

**Iowa State University Library  
Collection Development Policy  
Department of Ecology, Evolution, and Organismal Biology**

## **I. General Purpose**

Resources are selected to support the instructional and research needs of faculty, graduate, and undergraduate students in the Department of Ecology, Evolution, and Organismal Biology (EEOB). EEOB is one of the ISU departments that focuses on life science research. The department is involved in undergraduate programs (Biology, Environmental Science, Genetics) and offers graduate work leading to M.S. and Ph.D. degrees. In addition, there are many other programs at Iowa State University (ISU) whose faculty and students use this collection.

The types of materials collected for the department support a wide range of activities, from undergraduate education to faculty research needs. The types of material must therefore vary from popular non-technical literature in the fields of ecology, biology, evolution and related areas to extremely specialized material used by researchers.

## **II. History**

The life sciences have been an important part of ISU's instructional and research programs since its first students arrived in 1869. Botany at ISU began when the Board of Trustees in 1859 designated four professorships. In 1870, Charles E. Bessey accepted one of these, thus implementing Botany through its graduate work and established the Iowa State Herbarium. The Department of Zoology was originally founded in 1872. As the University developed, other departments were founded that focused on various areas of biology and agriculture.

In 2001 and 2002 the colleges of Liberal Arts and Sciences and Agriculture began to consider a reorganization of the basic life science departments at ISU. Plans were established to implement a major reorganization of these departments to better reflect how biology is organized at a more systematic level. One of these levels is that of the whole organism. The purpose of this department is to investigate organisms, how they have evolved, and how they are related to each other and the environment. The EEOB Department was founded in July 2003. The department was created by the combination of faculty from a number of former departments such as Zoology and Genetics; Botany; Microbiology; and Animal Ecology. Fourteen faculty from Zoology and Genetics and twelve faculty from Botany joined EEOB. One faculty member from Microbiology and four faculty from Animal Ecology also joined the department. It is jointly administered by the College of Liberal Arts and Sciences and the College of Agriculture and Life Sciences. At the same time, the Department of Genetics, Development and Cell Biology (GDCB) was also created. Twenty-three faculty from Zoology and Genetics and seven faculty from Botany joined GDCB. It should also be noted that the consolidation of the former Animal Ecology and Forestry departments in 2002 resulted in the formation of the Department of Natural Resource Ecology and Management (NREM).

As of October 2007, EEOB includes 30 faculty (25 tenure-track), 55 graduate students pursuing master and doctoral degrees, and approximately 15 post-doctoral associates and staff.

Major facilities associated with EEOB include:

- Ada Hayden Herbarium (<http://www.public.iastate.edu/~herbarium/index.html>)
- Bessey Microscopy Facility (<http://www.biotech.iastate.edu/facilities/BMF/>)
- Iowa Lakeside Laboratory (<http://www.continuetolearn.uiowa.edu/lakesidelab/index-2.html>)

EEOB is also part of the ISU ADVANCE program. “The goal of the ISU ADVANCE Program is to investigate the effectiveness of a multilevel collaborative effort to produce institutional transformation that results in the full participation of women faculty in science, technology, engineering and math fields in the university.” The ISU ADVANCE Program is funded for 5 years (2006-2011). Several EEOB faculty members are affiliated with this program.

### **III. Iowa State University Program**

EEOB plays a central role in undergraduate education. The EEOB Department and the GDCB Department co-administer the undergraduate degree in Biology. This degree attracts a large number of undergraduates. These two departments along with Biochemistry, Biophysics, and Molecular Biology (BBMB) jointly administer the undergraduate Genetics program. EEOB faculty also participate in majors (Animal Ecology and Forestry) administered by the NREM Department. Faculty are also involved in the Environmental Science and Environmental Studies programs.

The department offers graduate work leading to both a Master of Science (M.S.) and a Doctor of Philosophy (Ph.D.) degree. EEOB students major in one of several interdepartmental majors including: Bioinformatics and Computational Biology; Ecology and Evolutionary Biology; Environmental Science; Genetics; Interdisciplinary Graduate Studies; Neuroscience; Toxicology; and Sustainable Agriculture.

