Peter A. Hawman, PhD

Postdoctoral Research Associate

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EDUCATION

2024	University of Georgia, PhD, Geography "Tidal Marsh Vertical Carbon Fluxes Across Spatial and Environmental Gradients: Enhancing Satellite-derived Blue Carbon Modeling"
2014	University of Georgia GIS Certificate
2009	University of Georgia Bachelor of Landscape Architecture

EMPLOYMENT

2024-Present	Postdoctoral Research Associate, Center for Geospatial Research, Department of Geography, University of Georgia Mentored by Dr. Deepak Mishra and Dr. Merryl Alber
2017-2024	Graduate Research Assistant, Department of Geography, University of Georgia
2015-2017	GIS Analyst, Project Consulting Services, Inc., Atlanta, Georgia
2014-2015	NASA DEVELOP Fellow, University of Georgia, Athens, Georgia
2013-2014	Temporary Utility II Worker Landscape Grounds, University of Georgia, Facilities Management Division, Athens, GA
2010-2012	Horticulture Worker, Thyme After Thyme, Winterville, Georgia

PUBLICATIONS

1. **Hawman, P. A.**, Cotten, D. L., & Mishra, D. R. (2024). Canopy Heterogeneity and Environmental Variability Drive Annual Budgets of Net Ecosystem Carbon Exchange in a Tidal Marsh. *Journal of Geophysical Research: Biogeosciences*, *129*(4), e2023JG007866. https://doi.org/10.1029/2023JG007866
2. Richardson, J. L., Desai, A. R., Thom, J., Lindgren, K., Laudon, H., Peichl, M., et al. (2023). *On the Relationship Between Aquatic CO2 Concentration and Ecosystem Fluxes in Some of the World's Key Wetland Types*. Wetlands, 44(1), 1. https://doi.org/10.1007/s13157-023-01751-x
3. **Hawman, P. A.**, Mishra, D. R., O'Connell, J. L., (2023). *Dynamic emergent leaf area in tidal wetlands: implications for satellite-derived regional and global blue carbon estimates*. Manuscript in review.
4. Mao, L., Mishra, D. R., **Hawman, P. A.**, Narron, C. R., O'Connell, J. L., & Cotten, D. L. (2023). *Photosynthetic Performance of Tidally Flooded Spartina alterniflora Salt Marshes*. Journal of Geophysical Research: Biogeosciences. https://doi.org/10.1029/2022JG007161
5. Narron, C. R., O'Connell, J. L., Mishra, D. R., Cotten, D. L., **Hawman, P. A.**, & Mao, L. (2022). *Flooding in Landsat across tidal systems (FLATS): An index for intermittent tidal filtering and frequency detection*

in salt marsh environments. Ecological Indicators, 141, 109045. https://doi.org/10.1016/j.ecolind.2022.109045

6. Gaiser, E.E., J.S. Kominoski, D.M. McKnight, C.A. Bahlai, C. Cheng, S. Record, W. Wollheim, K.R. Christianson, M.R. Downs, **P.A. Hawman**, S.J. Holbrook, A. Kumar, D.R. Mishra, N.P. Molotch, R.B. Primack, A. Rassweiler, R.J. Schmitt, L. Sutter. (2022). *Long-term ecological research and the COVID-19 anthropause: A window to understanding social–ecological disturbance*. Ecosphere, 13(4), e4019. https://doi.org/10.1002/ecs2.4019
7. **Hawman, P. A.**, Mishra, D. R., O'Connell, J. L., Cotten, D. L., Narron, C. R., & Mao, L. (2021). *Salt Marsh Light Use Efficiency is Driven by Environmental Gradients and Species-Specific Physiology and Morphology*. Journal of Geophysical Research: Biogeosciences, 126(5). https://doi.org/10.1029/2020JG006213
8. Salmi, R., Presotto, A., Scarry, C. J., **Hawman, P**., & Doran-Sheehy, D. M. (2020). *Spatial cognition in western gorillas (Gorilla gorilla): an analysis of distance, linearity, and speed of travel routes*. Animal Cognition, 23(3), 545–557. https://doi.org/10.1007/s10071-020-01358-3

FUNDING

CoPI: "A tide-robust high-resolution Blue Carbon product for fragmented coastal marshes", Funded by NASA Carbon Monitoring System, Award Total $901,616

PROFESSIONAL ACTIVITIES

Journal Reviewer

American Geophysical Union Journal of Biophysical Research: Biogeosciences
American Geophysical Union Geophysical Research Letters
GIScience and Remote Sensing
Remote Sensing
Science of the Total Environment
Limnology and Oceanography

