Personal Information

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Citizenship Italy, USA.

Languages English (native); French (CEFL B2).

Education

2013 **Ph.D.**, *University of Wyoming*, Larmie, Ecology.
Dissertation: *The evolution of landscape structure: Eco-evolutionary dynamics drive spatial variation in serotiny in lodgepole pine*

2005 **M.S.**, *University of California*, Irvine, Biological Sciences.
Thesis: *Shrub-herb interactions in California's coastal sage scrub: Factors affecting establishment of a native understory and historical invasion by annual grasses*

2001 **B.S.**, *California Polytechnic State University*, San Luis Obispo, Ecology and Systematic Biology, *cum laude*.
Thesis: *Reproductive success of the tricolored blackbird (*Agelaius tricolor*) at Wind Wolves Preserve*

Professional Appointments

2020–pres **Universitäts Assistant (postdoc)**, *Institute for Ecology, University of Innsbruck*, Innsbruck, Austria.

2018–2019 **Postdoctoral Researcher**, *IGB, Leibniz Institute for Freshwater Ecology and Inland Fisheries*, Berlin, Germany.

2015–2018 **Postdoctoral Researcher**, *CNRS, Laboratoire d'Écologie Alpine*, Grenoble, France.

2013–2015 **Postdoctoral Fellow**, *Département de Biologie, Université du Québec*, Rimouski, Québec, Canada.

2009–2013 **Graduate Research Assistant**, *Department of Zoology & Physiology, University of Wyoming*, Laramie, WY, USA.

2008–2009 **Lead Biologist**, *Western Riverside County MSHCP Biological Monitoring Program*, Riverside, CA, USA.

2006–2008 **Avian Program Lead**, *Western Riverside County MSHCP Biological Monitoring Program*, Riverside, CA, USA.

2005–2006 **Field Ecologist**, *Irvine Ranch Conservancy*, Irvine, CA, USA.

Publications

15. Copenhaver-Parry, P. E., Carroll, C. J., Martin, P. H. & **Talluto**, **M. V.** (2020) Multi-scale integration of tree recruitment and range dynamics in a changing climate. *Global Ecology and Biogeography*, **29**, 102–116. URL: https://doi.org/10.1111/geb.13012.

14. Münkemüller, T., Gallien, L., Pollock, L. J., Barros, C., Carboni, M., Chalmandrier, L., Mazel, F., Mokany, K., Roquet, C., Smyčka, J., **Talluto**, **M. V.** & Thuiller, W. (2020) Dos and don'ts when inferring assembly rules from diversity patterns. *Global Ecology and Biogeography*, **29**, 1212–1229. URL: https://onlinelibrary.wiley.com/doi/abs/10.1111/geb.13098.

13. Carboni, M., Guéguen, M., Barros, C., Georges, D., Boulangeat, I., Douzet, R., Dullinger, S., Klonner, G., Kleunen, M. van, Essl, F., Bossdorf, O., Haeuser, E., **Talluto**, **M. V.**, Moser, D., Block, S., Conti, L., Dullinger, I., Münkemüller, T. & Thuiller, W. (2018) Simulating plant invasion dynamics in mountain ecosystems under global change scenarios. *Global Change Biology*, **24**, e289–e302. URL: https://onlinelibrary.wiley.com/doi/abs/10.1111/gcb.13879.

12. Haeuser, E., Dawson, W., Thuiller, W., Dullinger, S., Block, S., Bossdorf, O., Carboni, M., Conti, L., Dullinger, I., Essl, F., Klonner, G., Moser, D., Münkemüller, T., Parepa, M., **Talluto**, **M. V.**, Kreft, H., Pergl, J., Pyšek, P., Weigelt, P., Winter, M., Hermy, M., Van der Veken, S., Roquet, C. & Kleunen, M. van (2018) European ornamental garden flora as an invasion debt under climate change. *Journal of Applied Ecology*, **55**, 2386–2395. URL: http://doi.wiley.com/10.1111/1365-2664.13197.

11. Kleunen, M. van, Essl, F., Pergl, J., Brundu, G., Carboni, M., Dullinger, S., Early, R., González-Moreno, P., Groom, Q. J., Hulme, P. E., Kueffer, C., Kühn, I., Máguas, C., Maurel, N., Novoa, A., Parepa, M., Pyšek, P., Seebens, H., Tanner, R., Touza, J., Verbrugge, L., Weber, E., Dawson, W., Kreft, H., Weigelt, P., Winter, M., Klonner, G., **Talluto**, **M. V.** & Dehnen-Schmutz, K. (2018) The changing role of ornamental horticulture in alien plant invasions. *Biological Reviews*, **93**, 1421–1437. URL: http://doi.wiley.com/10.1111/brv.12402.

