

# Mark P Waldrop

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

70  
papers

7,862  
citations

43  
h-index

80  
g-index

80  
ext. papers

9,373  
ext. citations

8.5  
avg, IF

5.75  
L-index

#	Paper	IF	Citations
70	Stoichiometry of soil enzyme activity at global scale. <i>Ecology Letters</i> , <b>2008</b> , 11, 1252-1264	10	1158
69	Metagenomic analysis of a permafrost microbial community reveals a rapid response to thaw. <i>Nature</i> , <b>2011</b> , 480, 368-71	50.4	499
68	Linking microbial community composition to function in a tropical soil. <i>Soil Biology and Biochemistry</i> , <b>2000</b> , 32, 1837-1846	7.5	455
67	Multi-omics of permafrost, active layer and thermokarst bog soil microbiomes. <i>Nature</i> , <b>2015</b> , 521, 208-12	50.4	305
66	NITROGEN DEPOSITION MODIFIES SOIL CARBON STORAGE THROUGH CHANGES IN MICROBIAL ENZYMATIC ACTIVITY <b>2004</b> , 14, 1172-1177		305
65	Vulnerability of high-latitude soil organic carbon in North America to disturbance. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		292
64	Abundance of microbial genes associated with nitrogen cycling as indices of biogeochemical process rates across a vegetation gradient in Alaska. <i>Environmental Microbiology</i> , <b>2012</b> , 14, 993-1008	5.2	262
63	Extracellular Enzyme Activities and Soil Organic Matter Dynamics for Northern Hardwood Forests receiving Simulated Nitrogen Deposition. <i>Biogeochemistry</i> , <b>2005</b> , 75, 201-215	3.8	255
62	Microbial community utilization of recalcitrant and simple carbon compounds: impact of oak-woodland plant communities. <i>Oecologia</i> , <b>2004</b> , 138, 275-84	2.9	240
61	Expert assessment of vulnerability of permafrost carbon to climate change. <i>Climatic Change</i> , <b>2013</b> , 119, 359-374	4.5	212
60	Potential carbon emissions dominated by carbon dioxide from thawed permafrost soils. <i>Nature Climate Change</i> , <b>2016</b> , 6, 950-953	21.4	211
59	Microbial community response to nitrogen deposition in northern forest ecosystems. <i>Soil Biology and Biochemistry</i> , <b>2004</b> , 36, 1443-1451	7.5	210
58	Response of microbial community composition and function to soil climate change. <i>Microbial Ecology</i> , <b>2006</b> , 52, 716-24	4.4	201
57	Resource availability controls fungal diversity across a plant diversity gradient. <i>Ecology Letters</i> , <b>2006</b> , 9, 1127-35	10	199
56	Relationships between protein-encoding gene abundance and corresponding process are commonly assumed yet rarely observed. <i>ISME Journal</i> , <b>2015</b> , 9, 1693-9	11.9	188
55	Integrating microbial ecology into ecosystem models: challenges and priorities. <i>Biogeochemistry</i> , <b>2012</b> , 109, 7-18	3.8	177
54	Altered utilization patterns of young and old soil C by microorganisms caused by temperature shifts and N additions. <i>Biogeochemistry</i> , <b>2004</b> , 67, 235-248	3.8	159

