

MATTHEW J. DUENECK

EDUCATION

- PhD, Environmental Science & Resources. Portland State University. 2014
- M.S., Forest Resources. University of Massachusetts 2005
- B.S., Resource Conservation. University of Montana 2000
- A.S., Fire Science. Southern Maine Technical College 1996

RESEARCH INTERESTS

Forest health, landscape ecology, forest management, fire ecology and behavior, simulation modeling, climate change, disturbance interactions, ecosystem resilience.

APPOINTMENTS

- *Liberal Arts Department- Professor*
2017-**Present** New England Conservatory
- *Research Associate*
2017-**Present** Harvard Forest, Harvard University
- *Post-Doctoral Fellow*
2014-2017 Harvard Forest, Harvard University
- *Fire Science Department Chair- Professor*
2005–2010 Southern Maine Community College
- *Research Technician*
2000–2002 USFS Fire Science Laboratory
- *Firefighter*
1998-99 Helena Helitack/Arrowhead Hotshots

PUBLICATIONS

- 41). Gustafson, E., B. Miranda, B. Sturtevant, and **M. J. Duveneck** . (*In review*) Overcoming conceptual hurdles to accurately represent trees as cohorts in forest landscape models. *Ecological Modeling*.
- 40). Reese, G., C. Dymond, K. Quigley, **M. J. Duveneck**, M. Russell, E. Gustafson, R. Scheller, B. Miranda, and B. Sturtevant. (*In revision*) Applying growth and yield data and models to the calibration of forest landscape models. *Canadian Journal of Forest Research*.
- 39). Herb W. R., K. Blann, L. Johnson, M. White, **M. J. Duveneck**, R. Garono, J. Jereczek. (*In review*). Projecting the impacts of climate change and forest transition on streamflow in Lake Superior tributaries. *Journal of Hydrology*.

- 38). Hof, A.R., J. Lundström, **M. J. Duveneck** (2023). Modeling the Impacts of Climate Change on Ecosystem Services in Boreal Forests. In: Girona, M.M., Morin, H., Gauthier, S., Bergeron, Y. (eds) *Boreal Forests in the Face of Climate Change*. *Advances in Global Change Research*, vol 74. Springer, Cham. https://doi.org/10.1007/978-3-031-15988-6_25.
- 37). Hassan, M. M., **M. J. Duveneck**, J. Southwork. 2023. Tracking forest cover change and fragmentation in Teknaf following a massive influx of Rohingya refugees. *Ecological Informatics*. <https://doi.org/10.1016/j.ecoinf.2022.101966>.
- 36). Liang, Y., E.J. Gustafson, H.S. He., J. Serra Diaz, **M. J. Duveneck**, J. R. Thompson. 2022. What is the role of disturbance in catalyzing spatial shifts in forest composition and tree species biomass under climate change? *Global Change Biology*. <https://doi.org/10.1111/gcb.16517>.
- 35). Lucash, M., S. Weiss, **M. J. Duveneck**, R. Scheller. 2022. Managing for red-cockaded woodpeckers is more complicated under climate change. *Journal of Wildlife Management*. <http://doi.org/10.1002/jwmg.22309>.
- 34). Mina, M. Messier C., **M. J. Duveneck**, M Fortin, N. Aquilué. 2022. Managing for the unexpected: building resilient forest landscapes to cope with global change. *Global Change Biology*. <https://doi.org/10.1111/gcb.16197>.
- 33). Sirén, A, C. Sutherland, A.Karmalkar, **M. J. Duveneck**, & T. L. Morelli. Forecasting species distributions: Correlation does not equal causation. 2022. *Diversity and Distributions*. <https://doi.org/10.1111/ddi.13480>.
- 32). Soucy, A., P.Rahimzadeh-Bajgiran, S. De Urioste-Stone,r A. Weiskittel, **M. J. Duveneck**, B. McGreavy. A Comprehensive and Spatially Explicit Regional Vulnerability Assessment of the Forest Industry to Climate Change. 2021. *Journal of Forestry*. <https://doi.org/10.1093/jofore/fvab057>.
- 31). Sotnik, G. B.A. Cassell, **M. J. Duveneck**. R.M. Scheller. A new agent-based model provides insight into deep uncertainty faced in simulated forest management. 2021. *Landscape Ecology*. 1-19. <https://doi.org/10.1007/s10980-021-01324-5>.
- 30). **Duveneck, M. J.** (co-lead author), MacLean, M. G. (co-lead author), Plisinski, J., Morreale, L. L., Laflower, D., & Thompson, J. R. (2021). Forest carbon trajectories: Consequences of alternative land-use scenarios in New England. *Global Environmental Change*, 69, 102310. <https://doi.org/10.1016/j.gloenvcha.2021.102310>.
- 29). Fer, I., Gardella A., Shiklomanov A. N., Serbin, S. P., De Kauwe M. G., Raiho A., Johnston M. R., Desai A., Viskari, T., Quaife, T., LeBauer D. S., Cowdery E. M., Kooper R., Fisher J. B., Poulter B., **Duveneck M. J.**, Hoffman, F. M., Parton W., Mantooth J., Campbell E.E., Haynes, K. D., Schaefer K., Wilcox K. R, Dietze M. C. 2020. Beyond Modeling: A Roadmap to Community Cyberinfrastructure for Ecological Data-Model Integration. *Global Change Biology*. <https://doi.org/10.1111/gcb.15409>.
- 28). Pearman-Gillman, S. B, **M. J. Duveneck**, J. D. Murdoch, and T. M. Donovan 2020. Wildlife resilience and protection in a changing New England landscape *PlosOne*. E

