

BRENDAN M. ROGERS

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Dr. Rogers' research focuses on how terrestrial ecosystems are responding to climate change and land use, how this feeds back to climate change, and how management and policy can be used for climate mitigation and adaptation. He primarily focuses on the boreal forests and arctic tundra across Alaska, Canada, and Siberia, where rapid climate change is altering ecosystems, thawing permafrost, and intensifying disturbance regimes such as wildfire. Dr. Rogers uses a combination of field observations, remote sensing, and modeling techniques to conduct science for societal and policy impact.

EDUCATION

University of California, Irvine, CA | Ph.D. in Earth System Science | March 2014

Thesis: *Toward a better understanding of boreal forest fires and their role in the climate system.*

University of California, Irvine, CA | Masters of Science in Earth System Science | October 2011

Oregon State University, Corvallis, OR | Masters of Science in Environmental Sciences | August 2009

Thesis: *Potential impacts of climate change on vegetation distributions, carbon stocks, and fire regimes in the U.S. Pacific Northwest.*

Hamilton College, Clinton, NY | Bachelors of Arts in Mathematics; minor in Biology | May 2003

RELEVANT PROFESSIONAL EXPERIENCE

Associate Scientist | Woodwell Climate Research Center | May 2020 - present

Assistant Scientist | Woods Hole Research Center | Apr 2016 – May 2020

Postdoctoral Fellow | Woods Hole Research Center | Apr 2014 – Apr 2016

PUBLICATIONS

2024

Hung, J. K. Y., Arndt, K. A., Murphy, P., Montemayor, M., Rodenhizer, H., Ludwig, S., **Rogers, B. M.**, and Natali, S. M.: Slow post-fire carbon balance recovery despite increased net uptake rates in Alaskan tundra, *Environ. Res. Lett.*, 19, 124013, <https://doi.org/10.1088/1748-9326/ad8764>, 2024.

Liu, Z., **Rogers, B. M.**, Keppel-Aleks, G., Helbig, M., Ballantyne, A. P., Kimball, J. S., Chatterjee, A., Foster, A., Kaushik, A., Virkkala, A.-M., Burrell, A. L., Schwalm, C., Sweeney, C., Schuur, E. A. G., Dean, J., Watts, J. D., Kim, J. E., Wang, J. A., Hu, L., Welp, L., Berner, L. T., Mauritz, M., Mack, M., Parazoo, N. C., Madani, N., Keeling, R., Commane, R., Goetz, S., Piao, S., Natali, S. M., Wang, W., Buermann, W., Walker, X., Lin, X., Wang, X., Jin, Y., Yu, K., and Zhang, Y.: Seasonal CO₂ amplitude in northern high latitudes, *Nature Reviews Earth & Environment*, 1–16, <https://doi.org/10.1038/s43017-024-00600-7>, 2024.

Hugelius, G., Ramage, J., Burke, E., Chatterjee, A., Smallman, T. L., Aalto, T., Bastos, A., Biasi, C., Canadell, J. G., Chandra, N., Chevallier, F., Ciais, P., Chang, J., Feng, L., Jones, M. W., Kleinen, T., Kuhn, M., Lauerwald, R., Liu, J., López-Blanco, E., Luijkx, I. T., Marushchak, M. E., Natali, S. M., Niwa, Y., Olefeldt, D., Palmer, P. I., Patra, P. K., Peters, W., Potter, S., Poulter, B., **Rogers, B. M.**, Riley, W. J., Saunio, M., Schuur, E. a. G., Thompson, R. L., Treat, C., Tsuruta, A., Turetsky, M. R., Virkkala, A.-M., Voigt, C., Watts, J., Zhu, Q., and Zheng, B.: Permafrost Region Greenhouse Gas Budgets Suggest a Weak CO₂ Sink and CH₄ and N₂O Sources, But Magnitudes Differ Between Top-Down and Bottom-Up Methods, *Global Biogeochemical Cycles*, 38, e2023GB007969, <https://doi.org/10.1029/2023GB007969>, 2024.

Pallandt, M. M. T. A., Jung, M., Arndt, K., Natali, S. M., **Rogers, B. M.**, Virkkala, A.-M., and Göckede, M.: High-Latitude Eddy Covariance Temporal Network Design and Optimization, *Journal of Geophysical Research: Biogeosciences*, 129, e2024JG008406, <https://doi.org/10.1029/2024JG008406>, 2024.

Mackey, B., Hugh, S., Norman, P., **Rogers, B. M.**, and Dellasala, D.: Insights into Boreal Forest Disturbance from Canopy Stability Index, *Land*, 13, 1644, <https://doi.org/10.3390/land13101644>, 2024.

Ackermann, M., Amann, C., Cook, B., Davies, P., Glen, A., Frederick, J., Holdren, J., Ivey, M., Leland, R., Maddox, M., Miner, K., Natali, S., **Rogers, B.**, and Watts, J.: Pan-Arctic Methane: Current Monitoring Capabilities, Approaches for Improvement, and Implications for Global Mitigation Targets, Polar Institute, Woodrow Wilson International Center for Scholars, Washington, DC, 2024.

- Clelland, A. A., Marshall, G. J., Baxter, R., Potter, S., Talucci, A. C., Rady, J. M., Genet, H., **Rogers, B. M.**, and Natali, S. M.: Annual and Seasonal Patterns of Burned Area Products in Arctic-Boreal North America and Russia for 2001–2020, *Remote Sensing*, 16, 3306, <https://doi.org/10.3390/rs16173306>, 2024.
- Heffernan, E., Epstein, H., Declan McQuinn, T., **Rogers, B. M.**, Virkkala, A.-M., Lutz, D., and Armstrong, A.: Comparing assumptions and applications of dynamic vegetation models used in the Arctic-Boreal zone of Alaska and Canada, *Environmental Research Letters*, 19, 093003, <https://doi.org/10.1088/1748-9326/ad6619>, 2024.
- See, C. R., Virkkala, A.-M., Natali, S. M., **Rogers, B. M.**, Mauritz, M., Biasi, C., Bokhorst, S., Boike, J., Bret-Harte, M. S., Celis, G., Chae, N., Christensen, T. R., Murner (Connon), S. J., Dengel, S., Dolman, H., Edgar, C. W., Elberling, B., Emmerton, C. A., Euskirchen, E. S., Göckede, M., Grelle, A., Heffernan, L., Helbig, M., Holl, D., Humphreys, E., Iwata, H., Järveoja, J., Kobayashi, H., Kochendorfer, J., Kolari, P., Kotani, A., Kutzbach, L., Kwon, M. J., Lathrop, E. R., López-Blanco, E., Mammarella, I., Marushchak, M. E., Mastepanov, M., Matsuura, Y., Merbold, L., Meyer, G., Minions, C., Nilsson, M. B., Nojeim, J., Oberbauer, S. F., Olefeldt, D., Park, S.-J., Parmentier, F.-J. W., Peichl, M., Peter, D., Petrov, R., Poyatos, R., Prokushkin, A. S., Quinton, W., Rodenhizer, H., Sachs, T., Savage, K., Schulze, C., Sjögersten, S., Sonnentag, O., St. Louis, V. L., Torn, M. S., Tuittila, E.-S., Ueyama, M., Varlagin, A., Voigt, C., Watts, J. D., Zona, D., Zyryanov, V. I., and Schuur, E. A. G.: Decadal increases in carbon uptake offset by respiratory losses across northern permafrost ecosystems, *Nature Climate Change*, 1–10, <https://doi.org/10.1038/s41558-024-02057-4>, 2024.
Reported by Earth.com, Eye on the Arctic, and phys.org
- Jafarov, E. E., Briones, V., Kabeer, A., **Rogers, B. M.**, Natali, S., Genet, H., Rutter, R. M., and Carman, T. B.: Modeling the implications of post-fire alternative successional trajectory for boreal carbon and permafrost dynamics in Interior Alaska, in: *Proceedings. Volume 1: Conference Papers, 12th International Conference on Permafrost. Integrating Perspectives of Permafrost Thaw, Change, and Adaptation*, Whitehorse, Canada, <https://doi.org/10.52381/ICOP2024.145.1>, 2024.
- Briones, V., Jafarov, E. E., **Rogers, B. M.**, Natali, S., and Genet, H.: An integration approach to combine land cover products for improved ecosystem modeling across the pan-arctic, in: *Proceedings. Volume 1: Conference Papers, 12th International Conference on Permafrost. Integrating Perspectives of Permafrost Thaw, Change, and Adaptation*, Whitehorse, Canada, <https://doi.org/10.52381/ICOP2024.201.1>, 2024.
- Rodenhizer, H., Yang, Y., Fiske, G., Potter, S., Windholz, T., Mullen, A., Watts, J. D., and **Rogers, B. M.**: A Comparison of Satellite Imagery Sources for Automated Detection of Retrogressive Thaw Slumps, *Remote Sensing*, 16, 2361, <https://doi.org/10.3390/rs16132361>, 2024.
- Briones, V., Jafarov, E. E., Genet, H., **Rogers, B. M.**, Rutter, R. M., Carman, T. B., Klein, J., Euskirchen, E. S., Schuur, E. A., Watts, J. D., and Natali, S. M.: Exploring the interplay between soil thermal and hydrological changes and their impact on carbon fluxes in permafrost ecosystems, *Environmental Research Letters*, 19, 074003, <https://doi.org/10.1088/1748-9326/ad50ed>, 2024.
- Shrestha, S., Williams, C. A., **Rogers, B. M.**, Rogan, J., and Kulakowski, D.: Divergent biophysical responses of western United States forests to wildfire driven by eco-climatic gradients, *Biogeosciences*, 21, 2207–2226, <https://doi.org/10.5194/bg-21-2207-2024>, 2024.
- Ramage, J., Kuhn, M., Virkkala, A.-M., Voigt, C., Marushchak, M. E., Bastos, A., Biasi, C., Canadell, J. G., Ciais, P., López-Blanco, E., Natali, S. M., Olefeldt, D., Potter, S., Poulter, B., **Rogers, B. M.**, Schuur, E. A. G., Treat, C., Turetsky, M. R., Watts, J., and Hugelius, G.: The Net GHG Balance and Budget of the Permafrost Region (2000–2020) From Ecosystem Flux Upscaling, *Global Biogeochemical Cycles*, 38, e2023GB007953, <https://doi.org/10.1029/2023GB007953>, 2024.
- Ying, Q., Poulter, B., Watts, J. D., Arndt, K. A., Virkkala, A.-M., Bruhwiler, L., Oh, Y., **Rogers, B. M.**, Natali, S. M., Sullivan, H., Schiferl, L. D., Elder, C., Peltola, O., Bartsch, A., Armstrong, A., Desai, A. R., Euskirchen, E., Göckede, M., Lehner, B., Nilsson, M. B., Peichl, M., Sonnentag, O., Tuittila, E.-S., Sachs, T., Kalhori, A., Ueyama, M., and Zhang, Z.: WetCH₄: A Machine Learning-based Upscaling of Methane Fluxes of Northern Wetlands during 2016–2022, *Earth System Science Data Discussions*, 1–45, <https://doi.org/10.5194/essd-2024-84>, 2024.
- Diaz, L. R., Delcourt, C. J. F., Langer, M., Loranty, M. M., **Rogers, B. M.**, Scholten, R. C., Shestakova, T. A., Talucci, A. C., Vonk, J. E., Wangchuk, S., and Veraverbeke, S.: Environmental drivers and remote sensing proxies of post-fire thaw depth in Eastern Siberian larch forests, *EGU sphere*, 1–36, <https://doi.org/10.5194/egusphere-2024-469>, 2024.
- Lee, J. H., Veraverbeke, S., **Rogers, B.**, and Kerr, Y. H.: L-band microwave-retrieved fuel temperature predicts million-hectare-scale destructive wildfires, *International Journal of Applied Earth Observation and Geoinformation*, 129, 103776, <https://doi.org/10.1016/j.jag.2024.103776>, 2024.
- Li, W., Hsu, C.-Y., Wang, S., Yang, Y., Lee, H., Liljedahl, A., Witharana, C., Yang, Y., **Rogers, B. M.**, Arundel, S. T., Jones, M. B., McHenry, K., and Solis, P.: Segment Anything Model Can Not Segment Anything: Assessing AI Foundation Model's Generalizability in Permafrost Mapping, *Remote Sensing*, 16, 797, <https://doi.org/10.3390/rs16050797>, 2024.