### **IV. Subject Boundaries**

The collection includes parts of the following sections of the Library of Congress classification schedules: QE, QH, QK, and QL. (See Section XII for specific ranges.) Because of the interdisciplinary nature of EEOB, GDCB, NREM, and BBMB, there is a significant amount of subject overlap among the faculty and student researchers in these departments. Consequently, much of the related literature pertaining to animal and plant species is collected by bibliographers for GDCB, BBMB, NREM, and Entomology. For example, material classified as QH540-549.5 (Ecology and general animal ecology) is collected by the NREM bibliographer. Yet, materials in this call number range are extremely important and very central to the EEOB department. To illustrate with another example, material classified as QL671-699 (Birds) is collected by the EEOB bibliographer; faculty from EEOB and NREM study avian ecology. Any major

collection decisions regarding materials related to animal and plant diversity would require input from the bibliographers for NREM and EEOB, as well as the faculty from both departments.

From the Library's perspective, one of the ongoing challenges of the life sciences reorganization has been determining what call number ranges are assigned to the bibliographers associated with the above departments. There is ongoing communication and collaboration among the bibliographers responsible for these areas. In the event of any future journal cancellation projects, multiple bibliographers and academic departments would be consulted before final decisions were made.

## **V. General Collection Guidelines**

### **A. Linguistic.**

The collection is mostly composed of materials in the English language although materials are collected in other languages, when necessary.

### **B. Geographical Areas.**

The department's biological interests are generally not geographically dependent. No geographic area is excluded. However, materials specific to plant and animal species in countries outside of the United States are selectively purchased based on department research needs. Materials specific to Iowa and the mid-west are important to the collection and are routinely collected.

### **C. Types of Materials Collected.**

The library collects journals, other serial publications, monographs, conference proceedings, society publications, technical reports, maps and electronic databases. The library receives relevant government materials, especially technical reports, through the GPO depository program.

### **D. Format of Materials Collected**

Materials are acquired in print, microform, compact disc, DVD, and on the World Wide Web. Journals are collected in print and electronic formats. Web access to full-text journals is desirable and the preferred format among faculty and students. Monographs are usually collected in print format (which may include supplementary materials in CD-ROM). Electronic books are selectively purchased. No format is excluded if the material is relevant to the collection.

## **VI. Specific Collection Guidelines**

The collection includes materials that meet the teaching and research needs of the department. High priority is given to requests from faculty and students. The emphasis is on the collecting of current literature. See Section VII for a more detailed list of EEOB research priorities and specific organisms of interest to current EEOB faculty. Numerous field guides, covering United States and international plant and animal species, are published every year. These are selectively purchased.

Because the Department of Botany was one of the first academic departments at ISU, the Library has an extensive collection of botanical literature. The reference collection is particularly strong in the areas of botany and ornithology. Important resources include the *Catalogue of American Amphibians and Reptiles* and *Handbook of the Birds of the World*.

The Library has had a long-standing “long-term loan” agreement (since the 1960s) with the Ada Hayden Herbarium. Approximately 200 items that are part of the Library’s collection are currently housed in Bessey Hall - Room 344.

New title notification slips are often shared between the EEOB and NREM bibliographers.

## **VII. Detailed Subject Areas**

The following information was taken from the EEOB website pages that describe faculty research programs (<http://www.eeob.iastate.edu/faculty.html>) and the department’s research focus (<http://www.eeob.iastate.edu/research.html>).

Broad research areas of EEOB faculty include:

- Population, Community, and Ecosystem Ecology
- Landscape Ecology, Modeling, and Spatial Dynamics
- Physiological and Behavioral Ecology
- Conservation and Restoration Ecology
- Evolutionary Ecology
- Evolutionary Genomics
- Evolution and Development
- Population and Quantitative Genetics
- Systematics, Biodiversity, and Biogeography

“EEOB at ISU focuses on three interdisciplinary research areas: Ecological Complexity, Comparative Diversity, and Integrative Genetics and Genomics.”

