

# Jonathan R. B. Fisher

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## Employment

**Conservation Science Officer / Senior Officer**, The Pew Charitable Trusts, Washington, DC. March 2019 – present

- Conduct strategic explorations of potential new areas of work, including scientific analysis.
- Provide scientific expertise to inform Pew campaigns on terrestrial, freshwater, and spatial science issues.
- Design and manage research in collaboration with Pew staff and external researchers.
- Coach teams on strategic planning, including producing and refining theories of change.
- Promoted experimentation, learning, and psychological safety via interactive sessions

**Senior Conservation Scientist**, The Nature Conservancy, Arlington, VA. June 2012 – March 2019

- Managed staff and projects up to \$460,000 as principal investigator, from proposal writing to completion.
- Led & conducted research: sustainable agriculture, measures, remote sensing, social science, etc.
- Worked with corporations to identify and implement opportunities for improving sustainability.
- Developed strategic relationships with universities, including mentoring several postdoc research fellows.
- Communicated about conservation science via [blogs](#), talks, and [video](#) to diverse audiences.
- Developed and refined strategies and theories of change, including scientific review of evidence.

**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.
- Designed and implemented activity and outcome measures (at global to local scales).

**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.

**Prior jobs:** Teaching assistant for Forestry field studies (University of Illinois, summer 2001), Lab assistant for DeLucia ecophysiology lab (University of Illinois, fall 1997 – spring 2001), Research assistant (North Central Research Station of the U.S. Forest Service, 1996-1999)

## Education

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

**B.S. in Natural Resources and Environmental Sciences; B.S. in Forestry**, May 2001  
University of Illinois at Urbana-Champaign. Coursework included summer field studies in forestry, physics minor, and concentration in ecology. Summa cum laude (bronze tablet scholar).

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

- James, R., Ariunbaatar, J., Bresnahan, M., Carlos-Grotjahn, C., **Fisher, J. R. B.**, Gibbs, B., Hausheer, J. E., Nakozoete, C., Nomura, S., Possingham, H., & Lyons, K. (2022). [Gender and conservation science: Men continue to out-publish women at the world's largest environmental conservation non-profit organization](#). Conservation Science and Practice, January, 1–9. <https://doi.org/10.1111/csp2.12748> [BLOG](#)

- Vijay, V., **Fisher, J. R. B.**, & Armsworth, P. R. (2022). [Co-benefits for terrestrial biodiversity and ecosystem services available from contrasting land protection policies in the contiguous United States](https://doi.org/10.1111/conl.12907). Conservation Letters, February, 1–9. <https://doi.org/10.1111/conl.12907>. [BLOG](#)
- **Fisher, J.R.B.**, Wood, S.A., Bradford, M.A., & Kelsey, T.R. (2020). [Improving your impact: how to practice science that influences environmental policy and management](https://doi.org/10.1111/csp2.210). Conservation Science and Practice, e0210. <https://doi.org/10.1111/csp2.210>.
  - [This overview web page](#) for this paper has links to [a short overview](#), [science brief](#), [short interview](#), [long interview](#), and [video](#).
- Masuda, Y.J., **Fisher, J.R.B.**, Zhang, W., Castilla, C., Boucher, T.M., Blundo-Canto, G. (2020). A respondent-driven method for mapping small agricultural plots using tablets and high-resolution imagery (submitted version of manuscript, researchgate has the published version). Journal of International Development. <https://doi.org/10.1002/jid.3475> [BLOG](#)
- Hamel, P., Bremer, L.L., Ponette-González, A.G., Acosta, E., **Fisher, J.R.B.**, Steele, B., Targa Cavassani, A., Klemz, C., Blainski, E., Brauman, K.A. (2020). [The value of hydrologic information for watershed management programs: The case of Camboriú, Brazil](#). Science of The Total Environment. [BLOG](#)
- Bradford, M.A., Carey, C.J., Atwood, L., Bossio, D., Fenichel, E.P., Gennet, S., Fargione, J., **Fisher, J.R.B.**, Fuller, E., Kane, D.A., Lehmann, J., Oldfield, E.E., Ordway, E.M., Rudek, J., Sanderman, J., Wood, S.A. (2019). [Soil carbon science for policy and practice](#). Nature Sustainability, 2, 1070-1072. [BLOG](#)
- Reddy, S.W., Torphy, K., Liu, Y., Chen, T., Masuda, Y.J., **Fisher, J.R.B.**, Galey, S., Burford, K., Frank, K.A., Montambault, J.R. (2019). [How Different Forms of Social Capital Created Through Project Team Assignments Influence Employee Adoption of Sustainability Practices](#). Organization and Environment. [BLOG](#)
- **Fisher, J. R. B.** and Kareiva, P. (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. [BLOG](#)
- 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.
- 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. [BLOG](#)
- **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. [BLOG](#)
- **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. [BLOG](#)
- **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. [BLOG](#)
- 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. [BLOG](#)
- Reddy, S. M., Montambault, J., Masuda, Y. J., Gneezy, A., Keenan, E., Butler, W., **Fisher, J. R. B.** and Asah, S. T., (2017). [Advancing Conservation by Understanding and Influencing Human Behavior](#). Conservation Letters, 10(2), 248-256.
- 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.