- 15(9): e0239525 <https://doi.org/10.1371/journal.pone.0239525>.
- 27). Schrum, P., R. Scheller, M. Lucash, and **M. J. Duveneck**. 2020. Base-Hurricane: A new extension for the Landis-II forest landscape model. *Environmental Modelling & Software*, 104833. <https://doi.org/10.1016/j.envsoft.2020.104833>.
- 26). De Jager, N. R., J. J. Rohweder, and **M. J. Duveneck**. 2020. Climate Change Is Likely to Alter Future Wolf–Moose–Forest Interactions at Isle Royale National Park, United States *Frontiers in Ecology and Evolution*. 8. <https://doi.org/10.3389/fevo.2020.543915>.
- 25). Mina, M., C. Messier, **M. J. Duveneck**, M. Fortin, and N. Aquilué. 2020. Network analysis can guide resilience-based management in forest landscapes under global change. *Ecological Applications*. 30(7), 1-18. <https://doi.org/10.1002/eap.2221>.
- 24). Thompson J., J. Plisinski, K. Fallon Lambert, **M. J. Duveneck**, L. Morreale, M. McBride, M. G. MacLean, M. Weiss, and L. Lee. 2020. Spatial Simulation of Co-Designed Land-Cover Change Scenarios in New England: Alternative Futures and Their Consequences for Conservation Priorities. *Earth's Future*. 8(7). <https://doi.org/10.1029/2019EF001348>.
- 23). Pearman-Gillman, S. B., **M. J. Duveneck**, J. D. Muroch, and T. M. Donovan. 2020. Drivers and Consequences of Alternative Landscape Futures on Wildlife Distributions in New England, USA.. *Frontiers in Ecology and Evolution*, 8. <https://doi.org/10.3389/fevo.2020.00164>.
- 22). MacLean, M., J. Holt, M. Borsuk, M. Markowski-Lindsay, B. Butler, D. B. Kittredge, **M. J. Duveneck**, D. Laflower, D. Orwig, D. Foster, and J. R. Thompson. 2020. Potential impacts of insect-induced harvests in the mixed forests of New England. *Forests*. 11(5), 498. <https://doi.org/10.3390/f11050498>.
- 21). Markowski-Lindsay, M., D. Kittredge, J. Holt, J. Thompson, D. Orwig, D. Laflower, B. Butler, M. Borsuk, **M. J. Duveneck**, and M. G. MacLean. 2020. Compounding the disturbance: Family forest owner reactions to invasive forest insects. *Ecological Economics*. 167, 106461. <https://doi.org/10.1016/j.ecolecon.2019.106461>.
- 20). **Duveneck, M. J.**, and J. R. Thompson. 2019. Social and biophysical determinants of future forest conditions in New England: Effects of a modern land-use regime. *Global Environmental Change*. 55 (2019): 115-129. <https://doi.org/10.1016/j.gloenvcha.2019.01.009>,
- 19). McKenzie, P.F., **M. J Duveneck**, L. Morreale, and J. R. Thompson. 2019. Local and global parameter sensitivity within an ecophysiological based forest landscape model. *Env. Software and Modeling*. <https://doi.org/10.1016/j.envsoft.2019.03.002>.
- 18). McBride, M. F., **M. J. Duveneck**, K. Fallon-Lambert, K.A. Theoharides, and J. R. Thompson. 2018. Perspectives of resource management professionals on the future of New England's landscape: Challenges, barriers, and opportunities. *Landscape and Urban Planning*. <https://doi.org/10.1016/j.landurbplan.2018.10.019>.
- 17). Janowiak, M. K., A. D'Amato, C. W. Swanston, L. Iverson, F. Thompson III, W. Dijk, S. Matthews, M. Peters, A. Prasad, J.S. Fraser, L.A. Brandt, P.R. Butler, S.D. Handler,

