



**Illinois
Natural
History
Survey**



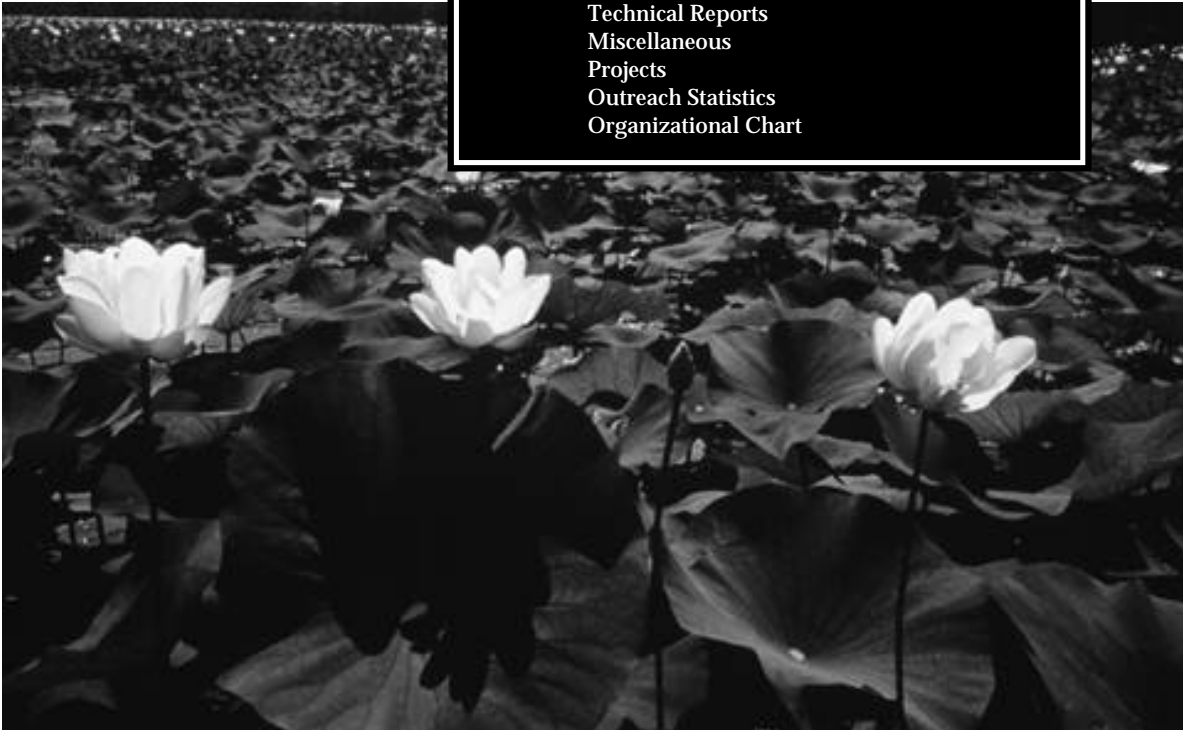
**Annual
Report**
2001-2002

Natural History Survey scientists study the plants and animals of Illinois and how they interact among the variety of ecosystems throughout the state. Through its research and other activities, the Survey fosters intelligent and responsible management of the biological resources of Illinois and public appreciation of the state's natural heritage. It is recognized as the nation's premier natural history survey. Founded in 1858, the Survey, now a division of the Illinois Department of Natural Resources, is headquartered on the campus of the University of Illinois at Urbana-Champaign. Its collections of plant and animal specimens are among the oldest in North America.

Photos by Michael Jeffords, INHS

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September 11, 2001 changed all of our lives in various ways. Not only did it affect our individual lives but it also impacted our institutions. The most immediate impact on the Survey was that the State froze many parts of our budget including out-of-state travel, purchases of scientific equipment and vehicles, and computer hardware and software. The freeze was also on all vacancies, and the Natural History Survey was left with six positions that were vacant and could not be filled. Many of these were in our Professional Scientist track, leaving a gap in the services we could provide, and reducing our ability to obtain outside grants and contracts in certain areas of expertise. Unfortunately, the freeze has been continued in Fiscal Year 2003, and we continue to struggle to maintain our level of research and services under restricted budgets.

The budget impact also directly affected our grant and contract funding. For example, state funds for our EcoWatch and CTAP programs were greatly reduced, as were federal funds for our Long-term Resource Management program. While we did have to reduce staff associated with our EcoWatch training program, we have been fortunate in being able to retain other staff associated with these and other programs that faced budget cuts. A particularly disappointing cut going into this fiscal year was the loss of \$250,000 a year that came to DNR to support an invasive species research, control, and education program. This important program has accomplished much over the last few years, and loss of these funds will mean that the state will have reduced capabilities to address this growing issue.

Despite budget cuts our work on invasive species continues. Through various outside funding sources we continue with efforts to monitor the effectiveness of the electric barrier in the canal at Romeoville, designed to prevent the movement of invasive fishes between the Great Lakes and the Illinois River. While the early focus of the barrier was to keep the round goby from moving from Lake Michigan into the Illinois and Mississippi river systems, the present concern is to keep bighead and silver carp, which are moving up the river, from entering Lake Michigan. In support of this barrier work we also have a research program at the Jake Wolf Hatchery to determine the effectiveness of various electric fields on Asian carp.

Our work on biological control of purple loosestrife continues, and we are collecting longer-term data on both beetle populations used for control as well as on the purple loosestrife populations. Education and outreach efforts to raise awareness of invasive species issues continue to be a priority, and we again published a very popular calendar featuring invasive species for 2002. In addition, we acquired a large mobile van that will be used to take our educational programs to communities around the state.

On a more positive budget note, we have received supplemental support for our Medical Entomology program to address the significant West Nile virus problem in Illinois. Much of this has come in terms of increased federal support to help us upgrade laboratories and purchase a small BL3 facility to do further research on West Nile virus in a controlled laboratory setting. This

research is setting the stage for better understanding the mosquitoes that transmit this virus, as well as various birds and mammals that are carriers.

Finding additional space for Survey staff has remained a priority, and progress was made in this last year. Rental space was secured in the research park on the south campus for staff that had previously occupied the Burnham Hospital complex. Not only were we able to find room for staff and storage that was at Burnham (the hospital complex was sold to the City of Champaign in summer 2002) but the move allowed us to bring together many of our staff from our Center for Economic Entomology and to provide better quarters for our education and outreach program.

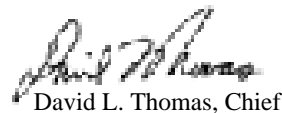
We continue to work with the UIUC and Fox Development Corporation to develop a Survey campus adjacent to the research park that would ultimately house all of the scientific surveys. In addition, we are making progress on developing a plan for a Phase 1 facility for the Natural History Survey. We are working closely with the UIUC as they plan to utilize space in the Natural Resources Building for other campus departments in space that we vacate in a move to new facilities. Previously appropriated funds for our building were transferred to the UI in spring 2002, and

these funds in conjunction with money from the sale of Burnham will be used to initiate design of our Phase 1 in Fiscal Year 2003.

September 11, 2001 not only affected state and federal budgets but changed national priorities. All public institutions have had to re-look at their programs and priorities. All have had to find ways of showing the relevance of what they do to legislatures and a public looking for more accountability. The INHS has set its future direction and priorities in a Strategic Plan that was developed over the last year and published in the spring of 2002. This five-year plan not only sets our mission, vision, goals, and objectives but it contains specific action items that will be addressed over the coming years. It is our way of setting our priorities and establishing a mechanism to track our progress.