Treat, C. C., Virkkala, A.-M., Burke, E., Bruhwiler, L., Chatterjee, A., Fisher, J. B., Hashemi, J., Parmentier, F.-J. W., **Rogers, B. M.**, Westermann, S., Watts, J. D., Blanc-Betes, E., Fuchs, M., Kruse, S., Malhotra, A., Miner, K., Strauss, J., Armstrong, A., Epstein, H. E., Gay, B., Goeckede, M., Kalthori, A., Kou, D., Miller, C. E., Natali, S. M., Oh, Y., Shakil, S., Sonnentag, O., Varner, R. K., Zolkos, S., Schuur, E. A. G., and Hugelius, G.: Permafrost Carbon: Progress on Understanding Stocks and Fluxes Across Northern Terrestrial Ecosystems, *Journal of Geophysical Research: Biogeosciences*, 129, e2023JG007638, <https://doi.org/10.1029/2023JG007638>, 2024.

Featured in EOS and reported by Phys.org

Schädel, C., **Rogers, B. M.**, Lawrence, D. M., Koven, C. D., Brovkin, V., Burke, E. J., Genet, H., Huntzinger, D. N., Jafarov, E., McGuire, A. D., Riley, W. J., and Natali, S. M.: Earth system models must include permafrost carbon processes, *Nature Climate Change*, 1–3, <https://doi.org/10.1038/s41558-023-01909-9>, 2024.

Reported by Futura, Phys.org, and Québec Science

Burrell, A. L., Cooperdock, S., Potter, S., Berner, L. T., Hember, R., Macander, M. J., Walker, X. J., Massey, R., Foster, A. C., Mack, M. C., Goetz, S. J., and **Rogers, B.**: The predictability of near-term forest biomass change in boreal North America, *Ecosphere*, 15, e4737, <https://doi.org/10.1002/ecs2.4737>, 2024.

Hessilt, T. D., **Rogers, B. M.**, Scholten, R. C., Potter, S., Janssen, T. A. J., and Veraverbeke, S.: Geographically divergent trends in snow disappearance timing and fire ignitions across boreal North America, *Biogeosciences*, 21, 109–129, <https://doi.org/10.5194/bg-21-109-2024>, 2024.

2023

Liu, Z., Kimball, J. S., Ballantyne, A., Watts, J. D., Natali, S. M., **Rogers, B. M.**, Yi, Y., Klene, A. E., Moghaddam, M., Du, J., and Zona, D.: Widespread deepening of the active layer in northern permafrost regions from 2003 to 2020, *Environmental Research Letters*, 19, 014020, <https://doi.org/10.1088/1748-9326/ad0f73>, 2023.

Massey, R., **Rogers, B. M.**, Berner, L. T., Cooperdock, S., Mack, M. C., Walker, X. J., and Goetz, S. J.: Forest composition change and biophysical climate feedbacks across boreal North America, *Nature Climate Change*, 1–8, <https://doi.org/10.1038/s41558-023-01851-w>, 2023.

Reported by Earth.com and Phys.org

Potter, S., Cooperdock, S., Veraverbeke, S., Walker, X., Mack, M. C., Goetz, S. J., Baltzer, J., Bourgeau-Chavez, L., Burrell, A., Dieleman, C., French, N., Hantson, S., Hoy, E. E., Jenkins, L., Johnstone, J. F., Kane, E. S., Natali, S. M., Randerson, J. T., Turetsky, M. R., Whitman, E., Wiggins, E., and **Rogers, B. M.**: Burned area and carbon emissions across northwestern boreal North America from 2001–2019, *Biogeosciences*, 20, 2785–2804, <https://doi.org/10.5194/bg-20-2785-2023>, 2023.

Moubarak, M., Sistla, S., Potter, S., Natali, S. M., and **Rogers, B. M.**: Carbon emissions and radiative forcings from tundra wildfires in the Yukon–Kuskokwim River Delta, Alaska, *Biogeosciences*, 20, 1537–1557, <https://doi.org/10.5194/bg-20-1537-2023>, 2023.

Reported by the Alaska Beacon

Mullen, A. L., Watts, J. D., **Rogers, B. M.**, Carroll, M. L., Elder, C. D., Noomah, J., Williams, Z., Caraballo-Vega, J. A., Bredder, A., Rickenbaugh, E., Levenson, E., Cooley, S. W., Hung, J. K. Y., Fiske, G., Potter, S., Yang, Y., Miller, C. E., Natali, S. M., Douglas, T. A., and Kyzivat, E. D.: Using High-Resolution Satellite Imagery and Deep Learning to Track Dynamic Seasonality in Small Water Bodies, *Geophysical Research Letters*, 50, e2022GL102327, <https://doi.org/10.1029/2022GL102327>, 2023.

Watts, J. D., Farina, M., Kimball, J. S., Schiferl, L. D., Liu, Z., Arndt, K. A., Zona, D., Ballantyne, A., Euskirchen, E. S., Parmentier, F.-J. W., Helbig, M., Sonnentag, O., Tagesson, T., Rinne, J., Ikawa, H., Ueyama, M., Kobayashi, H., Sachs, T., Nadeau, D. F., Kochendorfer, J., Jackowicz-Korczynski, M., Virkkala, A., Aurela, M., Commane, R., Byrne, B., Birch, L., Johnson, M. S., Madani, N., **Rogers, B.**, Du, J., Endsley, A., Savage, K., Poulter, B., Zhang, Z., Bruhwiler, L. M., Miller, C. E., Goetz, S., and Oechel, W. C.: Carbon uptake in Eurasian boreal forests dominates the high-latitude net ecosystem carbon budget, *Global Change Biology*, 29, 1870–1889, <https://doi.org/10.1111/gcb.16553>, 2023.

Yang, Y., **Rogers, B. M.**, Fiske, G., Watts, J., Potter, S., Windholz, T., Mullen, A., Nitze, I., and Natali, S. M.: Mapping retrogressive thaw slumps using deep neural networks, *Remote Sensing of Environment*, 288, 113495, <https://doi.org/10.1016/j.rse.2023.113495>, 2023.

2022

van Wees, D., van der Werf, G. R., Randerson, J. T., **Rogers, B. M.**, Chen, Y., Veraverbeke, S., Giglio, L., and Morton, D. C.: Global biomass burning fuel consumption and emissions at 500 m spatial resolution based on the Global Fire Emissions

Database (GFED), Geoscientific Model Development, 15, 8411–8437, <https://doi.org/10.5194/gmd-15-8411-2022>, 2022.

Rogers, B. M., Mackey, B., Shestakova, T. A., Keith, H., Young, V., Kormos, C. F., DellaSala, D. A., Dean, J., Birdsey, R., Bush, G., Houghton, R. A., and Moomaw, W. R.: Using ecosystem integrity to maximize climate mitigation and minimize risk in international forest policy, *Frontiers in Forests and Global Change*, 5, <https://doi.org/10.3389/ffgc.2022.929281>, 2022.

Wu, W., Liu, Y., **Rogers, B. M.**, Xu, W., Dong, Y., and Lu, W.: Monitoring gas flaring in Texas using time-series sentinel-2 MSI and landsat-8 OLI images, *International Journal of Applied Earth Observation and Geoinformation*, 114, 103075, <https://doi.org/10.1016/j.jag.2022.103075>, 2022.

Foster, A. C., Wang, J. A., Frost, G. V., Davidson, S. J., Hoy, E., Turner, K. W., Sonnentag, O., Epstein, H., Berner, L. T., Armstrong, A. H., Kang, M., **Rogers, B. M.**, Campbell, E., Miner, K. R., Orndahl, K. M., Bourgeau-Chavez, L. L., Lutz, D. A., French, N., Chen, D., Du, J., Shestakova, T. A., Shuman, J. K., Tape, K., Virkkala, A.-M., Potter, C., and Goetz, S.: Disturbances in North American boreal forest and Arctic tundra: impacts, interactions, and responses, *Environmental Research Letters*, 17, 113001, <https://doi.org/10.1088/1748-9326/ac98d7>, 2022.

DellaSala, D. A., Mackey, B., Norman, P., Campbell, C., Comer, P. J., Kormos, C. F., Keith, H., and **Rogers, B.**: Mature and old-growth forests contribute to large-scale conservation targets in the conterminous United States, *Frontiers in Forests and Global Change*, 5, <https://doi.org/10.3389/ffgc.2022.979528>, 2022.

Reported by Center for Western Priorities, Mongabay, One Earth, and The Jefferson Exchange

Liu, Z., Kimball, J. S., Ballantyne, A. P., Parazoo, N. C., Wang, W. J., Bastos, A., Madani, N., Natali, S. M., Watts, J. D., **Rogers, B. M.**, Ciais, P., Yu, K., Virkkala, A.-M., Chevallier, F., Peters, W., Patra, P. K., and Chandra, N.: Respiratory loss during late-growing season determines the net carbon dioxide sink in northern permafrost regions, *Nature Communications*, 13, 5626, <https://doi.org/10.1038/s41467-022-33293-x>, 2022.

Elder, M., Phillips, C. A., Potter, S., Frumhoff, P. C., and **Rogers, B. M.**: The costs and benefits of fire management for carbon mitigation in Alaska through 2100, *Environmental Research Letters*, 17, 105001, <https://doi.org/10.1088/1748-9326/ac8e85>, 2022.

Natali, S. M., Bronen, R., Cochran, P., Holdren, J. P., **Rogers, B. M.**, and Treharne, R.: Incorporating permafrost into climate mitigation and adaptation policy, *Environmental Research Letters*, 17, 091001, <https://doi.org/10.1088/1748-9326/ac8c5a>, 2022.

Shestakova, T. A., Mackey, B., Hugh, S., Dean, J., Kukavskaya, E. A., Laflamme, J., Shvetsov, E. G., and **Rogers, B. M.**: Mapping Forest Stability within Major Biomes Using Canopy Indices Derived from MODIS Time Series, *Remote Sensing*, 14, 3813, <https://doi.org/10.3390/rs14153813>, 2022.

Zhao, Z., Lin, Z., Li, F., and **Rogers, B. M.**: Influence of atmospheric teleconnections on interannual variability of Arctic-boreal fires, *Science of The Total Environment*, 838, 156550, <https://doi.org/10.1016/j.scitotenv.2022.156550>, 2022.

Zhang, Y., Piao, S., Sun, Y., **Rogers, B. M.**, Li, X., Lian, X., Liu, Z., Chen, A., and Peñuelas, J.: Future reversal of warming-enhanced vegetation productivity in the Northern Hemisphere, *Nature Climate Change*, 1–6, <https://doi.org/10.1038/s41558-022-01374-w>, 2022.

Reported by The Scientist

Jandt, R., **Rogers, B.**, and Philips, C.: Fire management is one way to reduce CO₂ emissions - how much would that cost, *Alaska Fire Science Consortium Research Brief*, Fairbanks, AK, 2022.

Phillips, C. A., **Rogers, B. M.**, Elder, M., Cooperdock, S., Moubarak, M., Randerson, J. T., and Frumhoff, P. C.: Escalating carbon emissions from North American boreal forest wildfires and the climate mitigation potential of fire management, *Science Advances*, 8, eabl7161, <https://doi.org/10.1126/sciadv.abl7161>, 2022.

