



Jointly sponsored by CSIRO National Research Collections Australia, iDigBio and the Atlas of Living Australia

Digitisation of Biological Collections Round Table Discussions

Global collections : Advancing scientific research

Digitising collections is not enough, you must make it known and available for searching and use. The potential now exists to capitalise on this global massive investment in biodiversity so as to enable new science.

Bioinformatics/Digitisation is being perceived as a replacement for, rather than an aid to, systematic expertise, where collection curation has been disconnected from researchers.

This topic envisages support of an international coordinating effort for collection digitisation research that would see to digitise collections for global impact across multiple institutions to address specific research questions. Integrating the process or products of digitisation into research needs to be capable of dealing with project /s that are focused on 1) collection of the data, and 2) research use of this data

Soltis:

Motivation of NSF for ADBC is research.

Questions:

what research would we like to do

what do we need to do

aggregating data and analysis

data driven vs hypothesis driven science

Barriers?

tech

cultural

international

scientific

info in digitized data:

place and time

traits

others?

novel uses of digitized data – new questions

linking heterogeneous data

Cleaning and enhancing (e.g. georeferencing) data after acquisition is crucial and communicating with subsequent users will be challenging

What sort of training do we need to apply for the next generation to be able to do all of this

making tools, e.g. ALA broader use - Interested in how can we make the ALA type analytical tools available on a broader scale ? and extend them?

Need international fund source; check on Aus and US (NSF) possibilities.

Should focus on global problems to our funders

International programs of NSF might be a source for international collaboration funding

Instead of bio-national proposals , we need combined joint proposals

Build feedback loops in data sharing

- annotations

- data quality

- use

When talking about data sharing (ie. ALA data shared with iDigBio etc), as so as the data aggregations happen. This causes issues for collections, how do collections get feedback ?

Need dated versioning system for aggregators and capacity for annotations to find their way back to the custodial institution.

Must solve cultural problem in sharing data, including cleaning, data ownership, open data,
... a trust network ... the data that comes from the collection

Judgements made on the record

Do we need 2 separate records, the original record & the cleaned record that has extra information

Need a working group ?

Data sharing is of benefit to all researchers

Jose: First step should be data sharing through the utilization of APIs

Vince: develop a repository of research-oriented use cases for data access and use by biodiversity researchers

Ke Ping Ma - uses of collections data

Taxonomy

Biogeography

Invasion Ecology

Conservation Biology

Phenology

Climate Change

practical idea - follow on from the zookeys 2012 special edition (global digitisation), another special edition on data sharing/data mobilisation, 3 years on after digitisation, the outcome of the data now

Produce a special edition of Zookeys or BDJ focused on data use, with several tracks.

Value of 'digital repatriation'/ exposure/ accessibility of specimens from other countries held in our collections as one of the benefits/advantages of data sharing. Curatorial benefit in getting input from researchers from country of origin to use those collections - increase our own knowledge about our collections, data improvement.

Focus on invasive species across several countries/continents in use cases and to substantiate the importance of international collaboration

Is there interest in a paper on patterns/ forms of embargoed or sensitive records - documenting, explaining, making transparent the decision-making around availability of data for invasive/ sensitive species research?

Ke Ping: High level short paper for Nature or Science about the global outcomes of this meeting and its importance to biodiversity digitization and data use