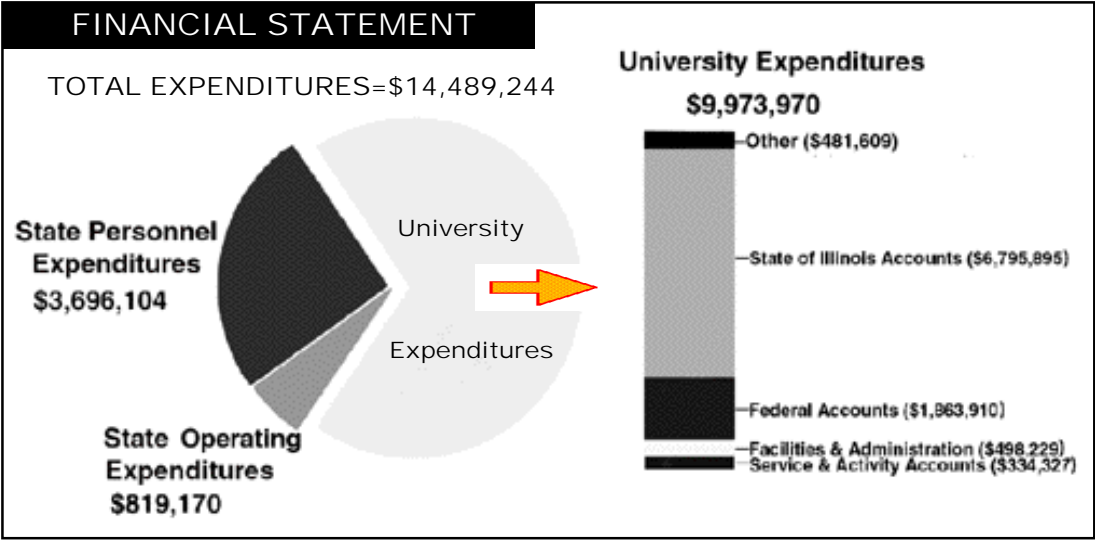
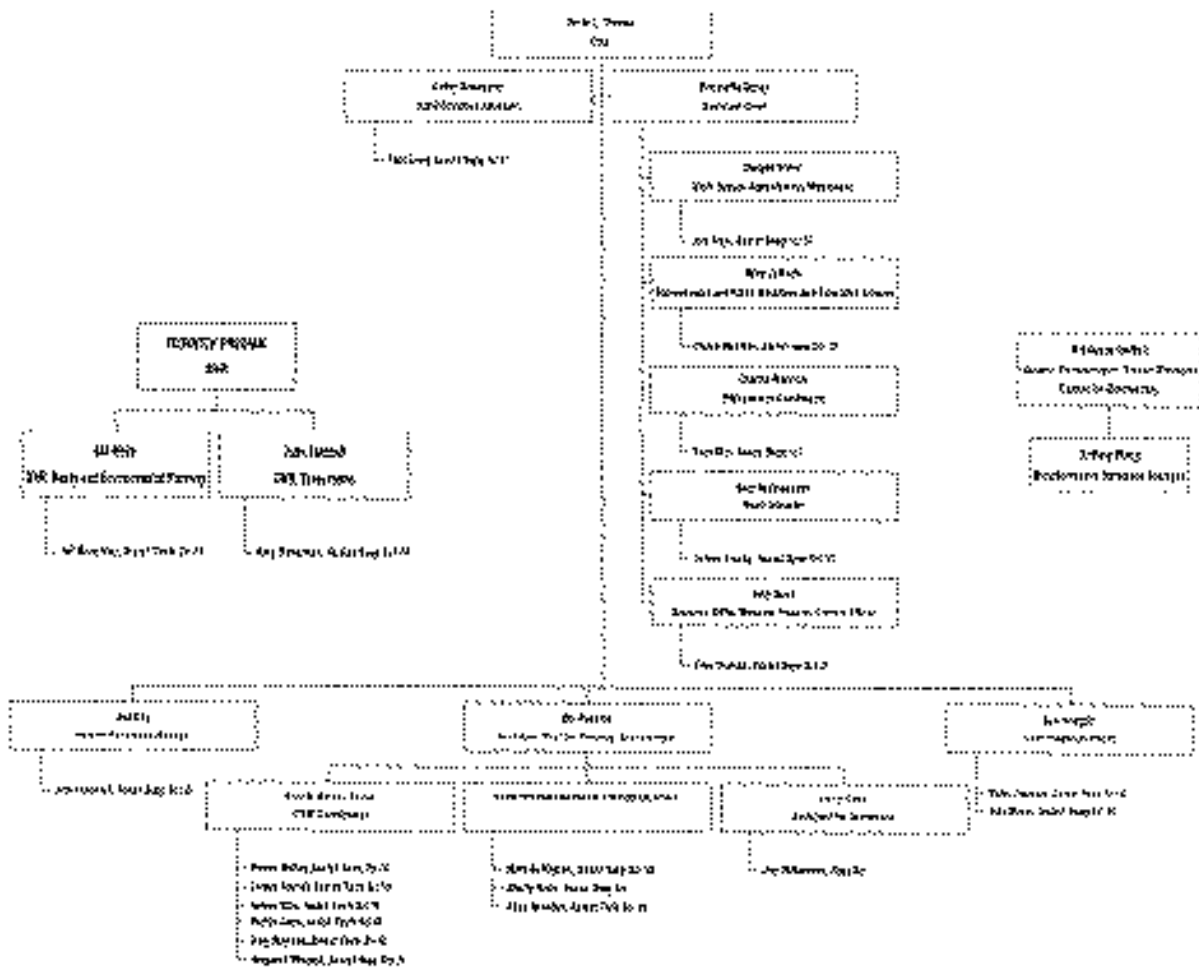
This year's annual report is somewhat abbreviated compared to past annual reports and is meant for more limited distribution to DNR and our Board. It summarizes the projects and publications of our various researchers and provides basic statistics on our outreach activities. It also contains organizational charts to show our present structure. A separate report that will come out later in the fiscal year will highlight, in a more concise fashion, the programs and major research activities of the Survey. It will be widely distributed to those interested in the activities of the Survey, and will stand on its own as a description of what we do for at least a few years.

If you have an interest in any of our projects I hope you will contact our researchers, or our Center offices. I also hope that you will visit our Web site (<http://www.inhs.uiuc.edu/>) to learn more about our activities and programs.


David L. Thomas, Chief

Message FROM THE CHIEF

INHS Office of the Chief



FACILITIES IMPROVEMENTS

During the past two years the Survey has been making significant improvements to several of its buildings and other facilities. Of four major projects undertaken, two have been completed and the other two are scheduled for completion by spring 2003.

One of the projects was a \$683,000 renovation of the Forbes Biological Station in Mason County, which was completed in the spring of 2002. The project included a 1,200-square-foot wet lab addition to the original building, upgrading insulation, replacing windows and asphalt shingles on the existing building, and constructing a new 1,800-square-foot pole barn building for storage. We also removed the old pedestrian bridge across Quiver Creek, improved the access road, and added protection from flood water on the creek side of the building. We now have a facility that is capable of serving a diversity of programs for many years to come.

Another project completed in the spring of 2002 involved interior finishing of rental space in the I-building at 1816 S. Oak Street in the UIUC South Research Park. The State Geological Survey and INHS joined together to enter into a five-year lease of 27,800 square feet, of which about 60% is used by our Survey. Our space is about half offices, a quarter labs, and the rest production area for our educational outreach program and general storage. Primary occupants of the new space are the Center for Economic Entomology, one program from the Center for Aquatic Ecology, the Critical Trends Assessment Program, and the Survey's educational outreach program.

A third project was a \$732,000 renovation of the Kaskaskia Biological Station on Lake Shelbyville, which was bid in May 2002 and is still in construction. This project included additions of 150 square feet to the director's residence and 725 square feet to the office/lab building, extensive renovation and improvements to the interior and exterior of both of these buildings plus the wet lab building, a new hazmat storage building, and improve-

ments to the boat ramp, entrance road, and the pond spillway. Work should be complete by very early 2003.

The fourth project involves relocating our wildlife research building, aviary, 22 research ponds, pond-site building, and all associated facilities from their current location on Hazelwood Drive in Champaign to new locations on the UIUC South Farms. This move was necessitated by growth of the UIUC South Research Park. Construction was started in the spring of 2002 and is expected to be complete by the spring of 2003.

A long-running project that continues to evolve and develop, but with relatively little to date to show for our efforts, is the construction of a new headquarters building for the Survey. Now everything seems to be coming together, and in the very near future we are hoping to construct a 70,000–80,000-square-foot first phase in or adjacent to the UIUC South Research Park. Some readers of this report may remember that in 1994 we purchased the former Burnham City Hospital in Champaign, intending to remodel it for our use. In 2002 that property was sold with the proceeds being added to other funds already available for our new headquarters.

Initial planning has begun on one other new project, namely to remodel and expand space for our Lake Michigan Biological Station at Zion. If all goes well, design work for this project will begin in 2003, with construction to commence the following year.

Not counting facilities we rent from others, the Survey has about 40 buildings and other facilities (e.g., dams and artificial pond complexes) that it must maintain. Capital projects for major maintenance or to improve these facilities is an ongoing responsibility. While we have completed many projects in recent years, much remains to be done. With continued assistance from IDNR's Office of Capital Development and from the University of Illinois, it certainly appears that we will continue this record of improvements well into the future.

INHS LIBRARY

Elizabeth Wohlgemuth

The Illinois Natural History Survey Library serves a wide range of library users. As a state agency library it strives to meet the diverse research needs of the Survey scientists and staff members. In addition, the INHS Library is a departmental library at the University of Illinois at Urbana-Champaign, so students, faculty, and staff are frequent users of the library. The public is also welcome to visit the library.

There are approximately 650 current journal subscriptions and the INHS Library has over 43,000 books and bound journals. Many of these journal subscriptions are received through our exchange program. There are 405 exchange partners from throughout the world sharing their publications with the Survey. The full-text journal database presently offering access to over 500 full-text, on-line journals is regularly updated. The majority of the library's \$69,941 budget is applied to journal subscriptions and electronic article databases. Databases that the INHS Library purchases are *Fish and Fisheries Worldwide*, *Wildlife & Ecological Studies*, *Aquatic Sciences and Fisheries Abstracts*, *BioONE*, and *JSTOR Ecology & Botany Collection*. The INHS Library's holdings are part of the UIUC's on-line catalog and can be accessed on the

library's home page at <http://www.library.uiuc.edu/nhx>.

This year the INHS Library added 6 new serial titles and 526 new books to the collection. Some of these books and journals were purchased while others were received through the exchange program or as donations from generous staff members and library supporters. In addition to maintaining the INHS on-line serials database and the binding of the serials, we have been going through the backlog of uncataloged retrospective library materials and are sending them to be cataloged.

A very important service offered is photocopying articles for the staff. This year we received over 874 requests for articles. Personalized *Current Contents* searches are also available to all staff members.

Among the accomplishments of the library's staff this year were an update of the INHS Library's procedures manual, archiving and processing a number of important Survey documents, and helping INHS staff develop records scheduling programs for their departments. INHS Head Librarian Beth Wohlgemuth formed a committee that designed and built an exhibit that highlighted the INHS and its Biological Collections. It was displayed in the Main Library for many months.

EDUCATION OUTREACH

MICHAEL JEFFORDS

Highlights of the previous year include several new endeavors and the continued growth of other projects. New projects undertaken include the development of the INHS Mobile Science Center (MSC) for travel to rural and small city schools. The MSC was premiered at the open house of the University of Illinois' College of Agricultural, Consumer and Environmental Sciences with an exhibit entitled "Arthropods Across Illinois." We hope to have the MSC fully operational by the fall of 2002. A new on-line course, "Biodiversity, Wetlands, and Biological Control: Purple Loosetrife, a Case Study" was developed through the UI Office of Continuing Education. The course's initial offering was during the spring semester. Outreach staff developed a new course, "Using Art to Teach Science," for the Environment and Nature Training Institute for Conservation Education (ENTICE) and taught the three-day course at Wildlife Prairie Park near Peoria in early July to 35 teachers. The course was modified and later taught to 15 additional teachers at Robert Allerton Park with funds from the Lumpkin Foundation.

The Illinois Wilds Institute for Nature (IWIN) is becoming very popular across the state. We offered three IWIN courses to Illinois citizens: Reptiles and Amphibians of Illinois, Field Entomology, and Butterflies of Illinois. Each course was at capacity and received great reviews from the nearly 100 participants. *The Illinois Steward* magazine continues to prosper and several

articles directly related to INHS appeared, including an article on the INHS Collections.

