



Résumé

**Dan R. Cox**

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## EDUCATION

**Graduate Certificate:** Applied Statistics, University of Kentucky, 2007

- Research: Advisor: Dr. Michael Lacki. Effects of prescribed burning on *Myotis sodalis* and *M. septentrionalis*

**M.S. Degree:** Biological Sciences, Eastern Illinois University, 2005

- Thesis title: An Evaluation of Beaver Habitat Models for Illinois Rivers

**B.S. Degree:** Zoology, Minor in chemistry, Eastern Illinois University, 2001

- Research: Research Advisor: Dr. Gary Fritz  
Performed laboratory research to determine genetic relatedness among isolated populations of royal catchfly. Laboratory work included separating DNA from plant samples and electrophoresis.

- Research: Research Advisor: Dr. Steven Mullin Conducted amphibian survey at Warbler Woods, Coles County, IL. Work entailed construction of drift fences, monitoring pit fall traps, herpetofauna ID, and data management.

## CERTIFICATIONS AND PERMITS

- Federal collection permit: Indiana bat (*Myotis sodalis*), northern long-eared bat (*M. septentrionalis*)
- Qualified Indiana bat surveyor, Pennsylvania Game Commission, WV DNR

## RELEVANT TRAINING

- Wildland fire training: L-180, S-130, S-190, S-290
- Developing Biological Assessments, USFWS
- AnaBat Techniques Workshop, Northtronics USA

## QUALIFICATIONS AND EXPERIENCE

Mr. Cox has sixteen years professional experience as an ecologist. He has surveyed bat communities throughout the eastern United States since 2006. As a research associate at the University of Kentucky, Mr. Cox's research focused on the effects of prescribed burning on two federally listed species of bats (*Myotis sodalis* and *M. septentrionalis*). He has extensive experience conducting regulatory surveys for endangered species of bats on proposed natural gas pipelines, proposed coal mines, DoD facilities, Federal Highway Administration

projects, state-owned conservation lands, and state DOT projects. Mr. Cox's experience not only includes surveying various rare species of flora and fauna, but also includes writing management plans for those species and implementing habitat management. He is proficient in a variety of field techniques, including mist netting, Harp trapping, acoustic surveys, cave surveys, live-trapping, pit fall trapping, attaching transmitters to bats, habitat management, avian surveys, herpetofauna surveys, and aerial/ground radio telemetry.

## **PUBLICATIONS**

Dodd, Luke E., Michael J. Lacki, **Daniel R. Cox**, Lynn K. Rieske. 2014. An assessment of the prey consumed by bats across Central Appalachia prior to the detection of white-nose syndrome. *Northeastern Naturalist*. In review.

Lacki, Michael J., **Daniel R. Cox**, Luke E. Dodd, Matthew B. Dickinson. 2009. Response of northern bats (*Myotis septentrionalis*) to prescribed fires in eastern Kentucky forests. *Journal of Mammalogy* 90:1165 – 1175.

Lacki, Michael J., **Daniel R. Cox**, and Matthew B. Dickinson. 2009. Meta-analysis of summer roosting characteristics of two species of *Myotis* bats. *American Midland Naturalist* 162:321 – 329.

Dickinson, Matthew B., Michael J. Lacki, **Daniel R. Cox**. 2009. Fire and the endangered Indiana bat. Pp. 51 – 75 in *Proceedings of the 3<sup>rd</sup> Fire in Eastern Oak Forests Conference* (T. F. Hutchinson, ed.). Northern Research Station, USDA GTR-NRS-P-46.

**Cox, Daniel R.** and Thomas A. Nelson. 2009. Beaver habitat models for use in Illinois streams. *Transactions of the Illinois State Academy of Science* 102:55 – 64.

**Cox, Daniel R.**, Michael J. Lacki, Michael D. Baker, Joseph S. Johnson. 2008. Sample size and the characterization of roosting habitat of forest-living bats. *Bat Research News* 49:1-9.

## **PROJECT EXPERIENCE**

**Biologist** – *borealis* Biological, 2018. KY Rebuilds: Jackson – Helechewa Structure Replacement Project, Kentucky. Duties included rare bat surveys and data management.

**Biologist** – *borealis* Biological, 2018. AEP Brues - Glendale Heights, West Virginia. Duties included rare bat surveys and data management.

**Biologist** – borealis Biological, 2018. Savanna Army Depot, Illinois. Seven potential bat roost trees were to be cut down for a soil removal project. Emergence surveys were conducted to determine presence/absence of bats in the standing trees.