Panel Reviewer

Department of Energy, BER, Earth & Environmental Systems Sciences Division

Conference Session Convener

"Integrated applications of satellite remote sensing products to inform coastal processes and management decisions", Coastal Estuarine Research Federation 2023 Biennial Conference, November 2023, Portland, Oregon

Presentations

1. **Hawman, P. A.**, Mishra, D. R., Cotten D. L., (2024). *Presentation: Spatial Heterogeneity in Tidal Marsh Carbon Exchange Informs Broadscale Gross Primary Production Modeling At Moderate Resolutions*. Presentation at the Georgia Coastal Ecosystem Long Term Ecological Research Annual Meeting, December, 2024, Athens, Georgia.
2. **Hawman, P. A.**, Mishra, D. R., (2024). Presentation: *Latitudinal Variations In Tidal Marsh Carbon Exchange Informs Broadscale Gross Primary Production Modeling At Moderate Resolutions*. American Geophysical Union (AGU) Annual Meeting, December 2024, Washington D.C.

3. **Hawman, P. A.**, Mishra, D. R., Cotten D. L., (2024). *Presentation: Canopy Heterogeneity and Latitude Drive Interannual Variability in Tidal Marsh Net Ecosystem Carbon Exchange*. Society of Wetland Scientists (SWS) Annual Meeting, November 2024, Taipei, Taiwan.
4. **Hawman, P. A.**, O'Connell, J. L., Mishra, D. R. (2024). *Presentation: A Tide-Robust High-Resolution Blue Carbon Product for Fragmented Coastal Marshes*. NASA Carbon Monitoring System (CMS) Team Meeting, September 2024, Washington, D.C.
5. **Hawman, P. A.**, Mishra, D. R., O'Connell, (2024). *Poster: Coastal Marsh Spatial Heterogeneity Requires Tide-Robust and High-Resolution Modeling for Blue Carbon Mapping*. NASA Carbon Monitoring System (CMS) Team Meeting, September 2024, Washington, D.C.
6. **Hawman, P. A.**, Mishra, D.R., Cotten D.L., O'Connell, J. L. (2023). *Presentation: Dynamic Emergent Leaf Area and Canopy Heterogeneity Drive Variance in Tidal Marsh Carbon Fluxes Across Timescales*. American Geophysical Union (AGU) Annual Meeting, December 2023, San Francisco, California.
7. **Hawman, P. A.**, Lynn, T., Sharma, R., Julien, A., Runion, K., Mishra, D.R. (2023). *Poster: Predicting salt marsh soil temperature through space and time: a spatially explicit high frequency model*. Coastal and Estuarine Research Federation (CERF) Biennial Conference, November 2023, Portland, Oregon.
8. **Hawman, P. A.**, Mishra, D. R., O'Connell, J. L. (2023). *Poster: Dynamic emergent leaf area under tidal submergence: Implications on blue carbon*. Poster at the NASA Carbon Cycle & Ecosystems Joint Science Workshop, May 2023, College Park, Maryland.
9. Mishra, D. R., **Hawman, P. A.** (2023). *Presentation: Long-term Net Ecosystem Exchange: GCE-LTER salt marsh flux tower*. Presentation at the Georgia Coastal Ecosystem Long Term Ecological Research Annual Meeting, January 5, 2023, Athens, Georgia.
10. **Hawman, P. A.**, Mishra, D. R., O'Connell, J. L. (2022). *Poster: Dynamic emergent leaf area under tidal submergence: Implications on blue carbon*. Poster at the Long Term Ecological Research Network All Scientists' Meeting 2022, September 20, 2022, Pacific Grove, California.
11. **Hawman, P. A.**, Mishra, D. R. (2022). *Presentation: Dynamic emergent leaf area under tidal submergence: Implications on blue carbon*. Remote Sensing of Environment. Oral presentation at the American Association of Geographers Annual Meeting 2022, March 1, 2022, Virtual.
12. **Hawman, P. A.**, Mishra, D. R. (2022). *Presentation: Dynamic emergent leaf area under tidal flooding*. Presentation at the Georgia Coastal Ecosystem Long Term Ecological Research Annual Meeting, January 5, 2022, Virtual.
13. **Hawman, P. A.**, Mishra, D. R., O'Connell, J. L., Cotten, D. L., Narron, C. R., & Mao, L. (2021). *Poster: Salt Marsh Light Use Efficiency is Driven by Environmental Gradients and Species-Specific Physiology and Morphology*. Linkages among the Air-Land-Water Continuum Virtual Oral Poster at the North American Carbon Program 7th Open Science Meeting, March 19, 2021, Virtual.
14. **Hawman, P. A.** (2020). *Presentation: Flux Tower Net Ecosystem Exchange: emergent leaf area under tidal flooding*. Presentation at the Georgia Coastal Ecosystem Long Term Ecological Research Annual Meeting, December 14, 2020, Virtual.
15. **Hawman, P. A.**, Mishra, D. R., Cotten, D. L., O'Connell, J. L., Narron, C. R. and Mao, L. (2020). *Presentation: Tidal flooding limits marsh-atmosphere daytime CO2 fluxes*. Oral presentation at the Georgia Coastal Ecosystem Long Term Ecological Research Summer Webinar, July 23, 2020, Virtual.
16. **Hawman, P. A.**, Mishra, D. R., Cotten, D. L., O'Connell, J. L., Narron, C. R. and Mao, L. (2020). *Presentation: Salt marsh light use efficiency in response to environmental conditions*. Oral

