The Diversity Workbench – a virtual biodiversity research environment

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The modularized Diversity Workbench represents a virtual research environment for multiple scientific purposes with regard to management and analysis of biological data. The framework is appropriate to store different kinds of biodiversity data and facilitates the processing of ecological, observational, collection and taxonomic data. It is capable and flexible enough to be applied as data storage unit for institutional data repositories.

The database framework Diversity Workbench consists of interacting database components. Clients of every component of the Workbench are used as stand-alone applications and provide supporting functions to clients of corresponding components. This results in a high flexibility with regard to the conceptual design, enabling sophisticated user administration and a rapid setup of project-specific and user-adapted entry forms. Further, it facilitates the dynamic integration of web services and external data resources.

Functions for field data gathering are provided by the component DiversityMobile, designed for monitoring ecological and biological data, using mobile devices. The information model of DiversityMobile is fully compatible with that of DiversityCollection, the database component for the storage of collection and observational data. DiversityCollection provides the option to export data to GBIF via the BioCase-Wrapper by using the TDWG standard schema ABCD.