**Biologist** – borealis Biological, 2018. Prologis Industrial Park, Illinois. Conducted a rare bat acoustic survey for a 201-acre area within a proposed industrial park. The acoustic data was first analyzed using Kaleidoscope Pro. The output was then manually vetted to confirm species presence/absence.

**Biologist** – EnviroScience, 2018. AEP Hurricane Service Center, West Virginia. Duties included rare bat surveys and data management.

**Biologist** – EnviroScience, 2018. US33 Scott Miller Hill Bypass Project, West Virginia. Duties included rare bat surveys and data management.

**Biologist** – borealis Biological, 2018. Mountain Valley Pipeline, Virginia and West Virginia. Conducted point count surveys for rare breeding birds. Survey protocol required both visual and call identification. Breeding birds actively nesting within the project corridor were monitored during pipeline construction to minimize impacts to breeding behavior.

**Biologist** – EnviroScience, 2017. Marsha Gunder-Schneider Nature Preserve and DiNovo-Poston Property, Ohio. Conducted a bat species inventory of both properties, which included mist netting, acoustic surveys, and radio-telemetry.

**Biologist** – borealis Biological, 2017. Diamond Trail Wind Farm, Iowa. Duties included rare bat surveys and data management.

**Biologist** – EnviroScience, 2016. Conducted fall portal surveys for endangered Indiana bats (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) using mist nets, harp traps, and acoustic detectors for a proposed interstate bypass in Pennsylvania.

**Contract Biologist** (May 2014- August 2016)

Conducted rare bat surveys for Apogee Environmental & Archaeological, Inc., and Jackson Group. Surveys were conducted across Pennsylvania and Arkansas to meet federal regulations for development projects. Surveys targeted Indiana bats and northern long-eared bats. Duties included mist netting and radio telemetry.

**Eastern Regional Preserves Manager**

KY State Nature Preserves Commission (August 2011 - March 2014)

**Ecologist** – Oversaw management of 26 nature preserves throughout central and eastern Kentucky. Duties included managing for state and federally listed flora and fauna, implementing a Rx burn program, coordinating volunteers, controlling pest plants, writing management plans and similar documents, and maintaining equipment, preserve boundaries, and hiking trails. In addition, approximately 6,000 acres of public lands distributed amongst 16 conservation areas were bioinventoried for birds, mammals, and herpetofauna.

**Ecologist/Project Manager**

Jackson Environmental Consulting Services, LLC (March 2010 - August 2011)

**Subcontracting Biologist** – Bluegrass Pipeline Project, Kentucky, Williams and Boardwalk Pipeline Partners, 2013. Duties included rare bat surveys and data management.

**Subcontracting Biologist** – Big Branch Mine, Pike County, Kentucky, 2012. Duties included rare bat surveys and data management.

**Project Manager** – Fort Drum Military Installation, New York, 2011. Coordinated a multi-year, ongoing research project on bat population dynamics. Duties included crew supervision, mist netting, acoustic sampling, data management, ground and aerial radio-telemetry, and coordination with military personnel.

**Project Manager** – Imboden Marker Mine, Wise County, Virginia, VA Coal LLC, 2010. Surveyed approximately 71 acres for Indiana bats (*Myotis sodalis*). Duties included field surveying, data analysis, report preparation, and coordination with regulatory agencies.

**Project Manager** – Easter Ridge Surface Mine, McDowell County, West Virginia, Mid-Vol Coal Sales Inc., 2010. Assessed habitat and surveyed approximately 844 acres for Indiana bats (*Myotis sodalis*). Additional duties included coordination with regulatory agencies, data analysis, and report preparation.

**Project Manager** – Totten Ridge Surface Mine, McDowell County, West Virginia, Mid-Vol Coal Sales Inc., 2010. Surveyed approximately 892 acres for Indiana bats (*Myotis sodalis*). Duties included project oversight, field surveying, data analysis, report preparation, and coordination with regulatory agencies.

**Project Manager** – Midland Wind Resource Area, Henry County, Illinois, Iberdrola Renewables, 2010. Assessed habitat and surveyed approximately 25,793 acres for Indiana bats (*Myotis sodalis*). Additional duties included coordination with regulatory agencies, data analysis, AnaBat acoustic monitoring, and report

preparation.

**Project Manager** – R.C. Byrd Hydroelectric Facility, American Municipal Power, 2010. Surveyed approximately 225 acres for Indiana bats (*Myotis sodalis*). Duties included project oversight, field surveying, data analysis, report preparation, and coordination with regulatory agencies.

