

Julie A. Hart

LinkedIn: <http://www.linkedin.com/pub/julie-hart/78/406/a20/>

EDUCATION

- Aug 2009 – Master of Science, Zoology and Physiology, Grade: 4.0 / 4.0
May 2013 University of Wyoming, Wyoming, USA
Advisor: Prof. Dr. Craig W. Benkman
Thesis: “*Are South Hills Crossbills Declining with Increasing Temperatures?*”
- Aug 1997 – Bachelor of Science, Environmental Science, Grade: 3.95 / 4.0, *summa cum laude*
May 2001 University of Vermont, Vermont, USA

WORK EXPERIENCE

- Jan 2019 – **Breeding Bird Atlas Coordinator**, *New York Natural Heritage Program, New York, USA*. Coordinate the third Breeding Bird Atlas for the state of New York. Work with a team of 13 regional coordinators to support >1500 community scientists in the collection of invaluable information on the distribution of breeding birds to be used for conservation. Project coordination duties include: organize and run meetings and events, produce and deliver educational materials, public relations management, manage two websites (WordPress and Drupal), review atlas data in R, and support fundraising efforts.
- Jul 2017 – **Database Manager**, *Map of Life, Yale University, Connecticut, USA*.
Dec 2018 Managed plant and animal observations in point and vector format in a 2 TB PostgreSQL/PostGIS database that also contained species trait information, metadata, taxonomies, and vernacular names. Worked with the public to mobilize data and consulted with developers to improve user experience and develop new features. Used Python, PostgreSQL, GitHub, and Bash on a daily basis.
- Aug 2015 – **Ecological Consultant** (Owner), *Julie Hart Consulting, Ettingen, Switzerland*.
Dec 2018 Provided services in ecology (both in the field and laboratory), conservation planning, data management and analysis, and English editing.
- Oct 2015 – **Lab Assistant**, *University of Basel, Basel, Switzerland*.
Dec 2015 Separated ants and spiders from contents of pitfall traps under a light microscope.
- Oct 2013 – **Data Analyst**, *Western EcoSystems, Inc., Wyoming, USA*.
Sep 2014 Conducted QAQC, data manipulation, database creation (MS Access), and computer programming for environmental projects. Created end-user functions based on features of the data and foreseen needs of analysts. Maintained confidentially on litigious projects. Programmed in R on a daily basis. Wrote reports and made presentations regarding data analysis.

ORNITHOLOGIST / PROJECT MANAGER / SCIENCE COMMUNICATOR

- Oct 2007 – **Conservation Biologist** (co-founder), *Vermont Center for Ecostudies, Vermont, USA*. Coordinated a regional high-elevation bird monitoring project and managed the International Bicknell's Thrush Conservation Group with partners in Canada, the US, Dominican Republic, Haiti, and others. Science communications and media relations manager. Website developer and blog author.
- Aug 2009
- Apr 2006 – **Biological Technician**, *Vermont Institute of Natural Science, Vermont, USA*. Trained and coordinated ~150 volunteers in five states to monitor montane songbirds. Provided field and technical support for conservation biology projects.
- Sept 2007
- Aug 2005 – **Wildlife Migration Technician**, *Duke Farms Foundation, New Jersey, USA*. Conducted a long-term hawk watch and coordinated volunteers.
- Oct 2005
- Jun 2005 – **Breeding Bird Atlas Field Assistant**, *Vermont Institute of Natural Science, Vermont, USA*. Observed and interpreted breeding behavior of birds for a statewide atlas project.
- Jul 2005
- Dec 2004 – **Ivory-billed Woodpecker Researcher**, *Cornell Lab of Ornithology, Arkansas, USA*. Participated in systematic surveys for the Ivory-billed Woodpecker, trained volunteers in using GPS, and supervised data entry with FoxPro and ArcView.
- May 2005
- May 2004 – **Seabird Colony Supervisor**, *National Audubon Society Seabird Restoration Program, Maine, USA*. Managed a Common and Roseate Tern colony, supervised interns, monitored growth rates and fledging success, and studied parent-chick feeding interactions.
- Aug 2004
- Feb 2004 – **Kokako Field Assistant**, *Kokako Recovery Research, New Zealand*. Assisted with a census of the endangered bird Kokako, re-sighted banded birds to determine territory boundaries, and conducted playback experiments to test pair bond strength.
- May 2004
- Dec 2001 – **Bird Conservation Specialist**, *Audubon New York, National Audubon, and Cornell Lab of Ornithology, New York, USA*. Supported major bird conservation initiatives, including the New York Important Bird Areas Program, National Audubon's WatchList, and the Partners in Flight North American Landbird Conservation Plan. Worked with partners nationally to develop conservation plans. Edited, designed, and published species checklists, brochures, and reports.
- Feb 2004
- May 2001 – **Loon Biologist**, *Loon Preservation Committee, New Hampshire, USA*. Monitored and protected Common Loons, conducted behavioral observations, collected data for long-term studies of mercury and lead toxicity, and provided public education programs on loon biology.
- Aug 2001