In addition to the above, the "routine" activities of outreach continued unabated and included the purple loosetrife workshops in the Chicago region, numerous presentations to a wide audience, participation in ACES Open House, a small Insect Expo, and many other outreach-related events.

EDUCATIONAL MATERIALS PRODUCED DURING FY 2002

Exotic, Invasive Species Calendar
Exotic, Invasive Species Poster
Gypsy Moth Poster
Asian Longhorned beetle boxes
Butterfly and Reptile and Amphibian Journal Books

OUTREACH STATISTICS

Queries Answered—220
Species Identified—50
Boards and Committees Served—20
Public Presentations to
Schools (K–12)—35
Colleges—25
Conferences and Symposia—10
Clubs and Private Organizations—35
State and Federal Agencies—15
International Meetings—0

INHS Publications Office

CHARLIE WARWICK

The Illinois Natural History Survey Publications Office provides printing and publishing assistance to Survey support staff, researchers, and the Education Outreach Office. In addition, we will occasionally help other natural sciences organizations closely allied with our mission with publishing efforts such as conference proceedings, informational brochures, and images for displays, posters, Web sites, and so on. We maintain an archives of 22,000+ images for the use of Survey staff and the public, and our images are used by organizations throughout the world. The Publications Office maintains a computer-graphics workstation with scanner and image-editing software. We provide consultation and training for INHS staff who wish to use the workstation.

INHS PUBLICATIONS PRODUCED DURING FY2002

- Bulletin 36(4), *Natural History of the Wood Frog (Rana sylvatica) in the Shawnee National Forest*
- INHS Special Publication 23, *Status and Function of Isolated Wetlands in Illinois*
- *Illinois Natural History Survey Reports* (numbers 370–373)
- INHS Staff Photo Directory
- INHS Strategic Plan
- INHS Annual Report 2000–2001
- Map: *Land Cover of the Early 1800s in Illinois*
- INHS Publications Catalog 2002–2003

INHS PUBLICATIONS IN PROGRESS DURING FY2002

- Manual 10, *Field Guide to Silkmoths of Illinois*
- Manual 11, *Field Guide to Illinois Bumblebees*
- Bulletin 36(5), *The Winter Stoneflies of Illinois: A Century of Change*
- INHS Special Publication 24: *Catalog of Chewing Lice of the World*
- INHS Special Publication 25: *Atlas of Breeding Birds in Illinois*

ARTICLES AUTHORED BY INHS RESEARCHERS DURING FY2002

In addition to publications produced by INHS, our researchers contribute a significant number of articles to prominent scientific journals throughout the world as well as technical and research reports to government agencies on the state and federal levels. The table below illustrates the types and numbers of publications produced by INHS researchers during FY2002.

Type of Publication	Number
Scientific Journals	119
Technical Reports	70
Miscellaneous (news articles, book chapters, Web pages, book reports, etc.)	20

INHS Collections GEOFF LEVIN

The INHS scientific collections have been called Illinois' biological memory. Totaling more than 8.5 million specimens and dating back almost 150 years, the collections and their associated data are the most complete documentation of the state's flora and fauna available anywhere. For several groups of organisms, including amphibians and reptiles, insects, fishes, mollusks, and mammals, the Survey manages collections that are among the 15 largest in the nation. The collections continue to grow as Survey staff survey and monitor the state's plants and animals and conduct scientific studies on specific taxonomic groups.

Because they document the presence of species through time, including the present, collections are an invaluable resource for tracing changes in the distribution of plants and animals as habitats have been modified. The collections are regularly used to recognize threatened and endangered species, determine the arrival and spread of exotic species, provide baseline data for ecological restoration projects, assess habitat quality

over time and space, locate populations of medical or economic importance, and for scientific research advancing our understanding of the state's plants and animals. Much of the collection data have been entered into computer databases, and large portions are accessible via the Internet, making this resource readily available to policy makers, resource managers, scientists, and the public.

The Survey's collections are heavily used by Survey scientists, scientists at other institutions, educators, and members of the general public. Visitors to the collections in the last year included students from several primary and secondary schools, students and faculty from colleges and universities, scientists from museums, and staff from environmental organizations and governmental agencies. Specimen loans and collection-associated data were sent to about 75 colleges, universities, museums, and other public and private institutions and organizations throughout the nation and the world.

COLLECTION	SIZE	SPECIMENS ACCESSIONED	LOANS		QUERIES	VISITORS
			NUMBER	SPECIMENS		
Insects	7,000,000	17,319	50	14,237	14	168
Plants	267,216	5,436	5	135	10	11
Mammals	1,091	3	4	68	3	21
Amphibians/Reptiles	19,483	898	14	137	23	58
Fish	779,427	8,188	26	1,244	13	137
Crustaceans	79,703	1,358	1	130	9	37
Mollusks	107,819	2,460	5	374	23	47
Birds	1,873	20	2	2	2	0
Annelids	315,000	745	1	50	10	5
Total	8,571,612	36,427	108	16,377	107	484

INHS PERSONNEL ACTIONS

APPOINTMENTS

Avery, Rachel, M.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective September 10, 2001.

Beckman, Marilyn, M.F.A., Research Assistant (Assistant Support Scientist III), Center for Biodiversity, effective April 3, 2002.

Boeckler, Jeffrey H., B.S., EcoSystems Planning Projects Manager (Assistant Technical Scientist III), Office of the Chief (Springfield), effective April 1, 2002.

Bretz, Bonnie, B.S., Office Assistant (Assistant Support Scientist I), Center for Wildlife Ecology, effective August 13, 2001.

Brown, Patricia M., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective February 4, 2002.

Creque, Sara M., M.S., Aquatic Ecologist (Assistant Research Scientist III), Center for Aquatic Ecology (Lake Michigan Biological Station), effective April 22, 2002.

Davern, Tracy R., B.A., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective October 9, 2001.

Diana, Matthew J., M.S., Fisheries Aquatic Research Biologist (Assistant Research Scientist III), Center for Aquatic Ecology (Ridge Lake Biological Station), effective January 28, 2002.

Einfalt, Lisa M., B.S., Research Technician (Assistant Technical Scientist III), Center for Aquatic Ecology (Kaskaskia Biological Station), effective November 21, 2001.

Epifanio, John, Ph.D., CAE Center Director (Associate Professional Scientist), Center for Aquatic Ecology, effective August 1, 2001.

Fallon, Declan J., B.S., Insect Pathology Postdoctoral Researcher (Assistant Research Scientist III), Center for Economic Entomology, effective May 31, 2002.

Halbig, Patrick J., M.S., Mosquito Field Team Leader (Assistant Technical Scientist I), Center for Economic Entomology, effective April 22, 2002.

Hanson, Erica L., Administrative Assistant (Assistant Support Scientist III), Center for Aquatic Ecology, effective February 19, 2002.

Harms, Erik W., B.S., Aquatic Ecologist (Assistant Technical Scientist III), Center for Aquatic Ecology (Illinois River Biological Station), effective April 4, 2002.

Harness, Dale K., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective September 4, 2001.

Jarvis, Janet, B.S., GIS Assistant (Assistant Technical Scientist III), Center for Wildlife Ecology, effective August 6, 2001.

Klein, Rita M., M.S., Assistant Ichthyologist (Assistant Technical Scientist III), Center for Biodiversity, effective January 21, 2002.

Kohl, Thomas, B.S., Soil Scientist (Assistant Technical Scientist III), Center for Wildlife Ecology, effective September 4, 2001.

Lemke, A. Maria, Ph.D., Aquatic Ecologist (Assistant Research Scientist III), Center for Aquatic Ecology (Illinois River Biological Station), effective October 9, 2001.

Morris, David C., Ph.D., Insect Morphological Systematist (Assistant Research Scientist III), Center for Biodiversity, effective April 19, 2002.

Moss, Kristi L., B.S., Research Biologist (Assistant Research Scientist III), Center for Aquatic Ecology, effective December 1, 2001.

O'Connor, Meghan, M.S., Biometrician (Assistant Technical Scientist III), Center for Aquatic Ecology (Great Rivers Field Station), effective October 1, 2001.

Riggs, Linda, A.S., Office Assistant (Assistant Support Scientist II), Center for Biodiversity, effective September 2, 2001.

Ringia, Adam M., M.S., Avian Field Team Leader (Assistant Technical Scientist I), Center for Economic Entomology, effective April 30, 2002.

Shoup, Daniel, Ph.D., Fisheries/Aquatic Ecologist Post Doctoral (Assistant Research Scientist III), Center for Aquatic Ecology (Kaskaskia Biological Station), effective September 4, 2001.

Soucek, David, Ph.D., Ecotoxicologist/Entomologist (Assistant Professional Scientist), Center for Economic Entomology, effective July 23, 2001.

Stein, Jeffrey A., B.S., Statewide Creel Project Research Director (Assistant Research Scientist III), Center for Aquatic Ecology, effective March 11, 2002.

Strohl, Melissa L., A.A.S., Office Assistant (Assistant Support Scientist I), Center for Wildlife Ecology, effective April 8, 2002.

Taylor, Ronald M., M.S., Aquatic Ecologist (Assistant Research Scientist II), Center for Aquatic Ecology (Illinois River Biological Station), effective April 16, 2002.

Tiemann, Jeremy S., M.S., Biological Field Assistant (Assistant Technical Scientist III), Center for Biodiversity, effective June 3, 2002.

Van de Wyngaerde, Marshall T., B.S., Laboratory Technician (Assistant Technical Scientist II), Center for Economic Entomology, effective May 6, 2002.

Wang, Xin-Ping, Ph.D., BioInformatics Web Programmer (Assistant Support Scientist III), Office of the Chief, effective April 1, 2002.

Zylka, Jason J., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective January 28, 2002.

RETIREMENTS

Anderson, Elizabeth, Administrative Assistant (Support Scientist), Center for Wildlife Ecology, effective September 30, 2001. Ms. Anderson had 29 years with the Survey.

RESIGNATIONS / SEPARATIONS

Arnold, Jeffrey L., M.S., Water Quality Technician (Assistant Technical Scientist III), Center for Aquatic Ecology, effective January 20, 2002.

Avery, Rachel L., B.A., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Beazley, Jeanette, B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective July 31, 2001.