**Project Manager** – Meldahl Hydroelectric Project, Clermont County, Ohio, City of Hamilton, Ohio, 2010 – assessed and surveyed an approximately 3 mile section of a proposed transmission corridor for Indiana bats (*Myotis sodalis*). Duties included habitat assessment, data analysis, report preparation, and coordination with regulatory agencies.

**Project Manager** – Spice Creek Strip Mine, McDowell County, West Virginia, Gress Engineering Corp., 2010. Assessed and surveyed a portal for potential Indiana bat (*Myotis sodalis*) winter habitat. Duties included habitat assessment, data analysis, report preparation, and coordination with regulatory agencies.

**Project Manager** – Deer Run Wind Resource Area, Illinois, Western Ecosystems Technology Inc., 2010. Surveyed for Indiana bats (*Myotis sodalis*). Duties included field surveying and data management.

**Project Manager** – Prairie Mill Wind Resource Area, Adams County, Illinois, Western Ecosystems Technology Inc., 2010. Surveyed for Indiana bats (*Myotis sodalis*). Duties included field surveying and data management.

**Project Manager** – Effects of Blasting on Bat Hibernaculum, Clark County, Kentucky, Palmer Engineering Company Inc., 2010. Conducted AnaBat acoustic surveys for presence of bats and determined effects of blasting on hibernating bats. Duties included acoustic monitoring, report preparation, data analysis, and coordination with regulatory agencies.

**Project Manager** – Protection and Enhancement Plan for Mill Point Quarry, Pocahontas County, West Virginia, Boxley Aggregates of West Virginia, LLC, 2010. Prepared an Indiana bat Protection and Enhancement Plan for the addition of 87 acres to an existing limestone quarry. Duties included report preparation and coordination with regulatory agencies.

### **Wildlife Biologist**

Environmental Solutions and Innovations, Inc. (April 2008 - March 2010)

**Biologist** – The Conservation Fund, 2009. Interpreted and analyzed data collected during AnaBat studies completed across the eastern range of the

Indiana bat in nine states.

**Team Leader** – Consol Pennsylvania Coal Company, Enlow Beltline, Slurry Injection Boreholes, and 15I Powerline and Airshaft, 2009. Completed Indiana bat habitat and mist net surveys in Greene and Washington counties, Pennsylvania. Responsibilities included mist netting, bat handling and morphometric processing, bat identification and implementation of White Nose Syndrome protocols.

**Biologist** – Consol Pennsylvania Coal Company, Bailey Mine, 2009. Participated in all aspects of ongoing Indiana bat monitoring telemetry studies to investigate effects of an overland conveyor belt on the federally endangered Indiana bat in Greene County, Pennsylvania. Principal author for project report.

**Team Leader** – Tennessee Gas Pipeline Company 300 Line: 2009. Completed Indiana bat habitat and mist net surveys in Potter, Tioga, Bradford, Susquehanna, Wayne, Pike, Venango, and McKean counties, Pennsylvania. Responsibilities included mist netting, bat handling and morphometric processing, bat identification and implementation of White Nose Syndrome protocols.

**Team Leader** – AES Sparrows Point LNG, LLC and Mid-Atlantic Express, LLC, 2009. Completed endangered bat surveys along 88-mile Sparrows Point LNG Terminal and Mid-Atlantic Express Pipeline in Baltimore, Hartford, and Cecil counties, Maryland and Lancaster and Chester counties, Pennsylvania. Responsible for mist net site set up and habitat assessment, bat identification, morphometric processing and implementation of White Nose Syndrome protocols.

**Biologist** – Confidential Client, Wind Farm, 2009. Participated in a biological assessment at an 84 windmill, 250-megawatt capacity wind farm on an island in the Great Lakes in Jefferson and Oswego counties, New York. Participated in client coordination and co-authored technical report.

**Project Manager** – Chief Gathering, Poor Shot Natural Gas Pipeline, 2009. Completed Indiana bat winter habitat assessment and summer mist net survey along 10-mile natural gas pipeline right-of-way in Lycoming County, Pennsylvania. Responsible for project management, client coordination, direction of field efforts, and reporting.

**Biologist** – Consol Pennsylvania Coal Company, Bailey Mine, 2009. Principal author of a resource management plan designed to retain and/or create suitable

roosting, foraging, and/or commuting habitat for Indiana bats in a 1200 acre conservation easement in Greene County, Pennsylvania.