10. **Talluto**, **M. V.**, Mokany, K., Pollock, L. J. & Thuiller, W. (2018) Multifaceted biodiversity modelling at macroecological scales using Gaussian processes. *Diversity and Distributions*, **24**, 1492–1502. URL: http://doi.wiley.com/10.1111/ddi.12781.

9. **Talluto**, **M. V.**, Boulangeat, I., Vissault, S., Thuiller, W. & Gravel, D. (2017) Extinction debt and colonization credit delay range shifts of eastern North American trees. *Nature Ecology and Evolution*, **1**, 0182. URL: https://doi.org/10.1038/s41559-017-0182.

8. Benkman, C. W., Jech, S. & **Talluto**, **M. V.** (2016) From the ground up: biotic and abiotic features that set the course from genes to ecosystems. *Ecology and evolution*, **6**, 7032–7038. URL: https://onlinelibrary.wiley.com/doi/abs/10.1002/ece3.2468.

7. **Talluto**, **M. V.**, Boulangeat, I., Ameztegui, A., Aubin, I., Berteaux, D., Butler, A., Doyon, F., Drever, C. R., Fortin, M.-J., Franceschini, T., Liénard, J., McKenney, D., Solarik, K. A., Strigul, N., Thuiller, W. & Gravel, D. (2016) Cross-scale integration of knowledge for predicting species ranges: a metamodelling framework. *Global Ecology and Biogeography*, **25**, 238–249. URL: https://onlinelibrary.wiley.com/doi/abs/10.1111/geb.12395.

6. **Talluto**, **M. V.** & Benkman, C. W. (2014) Conflicting selection from fire and seed predation drives fine-scaled phenotypic variation in a widespread North American conifer. *Proceedings of the National Academy of Sciences of the United States of America*, **111**, 9543–9548. URL: https://doi.org/10.1073/pnas.1400944111.

5. **Talluto**, **M. V.** & Benkman, C. W. (2013) Landscape-scale eco-evolutionary dynamics: selection by seed predators and fire determine a major reproductive strategy. *Ecology*, **94**, 1307–1316. URL: https://doi.org/10.1890/12-2058.1.

4. Benkman, C. W., Fetz, T. & **Talluto**, **M. V.** (2012a) Variable resource availability when resource replenishment is constant: The coupling of predators and prey. *The Auk*, **129**, 115–123. URL: https://doi.org/10.1525/auk.2011.11069.

3. Benkman, C. W., Smith, J. W., Maier, M., Hansen, L. & **Talluto**, **M. V.** (2012b) Consistency And Variation In Phenotypic Selection Exerted By A Community Of Seed Predators. *Evolution*, **67**, 157–169. URL: https://doi.org/10.1111/j.1558-5646.2012.01736.x.

2. **Talluto**, **M. V.** & Suding, K. N. (2008) Historical change in coastal sage scrub in southern California, USA in relation to fire frequency and air pollution. *Landscape Ecology*, **23**, 803–815. URL: https://link.springer.com/article/10.1007/s10980-008-9238-3.

1. **Talluto**, **M. V.**, Suding, K. N. & Bowler, P. A. (2006) Factors affecting understory establishment in coastal sage scrub restoration. *Madroño*, **53**, 55–59. URL: https://doi.org/10.3120/0024-9637(2006)53[55:FAUEIC]2.0.CO;2.

Selected Manuscripts in Preparation

2. Pollock, L. J., Mokany, K., Rosauer, D., Talluto, M. V. & Thuiller, W. (in revision) Embracing the complexity of biodiversity in conservation. *Trends in Ecology and Evolution*.

1. Vissault, S., Talluto, M. V., Boulangeat, I. & Gravel, D. (in revision) Slow demography constrains the North- Eastern temperate forest expansion under climate change. *Journal of Biogeography*.

Grants

3. Talluto, M. V. (2018) Processing of terrigenous organic carbon in partly intermittent river networks under future hydrological scenarios. **€1370**.

2. Benkman, C. W. & Talluto, M. V. (2011) The role of red squirrels (*Tamiasciurus hudsonicus*) in shaping spatial patterns of serotiny in lodgepole pine (*Pinus contorta*) forests. **US$5000**.

1. Talluto, M. V. (2011) Spatial heterogeneity in selection on serotiny from red squirrel (*Tamiasciurus hudsonicus*) predation on lodgepole pine (*Pinus contorta*). **US$1500**.

Awards

2015 **Excellence Award**, *Quebec Centre for Biodiversity Science*, (CA$2,000).
2014 **Excellence Award**, *Quebec Centre for Biodiversity Science*, (CA$2,500).
2013 **Dissertation Augmentation**, *University of Wyoming Graduate School*, (US$1,400).
2012 **George E. Menkins Memorial Scholarship**, *University of Wyoming*, (US$30,000).
2010 **L. Floyd Clarke Greater Yellowstone Scholarship**, *University of Wyoming*, (US$2,000).
2009 **Program in Ecology Fellowship**, *University of Wyoming*, (US$19,500).
2005 **Brython Davis Scholarship**, *University of California, Irvine*, (US$6,600).
2001 **Kevin M. Wright Memorial Scholarship**, *California Polytechnic State University*, (US$300).
1998 **Helen Sandercock Scholarship**, *California Polytechnic State University*, (US$3,000).

