Biological Sciences
Information Access Policy

Biological Sciences Reference Librarian: Lois Sill
Written Novemer 2001, **Revised July 2011**

I. The Clemson University Libraries support the mission of the Department of Biological Sciences. The following text is from the Department's webpage.

> "This program offers undergraduate programs leading to the B.S. and B.A. degrees in Biological Sciences and a B.S. in Microbiology. The graduate programs include MS and PhD degrees in Biological Sciences and Microbiology. There is also a 5-year BS/MS program in Biological Sciences and Bioengineering. In addition, faculty members in Biological Sciences also participate in the interdepartmental MS and PhD programs in Plant and Environmental Sciences and Environmental Toxicology. There is a new online Master's of BIOlogical SCiences **(**BIOSC ONLINE**)** that is provided by this department."

A. Purpose/Objectives
The following is from the *2011-2012 Clemson Undergraduate Announcements*:

> "Biology encompasses the broad spectrum of the modern life sciences, including the study of all aspects of life from the structure and function of the whole organism down to the subcellular levels and up through the interactions of organisms to the integrated existence of life on the entire planet. Descriptive, structural, functional, and evolutionary questions are explored through the hierarchy of the organization of life. Applications of current advances to the health and well-being of man and society, to nature and the continuation of earth as a balanced ecosystem, and to an appreciation of the place of natural science in our cultural heritage receive emphasis.
>
> Majors in Biological Sciences receive classroom, laboratory, and field training in biology with an emphasis on chemistry, mathematics, and physics as necessary tools. The Bachelor of Science in Biological Sciences curriculum prepares students for graduate study in any of the life science areas (such as agricultural sciences, biochemistry, botany, cell and molecular biology, conservation, ecology and environmental science, entomology, forestry, gene214tics, industrial and regulatory biology, microbiology, morphology, physiology, wildlife biology, and zoology; for the health professions (medicine, dentistry, etc.), veterinary medicine; and for science teaching."

B. Biological Sciences Faculty Link

C. Primary Users
The primary users are undergraduates from the College of Agriculture, Forestry and Life Sciences who are majoring in biology or a biological science, non-majors who are taking a science requisite or elective course and the users from the departments of Bioengineering, Biochemistry and Molecular Biology, Genetics, Health Science, Biotechnology, Nursing, Natural Resources, and those enrolled in preprofessional pharmacy, health studies, veterinary medicine, and rehabilitation sciences.

D. Secondary Users

Undergraduates not majoring in the sciences often choose topics from the life sciences for their freshman papers. Many biology topics are now "hot news" – cloning, stem cells, super-bug strains, – materials are purchased that cover these topics in a general way and that are written for the undergraduate who is not a science major.

Also, much of the material in the life sciences is interdisciplinary. Materials bought for one department are used by faculty, students, and staff in many other departments.

Community residents also use the biological science materials especially in the areas of natural history.

E. Curriculum

Link to the Biological Sciences Department degree curricula in the Clemson University *2011-2012 Clemson Undergraduate Announcements*, **page 46**.

II. Scope of the In House Collection

The biology collection in the Clemson University Libraries primarily supports the teaching and research needs of the Department of Biological Sciences faculty, graduate students, and undergraduate majors. The collection is also used by a number of Clemson faculty and students outside Biological Sciences; many undergraduates use this material in writing freshman term papers covering such topics as global warming, endangered species, animals used as test subjects, etc.

In addition, the biology collection contributes substantially to the teaching and research work of the Department of Public Health Sciences and the School of Nursing. Collecting efforts are aimed at maintaining a well rounded biology collection, with special strengths in areas of present research interests at Clemson and areas where advanced degrees are given, but which also provides materials for the undergraduates in all areas of the biological sciences, and which, will in the future, provide an adequate basic collection as research interests change.

A. Library of Congress subject areas. In bold are those covered at both the undergraduate and research levels. Biochemistry, genetics, and microbiology have separate Information Access Policies.

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L.C. Class Description

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QH 1-74 Natural History – General
QH 75-81 Nature Conservation
QH 84-199 Geographical Distribution - Biogeographical Ecology
QH 204-27 Microscopy
QH 305-42 Biology, incl. population biology and evolution
QH 423-499 Genetics (a separate Information Access Policy exists for this subject)
QH 505 Biophysics
QH 506-529 Molecular Biology
QH 540-559 Ecology
QH 573-671 Cytology
QK 15-599 Botany, incl. plant geography, seed plants and cryptograms
QK 600-638 Fungi, including arctic regions
QK 641-899 Plant Anatomy and physiology
QK 900-939 Plant Ecology
QL 5-345 Zoology – General
QL 101-221 Zoology, North America, incl. Canada and Polar Regions