- P.D. Shannon, D. Burbank, J. Campbell, C. Cogbill, **M. J. Duveneck**, M. Emery, N. Fisichelli, J. Foster, J. Hushaw, L. Kenefic, A. Mahaffey, T.L. Morelli, N. Reo, P. Schaberg, K.R. Simmons, A. Weiskittel, S. Wilmot, D. Hollinger, E. Lane, L. Rustad, P. Templer. 2018. New England Forest ecosystem vulnerability assessment: a report from the New England Climate Change Response Framework. Gen. Tech. Rep. NRS-173. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 234 p. <https://doi.org/10.2737/nrs-gtr-173>.
- 16). Thompson, J.R., J.S. Plisinski, P. Olofsson, C.E. Holden, **M. J. Duveneck**. 2017. Forest loss in New England: A projection of recent trends. *PloS one*. 12(12). <https://doi.org/10.1371/journal.pone.0189636>.
 - 15). **Duveneck, M. J.**, J. R. Thompson. 2017. Climate change imposes phenological tradeoffs on forest net primary productivity. *Journal of Geophysical Research-Biogeosciences*. <https://doi.org/10.1002/2017JG004025>.
 - 14). Liang, Y., **M. J. Duveneck**, E. J. Gustafson, J. Serra Diaz, J. R. Thompson. 2017. How disturbance, competition and dispersal interact to prevent tree range boundaries from keeping pace with climate change. *Global Change Biology*. <https://doi.org/10.1111/gcb.13847>.
 - 13). **Duveneck, M. J.**, J. R. Thompson, E. J. Gustafson, Y. Liang, and A. M.G. de Bruijn. 2016. Recovery Dynamics and Climate Change Effects to Future New England Forests. *Landscape Ecology*. <https://doi.org/10.1007/s10980-016-0415-5>.
 - 12). Mallampalli V. R., J. Thompson, **M. J. Duveneck**, S. Meyer, A. Ligmann-Zielinska, C. G. Druschke, K. Hychka, M. A. Kenney, K. Kok, and M.E. Borsuk. 2016. Methods for Translating Narrative Scenarios into Quantitative Assessments of Land Use Change. *Environmental Modeling and Software*. 7-20. <https://doi.org/10.1016/j.envsoft.2016.04.011>.
 - 11). **Duveneck, M. J.**, and R. M. Scheller. 2015. Measuring and managing resistance and resilience under climate change in northern Great Lake forests (USA). *Landscape Ecology*. <https://doi.org/10.1007/s10980-015-0273-6>.
 - 10). **Duveneck, M. J.**, and R. M. Scheller. 2015. Climate change effects to productivity and functional diversity in northern Great Lake forests with climate suitable planting. *Ecological Applications*. 25-6. Pages 1653-1668. <https://doi.org/10.1890/14-0738.1>.
 - 9). Truitt, A., E. Granek, **M. J. Duveneck**, K. Goldsmith, M. Jordan, S. Copp, K. Yazzie. 2015. What's novel about novel ecosystems: Managing change in an ever-changing world. *Environmental Management*. Pages 1-10. <https://doi.org/10.1007/s00267-015-0465-5>.
 - 8). **Duveneck, M.J.**, Jonathan R. Thompson, and B. Tyler Wilson. 2015. Imputed Forest Composition Map for New England Screened by Species Range Boundaries. *Forest Ecology and Management*. 347-1. Pages 107-115. <https://doi.org/10.1016/j.foreco.2015.03.016>.
 - 7). **Duveneck, M. J.**, R. M. Scheller, and M. White, A. 2014. Effects of alternative forest management strategies in the face of climate change in the northern Great Lake region.

