

# Jonathan R. B. Fisher

## Employment

**Senior Conservation Scientist**, The Nature Conservancy, Arlington, VA. June 2012 – Current

- Manage projects up to \$460,000 as principal investigator, from proposal writing to completion.
- Lead & conduct research: sustainable agriculture, measures, remote sensing, social science, etc.
- Work with corporations to identify and implement opportunities for improving sustainability.
- Develop strategic relationships with universities, including mentoring several postdoc research fellows.
- Internal strategy development, scientific review, and theory of change work.
- Communicate about conservation science via [blogs](#), talks, and video to diverse audiences.

**Data Management Specialist**, The Nature Conservancy, Arlington, VA. August 2005 – June 2012

- Conducted spatial analysis and modeling for a wide variety of scientific projects.
- Designed enterprise data integration platforms and processes to meet conservation needs.
- Managed global conservation data in multiple formats (shp, enterprise, and personal geodatabases).
- Worked with developers to design, create, test, deploy, and manage new conservation web applications.
- Analyzed and reported on measures information to determine progress towards conservation goals.

**Research Associate**, Aquatic ecology lab, University of Illinois, Urbana-Champaign, IL. August 2001 – July 2005

- Part-time August 2001 – May 2003; full time May 2003 – July 2005.
- Coordinated/managed multi-agency teams for field work at airports and natural areas (DFW, JFK, YVR).
- Built GIS products and tools; trained wildlife managers, administrators, and researchers on their use.
- Integrated, improved, and analyzed large databases of wildlife occurrences and airplane strikes.
- Developed new 3D extensions for ArcView software to work with custom bird radar hardware.

## Education

**M.S. in Environmental Engineering in Civil Engineering (aquatic biology/ecology option)** May 2003  
University of Illinois at Urbana-Champaign. Cumulative GPA: 3.86/4.0.

**B.S. in Natural Resources and Environmental Sciences; B.S. in Forestry**, May 2001  
Summa Cum Laude. University of Illinois at Urbana-Champaign. Coursework included summer field studies in forestry, physics minor, and concentration in ecology. Cumulative GPA: 3.92/4.0.

## Peer-Reviewed Publications: <http://orcid.org/0000-0001-5094-9730>

- **Fisher, J. R. B.** and Kareiva, P. (In Press, 2019). Using environmental metrics to promote sustainability and resilience in agriculture. In Gardner et al. (Eds), *Agricultural Resilience: Perspectives from Ecology and Economics*. Cambridge University Press. Manuscript accepted for publication.
- Kroeger, T., Klemz, C., Boucher, T., **Fisher, J. R. B.**, Acosta, E., Cavassani, A. T., ..., Dacol, K. (2019). Returns on investment in watershed conservation: Application of a best practices analytical framework to the Rio Camboriú Water Producer program, Santa Catarina, Brazil. *Science of The Total Environment* 657: 1368-1381. <https://doi.org/10.1016/j.scitotenv.2018.12.116>
- Masuda, Y. J., Liu, Y., Reddy, S. M. W., Frank, K.A., Burford, K., **Fisher, J. R. B.**, Montambault, J. (2018). Innovation diffusion within large environmental NGOs through informal network agents. *Nature Sustainability* 1(4), 190-197. <https://doi.org/10.1038/s41893-018-0045-9>
- **Fisher, J. R. B.**, Acosta, E. A., Dennedy-Frank, P. J., Kroeger, T., Boucher, T. M. (2018). Impact of satellite imagery spatial resolution on land use classification accuracy and modeled water quality. *Remote Sensing in Ecology and Conservation* 4(2), 137-149.
- **Fisher, J. R. B.**, Montambault, J., Burford, K. P., Gopalakrishna, T., Masuda, Y. J., Reddy, S. M. W., ... Salcedo, A. I. (2018). Knowledge diffusion within a large conservation organization and beyond. *PLoS ONE*, 13(3), 1–24. <https://doi.org/10.1371/journal.pone.0193716>