Brown, Patricia M., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Caceres, Carla, Ph.D., Aquatic Ecologist (Assistant Professional Scientist), Center for Aquatic Ecology, effective August 20, 2001.

Carmona, Dominic C., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Chen, Yung-Chun (Tony), B.S., Plant Pathologist Technician (Assistant Technical Scientist III), Center for Biodiversity, effective April 20, 2002.

Chen, Weidong, Ph.D., Plant Pathologist (Associate Professional Scientist), Center for Biodiversity, effective March 15, 2002.

Davern, Tracy R., B.A., Biology, EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective October 26, 2001.

Davis, Andrea L., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Dugaw, Dax D., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective May 4, 2002.

Emme, Kathryn, B.A., Assistant Research Biologist (Assistant Research Scientist III), Center for Aquatic Ecology, effective August 3, 2001.

Fabry, Michelle A., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Fluegel, Deborah A., B.A., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Fuller, Justin, B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective July 31, 2001.

Garland, Michelle R., Education/Outreach Assistant (Assistant Support Scientist III), Center for Economic Entomology, effective January 31, 2002.

Green, Ruth, M.S., Greenhouse Manager (Support Scientist), Office of the Chief, effective July 20, 2001.

Harness, Dale K., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Hefter, Rebecca A., B.A., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

Higgs, Mary Catherine (Kate), B.S., Insect Pathology Technical Assistant (Assistant Support Scientist III), effective September 30, 2001.

Hoxmeier, John, M.S., Fisheries Biologist (Associate Research Scientist), Center for Aquatic Ecology, effective July 15, 2001.

Jellen, Benjamin, B.S., Field Ecologist (Assistant Support Scientist II), Center for Biodiversity, effective August 20, 2001.

Jenkins, Andrea, B.S., Network Administrator (Associate Support Scientist), Office of the Chief, effective July 31, 2001.

Kaufman, Mary Beth, B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

LeBel Jr., James P., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective May 10, 2002.

Nealand, Angela D., B.S., Lab Technician (Assistant Technical Scientist I), Center for Aquatic Ecology (Illinois River Biological Station), Havana, IL, effective February 20, 2002.

Sangunett, Brandi, B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective August 10, 2001.

Sietman, Bernard E., M.S., Biological Field Assistant (Assistant Technical Scientist III), Center for Biodiversity, effective December 24, 2001.

Steinberg, Ralph, M.S., CTAP Ichthyologist (Assistant Support Scientist III), Center for Biodiversity, effective August 9, 2001.

VanDeelen, Timothy, Ph.D., Forest Wildlife Ecologist (Associate Professional Scientist), Center for Wildlife Ecology, effective August 31, 2001.

Vodkin, Michael, Ph.D., Molecular Biologist (Associate Research Scientist), Center for Economic Entomology, effective July 6, 2001.

Zylka, Jason J., B.S., EcoWatch Trainer (Assistant Support Scientist I), Office of the Chief, effective June 30, 2002.

OTHER

Caceres, Carla, Ph.D., Aquatic Ecologist (Assistant Professional Scientist), Center for Aquatic Ecology, awarded Zero Time Appointment, effective October 23, 2001.

Chen, Weidong, Ph.D., Plant Pathologist (Associate Professional Scientist), Center for Biodiversity, awarded Zero Time Appointment, effective April 1, 2002.

Crane, J. Leland, Ph.D., Mycologist (Professional Scientist), Center for Biodiversity, awarded Emeritus status, effective July 1, 2001.

Fischer, Robert U., Ph.D., Adjunct Appointment (Associate Professional Scientist), Center for Aquatic Ecology, effective March 28, 2002.

Goldberg, Tony L., Ph.D., Adjunct Appointment (Assistant Professional Scientist), Center for Aquatic Ecology, effective March 28, 2002.

Herendeen, Robert, Ph.D., Ecological Modeling (Professional Scientist), Center for Aquatic Ecology, stepped down from Associate Center Director, effective August 1, 2001.

Heske, Edward J., Ph.D., Mammalian Ecologist (Professional Scientist), Center for Wildlife Ecology, to Associate Center Director, effective March 1, 2002.

Miller, Craig A., Ph.D., transferred from Associate Research Scientist to Assistant Professional Scientist, Center for Wildlife Ecology, effective January 1, 2002.

Osterman, Amy, B.S., EcoWatch Database Manager (Assistant Support Scientist III), Office of the Chief (OC), effective January 21, 2002.

Phillips, Christopher A., Ph.D., transferred from Research Scientist to Assistant Professional Scientist, Center for Biodiversity, effective January 1, 2002.

Pirkle, Sheila, (Research Scientist), Office of the Chief, awarded Zero Time Appointment, effective October 22, 2001.

Sietman, Bernard E., M.S., Biology (Assistant Research Scientist III), Center for Biodiversity, awarded Zero Time Appointment, effective December 22, 2001.

Solter, Leellen, Ph.D., Insect Pathologist (Assistant Professional Scientist), Center for Economic Entomology, to Associate Center Director, effective July 1, 2001.

Young, Angela, Center Administrative Assistant (Associate Support Scientist), Center for Biodiversity, accepted new position, effective June 18, 2001.

PROMOTIONS

Charlebois, Patrice M., M.S., promoted from Associate Technical Scientist to Technical Scientist, Center for Aquatic Ecology, effective, September 1, 2001.

DeWalt, R. Edward, Ph.D., promoted from Assistant Research Scientist to Associate Research Scientist, Center for Biodiversity, effective January 1, 2002.

Heske, Edward J., Ph.D., promoted from Associate Professional Scientist to Professional Scientist, Center for Wildlife Ecology, effective September 1, 2001.

Holtrop, Ann M., M.S., promoted from Senior Technical Research Scientist to Assistant Research Scientist III, Center for Aquatic Ecology, effective September 1, 2001.

Jeffords, Michael R., Ph.D., promoted from Professional Scientist to Senior Professional Scientist, Office of the Chief, effective September 1, 2001.

McNamara, James D., promoted from Associate Support Scientist to Support Scientist, in Office of the Chief, effective September 1, 2001.

Petzing, John E., B.S., promoted from Technical Support Scientist to Assistant Technical Scientist II, Center for Biodiversity, effective September 1, 2001.

Phillippe, Loy R., Ph.D., promoted from Associate Technical Scientist to Technical Scientist, Center for Biodiversity, effective September 1, 2001.

Phillips, Christopher A., Ph.D., promoted from Associate Research Scientist to Research Scientist, Center for Biodiversity, effective September 1, 2001.

Ruesink, William G., Ph.D., promoted from Professional Scientist to Senior Professional Scientist, Office of the Chief, effective September 1, 2001.

Scott, Amy J., promoted from Assistant Support Scientist to Associate Support Scientist, Office of the Chief, effective September 1, 2001.

Stoeckel, James A., M.S. promoted from Associate Support Scientist to Technical Scientist, Center for Aquatic Ecology, effective September 1, 2001.

Symstad, Amy J., Ph.D., promoted from Assistant Research Scientist to Associate Research Scientist, Center for Biodiversity, effective September 1, 2001.

Taylor, Christopher A., M.S., promoted from Associate Research Scientist to Research Scientist, Center for Biodiversity, effective September 1, 2001.

Taylor, Steven J., Ph.D., promoted from Assistant Research Scientist to Associate Research Scientist, Center for Biodiversity, effective September 1, 2001.

Thomas-Eichorn, Shelly L., promoted from Technical Support Scientist to Assistant Support Scientist II, Center for Wildlife Ecology, effective September 1, 2001.

Wenny, Daniel G., Ph.D., promoted from Assistant Research Scientist to Associate Research Scientist, Center for Biodiversity, effective September 1, 2001.

Wetzel, Mark J., M.S., promoted from Associate Research Scientist to Research Scientist, Center for Biodiversity, effective September 1, 2001.

Yetter, Aaron P., M.S., promoted from Associate Research Scientist to Technical Scientist, Center for Wildlife Ecology, effective September 1, 2001.



CENTER FOR AQUATIC ECOLOGY

The mission of the Center for Aquatic Ecology is to conduct basic and applied research investigating all aspects of the biology of the flora and fauna associated with aquatic ecosystems. The Center maintains eight field stations: the Aquatic Research Field Laboratory in Champaign, the Sam Parr Biological Station at Kinmundy, the Ridge Lake Station near Charleston, the Lake Michigan Biological Station at Zion, the Kaskaskia Biological Station on Lake Shelbyville, the Illinois River Biological Station in Havana, and the Great Rivers Research Station at Alton.

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Cáceres, C.E., and M.S. Schwalbach. 2001. How well do laboratory experiments explain field patterns of zooplankton emergence? *Freshwater Biology* 46:1179–1189.

Catalano, M.J., S.R. Chipps, M.A. Bouchard, and D.H. Wahl. 2001. Evaluation of injectable fluorescent tags for centrarchid fishes: mark retention and effects on vulnerability to predation. *North American Journal of Fisheries Management* 21:911–917.

Charlebois, P.M., L.D. Corkum, D.J. Jude, C. Knight. 2001. The round goby invasion: current research and future needs. *Journal of Great Lakes Research* 27:263–266.

Charlebois P.M., M.J. Raffenberg, and J.M. Dettmers. 2001. First occurrence of *Cercopagis pengoi* in Lake Michigan. *Journal of Great Lakes Research* 27:258–261.

Chick, J.H., and M.A. Pegg. 2001. Invasive carp in the Mississippi River Basin. *Science* 292:2250–2251.

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Cooke, S.J., T.K. Kassler, and D.P. Philipp. 2001. Performance indicators of largemouth bass outbreeding depression with implications for management and conservation. *Journal of Fish Biology* 58A:248–268.

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Cosgriff, R.J., and J.K. Tucker. 2001. The arthropods of an early sand prairie sere. *Transactions of the Illinois State Academy of Science* 94(2):79–87.