- Canadian Journal of Forest Research. 44-700-710 (2014). <https://doi.org/10.1139/cjfr-2013-0391>.
- 6). **Duveneck, M. J.**, R. M. Scheller, M. White, A. S. Handler, and C. Ravenscroft. 2014. Climate change effects to northeastern Minnesota and northern lower Michigan forests: A case for preserving diversity. *Ecosphere*. 5(2): art23. <https://doi.org/10.1890/ES13-00370.1>.
 - 5). Handler, S., **M. J. Duveneck**, L. Iverson, E. Peters, R. M. Scheller, K. R. Wythers, L. Brandt, P. Butler, M. Janowiak, C. Swanston, K. Barrett, R. Kolka, C. McQuinston, B. Palik, P. B. Reich, C. Turner, M. A. White, C. Adams, A. W. D' Amato, S. Hagell, R. Johnson, P. Larson, M. Larson, S. Matthews, R. Montgomery, S. Olson, M. Peters, A. Prasad, J. Rajala, P. D. Shannon, J. Daley, M. Davenport, M. R. Emery, D. Fehringer, C. L. Hoving, G. Johnson, L. B. Johnson, D. Neitzel, A. Rissman, C. Rittenhouse, and R. Ziel. 2014. Minnesota Forest Ecosystem Vulnerability Assessment and Synthesis: A report from the Northwoods Climate Change Response Framework. Gen. Tech. Rep. NRS-133. Newtown Square, PA; U.S. Department of Agriculture, Forest Service, Northern Research Station. 228 p. <https://doi.org/10.2737/NRS-GTR-133>.
 - 4). Handler, S., **M. J. Duveneck**, L. Iverson, E. Peters, R. M. Scheller, K. R. Wythers, L. Brandt, P. Butler, M. Janowiak, C. Swanston, A. C. Eagle, J. G. Cohen, R. Corner, P. B. Reich, T. Baker, S. Chhin, E. Clark, D. Fehringer, J. Fosgitt, J. Gries, K. R. Hall, C. Hall, R. Heyd, C. L. Hoving, I. Ibanez, D. Kuhr, S. Matthews, H. Muladore, K. Nadelhoffer, D. Neumann, M. Peters, A. Prasad, M. Sands, R. Swaty, L. Wonch, J. Daley, M. Davenport, M. R. Emery, G. Johnson, L. B. Johnson, D. Neitzel, A. Rissman, C. Rittenhouse, and R. Zeil. 2014. Michigan Forest Ecosystem Vulnerability Assessment and Synthesis: A report from the Northwoods Climate Change Response Framework. Gen. Tech. Rep. NRS-129. Newtown Square, PA; U.S. Department of Agriculture, Forest Service, Northern Research Station. 229 p. <https://doi.org/10.2737/NRS-GTR-129>.
 - 3). Skowronski, N. S., K. L. Clark, **M. J. Duveneck**, and J. Hom. 2011. Three-dimensional canopy fuel loading predicted using upward and downward sensing LiDAR systems. *Remote Sensing of Environment*. 115, 703-714. <https://doi.org/10.1016/j.rse.2010.10.012>.
 - 2). Clark, K. L, N. Skowronski, J. Hom, **M. J. Duveneck**, Y. Pan, S. Van Tuyl, J. Cole, M. Patterson and S. Maurer. 2009. Decision support tools to improve the effectiveness of hazardous fuel reduction treatments in the New Jersey pine barrens. *International Journal of Wildland Fire*. 18, 268–277. <https://doi.org/10.1071/WF08080>.
 - 1). **Duveneck, M. J.** and William A. Patterson III. 2007. Characterizing Canopy Fuels to Predict Fire Behavior in Pitch Pine Stands. *Northern Journal of Applied Forestry*. 24 (1) 2007. <https://doi.org/10.1093/njaf/24.1.65>.

REPORTS AND THESES

- **Duveneck, M. J.**, W. Xi, and R. M. Scheller. Chapter 7: Understanding Model Outputs; and

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Scheller, R. M. and **M. J. Duveneck**. Chapter 13: Simulating Forest Management with the Base Harvest Extension. In Scheller, R.M. and MS Lucash. Editors. 2014. Forecasting Forested Landscapes: An Introduction to LANDIS-II with Exercises. Self-Published. ISBN: 9781722654924.

- **Duveneck, M. J.** 2013. Managing for Resistance and Resilience of Northern Great Lakes Forests to the Effects of Climate Change. Doctoral Dissertation. Portland State University, Portland, OR. <https://doi.org/10.15760/etd.1550>.
- Williams, B. J., B. Song, J. Hom, and **M. J. Duveneck**. 2008. Wildfire Visualization Using GIS and Forest Inventory Data. In Proceedings of the 6th Southern Forestry and Natural Resources GIS Conference (2008).
- Patterson, W.A. III, D. Crary Jr. and **M. J. Duveneck**. 2008. The impossible summer burn: Techniques for fuel reduction, habitat restoration and happy locals in northeastern pine barrens. Fire Science Brief. 13 (2008).
- **Duveneck, M. J.** 2005. Characterizing Canopy Fuels as They Affect Fire Behavior in Pitch Pine. Master's Thesis. University of Massachusetts. Amherst, MA.
- Patterson, William A. III and **M. J. Duveneck**. 2004. Fire Management Plan for The Maine Army National Guard Hollis Training Site. University of Massachusetts Forestry Program.
- Patterson, W. A. III, D. Crary Jr., and **M. J. Duveneck**. 2004. Managing pitch pine to Reduce Crown Fire Potential. In Managing fuels in northeast barrens: A field tour sponsored by the Joint Fires Sciences Program for northeastern fire managers. University of Massachusetts Forestry Program.