Reported by ABC News, Azo CleanTech, Biz News Post, CastaNet, Clayton News Daily Online, CNN, Common Dreams, Cosmos, Earth.com, Erie News Now, Eurasia Review, EurekAlert, Good Word News, headtopics.com, Henry Herald Online, Honest Communist, iHeartRadio, Ingenioren, Jackson Progress-Argus, KAKE TV Online, KCBS Radio, KESQ-TV Online, kidk.com, KMIZ-TV Online, KRDO.com, KVLA-TV Online, Menopausal Mother Nature, MSN Weather US, National Observer, National Post, News Break, Newton Citizen Online, PressReleasePoint, Samachar Central, Swift Telecast, Tech and Science Post, ThaiFrX, The Albany Herald, The Canadian Press, The Globe and Mail, The Hill, The Jefferson Exchange, The World News, Vietnam Explorer, WICZ-TV Online, WRAL-TV Online, Yahoo UK, YubaNet, 6Park News Alaska, 24HTECH

Shrestha, S., Williams, C. A., **Rogers, B. M.**, Rogan, J., and Kulakowski, D.: Wildfire controls on land surface properties in mixed conifer and ponderosa pine forests of Sierra Nevada and Klamath mountains, Western US, *Agricultural and Forest Meteorology*, 320, 108939, <https://doi.org/10.1016/j.agrformet.2022.108939>, 2022.

- Burrell, A. L., Sun, Q., Baxter, R., Kukavskaya, E. A., Zhila, S., Shestakova, T., **Rogers, B. M.**, Kaduk, J., and Barrett, K.: Climate change, fire return intervals and the growing risk of permanent forest loss in boreal Eurasia, *Science of The Total Environment*, 831, 154885, <https://doi.org/10.1016/j.scitotenv.2022.154885>, 2022.
- Foster, A. C., Shuman, J. K., **Rogers, B. M.**, Walker, X. J., Mack, M. C., Bourgeau-Chavez, L. L., Veraverbeke, S., and Goetz, S. J.: Bottom-up drivers of future fire regimes in western boreal North America, *Environmental Research Letters*, 17, 025006, <https://doi.org/10.1088/1748-9326/ac4c1e>, 2022.
- Treharne, R., **Rogers, B. M.**, Gasser, T., MacDonald, E., and Natali, S.: Identifying Barriers to Estimating Carbon Release From Interacting Feedbacks in a Warming Arctic, *Frontiers in Climate*, 3, <https://doi.org/10.3389/fclim.2021.716464>, 2022.
- Virkkala, A.-M., Natali, S. M., **Rogers, B. M.**, Watts, J. D., Savage, K., Connon, S. J., Mauritz, M., Schuur, E. A. G., Peter, D., Minions, C., Nojeim, J., Commene, R., Emmerton, C. A., Goeckede, M., Helbig, M., Holl, D., Iwata, H., Kobayashi, H., Kolari, P., López-Blanco, E., Marushchak, M. E., Mastepanov, M., Merbold, L., Parmentier, F.-J. W., Peichl, M., Sachs, T., Sonnentag, O., Ueyama, M., Voigt, C., Aurela, M., Boike, J., Celis, G., Chae, N., Christensen, T. R., Bret-Harte, M. S., Dengel, S., Dolman, H., Edgar, C. W., Elberling, B., Euskirchen, E., Grelle, A., Hatakka, J., Humphreys, E., Järveoja, J., Kotani, A., Kutzbach, L., Laurila, T., Lohila, A., Mammarella, I., Matsuura, Y., Meyer, G., Nilsson, M. B., Oberbauer, S. F., Park, S.-J., Petrov, R., Prokushkin, A. S., Schulze, C., St. Louis, V. L., Tuittila, E.-S., Tuovinen, J.-P., Quinton, W., Varlagin, A., Zona, D., and Zyryanov, V. I.: The ABCflux database: Arctic–boreal CO₂ flux observations and ancillary information aggregated to monthly time steps across terrestrial ecosystems, *Earth System Science Data*, 14, 179–208, <https://doi.org/10.5194/essd-14-179-2022>, 2022.
- ## 2021
- Shestakova, T., **Rogers, B. M.**, and Kukavskaya, E. A.: Primary Forest Case Study: Boreal Siberia, International Union for the Conservation of Nature, https://www.iucn.org/sites/dev/files/content/documents/iucn_casestudy_siberia_updated20211221.pdf, 2021.
- Walker, X. J., Howard, B. K., Jean, M., Johnstone, J. F., Roland, C., **Rogers, B. M.**, Schuur, E. A. G., Solvik, K. K., and Mack, M. C.: Impacts of pre-fire conifer density and wildfire severity on ecosystem structure and function at the forest-tundra ecotone, *PLOS ONE*, 16, e0258558, <https://doi.org/10.1371/journal.pone.0258558>, 2021.
- Shvetsov, E. G., Kukavskaya, E. A., Shestakova, T. A., Laflamme, J., and **Rogers, B. M.**: Increasing fire and logging disturbances in Siberian boreal forests: a case study of the Angara region, *Environmental Research Letters*, 16, 115007, <https://doi.org/10.1088/1748-9326/ac2e37>, 2021.
- Baltzer, J. L., Day, N. J., Walker, X. J., Greene, D., Mack, M. C., Alexander, H. D., Arseneault, D., Barnes, J., Bergeron, Y., Boucher, Y., Bourgeau-Chavez, L., Brown, C. D., Carrière, S., Howard, B. K., Gauthier, S., Parisien, M.-A., Reid, K. A., **Rogers, B. M.**, Roland, C., Sirois, L., Stehn, S., Thompson, D. K., Turetsky, M. R., Veraverbeke, S., Whitman, E., Yang, J., and Johnstone, J. F.: Increasing fire and the decline of fire adapted black spruce in the boreal forest, *Proceedings of the National Academy of Sciences of the United States of America*, 118, <https://doi.org/10.1073/pnas.2024872118>, 2021.
Reported by CBC, NSF, Phys.org, and Wildfire Today
- Boyd, M. A., Berner, L. T., Foster, A. C., Goetz, S. J., **Rogers, B. M.**, Walker, X. J., and Mack, M. C.: Historic declines in growth portend trembling aspen death during a contemporary leaf miner outbreak in Alaska, *Ecosphere*, 12, e03569, <https://doi.org/10.1002/ecs2.3569>, 2021.
- Delcourt, C. J. F., Combee, A., Izbicki, B., Mack, M. C., Maximov, T., Petrov, R., **Rogers, B. M.**, Scholten, R. C., Shestakova, T. A., Wees, D. van, and Veraverbeke, S.: Evaluating the Differenced Normalized Burn Ratio for Assessing Fire Severity Using Sentinel-2 Imagery in Northeast Siberian Larch Forests, *Remote Sensing*, 13, 2311, <https://doi.org/10.3390/rs13122311>, 2021.
- Veraverbeke, S., Delcourt, C. J. F., Kukavskaya, E., Mack, M., Walker, X., Hessilt, T., **Rogers, B.**, and Scholten, R. C.: Direct and longer-term carbon emissions from arctic-boreal fires: A short review of recent advances, *Current Opinion in Environmental Science & Health*, 23, 100277, <https://doi.org/10.1016/j.coesh.2021.100277>, 2021.
- Virkkala, A.-M., Aalto, J., **Rogers, B. M.**, Tagesson, T., Treat, C. C., Natali, S. M., Watts, J. D., Potter, S., Lehtonen, A., Mauritz, M., Schuur, E. A. G., Kochendorfer, J., Zona, D., Oechel, W., Kobayashi, H., Humphreys, E., Goeckede, M., Iwata, H., Lafleur, P. M., Euskirchen, E. S., Bokhorst, S., Marushchak, M., Martikainen, P. J., Elberling, B., Voigt, C., Biasi, C., Sonnentag, O., Parmentier, F.-J. W., Ueyama, M., Celis, G., St. Louis, V. L., Emmerton, C. A., Peichl, M., Chi, J., Järveoja, J., Nilsson, M. B., Oberbauer, S. F., Torn, M. S., Park, S.-J., Dolman, H., Mammarella, I., Chae, N., Poyatos, R., López-Blanco, E., Christensen, T. R., Kwon, M. J., Sachs, T., Holl, D., and Luoto, M.: Statistical upscaling of ecosystem CO₂ fluxes across the terrestrial tundra and boreal domain: Regional patterns and uncertainties, *Global Change Biology*, 27, 4040–4059, <https://doi.org/10.1111/gcb.15659>, 2021.

Cover photo of GCB issue; Reported by phys.org

Madani, N., Parazoo, N. C., Kimball, J. S., Reichle, R. H., Chatterjee, A., Watts, J. D., Saatchi, S., Liu, Z., Endsley, A., Tagesson, T., **Rogers, B. M.**, Xu, L., Wang, J. A., Magney, T., and Miller, C. E.: The Impacts of Climate and Wildfire on Ecosystem Gross Primary Productivity in Alaska, *Journal of Geophysical Research: Biogeosciences*, 126, e2020JG006078, <https://doi.org/10.1029/2020JG006078>, 2021.

Birch, L., Schwalm, C. R., Natali, S., Lombardozzi, D., Keppel-Aleks, G., Watts, J., Lin, X., Zona, D., Oechel, W., Sachs, T., Black, T. A., and **Rogers, B. M.**: Addressing biases in Arctic–boreal carbon cycling in the Community Land Model Version 5, *Geoscientific Model Development*, 14, 3361–3382, <https://doi.org/10.5194/gmd-14-3361-2021>, 2021.

Scholten, R. C., Jandt, R., Miller, E. A., **Rogers, B. M.**, and Veraverbeke, S.: Overwintering fires in boreal forests, *Nature*, 593, 399–404, <https://doi.org/10.1038/s41586-021-03437-y>, 2021.

Reported by ABC, B Positive, Barron's, BBC, the Boston Globe, CBC, Complex, C2wlabnews, Ecoportal.net, E&E News, Eos, Florida News Times, Gamers Grade, Irish News, NASA Earth Observatory, National Geographic, Nature Asia, Nature Podcast, New Scientist, News Express, News Opener, News WWC, Phys.org, Popular Mechanics, Radio James Town, Republic Americas, Science Focus, Tech Live, Thedrive.net, The National News, The New York Times, UK Today News, the UK Times, Vice, Voice Press, Web.de, Weis Radio, Wired, the YYC Times, X-MOL

Natali, S. M., Holdren, J. P., **Rogers, B. M.**, Treharne, R., Duffy, P. B., Pomerance, R., and MacDonald, E.: Permafrost carbon feedbacks threaten global climate goals, *Proceedings of the National Academy of Sciences of the United States of America*, 118, e2100163118, <https://doi.org/10.1073/pnas.2100163118>, 2021.

Reported by AZoCleantech, Daily Mail, EcoDebate, The Globe and Mail, Florida Time News, The Hill, Inverse, the National Geographic Espana, Phys.org, Reuters, TeknoDate, and U.S. News and World Report

2020

Dieleman, C. M., **Rogers, B. M.**, Potter, S., Veraverbeke, S., Johnstone, J. F., Laflamme, J., Solvik, K., Walker, X. J., Mack, M. C. and Turetsky, M. R.: Wildfire combustion and carbon stocks in the southern Canadian boreal forest: Implications for a warming world, *Global Change Biology*, 26(11), 6062–6079, doi:10.1111/gcb.15158, 2020.

Featured in a Global Change Biology Summary Video

Walker, X. J., **Rogers, B. M.**, Veraverbeke, S., Johnstone, J. F., Baltzer, J. L., Barrett, K., Bourgeau-Chavez, L., Day, N. J., de Groot, W. J., Dieleman, C. M., Goetz, S., Hoy, E., Jenkins, L. K., Kane, E. S., Parisien, M.-A., Potter, S., Schuur, E. a. G., Turetsky, M., Whitman, E., and Mack, M. C.: Fuel availability not fire weather controls boreal wildfire severity and carbon emissions, *Nature Climate Change*, 10, 1130-U100, <https://doi.org/10.1038/s41558-020-00920-8>, 2020.

Reported by AzoCleantech Inverse, News Break, ScienceDaily

Lin, X., **Rogers, B. M.**, Sweeney, C., Chevallier, F., Arshinov, M., Dlugokencky, E., Machida, T., Sasakawa, M., Tans, P., and Keppel-Aleks, G.: Siberian and temperate ecosystems shape Northern Hemisphere atmospheric CO₂ seasonal amplification, *Proceedings of the National Academy of Sciences of the United States of America*, 117, 21079–21087, <https://doi.org/10.1073/pnas.1914135117>, 2020.

