Jacob Usinowicz

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Professional appointments and education

2019-Present. *Postdoctoral Fellow:* Biodiversity Research Center, University of British Columbia, Mentor: Mary O'Connor

2014 – 2019. Postdoctoral Researcher: Institute of Integrative Biology, ETH Zurich. Mentor: Jonathan Levine

2009 – 2014. Ph.D. Integrative Biology. University of Wisconsin, Madison. PhD. program in Zoology. Mentor: Anthony R. Ives

1999-2003. B.A. Human Ecology, focus in Physics and Biology. College of the Atlantic.

Peer-reviewed publications

9. Usinowicz, J. and J.M. Levine. 2012. Climate-driven range shifts reduce persistence of competitors in a perennial plant community. Global Change Biology.

8. Usinowicz, J. and J.M. Levine. 2018. Species persistence under climate change: a geographic scale coexistence problem. Ecology Letters. 21:1589–1603.

7. Alexander, J. M., J. M. Diez, **J. Usinowicz**, and S. P. Hart. 2018. Species' Distributions as a Coexistence Problem: A Response to Godsoe et al. Trends in ecology & evolution 33:144–145.

6. Usinowicz, J., C. Chang-Yang, Y. Chen, J. S. Clark, C. Fletcher, N. C. Garwood, Z. Hao, J. Johnstone, Y. Lin, M. R. Metz, T. Masaki, T. Nakashizuka, I. Sun, R. Valencia, Y. Wang, J. K. Zimmerman, A. R. Ives, S. J. Wright. 2017. Temporal coexistence mechanisms contribute to the latitudinal gradient in forest diversity. Nature. 550:105–108.

5. Hart, S. P., **J. Usinowicz**, and J. M. Levine. 2017. The spatial scales of species coexistence. Nature Ecology & Evolution 1:1066.

4. Usinowicz, J., J. Qiu, and A. Kamarainen. 2016. Flashiness and Flooding of Two Lakes in the Upper Midwest During a Century of Urbanization and Climate Change. Ecosystems:1–15.

3. Usinowicz, J. 2015. Limited Dispersal Drives Clustering and Reduces Coexistence by the Storage Effect. The American Naturalist 186:634–648

2. S. K. Carter, E. S. Childress, K. J. Cromwell, C. Gratton, A. O. Hasley, B. M. Kraemer, **J. Usinowicz** and Others. 2015. The rise of novelty in ecosystems. Ecological Applications 25:2051–2068.

1. Usinowicz, J., S. J. Wright, and A. R. Ives. 2012. Coexistence in tropical forests through asynchronous variation in annual seed production. Ecology 93:2073–2084.

Manuscripts in prep

Usinowicz, Jacob; and O'Connor, Mary I. In prep. The fitness value of ecological information.

Calvo, Lara; and **Usinowicz, Jacob**. In prep. How a warming climate and competition jointly impact habitat suitability for co-occurring *Daphnia* species.

Chapters, In review or in prep

2.Usinowicz, Jacob; Wright, S. Joseph. Variable seedling recruitment promotes forest diversity. Invited for the 100th anniversary of BCI, Smithsonian Contributions to Ecology. In Prep. Eds. Herre, Allen; Muller-Landau, Helene; Page, Rachel; Wcislo, Bill; and Wright, Joseph.

1. O'Connor, Mary I.; Bernhardt, Joanna R.; Stark, Keila; **Usinowicz, Jacob**; Whalen, Matthew. Experimental evidence for how biodiversity affects ecosystem function. In review. In: The ecological and societal consequences of biodiversity loss. Eds. Michel Loreau, Andy Hector and Forest Isbell

Non-academic publications

Usinowicz, J., Childress, E. , Christel, S., Cromwell, K., Hasley, A., Kraemer, B., Latzka, A., Mikulyuk, A., Ramirez Reyes, C., Raynor, J., Stenglein, J., Vander Zanden, J., Walsh, J. 2013. Interim Progress of the Yahara Watershed Adaptive Management Pilot Project.

