

- General Systematic Research Tools and Resources for Systematics Research, University of Michigan Herbarium, Ann Arbor, MI, USA: http://www.herb.lsa.umich.edu/tool_dir.htm
- Center for Biosystematics, University of California, Davis, CA, USA: <http://cbshome.ucdavis.edu/index.html>
- Virtual Library Museums Pages: Directory of Online Museums: <http://www.icom.org/vlmp>
- UCMP lists of Natural History Collections, Societies and Organisations, hosted by the Museum of Paleontology, University of California (UCMP), Berkeley, CA, USA: <http://www.ucmp.berkeley.edu/collections/other.html>; <http://www.ucmp.berkeley.edu/subway/nathistmus.html>; <http://www.ucmp.berkeley.edu/subway/nathistorg.html>
- Directory of Research Systematics Collections (DRSC) of the National Biological Information Infrastructure (NBII), ASC and USGS, Washington, DC, USA: <http://bp.cr.usgs.gov/drsc/drsc.cfm>
- Natural History Museums and Collections: <http://www.lib.washington.edu/sla/natmus.html>; <http://fsas.upm.edu.my/~arahim/jabbio/museum.html>
- Biological Museums on the Web, hosted by The Biodiversity and Biological Collections Web Server, University of New Orleans, New Orleans, LA, USA: <http://biodiversity.uno.edu/cgi-bin/hl?museum>
- The Insect and Spider Collections of the World, hosted by the Bernice Pauahi Bishop Museum, Honolulu, HI, USA: <http://www.bishopmuseum.org/bishop/ento/codens-r-us.html>
- Insects and Entomological Resources, hosted by Saint Anselm College, Manchester, NH, USA: <http://www.anselm.edu/homepage/chieber/insects.html>
- Iowa State Entomology Index: Insect Collections, Iowa State University, IA, USA: http://www.ent.iastate.edu/List/insect_collections.html
- Council of Heads of Australian Entomological Collections (CHAEC), hosted by Museum Victoria, Melbourne, VIC, Australia: <http://pioneer.mov.vic.gov.au/chaec>
- International Society of Arachnology, National Museum of Natural History, Washington, DC, USA: <http://www.ufsia.ac.be/Arachnology/Pages/ISA.html>
- Polar Museums Directory, The Scott Polar Research Institute (SPRI), University of Cambridge, UK: <http://www.spri.cam.ac.uk/lib/museums.htm>
- Botanical Museums, Herbaria, Natural History Museums on the Internet Directory for Botany (IDB), University of Alberta, Edmonton, AB, Canada: <http://www.botany.net/IDB/subject/botmus.html>
- A list of herbaria, hosted by Tel Aviv Herbarium (TELA), Tel Aviv, Israel: <http://www.tau.ac.il/lifesci/botany/herbaria.htm>
- *Index Herbariorum* and *Plant Specialists Index*, Online Search Index for Institutions and People, hosted by The New York Botanical Garden, Bronx, NY, USA: <http://www.nybg.org/bsci/ih/ih.html>
- American Society of Plant Taxonomists (ASPT), Membership Directory: <http://www.sysbot.org/members.htm>

- Worldwide List of Internet Accessible Herbaria: <http://www.ibiblio.org/botnet/flora/wwwlist2.html>
- Further listings of herbaria: <http://dir.yahoo.com/Science/Biology/Botany/Herbaria>
- Mycologists Online, Worldwide Directory for Mycology and Lichenology, hosted by the Institute of Botany, Bratislava, Slovakia: <http://web.savba.sk/botu/myco>