Reported by Politico, Science Daily, The Science Times, and WCAI Cape and Islands NPR

Walker, X. J., Baltzer, J. L., Bourgeau-Chavez, L., Day, N. J., Dieleman, C. M., Johnstone, J. F., Kane, E. S., **Rogers, B. M.**, Turetsky, M. R., Veraverbeke, S. and Mack, M. C.: Patterns of Ecosystem Structure and Wildfire Carbon Combustion Across Six Ecoregions of the North American Boreal Forest, *Frontiers in Forests and Global Change*, 3, doi:10.3389/ffgc.2020.00087, 2020.

Cansler, C. A., Hood, S. M., Varner, J. M., Mantgem, P. J. van, Agne, M. C., Andrus, R. A., Ayres, M. P., Ayres, B. D., Bakker, J. D., Battaglia, M. A., Bentz, B. J., Breece, C. R., Brown, J. K., Cluck, D. R., Coleman, T. W., Corace, R. G., Covington, W. W., Cram, D. S., Cronan, J. B., Crouse, J. E., Das, A. J., Davis, R. S., Dickinson, D. M., Fitzgerald, S. A., Fulé, P. Z., Ganio, L. M., Grayson, L. M., Halpern, C. B., Hanula, J. L., Harvey, B. J., Hiers, J. K., Huffman, D. W., Keifer, M., Keyser, T. L., Kobziar, L. N., Kolb, T. E., Kolden, C. A., Kopper, K. E., Kreidler, J. R., Kreye, J. K., Latimer, A. M., Lerch, A. P., Lombardero, M. J., McDaniel, V. L., McHugh, C. W., McMillin, J. D., Moghaddas, J. J., O'Brien, J. J., Perrakis, D. D. B., Peterson, D. W., Prichard, S. J., Progar, R. A., Raffa, K. F., Reinhardt, E. D., Restaino, J. C., Roccaforte, J. P., **Rogers, B. M.**, Ryan, K. C., Safford, H. D., Santoro, A. E., Shearman, T. M., Shumate, A. M., Sieg, C. H., Smith, S. L., Smith, R. J., Stephenson, N. L., Stuever, M., Stevens, J. T., Stoddard, M. T., Thies, W. G., Vaillant, N. M., Weiss, S. A., Westlind, D. J., Woolley, T. J. and Wright, M. C.: The Fire and Tree Mortality Database, for empirical modeling of individual tree mortality after fire, *Scientific Data*, 7(1), 1–14, doi:10.1038/s41597-020-0522-7, 2020.

McLauchlan, K. K., Higuera, P. E., Miesel, J., **Rogers, B. M.**, Schweitzer, J., Shuman, J. K., Tepley, A. J., Varner, J. M., Veblen, T. T., Adalsteinsson, S. A., Balch, J. K., Baker, P., Batllori, E., Bigio, E., Brando, P., Cattau, M., Chipman, M. L.,

Coen, J., Crandall, R., Daniels, L., Enright, N., Gross, W. S., Harvey, B. J., Hatten, J. A., Hermann, S., Hewitt, R. E., Kobziar, L. N., Landesmann, J. B., Loranty, M. M., Maezumi, S. Y., Mearns, L., Moritz, M., Myers, J. A., Pausas, J. G., Pellegrini, A. F. A., Platt, W. J., Roozeboom, J., Safford, H., Santos, F., Scheller, R. M., Sherriff, R. L., Smith, K. G., Smith, M. D. and Watts, A. C.: Fire as a fundamental ecological process: Research advances and frontiers, *Journal of Ecology*, 108(5), 2047–2069, doi:10.1111/1365-2745.13403, 2020.

Featured on Journal of Ecology's The Blog

Dellasala, D. A., Kormos, C. F., Keith, H., Mackey, B., Young, V., **Rogers, B.** and Mittermeier, R. A.: Primary Forests Are Undervalued in the Climate Emergency, *BioScience*, doi:10.1093/biosci/biaa030, 2020.

Potter, S., Solvik, K., Erb, A., Goetz, S. J., Johnstone, J. F., Mack, M. C., Randerson, J. T., Román, M. O., Schaaf, C. L., Turetsky, M. R., Veraverbeke, S., Walker, X. J., Wang, Z., Massey, R. and **Rogers, B. M.**: Climate change decreases the cooling effect from postfire albedo in boreal North America, *Global Change Biology*, 26(3), 1592–1607, doi:10.1111/gcb.14888, 2020.

Rogers, B. M., Balch, J. K., Goetz, S. J., Lehmann, C. E. R. and Turetsky, M.: Focus on changing fire regimes: interactions with climate, ecosystems, and society, *Environmental Research Letters*, 15(3), 030201, doi:10.1088/1748-9326/ab6d3a, 2020.

Received IOP Publishing Top Cited Paper Award (2023)

Duncan, B. N., Ott, L. E., Abshire, J. B., Brucker, L., Carroll, M. L., Carton, J., Comiso, J. C., Dinnat, E. P., Forbes, B. C., Gonsamo, A., Gregg, W. W., Hall, D. K., Jalongo, I., Jandt, R., Kahn, R. A., Karpechko, A., Kawa, S. R., Kato, S., Kumpula, T., Kyrölä, E., Loboda, T. V., McDonald, K. C., Montesano, P. M., Nassar, R., Neigh, C. S. R., Parkinson, C. L., Poulter, B., Pulliainen, J., Rautiainen, K., **Rogers, B. M.**, Rousseaux, C. S., Soja, A. J., Steiner, N., Tamminen, J., Taylor, P. C., Tzortziou, M. A., Virta, H., Wang, J. S., Watts, J. D., Winker, D. M. and Wu, D. L.: Space-Based Observations for Understanding Changes in the Arctic-Boreal Zone, *Reviews of Geophysics*, 58(1), e2019RG000652, doi:10.1029/2019RG000652, 2020.

2019

Natali, S. M., Watts, J. D., **Rogers, B. M.**, Potter, S., Ludwig, S. M., Selbmann, A.-K., Sullivan, P. F., Abbott, B. W., Arndt, K. A., Birch, L., Björkman, M. P., Bloom, A. A., Celis, G., Christensen, T. R., Christiansen, C. T., Commene, R., Cooper, E. J., Crill, P., Czimeczik, C., Davydov, S., Du, J., Egan, J. E., Elberling, B., Euskirchen, E. S., Friberg, T., Genet, H., Göckede, M., Goodrich, J. P., Grogan, P., Helbig, M., Jafarov, E. E., Jastrow, J. D., Kalhori, A. A. M., Kim, Y., Kimball, J. S., Kutzbach, L., Lara, M. J., Larsen, K. S., Lee, B.-Y., Liu, Z., Loranty, M. M., Lund, M., Lupascu, M., Madani, N., Malhotra, A., Matamala, R., McFarland, J., McGuire, A. D., Michelsen, A., Minions, C., Oechel, W. C., Olefeldt, D., Parmentier, F.-J. W., Pirk, N., Poulter, B., Quinton, W., Rezanezhad, F., Risk, D., Sachs, T., Schaefer, K., Schmidt, N. M., Schuur, E. A. G., Semenchuk, P. R., Shaver, G., Sonnentag, O., Starr, G., Treat, C. C., Waldrop, M. P., Wang, Y., Welker, J., Wille, C., Xu, X., Zhang, Z., Zhuang, Q. and Zona, D.: Large loss of CO₂ in winter observed across the northern permafrost region, *Nature Climate Change*, 1–6, doi:10.1038/s41558-019-0592-8, 2019.

Reported by CBC radio Quebec, ClimateWire, Global National News Canada, The Independent, NASA Earth Science News, NASA Earth Observatory, Nature Climate Change News & Views, NewScientist, Newsweek, Science, the Washington Examiner, and the Washington Post.

Mekonnen, Z. A., Riley, W. J., Randerson, J. T., Grant, R. F. and **Rogers, B. M.**: Expansion of high-latitude deciduous forests driven by interactions between climate warming and fire, *Nature Plants*, 1–7, doi:10.1038/s41477-019-0495-8, 2019.

Reported by ScienceDaily, the Daily Californian, EurekAlert!, and ScienceDaily

Walker, X. J., Baltzer, J. L., Cumming, S. G., Day, N. J., Ebert, C., Goetz, S., Johnstone, J. F., Potter, S., **Rogers, B. M.**, Schuur, E. A. G., Turetsky, M. R. and Mack, M. C.: Increasing wildfires threaten historic carbon sink of boreal forest soils, *Nature*, 572(7770), 520–523, doi:10.1038/s41586-019-1474-y, 2019.

Featured on Nature's Burning issue and reported by Nature News and Views, Phys.org, NASA Earth, NASA Goddard, Express, Nature World News, Meadow Lake SK newspaper, Yorkton SK newspaper, Prince Albert SK newspaper, Saskatoon Star Phoenix, CBC Saskatoon Morning Show, CBC Whitehorse Morning show, 630CHED Edmonton Radio, The Conversation Canada, ScienceDaily, and EurekAlert!

Foster, A. C., Armstrong, A. H., Shuman, J. K., Shugart, H. H., **Rogers, B. M.**, Mack, M. C., Goetz, S. J. and Ranson, K. J.: Importance of tree- and species-level interactions with wildfire, climate, and soils in interior Alaska: Implications for forest change under a warming climate, *Ecological Modelling*, 409, 108765, doi:10.1016/j.ecolmodel.2019.108765, 2019.

Featured on NASA Earth Observatory and NASA NCCS In the News

Boyd, M. A., Berner, L. T., Doak, P., Goetz, S. J., **Rogers, B. M.**, Wagner, D., Walker, X. J. and Mack, M. C.: Impacts of climate and insect herbivory on productivity and physiology of trembling aspen (*Populus tremuloides*) in Alaskan boreal forests, *Environmental Research Letters*, 14(8), 085010, doi:10.1088/1748-9326/ab215f, 2019.

2018

Walker, X. J., **Rogers, B. M.**, Baltzer, J. L., Cumming, S. G., Day, N. J., Goetz, S. J., Johnstone, J. F., Schuur, E. A. G., Turetsky, M. R. and Mack, M. C.: Cross-scale controls on carbon emissions from boreal forest megafires, *Global Change Biology*, 24(9), 4251–4265, doi:10.1111/gcb.14287, 2018.

Reported by Cabin Radio.

Rogers, B. M., Solvik, K., Hogg, E. H., Ju, J., Masek, J. G., Michaelian, M., Berner, L. T. and Goetz, S. J.: Detecting early warning signals of tree mortality in boreal North America using multiscale satellite data, *Global Change Biology*, 24(6), 2284–2304, doi:10.1111/gcb.14107, 2018.

Archibald, S., Lehmann, C. E. R., Belcher, C. M., Bond, W. J., Bradstock, R. A., Daniau, A.-L., Dexter, K. G., Forrester, E. J., M Greve, He, T., Higgins, S. I., Hoffmann, W. A., Lamont, B. B., McGlenn, D. J., Moncrieff, G. R., Osborne, C. P., Pausas, J. G., O Price, Ripley, B. S., **Rogers, B. M.**, Schwilk, D. W., Simon, M. F., Turetsky, M. R., Werf, G. R. V. der and Zanne, A. E.: Biological and geophysical feedbacks with fire in the Earth system, *Environmental Research Letters*, 13(3), 033003, doi:10.1088/1748-9326/aa9ead, 2018.

Walker, X. J., Baltzer, J. L., Cumming, S. G., Day, N. J., Johnstone, J. F., **Rogers, B. M.**, Solvik, K., Turetsky, M. R. and Mack, M. C.: Soil organic layer combustion in boreal black spruce and jack pine stands of the Northwest Territories, Canada, *International Journal of Wildland Fire*, 27(2), 125–134, doi:10.1071/WF17095, 2018.