Grants and fellowships

$95,000. NSF IGERT Fellowship: Novel Ecosystems. 2012-2014
$60,000. Teaching Fellow. Zoology Department. University of Wisconsin, Madison. 2009-2012
$3,000. Arts and Sciences Distinguished Teaching Fellow. University of Wisconsin, Madison. 2012
$600 John Jefferson Davis Travel Award. UW, Madison. 2012
$600 John Jefferson Davis Travel Award. UW, Madison. 2010
$3,000 Bundt Research Award. UW, Madison. 2010
$3,000 Bundt Research Award. UW, Madison. 2009
$1600. Kathryn Davis International Travel Scholarship. 2003
$12,000. NSF REU Fellow at the Santa Fe Institute. 2002
$40,000. Geneva S. Hull Scholarship for Environmental Studies. 1999-2003

Scientific presentations

Invited Presentations
2020. Connecting Theory and Conservation. Conservation Discussion Group. University of British Columbia.
2020. Range shifts as a regional-scale coexistence problem. Jake Alexander Lab, ETH, Zurich.

2018. Species persistence in a changing environment: a geographic scale coexistence problem. Ecological Society of America Annual Conference.
2018. Gordon Research Conference: Unifying ecology across scales. Session chair.
2014. Asynchronous reproduction and coexistence in forest communities. Center for Tropical Forest Studies (CTFS) annual workshop, Front Royal, Virginia.
2012. Annual variability and the storage effect in a tropical forest. Smithsonian Tropical Research Institute, Barro Colorad Island, Panama

Conference Presentations
2017. Disentangling the impacts of changing competitive interactions during climate-driven range shifts. Ecological Society of America
2015. Reproductive asynchrony and the storage effect contribute to the latitudinal gradient in forest diversity. Ecological Society of America,
2013. Limited dispersal drives clustering and reduces coexistence by the storage effect in a spatially explicit lottery model. Ecological Society of America,
2010. Coexistence in tropical forests mediated by asynchronous variation in annual seed production. Ecological Society of America

Posters
2018. Gordon Research Conference: Unifying ecology across scales. Temporal coexistence mechanisms contribute to the latitudinal gradient in forest diversity.

Academic service

Professional services.
2019 Ad hoc proposal review. NSF DEB, Population & Community Ecology Program.

Reviewer services.
2020. Ecology Letters, Ecological Monographs, Global Change Biology.
2019. Ecology Letters, Oikos, Theoretical Population Biology, Ecology
2018. Ecology Letters, Ecology, The American Naturalist, Global Ecology and Biology, Biology Letters, Plant Biology.
2017. Global Change Biology
2016. Functional Ecology, Ecology
2015. Ecology, Annals of Botany, Methods in Ecology and Evolution
2014. The American Naturalist
2013. PNAS, Ecological Monographs

Teaching and mentoring

Teaching awards
2012. L&S Teaching Fellowship. College of Letters and Science. UW - Madison

Teaching appointments
2015-2019 Co-instructor “Advanced Topics in Plant Population and Community Ecology” (M.Sc. level), ETH Zürich.

2012. Instructor “L&S Teaching Fellows - Tips for Teachers” series
2008- 2012. Co-Instructor, Zoology 102, Introductory Zoology Lab. UW-Madison
2009. Spring.Teaching Assistant, Zoology/Botany 260, Introduction to Ecology. UW-Madison

Mentoring
2020. Lara Calvo, Bamfield Marine Sciences Center. Directed studies project.
2018. Vasco J. Lepori. M.Sc. Thesis reader: Competition drives species-specific phenological shifts in an annual grassland
2017. Pascal Schweizer, M.Sc. Term Paper, ETH Zürich.
2016. Sebastian Schneider, M.Sc. Term Paper, ETH Zürich.
2013. Todd Olson, B.Sc. in Physics, Quantitative Biology, UW-Madison