presentation at the Georgia Coastal Ecosystem Long Term Ecological Research Annual Meeting, January 7, 2020, Athens, Georgia.

17. **Hawman, P. A.**, Mishra, D. R., Cotten, D. L., O'Connell, J. L., Narron, C. R. and Mao, L. (2020). *Poster: Tidal flooding limits marsh-atmosphere daytime CO2 fluxes*. Poster at the Georgia Coastal Ecosystem Long Term Ecological Research Annual Meeting, January 7, 2020, Athens, Georgia.
18. **Hawman, P. A.**, Mishra, D. R., Cotten, D. L., O'Connell, J. L., Narron, C. R. and Mao, L. (2019). *Presentation: Salt marsh light use efficiency and gross primary productivity in response to environmental conditions*. Disturbance Impacts on Ecological and Biogeochemical Processes in Coastal Wetlands I. Oral Presentation at the American Geophysical Union Fall Meeting 2019, December 12, 2019, San Francisco, California.
19. **Hawman, P. A.**, Mishra, D. R., O'Connell, J. L., Cotten, D.L., Narron, C. R. and Mao, L. (2019). *Presentation: Salt marsh light use efficiency and gross primary production in response to environmental conditions*. Carbon fluxes in coastal systems. Oral presentation at the Coastal and Estuarine Research Federation (CERF) Biennial Conference 2019, November 5, 2019, Mobile, Alabama.
20. **Hawman, P. A.**, Mishra, D. R., Cotten, D. L., O'Connell, J. L., Narron, C. R., & Mao L. (2018). *Effects of Cloud Cover on Light Use Efficiency in Salt Marsh Species*. Poster presentation at the American Geophysical Union 2018 Fall Meeting, Washington D.C., December 10-14, 2018.
21. **Hawman, P. A.** (April 2018). *Effects of diffuse photosynthetically active radiation on light use efficiency of salt marsh species*. Oral presentation at the American Association of Geographers Annual Meeting, New Orleans, LA.
22. Salmi, R., Presotto, A., **Hawman**, P.A., & Doran-Sheehy, D. (August 2016). *Euclidean Navigation Maps in Western Gorillas (Gorilla gorilla): An Analysis of Distance, Linearity and Speed of Travel Routes*. Oral presentation by Roberta Salmi at the International Primatology Society and the American Society of Primatologists meeting, Chicago, IL.
23. **Hawman, P.A.** (November 2014). *Utilizing NASA Earth Observations to Enhance the Conservation of Colombia's Most Endangered Primate, the Cotton-top Tamarin (Saguinus oedipus)*. Oral presentation at the SouthEastern Division of the Association of American Geographers 69th Annual Meeting, Athens, GA.
24. **Hawman, P.A.** (August 2014). *Utilizing NASA Earth Observations to Enhance the Conservation of Colombia's Most Endangered Primate, the Cotton-top Tamarin (Saguinus oedipus)*. Oral presentation at the NASA Earth Science Division's DEVELOP National Program Annual Earth Science Applications Showcase, Washington, D.C.

HONORS AND AWARDS

2021 Outstanding Student Presentation Award, 7th North American Carbon Program

COMMUNITY SERVICE

2020-Present Board of Directors for Sandy Creek Nature Center, Inc., Athens, Georgia