Fisher, J. B., Hayes, D. J., Schwalm, C. R., Huntzinger, D. N., Stofferahn, E., Kevin Schaefer, Luo, Y., Wullschlegel, S. D., Goetz, S., Miller, C. E., Griffith, P., Sarah Chadburn, Chatterjee, A., Ciais, P., Douglas, T. A., Genet, H., Ito, A., Neigh, C. S. R., Poulter, B., **Rogers, B. M.**, Sonnentag, O., Tian, H., Wang, W., Yongkang Xue, Yang, Z.-L., Zeng, N. and Zhang, Z.: Missing pieces to modeling the Arctic-Boreal puzzle, *Environmental Research Letters*, 13(2), 020202, doi:10.1088/1748-9326/aa9d9a, 2018.

2017

van der Werf, G. R., Randerson, J. T., Giglio, L., Leeuwen, T. T. van, Chen, Y., **Rogers, B. M.**, Mu, M., Marle, M. J. E. van, Morton, D. C., Collatz, G. J., Yokelson, R. J. and Kasibhatla, P. S.: Global fire emissions estimates during 1997–2016, *Earth System Science Data*, 9(2), 697–720, doi:https://doi.org/10.5194/essd-9-697-2017, 2017.

Rogers, B. M., Jantz, P. and Goetz, S. J.: Vulnerability of eastern US tree species to climate change, *Global Change Biology*, 23(8), 3302–3320, doi:10.1111/gcb.13585, 2017.

Reported by Mongabay, GreenNews, Humanitarian News, and the Duluth News Tribune; featured in the Boston Globe.

Veraverbeke, S., **Rogers, B. M.**, Goulden, M. L., Jandt, R. R., Miller, C. E., Wiggins, E. B. and Randerson, J. T.: Lightning as a major driver of recent large fire years in North American boreal forests, *Nature Climate Change*, 7(7), 529–534, doi:10.1038/nclimate3329, 2017.

Reported by Canadian Geographic, ClimateSignals, NASA Earth Observatory, National Geographic, Phys.org, Scientific American, ScienceNews, and the World Climate Research Programme

2016

Rogers, B. M., Jantz, P., Goetz, S. J. and Theobald, D. M.: Vulnerability of Tree Species to Climate Change in the Appalachian Landscape Conservation Cooperative, in *Climate Change in Wildlands: Pioneering Approaches to Science and Management in the Rocky Mountains and Appalachians*, edited by A. Hansen, B. Monahan, T. Olliff, and D. Theobald, pp. 212–233, Island Press, Washington, DC., 2016.

Reported by NASA Visible Earth, Mountain Forum, and Pro Arb Magazine.

Jantz, P., Monahan, B., Hansen, A., **Rogers, B. M.**, Zolkos, S., Cormier, T. and Goetz, S.: Modeling Potential Impacts of Climate Change on Vegetation for National Parks in the Eastern United States, in *Climate Change in Wildlands: Pioneering Approaches to Science and Management in the Rocky Mountains and Appalachians*, edited by A. Hansen, B. Monahan, T. Olliff, and D. Theobald, pp. 151–173, Island Press, Washington, DC., 2016.

Guay, K., Jantz, P., Gross, J. E., **Rogers, B. M.** and Goetz, S. J.: Historical and Projected Climates as a Basis for Climate Change Exposure and Adaptation Potential across the Appalachian Landscape Conservation Cooperative, in *Climate Change in Wildlands: Pioneering Approaches to Science and Management in the Rocky Mountains and Appalachians*, edited by A. Hansen, B. Monahan, T. Olliff, and D. Theobald, pp. 78–94, Island Press, Washington, DC., 2016.

- Hoover, D. L. and **Rogers, B. M.**: Not all droughts are created equal: the impacts of interannual drought pattern and magnitude on grassland carbon cycling, *Global Change Biology*, 22(5), 1809–1820, doi:10.1111/gcb.13161, 2016.
- Holden, S. R., **Rogers, B. M.**, Treseder, K. K. and Randerson, J. T.: Fire severity influences the response of soil microbes to a boreal forest fire, *Environmental Research Letters*, 11(3), 035004, doi:10.1088/1748-9326/11/3/035004, 2016.
Reported by Environmental Research Web and Frontiers in Ecology and the Environment.
- Abbott, B. W., Jones, J. B., Schuur, E. A. G., III, F. S. C., Bowden, W. B., Bret-Harte, M. S., Epstein, H. E., Flannigan, M. D., Harms, T. K., Hollingsworth, T. N., Mack, M. C., McGuire, A. D., Natali, S. M., Rocha, A. V., Tank, S. E., Turetsky, M. R., Vonk, J. E., Wickland, K. P., Aiken, G. R., Alexander, H. D., Amon, R. M. W., Benscoter, B. W., Yves Bergeron, Bishop, K., Blarquez, O., Bond-Lamberty, B., Breen, A. L., Buffam, I., Yihua Cai, Carcaillet, C., Carey, S. K., Chen, J. M., Chen, H. Y. H., Christensen, T. R., Cooper, L. W., Cornelissen, J. H. C., Groot, W. J. de, DeLuca, T. H., Dorrepaal, E., Fetcher, N., Finlay, J. C., Forbes, B. C., French, N. H. F., Gauthier, S., Girardin, M. P., Goetz, S. J., Goldammer, J. G., Gough, L., Grogan, P., Guo, L., Higuera, P. E., Hinzman, L., Hu, F. S., Gustaf Hugelius, Jafarov, E. E., Jandt, R., Johnstone, J. F., Karlsson, J., Kasischke, E. S., Gerhard Kattner, Kelly, R., Keuper, F., Kling, G. W., Kortelainen, P., Kouki, J., Kuhry, P., Hjalmar Laudon, Laurion, I., Macdonald, R. W., Mann, P. J., Martikainen, P. J., McClelland, J. W., Ulf Molau, Oberbauer, S. F., Olefeldt, D., Paré, D., Parisien, M.-A., Payette, S., Changhui Peng, Pokrovsky, O. S., Rastetter, E. B., Raymond, P. A., Reynolds, M. K., Rein, G., Reynolds, J. F., Robards, M., **Rogers, B. M.**, Schädel, C., Schaefer, K., Schmidt, I. K., Anatoly Shvidenko, Sky, J., Spencer, R. G. M., Starr, G., Striegl, R. G., Teisserenc, R., Tranvik, L. J., Virtanen, T., Welker, J. M., et al.: Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment, *Environmental Research Letters*, 11(3), 034014, doi:10.1088/1748-9326/11/3/034014, 2016.
Featured in ERL 'Highlights of 2016'.

2015

- Boike, J., Lawrence, D., Natali, S., **Rogers, B.**, Romanovsky, V., Schaefer, K. and Spawn, S.: Permafrost: The Frozen Amplifier, in *Thresholds and Closing Windows: Risks of Irreversible Cryosphere Climate Change*, edited by P. Pearson, pp. 11–14, International Cryosphere Climate Initiative., 2015.
- Mouteva, G. O., Czimczik, C. I., Fahrni, S. M., Wiggins, E. B., **Rogers, B. M.**, Veraverbeke, S., Xu, X., Santos, G. M., Henderson, J., Miller, C. e. and Randerson, J. T.: Black carbon aerosol dynamics and isotopic composition in Alaska linked with boreal fire emissions and depth of burn in organic soils, *Global Biogeochemical Cycles*, 29, 1977–2000, doi:10.1002/2015GB005247, 2015.
Featured by the Alaska Fire Science Consortium.
- Fisher, R. A., Muszala, S., Verstein, M., Lawrence, P., Xu, C., McDowell, N. G., Knox, R. G., Koven, C., Holm, J., **Rogers, B. M.**, Spessa, A., Lawrence, D. and Bonan, G.: Taking off the training wheels: the properties of a dynamic vegetation model without climate envelopes, *CLM4.5(ED)*, *Geoscientific Model Development*, 8(11), 3593–3619, doi:10.5194/gmd-8-3593-2015, 2015.
- Fisher, R., Muszala, S., Verstein, M., Lawrence, P., Xu, C., McDowell, N., Knox, R., Koven, C., Holm, J., **Rogers, B. M.**, Spessa, A., Lawrence, D., and Bonan, G.: *CLM(ED) model: Technical Documentation*, National Center for Atmospheric Research, Boulder, CO., 2015.
- Rogers, B. M.**, Bachelet, D., Drapek, R. J., Law, B. E., Neilson, R. P. and Wells, J. R.: Drivers of Future Ecosystem Change in the US Pacific Northwest: The Role of Climate, Fire, and Nitrogen, in *Global Vegetation Dynamics: Concepts and Applications in the MC1 Model*, edited by D. Bachelet and D. Turner, pp. 91–114, John Wiley & Sons, Inc., Washington, D. C., 2015.
- Bachelet, D., **Rogers, B. M.** and Conklin, D. R.: Challenges and Limitations of Using a DGVM for Local to Regional Applications, in *Global Vegetation Dynamics: Concepts and Applications in the MC1 Model*, edited by D. Bachelet and D. Turner, pp. 31–40, John Wiley & Sons, Inc., Washington, D.C., 2015.
- Veraverbeke, S., **Rogers, B. M.** and Randerson, J. T.: Daily burned area and carbon emissions from boreal fires in Alaska, *Biogeosciences*, 12(11), 3579–3601, doi:10.5194/bg-12-3579-2015, 2015.
Featured in the Washington Post and NASA Earth Observatory.
- Rogers, B. M.**, Soja, A. J., Goulden, M. L. and Randerson, J. T.: Influence of tree species on continental differences in boreal fires and climate feedbacks, *Nature Geoscience*, 8, 228 – 234, doi:10.1038/ngeo2352, 2015.
Reported by DailyMail, EurekAlert, Europapress, Flipboard, Gizmodo, io9, La Recherche, NASA Earth Observatory, National Fire Protection Association, ScienceDaily, and Smithsonian Online Magazine.

2014

- Rogers, B. M.**, Veraverbeke, S., Azzari, G., Czimeczik, C. I., Holden, S. R., Mouteva, G. O., Sedano, F., Treseder, K. K. and Randerson, J. T.: Quantifying fire-wide carbon emissions in interior Alaska using field measurements and Landsat imagery, *Journal of Geophysical Research Biogeosciences*, 119, 1608–1629, doi:10.1002/2014JG002657, 2014.
- Lin, H.-W., McCarty, J. L., Wang, D., **Rogers, B. M.**, Morton, D. C., Collatz, G. J., Jin, Y. and Randerson, J. T.: Management and climate contributions to satellite-derived active fire trends in the contiguous United States, *Journal of Geophysical Research Biogeosciences*, 119, 645–660, doi:10.1002/2013JG002382, 2014.
- Veraverbeke, S., Sedano, F., Hook, S. J., Randerson, J. T., Jin, Y. and **Rogers, B. M.**: Mapping the daily progression of large wildland fires using MODIS active fire data, *International Journal of Wildland Fire*, 23(5), 655–667, doi:10.1071/WF13015, 2014.

2009 - 2013

- Rogers, B. M.**, Randerson, J. T. and Bonan, G. B.: High-latitude cooling associated with landscape changes from North American boreal forest fires, *Biogeosciences*, 10(2), 699–718, doi:10.5194/bg-10-699-2013, 2013.
- Randerson, J. T., Chen, Y., Werf, G. R. van der, **Rogers, B. M.**, and Morton, D. C.: Global burned area and biomass burning emissions from small fires, *Journal of Geophysical Research Biogeosciences*, 117, G04012, doi:10.1029/2012JG002128, 2012.
- Ward, D. S., Kloster, S., Mahowald, N. M., **Rogers, B. M.**, Randerson, J. T. and Hess, P. G.: The changing radiative forcing of fires: global model estimates for past, present and future, *Atmospheric Chemistry and Physics*, 12(22), 10857–10886, doi:10.5194/acp-12-10857-2012, 2012.
- Rogers, B. M.**, Neilson, R. P., Drapek, R., Lenihan, J. M., Wells, J. R., Bachelet, D. and Law, B. E.: Impacts of climate change on fire regimes and carbon stocks of the U.S. Pacific Northwest, *Journal of Geophysical Research Biogeosciences*, 116, G03037, doi:10.1029/2011JG001695, 2011.
- French, N. H. F., De Groot, W. J., Jenkins, L. K., **Rogers, B. M.**, Alvarado, E., Amiro, B., De Jong, B., Goetz, S., Hoy, E., Hyer, E., Keane, R., Law, B. E., McKenzie, D., McNulty, S. G., Ottmar, R., Perez-Salicipup, D. R., Randerson, J., Robertson, K. M. and Turetsky, M.: Model comparisons for estimating carbon emissions from North American wildland fire, *Journal of Geophysical Research Biogeosciences*, 116, G00K05, doi:10.1029/2010JG001469, 2011.
- Bachelet, D., Johnson, B. R., Bridgham, S. D., Dunn, P. V., Anderson, H. E. and **Rogers, B. M.**: Climate change impacts on western Pacific Northwest prairies and savannas, *Northwest Science*, 85(2), 411–429, doi:10.3955/046.085.0224, 2011.
- Kerns, B. K., Naylor, B. J., Buonopane, M., Parks, C. G. and **Rogers, B.**: Modeling tamarisk (*tamarix* spp.) habitat and climate change effects in the Northwestern United States, *Invasive Plant Science and Management*, 2(3), 200–215, doi:10.1614/IPSM-08-120.1, 2009.
- Bachelet, D., Conklin, D., **Rogers, B.**, McGlinchy, M., Lenihan, J., Neilson, R., Drapek, R.: Can global models reproduce the current increase in Western United States Wildfires and project a reliable future trend?, *Nature Precedings*, doi:10.1038/npre.2009.3618, 2009.