Current research areas and organisms of interest of EEOB faculty include:

- Environmental and regulatory physiology of birds and reptiles
- Ecological and evolutionary morphology (salamanders)
- Behavior, ecology, evolution, and genetics of free-living animals; influence of ecology and behavior on evolutionary processes and genetic structure of natural populations. (primarily birds)
- Evolution and ecology of senescence (garter snakes, baboons, birds)
- Systematics and morphology of grasses, in particular the woody bamboos
- Population dynamics
- Wetland processes and function in agricultural landscapes

- Conservation biology, landscape ecology, and restoration ecology (birds and butterflies)
- Aquatic ecology
- Biology of reptiles
- Animal evolution, phylogenetics and mitochondrial genomics (bilaterian animals, parasitoid wasps)
- Spatial ecology of plants and animals
- Evolutionary ecology and mathematical tools
- Molecular evolution, phylogenetics, and conservation of bivalved mollusks
- Conservation and ecological genetics of turtles
- Physiological ecology of free-living birds
- Genome evolution (cotton)
- Ecology and restoration of grasslands and savannahs

### VIII. Other Resources Available

Major electronic indexes relevant to EEOB include: *Agricola*, *Biosis Previews*, *Biological and Agricultural Index*, *CAB Abstracts*, *Fish and Fisheries Worldwide*, *PubMed*, *Species Information Library*, *Water Resources Abstracts*, *Web of Science*, *Wildlife and Ecology Studies Worldwide*, and *Zoological Record*. Other useful electronic resources include: *Birds of North America Online* and *Grzimek's Animal Life Encyclopedia*.

The following sources are useful for determining core publications.

- Guide to reference and information sources in plant biology / Diane Schmidt ... [et al.]. Westport, Conn.: Libraries Unlimited, 2006.
- Using the biological literature: a practical guide / Diane Schmidt, Elisabeth B. Davis, Pamela F. Jacobs. New York : Marcel Dekker, c2002.

#### Useful Websites for Identifying Potential Purchases

- The Royal Botanic Gardens, Kew website (<http://www.kew.org/>) Click on “Data and Publications.”
- Missouri Botanical Garden Press (<http://www.mbgpress.info/>)
- NHBS Environment Bookstore (<http://www.nhbs.com/index.html>)
- Blackburn Press (<http://www.blackburnpress.com/index.html>)
- The Council on Botanical and Horticultural Libraries, Inc. (<http://www.cbhl.net/index.html>)

#### EEOB Information

- EEOB website, <http://www.eeob.iastate.edu/>

- College of Liberal Arts and Sciences, October 2007 Report to the President and Provost (<http://www.las.iastate.edu/main/report.shtml>). This report includes EEOBs annual report.
- Biology program website, <http://www.biology.iastate.edu/>
- Undergraduate Genetics program website, <http://www.public.iastate.edu/~ugradgen/>

## **IX. Cross-references to Collection Development Policies**

Biochemistry, Biophysics, and Molecular Biology  
 Genetics, Development and Cellular Biology  
 Natural Resource Ecology and Management

## **X. Creation date**

Draft written in August 2003 by Richard Llewellyn

## **XI. Revision History**

Extensively revised in December 2007 by Andrea L. Dinkelman

## **XII. LC Class(es), if applicable.**

QE901 – QE996.5 Paleobotany  
 QH347 Comparison of plants and animals  
 QH349 Miscellany and curiosa  
 QH351 Morphology  
 QH359 – QH425 Evolution  
 QH518 Life. Respiration  
 QH518.5 Life. Anaerobiosis  
 QH519 Life. Nutrition  
 QH521 Life. Metabolism  
 QH523 Life. Dormancy  
 QH524 Cryptobiosis. Anhydrobiosis  
 QH527 Chronobiology. Periodicity. Biorhythms.  
 QH528 Degeneration  
 QH528.5 Longevity  
 QH529 Senescence. Aging.  
 QH530 Death  
 QH530.5 Biodegradation  
 QH531 Miscellany and curiosa  
 QK1 – QK707 Botany. Plant Anatomy.  
 QK900 – QK989 Plant Ecology  
 QL1 – QL79 Zoology, General.  
 QL360 – QL449.49 Invertebrates  
 QL640 – QL669.8 Reptiles and amphibians

QL671 – QL699 Birds  
QL799 – 950.9 Morphology. Anatomy.

**XIII. Bibliographer name**

Andrea L. Dinkelman

*Last revised 12/19/2007.*