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- Herendeen, R. 2001. Prospective/retrospective on strategies. *In* S. Ulgiati, ed. *Advances in energy analysis: exploring supplies, constraints, and strategies*. Proceedings of the Workshop Advances in Energy Analysis, Porto Venere, Italy, 23-27 May 2000. Servizi Grafici Editoriali, Padua, Italy.
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- Johnson, D.M., D.A. Soluk, and D. Debinski. 2001. The endangered Hine's emerald dragonfly. *WINGS* 24:17–21.
- Pegg, M.A., and C.L. Pierce. 2001. Growth rate responses of Missouri and Lower Yellowstone River fishes to a latitudinal gradient. *Journal of Fish Biology* 59:1529–1543.
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- Trexler, J.C., W.F. Loftus, F. Jordan, J.H. Chick, K.L. Kandler, T.C. McElroy, and O. Bass. 2001. Ecological scale and its implications for freshwater fishes in the Florida Everglades. Pages 153–181 *in* J.W. Porter and K.G. Porter, eds. *The Everglades, Florida Bay, and coral reefs of the Florida Keys: an ecosystem sourcebook*. CRC Press, Boca Raton, FL.
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- Tucker, J.K. 2001. Clutch frequency in the redeared slider (*Trachemys scripta elegans*). *Journal of Herpetology* 35(4):66–668.
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TECHNICAL REPORTS

Aday, D., J. Claussen, J. Hoxmeier, D. Shoup, D. Philipp, and D. Wahl. Quality management of bluegill: factors affecting population size structure. Technical annual report 01-11 submitted to Illinois Department of Natural Resources. 20 pp.

Brofka, W., and J. Dettmers. A survey of sport fishing in the Illinois portion of Lake Michigan. Technical annual report 2001-02 submitted to Illinois Department of Natural Resources. 58 pp.

Davis, B.A., J. Hoxmeier, and D. Wahl. Evaluation of fish populations in seven oxbow lakes on an unchannelized reach of the lower Kaskaskia River. Technical progress report 01-13 submitted to Southwestern Illinois Resource Conservation and Development. 124 pp.

Dettmers, J., A.S. McNaught, D. Mason, J. Janssen, and D. Jude. Mechanisms affecting recruitment of yellow perch in Lake Michigan. Technical annual report 01-07 submitted to Great Lakes Fishery Trust. 11 pp.

Dettmers, J., S. Czesny, and B. Pientka. Growth and survival of nearshore fishes in Lake Michigan. Technical annual report 01-10 submitted to Illinois Department of Natural Resources. 42 pp.

Dodd, H., W. Neisler, A. Holtrop, and D. Wahl. Evaluation of management practices for improving stream quality in the Illinois Watershed Program. Technical annual report 01-08 submitted to Illinois Department of Natural Resources. 81 pp.

Kassler, T., and D. Philipp. Genetic assessment of two *Stizostedion* species and their hybrid in the Ohio River. Technical final report 01-12 submitted to Ohio Division of Wildlife. 20 pp.

Lemke, A., and M. Pegg. Progress report: Lake Chautauqua bioresponse study. Technical progress report 01-09 submitted to U.S. Army Corps of Engineers (Rock Island District). 68 pp.

McClelland, M., and M. Pegg. Long-term Illinois River fish population monitoring program. Technical annual report 01-05 submitted to Illinois Department of Natural Resources. 35 pp.

Miller-Ishmael, L., B. Carroll, A. Osterman, J. Claussen, D. Benjamin, R. Illyes, and D. Philipp. Database management and analysis of fisheries in Illinois.

Technical annual progress report 01-02 submitted to Illinois Department of Natural Resources. 293 pp.

Parkos, J., J. Hoxmeier, K. Ostrand, M. Siepker, T. Kassler, D. Philipp, and D. Wahl. Factors influencing largemouth bass recruitment: implications for the Illinois Management and Stocking Program. Technical annual progress report 01-06 submitted to Illinois Department of Natural Resources. 40 pp.

Pegg, M.A., and S.P. Havera. 2001. Illinois River natural resources bibliography. Technical final report 2001-13 submitted to U.S. Army Corps of Engineers, Rock Island District. 114 pp.

Philipp, D., J. Claussen, A. Osterman, and D. Benjamin. Creel survey on Newton Lake. Technical final report 01-03 submitted to Ameren Corporation. 42 pp.

Pientka, B., J. Dettmers, and B. Graeb. Yellow perch population assessment in southwestern Lake Michigan, including the identification of factors that determine yellow perch year-class strength. Technical annual report 01-04 submitted to Illinois Department of Natural Resources. 38 pp.

Spruell, P., J. Epifanio, G. Haas, K. Pratt, B. Rieman, C. Stockwell, and F. Utter. Genetic considerations for bull trout restoration in the Lower Clark Fork drainage, Idaho and Montana. Technical report 01-14 submitted to Idaho and Montana Bull Trout Management Team. 48 pp.

Steinmetz, J., and D. Soluk. Population viability of mottled sculpin in Black Partridge Creek. Technical annual progress report 01-01 submitted to Illinois Department of Transportation. 10 pp.

CENTER FOR AQUATIC ECOLOGY PROJECTS

Phylogenetic relationships among the black bass and assessment of local adaptation
T. Kassler, J. Koppelman, J. Levengood, J. Claussen, D. Philipp

Experimental investigation of the dispersal ability of freshwater invertebrates
C. Caceres, D. Soluk

Foraging mode and prediction of the impact of multiple predators on prey populations
H. Vance, D. Soluk

Solar radiation, growth dilution, and metal accumulation by autotrophic biofilms
W. Hill, I. Larsen

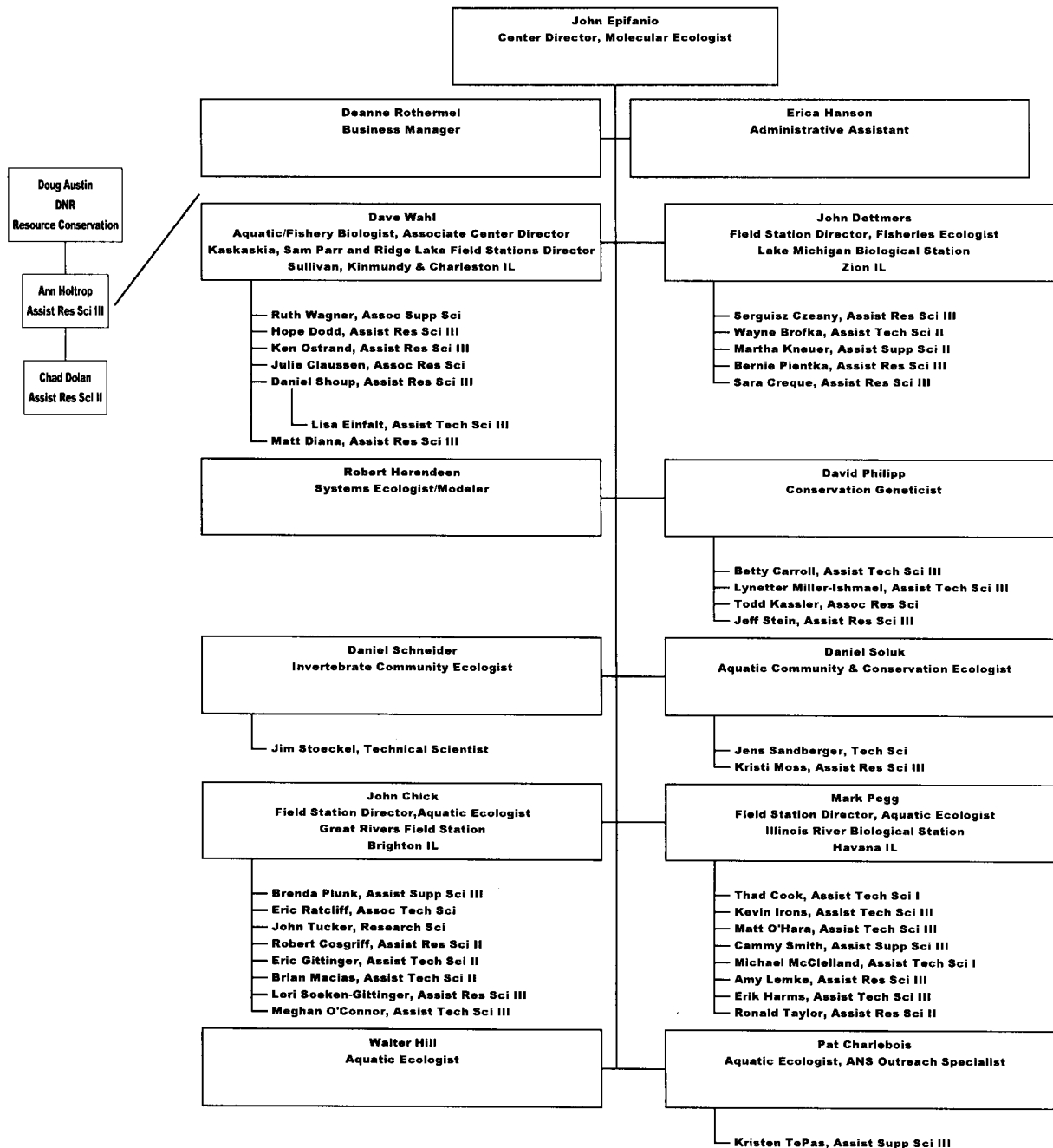
Factors inducing and terminating dormancy in zooplankton
C. Caceres, A. Rachubinski, A. Andreou

Linking life-history traits to community dynamics in freshwater ecosystems
C. Caceres, A. Tessier (Michigan State University)

