



Résumé

Jonathan Hootman

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EDUCATION

M.A. Cultural Anthropology, California Institute of Integral Studies, 2007

B. S. Wildlife Management, Ohio State University, 2001

CERTIFICATIONS AND PERMITS

- Federal collection permit: Indiana bat (*Myotis sodalis*), northern long-eared bat (*M.septentrionalis*), and gray bat (*Myotis grisescens*)
- Qualified Indiana bat surveyor, Pennsylvania Game Commission
- State permits held in West Virginia, Wisconsin, Kentucky, Ohio, Michigan, North Carolina, Iowa, and Alabama.

QUALIFICATIONS AND EXPERIENCE

Mr. Hootman is entering his 19th year as a wildlife biologist with an emphasis on endangered bat surveys. He has held a federal permit since 2004 and has participated in projects involving Indiana bats, northern myotis bats, gray bats, and many state listed bat species. These surveys have occurred in a variety of places, including surveys in West Virginia, Virginia, Pennsylvania, Ohio, Michigan, Missouri, Tennessee, New York, Maryland, New Jersey, Wisconsin, Illinois, Indiana, Arkansas, Kentucky, and South Carolina. Mr. Hootman has concentrated on land development projects, specifically wind, mine and gas pipeline development projects. Mr Hootman has also participated in many research projects involving bat migration. He is proficient in the use of mist net surveys and Global Position Systems (GPS) to investigate the presence, distribution, and habitat use of endangered species. He is also a highly skilled radio telemetry operator and has radio tagged hundreds of bats.

Mr. Hootman has been active in outdoor activities and field biology for many years. He has worked as a field biologist on a variety of projects and has worked nine years for Environmental Solutions and Innovations and has worked five years for Apogee Environmental and Archaeological. Since then he has worked as an independent contractor on a wide range of projects. Mr. Hootman's field expertise includes mist net and summer habitat surveys and assessments for endangered bats, radio telemetry, rare bird surveys, habitat assessment and delineation, navigating with GPS and topographic maps, animal handling, Padi certified scuba training, fish sampling using a "backpack shocker" and general equipment operation, including operation of 4-wheel drive and all terrain vehicles.

Mr. Hootman is proficient and experienced in the application of the following equipment and techniques as they relate to the capture and handling of bats:

- Mist nets
- Bat harp traps
- Bat roost tree identification
- Spring/autumn cave/mine (hibernacula) entrance surveys
- Winter bat count surveys
- Summer bat habitat suitability assessment
- Ultrasound detectors; including deployment and call analysis
- Radio Telemetry

SELECTED NEPA/ESA DOCUMENTS:

Lemen, C., J. White, P. Freeman, H. Otto, B. Andersen, and **J. Hootman**. 2017. Autumn Migration of *Myotis septentrionalis* in Nebraska: Documentation of Fall Activity, Migratory Timing, and Distance Using Radio-telemetry. Transactions of the Nebraska Academy of Sciences and Affiliated Societies 37 (2017), pp. 40–46.

Hootman, J. 2016. A winter habitat assessment and survey for the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened northern long-eared bat (*Myotis septentrionalis*) at a proposed federal prison in Letcher County, Kentucky. Final report submitted to the US Fish and Wildlife Service, Frankfort, KY.

Beverly, J., **J. Hootman**, K. Cowden, and W. Webb. 2012. A summer survey and winter habitat assessment for the federally endangered Indiana bat (*Myotis sodalis*) at a proposed project area near Grassy Branch, Pike County, KY (Application No. 898-0603 Am. 3). Final report submitted to the US Fish and Wildlife Service, Frankfort, KY.

Beverly, J., **J. Hootman**, K. Cowden, and W. Webb. 2012. A summer survey and winter habitat assessment for the federally endangered Indiana bat (*Myotis sodalis*) at a proposed project area near Panther Branch, Pike County, KY (Application No. 898-0712 Am. 1). Final report submitted to the US Fish and Wildlife Service, Frankfort, KY.