Presentations (Selected first-author)

12. Talluto, M. V. (2019) "Macroecology, data science, and the future of environmental management". *School of Biological Sciences, Queen's University Belfast*.

11. Talluto, M. V., Fuß, T. & Singer, G. A. (2019) "Modelling ecosystem metabolism at the scale of entire river networks". *Symposium for European Freshwater Sciences*.

10. Talluto, M. V. (2017a) Climatic disequilibrium in tree species distributions in North American forests. *Department of Evolutionary Biology and Environmental Studies, University of Zürich*.

9. Talluto, M. V. (2017b) Critical transitions and lagged response to climate change in eastern North American forests. *Alpine Ecology Lab, Grenoble, France*.

8. Talluto, M. V. (2017c) Improving biodiversity models by integrating multiple information sources. *Ecological Society of America Annual Meeting*.

7. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2017) Critical transitions and lagged response to climate change in eastern North American forests. *Department of Bioscience - Ecoinformatics and Biodiversity, Aarhus University, Denmark*.

6. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2016) Local dynamics slow the response of species ranges to climate change in eastern North American forests. *French Ecological Society Annual Meeting*.

5. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2015) Local colonization-extinction dynamics gen- erate lags in the response to climate change in eastern North American forests. *American Geophysical Union Annual Fall Meeting*.

4. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2014a) A framework for cross-scale integration for predicting tree range shifts under climate change. *7th Eastern CANUSA conference in forest science*.

3. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2014b) A framework for cross-scale integration for predictive modeling of species' ranges. *Ecological Society of America Annual Meeting*.

2. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2014c) A state-transition approach to estimating the migration rate of the temperate-boreal forest transition under climate change. *Quebec Centre for Biodiversity Science Annual Symposium*.

1. Talluto, M. V., Boulangeat, I., Vissault, S. & Gravel, D. (2012) Effects of natural selection from seed predation on serotiny: The role of red squirrels in determining forest structure in lodgepole pine. *Ecological Society of America Annual Meeting*.

Mentoring

M.Sc. 2016 **Steve Vissault**, *Université du Québec à Rimouski*, (co-advised with D. Gravel).

2005 **Jocelyn Oakley**, *University of California, Irvine*, (independent study, co-advised with K. Suding).

2005 **Kimberly Kurcab**, *University of California, Irvine*, (independent study, co-advised with K. Suding).

Teaching Appointments

2018 **Instructor**, IGB, Leibniz Institute for Freshwater Ecology and Inland Fisheries, Berlin, Germany.
Courses Taught: Introductory Bayesian statistics for ecologists

2017, 2018 **Guest Instructor**, *Department of Biology*, Sherbrook University, Sherbrooke, Canada.
Courses Taught: Bayesian Statistics for Ecologists (summer school)

2012 **Instructor**, *Department of Geography*, University of Wyoming, Laramie, Wyoming, USA.
Courses Taught: Biogeography

2007 **Adjunct Professor**, *Department of Environmental Studies*, Mt. San Jacinto College, San Jacinto, California, USA.
Courses Taught: Introduction to Environmental Studies

2005–2008 **Instructor**, *Department of Ecology and Evolutionary Biology*, University of California, Irvine, California, USA.
Courses Taught: California Natural History; Experimental Biology Laboratory

2002–2005 **Teaching Assistant**, *Department of Ecology and Evolutionary Biology*, University of California, Irvine, California, USA.
Courses Taught: Experimental Biology Laboratory; Processes in Ecology and Evolution; Patterns of Diversity, Ecology, and Evolution; Way Your Body Works (Human Physiology); COSMOS: High School Summer Program for Math and Science

Service & Professional Activities

2017 **Symposium Co-organizer (with LJ Pollock and K Mokany)**, *New Approaches and Challenges for the Next Generation of Biodiversity Models*, Ecological Society of America Annual Meeting.

2012 **Judge for student presentations**, Ecological Society of America Annual Meeting.

2012 **Student webmaster**, University of Wyoming Department of Zoology & Physiology.

2012 **Student representative to faculty meetings**, University of Wyoming Department of Zoology & Physiology.

2010 **Judge**, Wyoming State High School Science Fair.

Reviewing.
Conservation Biology, Diversity and Distributions, Ecological Modelling, Ecology Letters, Ecography, Global Ecology and Biogeography, Journal of Biogeography, Journal of Ecology, Methods in Ecology and Evolution, NSF Division of Environmental Biology, PLoS One, The American Naturalist