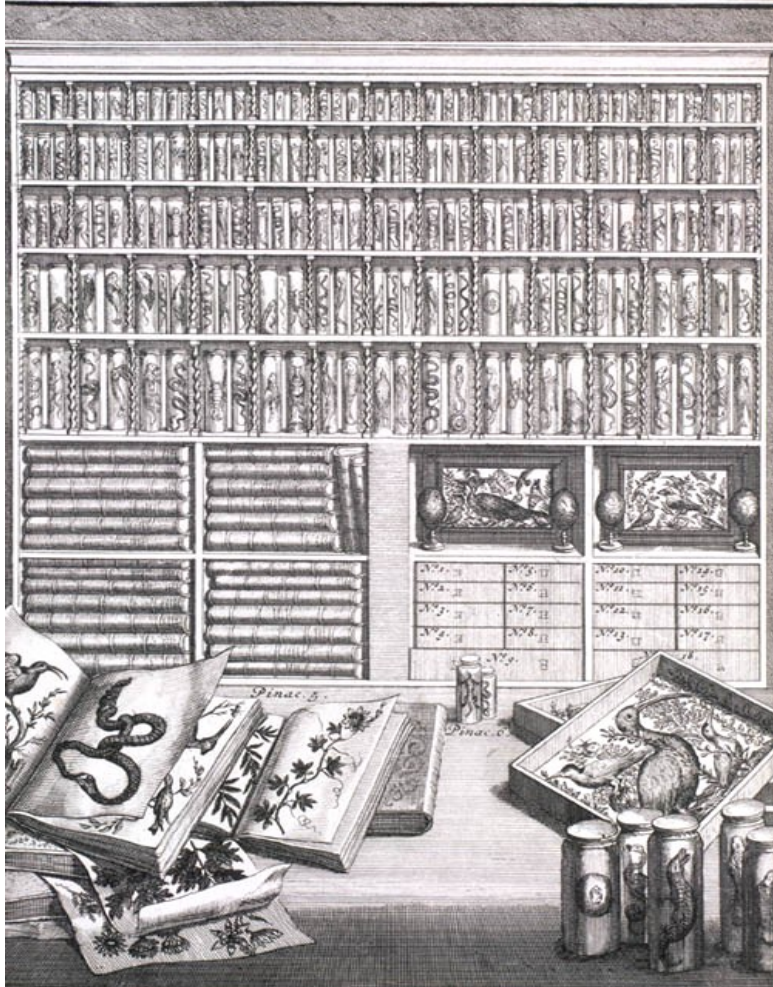


The Biodiversity Heritage Library

Preserving a Knowledge Ecology

Thomas Garnett, BHL Program Director

27 September, 2010



The cited half-life of publications in taxonomy is longer than in any other scientific discipline

-Macro-economic case for open access, Tom Moritz

-Current taxonomic literature often relies on texts and specimens > 100 years old.



Reptilia and Batrachia. (1885-1902) by Albert C.L.G. Günther

Digitize the core literature on biodiversity.

Open Access: all content can be repurposed, reused, reformatted.

Congruent: must fit in to a dynamic knowledge ecology.

BHL Content

- The Biodiversity Heritage Library has the largest collection of full-text digitized core biodiversity literature in the world.
- No other repository is even close for this class of texts.
- 31,000,000 pages – 83,000 volumes – growing. 80 terabytes today – double in two years.



Preserving a Knowledge *Ecology*

Biodiversity information is created, used, and maintained in a complex knowledge ecology of taxonomists, botanists, zoologists, conservationists, field researchers, professional societies, publishers, librarians and others. Making it available for future generations *requires more than preserving bit streams.*

**Self-organization, resilience,
heterogeneity, & fractal dynamics**

Open Access is a form of preservation

- distribute responsibility to the wider community and thereby pool resources.
- digitize/make available the greatest amount of biodiversity texts in as open a manner as possible. This includes open to human reading but also open to algorithmic investigation by projects that will push the frontiers of biodiversity research.
- To ensure and demonstrate that the legacy of biodiversity research belongs to all of humanity and is the exclusive provenance of no one country



