

1. **Name:** Peter M. Groffman
2. **Employer:** City University of New York Advanced Science Research Center at the Graduate Center and Brooklyn College Department of Earth and Environmental Sciences
3. **City, State, and Country:** New York, NY 10031 USA
4. **History of employment:**
  - 2015 – current. Professor CUNY Advanced Science Research Center and Brooklyn College Department of Earth and Environmental Sciences
  - 2015 – current. Senior Research Fellow, Cary Institute of Ecosystem Studies
  - 1992 – 2015. Assistant Scientist – Senior Scientist, Cary Institute of Ecosystem Studies
  - 1987 – 1991. Assistant Professor, Department of Natural Resources Science, Univ. Rhode Island
  - 1984 – 1987. Postdoctoral Associate, Michigan State University
5. **Degrees**
  - University of Virginia. Environmental Science. B.A. 1980
  - University of Georgia. Ecology. Ph.D. 1984
6. **Narrative of research experience:** My research focuses on ecosystem biogeochemical processes related to carbon and nitrogen cycles. Specific projects have addressed the effects of climate and other components of global environmental change on agricultural ecosystems, forests, wetlands, prairies, deserts, and cities. These studies have been highly interdisciplinary, involving collaboration with a wide variety of biophysical and social scientists, and an emphasis of the flow of information from science to society.

**7. Short list of key publications:**

- Mason, R. E., J. M. Craine, N. K. Lany, M. Jonard, S. V. Ollinger, P. M. Groffman, R. W. Fulweiler, J. Angerer, Q. D. Read, P. B. Reich, P. H. Templer, and A. J. Elmore. 2022. Evidence, causes, and consequences of declining nitrogen availability in terrestrial ecosystems. *Science* 376:eabh3767.
- Mejia, G. A., P. M. Groffman, A. E. Downey, E. M. Cook, S. Sritrairat, R. Karty, M. I. Palmer, and T. McPhearson. 2022. Nitrogen cycling and afforestation success in New York City. *Ecological Applications* 32:e2535.
- Zhang, R., D. Newburn, A. Rosenberg, L. Lin, P. M. Groffman, J. Duncan, and L. E. Band. 2022. Spatial asynchrony in environmental and economic benefits of stream restoration *Environmental Research Letters* 17:054004.
- Harms, T. K., P. Groffman, L. Aluwihare, C. Craft, W. R. Wieder, S. E. Hobbie, S. G. Baer, J. M. Blair, S. Frey, C. K. Remucal, J. A. Rudgers, S. L. Collins, and LTER OM Working Group. 2021. Patterns and trends of organic matter processing and transport: Insights from the US Long-Term Ecological Research network. *Global Change Ecology* 2:100025
- Jones, J. A., P. M. Groffman, J. Blair, F. W. Davis, H. Dugan, E. E. Euskirchen, S. D. Frey, T. K. Harms, E. Hinckley, M. Kosmala, S. Loberg, S. Malone, K. Novick, S. Record, A. V. Rocha, B. L. Ruddell, E. H. Stanley, C. Sturtevant, A. Thorpe, T. White, W. R. Wieder, L. Zhai, and K. Zhu. 2021. Synergies among environmental science research and monitoring networks: A research agenda. *Earth's Future* 9:e2020EF001631.
- Kanter, D. R., C. Wagner-Riddle, P. M. Groffman, E. A. Davidson, J. N. Galloway, J. D. Gourevitch, H. J. M. van Grinsven, B. Z. Houlton, B. L. Keeler, S. M. Ogle, H. Pearen, K. J. Rennert, M. Saifuddin, D. J. Sobota, and G. Wagner. 2021. Improving the social cost of nitrous oxide. *Nature Climate Change* 11:1008-1010.
- Suchy, A. K., P. M. Groffman, L. E. Band, J. M. Duncan, A. J. Gold, J. M. Grove, D. H. Locke, and L. Templeton. 2021. A landscape approach to nitrogen cycling in urban lawns reveals the interaction between topography and human behaviors. *Biogeochemistry* DOI: 10.1007/s10533-020-00738-8.