- 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. [BLOG](#)
- **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)<sup>™</sup> 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*)

### **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 as 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)

Participant in working groups:

- “Developing targets to manage soil organic matter for environment and people” (\$198,230 grant from the Science for Nature and People Partnership (SNAPP))

### **Selected Trainings**

- Certified End-of-life Specialist Training Program Mar 2020
- Conservation coach training Jan 2018
  - Completed week-long Conservation Coaches Network training and practice as a coach for the Open Standards for the Practice of Conservation, <https://www.ccnetwork.com/conservation-coaches/>
- Engaging across differences (three-day workshop on diversity, equity, and inclusion) Sep 2017
- Systems thinking (Peter Senge’s three-day workshop on systems thinking) Sep 2016
- Science communication and storytelling (Alan Alda Center four-day workshop) Feb 2014

### **Videos & Audio Recordings**

- *Note that several of these were produced as part of the Science Impact Project, a 2.5 year program providing training on science communications and other aspects of planning to improve research impact.*

- “SciComm: raising our voice for science in public policy,” Mar 2020
  - Interview as part of a short documentary about the 2017 March for Science in DC, <https://vimeo.com/383209723>
- “Scaling sustainable agriculture, Walmart-style” Oct 2017
  - TED-style talk, The Nature Conservancy’s Science Impact Project meeting, [https://www.youtube.com/watch?v=EPDBKJj\\_fSo](https://www.youtube.com/watch?v=EPDBKJj_fSo)
  - Also delivered at the April 2018 March for Science in Washington, DC.
- “Wildlife habitat: dangerous or protective for our food supply?” Apr 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 Apr 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” Feb 2017
  - Video, Cargill Protein group. Video for internal Cargill use only.
- “The business of giving visits The Nature Conservancy” Feb 2017
  - Radio interview. <https://denverfrederick.wordpress.com/2017/02/20/the-business-of-giving-visits-the-office-of-the-nature-conservancy/>
- “The local tomato” Jan 2016
  - Video, The Nature Conservancy’s Nature Works Everywhere Program. <https://vimeo.com/148116105>
- “The industrial tomato” Sep 2015
  - Video, The Nature Conservancy’s Nature Works Everywhere Program. <https://vimeo.com/138258792>
- “Has ecoregional planning impacted land acquisition at TNC?” Nov 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 Sep 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.