TEACHING EXPERIENCE

New England Conservatory

- Natural Disasters & Catastrophes (Fall 2017, Fall 2020, Fall 2023)
- Energy in the 21st Century (Fall 2017, Fall 2020, Fall 2023)
- Freshman Seminar: Complexities in Repairing the Environment (Fall 2017, Fall 2018, Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023)
- Watershed Hydrology: Understanding Water in the Environment (Spring 2018, Spring 2021)
- Climate Change Adaptation (Spring 2018, Spring 2021)
- Social Dance (Spring 2018, Spring 2019, Spring 2020, Spring 2022, Spring 2023)
- Mapematics: Introduction to Geographic Information Science (Fall 2018, Spring 2020, Spring 2022, Spring 2023)
- Forest Ecology (Fall 2018, Fall 2021)
- Intro to Probability and Mathematical Modeling (Spring 2019, Fall 2021)
- Our Cosmic Origins (Spring 2019, Spring 2022)
- Sustainable Societies (Fall 2019. Fall 2022)
- Evolution of Life on the Planet (Spring 2020, Spring 2023)
- Introduction to Physical Geography (Fall 2019, Fall 2022)
- Introduction to Botany and Plant Physiology (Spring 2021)

University of Massachusetts-Amherst

- Ecology, Economy, and Future of Maple Syrup (Guest lecturer, 2016)

Northeastern University

- Architecture and Land Use (Guest lecturer, 2016)

LANDIS-II Forest Simulation Model Training

- Introduction to LANDIS-II (Instructor, 2013 Portland, OR; 2014 Harvard Forest, MA, 2021 Remote)

Portland State University

- Landscape Ecology (Guest lecturer, 2013)
- Intro Environmental Management (Guest lecturer, 2013)
- Investigating Forest Ecosystems (Teaching Assistant, 2010)
- Old Growth Forest Ecology (Teaching Assistant, 2011)

Southern Maine Community College

- Fire Service Building Construction (Fall: 2005).
- Fire Service Hydraulics (Spring: 2006, 2007, 2008).
- Service Learning (Fall: 2005, 2006; Spring: 2007).
- Wildland Fire Management (Fall: 2008, 2009; Spring: 2009, 2010).
- Wildland Fire Behavior (Spring: 2008, 2009).
- Fire Inspector (Spring: 2006, 2007, 2008, 2009, 2010).
- Fire Protection Systems (Fall: 2005, 2006, 2007, 2008, 2009).

Peninsula School, Menlo Park, California

- 7th and 8th grade (Teaching Assistant, 2000-2001)

University of Montana

- Dendrology (Teaching Assistant, 1999-2000)
- Wood Identification (Teaching Assistant, 2000)

Visiting social dance Instructor

- Pinewoods American Dance/Music Week, Plymouth, MA (2009, 2011, 2018).
- BACDS American & English Week, Mendocino, CA (2009, 2010, 2011).
- Winter Dance Week, Brasstown, NC (2007, 2008, 2009, 2010, 2012, 2013, 2014).
- Bates College Tango Club, Lewiston, ME (2007, 2008).
- Davis Elkins College/Augusta Dance Week, Elkins, WV (2007, 2008).
- Stanford University Waltz Week, Stanford, CA (2007).
- Timber Ridge Dance Week, High View, WV (2006, 2008).
- Chesapeake Dance Weekend, MD (2010, 2011, 2015).
- Music City Masquerade, TN (2012)
- New England Conservatory, MA (2014, 2015, 2019, 2021)

SERVICE AND OUTREACH

- Executive Board (2022-Present), LANDIS-II foundation.
- Academic Technology Committee (2022-present). New England Conservatory.
- Board of Directors, Nominating Committee, and Program Committee; Director. Harry F. Guggenheim Foundation. 2011-Present. Foundation sponsors scholarly research addressing problems of violence, aggression, and dominance.
- Undergraduate Curriculum Committee (2020-2022); Chair. 2021-2022. New England Conservatory.
- Advisory Board; Advisor. North Atlantic Fire Science Consortium. 2014-2019. Consortium provides link with fire science, management, and policy in the North Atlantic region.
- Search Committee Chair; Southern Maine Community College, Maine Fire Training Director. September 2009
- Search Committee Chair; Southern Maine Community College, Fire Science Professor. April 2009
- Co-organized Symposium; “Simulating Forest Dynamics Using LANDIS-II” for the International Association of Landscape Ecologist meeting in Portland, Oregon, July 2015.
- Reviewer; Ecological Economics (2017), Forest Ecology and Management (2017), Ecological Applications (2017), Canadian Journal of Forest Research (2016), Environmental Research Letters (2016), International Journal of Wildland Fire (2015), Landscape Ecology (2015, 2016, 2018), Environmental Modeling and Software (2015), Ecological Modeling (2014, 2016), Pearson Education (2006), International Journal of Remote Sensing (2019), Frontiers in Forests and Global Change (2022).
- Student Committee: Núria Aquilué Junyent (PhD, Université du Québec à Montréal 2018).