- Jul 2000 – **Environmental Intern**, *New Hampshire Department of Environmental Services, New Hampshire, USA*. Assisted the Senior Planner in the Commissioner’s Office in developing the 2000 State of the Environment Report for New Hampshire about the state of land, air, and water resources in the state.
- Aug 2000
- Jun 1998 – **Forest Ecosystem Research Intern**, *School of Natural Resources, University of Vermont, Vermont, USA*. Conducted an independent research project on the influence of acid rain on the leachate from lysimeters with respect to soil type, vegetation, and pH as part of continuing research on pines.
- Aug 1998

PUBLICATIONS

- J. Scarl, **J. A. Hart**, R. Dettmers, J. D. Lambert, and P. Sólymos. *In prep*. Changes in abundance of high-elevation songbirds: A ten-year study using citizen science data in the Northeastern U.S.
- Hart, J. A.** 2013. Are South Hills Crossbills declining with increasing temperatures? M.Sc. thesis, University of Wyoming, Laramie, Wyoming.
- Hart, J. A.**, and C. Rimmer. 2012. White-winged Warbler (*Xenoligea montana*), Neotropical Birds Online (T. S. Schulenberg, Editor). Ithaca: Cornell Lab of Ornithology; retrieved from Neotropical Birds Online:
http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=581356
- Hart, J. A.**, C. Soberanes-González, C. Rodríguez-Flores, and M. C. Arizmendi. 2011. Ruddy Ground-Dove (*Columbina talpacoti*), Neotropical Birds Online (T. S. Schulenberg, Editor). Ithaca: Cornell Lab of Ornithology; retrieved from Neotropical Birds Online:
http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=174101
- IBTCG. 2010. A conservation action plan for Bicknell’s Thrush (*Catharus bicknelli*). **J. A. Hart**, C. C. Rimmer, R. Dettmers, R. M. Whittam, E. A. McKinnon, and K. P. McFarland, Eds. International Bicknell’s Thrush Conservation Group. Online at: www.bicknellsthrush.org
- Hart, J. A.** 2010. Hispaniolan Crossbill (*Loxia megaplaga*), Neotropical Birds Online (T. S. Schulenberg, Editor). Ithaca: Cornell Lab of Ornithology; retrieved from Neotropical Birds Online: http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=686796
- Hart, J. A.**, and J. Daniel Lambert. 2008. Mountain Birdwatch: Protocol and Standard Operating Procedures for Monitoring High-elevation Landbirds in the Northern Appalachian and Laurentian Regions. Northeast Coordinated Bird Monitoring. 62 pp.

ORAL & POSTER PRESENTATIONS

- 2020 “Global Conservation and the New York Breeding Bird Atlas with a focus on Indian River Lakes,” invited presentation, Indian River Lakes Conservancy, virtual (oral)
- 2020 “The Joys of Atlasing,” invited presentation, Kelly Adirondack Center, virtual (oral)

