



# Enlarging information on vertebrate collection data

## Innovative methods for rapid assessment

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Fig. 1. Scans of inventories, indexes or itineraries are also instruments for a synopsis of collection contents.

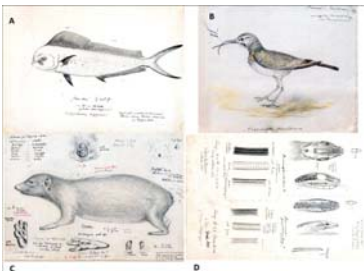


Fig. 2. Scans from the sketchbook of Georg Schweinfurth provide detailed information on the depicted species of Egypt. A. Common dolphinfish B. Greater Hoopoe-lark with bill anomaly C. Rock Hyrax, *Procavia capensis abyssinicus* D. Striped Sand-snake (top) and Speckled Sand-snake (bottom).



Fig. 3. The sketchbook of Georg Schweinfurth also gives insight into landscapes and habitats at a time, when photography was not yet a common tool.

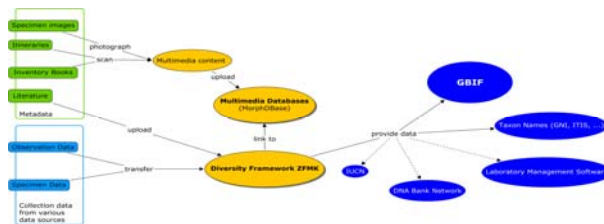
The Zoological Research Museum Alexander Koenig, Bonn (ZFMK), Germany provides data on vouchers and observations of vertebrates (mammals, birds, fishes, amphibians and reptiles) for use in research, teaching and education as well as for the interested public. Three main goals will be accomplished:

- Acquisition of already digitized occurrence data
- A rapid acquisition of non-digitized vouchers and observations
- Addition of multimedia data to enrich specimen based information

### Acquisition of already digitized data

Occurrence data, (specimen based collection and observation data), taxon names, and literature data are dispersed over several institutes and are available in different formats. The ZFMK will transfer all these data into one central repository, the Diversity Workbench Framework

[www.diversityworkbench.net](http://www.diversityworkbench.net). Tools will be developed to exchange the data with other applications and databases, like Laboratory Management Software, Web Portals, etc. This will ease access to collection data and allow data flow within the ZFMK and to other institutions.



### Rapid acquisition of new data

A rapid acquisition of specimen based collection data will be accomplished by scans and photographs: Multiple specimen based items like clutches of eggs in bird collections will be scanned. Amphibians or fishes in wet collections are photographed and presented as one single entity and documented by images. The information content of specimen based collection data will be enlarged by appending multimedia data. These are photographs, sound files and scans of literature, but also of old inventory books and itineraries that hold valuable and detailed information and illustrations of finding localities, landscapes and habitat (Figures 1 - 3).

### Outlook

All data will be offered free to all via an institutional web portal as well as via GBIF. Ideally GBIF should provide the possibility to link vouchers, images or observations with complex literature references, old inventory books and/or itineraries.

### About GBIF-D:

GBIF was established in 2001 and Germany is one of the founding nations. Currently GBIF Germany (GBIF-D, [www.gbif.de](http://www.gbif.de)) is funded as a 3-year project by the Federal Ministry of Education and Research (BMBF, 01LI 1001 A-F).

Eight institutional nodes form the backbone of GBIF-D, each responsible for a range of taxonomic groups:

- BGBM Berlin-Dahlem responsible for Coordination
- DSMZ Braunschweig responsible for Bacteria & Archaea
- BGBM Berlin-Dahlem responsible for Plants & Protists
- BSM Munich responsible for Fungi & Lichens
- MN Berlin responsible for Insects
- ZSM Munich responsible for Invertebrates II
- Senckenberg Frankfurt responsible for Invertebrates III
- ZFMK Bonn responsible for Vertebrates
- MN Berlin responsible for Fossils

For any questions concerning GBIF, GBIF-D, access to and provision of data please feel free to contact [gbif-d@bgbm.org](mailto:gbif-d@bgbm.org)

### About GBIF:

GBIF makes digital biodiversity data **openly and freely available** on the Internet for everyone, and endorses both open source software and open data access. [www.gbif.org](http://www.gbif.org)

GBIF provides **scientific biodiversity data** for decision-making, research endeavours and public use. <http://data.gbif.org>

GBIF is a network of **data publishers who retain ownership and control** of the data they share. Linked datasets provide a more robust representation of biodiversity than any single dataset.

GBIF provides access to primary biodiversity data held in institutions in developed and developing countries. **Data shared through GBIF are repatriated data.**

GBIF is a **dynamic, growing partnership** of countries, organisations, institutions and individuals working together to mobilise scientific biodiversity data.

GBIF invites you to download species occurrence data freely and openly from <http://data.gbif.org>

GBIF & GBIF-D invite you to **join** the GBIF network **and share** your biodiversity data, as well as participate in developing **new tools and services.**

Photocredits  
Inventories, Itineraries etc. of vertebrates are scanned at ZFMK by Thorsten Klug (Figures 1-3). The hardware is open to all GBIF-D partners.