Beverly, J., **J. Hootman**, K. Cowden, and W. Webb. 2012. A summer survey and winter habitat assessment for the federally endangered Indiana bat (*Myotis sodalis*) at a proposed project area near Beetree Branch, Morgan County, KY (Application No. 877-0202 Am. 1). Final report submitted to the US Fish and Wildlife Service, Frankfort, KY.

Beverly, J., **J. Hootman**, K. Cowden, and W. Webb. 2012. A summer survey and winter habitat assessment for the federally endangered Indiana bat (*Myotis*

sodalis) near known maternity colony trees, Boone County, WV (Application No. S-5012-00 & S-5023-00). Final report submitted to the US Fish and Wildlife Service, Elkins, WV.

Beverly, J., **J. Hootman**, K. Cowden, and W. Webb. 2012. A summer survey and winter habitat assessment for the federally endangered Indiana bat (*Myotis sodalis*) at a proposed Crooked Run Refuse Facility, Boone County, WV (permit pending). Final report submitted to the US Fish and Wildlife Service, Elkins, WV.

Beverly, J., **J. Hootman**, W. Webb, and K. Owens. 2012. A summer survey and winter habitat assessment for the federally endangered Indiana bat (*Myotis sodalis*) near a known colony, Kanawha & Fayette Counties, WV (permit pending). Final report submitted to the US Fish and Wildlife Service, Elkins, WV.

PROJECT EXPERIENCE

Biologist/Project Manager – borealis Biological, 2018. Conducted habitat assessments, mist net surveys, and winter habitat searches and surveys for endangered Indiana bats (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) for an AEP power line improvement project in West Virginia and Kentucky. Borealis Biological was a sub-contractor for GAI.

Biologist/Project Manager – borealis Biological, 2018. Conducted mist net surveys for endangered Indiana bats (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) for a proposed MarkWest natural gas pipeline in West Virginia. Borealis Biological was a sub-contractor for Civil and Environmental Consultants (CEC).

Biologist/Project Manager – borealis Biological, 2018. Conducted point counts and nest searches for migratory birds along a proposed gas pipeline (Mountain Valley Pipeline) in Virginia and West Virginia. Borealis Biological was a sub-contractor for Environmental Solutions and Innovations (ESI).

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.

Biologist – Jackson Group, 2016. Conducted presence/absence surveys for endangered Indiana bats (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) for a wind energy project in central Michigan.

Biologist – Department of Defense, 2016. Conducted baseline bat surveys at General Mitchell International Airport, Volk Field, and Hardwood Weapons Range in Wisconsin.

Biologist – Independent Contractor, 2016. Conducted spring cave surveys for endangered Indiana bats (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) for a private landowner affected by a proposed federal prison in Letcher County Kentucky.

Biologist – University of Nebraska, 2015. Conducted a fall migration study on NLEB (*Myotis septentrionalis*) using passive radio telemetry. Bats were captured in Fontanelle Forest and telemetry towers were placed strategically throughout eastern Nebraska.

Biologist – Kentucky Bat Working Group Volunteer, 2015. Volunteered during the annual meeting at Carter Caves State Park. We conducted harp trapping at two different known hibernacula for endangered Indiana bats (*Myotis sodalis*) and threatened NLEB (*Myotis septentrionalis*). I assisted with setup, identification, and helped conduct a test for people hoping to improve their I.D. skills.

Biologist – Copperhead Consulting, 2015. “Effectiveness of Acoustic Lures For Increasing capture success of Indiana bats (*Myotis sodalis*)” Ballard Wildlife Management Area (Ballard), La Center, Kentucky. Conducted research looking at the capture difference of using an acoustic lure versus using traditional mist netting.

Biologist – Rover Pipeline, 2015. Conducted presence/absence surveys for endangered Indiana bats (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) for a natural gas pipeline across Ohio.

Biologist – Copperhead Consulting/USFWS, 2015. Conducted a spring migration project for endangered Indiana bats (*Myotis sodalis*). Assisted with erecting the harp trap, capturing and identifying bats, and affixing radio transmitters to them. Lead biologist as part of a ground crew responsible for finding roost trees during bats' migration route.