GRANTS & CONTRACTS

- **Duveneck, M. J.** 2023. Forest simulation modeling in the southern Appalachians to support a forest climate vulnerability assessment. The Nature Conservancy. \$57,000.
- Messier, C. et al. (**Duveneck, M. J.**, cooperator) (2023). Pan-Canadian NSERC Alliance. Simulating Forest Change Across Canadian Forests. CAD\$ 4,028,000.
- **Duveneck, M. J.** 2022. Second Century Stewardship. Parameterization and simulation of Acadia National Park forests, Maine. Schoodic Institute. \$20,000.
- **Duveneck, M. J.** 2018. Consulting and parameterization of forest simulation model in Fort Bragg, North Carolina. Portland State University. \$1800.

- **Duveneck, M. J.** 2018. Modeling forest change in Northeast National Parks. University of Massachusetts. \$5000.
- **Duveneck, M. J.** 2018/2019. Consulting and parameterization of forest simulation model in Quebec. Université du Québec à Montréal. \$1000.
- **Duveneck, M. J.** 2016. Consulting and development of vegetation map in Pennsylvania to initialize forest simulation model. Pennsylvania State University. \$8000
- Ayers, M. P., C.F. Aoki, K.L. Clark, R.M. Scheller, **M. J. Duveneck** (Cooperator). R. Billings. 2016-2017. Southern pine beetle range expansion: Forecasting SPB population dynamics and impacts of disturbance interactions on future forests of New York, New Jersey and New England. USDA Forest Service. Northeastern Area State & Private Forestry.
- Scheller, R. M., C. Swanston, S. Handler, M. White, **M. J. Duveneck**. (Assisted writing) 2011-2013. Scenarios for forest reserve and adaptive management under alternative climate change scenarios in the northern Great Lakes. Upper Midwest and Great Lakes Landscape Conservation Cooperative. \$111,404.
- **Duveneck, M. J.** 2010. Development of operations manual and provide training for Mobile Fire Sprinkler & Alarm Simulator. Portland, Maine Area Metro Fire Departments. \$6000.
- **Duveneck, M. J.** 2008. Characterizing canopy fuels with indirect upward looking LiDAR in Montana conifer forests. USFS Global Change Program. Northern Research Station. \$4000.
- **Duveneck, M. J.** 2007. Parameterize crown fuels in New Jersey Pine Barrens with Upward LiDAR. USFS Global Change Program. Northern Research Station. \$2000.
- **Duveneck, M. J.** 2007. SMCC Mini-Grant. Curriculum Update for “Building Construction for the Fire Service”. \$400.
- **Duveneck, M. J.** 2007. SMCC Mini-Grant. Course development for: “Wildland Fire Ecology & Behavior”. \$400.
- **Duveneck, M. J.** 2006. FARSITE modeling for New Jersey Pine Barrens. USFS Global Change Program. Northern Research Station. \$1000.
- **Duveneck, M. J.** 2006. SMCC Mini-Grant. Course development for: “Introduction to Forest Fire Management”. \$400.

AWARDS

- Portland State University; Environmental Science & Management Bushby Graduate Scholarship. Portland, OR. June 2013. \$4500.
- Portland State University; Academically-Controlled Auxiliary Activities (AAA) Student Travel Award, Portland, OR. February 2013. \$750.

- U.S. Regional Association of the International Association for Landscape Ecology; Student Travel Award. Austin, TX. April 2013. \$500.
- Portland State University; Environmental Science & Management Bushby Graduate Travel Award. Portland, OR. June 2012. \$475.
- Michigan State University-NASA; Professional Enhancement Award. Annual Symposium of the U.S. Regional Association of the International Association for Landscape Ecology. Newport, RI. April 2012. \$700.
- Portland State University; Dean's Award. Portland, OR. September 2010. \$7500.
- National Institute for Staff and Organizational Development (NISOD); Teaching Excellence Award. International Conference on teaching & Leadership Excellence. Austin, TX. May 2008.
- University of Massachusetts Department of Natural Resources Conservation; Herschel G. Abbott Award; Amherst, MA. April 21, 2004. \$700.
- University of Massachusetts Department of Natural Resources Conservation; Membership Xi Sigma Pi Forestry Honor Society; Amherst, MA. April 21, 2004.
- USFS Fire Sciences Lab; Fire/Fire Surrogate Research Burn Award. July 2002. \$500.