- **Fisher, J. R. B.** (2017). Global agricultural expansion – the sky isn't falling (yet). In Kareiva, P., Silliman, B, and Marvier, M. (Eds), *Effective Conservation Science: Data not Dogma*. Oxford University Press, Oxford, UK, pages 73-79. <https://global.oup.com/academic/product/effective-conservation-science-9780198808985?cc=se&lang=en&>
- Ayana, E. K., **Fisher, J. R. B.**, Hamel, P., Boucher, T. M. (2017). Identification of ditches and furrows using remote sensing: application to sediment modelling in the Tana watershed, Kenya. *International Journal of Remote Sensing* 38(16), 4611-4630.
- Ayana, E. K., Ceccato, P., **Fisher, J. R. B.**, & DeFries, R. (2016). Examining the relationship between environmental factors and conflict in pastoralist areas of East Africa. *Science of The Total Environment*, 557, 601-611.
- Reddy, S. M., Montambault, J., Masuda, Y. J., Gneezy, A., Keenan, E., Butler, W., **Fisher, J. R. B.** and Asah, S. T., (2016). Advancing Conservation by Understanding and Influencing Human Behavior. *Conservation Letters*.
- Kroeger, T., Escobedo, F. J., Hernandez, J. L., Varela, S., Delphin, S., **Fisher, J. R. B.**, & Waldron, J. (2014). Reforestation as a novel abatement and compliance measure for ground-level ozone. *Proceedings of the National Academy of Sciences*, 111(40), E4204-E4213.
- **Fisher, J. R. B.**, & Dills, B. (2012). Do private conservation activities match science-based conservation priorities? *PLoS ONE* 7(9): e46429
- McDonald, R. I., Forman, R. T., Kareiva, P., Neugarten, R., Salzer, D., & **Fisher, J.** (2009). Urban effects, distance, and protected areas in an urbanizing world. *Landscape and Urban Planning*, 93(1), 63-75.

### **Additional Publications**

- The Nature Conservancy. (2018). *Everyday Sustainability Guide: seven good-for-our-planet steps that are easy to take*. Report available at [https://support.nature.org/site/SPageNavigator/supporter/green\\_guide.html](https://support.nature.org/site/SPageNavigator/supporter/green_guide.html)
- The Nature Conservancy. (2016). *reThink Soil: A Roadmap for U.S. Soil Health*. Report available at <http://nature.org/soil>.
- The Nature Conservancy. (2016). *U.S. Beef Supply Chain: Opportunities in Fresh water, Wildlife Habitat, and Greenhouse Gas Reduction*. Report available at <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/sustainability-and-the-u-s--beef-supply-chain/>.
- **Fisher, J. R. B.**, Boucher, T. M., Attwood, S. K., & Kareiva, P. (2013). How Do We Know an Agricultural System is Sustainable? <http://fish.freeshell.org/publications/Fisher2013-HowDoWeKnowAnAgriculturalSystemsSustainable.pdf> (*went through external peer review, although not at a journal*)
- Herricks, E. E., **Fisher, J. R.**, Markow, J. S., & Antonik, P. (2005). *A Report of Test Results of the 94 GHz Bird Detection Radar (BIRDAR)™ at DFW Airport*. WAVEBAND CORP IRVINE CA.
- Herricks, E., **Fisher, J. R. B.**, Kuehner, C., Hovan, M. J. (2003). *Application of GIS Technologies to Wildlife Management at DFW Airport*. 2003 Bird Strike Committee Proceedings.
- **Fisher, J. R. B.** (2003). *Evaluation of avian hazards to aircraft at Dallas / Fort Worth International Airport*. <http://hdl.handle.net/2142/96213> (*master's thesis*)
- Dwyer, J., Marsinko, A., & **Fisher, J.** (1999). Trends in participation rates for wildlife-associated outdoor recreation activities by gender and race/ethnicity. In *Proceedings of the 1998 Northeastern Recreation Research Symposium* (Gen. Tech. Rep. NE-255. pp. 213-218). Radnor, PA: USDA Forest Service, Northeastern Research Station.

### **Grants**

Funded projects as Principal Investigator:

- “Finding common ground: Bringing together ecosystems services, agricultural productivity, and smallholder livelihoods in landscape planning” (\$253,925 grant from CIAT, part of a larger CGIAR WLE grant to multiple organizations, I brought in and managed an additional \$206,075 via in-kind support)
- “Walmart Beef Supply Chain: Opportunities in Fresh water, Wildlife Habitat, and Greenhouse Gas Reduction.” (\$75,000 grant from Walmart)