- Weitzman, J. N., P. M. Groffman, P. R. Adler, C. J. Dell, F. E. Johnson, R. N. Lerch, and T. C. Strickland. 2021. Drivers of hot spots and hot moments of denitrification in agricultural systems. *Journal of Geophysical Research Biogeosciences* 126:e2020JG006234.
- Zarnetske, P., J. Gurevitch, J. Franklin, P. M. Groffman, C. Harrison, J. J. Hellmann, F. M. Hoffman, S. Kothari, A. Robock, S. Tilmes, D. Visoni, J. Wu, L. Xia, and C.-E. Yang. 2021. Potential ecological impacts of climate intervention by reflecting sunlight to cool Earth. *Proceedings of the National Academies of Science* 118:e1921854118.
- Gaiser, E. E., D. M. Bell, M. C. N. Castorani, D. L. Childers, P. M. Groffman, C. R. Jackson, J. S. Kominoski, D. P. C. Peters, S. T. A. Pickett, J. Ripplinger, and J. C. Zinnert. 2020. Long-term ecological research and evolving frameworks of disturbance ecology. *BioScience* 70:141-156; <https://doi.org/10.1093/biosci/biz162>
- Groffman, P. M. 2020. How reliable is the green in green infrastructure? Pages 85-85 in S. Derrible and M. Chester, editors. *Urban Instructure: Reflections for 2100*. Amazon Press, Phoenix, AZ.
- Pickett, S.T.A., M.L. Cadenasso, M.A. Baker, C. Boone, G. Buckley, P.M. Groffman, J.M. Grove, E. Irwin, S. Kaushal, S. LaDeau, A. Miller, C. Nilon, M. Romolini, E. Rosi, C. Swan and K. Szlavecz. 2020. Theoretical perspectives of the Baltimore Ecosystem Study: Conceptual evolution in a social-ecological research project. *BioScience* 70:297-314.
- Almaraz, M., P. M. Groffman, and S. Porder. 2019. Effects of changes in nitrogen availability on nitrogen gas emissions in a tropical forest during a drought. *Journal of Geophysical Research: Biogeosciences* 124:2917-2926
- Weintraub, S., A.N. Flores, W.R. Wieder, D. Sihi, C. Cagnarini, D.R.P. Gonçalves, M. Young, L. Li, Y. Olshansky, R. Baatz, P.L. Sullivan and P.M. Groffman. 2019. Leveraging environmental research and observation networks to advance soil carbon science. *Journal of Geophysical Research Biogeosciences* 124:1047-1055.
- Weitzman, J. N., P. M. Groffman, J. L. Campbell, C. T. Driscoll, R. T. Fahey, T. J. Fahey, P. G. Schaberg, G. J. Hawley, and L. E. Rustad. 2019. Ecosystem nitrogen response to a simulated ice storm in a northern hardwood forest. *Ecosystems* <https://doi.org/10.1007/s10021-019-00463-w>
- Baatz, R., P. L. Sullivan, L. Li, S. Weintraub, H. W. Loescher, M. Mirtl, P. M. Groffman, D. H. Wall, M. Young, T. White, H. Wen, S. Zacharias, I. Kühn, J. Tang, J. Gaillardet, I. Braud, A. N. Flores, P. Kumar, H. Lin, T. Ghezzehei, H. L. Gholz, H. Vereecken, and K. Van Looy. 2018. Integration of terrestrial observational networks: opportunity for advancing Earth system dynamics modelling. *Earth System Dynamics* 9:593–609.
- Groffman, P.M., C.T. Driscoll, J. Durán, J.L. Campbell, L.M. Christenson, T.J. Fahey, M.C. Fisk, C. Fuss, G.E. Likens, G. Lovett, L. Rustad and P.H. Templer. 2018. Nitrogen oligotrophication in northern hardwood forests. *Biogeochemistry* 141:523-539.
- Ni, X. and P.M. Groffman. 2018. Declines in methane uptake in forest soils. *Proceedings of the National Academies of Science of the United States of America* 115:8587-8590.

## 8. Honors

- Fellow, Soil Science Society of America
- Fellow, Ecological Society of America
- Ecological Society of America Soil Ecology Section Deborah A. Neher Career Award
- Visiting Professor for Senior International Scientists of the Chinese Academy of Sciences
- Sergei A. Wilde Distinguished Lectureship in Forest Soils
- David Schindler Professorship in Aquatic Science Lecture
- Nobel Peace Prize for 2007 to the IPCC

## 9. Professional Society Memberships

- American Geophysical Union, 1998 – current.
- Ecological Society of America, 1984 – current.
- Soil Science Society of America, 1984 – current.