PRESENTATIONS (Oral and Posters)

- **Duveneck, M. J.**, M. MacLean, D. Laflower, and J. Thompson. Management response to insect outbreaks: Are the effects larger than insects themselves? (Invited Seminar). International Association of Landscape Ecologists. March 2023. Riverside, California.
- **Duveneck, M. J.** Stories from Schoodic Institute. (Invited Seminar). The Story Collider. June 2022. Schoodic Institute. Winter Harbor, Maine.
- **Duveneck, M. J.**, M. MacLean, and J. Thompson. The effect of climate, the modern land-use regime, and alternative future scenarios on forest carbon in New England, USA. (Invited Seminar). International Association of Landscape Ecologists. July 2019. Milan, Italy.
- Scheller, R.M., M.S. Lucash, **M.J. Duveneck**. Managing forests for change: Simulations suggest radical innovations in management will be necessary. (Seminar). Ecological Society of America 104th Annual Meeting. August 2019. Louisville, Kentucky.
- De Jager, N.R. **M.J. Duveneck**, and J.J. Rohweder. Interactive effects of wolf predation and climate change on moose-forest interactions at Isle Royale National Park, USA (Seminar). International Association of Landscape Ecology Meeting. April 2019. Chicago, IL.
- **Duveneck, M. J.** Crown fuel and fire modeling in pitch pine (Field tour). North Atlantic Fire Science Exchange. Montague Plains Field Trip. August 2018. Montague, MA.
- MacLean, M. G., **M. J. Duveneck**, D. Laflower, A. Chmurzynski, J. Thompson. The importance of interacting global change drivers when modeling forest disturbance in New

England (Seminar). Ecological Society of America Conference. August 2018. New Orleans, LA.

- Thompson, J., **M.J. Duveneck**, K. Fallon-Lambert, J. Plisinski, L. Morreale. Land-use regimes and the future of New England's forest carbon (Seminar). Ecological Society of America Conference. August 2018. New Orleans, LA.
- **Duveneck, M.J.** Artists are engaged by science (Seminar). Consortium for the Liberal Education of Artists Conference. April 2018. Baltimore, MD.
- **Duveneck, M.J.** Effects of the modern land-use regime on future New England forests (Seminar). Ecological Society of America Conference. August 2017. Portland, OR.
- **Duveneck, M. J.** Interactions of climate and land use in New England: Simulating alternative scenarios of future forests (Seminar). Wildfire in the Northeast Conference. December 2016. Mystic, CT.
- **Duveneck, M. J.** Future forests, climate and land use in New England (Seminar). Visionary Meeting on Understanding and Forecasting the Impact of Climate Change on Maine's Forest. November 2016. Portland, ME.
- **Duveneck, M. J.** and J. Thompson. Tradeoffs between increased gross photosynthesis and increased respiration demand under climate change: Seasonal and spatial variability in New England (Seminar). International Association of Landscape Ecology Meeting. April 2016. Asheville, NC.
- **Duveneck, M. J.**, and J. Thompson. Effects of seasonal phenological changes to future forest productivity (Invited Presentation). Harvard Forest Research Symposium. March 2016. Petersham, MA.
- Rapp, J.M., **M.J. Duveneck**, and J. R. Thompson. Expansion of the maple syrup industry in New England: projecting where the taps will be in a changing environment (Poster). Harvard Forest Research Symposium. March 2016. Petersham, MA.
- **Duveneck, M. J.**, J. Thompson, L. Morreale, and J. Plisinski. Future Effects to New England Forests: Scenarios of Harvest, Development, and Climate Change (Invited Presentation). International Association of Landscape Ecology Meeting. July 2015. Portland, OR.
- **Duveneck, M. J.** Measuring and Managing Resilience under Climate Change and Alternative Scenarios in Northern Great Lake Forests (Invited Presentation). US Forest Service NYC Urban Field Station. June 2015. Bayside, NY.
- **Duveneck, M. J.** Forest Management for Resilience under Climate Change: Case Studies of Alternative Silviculture in the Great Lakes Region (Invited Presentation). Northeastern Area Association of State Foresters Annual Meeting. Climate Change: Climate Preparedness for a Changing Forest. June 2015. Petersham, MA.
- **Duveneck, M. J.** Managing for Resilience in Multiple Dimensions under Climate Change: Informing Forest Managers in the Great Lake Region with Alternative Scenarios (Seminar). Harvard Forest Seminar Series. March 2015. Petersham, MA.