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- 2020 “Finding Early Nesters,” New York State Ornithological Assoc., Long Lake, NY (oral)
- 2019 “Global Conservation and the New York Breeding Bird Atlas,” invited presentation, Broome County Naturalists’ Club, Binghamton, New York (oral)
- 2019 “New York Breeding Bird Atlas III,” invited presentation, New York State Ornithological Association, Kingston, New York (oral)
- 2019 “The Third Breeding Bird Atlas in New York,” invited presentation, Audubon New York, Saratoga, New York (oral)
- 2015 “Changes in abundance of high-elevation songbirds: A ten-year study using citizen science data in the Northeastern U.S.” Julie Hart, Judith Scarl, Randy Deters, Dan Lambert, & Peter Sólymos, British Ecological Society, Edinburgh, UK. (oral)
- 2013 “Are South Hills Crossbills declining because of increasing temperatures?”, thesis defense, University of Wyoming, Laramie, Wyoming (oral)
- 2011 “eBird: Where birding meets science!”, invited presentation, Laramie Audubon Society, Laramie, Wyoming (oral)
- 2010 “In search of Diablotín: one of the world’s rarest birds and its unlikely stronghold in Haiti,” invited presentation, Laramie Audubon Society, Laramie, Wyoming (oral)
- 2010 “Mountain Birdwatch 2.0: Launching a Revised, Expanded Monitoring Program,” Judith Scarl, Dan Lambert, and Julie Hart, “Power of Partnerships” Bird Conservation Conference in the Northeast, Plymouth, Massachusetts (poster)
- 2010 “Experiences in non-profit bird conservation,” invited presentation, University of Wyoming student chapter of The Wildlife Society, Laramie, Wyoming (oral)
- 2010 “Climate change, premature seed fall, and the decline of crossbills,” Great Basin & Mojave Desert Climate Symposium, Las Vegas, Nevada (poster)
- 2009 “Bicknell’s Thrush: New England’s montane specialist,” invited presentation, Laramie Audubon Society, Laramie, Wyoming (oral)
- 2009 “What does maple chocolate ice cream have to do with Bicknell’s Thrush conservation?” University of Wyoming brown bag series, Laramie, Wyoming (oral)
- 2009 “Birds and Butterflies of the Alpine: Pipits, Arctics, and Fritillaries on Mount Washington,” 6th Northeast Alpine Stewardship Gathering, Lake Placid, New York (oral)
- 2008 “Mountain Birdwatch Phase 2: Monitoring high-elevation birds in the Atlantic Northern Forest,” Northeast Coordinated Bird Monitoring and Conservation Workshop, Cape May, New Jersey (oral)
- 2008 “Bicknell’s Thrush: New York’s montane specialist,” invited presentation, Hudson-Mohawk Bird Club in Colonie, New York (oral)
- 2008 “Bicknell’s Thrush: New Hampshire’s montane specialist,” invited presentation, Margret and H.A. Rey Center, Waterville Valley, New Hampshire (oral)
- 2007 “Bicknell’s Thrush: New York’s montane specialist,” invited presentation, Capital District Audubon Society, Colonie, New York (oral)

- 2007 “Bicknell’s Thrush: Connecting Vermont to the rest of the hemisphere,” Vermont Institute of Natural Science, Weston, Vermont (oral)
- 2006 “Bicknell’s Thrush: New York’s montane specialist,” feature presenter, fall council meeting of Audubon New York, Saranac Lake, New York (oral)
- 2006 “Mountain Birdwatch: High-elevation bird monitoring,” Maine Mountain Conference, Saddleback, Maine (oral)

GRANTS & FELLOWSHIPS

- 2011 American Ornithologists’ Union (AOU) Research Award, **\$2265**
“Climate Change, Premature Seed Fall, and the Decline of Crossbills”
- 2010 Wyoming Geographic Information Science Center (WyGIS) Geospatial Information and Technology Association (GITA) graduate scholarship, **\$500**
- 2010 U.S. Environmental Protection Agency (EPA) Science to Achieve Results (STAR) Fellowship, **\$100,000^[1]_{SEP}**
“Towards a Mechanistic Understanding of Climate Change Impacts on a Specialized Terrestrial System”
- 2010 Program in Ecology Travel Award for Great Basin & Mojave Desert Climate Symposium, University of Wyoming, **\$500**
- 2008 Environment Canada, Canadian Wildlife Service, **\$8000**
“Production of a Bicknell’s Thrush Global Breeding Distribution Model Based on Potential Habitat”
- 2008 American Bird Conservancy, Survey Design and Implementation Fund, **\$3900**
“Review and Piloting of Standard Operating Procedures for Coordinated Mountain Bird Monitoring”
- 2007 American Bird Conservancy, Survey Design and Implementation Fund, **\$4200**
“Lead Implementation of Coordinated Mountain Bird Monitoring in the Northeast”
- 2003 AmeriCorps Education Award, National Service Trust, **\$4725**
- 2002 AmeriCorps Education Award, National Service Trust, **\$4725**

CONTINUING EDUCATION

- 21-21 Jul 2018 **Open Standards for the Practice of Conservation**, *North American Congress for Conservation Biology*. A two-day workshop on implementing the Open Standards through adaptive management, project design, and monitoring.
- 26 Aug 2016 **Grasshoppers – Good Indicators for Dry Meadows**, *Pro Natura & ornithoptera.ch*. An introduction to the most important grasshopper species in dry fields and meadows in Switzerland, field survey and identification methods, and discussion of grasshoppers as bioindicators.
- May 2016 – **Introduction to Dragonflies**, *ZVS/BirdLife Zürich*.
Sep 2016 Species diversity, taxonomy, biology, habitats, and field identification of the 48 most common dragonfly species in the Swiss Midlands.