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

- “How to do science so it influences marine policy and management: A panel discussion” Jan 2021
  - Panel discussion with over 500 attendees: <https://www.openchannels.org/webinars/2021/how-do-science-so-it-influences-marine-policy-and-management-panel-discussion>
- “Learning from failure in marine research and conservation” Nov 2020
  - Interactive session at Pew Marine Fellows Meeting
- “Never waste a good failure: what you can do to fail intelligently and why it matters” Jul 2020
  - Interactive session at North American Congress for Conservation Biology
- “Guidelines for doing science that influences policy and management” Dec 2019
  - Webinar w/ discussion, over 450 people joined live, almost 1,000 signed up to receive the recording: <https://www.openchannels.org/webinars/2019/improving-your-impact-guidelines-doing-science-influences-policy-and-management>
- “Everyday sustainability guide – how can you best ‘green your life?’” Jun 2018
  - Presentation, Q&A, and discussion, The Nature Conservancy’s Arlington office
- “Agriculture at The Nature Conservancy” Feb 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” Sep 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” Jun 2016
  - Presentation, Esri user conference, San Diego, CA
- “The state of science at TNC” Feb 2016
  - Plenary presentation (and subsequent panel discussion), The Nature Conservancy’s Central U.S. conference, Austin, TX
- “Drones: what you need to know” Feb 2016
  - Presentation, The Nature Conservancy’s Central U.S. conference, Austin, TX
- “Collaboration with Cornell University” Feb 2015
  - Presentation, The Nature Conservancy’s Science Council / Board of Director Members, Austin, TX
- “Agriculture, habitat and food security: science frontiers and opportunities” Jun 2014
  - Presentation, The Nature Conservancy’s Science Council / Board of Director Members, Washington, DC
- “Ecosystem services in corporate sustainability” Mar 2014
  - Plenary panel discussion, Natural Capital Project Summit, Palo Alto, CA
- “Driving sustainability through the private sector” Nov 2013
  - Panel discussion, DC Net Impact, Washington, DC.
- “Sustainable agriculture science at The Nature Conservancy” Oct 2013
  - Presentation, The Nature Conservancy’s Volunteer Leadership Summit, Washington, DC.
- “Do private conservation activities match science-based conservation priorities?” Oct 2013
  - Presentation, Society for Conservation Biology Conference, Oakland, CA.
- “Data conversion for web mapping” Jul 2011
  - Presentation, Society for Conservation GIS Conference, Big Bear Lake, CA.
- Spatial data publishing workshops May & Oct 2010
  - Designed and presented most material over 4-day workshops in Boston, MA and Arlington, VA

### **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> Other short blogs are not included here.*
- “Never waste a good failure” Mar 2021
  - Blog post, part 1 (barriers to learning) <https://medium.com/wcs-conservation-solutions/never-waste-a-good-failure-barriers-to-learning-part-1-ad464a20fe86>
  - Blog post, part 2 (opportunities for learning) <https://medium.com/wcs-conservation-solutions/never-waste-a-good-failure-opportunities-for-learning-part-ii-e9ad87bf6ac0>
- “Leveraging local knowledge to map and link agricultural plots to farmer practices” May 2020
  - Blog post, <https://www.ifpri.org/blog/leveraging-local-knowledge-map-and-link-agricultural-plots-farmer-practices>
- “Tips for being a more effective scientist” Feb 2019
  - Blog post, <http://sciencejon.blogspot.com/2019/02/tips-for-being-more-effective-scientist.html>
- “How many trees make a forest?” Feb 2019
  - Blog post, <https://news.mongabay.com/2019/02/how-many-trees-make-a-forest-commentary/>
- “Men stepping up to be stronger allies” May 2018
  - Blog post, <http://sciencejon.blogspot.com/2018/05/men-stepping-up-to-be-stronger-allies.html>
- “Tips for helping people to find your journal articles (and be able to read them)” Mar 2018
  - Blog post, <http://sciencejon.blogspot.com/2018/03/tips-for-helping-people-to-find-your.html>
- “Share the good news: a paper on improving “knowledge diffusion”” Mar 2018
  - Blog post, <http://sciencejon.blogspot.com/2018/03/share-good-news-paper-on-improving.html>
- “Scaling sustainable agriculture” Jan 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](https://www.youtube.com/watch?v=EPDBKj_fSo)
- “How much data is enough? Investigating how spatial data resolution impacts conservation decision making” Aug 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?” Aug 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” Feb 2016
  - Blog post, Cool Green Science. No longer online, but the searchable database I built is at <https://www.conservationgateway.org/ConservationPlanning/ToolsData/sitepages/article-list.aspx>
- “Are unsustainable agriculture practices contributing to ALS and Alzheimer's?” Jun 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” Feb 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” Jan 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” Sep 2014
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2014/09/reforestation-to-reduce-ozone-without.html>
- “Do the rumble-rump with peacock spiders” Jun 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?” Jun 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?” Sep 2013
  - Blog post, Cool Green Science. <http://blog.nature.org/science/2013/09/20/ugly-produce/>
- “Citizen science: survey katydids in your neighborhood” Sep 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” Aug 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” Jul 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” Apr 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” Mar 2013
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2013/03/making-crowdsourced-map.html>
- “Evolution of nerve cells: progress towards an unsolved mystery” Feb 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” Feb 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” Jan 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?” Oct 2012
  - Blog post, Science Jon. <http://sciencejon.blogspot.com/2012/10/where-does-your-water-come-from.html>