Biologist – Sunoco, 2014. Conducted presence/absence surveys for endangered Indiana bats (*Myotis sodalis*) for a natural gas pipeline across Pennsylvania.

Field Supervisor – Civil and Environmental Consultants, 2013. Supervised multiple crews on various projects throughout Ohio, West Virginia, Kentucky, and Pennsylvania while conducting presence/absence surveys for endangered Indiana bats (*Myotis sodalis*) for the Bluegrass natural gas pipeline project.

Project Supervisor – Alpha Natural Resources, Black Castle: 2012. Lead eight teams of two conducting mist netting, and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in the mountains of West Virginia.

Project Supervisor – Alpha Natural Resources, Long Branch: 2012. Lead eight teams of two conducting mist netting, radio telemetry, and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in the mountains of West Virginia.

Project Supervisor – Alpha Natural Resources, Eagle Number Two: 2012. Lead ten teams of two conducting mist netting, and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in the mountains of West Virginia.

Project Supervisor – REIC, Mayben: 2012. Lead four teams of two conducting mist netting, and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in the mountains of West Virginia.

Project Supervisor – Civil and Environmental Consulting: 2012. Lead six teams of two conducting mist netting for endangered Indiana bats (*Myotis sodalis*) in West Virginia.

Project Supervisor – Clintwood Elkhorn: 2012. Lead one team of two conducting mist netting and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in eastern Kentucky.

Project Supervisor – Roadway Unlimited: 2012. Lead two teams of two conducting mist netting and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in eastern Kentucky.

Project Supervisor – Apex Panther Branch: 2012. Lead one team of two conducting mist netting and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in eastern Kentucky.

Project Supervisor – Jackson Environmental: 2012. Lead two teams of two conducting mist netting and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in eastern Kentucky.

Field Supervisor – Mark West Gulf Port Trunk: 2012. Lead two teams of two conducting mist netting and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in eastern Ohio.

Project Supervisor – Clintwood Elkhorn: 2012. Lead two teams of two conducting mist netting and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in eastern Kentucky.

Project Supervisor – Alpha Natural Resources: 2011. Lead eight teams of two conducting mist netting, radio telemetry, and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in the mountains of West Virginia.

Project Supervisor – Various coal companies: 2011. Conducted mine portal surveys for endangered Indiana bats (*Myotis sodalis*) and Grey bats (*Myotis grisescens*).

Field Technician – Various coal companies: 2011. Conducted fish surveys using backpack electroshocking and seining techniques.

Project Supervisor – Massey Energy Company: 2010. Lead 6 teams of two conducting mist netting, radio telemetry, and mine portal searches for endangered Indiana bats (*Myotis sodalis*) in the mountains of West Virginia.

Biologist – Copperhead Consulting/USFWS, 2009. Conducted a spring migration project for endangered Indiana bats (*Myotis sodalis*). Assisted with erecting the harp trap, capturing and identifying bats, and affixing radio transmitters to them. Worked as part of a ground crew responsible for finding roost trees during bats' migration route.

Field Biologist – West Virginia: 2007-2009. Conducted a multi-year delineation of Cheat threetooth land snail habitat in the Cheat River Valley of northeastern West Virginia. This project involved the delineation and GIS mapping of critical habitat located within 1,000 acres of the Snakehill Wildlife Management and approximately 8,000 acres owned by a private timber interest.

Field Supervisor – Fort Drum, NY: 2007. Lead a crew of four, mist netting, then tracking endangered Indiana bats (*Myotis sodalis*). The bats foraging patterns were then monitored using radio-telemetry.

Field Supervisor – Union Pacific: 2006. 5-mile railroad right-of-way (ROW) netting surveys and diurnal and night time foraging telemetry conducted as a result of four endangered bat captures.

Team Leader – Allegheny National Forest Bat Survey: 2006. Conducted 55-site bat survey in Allegheny National Forest covering potentially impacted areas in Elk, Forest, McKean, and Warren counties, Pennsylvania.