- Jan 2016 – **Statistical Learning**, *Stanford Online*, Trevor Hastie & Rob Tibshirani
Apr 2016 Linear regression, classification, resampling methods, linear model selection and regularization, nonlinear models, tree-based methods, support vector machines, unsupervised learning.
- 8-9 Aug 2012 **Structured Decision Making**, *University of Wyoming*
Introduction to an organized decision-making approach widely used in the US to resolve environmental issues. The process uses an integrated assessment of risks, uncertainties, and tradeoffs to weigh alternative actions and can be adapted to multi-party decisions.
- 17 Jul 2012 **Wyoming Pollinator Conservation**, *Xerces Society*
Identification of native bees, bee biology, discussion of pollinator-friendly farming practices, how to attract native pollinators, best management practices.
- 25-27 Mar 2006 **Endangered Species Advocacy Training**, *National Audubon Society*
Trained in lobbying techniques, in-depth education on the Endangered Species Act, and preparation for visiting state representatives and senators. Culminated in meeting and lobbying with Vermont state representative and senators.

COMMUNICATIONS EXPERIENCE

- Editor, *Atlas Insider: the newsletter of the NY Breeding Bird Atlas III*, 2019-current
Author, Bird Atlas articles for *New York Birders*, 2019-current
Web manager, NY Breeding Bird Atlas, <<https://ebird.org/atlasny>>, 2019-current
Web designer, Laramie Audubon Society, <laramieaudubon.blogspot.com>, 2011-2015
Editor and graphic designer, *Field Notes*, Vermont Center for Ecostudies newsletter, 2007-2009
Web designer, Vermont Center for Ecostudies, <www.vtecostudies.org>, 2007-2009
Author, Birding articles for a syndicated column in the Burlington Free Press, 2007-2008
Graphic designer, Partners in Flight North American Landbird Conservation Plan, 2004
Graphic designer, *Birdscope*, Cornell Lab of Ornithology, 2003
Graphic designer, publications for the Cornell Lab of Ornithology, 2003
Compiler and designer, bird checklists for Important Bird Areas of New York State, 2002-2003

PROFESSIONAL SERVICE

- Member, Society for Conservation Biology, 2009-2013, 2015-2017, 2020
Volunteer, Audubon Christmas Bird Count, 2002-2014, 2019-current
Volunteer, Project Feederwatch, 2019-current
Member, Hudson-Mohawk Bird Club, Albany, New York, 2019-current
Volunteer, Albany Pine Bush, bird banding, 2019
Volunteer, NYS Department of Environmental Conservation, bird banding, 2019
Member and Publicity Chair, New Haven Bird Club, 2018
Volunteer, Connecticut Breeding Bird Atlas, Connecticut, 2018
Volunteer, Audubon Connecticut, bird banding, 2017-current
Member, New Haven Bird Club, Connecticut, 2017-current
Volunteer, Vogelwarte, bird ringing at Col de Bretolet, Subigerberg, and Ulmethöchi,

Switzerland, 2015-2017

Volunteer, ORNIS, bird ringing in Petite Camargue and Alsace, France
Volunteer, Hopp Hase (hare surveys), Ettingen, Switzerland, 2016
Volunteer, Amphibian migration, Ettingen, Switzerland, 2016-2017
Member, Nature Club, Ettingen, Switzerland, 2015-2017
Member, BirdLife Switzerland, Switzerland, 2015-2017
Member, British Ecological Society, 2015-2017
Reviewer, Journal of Caribbean Ornithology, 2013
Volunteer, bird banding, Fauna Forever, Peruvian Amazon, 2013
Volunteer, MAPS bird banding station, Laramie, Wyoming, 2012-2013
President, Program in Ecology student organization, University of Wyoming, 2010-2011
Member, Cooper Ornithological Society, 2010-2013
Member and Secretary, Laramie Audubon Society, Wyoming, 2009-2014
Member, American Ornithologists Union, 2009-2013^[L]_[SEP]
Member, Zoology & Physiology Graduate Advisory Board, University of Wyoming, 2009-2011
Member, Vermont Bird Records Committee, 2008-2009
Volunteer, bird banding, Robert Ricklefs and Steve Latta, St. Vincent and the Grenadines, 2008
Member, International Rusty Blackbird Technical Working Group, 2007-2009
Member, International Bicknell's Thrush Conservation Group, 2007-current
Volunteer, New York Winter Waterfowl Count, Cayuga Lake Loon Watch, and Lake Champlain
Lake Watch, 2002-2005
Member, Cayuga Bird Club and Cornell Birding Club, 2002-2004
Volunteer, Braddock Bay Bird Banding Laboratory, Fall 2003
Member, President and Outreach Volunteer, UVM chapter of The Wildlife Society, 1998-2001