QL 351-352 Classification Systematics taxonomy and nomenclature
QL 365-454 Invertebrata
QL 473-599 Insecta
QL 606-607 Chordata Vertebrata – general
QL 610 Protochordata
QL 619-639 Fishes
QL 625-629 Freshwater Fishes - North America
QL 637 Freshwater Fishes - Arctic Regions
QL 651-664 Reptiles and Amphibians – General
QL 651-654 Reptiles and Amphibians - North America
QL 666 Reptiles
QL 669 Amphibians
QL 671-698 Birds
QL 708-739 Mammals – General
QL 708.3 Mammals – Evolution
QL 715-736 Mammals - North America, Canada and Arctic
QL 737.C5 Chiroptera
QL 737.R6 Rodentia
QL 739-739.2 Mammals - Anatomy and Morphology and Physiology
QL 750-795 Animal Behavior. Ethology
QL 799-950 Morphology
QL 95 Embryology
QM 690-691 Human Embryology
QP 501-625 Biochemistry, incl. hormones, enzymes and nucleic acids (a separate Information Access Policy exists for this subject)
QP 670-671 Pigments
QP 701-702 Carbohydrates
QP 751-752 Lipids
QP 771-772 Vitamins
QP 901-981 Experimental Pharmacology
QR 12-189 Microbiology, incl. bacterial genetics and immunology (a separate Information Access Policy exists for this subject)
QR 201-353 Pathogenic micro-organisms
QR 359-484 Virology

B. Core Biology Journals

Many of these journals fall outside the typical QH to QR Library of Congress call number range for the life sciences and that helps illustrate how interdisciplinary the subject areas are becoming. Access to the present core collection of journals will be maintained if possible, and, as funds allow, new journals from the list below and others not owned by the Libraries and requested by faculty or graduate students will be considered. Online access will be purchased if available and affordable.

ACS CHEM BIOL
ADV IMMUNOL
ADV INSECT PHYSIOL
ADV MICROB PHYSIOL
ADV PROTEIN CHEM
AGING CELL
AM J HUM GENET
AM NAT
ANNU REV BIOCHEM
ANNU REV CELL DEV BI
ANNU REV ECOL EVOL S
ANNU REV ENTOMOL
ANNU REV ENV RESOUR
ANNU REV GENET
ANNU REV GENOM HUM G
ANNU REV IMMUNOL
ANNU REV MICROBIOL
ANNU REV PHYSIOL
ANNU REV PHYTOPATHOL
ANNU REV PLANT BIOL

B AM MUS NAT HIST
BBA-REV CANCER
BIOCHEM BIOPH RES CO
BIOCHEMISTRY-US
BIOL REV
BIOSCIENCE
CANCER CELL
CELL
CELL DEATH DIFFER
CELL HOST MICROBE
CELL METAB
CELL RES
CELL STEM CELL
CLIN INFECT DIS
CLIN MICROBIOL REV
CRIT REV BIOCHEM MOL
CURR BIOL
CURR OPIN CELL BIOL
CURR OPIN CHEM BIOL
CURR OPIN GENET DEV
CURR OPIN IMMUNOL
CURR OPIN MICROBIOL
CURR OPIN PLANT BIOL
CURR OPIN STRUC BIOL
CYTOKINE GROWTH F R
DEV CELL
DEVELOPMENT
ECOL LETT
ECOL MONOGR
ECOLOGY
EMBO J
EMBO REP
ENERG ENVIRON SCI
ENVIRON SCI TECHNOL
EPIGENET CHROMATIN
EVOL BIOINFORM
FEMS MICROBIOL REV
FRONT ECOL ENVIRON
GENE DEV
GENOME BIOL
GENOME RES
GLOBAL BIOGEOCHEM CY
GLOBAL CHANGE BIOL
HUM MOL GENET
HUM REPROD UPDATE
IMMUNITY
IMMUNOL REV
J BIOL CHEM
J CELL BIOL
J CELL SCI
J EXP MED
J IMMUNOL
J MOL CELL BIOL
J VIROL
MICROBIOL MOL BIOL R
MOL ASPECTS MED
MOL BIOL CELL
MOL BIOL EVOL
MOL CELL
MOL CELL BIOL
MOL INTERV
MOL PSYCHIATR
MOL SYST BIOL
MUCOSAL IMMUNOL
MUTAT RES-REV MUTAT
NAT CELL BIOL
NAT CHEM BIOL
NAT GENET
NAT IMMUNOL
NAT MED
NAT PROD REP
NAT REV GENET
NAT REV IMMUNOL
NAT REV MICROBIOL
NAT REV MOL CELL BIO
NAT STRUCT MOL BIOL
NUCLEIC ACIDS RES
OCEANOGR MAR BIOL
ONCOGENE
PHILOS T R SOC B
PHYSIOL REV
PHYSIOLOGY
PLANT CELL
PLOS BIOL
PLOS GENET
PLOS ONE
PLOS PATHOG
PROG LIPID RES
Q REV BIOL
REV MED VIROL
RNA
SCI SIGNAL
SEMIN CELL DEV BIOL
SEMIN IMMUNOL
STEM CELLS
STRUCTURE
SYST BIOL
TRAFFIC (biological transport)
TRENDS BIOCHEM SCI
TRENDS CELL BIOL
TRENDS ECOL EVOL
TRENDS GENET
TRENDS IMMUNOL
TRENDS MICROBIOL
TRENDS MOL MED
TRENDS PLANT SCI

C. Other Resources Available

1. R.M. Cooper Library also provides free interlibrary loan service (ILL) to students, faculty, and staff. Also, the Libraries will use commercial document suppliers if there is no other option.
2. Important Indexes and Abstracts to be retained if financially possible.