- Conservation ecology and genetics of black rat snakes
G. Blouin-Demers (Ohio State University), P.J. Weatherhead, H.L. Gibbs (Ohio State University)
- Reproductive ecology of northern water snakes
K.J. Kissner, P.J. Weatherhead
- Relationship between fish biodiversity and ecosystem structure and function
K. Ostrand, D. Wahl
- Ecology of the federally listed, endangered Hine's emerald dragonfly
D. Soluk, L. Pintor, S. Foster
- Evaluation of removal of the upper Batavia Dam on the Fox River, Illinois
D. Wahl, H. Dodd
- Evaluating the effects of reducing water levels in backwater habitats of large rivers
D. Wahl, J. Dettmers, B. Herwig
- Sewage treatment as ecosystem management
D. Schneider
- Reducing risk of aquatic nuisance species spread via baitfish
P. Charlebois
- Trophic transfer of PCBs: zebra mussels and round gobies
P. Charlebois
- Zebra mussel metapopulation dynamics
D. Schneider, R. Sparks, K. Blodgett, J. Stoeckel, C. Rehmann, D. Padilla
- Carp, culture, and a century of exotic species introductions
D. Schneider, G. Sandiford
- Exotic zooplankton in the upper Mississippi River
J. Stoeckel
- Implications of the introduction of *Daphnia lumholtzi* on fish and zooplankton assemblages
D. Wahl, C. Kolar
- Effects of common carp on aquatic communities
D. Wahl, V. Santucci, J. Parkos, M. Wolfe
- Consequences of exotic zooplankton in Lake Michigan
C. Caceres, A. Witt, J. Dettmers
- Bighead competition with native fishes and potential threats to the Great Lakes
J. Chick, M. Pegg
- Use of stable isotopes to examine food webs in the Illinois and Mississippi rivers
B. Herwig, D. Soluk, D. Wahl, J. Dettmers
- Trophic interactions in ecosystems
R. Herendeen
- Ecological indicators for sustainable agriculture
R. Herendeen
- Using indicators of off-site impacts in local and regional planning
R. Herendeen, R. Shammin
- Long Term Resource Monitoring Program: out-of-pool analysis
J. Chick, M. Pegg
- Long Term Resource Monitoring Program—Pool 26 Mississippi River
J. Chick
- Channel catfish and their potential role as dispersers of white mulberry seeds
J. Chick
- Analysis of alternative sampling schemes for long-term monitoring of fishes in Navigation Pool 26 of the Upper Mississippi River
J. Chick
- Dredge material deposition and the Illinois chorus frog
J. Tucker
- Evolution of life history strategies in turtles
J. Tucker, F.J. Janzen
- Survey of mussels of Upper Mississippi River Navigation Pool 26
J. Tucker
- Food habits of herptiles occupying an early sand prairie sere
R. Cosgriff, J. Tucker
- Seed dynamics of floodplain forests and their relationship to community structuring
R. Cosgriff, Y. Yin
- Floodplain forest response to large-scale flood disturbance
R. Cosgriff, Y. Yin
- Submersed aquatic vegetation and relationships to use by YOY fishes
R. Cosgriff, L. Gittinger
- Survivorship of flood events by seeds
R. Cosgriff, Y. Yin
- Habitat enhancement projects and aquatic vegetation
R. Cosgriff, J. Chick
- Lake Chautauqua Habitat Rehabilitation and Enhancement Project (HREP)
J. Stoeckel, K. Irons, T. Cook

- Long-term Illinois River Fish Population Monitoring Program
M. McClelland, M. Pegg
- Watershed-scale effects of best management practices on stream fish and invertebrates
D. Wahl, H. Dodd
- Individual-based modeling of walleye and gizzard shad populations in impoundments
T. Galarowicz, R. Herendeen, D. Wahl
- Comparative growth and survival of several genetic stocks of muskellunge
D. Wahl, M. Diana
- Sportfishing creel survey of the Illinois portion of Lake Michigan
J. Dettmers, D. Philipp
- Growth and survival of nearshore fishes in Lake Michigan
J. Dettmers
- Effects of food availability on recruitment of yellow perch in Lake Michigan
B. Graeb, J. Dettmers
- Population viability of mottled sculpin in Black Partridge Creek
J. Steinmetz, D. Soluk
- Reproductive ecology and impacts of catch-and-release angling in bass
D. Philipp, J. Claussen, D. Wahl, C. Suski, T. Kassler, J. Parkos
- Mechanisms affecting recruitment of yellow perch in Lake Michigan
J. Dettmers, B. Pientka, C. Caceres
- Creel surveys on Illinois impoundments
D. Benjamin, B. Carroll, L. Miller-Ishmael, D. Philipp
- Physiological ecology of centrarchid fishes including energetics of parental care
S. Cooke, J. Schreer, D. Wahl, D. Philipp, P.J. Weatherhead
- Illinois chorus frog: wetland mitigation impact and dredge material deposition
J. Tucker
- Spunky Bottoms Herpetological Survey
J. Tucker
- Importance of floodplain lakes as fish nurseries in the lower Kaskaskia
D. Wahl, D. Thomas
- Bluegill reproductive strategies factors affecting population size structure
D. Wahl, D. Philipp, J. Hoxmeier, J. Claussen, D. Aday
- Factors influencing largemouth bass recruitment
D. Wahl, D. Philipp, J. Hoxmeier, J. Parkos
- Individual-based modeling of walleye and gizzard shad populations in impoundments
T.L. Galarowicz (UIUC), R. Herendeen, D. Wahl
- Invasive aquatic plant outreach by 4-H field volunteers
P. Charlebois, R. Wiedenmann, D. Voegtlin
- CAE OUTREACH STATISTICS FOR FY 2002
- Queries answered — 919
Species identified — 0
Boards and committees served — 37
Public presentations to
 Schools (K–12) — 5
 Colleges — 8
 Conferences & symposia — 71
 Clubs & private organizations — 14
 State and federal agencies — 9
 International meetings — 1
TOTAL PRESENTATIONS — 108

Center for Aquatic Ecology—Organizational Chart





The mission of the Center for Biodiversity is to obtain information on the diversity of life through research in systematics, ecology, and conservation biology, and through the acquisition and maintenance of natural history collections and their associated databases. This information is provided to the people of Illinois, policy makers, and the scientific and educational communities through publications, education, and outreach.

SCIENTIFIC PUBLICATIONS

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Breeding avian fauna of the Fox Ridge State Park, Coles County, Illinois
S. Amundsen

Breeding avian fauna of the Lincoln Trail State Park, Clark County, Illinois
S. Amundsen

A centralized, Internet-based Critical Trends Assessment Program (CTAP) database
E. Chen, E. DeWalt, B. Molano-Flores

A centralized, Internet-based Long-Term Resource Monitoring (LTRMP) database
E. Chen, E. DeWalt, M. Pegg

Population genetics and host specialization of the fungus *Phialophora gregata*
W. Chen, C. Grau (University of Wisconsin)

Taxonomic and genetic identification of the horseradish root discoloration pathogens
W. Chen, M Babadoost (UIUC), C. Eastman

Nomenclator of sanctioned names of fungi
L. Crane

Revision of the genus *Torula*
L. Crane, J. Hughes, (Agriculture Canada)

World host index of the Meliolaceae (Ascomycetes)
A. Jones (UIUC), L. Crane

Biological inventory of C2000 Ecosystem Program aquatic sites
K. Cummings, C. Mayer, C. Phillips

Freshwater mussels of Illinois
K. Cummings

Freshwater mussels of the Mackinaw River
K. Cummings, C. Mayer

Status review of the endangered salamander mussel and mudpuppy
K. Cummings, C. Mayer, C. Phillips

Freshwater mollusk bibliography on the Web
K. Cummings, A. Bogan (North Carolina State Museum of Natural Sciences), G. Watters (Ohio State University), C. Mayer

Web directory of mollusk collections of the world
K. Cummings, A. Oleinik (Purdue University), J. Slapcinsky (formerly Field Museum)

Freshwater mussel/host database
K. Cummings, G. Watters (Ohio State University), C. Mayer

Directory of freshwater mussel researchers
K. Cummings

Biographies of freshwater malacologists on the Web
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Freshwater mussel genera on the Web
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Type catalogue of freshwater mussels (Unionoida) of the world
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Impacts of coalmine discharges on Illinois unionid mussels
D. Soucek, K. Cummings

Mussel survey of two east-central Illinois streams
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Comparison of historical and contemporary EPT
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EPT species composition at Forest Glen Forest Preserve, Vermilion County, Illinois
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EPT specimen database, Internet access and GIS mapping
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Life cycles of Trichoptera (caddisflies) and bacterial and agricultural pesticide contamination
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EPT fauna of western Great Smoky Mountains National Park
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Comparison of CTAP volunteer stream monitoring data to professional monitoring data
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D. Wenny, K. Murray (Hope College)
- Post-dispersal seed fate of *Prunus serotina* and *Quercus rubra* in native and introduced populations
D. Wenny and P. Jansen (Wageningen University, Netherlands)
- The aquatic Oligochaeta of the Great Smoky Mountains National Park
M. Wetzel
- The aquatic Annelida of the Colorado River and its tributaries in Grand Canyon National Park
M. Wetzel, D. Blinn, J. Shannon (Northern Arizona University)
- A catalogue of names, descriptions, and type specimens of the Oligochaeta
M. Wetzel, J. Reynolds (Oligochaetology Laboratory, Kitchener, Ontario)
- Common and scientific names of aquatic and terrestrial of North America
M. Wetzel, K. Coates (Bermuda Biological Station for Research, Inc.), J. Reynolds (Oligochaetology Laboratory, Kitchener, Ontario), K. Fauchald and W. Moser (USNM-Smithsonian Institution, Washington, DC), S. Gelder (Univ. Maine-Presque Isle), J. Madill (Canadian Museum of Nature, Ottawa), D. Klemm (USEPA, Cincinnati)
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Host preference and fitness of the Illinois threatened *Agalinis (=Tomanthera) auriculata*
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CBD OUTREACH STATISTICS FY 2002