ARCHIVED DATA PRODUCTS

- Delcourt, C. J. F., **Rogers, B. M.**, Akhmetzyanov, L., Izbicki, B., Scholten, R. C., Shestakova, T., van Wees, D., Mack, M. C., Sass-Klaassen, U., and Veraverbeke, S.: Burned and Unburned Boreal Larch Forest Site Data, Northeast Siberia, <https://doi.org/10.5281/zenodo.10840088>, 2024.
- Hessilt, T. D., **Rogers, B. M.**, Scholten, R. C., Potter, S., Janssen, T. a. J., and Veraverbeke, S.: ABoVE: Ignitions of ABoVE-FED Fires in Alaska and Canada, ORNL DAAC, <https://doi.org/10.3334/ORNLDAAC/2316>, 2023.
- Massey, R., **Rogers, B. M.**, Berner, L. T., Cooperdock, S., Mack, M. C., Walker, X. J., and Goetz, S. J.: Arctic-Boreal Vulnerability Experiment (ABoVE) Deciduous Fractional Cover and Tree Canopy Cover for Boreal North America, 1992-2015, ORNL DAAC, <https://doi.org/10.3334/ORNLDAAC/2296>, 2023.
- Mullen, A., Watts, J.D., **Rogers, B.M.**, Carroll, M.L., Caraballo-Vega, J.A., Noomah, J., Williams, Z.W., and Hung, J.K.Y.: Arctic-Boreal Vulnerability Experiment (ABoVE) ABoVE: Lake and Pond Extent in Alaskan Boreal and Tundra Subregions, 2019-2021, ORNL DAAC, <https://doi.org/10.3334/ORNLDAAC/2134>, 2022.
- Potter, S., Veraverbeke, S., Walker, X. J., Mack, M. C., Goetz, S. J., Baltzer, J. L., Dieleman, C., French, N. H. F., Kane, E. S., Turetsky, M. R., Wiggins, E. B., and **Rogers, B. M.**: ABoVE: Burned Area, Depth, and Combustion for Alaska and Canada, 2001-2019, ORNL DAAC, <https://doi.org/10.3334/ORNLDAAC/2063>, 2022.

- Baltzer, J. L., Day, N. J., Walker, X. J., Greene, D. F., Mack, M. C., Arseneault, D., Barnes, J., Bergeron, Y., Boucher, Y., Bourgeau-Chavez, L. L., Brown, C. D., Carrière, S., Howard, B. K., Gauthier, S., Parisien, M. A., Reid, K. A., **Rogers, B. M.**, Roland, C., Sirois, L., Stehn, S., Thompson, D. K., Turetsky, M. R., Whitman, E., and Johnstone, J. F.: ABoVE: Synthesis of Post-Fire Regeneration Across Boreal North America, ORNL DAAC, <https://doi.org/10.3334/ORNLDAAC/1955>, 2022.
- Virkkala, A.-M., Natali, S., **Rogers, B. M.**, Watts, J. D., Savage, K., Connon, S. J., Mauritz-Tozer, M. E., Schuur, E. a. G., Peter, D. L., Minions, C., Nojeim, J., Commane, R., Emmerton, C. A., Goeckede, M., Helbig, M., Holl, D., Iwata, H., Kobayashi, H., Kolari, P., Lopez-Blanco, E., Marushchak, M. E., Mastepanov, M., Merbold, L., Peichl, M., Sonnentag, O., Sachs, T., Ueyama, M., Voigt, C., Aurela, M., Boike, J., Celis, G., Chae, N., Christensen, T., Bret-Harte, S., Dengel, S., Dolman, H., Edgar, C., Elberling, B., Euskirchen, S. E., Grelle, A., Hatakka, J., Humphreys, E. R., Jaerveoja, J., Kotani, A., Kutzbach, L., Laurila, T., Lohila, A., Mammarella, I., Matsuura, Y., Meyer, G., Nilsson, M. B., Oberbauer, S. F., Park, S. J., Parmentier, F. J. W., Petrov, R., Prokushkin, A. S., Zyryanov, S., Schulze, C., St. Louis, V. L., Tuittila, E. S., Tuovinen, J. P., Quinton, W., Varlagin, A., Zona, D., and Zyryanov, V. I.: The ABCflux Database: Arctic-Boreal CO₂ Flux and Site Environmental Data, 1989-2020, <https://doi.org/10.3334/ORNLDAAC/1934>, 2021.
- Boyd, M. A., Berner, L. T., Foster, Adrianna. C., Goetz, S. J., **Rogers, B. M.**, Walker, X. J., Mack, M. C., and Bonanza Creek LTER: Annual aspen growth (basal area increment; BAI) of 84 aspen that were alive and 76 that were dead when sampled in 2016 from 22 plots (eight sites) that are a part of the Cooperative Alaska Forest Inventory (CAFI), <https://doi.org/10.6073/pasta/4041316bc68a6d5f5f9252c9ef92fed4>, 2021a.
- Boyd, M. A., Berner, L. T., Foster, Adrianna. C., Goetz, S. J., **Rogers, B. M.**, Walker, X. J., Mack, M. C., and Bonanza Creek LTER: Annual maximum summer NDVI (NDVImax) at 22 plots (8 sites) that are a part of the Cooperative Alaska Forest Inventory (CAFI) from 1986 - 2015., <https://doi.org/10.6073/pasta/17dd18c0a4f0e9c807c0220dd519313d>, 2021b.
- Boyd, M. A., Berner, L. T., Foster, Adrianna. C., Goetz, S. J., **Rogers, B. M.**, Walker, X. J., Mack, M. C., and Bonanza Creek LTER: Seasonal climate data (growing season, spring, fall/winter, and previous growing season) at an annual resolution for eight sites from the Cooperative Alaska Forest Inventory (CAFI) from 1945 - 2013., <https://doi.org/10.6073/pasta/08d8211791b22ce66ba611c64cc30d0e>, 2021c.
- Boyd, M. A., Berner, L. T., Foster, Adrianna. C., Goetz, S. J., **Rogers, B. M.**, Walker, X. J., Mack, M. C., and Bonanza Creek LTER: Tree characteristics of 84 aspen that were alive and 76 that were dead when sampled in 2016 from 22 plots (8 sites) that are a part of the Cooperative Alaska Forest Inventory (CAFI), <https://doi.org/10.6073/pasta/8428afd5a949e52be0d78184df3d50ed>, 2021d.
- Virkkala, A.-M., Aalto, J., **Rogers, B. M.**, Tagesson, T., Treat, C. C., Natali, S. M., Watts, J. D., Potter, S., Lehtonen, A., Mauritz, M., Schuur, E. A. G., Kochendorfer, J., Zona, D., Oechel, W., Kobayashi, H., Humphreys, E., Goeckede, M., Iwata, H., Lafleur, P., Euskirchen, E. S., Bokhorst, S., Marushchak, M., Martikainen, P. J., Elberling, B., Voigt, C., Biasi, C., Sonnentag, O., Parmentier, F.-J., Ueyama, M., Celis, G., St.Loius, V. L., Emmerton, C. A., Peichl, M., Chi, J., Järveoja, J., Nilsson, M. B., Oberbauer, S. F., Torn, M. S., Park, S.-J., Dolman, H., Mammarella, I., Chae, N., Poyatos, R., López-Blanco, E., Christensen, T. R., Kwon, M. J., and Luoto, M.: Predictions for “Statistical upscaling of ecosystem CO₂ fluxes across the terrestrial tundra and boreal domain: regional patterns and uncertainties,” <https://doi.org/10.5281/zenodo.4521852>, 2021.
- Virkkala, A.-M., Aalto, J., **Rogers, B. M.**, Tagesson, T., Treat, C. C., Natali, S. M., Watts, J. D., Potter, S., Lehtonen, A., Mauritz, M., Schuur, E. A. G., Kochendorfer, J., Zona, D., Oechel, W., Kobayashi, H., Ueyama, M., Humphreys, E., Goeckede, M., Iwata, H., Lafleur, P., Euskirchen, E. S., Bokhorst, S., Marushchak, M., Elberling, B., Voigt, C., Sonnentag, O., Parmentier, F.-J. W., Celis, G., St.Loius, V. L., Emmerton, C. A., Peichl, M., Chi, J., Järveoja, J., Oberbauer, S. F., Torn, M. S., Park, S.-J., Dolman, H., Mammarella, I., Chae, N., Poyatos, R., Nilsson, M. B., Biasi, C., Martikainen, P. J., Lopéz-Blanco, E., Christensen, T. R., Kwon, M. J., Chen, L., and Luoto, M.: Data for: “Statistical upscaling of ecosystem CO₂ fluxes across the terrestrial tundra and boreal domain: regional patterns and uncertainties,” <https://doi.org/10.5281/zenodo.4519583>, 2021.
- Birch, L., Schwalm, C., Natali, S., Lombardozzi, D., Watts, J., Keppel-Aleks, G., Lin, X., Sacks, B., Oleson, K., Lawrence, D., Wieder, W., and **Rogers, B.**: Arctic Boreal CLM, Zenodo, <https://doi.org/10.5281/zenodo.4706221>, 2021.
- Scholten, R. C., Veraverbeke, S., Jandt, R., Miller, E. A., and **Rogers, B. M.**: ABoVE: Ignitions, Burned Area, and Emissions of Fires in AK, YT, and NWT, 2001-2018, ORNL DAAC, doi.org/10.3334/ORNLDAAC/1812, 2021.
- Lin, X., Keppel-Aleks, G., **Rogers, B. M.**, and Birch, L.: Simulated CO₂ and tracer concentrations in the Northern Hemisphere from a tagged transport model GEOS-Chem v12.0.0, University of Michigan, [doi:10.7302/rp59-rw53](https://doi.org/10.7302/rp59-rw53), 2020.
- Potter, S., **Rogers, B.M.** and Dieleman, C.: ABoVE: Spatial Estimates of Carbon Combustion from Wildfires across SK, Canada, 2015, ORNL DAAC, [doi:10.3334/ORNLDAAC/1787](https://doi.org/10.3334/ORNLDAAC/1787), 2020.

