TECHNICAL NOTES

USDA-Natural Resources Conservation Service
Boise, Idaho

TN BIOLOGY NO. 28 November 3, 1999

Bat Conservation International (BCI) and NRCS have a MOU and have recently developed a Cooperative Agreement. As part of the agreement BCI is providing website and phone contacts related to bat conservation, management and education for NRCS and district use.

File this in the Biology section of the Technical Notes, Section VI of the Technical Guide.

Bat Conservation International, Inc.
Post Office Box 162603 • Austin, Texas 78716 • 512/327-9721 • FAX 327-9724

Frank Fink
State Biologist
NRCS Idaho
9173 West Barnes Dr. Ste C
Boise, ID 83709

November 3, 1999

Dear Frank Fink:

In 1994, Bat Conservation International (BCI) and the Natural Resource Conservation Service (NRCS) signed a Memorandum of Understanding (MOU) and in July 1999, a Cooperative Agreement was developed to further the goals of the MOU. Specifically, the purpose of the Agreement is to further partnership between NRCS and BCI, and increase efforts related to bat conservation, management, and education.

BCI is a world leader in bat education and offers numerous educational materials, reference resources, technical information, and workshops to resource managers. Many of these resour ces can be found at our website: **www.batcon.org**

This memo highlights several bat conservation and management resources available to you.

EDUCATION AND AWARENESS ABOUT BATS

- Educational Materials: BCI offers many types of educational materials, from videos and slide presentations, to educator handbooks and bat fact cards. This information is available through ou r catalog (enclosed) and through our web site by clicking on the left tool bar under HOME: CATALOG.

- General Information 'All About Bats': For general information on a host of bat related topics, go to our web site and click on various topics on the left tool bar under ALL ABOUT BATS. We have informative papers about:

  * Rabies and Bats
  * Bat Species Lists for the US and Europe
  * Bat Facts/Trivia
  * Frequently Asked Questions About Bats
  * Excluding Bats from Buildings
  * Bat Detectors and Echolocation Calls
  * Reading Resources for Educators, Students, and Bat Enthusiasts

- Bat Conservation and Management Workshops: These five-day workshops cover all aspects of bat conservation and management, teach bat trapping and handling techniques, and field methods. Workshops are offered annually in Arizona and Pennsylvania, and one other location in the US. Additional information and future workshop dates can be found at our web site under the heading GET INVOLVED: TRIPS AND WORKSHOPS.

- Anabat Workshops: BCI's four-day Anabat workshops, developed and hosted with the inventor and developers of the system, allows scientists to identify certain bat species by their echolocation calls. Participants will gain hands-on experience in gathering, recording, and analyzing calls under field conditions. Additional information and future workshop dates can be found at our web site under the heading GET INVOLVED: TRIPS AND WORKSHOPS.

- List of National Bat Experts and Contacts: BCI is compiling a list, by state, of bat experts and contacts. This list provides the person responsible for bat capture permits in each state and others involved in bat management and research. Once complete, this list will be distributed to all NRCS Biologists and Resource Managers.

- World Wide Web Resources and Bat Links: BCI compiled a detailed list of Internet destinations which directly pertain to bats and bat conservation (enclosed).

- Database of Literature and Bibliography Resources: BCI assembled a bibliographic database of reprints, books, dissertations, and popular journal articles. This list is intended to let researchers and managers know what literature has been published on topics relating to bats. To access this resource, go to our web site and click on ALL ABOUT BATS: LITERATURE/ REFERENCES. In addition, BCI has 16 years of back issues of our quarterly magazine *BATS* available on our web site under PUBLICATIONS: BATS MAGAZINE.

CONSERVATION INITIATIVES

- Bats and Mines: BCI's North American Bats and Mines Project is working with the NRCS Rural Abandoned Mines Program to protect bats living in abandoned mines. In 1999 and 2000, we are placing emphasis on mine land reclamation in the Great Lakes Region and in western states where a high percentage of historic mining districts overlap with the range of many sensitive bat species. For more information about the Bats and Mine Project, see our web site under PROJECTS: MINES PROJECT.