Queries Answered: 1,473

Specimens Identified: 33,605

Boards and Committees Served: 73

Public Presentations

Schools (K-12) — 25

Colleges — 13

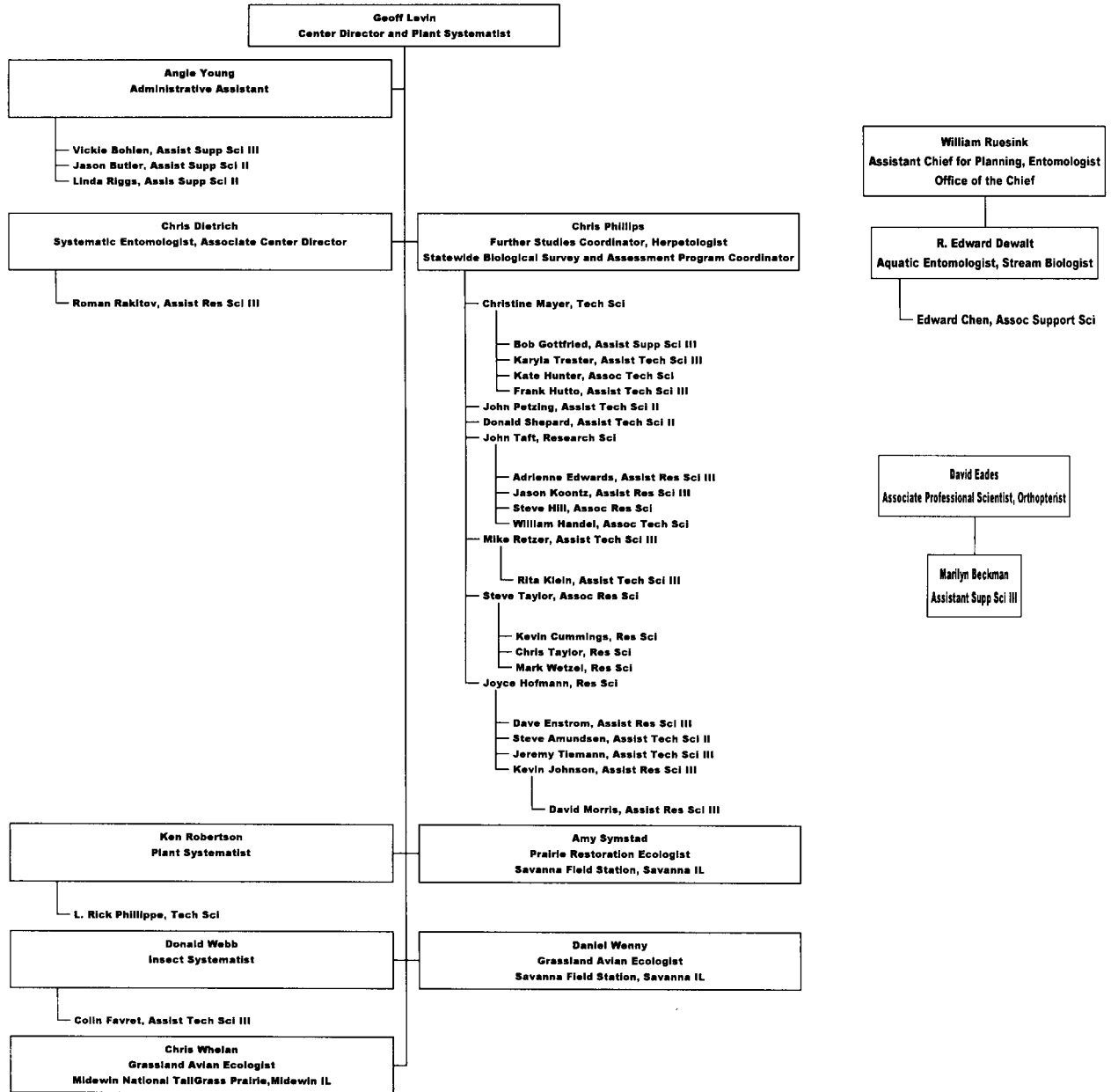
Conferences & Symposia — 28

Clubs & Private Organizations — 14

State & Fed. Agencies — 11

International Meetings — 1

Center for Biodiversity Organizational Chart





The Center For Economic Entomology serves the people of Illinois, policy makers, and the scientific and educational communities by investigating and resolving entomological problems and issues in four critical areas: agriculture, medicine, natural environments, and urban landscapes. The Center provides scientifically based information leading to an understanding and appreciation of our natural heritage and the wise preservation, management, and utilization of Illinois' natural resources.

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- Host relationships of Kyrghyz bees and meloid beetles
J. Bouseman
- Meloid beetles of Illinois
J. Bouseman
- Native bees and pollination
J. Bouseman
- Ticks and tick-borne diseases in Illinois
J. Bouseman, J. Nelson
- Prairie insects of Illinois
J. Bouseman, J. Sternburg
- Silk moths and royal moths of Illinois
J. Bouseman, J. Sternburg
- Skippers of Illinois
J. Bouseman, J. Sternburg, J. Wiker
- Hawk moths of Illinois
J. Bouseman, J. Sternburg
- Invasive aquatic plant outreach by 4-H field volunteers
P. Charlebois, R. Wiedenmann, D. Voegtlin
- Taxonomic and genetic identification of horseradish root discoloration pathogens
W. Chen, M. Babadoost (UIUC), C. Eastman
- Interactions of reduced-risk insecticides and the citrus mealybug parasitoid, *Leptomastix dactylopii*
R. Cloyd (UIUC), R. Wiedenmann
- Understanding and managing the soybean aphid
L. Domier (USDA-ARS), M. Gray (UIUC), G. Hartman (USDA-ARS), S. Isard (UIUC), D. Onstad (UIUC), P. Orwick (UIUC), S. Ratcliffe (UIUC), J. Shaw, L. Solter, K. Steffey (UIUC), D. Voegtlin, L. Wax (USDA-ARS)
- Horseradish pest management and productivity
C. Eastman, W. Chen, M. Babadoost (UIUC), A. Hamblin (UIUC), J. Masiunas (UIUC), M. Kushad (UIUC), R. Skirvin (UIUC), M. Norton (UIUC), C. Voigt (UIUC)
- Pest management with glucosinolate-rich cultivars
C. Eastman, J. Masiunas (UIUC), M. Kushad (UIUC)
- Insect and weed management in vegetable crops under organic, conventional, and transitional production systems
C. Eastman, E. Zaborski, J. Masiunas (UIUC)
- Habitat selection and species diversity of migratory aphids
C. Favret, D. Voegtlin
- A knowledge-based digital library of scientific investigation processes
B. Heidorn (UIUC), K.R. Robertson, M.R. Jeffords, B. Sandore (UIUC), D.S. Seigler (UIUC)
- Host plant resistance for soybean insect pests
C. Helm, R. Nelson (UIUC)
- Cooperative agricultural pest survey
C. Helm, E. Brewer
- Molecular identification and function of endosymbionts in vector mosquitoes
L. Kent (UIUC), R. Novak
- Dispersal of western corn rootworms from cornfields into soybean fields
E. Levine, J. Spencer, S. Isard (UIUC), E. Adee (Monmouth, IL), R. Hines (Dixon Springs, IL), L. Paul (DeKalb, IL), G. Raines (Perry, IL)
- Western corn rootworm transmission of soybean diseases
E. Levine, S. Isard (UIUC), T. Mabry (UIUC), J. Spencer, H. Hobbs (UIUC), G. Hartman (USDA), W. Pedersen (UIUC)

Genetic markers for western corn rootworms that lay eggs in soybean fields

E. Levine, N. Mihelcic (University of Guelph, Canada), A. Schaafsma (University of Guelph, Canada), J. Spencer

Environmental/genetic basis for prolonged diapause in northern corn rootworm eggs

E. Levine

Response of western corn rootworms to different soybean lines

E. Levine, J. Spencer, M. Gray (UIUC), R. Nelson (USDA), R. Hammond (Ohio State University), C. Pierce (UIUC), S. Isard (UIUC)

Egg-laying by the northern corn rootworm in soybean fields

E. Levine

Population dynamics of vector mosquitoes in Illinois

R. Novak, R. Lampman, N. Krasavin

Succession of mosquito species in a reclaimed wetland—Spunky Bottoms

R. Novak

Evaluation of novel mosquito repellents

R. Novak, R. Lampman

Chemical ecology and toxicology of mosquitoes

R. Novak, R. Lampman

Dog heartworm in native foxes

R. Novak, J. Chestnut (UIUC), R. Warner (UIUC)

Applied ecology in the management of encephalitis in urban habitats

R. Novak, L. Kent (UIUC)

An integrated approach to managing malaria in Africa

R. Novak, J. Beier (Tulane University), J. Shililu (International Center for Insect Physiology and Ecology), J. Githurie (ICIPE), C. Mbogo (ICIPE), G. Tewolde (Ministry of Health, Eritrea) J. Ijumba (National Malaria Institute, Tanzania), L. Regens (University of Oklahoma), W. Bassert and E. McKensie (Harvard University)

Arboviral surveillance and ecology

R. Novak, N. Krasavin

West Nile Virus: potential host and vector interactions in Illinois

R. Novak, R. Lampman, J. Levenson, N. Krasavin

Training students in molecular techniques for arbovirus detection

R. Novak, N. Krasavin

Insecticide evaluation of field, forage, fruit, and vegetable crops

J. Shaw

Control of the Asian longhorned beetle, *Anaplophora glabripennis*

L. Solter, J. Cate (Integrated BioControl Systems, Inc., IN), L. Hanks (UIUC), M. McManus, M. Keena (USDA Forest Service, CT), L. Bauer (USDA Forest Service, MI)

Systematics and within-species variability of entomopathogenic microsporidia

L. Solter, J. Maddox, J. Vavra and J. Weiser (Charles University, Prague, Czech Republic), C. Vossbrinck (Connecticut Agricultural Experiment Station, New Haven, CT), D. Pilarska (Bulgarian Academy of Sciences), M. McManus (USDA Forest Service, CT)

Biology and ecology studies of entomopathogens

L. Solter, G. Hoch (Austrian National Science Foundation Fellow), D. Pilarska (Bulgarian Academy of Sciences), C. Vossbrinck (Connecticut Agricultural Experiment Station), M. Henn (Technical University of Munich, Germany), J. Novotny (Forest Research Institute, Banska Stiavnica, Slovakia), A. Linde (Fachhochschule Eberswalde, Eberswalde, Germany), G. Csoka, (Matrafured, Hungary), M. McManus (USDA Forest Service, CT), J. Siegel (USDA/ARS, Schafter, CA).