- **Duveneck, M. J.**, Jonathan R. Thompson, B. Tyler Wilson, Sofie McComb, and Luca Morreale Plot-Level Forest Composition Data at a Regional Scale (Poster). October 2014. Scenarios to Solutions Harvard Forest Research Coordination Network Planning Workshop, South Casco, ME.
- **Duveneck, M. J.** Measuring and Managing Resilience Under Climate Change in Northern Great Lake Forests (Seminar). University of Vermont. Gund Institute Seminar Series. September 2014. Burlington, VT.
- **Duveneck, M. J.** Climate Change Effects to Northern Great Lakes Region Forests: Managing for Resistance and Resilience (Webinar). April 2014. The Nature Conservancy, Field Climate Forum.
- White, M., **Duveneck, M. J.**, Scheller, R. M. How Do We Manage Forests For Climate Change? Forest Restoration and Management in Changing Climate: Implications for Lake Superior Watersheds (Seminar). January 2014. Duluth, MN.
- **Duveneck, M. J.** How Do We Manage Forests For Climate Change? Assessing Resistance and Resilience of Northern Great Lake Forests. (Seminar). Portland State University, Dissertation Defense. November 2013. Portland, OR.
- **Duveneck, M. J.** Climate Change Vulnerability Assessment and Declining Resistance and Resilience in the Northern Great Lakes Region. (Seminar). Portland State University, Forest Ecology and Management Seminar Series. October 2013. Portland, OR.
- **Duveneck, M. J.**, R. M. Scheller, and M. White. A Landscape Comparison of Potential Climate Futures in Minnesota and Michigan. (Prepared presentation for seminar). Ecological Society of America 98th Annual Meeting. August 2013. Minneapolis, MN.
- **Duveneck, M. J.** and R. M. Scheller. Climate Change in Northern Minnesota and Northern Lower Michigan Forests: Assessing the Effect of Latitude. (Seminar). International Association of Landscape Ecology Meeting. April 2013. Austin, TX.
- Falkowski, M. J., A.T. Hudak, N. L. Crookston, R. M. Scheller, **M. J. Duveneck**, L. M. Nagel, and R. E. Froese. Enhancing Tools and Geospatial Data to Support Operational Forest Management and Regional Forest Planning in the Face of Climate Change. (Poster). NASA Land Use/Land Cover Change meeting. April 2013. Rockville, MD.
- Scheller, R. M., and **M. J. Duveneck**. Future forest scenarios under climate change in Northern Lower Michigan. (Seminar). Michigan Climate Change Response Framework Workshop. September 2012. Pellston, MI.
- **Duveneck, M. J.** and R.M. Scheller. Climate Change Adaptation: Forest Management Scenarios in Northern Minnesota. (Seminar). Purdue University/North Carolina State University Summer Field Tour. July 2012. Portland, OR.
- Scheller, R. M., **M. J. Duveneck**, M. White. Scenarios of alternative forest management under climate change scenarios in the northern Great Lakes. (Seminar). Minnesota Climate Change Response Framework Workshop. July 2012. Grand Rapids, MN.

- **Duveneck, M. J.**, R. M. Scheller, M. White, S. Handler, C. Swantson. Assisted Migration for Climate Change Adaptation: Forest Management Scenarios in Northern Minnesota. (Invited Presentation). International Association of Landscape Ecology Meeting. April 2012. Newport, RI.
- White, M., **M. J. Duveneck**, and R. M. Scheller. Forest Restoration and Biodiversity Conservation in a Changing Climate. (Prepared presentation for seminar). Adaptive Management In the Face of Climate Change Workshop. February 2012. Cloquet, MN.
- Scheller, R. M., **M. J. Duveneck**, M. White, S. Handler, C. Swantson. Scenarios of alternative forest management under climate change scenarios in the northern Great Lakes. (Webinar). Upper Midwest and Great Lakes Landscape Conservation Cooperative Project Sub-topic Meeting. January 2012. East Lansing, MI.
- **Duveneck, M. J.** and R. M. Scheller. Assisted migration for climate change adaptation. (Poster). LANDIS-II Conference. January 2012. Madison, WI.
- White, M., R. M. Scheller, **M. J. Duveneck**. Understanding Climate Change in Northeastern Minnesota. (Webinar). September 2011. Minnesota Science Team Meeting.
- Scheller, R. M. , J. Thompson, M. White, C. Ravenscroft, **M. J. Duveneck**, D. Mladenoff. Tree species migration in Wisconsin, Minnesota, and Massachusetts: A model comparison of potential limiting factors under climate change. (Prepared presentation for seminar) Ecological Society of America 96th Annual Meeting. August 2011. Austin, TX.
- Carr, T, **M. J Duveneck**, and L. West. Service learning as a tool for civic engagement. (Seminar). Maine Community College System Dirigo Institute. June 2006. New Harbor, ME.
- **Duveneck, M. J.** Characterizing canopy fuels as they affect fire behavior of pitch pine (*Pinus rigida*). (Seminar). Maine Forest Service-Regional Forest Ranger Meeting. November 2005. Gray, ME.