  Thanks to start-up funding provided by NRCS's Wildlife Habitat Incentives Program (WHIP), more than a dozen high priority mines will be closed in the Great Lakes Region in 1999 to 2001. These efforts will protect more than 350,000 mine-roosting bats. The overall cost of the Great Lakes Bat Conservation Initiative is $236,600, of which NRCS is contributing $135,000, BCI is contributing over $70,000, and a host of other state and private partners are contributing more than $30,000.

  WHIP funding is also being used to modify abandoned mines in Nevada, reopen mines previously used by bats, and provide habitat for sensitive Townsend's big-eared bats.

  * *Bats and Mines Resource Publication*: BCI's handbook, *Bats and Mines,* (enclosed) summarizes the current knowledge of bat conservation and mine land management. It covers topics such as the importance of mines to bats, how and when bats use mines, assessing mines for bats, protecting bats living in mines, and how mine structure, location, and human disturbance affect bat use. *Bats and Mines* includes bat-compatible gate designs, sample survey forms, relevant literature, and available resources (such as other

groups to contact and equipment sources). This handbook is an essential tool for all resource managers developing bat and mine management plans or conservation projects.

* *Mine Assessment for Bats Workshops*: these three-day workshops are held at various locations throughout the US and cover bat natural history and distribution, internal and external mine survey techniques, mine safety, bat-compatible mine closure methods, cooperative partnership programs, and liability issues. Taught by a cadre of nationally recognized bat and mine experts, these workshops are vital to understanding the range of bat and mine issues. Additional information and future workshop dates can be found at our web site under the heading PROJECTS: MINES PROJECT: EDUCATION, AWARENESS, AND TRAINING.

* *Mine/Cave Gating Workshops*: these five-day workshops teach hands-on bat-compatible gate construction. Participants, under the guidance of nationally recognized expert gate builders, learn correct gate design, placement, welding, and actually construct a bat gate on location. Additional information and future workshop dates can be obtained by calling BCI Biologists Jim Kennedy or Sheryl Ducummon at (512) 327-9721.

- Bat House Research Project: The North American Bat House Research Project is a coordinated effort between BCI staff, bat research colleagues, and the public. The program provides alternative habitat for millions of bats that lose their homes each year through eviction from buildings and destruction of their roosts. Research associates from across the US have joined BCI in developing effective artificial bat roost designs and placement techniques. Bat houses can be an integral component of an integrated pest management program, encouraging hundreds of crop and forest pest-eating insectivorous bats to take up residence in key agricultural areas. Nuisance bats can also be excluded from attics or other occupied buildings into bat houses. For additional information, go to our web site under PROJECTS: BAT HOUSE PROJECT or our *Bat House Builder's Handbook* can be purchased from our catalog.

- North American Bat Conservation Partnership Program: The North American Bat Conservation Partnership (NABCP) was formed to support an organized continent-wide bat conservation effort. The Partnership is an alliance of bat working groups, researchers, non-governmental organizations, and state and federal agencies from Mexico, Canada, and the US, and is lead by a 13 member Executive Steering Committee who represent these groups. These partners are creating a Strategic Plan that identifies continent-wide bat conservation priorities. More information can be found on the website at PROJECTS: N.A. BAT CONS. PART. Several programs fall under this partnership including:

  * *Grants Program* - The NABCP Conservation Fund is available to support projects that most effectively help conserve North American bats. BCI makes approximately $70,000 available annually in small grants that range from $2,000 to $5,000. Applications for assistance must be submitted before December 31st and additional information can be found at PROJECTS: N.A. BAT CONS. PART.: GRANTS.

  * *Bats and Caves* - an emphasis program to protect and manage cave resources for bats.

* *Bats and Forests Program* - a new program underway to identify habitat criteria and the needs of forest roosting bat species.

* *Bats and Bridges Program* - an emphasis program that researches bat-friendly bridge designs. An estimated 3,600 highway structures are used by more than 33 million bats in southern US. Until recently, few state transportation departments were managing for bats. Now, 25 departments are involved and helping to reestablish bat populations at little or no cost to taxpayers, through highly proactive measures. Two handbooks are available to land managers: one with a Texas emphasis and one covering the entire US. These resources can be found on our website under PROJECTS: BRIDGE PROJECT, then click on either BATS IN AMERICAN BRIDGES or TEXAS BATS AND BRIDGES HANDBOOK.