9 Biodiversity and Biological Collections Database Software

- The Biodiversity and Biological Collections Web Server, University of New Orleans, New Orleans, LA, USA: <http://biodiversity.uno.edu>
- General Systematic Research Tools and Resources for Systematics Research, University of Michigan Herbarium, Ann Arbor, MI, USA: http://www.herb.lsa.umich.edu/tool_dir.htm
- Digital Taxonomy – An Information Resource on Biodiversity Data Management: <http://www.geocities.com/RainForest/Vines/8695>
- BIOLINK, CSIRO Publishing, Melbourne, VIC, Australia: <http://www.biolink.csiro.au>
- BIOTA: The Biodiversity Database Manager, Sinauer Associates, Inc., Sunderland, MA, USA: <http://viceroy.eeb.uconn.edu/biota>
- DELTA: <http://biodiversity.bio.uno.edu/delta>
- MUSE and Specify, Biodiversity Research Center, Lawrence, KS, USA: <http://biodiversity.bio.uno.edu/muse>; <http://usobi.org/specify/Muse.html>; <http://www.usobi.org/specify>
- Platypus, CSIRO Publishing, Melbourne, VIC, Australia: <http://www.environment.gov.au/abrs/platypus.html>
- Freezerworks, Dataworks Development, Inc., Mountlake Terrace, WA, USA: <http://www.freezerworks.com>

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Further reading

Dessauer, H. C. and Hafner, M. S. (1984). *Collections of Frozen Tissues: Value, Management, Field and Laboratory Procedures and Directory of Existing Collections*. Association of Systematics Collections, University of Kansas Press, Lawrence, KS.

This volume presents the proceedings of a Workshop on Frozen Tissue Collection Management, in which papers stressing the value of frozen tissue collections for studies in basic, applied and forensic sciences were presented, guidelines for collection management were discussed and a plan to promote and coordinate use, growth and funding of tissue collections was formulated. Contents include sections detailing the value of and need for, collections of frozen tissues, simple methods for collecting tissues under field conditions, knowledge on long-term stability of tissue components, U.S. federal regulations concerning tissue collection and transport and results of a worldwide survey of tissue collections holdings. This seminal volume is still of tremendous value to tissue collection managers, users and potential users and officials of all federal, state and private funding agencies. The directory of frozen tissue collections was updated in Dessauer et al. (1996), and recent websites are provided in Appendix 5 of this chapter.

Herholdt, E. M. (1990). *Natural History Collections: Their Management and Value*. Transvaal Museum Special Publication No. 1, Transvaal Museum, Pretoria.

This volume presents the proceedings of a symposium on the management and value of natural history collections held at the Transvaal Museum, Pretoria. Contributed papers deal with general aspects of the management of fluid collections, the conservation of natural history material, the computerization of collections, the importance of voucher specimens and the extensive uses of collections. Contents reflect the broad nature of collections management, the value of collections and the expertise involved in their curation. This volume serves both as a useful reference for museum curators and collections managers, by stimulating professionalism in collections management and as a primer on the value of natural history collections outside the scientific community.

Hoagland, K. E. and Rossman, A. Y. (1997). *Global Genetic Resources: Access, Ownership and Intellectual Property Rights. Beltsville Symposia in Agricultural Research 21*. Association of Systematics Collections, Washington, DC.

This volume presents the proceedings of the Beltsville Symposium on Global Genetic Resources, which explored issues relating to ownership of and access to genetic resources and biological specimens. Laws are being implemented in countries throughout the world that severely restrict access to these research resources, thereby affecting the ability of scientists to pursue their goal of providing knowledge to benefit the world's people. Contributed papers examine the status of the various treaties, national laws and agreements in effect around the world, present case studies demonstrating how research using international resources benefit the global community, explore models of the equitable use of genetic resources, and discuss potential solutions and mutually beneficial compromises. An Association of Systematics Collections position paper, based on the presentations, discussions, and an open session immediately following the symposium, is also presented.

Zimmer, E. A., White, T. J., Cann, R. L. and Wilson, A. C. (1994). *Methods in Enzymology Vol. 224, Molecular Evolution: Producing the Biochemical Data*. Academic Press, San Diego, CA.

This volume presents a compendium of excellent chapters, contributed by authorities, dealing with all aspects of data acquisition and analysis for studies in molecular evolution. Guidelines for the collection and storage of samples are arranged into chapters on land plants, vertebrates, invertebrates, fungi and algae. Each chapter presents methods for the collection and temporary storage of freshly collected tissues in the field, as well as suggestions for alternative sources of tissues. Procedures for the transportation, long-term storage and documentation of samples, including the collection and deposition of voucher specimens, are provided. Each chapter also offers general information on the regulations permitting collection and transportation of samples. Subsequent chapters present protocols for isolation of proteins and DNA from fresh and ancient samples, including advice on the selection of tissues.