

MICHAEL M. FULLER, PH.D.

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Summary

Statistician, biologist, developer with 15 years experience in academia and the environmental studies industry. Highly versatile, articulate, and enthusiastic team player, dedicated to rigorous discovery of real patterns, and finding creative, practical solutions to difficult problems. Excellent writer, editor, and speaker, with professional presentation skills.

Research Gate: www.researchgate.net/profile/Michael_Fuller3
Github Profile: github.com/impactanalysts
LinkedIn: linkedin.com/in/michael-fuller-3730094

Recent Projects

Forest growth in western US under climate change

12Gb public dataset: CART, regression, raster processing, stochastic numerical models.
My solution yielded an improvement of 2 to 3 orders of magnitude in parameter accuracy.

Oil sands air pollution and forest health

1Gb private data: 5 years of forest health indicators from experimental plots.
My PCA, GLM results used by gov agency to set regulatory standards for atmosph N in Alberta.

Open Source Contributor: Individual Based Tree Harvest Simulations

3000+ lines of C++ code; harvest module for the Open Source SORTIE-ND project

Key Skills and Attributes

Data Analysis: statistical, numerical, analytic models and algorithms

Programming: C/C++, Python, MATLAB, R, Git

Computing: UNIX, Linux, OSX (Mac), Windows (prefer Mac)

Statistics: experimental design, sampling, frequentist models, maximum likelihood

Zoology: field identification, survey methods, vertebrates and invertebrates

- Object-oriented software development
- Taught university courses in statistics and experimental design

Education

Ph.D. Biology (quantitative ecology emphasis)
University of New Mexico, Albuquerque

Recent Publications

Number of citations shown in parentheses

1. Fuller, M.M., L.J. Gross, S.M. Duke-Sylvester, and M. Palmer. 2008. Testing the robustness of management decisions: Everglades Restoration Scenarios. *Ecological Applications* **18**:711-723. (33 citations)
2. Thorpe, H.C., Fuller, M.M., S.C. Thomas, and J.P. Caspersen. 2010. Modelling stand development after partial harvests: An empirically based, spatially explicit analysis for lowland black spruce. *Ecological Modelling* **221**:256-267. (17 citations)
3. Fuller, M.M. and B.J. Enquist. 2012. Accounting for spatial autocorrelation in null models of tree species association. *Ecography* **35**: 510-518. (11 citations)
4. Ryan, M., M.M. Fuller, N.J. Scott, and five others. 2014. Individualistic population responses of five frog species in two changing tropical environments over time. *PLoS One* **9**: e98351. (7 citations)
5. Martin, A.R., J.P. Caspersen, M.M. Fuller, T.A. Jones, and S.C. Thomas. 2014. Temporal dynamics and causes of postharvest mortality in a selection-managed tolerant hardwood forest. *Forest Ecology and Management* **314**: 183-192. (4 citations)
6. Chivers, W.J., W. Gladstone, R. Herbert, and M.M. Fuller. 2014. Predator-prey systems depend on a prey refuge. *Journal of Theoretical Biology* **360**: 271-278. (3 citations)
7. Patankar, R., M.M. Fuller, S.M. Smith, and S.C. Thomas. 2014. The distribution of a host-specific canopy parasite is linked with local species diversity in a northern temperate forest. *Journal of Vegetation Science* **25**: 1015-1023. (1 citations)
8. Fuller, MM. 2017. Triumphs and Tribulations: An Intimate Account of How Long-Term Funding Affects the Lives of Scientists. *Bioscience* **67**: 477-478. (published this year)

Oral Presentations

2010 Post-Harvest Mortality in Boreal Forests following Retention Harvests: a spatial analysis of edge effects. Ecological Society of America, Pittsburgh, PA.

2009 Post-harvest mortality in selection-managed northern hardwoods: dendrochronological analysis and potential long-term impacts on species composition. Ecological Society of America, Albuquerque, NM.

2008 Testing the robustness of management decisions to uncertainty: Everglades restoration scenarios. Ecological Society of America, Milwaukee, WI.

2006 Using Integro-Difference Equations to Model the Effect of Growing Season Length on the Spread of the Eurasian Collared-Dove in North America. Ecological Society of America, Memphis, TN.

2005 Using Network Analysis to Characterize Forest Structure. Resource Modeling Assoc. Arcata, CA.

2004 Competition Influences Species Association in Networks of Tropical Trees. ESA, Portland, OR.