HONORS RECEIVED

Summa Cum Laude, University of Wyoming, 2013
Phi Kappa Phi membership, 2011
The Wildlife Society, Wyoming Chapter Graduate Student Award, 2010 (**\$1000**)
EPA EPSCoR Fellowship, University of Wyoming, Fall 2009-Spring 2010 (**\$19,600**)
Honorary Two-Year Membership to Cooper Ornithological Society, 2010-2011
Summa Cum Laude, University of Vermont, 2001
Holcomb Natural Resources Prize, University of Vermont, 2001
Environmental Sciences Award, University of Vermont, 2001
McIntosh Scholarship Award (for Environmental Sciences), University of Vermont, 2000 (**\$500**)
Dean's Book Award for Environmental Sciences, University of Vermont, 2000
Golden Key International Honor Society junior scholarship recipient, 1999
Mortar Board Sophomore Scholarship Award, 1999 (**\$1000**)
Dean's List, University of Vermont, all 8 semesters
Student Academic Recognition (STAR), University of Vermont, Spring 1999-Fall 2001
Vermont Scholar, University of Vermont, 1997-2001 (**full tuition, room and board**)

COMPETENCIES

Ornithology	<p>Bird capture with mist nets and box traps Banding/ringing (5000+ birds processed) Sampling of blood, feathers, and toenails Collection of morphometric measurements Managing a banding/ringing station Re-sighting color-banded individuals Nest searching, territory mapping, and population censuses Behavioral observation and feeding studies Sound recording and playback experiments</p>
International Bird Banding Experience	<p>Dominican Republic, France, Haiti, New Zealand, Peru, St. Vincent and the Grenadines, Switzerland, United States</p>
Other Field Skills	<p>Habitat measurements (prism, densiometer, point-transect method, hypsometer, clinometer, tree corer) Butterfly capture and identification Pollock transects Wildlife camera trapping Natural history interpretation and education for all ages Small mammal trapping GPS navigation Motorboat use and maintenance Hiking trail construction</p>
Program Management	<p>Data management Managing multiple projects at once Report writing Fundraising (through grant writing and donor cultivation) Publicity and outreach Strategic planning and budgeting Cultivating outside partnerships Organizing and running meetings and workshops Meeting deadlines</p>
Statistics	<p>Regression (linear, polynomial, multiple linear, binomial, multinomial, K-nearest neighbors, local/loess, linear/quadratic discriminant analysis) GLMs, GAMs, Splines (linear, cubic, natural, smoothing) Survival analysis, detection probability, abundance estimation AIC model comparison and maximum likelihood Variable selection, Subset selection Resampling (CV, K-fold CV, LOOCV, validation set), Bootstrap Shrinkage/regularization methods (ridge regression, lasso) Dimension reduction methods (PCA, PLS)</p>

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Regression and classification trees (bagging, boosting, RF)
Support vector machines
Unsupervised learning (PCA, clustering)
Neural networks/deep learning

Information Technology

Proficient with ArcGIS and QGIS
Intermediate to advanced programming in R, Rmarkdown
Beginner programming in PostgreSQL/PostGIS, Python, Bash
Proficient with Microsoft Word, Excel, PowerPoint, and Access
Relational database design and management
Familiar with programs DISTANCE, MARK, and UCARE
Graphic design programs Adobe Photoshop, Illustrator,
Dreamweaver, and InDesign
Basic html and CSS programming for design and maintenance of
websites and blogs

Languages

English (mother tongue)
Spanish (intermediate)
German (intermediate, B2 level in Common European Framework
of Reference for Languages)