Aquatic Science & Fisheries Abstracts (ASFA) 3: Aquatic Pollution & Environmental Quality
Bacteriology Abstracts (Microbiology B)
COS Conference Papers Index
Ecology Abstracts
Environment Abstracts (ProQuest)
Environmental Engineering Abstracts
Environmental Impact Statements: Digests
Health & Safety Science Abstracts
Industrial and Applied Microbiology Abstracts (Microbiology A)
Pollution Abstracts
ProQuest Deep Indexing: Environmental Sciences
MEDLINE (in Web of Knowledge)
Sustainability Science Abstracts
Toxicology Abstracts
TOXLINE
Water Resources Abstracts
BIOSIS (in Web of Knowledge)
AGRICOLA (in Web of Knowledge)
Web of Science (in Web of Knowledge)
Environmental Science and Pollution Management
BioOne Abstracts & Indexes
TOXLINE
Biological & Agricultural Index
SciFinder Scholar
Web of Knowledge

II. Collection Management and Parameters

A. Languages

English is the predominant language. If materials in other languages are collected they must generally contain information not readily available in English.

B. Geographic Areas

Much of the material in biology describes subjects, which are independent of geography. Descriptions of most of the world's geographic/ecological areas are included in the collection, with more depth being provided in descriptions of the South or Southeast or other areas where Clemson has programs or interest. Some degree of comprehensive coverage is attempted in local (North Carolina, South Carolina, Georgia) biology, especially in natural history.

C. Chronological Boundaries

Most books considered for purchase are quite current; materials published prior to the most recent five years are purchased very selectively. The emphasis on recent materials does not extend to descriptions of biological and ecological regions, descriptions of species, and field guides.

D. Format of Materials Collected

Monographic material purchased will primarily be English language print sources and electronic format. Journals, handbooks, manuals, and encyclopedias will be in electronic format, if available. Materials in languages other than English will be collected only upon specific request. Scholarly, technical and professional treatments are emphasized. DVDs will be purchased as requested by faculty.

E. The following materials will be excluded unless there is an extraordinary need. These materials are made available in the learning resources center and personalized assistance lab available to biology students in Long Hall.
   1. Workbooks
   2. Computer software
   3. Rare materials

F. Weeding Guidelines
   Monographic material, with an imprint of 1995 or earlier, which has not circulated for the last ten years, will be reviewed for weeding. Statistical reports are available for review of these titles. If a book has not circulated and is historically important, Special Collections will be asked to house it. If Special Collections does not take the item, storage will be considered if the item is rare or unique to Clemson.

III. Selection Tools and Review Sources

A. Major Life Science Journals

B. Publishers Websites and Catalogs

C. Biology Society Websites and Catalogs

D. GOBI service from YBP if funds are available

E. The students and faculty are most helpful in suggesting resources to purchase. While working with undergraduates at the reference desk or through class contacts, one learns what topics are of interest. Also, by reading current journals and professional magazines in biology, the topics of current interest are apparent. Co-workers are also extremely helpful in suggesting areas that may need more coverage. Looking at the ILLs requested also helps in the selection process.

F. If faculty members fail to recommend material, the librarian will encourage them to take a more active part in selection. If this encouragement fails, the librarian will make the selections.

G. The librarian is also responsible for the selection of general materials not specifically related to the curriculum and for maintaining a balance between the various subject areas and between standard and current works.

IV. Evaluation Tools

A. "Use studies" involving circulation and browsing data from our online catalog, databases, and journal vendors will show the areas of highest use.

B. *Journal Citation Reports* purport to pinpoint the most influential journals in any science discipline in several quantitative methods.

C. Interlibrary Loan -- if the students, staff, and faculty are frequently requesting articles from specific journals or books that we do not have access to, this is a clue that these materials may need to be ordered or electronic access gained. By communicating with faculty and students, especially grad students, one can determine if the material needed is available in a timely manner.

V. Assessment and Planning

A. Qualitative Measures
   1. The information access policy for this department will be reviewed every five years.
   2. Appropriate bibliographies will be checked against our holdings.
   3. Benchmarking projects, to be determined.

B. Quantitative Measures
   1. Interlibrary Loan Activities will be monitored to see what subject areas are lacking and what type materials are being requested most.
   2. Circulation Statistics, both for print and electronic resources, will be reviewed to see which areas of the collection are most heavily used.
   3. Keeping track of the new research grants undertaken and the new courses taught in the Biological Sciences Department can also help determine what materials to purchase and helps in the planning.