53	Response of Oxidative Enzyme Activities to Nitrogen Deposition Affects Soil Concentrations of Dissolved Organic Carbon. <i>Ecosystems</i> , <b>2006</b> , 9, 921-933	3.9	157
52	Short-term response of methane fluxes and methanogen activity to water table and soil warming manipulations in an Alaskan peatland. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		143
51	Seasonal dynamics of microbial community composition and function in oak canopy and open grassland soils. <i>Microbial Ecology</i> , <b>2006</b> , 52, 470-9	4.4	133
50	Molecular investigations into a globally important carbon pool: permafrost-protected carbon in Alaskan soils. <i>Global Change Biology</i> , <b>2010</b> , 16, 2543	11.4	129
49	Molecular analysis of fungal communities and laccase genes in decomposing litter reveals differences among forest types but no impact of nitrogen deposition. <i>Environmental Microbiology</i> , <b>2007</b> , 9, 1306-16	5.2	112
48	Large loss of CO in winter observed across the northern permafrost region.. <i>Nature Climate Change</i> , <b>2019</b> , 9, 852-857	21.4	112
47	A pan-Arctic synthesis of CH and CO production from anoxic soil incubations. <i>Global Change Biology</i> , <b>2015</b> , 21, 2787-2803	11.4	110
46	Microbes in thawing permafrost: the unknown variable in the climate change equation. <i>ISME Journal</i> , <b>2012</b> , 6, 709-12	11.9	110
45	Impact of fire on active layer and permafrost microbial communities and metagenomes in an upland Alaskan boreal forest. <i>ISME Journal</i> , <b>2014</b> , 8, 1904-19	11.9	106
44	Understanding how microbiomes influence the systems they inhabit. <i>Nature Microbiology</i> , <b>2018</b> , 3, 977-982	22.6	101
43	Linking microbial community structure and microbial processes: an empirical and conceptual overview. <i>FEMS Microbiology Ecology</i> , <b>2015</b> , 91,	4.3	100
42	Microbial survival strategies in ancient permafrost: insights from metagenomics. <i>ISME Journal</i> , <b>2017</b> , 11, 2305-2318	11.9	96
41	A molecular dawn for biogeochemistry. <i>Trends in Ecology and Evolution</i> , <b>2006</b> , 21, 288-95	10.9	82
40	Differential response of carbon fluxes to climate in three peatland ecosystems that vary in the presence and stability of permafrost. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2014</b> , 119, 1576-1595	3.7	72
39	Estimating aboveground biomass in interior Alaska with Landsat data and field measurements. <i>International Journal of Applied Earth Observation and Geoinformation</i> , <b>2012</b> , 18, 451-461	7.3	69
38	Evolutionary-Economic Principles as Regulators of Soil Enzyme Production and Ecosystem Function. <i>Soil Biology</i> , <b>2010</b> , 229-243	1	66
37	Patterns in wetland microbial community composition and functional gene repertoire associated with methane emissions. <i>MBio</i> , <b>2015</b> , 6, e00066-15	7.8	61
36	Anaerobic oxidation of methane in tropical and boreal soils: Ecological significance in terrestrial methane cycling. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		56

35	Interactive effects of wildfire and permafrost on microbial communities and soil processes in an Alaskan black spruce forest. <i>Global Change Biology</i> , <b>2008</b> , 14, 2591-2602	11.4	56
34	Soil organic matter and litter chemistry response to experimental N deposition in northern temperate deciduous forest ecosystems. <i>Global Change Biology</i> , <b>2005</b> , 11, 1514-1521	11.4	51
33	A decade of boreal rich fen greenhouse gas fluxes in response to natural and experimental water table variability. <i>Global Change Biology</i> , <b>2017</b> , 23, 2428-2440	11.4	49
32	Dissolved organic carbon and nitrogen release from boreal Holocene permafrost and seasonally frozen soils of Alaska. <i>Environmental Research Letters</i> , <b>2018</b> , 13, 065011	6.2	49
31	The interacting roles of climate, soils, and plant production on soil microbial communities at a continental scale. <i>Ecology</i> , <b>2017</b> , 98, 1957-1967	4.6	45
30	Effects of Forest Postharvest Management Practices on Enzyme Activities in Decomposing Litter. <i>Soil Science Society of America Journal</i> , <b>2003</b> , 67, 1250-1256	2.5	45
29	Response of anaerobic carbon cycling to water table manipulation in an Alaskan rich fen. <i>Soil Biology and Biochemistry</i> , <b>2013</b> , 58, 50-60	7.5	43
28	Warming Effects of Spring Rainfall Increase Methane Emissions From Thawing Permafrost. <i>Geophysical Research Letters</i> , <b>2019</b> , 46, 1393-1401	4.9	43
27	Changes in the Active, Dead, and Dormant Microbial Community Structure across a Pleistocene Permafrost Chronosequence. <i>Applied and Environmental Microbiology</i> , <b>2019</b> , 85,	4.8	36
26	Restoration and Canopy Type Influence Soil Microflora in a Ponderosa Pine Forest. <i>Soil Science Society of America Journal</i> , <b>2005</b> , 69, 1627-1638	2.5	36
25	Bacterial and enchytraeid abundance accelerate soil carbon turnover along a lowland vegetation gradient in interior Alaska. <i>Soil Biology and Biochemistry</i> , <b>2012</b> , 50, 188-198	7.5	25
24	Controls on ecosystem and root respiration across a permafrost and wetland gradient in interior Alaska. <i>Environmental Research Letters</i> , <b>2013</b> , 8, 045029	6.2	24
23	Effect of permafrost thaw on plant and soil fungal community in a boreal forest: Does fungal community change mediate plant productivity response?. <i>Journal of Ecology</i> , <b>2019</b> , 107, 1737-1752	6	22
22	Mineralogy dictates the initial mechanism of microbial necromass association. <i>Geochimica Et Cosmochimica Acta</i> , <b>2019</b> , 260, 161-176	5.5	22
21	Modeling CH <sub>4</sub> and CO <sub>2</sub> cycling using porewater stable isotopes in a thermokarst bog in Interior Alaska: results from three conceptual reaction networks. <i>Biogeochemistry</i> , <b>2016</b> , 127, 57-87	3.8	21
20	Extreme CO <sub>2</sub> disturbance and the resilience of soil microbial communities. <i>Soil Biology and Biochemistry</i> , <b>2013</b> , 65, 274-286	7.5	20
19	Transport of oxygen in soil pore-water systems: implications for modeling emissions of carbon dioxide and methane from peatlands. <i>Biogeochemistry</i> , <b>2014</b> , 121, 455-470	3.8	17
18	Soil microbial community composition is correlated to soil carbon processing along a boreal wetland formation gradient. <i>European Journal of Soil Biology</i> , <b>2017</b> , 82, 17-26	2.9	15