* *Latin American Program* - This program focuses on bats that migrate between the US and Latin America, as well as education and conservation of Latin America's diverse bat fauna, vampire control, and tropical rainforest habitat protection. Additional information can be obtained at our website under PROJECTS: LATIN AMERICA.

RESEARCH

- Student Scholarships: Each year, BCI sponsors graduate students in conducting conservation-relevant research. Lack of knowledge about bat ecology and behavior is one of the greatest impediments to bat conservation progress. The goal of this program is to support students in research initiatives that contribute new knowledge essential to conserving bats and the ecosystems they serve. BCI has set aside a minimum of $40,000 annually for its student scholarship fund. Individual awards range from $1,000 to $2,500.

Please feel free to contact any of the following BCI biologists (512-327-9721) if you have any additional questions regarding bat education, management, or research:

General Bat Education/Rabies:	Barbara French, Information Specialist
Education, Workshops	Cullen Geiselman, Education Programs Assistant
Bats and Mines: Workshops, Grants	Sheryl Ducummon, Bats and Mines Director
Conservation Partnership & Bridges	Brian Keeley, NABCP Director
Conservation Partnership, Caves, NABCP Grants	Jim Kennedy, NABCP Assistant Director
Bat Houses, Exclusion	Mark or Selena Kiser, Bat House Research Project
Library, Reference Resources, Scholarships	Angela England, Educational Resources Coordinator

We look forward to continued success through partnership between BCI and the NRCS.

Sincerely,

Sheryl Ducummon

Sheryl Ducummon
North American Bats and Mines Project Director

World Wide Web Resources and Bat Links

Bat Conservation International, Inc. has put together the following list of Internet destinations which directly pertain to bats and bat conservation. This is by no means a complete list of all the batty offerings. We encourage you to browse these sites and find new ones in your continuous discovery and investigations with bats.

NAME	ADDRESS
Bat Conservation International	
Bat Conservation International	http://www.batcon.org
BATS Magazine Archive	http://www.batcon.org/batsmag/batindex.html
Literature Reference Database	http://www.batcon.org/bibsearch.html
N. A. Bat Conservation Partnership	http://www.batcon.org/nabcp/index.html
Bats and Mines Project	http://www.batcon.org/mines/index.html
Texas Bats and Bridges Project	http://www.batcon.org/bridge/babtop.html
U.S. Bats and Bridges Project	http://www.batcon.org/bridge/ambatsbridges/index.html
Latin American Initiative	http://www.batcon.org/pcmm/index.html
Student Scholarship Program	http://www.batcon.org/schol/schol.html
General Information	
Australian Bat Society	http://batcall.csu.edu.au/batcall/abs/home.htm
Basically Bats Web Page	http://karst.lads.com/BasicallyBats/index.html
Bat Links	http//www.york.biosis.org/zrdocs/zoolinfo/mam_chir.htm
Bat Conservation in Bochum	http://www.tp4.ruhr-uni-bochum.de/~lr/bats/bats_bochum.html
Bat Conservation Trust	http://bats.org.uk/default.htm
Batline: Bat News Group	gopher://gopher.unm.edu/11/academic/biology/batline
Bats and Bridges	http://www.tfhrc.gov/pubrds/winter96/p96w12.htm
Bats in Austin	http://www.austin360.com/features/bats/batstop.htm
British Wildlife - Bats	http://rs306.ccs.bbk.ac.uk/flora/bats.htm
Canadian Bat Resources	http://www.camosun.bc.ca/~colesr/batlink.htm
Discover Bats in Alaska	http://www.state.ak.us/local/akpages/FISH.GAME/notebook/smgame/bats.htm
Guide to Birding/Bats	http://birding.miningco.com/
Mammals of Socorro Co, NM	http://serviette.unm.edu/msb/mammal/mammal-home.html
Missouri Bat Caves	http://www.state.mo.us/conservation/nathis/mammals/batcaves.htm
Philadelphia Inquirer Article	http://sln.fi.edu/inquirer/bats.html
Shetland Wildlife Pages	http://www.zetnet.co.uk/sigs/bats/
USGS Bat Web Links	http://www.mesc.nbs.gov/links/bat_web_sites.html
Detailed Species Information	
Bat Diversity Web	http://www.oit.itd.umich.edu/bio108/Chordata/Mammalia/Chiroptera.shtml
Bat Species at Smithsonian Institution	http://nmnhwww.si.edu/cgi-bin/wdb/msw/names/query/8001
Chiroptera: Systematics	http://www.ucmp.berkeley.edu/synapsids/eutheria/chirosy.html
Fish & Wildlife's Endangered Species	http://www.fws.gov/~r9endspp/vertdata.html
Johns Hopkins – Bats of the World	http://www.press.jhu.edu/books/walkers_mammals_of_the_world/
Mexican Free-tailed Bat	http://www.tpwd.state.tx.us/nature/wild/mammals/bat.htm
Myotis volans Research	http://www.msu.edu/user/taylo110/bats.html
Read about Mexican Free-tailed Bats	http://www.tnc.org/infield/species/bats/bat.htm
UK Bat Database	http://www.pipistrelle.demon.co.uk/
US Desert Bats	http://www.desertusa.com/jan97/du_bats.html