Abundance patterns of WCR flight between corn, soybeans, and other crops

J. Spencer, T. Mabry (UIUC), S. Isard (UIUC), E. Levine

Evaluation of kairomone traps for western corn rootworm monitoring

J. Spencer, T. Mabry (UIUC), E. Levine, S. Isard (UIUC)

Western corn rootworm adult mortality following consumption of transgenic corn

J. Spencer, T. Mabry (UIUC)

Using transgenic corn tissue as a marker for dispersal studies

J. Spencer, T. Mabry (UIUC)

Movement and mating of adult western corn rootworms in cornfields

J. Spencer, D. Onstad (UIUC), E. Levine, S. Isard (UIUC)

Soybean foliage consumption reduces vigor of adult western corn rootworms

J. Spencer, T. Mabry (UIUC), S. Isard (UIUC), E. Levine

Morphological analysis of *Aphis glycines*

D. Voegtlin

Biological control of pine aphids in Brazil with parasitoids

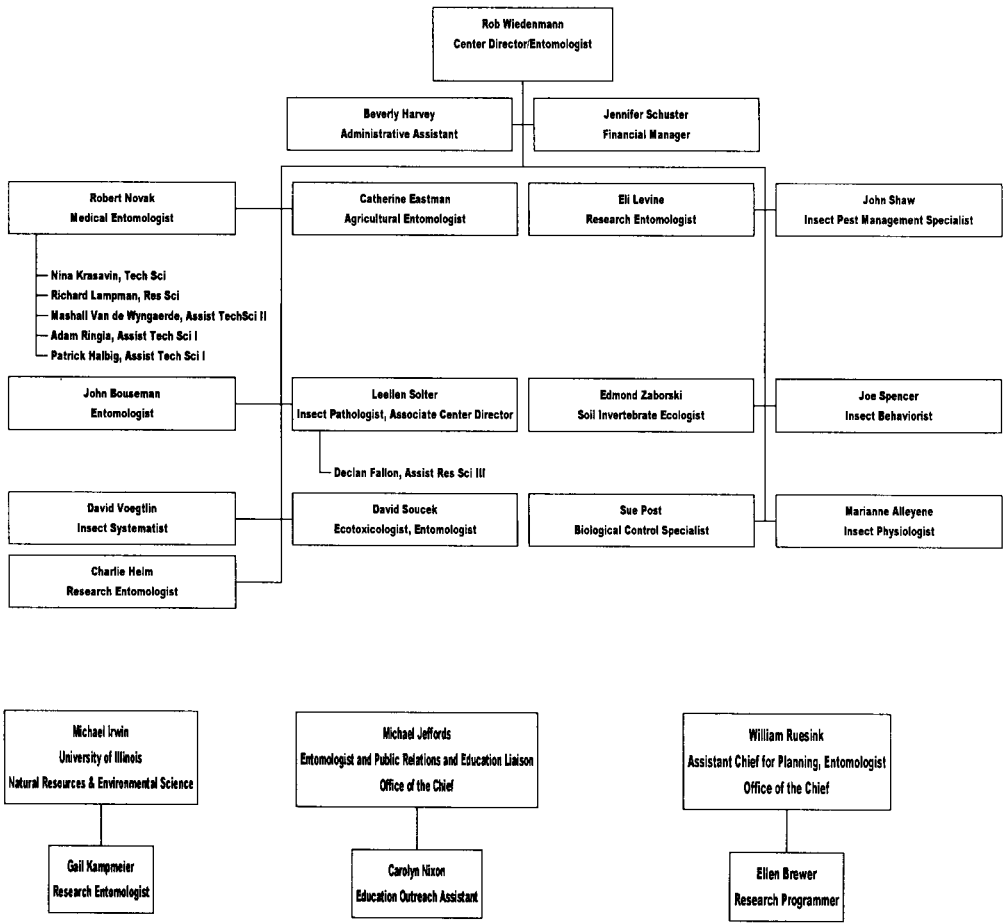
D. Voegtlin

Response of CMV vector aphids to autumnal photoperiod and temperature

D. Voegtlin

- Survey of invertebrates at Indian Ridge Marsh, Indian Creek, and Hegewisch March
D. Voegtlin
- Aphis glycines*—over-wintering distribution and spring emigration
D. Voegtlin, D. Hogg (University of WI), C. Difonzo (MI State University), D. Ragsdale (University of MN), B. O'Neil (Purdue)
- Garlic mustard ecology and biological control
R. Wiedenmann, E. Gault (UIUC)
- Impacts of purple loosestrife on nesting wetland birds
R. Wiedenmann, J.D. Maddox (UIUC)
- Midwest Institute for Biological Control
R. Wiedenmann, R. O'Neil (Purdue Univ.), J. Obrycki (Iowa State Univ.), E. Delfosse (USDA)
- Biological control of alfalfa blotch leafminer
R. Wiedenmann, J. Lundgren (UIUC), K. Steffey (UIUC)
- Host-parasite physiological interactions
R. Wiedenmann, M. Alleyne, C. Helm, J. Nardi (UIUC), R. Kfir (Plant Protection Research Institute, Pretoria, South Africa)
- Teasel ecology and control methods
R. Wiedenmann, A. Musser, J. Parrish (Millikin University)
- Biological control of purple loosestrife
R. Wiedenmann, D. Voegtlin, S. Post, C. Helm
- Non-target impacts of *Bt* corn against predatory beetles
R. Wiedenmann, J. Lundgren (UIUC)
- Survey of Illinois earthworms
E. Zaborski
- Earthworms in Illinois agroecosystems
E. Zaborski
- Soil mites as biological indicators of soil condition
E. Zaborski
- An alternative expellant for sampling earthworm populations
E. Zaborski
- Bipalium adventitium*, an exotic flatworm predator of earthworms
E. Zaborski
- Phasmarhabditis* sp. nematodes parasitizing *Lumbricus terrestris* earthworms
E. Zaborski
- Influences of insecticides and transgenic corn in soil ecosystems
E. Zaborski
- Fungus gnats and their natural enemies in greenhouses
E. Zaborski, R. Cloyd (UIUC)
- CEE OUTREACH STATISTICS FOR FY 2002
Queries answered — 302
Species identified — 143
Boards and committees served — 21
Public presentations to
 Schools (K–12) — 6
 Colleges — 16
 Conferences and symposia — 54
 Clubs and private organizations — 32
 State and federal agencies — 7
 International meetings — 4

Center for Economic Entomology Organizational Chart





The mission of the Center for Wildlife Ecology is to conduct basic and applied research on wildlife and their habitats. The Center conducts research on all aspects of wildlife ecology including basic ecological studies of individual species and communities; landscape analyses; evaluation, delineation, restoration, and mitigation studies of wetlands; human dimensions of wildlife management; and wildlife health.

SCIENTIFIC PUBLICATIONS

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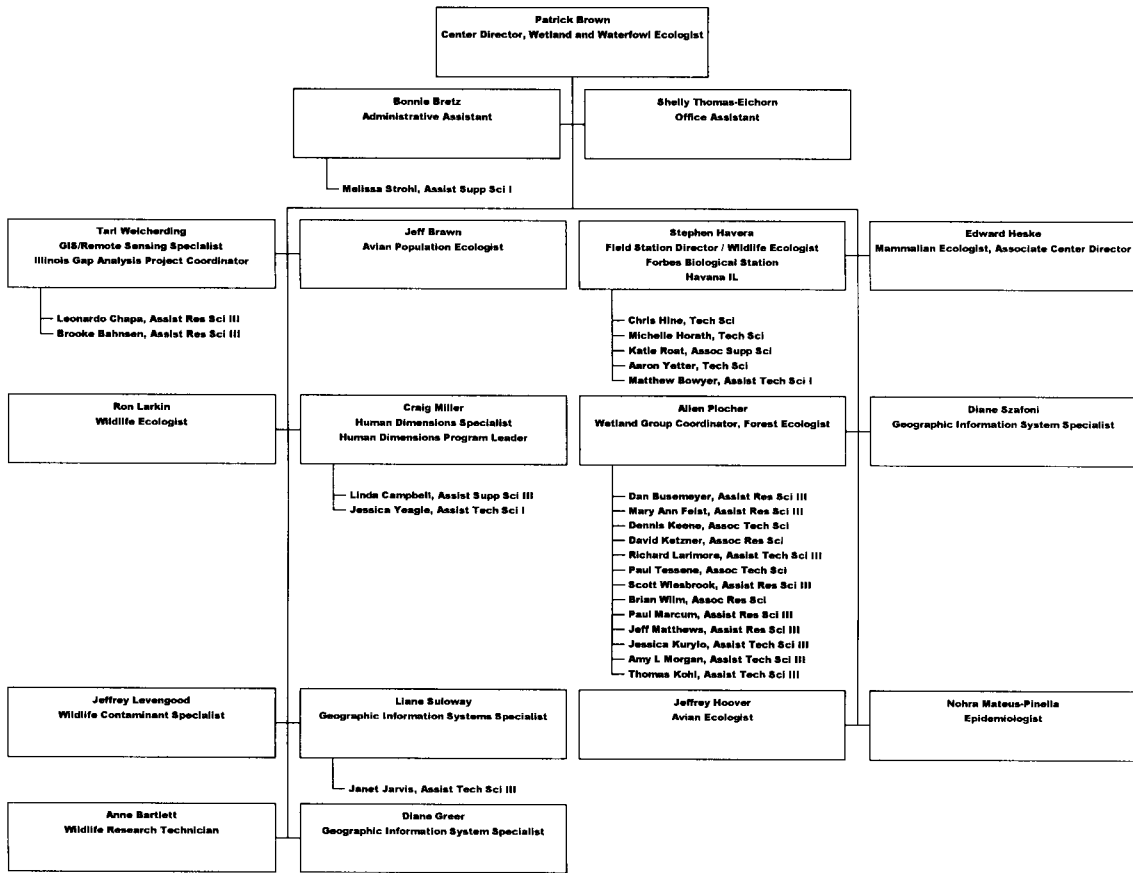
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J. Hoover

Importance of floodplain forest for wintering birds
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Influence of agricultural in-holdings on the nesting success of forest songbirds
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Boards and committees served — 5
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Center for Wildlife Ecology Organizational Chart



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Published by authority of the State of Illinois
Hon. George Ryan, Governor
MJ128052-250-11-02
Cost per copy: \$2.04

Editors: Thomas Rice and Charles Warwick
Design: Thomas Rice

A catalog of the publications of the Illinois Natural History Survey is available without charge from the address below.
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