## **Videos & Audio Recordings**

- “Scaling sustainable agriculture, Walmart style” October 2017
  - TED-style talk, The Nature Conservancy’s Science Impact Project meeting, [https://www.youtube.com/watch?v=EPDBKj\\_fSo](https://www.youtube.com/watch?v=EPDBKj_fSo)
  - Also delivered at the April 2018 March for Science in Washington, DC.
- “Wildlife habitat: dangerous or protective for our food supply?” April 2017
  - Presentation at the DC March for Science – The Nature Conservancy’s tent, <https://www.youtube.com/watch?v=OdOG4f3C-ag>
- Interviews at the DC March for Science April 2017
  - 3-minute spot on The Weather Channel about TNC’s work on soil and agriculture <https://drive.google.com/file/d/0B9Ni7xFetz80V3A0NDBvWS05Umc/view>
  - Facebook live interviews with The Nature Conservancy were not recorded
- “NGO Perspectives on Animal Protein” February 2017
  - Video, Cargill Protein group. Video for internal Cargill use only.
- “The Business of Giving Visits The Nature Conservancy” February 2017
  - Radio interview. <https://denverfrederick.wordpress.com/2017/02/20/the-business-of-giving-visits-the-office-of-the-nature-conservancy/>
- “The Local Tomato” January 2016
  - Video, The Nature Conservancy’s Nature Works Everywhere Program. <https://www.natureworkseverywhere.org/#resources/535ddfe5c6435b17dba226b1>
- “The Industrial Tomato” September 2015
  - Video, The Nature Conservancy’s Nature Works Everywhere Program. <https://www.natureworkseverywhere.org/#resources/535ddfe5c6435b17dba226b1>
- “Has Ecoregional Planning Impacted Land Acquisition at TNC?” November 2012
  - Presentation, The Nature Conservancy’s Science Fest, Arlington, VA.
  - Video available at <http://www.conservationgateway.org/Pages/scifest-fisher.aspx>
- Media coverage of my research on wildlife-airplane bird strikes September 2004
  - News spots including me on KDFW 9/23/04 and WFAA 9/24/04, two additional reports on the work but not including me on KTVT 9/23/04 and KXAS 9/24/04. Available upon request.

## **Additional Selected Presentations / Panel Discussions**

- “Everyday sustainability guide – how can you best ‘green your life’?” June 2018
  - Presentation, Q&A, and discussion, The Nature Conservancy’s Arlington office
- “Agriculture at The Nature Conservancy” February 2017
  - Interactive brown bag presentation and discussion, The Nature Conservancy’s Durham office.
  - The audience voted on which topic they wanted to hear more about partway through the presentation.
- “The Future of Science at TNC” September 2016
  - Presentation to The Nature Conservancy’s Office of the President
- “Pick the right data for the job: lessons from using drones and satellite data for water funds” June 2016
  - Presentation, Esri user conference, San Diego, CA
- “The State of Science at TNC” February 2016
  - Plenary presentation (and subsequent panel discussion), The Nature Conservancy’s Central U.S. conference, Austin, TX
- “Drones: what you need to know” February 2016
  - Presentation, The Nature Conservancy’s Central U.S. conference, Austin, TX
- “Collaboration with Cornell University” February 2015
  - Presentation, The Nature Conservancy’s Science Council / Board of Director Members, Austin, TX

- “Agriculture, habitat and food security: Science frontiers and opportunities” June 2014
  - Presentation, The Nature Conservancy’s Science Council / Board of Director Members, Washington, DC
- “Ecosystem Services in Corporate Sustainability” March 2014
  - Plenary panel discussion, Natural Capital Project Summit, Palo Alto, CA
- “Driving Sustainability Through the Private Sector” November 2013
  - Panel discussion, DC Net Impact, Washington, DC.
- “Sustainable Agriculture Science at The Nature Conservancy” October 2013
  - Presentation, The Nature Conservancy’s Volunteer Leadership Summit, Washington, DC.
- “Do Private Conservation Activities Match Science-based Conservation Priorities?” October 2013
  - Presentation, Society for Conservation Biology Conference, Oakland, CA.
- “Data conversion for web mapping” July 2011
  - Presentation, Society for Conservation GIS Conference, Big Bear Lake, CA.
- Spatial Data Publishing Workshops May & October 2010
  - Designed and presented most material over 4-day workshop, Boston, MA

