility (GBIF), International Barcode of Life (iBOL), International Nucleotide Sequence Database Collaboration (INSDC) and JSTOR Plant Science, all are global players that among other data process and (re-)purpose lichen research data. While all these platforms capture biodiversity data, they focus on different aspects, for instance, taxonomy and classification, occurrence, morphology, molecular data, or ecology.

Our contribution describes the processing of lichenological research data in some of these platforms, focusing on the technical implementation of data exchange, copyright issues, and data sharing policies and their implications for data custodians, owners, providers, and publishers. The international initiatives GBIF and CoL seek long-term business models and funding mechanisms to provide online data openly and free of charge. In the long run, GBIF depends on governmental commitments for its funding, CoL is financed by EU and other grants as well as by Species 2000, a British company limited by guarantee. These two business models are compared with that of JSTOR Plant Science, the commercial portal of the Global Plant Initiative (GPI). All three initiatives are currently discussing challenges of sustainability both with regard to data curation as well as software development for their complex portals.

Keywords: Lichen Research Data, Internet Portals for Science, BHL, CoL, EoL, GBIF, iBOL, JSTOR Plant Science, INSDC, Data Flow