**Assistant Biologist** - Ohio Department of Natural Resources, 2009. Performed counts of hibernating bats in Lewisburg Mine, an abandoned limestone mine, currently distinguished as the largest Indiana bat hibernaculum in Ohio.

**Biologist** – Consol Pennsylvania Coal Company, Bailey Mine, 2009. Principal author of a vegetative management plan designed to return disturbed areas to a condition providing suitable roosting and foraging habitat for Indiana bats in Greene County, Pennsylvania.

**Field Supervisor** – American Electric Power, Dwale 69 kV Transmission Line Extension, 2008. Led field team to conduct portal searches along a proposed .4-mile transmission line right-of-way in Floyd County, Kentucky. Searched on foot for abandoned mine portals and assessed mines for potential winter bat habitat in areas within one kilometer of the line that had historically been mined.

**Field Assistant** – Equitrans, Ranger Pipeline, 2008. Assisted with portal trapping for Indiana bats along a 36-mile proposed pipeline in Martin and Floyd counties, Kentucky. Responsible for harp trap set up, bat identification, morphometric processing and implementation of White Nose Syndrome protocols.

**Team Leader** – Equitrans, Ranger Pipeline, 2008. Participated in field surveys for the endangered Indiana bat along a proposed 70-mile, natural gas pipeline in Martin and Floyd counties, Kentucky. Responsible for AnaBat site selection, data collection and analysis, mist net set up and habitat assessment, bat identification, morphometric processing and implementation of White Nose Syndrome protocols.

**Team Leader** – TW Philips, Bionol Clearfield Pipeline, 2008. Mist net survey for the endangered Indiana bats associated with a proposed 8-mile pipeline in Clearfield County, Pennsylvania. Performed reconnaissance, net set-up, habitat assessment, bat identification, morphometric processing and WNS protocol.

**Team Leader** – Pennsylvania Turnpike Commission Southern Beltway, Interstate 79 to Mon/Fayette Expressway and Interstate 79 to US Route 22, 2008. Summer mist net surveys for the endangered Indiana Bat along 25 miles of proposed roadway corridor in Allegheny and Washington counties, Pennsylvania. Responsible for mist net site set up and habitat assessment, bat identification, handling, morphometric processing and implementation of White Nose Syndrome protocols.

**Research Associate** – University of Kentucky (January 2006 - April 2008)

Research focused on the effects of prescribed burning on the ecology of Indiana bats and northern long-eared bats. Roost tree and stand characteristics were quantified and insect prey items were surveyed pre- and post-fire. The position required mist netting, radio telemetry, prescribed burning, multi-agency communication/cooperation, data management/analysis, composition of peer-reviewed publications, and supervision of technicians.

**Research Assistant** – MO Dept. of Conservation (January 2005 - December 2005)

Duties involved the establishment of vegetation plots for fire effects monitoring, which included sampling of natural communities under various stand management regimes. The position also entailed prescribed burning, fuel sampling, fire behavior sampling, wildfire suppression, data management, vehicle/equipment maintenance and operation, and supervision of technicians.

**Natural Heritage Resident** – IL Dept. of Natural Resources (January 2004 - January 2005)

Duties included surveys of both federal and state listed T & E species, pest plant control, establishment of vegetation plots for fire effects monitoring, prescribed burning, public outreach, equipment operation and maintenance, habitat management, and composing technical reports.

**Field Technician** – Eastern Illinois University (September 2003 - November 2003)

Duties included searching for and identifying beaver activity, and snare trapping, sedating, and radio-tagging beavers.

**Deer Check Station Coordinator** – IL Dept. of Natural Resources (November 2003 - December 2003)

Duties included educating workers in check station protocol, supplying materials to check stations as needed, creating schedules for workers, and summarizing data.

**Graduate Assistant** – Eastern Illinois University (August 2001 - April 2003)

Tested and developed habitat models predicting beaver densities in Midwestern rivers. Fieldwork included habitat sampling, identifying and mapping beaver activity, and supervision of technicians. Other duties included grading papers, proctoring exams, and assisting students with coursework.



**Deer Check Station Worker** – IL Dept. of Natural Resources (November 1999, 2001, '02, '04)

Followed IL DNR protocol for permit processing, age estimation, data collection and entry, and hunter education at deer check stations.

### **PROFESSIONAL AFFILIATIONS**

- Board member, KY Prescribed Fire Council (September 2013 - March 2014)
- Secretary, Forestry Graduate Student Association, Univ. of KY (Jan 2007 - Aug 2007)
- Member, Tri Beta National Biological Honors Society (1999 - 2001)