BHL Digital Preservation Principles

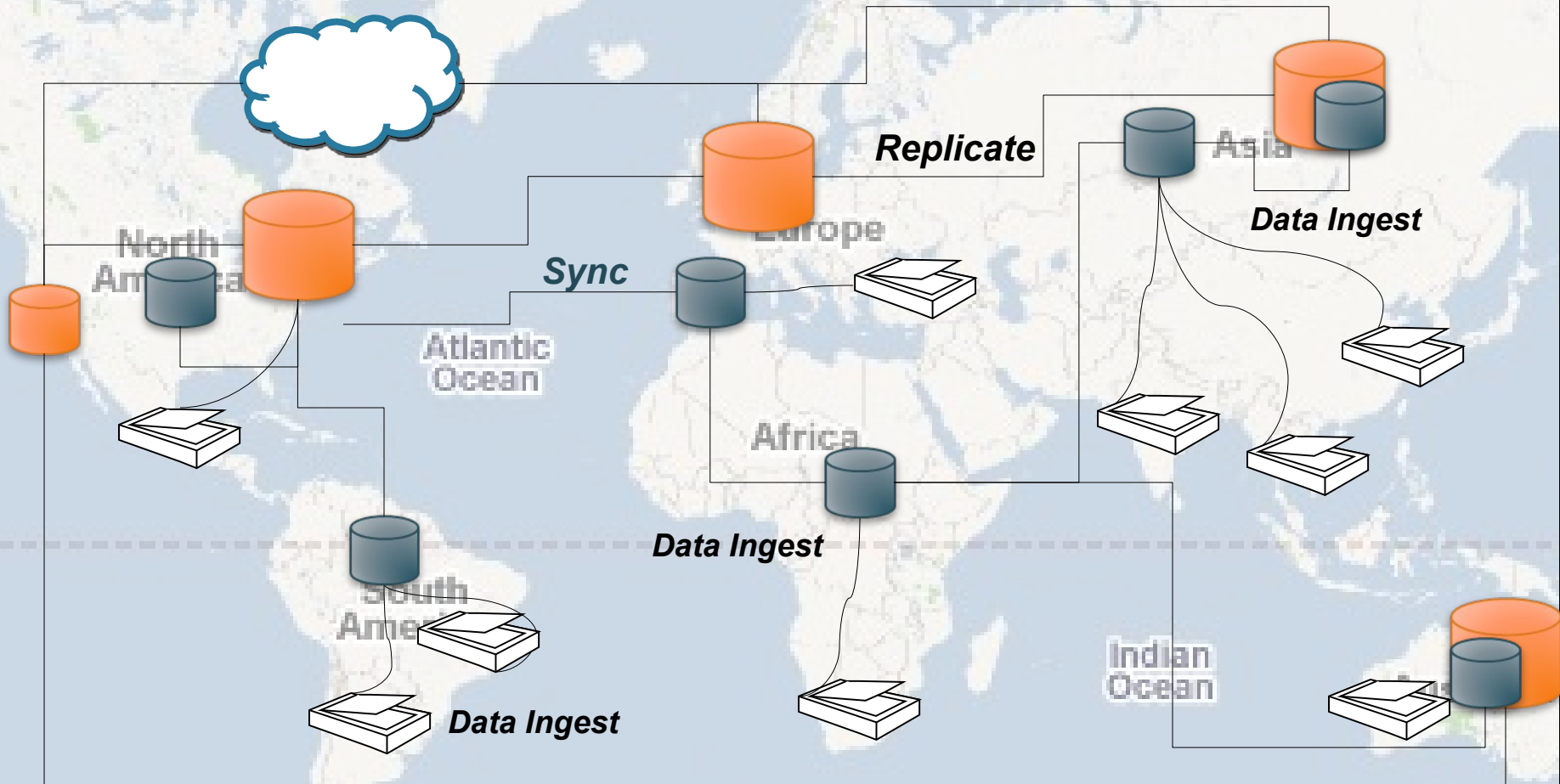
- Ensure long-term continued access to the content of the legacy biodiversity published record by eliminating any single point of failure.
- Distribute responsibility to the wider biodiversity community and thereby pool resources.
- Create responsible ownership of the content by partner projects. |

BHL Digital Preservation Principles 2

- Replicate the content in different locations
- With different system architectures.
- Under different managements and different funding streams.
- Each partner nodes is self-sustaining.
- Transparent processes.

BHL Vision: Global Infrastructure

-  Preservation System – multiple redundant copies of all digitized content.
-  Access System – files, metadata & services needed to deliver content.



- The Long Now Strategy
 - Institutions that are creating the BHL exist to persist through time. That's an important part of their business. Use them.
 - Do not depend on any one institution.
 - Preservation is both a *technical* and a *social* process.
 - The future is uncertain, the technology landscape changes, people pass on. So create consortial structures that are low-overhead, flexible, and can respond quickly.