- Cansler, C. A., Hood, S. M., Varner, J. M., van Mantgem, P. J., Agne, M. C., Andrus, R. A., Ayres, M. P., Ayres, B. D., Bakker, J. D., Battaglia, M. A., Bentz, B. J., Breece, C. R., Brown, J. K., Cluck, D. R., Coleman, T. W., Corace, R. G., Covington, W. W., Cram, D. S., Cronan, J. B., Crouse, J. E., Das, A. J., Davis, R. S., Dickinson, D. M., Fitzgerald, S. A., Fulé, P. Z., Ganio, L. M., Grayson, L. M., Halpern, C. B., Hanula, J. L., Harvey, B. J., Hiers, J. K., Huffman, D. W., Keifer, M., Keyser, T. L., Kobziar, L. N., Kolb, T. E., Kolden, C. A., Kopper, K. E., Kreidler, J. R., Kreye, J. K., Latimer, A. M., Lerch, A. P., Lombardero, M. J., McDaniel, V. L., McHugh, C. W., McMillin, J. D., Moghaddas, J. J., O'Brien, J. J., Perrakis, D. D. B., Peterson, D. W., Prichard, S. J., Progar, R. A., Raffa, K. F., Reinhardt, E. D., Restaino, J. C., Roccaforte, J. P., **Rogers, B. M.**, Ryan, K. C., Safford, H. D., Santoro, A. E., Shearman, T. M., Shumate, A. M., Sieg, C. H., Smith, S. L., Smith, R. J., Stephenson, N. L., Steuver, M., Stevens, J. T., Stoddard, M. T., Thies, W. G., Vaillant, N. M., Weiss, S. A., Westlind, D. J., Woolley, T. J. and Wright, M.: Fire and tree mortality database (FTM), Forest Service Research Data Archive, doi:10.2737/RDS-2020-0001, 2020.
- Dieleman, C., **Rogers, B. M.**, Veraverbeke, S., Johnstone, J. F., Laflamme, J., Gelhorn, L., Solvik, K., Walker, X. J., Mack, M. C. and Turetsky, M. R.: ABoVE: Characterization of Burned and Unburned Boreal Forest Stands, SK, Canada, 2016, ORNL DAAC, doi:10.3334/ORNLDAAC/1740, 2020.
- Walker, X. J., Baltzer, J. L., Bourgeau-Chavez, L. L., Day, N. J., De Groot, W. J., Dieleman, C., Hoy, E. E., Johnstone, J. F., Kane, E. S., Parisien, M. A., Potter, S., **Rogers, B. M.**, Turetsky, M. R., Veraverbeke, S., Whitman, E. and Mack, M. C.: ABoVE: Synthesis of Burned and Unburned Forest Site Data, AK and Canada, 1983-2016, ORNL DAAC, doi:10.3334/ORNLDAAC/1744, 2020.
- Walker, X. J., Baltzer, J. L., Laurier, W., Cumming, S. G., Day, N. J., Goetz, S. J., Johnstone, J. F., Potter, S., **Rogers, B. M.**, Schuur, E. a. G., Turetsky, M. R. and Mack, M. C.: ABoVE: Characterization of Carbon Dynamics in Burned Forest Plots, NWT, Canada, 2014, ORNL DAAC, doi:10.3334/ORNLDAAC/1664, 2019.
- Solvik, K., Potter, S., Erb, A. M., Roman, M., Schaaf, C., Sun, Q., Wang, Z. and **Rogers, B. M.**: ABoVE: MODIS-Derived Daily Mean Blue Sky Albedo for Northern North America, 2000-2017, ORNL DAAC, doi:10.3334/ORNLDAAC/1605, 2019.
- Watts, J. D., Natali, S., Potter, S. and **Rogers, B. M.**: Gridded Winter Soil CO₂ Flux Estimates for pan-Arctic and Boreal Regions, 2003-2100, ORNL DAAC, doi:10.3334/ORNLDAAC/1683, 2019.
- Natali, S., Watts, J. D., Potter, S., **Rogers, B. M.**, et. al.: Synthesis of Winter In Situ Soil CO₂ Flux in pan-Arctic and Boreal Regions, 1989-2017, ORNL DAAC, doi:10.3334/ORNLDAAC/1692, 2019.
- Walker, X. J., **Rogers, B. M.**, Baltzer, J. L., Cummings, S. R., Day, N. J., Goetz, S. J., Johnstone, J. F., Turetsky, M. R. and Mack, M. C.: ABoVE: Wildfire Carbon Emissions and Burned Plot Characteristics, NWT, CA, 2014-2016, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1561, 2018.
- Rogers, B. M.**, Soja, A. J., Goulden, M. L. and Randerson, J. T.: Fire Intensity and Burn Severity Metrics for Circumpolar Boreal Forests, 2001-2013, ORNL Distributed Active Archive Center, doi: 10.3334/ORNLDAAC/1520, 2017.
- Veraverbeke, S., **Rogers, B. M.**, Goulden, M. L., Jandt, R., Miller, C. E., Wiggins, E. B. and Randerson, J. T.: ABoVE: Ignitions, burned area and emissions of fires in AK, YT, and NWT, 2001-2015, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1341, 2017.
- Mouteva, G. O., Czimczik, C. I., Fahrni, S. M., Wiggins, E. B., **Rogers, B. M.**, Veraverbeke, S., Xu, X., Santos, G. M., Henderson, J., Miller, C. E. and Randerson, J. T.: CARVE: Fire-Related Aerosol and Soil Elemental and Isotopic Composition, Alaska, 2013, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1340, 2016.
- Veraverbeke, S., **Rogers, B. M.** and Randerson, J. T.: CARVE: Alaskan Fire Emissions Database (AKFED), 2001-2013, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1282, 2015.

GRANTS AWARDED

- Woodwell Fund for Climate Solutions | 2024 - 2026 | Co-I | \$124,000
Arctic Wildfire Pollutants: Towards Improving Emissions Estimates and Developing Tribally-Led Monitoring
- Joint Fire Science Program | 2024 - 2027 | Co-PI | \$22,216 (to Woodwell)
Informing effective strategies for managing carbon with increasing fire in boreal forests of interior Alaska
- Heising-Simons Foundation | 2024 - 2026 | PI | \$349,995
Mapping Retrogressive Thaw Slumps in Arctic Permafrost
- Gordon and Betty Moore Foundation Wildfire Resilience Initiative | 2024 - 2026 | PI | \$400,000 (to Woodwell)
Wildfire Resilience in Alaska
- Woodwell Fund for Climate Solutions | 2024 - 2026 | PI | \$139,423

Boreal Fire Management to Protect Permafrost and Carbon

Google.org Impact Challenge in Climate Innovation | 2023 - 2026 | Co-PI | \$5,000,000

Tracking Arctic permafrost thaw with geo.AI to inform climate action

Grant announcement showcased on ABC News, Alaska Beacon, Axios, Google.com, and Mashable

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2022 - 2025 | Co-I | \$118,853 (to Woodwell)

Drivers and impacts of Reburning in boreal forest ecosystems (DIRE)

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2022 - 2025 | Co-I | \$726,790

Contributions of tundra and boreal systems to radiative forcing in North America and Russia under contemporary and future conditions

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2022 - 2025 | Co-I | \$87,199 (to Woodwell)

Mapping and modeling attributes of an arctic - boreal biome shift: Phase-3 applications within the ABoVE domain

The Audacious Project | 2022 – 2028 | Co-PI | \$41,235,000

Integrating permafrost into our global solution for climate change

Heising-Simons Foundation | 2021 – 2023 | Co-PI | \$249,454

Mapping abrupt permafrost thaw in the Arctic

NSF Arctic System Science | 2021 – 2024 | Co-PI | \$499,169 (to Woodwell)

Collaborative Research: Climate warming and increasing wildfire in the boreal forests of Northwestern North America: Will vegetation change slow the feedback?

NASA Earth Science Division | 2021 – 2022 | Co-I | \$199,346

Developing high spatiotemporal resolution inundation maps to detect rapid changes in surface hydrology and methane hotspots across ecosystem gradients in Alaska

Quadrature Climate Foundation | 2021 – 2024 | Co-PI | \$2,999,563

Mitigating the Global Threat from Thawing Permafrost: the Arctic Carbon Monitoring and Prediction System (Arctic MaPS)

Woodwell Climate Research Center Fund for Climate Solutions | 2020 – 2022 | Co-I | \$98,125

Building an international network of ground observations for the Arctic Carbon Monitoring and Prediction System

NSF Arctic Natural Sciences | 2020 – 2023 | Co-I | \$170,395 (to WHRC)

Collaborative Research: Increasing wildfires and the loss of legacy carbon from boreal and tundra ecosystems

One Earth, Rockefeller Philanthropy Advisors | 2020 – 2021 | Co-PI | \$75,000 (total)

Accounting for permafrost carbon feedbacks in global climate policy: estimates for gradual thaw, abrupt thaw, and wildfire

Gordon and Betty Moore Foundation | 2019 – 2023 | Co-PI | \$2,399,613 (total)

Global threat from a warming Arctic: The case for an Arctic Carbon Monitoring and Prediction System

WHRC Fund for Climate Solutions | 2019 – 2021 | PI | \$37,817 (total)

Planning for intensifying boreal wildfires: societal risks, management influence, policy opportunities, and strategic partnerships

WHRC Fund for Climate Solutions | 2019 – 2021 | Co-I | \$133,878 (total)

Integrating state-of-the-art science with indigenous knowledge to support threatened Arctic communities

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2019 - 2022 | Co-I | \$164,828 (to WHRC)

Mapping and modeling attributes of an arctic - boreal biome shift: Phase-2 applications within the ABoVE domain

WHRC Fund for Climate Solutions | 2018 – 2019 | PI | \$24,896 (total)

Management of Alaska wildfires for climate mitigation

Material from this project featured in several Union of Concerned Scientists blogs, the Got Science? Podcast, BBC news, E&E News, Grist, the Juneau Empire, Fairbanks Daily News Miner, Anchorage Daily News, Kodiak Daily Mirror, Mat-Su Valley Frontiersman, and Alaska Native News

WHRC Fund for Climate Solutions | 2018 – 2019 | Co-I | \$180,045 (total)

Establishing an Arctic Climate Change and Carbon Observatory

WHRC Fund for Climate Solutions | 2019 – 2020 | Co-I | \$49,186 (total)

Towards a northern pyrogenic carbon budget

Griffith University | 2018 – 2022 | Co-I | \$599,996 (to WHRC)

Research into information, policy, and on-ground action for primary forest protection: boreal and temperate primary forests

DoD Strategic Environmental Research and Development Program (SERDP) | 2018 - 2019 | Co-PI | \$199,966 (total)

Integrating remote sensing and field measurements to identify environmental nonstationarity on interior Alaska DoD training lands

DoD Strategic Environmental Research and Development Program (SERDP) | 2018 - 2022 | Co-PI | \$483,653 (to WHRC)
Resiliency and vulnerability of boreal forest habitat to the interaction of climate and fire disturbance across DoD lands of interior Alaska

NASA Land Cover/Land Use Change | 2018 - 2021 | Co-I | \$89,792 (to WHRC)
Circumpolar albedo of northern lands from Landsat-8 and Sentinel-2

NASA Carbon Cycle Science | 2017 - 2020 | PI | \$1,378,730 (total)
Understanding the causes and implications of enhanced seasonal CO₂ exchange in boreal and arctic ecosystems

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2018 | PI | \$741,804 (total)
Developing a spatially-explicit understanding of fire-climate forcings and their management implications across the ABoVE domain

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2019 | Co-I | \$140,818 (to WHRC)
Mapping and modeling attributes of an arctic-boreal biome shift: Resource and management implications within the ABoVE domain

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2019 | Postdoc | \$240,200 (to WHRC)
Increasing fire severity and the loss of legacy carbon from forest and tundra ecosystems of northwestern North America

INTERFACE Student Collaborative Exchange Program, Purdue University | 2011 | Co-I | \$430 (total)
Examining the effects of water availability on land surface temperatures in grassland and forest ecosystems

MENTORING

Kayla Mathes | Postdoctoral Researcher at Woodwell Climate Research Center | 2024

Heidi Rodenhizer | Postdoctoral Researcher at Woodwell Climate Research Center | 2023-2024

Andrew Clelland | Visiting Ph.D. student at Woodwell Climate Research Center | 2023-2024

Chritina Schaedel | Research Scientist at Woodwell Climate Research Center | 2023-2024

Elchin Jafarov | Research Scientist at Woodwell Climate Research Center | 2023-2024

Joshua Rady | Postdoctoral Researcher at Woodwell Climate Research Center | 2022 - 2024

Anna Gagne-Landmann | Research Assistant at Woodwell Climate Research Center | 2022 – 2023 | Now Ph.D. student at Northern Arizona University