### **Media Publications / Science Communications Products**

- *Each month I write a blog post summarizing useful science articles I’ve read each month. You can see the latest at <http://sciencejon.blogspot.com/search/label/monthlyscienc roundup>*
- “Share the good news: a paper on improving “knowledge diffusion”” March 2018
  - Blog post, <http://sciencejon.blogspot.com/2018/03/share-good-news-paper-on-improving.html>
- “Scaling Sustainable Agriculture” January 2018
  - Blog post, Cool Green Science. <https://blog.nature.org/science/2018/01/25/scaling-sustainable-agriculture/> and accompanying video, <https://www.youtube.com/watch?v=EPDBKj fSo>
- “How much data is enough? Investigating how spatial data resolution impacts conservation decision making” August 2017
  - Blog post, Remote Sensing in Ecology and Conservation blog. <https://rsecjournalblog.wordpress.com/2017/08/25/how-much-data-is-enough-investigating-how-spatial-data-resolution-impacts-conservation-decision-making/>
- “Camboriú Conservation Field Test: How Much Data is Enough?” August 2017
  - Blog post, Cool Green Science. <https://blog.nature.org/science/2017/08/24/camboriu-data-for-water-funds/>
- “The Nature Conservancy’s Massive New Science Article Database” February 2016
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2016/02/01/looking-for-nature-conservancy-science-try-this/>
- “Are Unsustainable Agriculture Practices Contributing to ALS and Alzheimer's?” June 2015
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2015/06/are-unsustainable-agriculture-practices.html>
- “Horses Doing Math: On the Quality of Scientific Studies” February 2015
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2015/02/12/horses-doing-math-clever-hans-lessons-conservation-science/>
- “Improving Nearshore Bathymetric Surveys Using Satellite Images” January 2015
  - Blog post (2<sup>nd</sup> author), Lake Scientist. <http://www.lakescientist.com/research-summary-improving-nearshore-bathymetric-surveys-using-satellite-images/>
- “Reforestation to Reduce Ozone Without Costing Businesses Extra Money” September 2014
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2014/09/reforestation-to-reduce-ozone-without.html>
- “Do the Rumble-Rump with Peacock Spiders” June 2014
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2014/06/23/do-the-rumble-rump-with-peacock-spiders/>
- “Global Agriculture Trends: Are We Actually Using Less Land?” June 2014

- Blog post, Cool Green Science. <http://blog.nature.org/science/2014/06/18/global-agriculture-land-sustainability-deforestation-foodsecurity/>
- “Weird Nature: Is “Ugly” Produce the Next Big Thing at the Farmers’ Market?” September 2013
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2013/09/20/ugly-produce/>
- “Citizen Science: Survey Katydid in Your Neighborhood” September 2013
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2013/09/08/citizen-science-survey-katydid-in-your-neighborhood/>
- “Quickly Mapping a Spreadsheet with Addresses” August 2013
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2013/08/quickly-mapping-spreadsheet-with.html>
- “Disrupting Bacterial “Communication”: A New Idea for Sustainable Agriculture” July 2013
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2013/07/16/disrupting-bacterial-communication-a-new-idea-for-sustainable-agriculture/>
- “Using Data Thief to rebuild misleading figures” April 2013
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2013/04/using-data-thief-to-rebuild-misleading.html>
  - Blog post (abridged), Cool Green Science. <http://blog.nature.org/science/2013/05/08/go-deep-using-data-thief-to-rebuild-misleading-figures/>
- “Making a Crowdsourced Map” March 2013
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2013/03/making-crowdsourced-map.html>
- “Evolution of Nerve Cells: Progress Towards an Unsolved Mystery” February 2013
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2013/02/evolution-of-nerve-cells-progress.html>
- “Everyday Nature: How I Came To Love House Centipedes” February 2013
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2013/02/08/everyday-nature-how-i-came-to-love-house-centipedes/>
- “Reveling in Urban Ecology” January 2013
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2013/01/30/citizen-science-reveling-in-urban-ecology/>
- “Where Does Your Water Come From?” October 2012
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2012/10/where-does-your-water-come-from.html>
- “The Quickest, Easiest Way to Save Water” September 2012
  - Blog post, Care2. <http://www.care2.com/greenliving/the-quickest-easiest-way-to-save-water.html>
- “Nature’s Copycats: Butterflies, Hornets and Orangutans” August 2012
  - Blog post, Conservancy Talk. <http://blog.nature.org/conservancy/2012/08/30/natures-copycats-butterflies-hornets-and-orangutans/>
- “How Flying Undermines Your Green Lifestyle” July 2012
  - Blog post, Care2. <http://www.care2.com/greenliving/how-flying-undermines-your-green-lifestyle.html>
- “Tips for More Eco-Friendly Clothing” May 2012
  - Blog post, Care2. <http://www.care2.com/greenliving/the-search-for-eco-friendly-clothing.html>
- “Tips to Make Your Office More Bike-friendly” April 2012
  - Blog post, Care2. <http://www.care2.com/greenliving/tips-to-make-your-office-more-bike-friendly.html>
- “Going Solar: Tips for Your Home” January 2012
  - Blog post, Care2. <http://www.care2.com/greenliving/going-solar-tips-for-your-home.html>
- “How Green Is Compostable Packaging?” November 2011
  - Blog post, Care2. <http://www.care2.com/greenliving/how-green-is-compostable-packaging.html>