Resources for Teachers

A Thematic Resource for Teachers	http://www.cccoe.k12.ca.us/bats/welcome.html
AIMS Education Organization	http://www.AIMSedu.org/
Concept Principles of Flight	http://wings.ucdavis.edu/Curriculums/Bats/index.html
Flights of Fancy	http://www.keele.ac.uk/koss/stkmg/nathist/bats/intro.htm
General Bat Info for Kids	http://edu.leeds.ac.uk/~edu/technology/epb97/forest/bats.htm
Journey North	http://www.learner.org/jnorth/jnorth.html
Meet a Real Bat Biologist	http://www.scholastic.com/instructor/special4/mentorkl.htm

Echolocation

Bat Ecology and Bioacoustics Lab	http://www.bio.bris.ac.uk/research/bats/batpage.htm
Bat Research Lab at Purdue School	http://klingon.iupucs.iupui.edu/~bat/
Pacific Northwest Bat Library	http://weber.u.washington.edu/%7Ejanete/batcall.html
SE Australian Bat Call Library	http://batcall.csu.edu.au/batcall/batcall1.html

Research Equipment

Bat Detectors - General	http://www.biology.leeds.ac.uk/research/biomech/daw/bats/detector.htm
Bat Detectors	http://www.bahnhof.se/~pettersson/
AnaBat Bat Call Library (NM)	http://biology.unm.edu/~batcall/
AnaBat Equipment	http//www.titley.com.au/
AnaBat File Analysis	http://www.ozemail.com.au/~jollys/
Avinet (Mist-nets, etc.)	http://www.avinet.com/
Caving Equipment	http://www.caves.org/imo/
General Gear	http://www.carlsbadnm.com/gmo
Night-vision Equipment	http://www.bemeyers.com
Temperature Data-loggers	http://www.onsetcomp.com

Bat House Information

BCI Bat House Research Associates	http://www.batcon.org/bhra/bhratop.html
Micnhimer's Sorghum Web Page	http://www.neosoft.com/%7Esorghum/tlccsa4.html
The Backyard Bat Page	http://www.webb-it.com/bats/enter.html

Conferences and Working Groups

11th Int'l Bat Research	http://www.unb.br/zoo/projetos/circular2.htm
Collaboration on Bat Data	http://www.nbii.gov/species.risk/nm2.html

Related Topics

American Cave Conservation	http://www.cavern.org/
Critter Control	http://www.crittercontrol.com/
National Speleological Society	http://www.caves.org/
Rainforest Action Network	http://www.ran.org/ran/
Speleobooks	http://www.albany.net/~oldbat/

Need More Ideas?

Read about Active BCI Members	http://www.batcon.org/batsmag/v15n1-2.html

Please note: due to the dynamic nature of the Internet, some of these addresses may have changed or have ceased to exist. If you have trouble locating a site that you are particularly interested in, try one of the many widely used search-engines such as: http://www.infoseek.com or http://www.altavista.com.

If you would like to tell us about a new site you've found that we should add to our list, e-mail BCI at: webmaster@batcon.org.