17	Seasonal Electrical Resistivity Surveys of a Coastal Bluff, Barter Island, North Slope Alaska. <i>Journal of Environmental and Engineering Geophysics</i> , <b>2016</b> , 21, 37-42	1	13
16	Towards determining spatial methane distribution on Arctic permafrost bluffs with an unmanned aerial system. <i>SN Applied Sciences</i> , <b>2019</b> , 1, 1	1.8	12
15	Biological and mineralogical controls over cycling of low molecular weight organic compounds along a soil chronosequence. <i>Soil Biology and Biochemistry</i> , <b>2019</b> , 133, 16-27	7.5	11
14	Carbon Fluxes and Microbial Activities From Boreal Peatlands Experiencing Permafrost Thaw. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2021</b> , 126, e2020JG005869	3.7	10
13	Getting to the Root of Plant-Mediated Methane Emissions and Oxidation in a Thermokarst Bog. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2020</b> , 125, e2020JG005825	3.7	8
12	Emergent biogeochemical risks from Arctic permafrost degradation. <i>Nature Climate Change</i> , <b>2021</b> , 11, 809-819	21.4	8
11	Life at the Frozen Limit: Microbial Carbon Metabolism Across a Late Pleistocene Permafrost Chronosequence. <i>Frontiers in Microbiology</i> , <b>2020</b> , 11, 1753	5.7	7
10	Spatially explicit estimation of aboveground boreal forest biomass in the Yukon River Basin, Alaska. <i>International Journal of Remote Sensing</i> , <b>2015</b> , 36, 939-953	3.1	6
9	Active virus-host interactions at sub-freezing temperatures in Arctic peat soil. <i>Microbiome</i> , <b>2021</b> , 9, 208	16.6	6
8	Soil data for a thermokarst bog and the surrounding permafrost plateau forest, located at Bonanza Creek Long Term Ecological Research Site, Interior Alaska. <i>US Geological Survey Open-File Report</i> , 1-11		5
7	Permafrost Mapping with Electrical Resistivity Tomography: A Case Study in Two Wetland Systems in Interior Alaska. <i>Journal of Environmental and Engineering Geophysics</i> , <b>2020</b> , 25, 199-209	1	3
6	The Biophysical Role of Water and Ice Within Permafrost Nearing Collapse: Insights From Novel Geophysical Observations. <i>Journal of Geophysical Research F: Earth Surface</i> , <b>2021</b> , 126, e2021JF006104	3.8	3
5	Influence of Permafrost Type and Site History on Losses of Permafrost Carbon After Thaw. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2021</b> , 126, e2021JG006396	3.7	2
4	Generalized models to estimate carbon and nitrogen stocks of organic soil horizons in Interior Alaska. <i>Earth System Science Data</i> , <b>2020</b> , 12, 1745-1757	10.5	2
3	Changes in the Active, Dead, and Dormant Microbial Community Structure Across a Pleistocene Permafrost Chronosequence		1
2	Ecology of active viruses and their bacterial hosts in frozen Arctic peat soil revealed with H218O stable isotope probing metagenomics		1
1	Mechanisms for retention of low molecular weight organic carbon varies with soil depth at a coastal prairie ecosystem. <i>Soil Biology and Biochemistry</i> , <b>2022</b> , 108601	7.5	