Aiza Kabeer | Research Assistant at Woodwell Climate Research Center | 2022 – 2023 | Now Ph.D. student at the University of Arizona

Ridhima Sing | Intern at Woodwell Climate Research Center | 2022 – 2023 | Now Bachelor of Science student at the Massachusetts Institute of Technology

Anna Talucci | Postdoctoral Researcher at Woodwell Climate Research Center | 2022 - 2024

Naren Vohra | Intern at Woodwell Climate Research Center | 2022 | Now Postdoctoral Research Associate at Los Alamos Laboratory

Yili Yang | Data Science Consultant at Woodwell Climate Research Center | 2022 - 2024

Valeria Briones | Research Assistant at Woodwell Climate Research Center | 2021 - 2024

Jacquelyn Dean | Research Assistant at Woodwell Climate Research Center | 2021 - 2024

Anna Virkkala | Postdoctoral Researcher at WHRC | 2020 - 2024

Arden Burrell | Postdoctoral Researcher at WHRC | 2020 - 2024

Scott Zolkos | Postdoctoral Fellow at WHRC (joint with Harvard) | 2020 - 2023

Sara Giacomini | Research Assistant at WHRC | 2019 - 2020

Kathleen Savage | Research Associate at WHRC | 2019 - 2020

Jocelyne Laflamme | Summer intern at WHRC | 2019 | Now Research Geographer at the University of British Columbia

Molly Elder | Ph.D. student at Tufts University | 2018 - 2022

Tatiana Shestakova | Postdoctoral Researcher at WHRC | 2019 – 2022 | Now Postdoctoral Researcher at the University of Lleida

Carly Phillips | Postdoctoral Fellow at WHRC (joint with Union of Concerned Scientists) | 2018 – 2020 | Now Research Scientist at the Union of Concerned Scientists

Machteld Vergouw | Visiting M.A. student at Tufts University | 2018

Michael Moubarak | Summer intern at WHRC | 2018 | Now Ph.D. student at the University of California, Berkeley

Sol Cooperdock | Research Assistant at WHRC | 2018 – 2019 | Now Research Associate at Brown University

Leah Birch | Postdoctoral Fellow at WHRC | 2017 – 2020 | Now Atmospheric Data Scientist at MORSE Corp

Julia Nojeim | Summer intern at WHRC | 2017 | Now Clean Energy Coordinator at the Yale Center for Business and the Environment

Stefano Potter | Research Associate at WHRC | 2017 - 2024

Kylen Solvik | Research Assistant at WHRC | 2015 – 2018 | Now Ph.D. student of Geography at University of Colorado, Boulder

SYNERGISTIC ACTIVITIES

Market Research Group | Woodwell Climate Research Center | 2024

Research Priority Team Member | International Conference on Arctic Research Planning | Observing, Reconstructing, and Predicting Future Climate Dynamics and Ecosystem Responses | 2024

Diversity, Inclusion, Retention, and Equity (DIRE) Committee | Woodwell Climate Research Center | 2023

NGEE-Arctic Phase 4 Advisory Board member | 2023 - 2024

Joint Oak Ridge National Laboratory and Land Processes Laboratory Distributed Active Archive Center (ORNL and LP DAAC) User Working Group | 2023

Co-lead | Permafrost Pathways | 2022 - 2024

Space Committee | Woodwell Climate Research Center | 2022 - 2023

Ph.D. Committee Member | University of Massachusetts, Boston, 2017-2021 | Clark University, 2020 – 2023 | Tufts University, 2022 - 2023

Co-organizer, Co-lead, and Session Lead | Arctic-Boreal Carbon Flux Upscaling Workshop | 2020

Working Group Co-Lead | NASA ABoVE Vegetation Dynamics and Distribution | 2019 - 2023

Organizing Committee | National Academies of Sciences, Engineering, and Medicine workshop, *Greenhouse Gas Emissions from Wildland Fires: Towards Improved Monitoring, Modeling, and Management*, 2023 | NASA ABoVE Science Team Meetings, 2019 – 2020, 2022 - 2023 | Research to Operations workshop: Using ABoVE Data in Fire and Resource Management, 2019 - 2022

Primary Forest Task Team Member | International Union for Conservation of Nature | 2018 - 2022

Guest Editor | Philosophical Transactions of the Royal Society B, *Novel fire regimes in the Anthropocene: Ecological and evolutionary effects on biodiversity and carbon cycling*, 2023 - 2024 | Environmental Research Letters, *Resiliency and Vulnerability of Arctic and Boreal Ecosystems to Environmental Change: Advances and Outcomes of ABoVE (the Arctic Boreal Vulnerability Experiment)*, 2017 – 2024 | Environmental Research Letters (lead guest editor) | *Focus on Changing Fire Regimes: Interactions with Climate, Ecosystems, and Humans* | 2015-2020

Steering Committee | Future of Fire Workshop (NSF), 2017 | WHRC Strategic Planning Committee, 2017 | International Boreal Forest Research Association (IBFRA) Meeting, 2018 – 2021 | WHRC Rebranding Committee, 2019-2020

Co-Lead | Interagency Arctic Research Policy Committee (IARPC) Terrestrial Ecology Fire Working Group | 2017 - 2019

Science Team Member | NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2024

Organizer | WHRC monthly Journal Club | 2015 - 2019

Session Organizer and Convener | International Boreal Forest Research Association Conference, *Forest Integrity, Ecosystem Services, and Management in the Boreal Zone; Changing Carbon Cycle Dynamics of Boreal Ecosystems; Observed Changes in Boreal Forest Productivity and Demographics; Projections of Future Changes in Boreal Forest Productivity and Demographics*, 2021 | American Geophysical Union Fall Meeting, *The Role of Fire in the Earth System: Understanding Drivers, Feedbacks, and Interactions with the Land, Atmosphere and Society*, 2015, 2017, 2018, 2020; *Forest Disturbance in the Context of Shifting Climate: Understanding Disturbances and Their Interactions as Agents of Forest Change*, 2020 | Ecological Society of America Annual Meeting, *Modeling: Communities, Disturbance, and Succession*, 2014

OUTREACH

US congressional consultation | Committee on Indian Affairs, House Sustainable Energy and Environment Coalition, Representative Mary Peltola, Senator Lisa Murkowski, US Arctic Research Commission, White House Office of Science and Technology Policy | 2024

Land management | Collaborated with US Fish and Wildlife Service on landmark decision to protect Yedoma permafrost from wildfire | 2023

Media Features | The Economist, *Wildfires are getting more frequent and more devastating*, 2024 | The Telegraph, *Why Alaska's elite firefighters are being deployed to protect its permafrost*, 2024 | Alaska Beacon, *An Alaska wildlife refuge is changing its wildfire strategy to limit carbon emissions*, 2024 | Alaska Nightly News, 2024 | Wired, *The World is Ignoring the Other Deadly Kind of Carbon*, 2024 |

Nature, *Epic blazes threaten Arctic permafrost. Can firefighters save it?*, 2024 | Washington Post, *Alaska firefighters experiment with targeting blazes to save carbon*, 2023 | Bloomberg, *Wildfires Are Set to Double Canada's Climate Emissions This Year*, 2023 | CNN, *Canada's wildfire season is off to an 'unprecedented' start. Here's what it could mean for the US*, 2023 | New York Times, *Record Pollution and Heat Herald a Season of Climate Extremes*, 2023 | BNN Bloomberg, *It's Already a Large Fire Year in Canada: Weather Watch*, 2023 | Susan Bauer-Wu, *A Future We Can Love: How we can Reverse the Climate Crisis Through the Power of our Hearts & Minds*, 2023 | Science|Business, *Arctic researchers forced to modify projects amid geopolitical tensions with Russia*, 2022 | The New York Times, *A Warming Siberia, wracked by wildfires, nears a crucial threshold*, 2022 | CNN, *Belching lakes, mystery craters, 'zombie fires': How the climate crisis is transforming the Arctic permafrost*, 2022 | The Financial Times, *The Ancient Subarctic Forests at Risk from Climate Change and War*, 2022 | Reuters, *Why Arctic Fires are Releasing More Carbon than Ever*, 2022 | Nature, *Russia's war in Ukraine forces Arctic climate projects to pivot*, 2022 | Ben Rawlence, *The Treeline: The Last Forest and the Future of Life on Earth*, 2022 | Grist, *The 7 Climate Tipping Points that Could Change the World Forever*, 2021 | CarbonBrief, *Nine 'Tipping Points' That Could be Triggered by Climate Change*, 2020

Educational video | TED Ed, *What's hidden in Arctic ice?* Brendan Rogers and Jessica Howard, 2023

Climate Conference of the Parties | *Permafrost Day, Cryosphere Pavilion*, 2022

Contributing Subject Matter Expert | US Group on Earth Observations, *Earth Observations Assessment Report: Agriculture and Forestry*, 2023 | NASA Request for Information, *Terra and Aqua Orbital Drift Enables Novel Fire Science*, 2022 | NASA Request for Information, *Burning Questions: Critical Needs for Remote Sensing of Fire Impacts on Ecosystems*, 2015

Panelist | Arctic Circle Assembly, *The growing circle of Arctic methane emissions; Emerging risks in the Arctic: current and future priorities for emergency management*, Reykjavik, Iceland, 2024 | 20 Summers, *World on Fire: Woodwell Climate Research*, Provincetown, MA, 2023 | Woodwell Climate Research Center, *Permafrost Pathways: Connecting Science, People, and Policy for Arctic Justice and Global Climate*, 2022

Op-ed | Scientific American, *How stopping Alaskan wildfires can slow climate change*, 2022 | The Hill, *The major emitter that's missing from climate negotiations*, 2021

Website Development and Curation | *Permafrost Pathways*, <https://permafrost.woodwellclimate.org/>, 2022 – 2023 | *Unstable Ground*, <https://www.unstableground.org/>, 2020 - 2021

Blog Contributor | Union of Concerned Scientists, *Extreme Fires, Creative Solutions*, 2019

Policy Briefs | *Using Ecosystem Integrity to Maximize Mitigation and Minimize Risk in International Forest Policy*, Griffith University, 2023 | *Boreal, Temperate, and Tropical Primary Forests*, WHRC, 2019 | *Northern High-Latitude Wildfires and Climate Change*, WHRC, 2018

Documentaries | Northern Light Productions, *Climate Emergency: Feedback Loops*, 2021 | Canadian Broadcasting Corporation, *The Nature of Things, What Trees Talk About*, 2017

Seminar & Guest Lecturer | Yakut Scientific Center, Harvard University, Clark University, Stonehill College, WHRC Community Lecture, WHRC Board of Directors, WHRC Kaneb Lecture, Trillium Asset Management, The Greene School, Northern Water Futures, IARPC, Tongji University, Jet Propulsion Laboratory Carbon Club | 2015 - 2023

Course Designer and Presenter | Climate, Literacy, Empowerment, And iNquiry (CLEAN) education program | 2009 – 2014

HONORS, AWARDS, AND FELLOWSHIPS

2020 Editor's Citation for Excellence in Refereeing for Geophysical Research Letters | May 2021

2013 Editor's Citation for Excellence in Refereeing for Eos | Apr 2014

Outstanding Oral Presentation by a Young Scientist, 16th Conference of the International Boreal Forest Research Association | Oct 2013

NSF Graduate Research Fellowship | Oct 2009 – Sep 2011; Oct 2012 – Sep 2013

University of California, Irvine Chancellor's Fellowship | Oct 2009 – Sep 2011; Oct 2012 – Sep 2013

Jenkins Graduate Fellowship | Jan 2012 – Mar 2012

International Biogeography Society Student Travel Award | Jan 2009

Tarbell Book Prize in Organic Chemistry, Hamilton College | May 2003

Kirkland Prize in Mathematics, Hamilton College | May 2003

Oren Root Scholarship for Mathematics, Hamilton College | May 2003

Phi Beta Kappa, Hamilton College | May 2003

Summa Cum Laude, Hamilton College | May 2003

Departmental Honors in Mathematics, Hamilton College | May 2003

General Honors, Hamilton College | May 2003