Team Leader – I-66 Endangered Bat Survey: 2006. Assisted field efforts for an Indiana and gray bat survey for a proposed interstate construction project in central Kentucky. Performed reconnaissance of mist net sites and directed mist netting efforts for one research team.

Team Leader – Millenium Pipeline: 2005. Conducted mist net surveys along natural gas pipeline right-of-way.

Team Leader – Dominion Northeast Storage Project. Conducted mist net surveys along natural gas pipeline right-of-way.

Team Leader– Dominion TL-536 Line. Conducted mist net surveys along 9.5 mile natural gas pipeline right-of-way.

Team Leader – Dominion TL-453 Line. Conducted mist net surveys along 11.5 mile natural gas pipeline right-of-way.

Team Leader – Columbia Gas Line A-5 Replacement Project. Conducted mist net surveys along natural gas pipeline right-of-way.

Biologist II – Indiana Bat Surveys for Tier 2 Studies of the I-69 corridor. Conducted autumn harp trap surveys for bats at cave openings in Indiana.

Biological Technician – Newport Chemical Depot. Conducted mist net surveys and radio telemetry to locate diurnal roosts on the Newport Chemical Depot, Indiana.

Team Leader – Indiana Department of Natural Resources Habitat Conservation Plan. Conducted summer and autumn surveys and radio telemetry microhabitat studies for the endangered Indiana bat for incorporation into the IDNR’s Habitat Conservation Plan in Harrison-Crawford State Forest, Harrison and Crawford counties, Indiana.

Biological Technician – ODOT Route 33 Nelsonville Bypass. Completed spring bat survey of mine portals using bat traps, mist nets and Anabat for road improvement project.

Biologist II – Chippewa National Forest, Sensitive Bird Survey. Participated in a playback survey for rare birds on nearly 7,000 acres in Minnesota.

Team Leader – Conducted mist net surveys and summer habitat assessments for endangered bats for a 220-mile natural gas transmission line development in Virginia and West Virginia.

Field Director – Conducted mist net surveys and summer habitat assessments for endangered bats for 3 sites of 296.31 acres, 838.58 acres, and 601 acres for a coal mine development in Logan County, West Virginia.

Biologist I – Ohio Department of Transportation project BUT-747.03 at Millikin Road and State Route 747. Conducted roost tree emergence count and Anabat survey for road expansion project in Butler County, Ohio.

Field Assistant – Upper Kanawha Valley Development Corporation. Conducted Indiana bat mist net surveys and summer habitat assessments on a 231-acre tract in West Virginia.

Field Assistant – Conducted Indiana bat mist net surveys and summer habitat assessments for a highway development project in Scioto County, Ohio.

Field Assistant – Completed summer mist net survey and summer habitat assessment for US Route 68/KY 80 Lake to Canton project, Trigg County, Kentucky.

Field Assistant – Completed summer mist net survey and summer habitat assessment for KY 30 London (Jackson County), Kentucky.

Field Assistant – Completed summer presence/absence mist net survey and summer habitat assessment for the Indiana bat on Camp Dawson, West Virginia.

Field Assistant – Completed Indiana bat summer mist net survey and summer habitat assessment for KY Route 70, Kentucky.

Field Assistant – Completed endangered Indiana bat summer mist netting survey at a surface coal mining site in Pike County, Kentucky.

Field Assistant – Completed endangered Indiana bat summer mist netting survey at a surface coal mining site in Logan and Mingo counties, West Virginia.

Field Assistant – Completed summer mist net survey and summer habitat assessment for endangered Indiana bats along an 11-mile pipeline corridor in central Illinois.

Field Assistant – Conducted mist net surveys and summer habitat assessments for a commercial development in Morris County, New Jersey. This development was within 5 miles of known hibernacula for the federally endangered Indiana bat.

Field Assistant – Conducted mist net surveys and summer habitat assessments for a sub-surface coal mine development in Wise County, Virginia.