

# Serita D. Frey

## List of Publications by Year in descending order

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Version: 2024-02-01

120  
papers

19,224  
citations

29994

54  
h-index

20307

116  
g-index

127  
all docs

127  
docs citations

127  
times ranked

15123  
citing authors

#	ARTICLE	IF	CITATIONS
1	Increasing the spatial and temporal impact of ecological research: A roadmap for integrating a novel terrestrial process into an Earth system model. <i>Global Change Biology</i> , 2022, 28, 665-684.	4.2	27
2	Effects of an introduced mustard, <i>Thlaspi arvense</i> , on soil fungal communities in subalpine meadows. <i>Fungal Ecology</i> , 2022, 56, 101135.	0.7	1
3	Fast-decaying plant litter enhances soil carbon in temperate forests but not through microbial physiological traits. <i>Nature Communications</i> , 2022, 13, 1229.	5.8	92
4	Soil volatile organic compound emissions in response to soil warming and nitrogen deposition. <i>Elementa</i> , 2022, 10, .	1.1	1
5	Evidence for a genetic basis in functional trait tradeoffs with microbial growth rate but not growth yield. <i>Soil Biology and Biochemistry</i> , 2022, 172, 108765.	4.2	0
6	Fungal community structure and function shifts with atmospheric nitrogen deposition. <i>Global Change Biology</i> , 2021, 27, 1349-1364.	4.2	90
7	Soil aggregate-mediated microbial responses to long-term warming. <i>Soil Biology and Biochemistry</i> , 2021, 152, 108055.	4.2	30
8	Linking Genes to Traits in Fungi. <i>Microbial Ecology</i> , 2021, 82, 145-155.	1.4	22
9	Synergies Among Environmental Science Research and Monitoring Networks: A Research Agenda. <i>Earth's Future</i> , 2021, 9, e2020EF001631.	2.4	5
10	SoDaH: the SOils DATA Harmonization database, an open-source synthesis of soil data from research networks, version 1.0. <i>Earth System Science Data</i> , 2021, 13, 1843-1854.	3.7	17
11	A holistic framework integrating plant-microbe-mineral regulation of soil bioavailable nitrogen. <i>Biogeochemistry</i> , 2021, 154, 211-229.	1.7	63
12	Fungal community response to long-term soil warming with potential implications for soil carbon dynamics. <i>Ecosphere</i> , 2021, 12, e03460.	1.0	17
13	Biogeochemical evolution of soil organic matter composition after a decade of warming and nitrogen addition. <i>Biogeochemistry</i> , 2021, 156, 161-175.	1.7	13
14	Functional, temporal and spatial complementarity in mammal-fungal spore networks enhances mycorrhizal dispersal following forest harvesting. <i>Functional Ecology</i> , 2021, 35, 2072-2083.	1.7	7
15	Physical protection regulates microbial thermal responses to chronic soil warming. <i>Soil Biology and Biochemistry</i> , 2021, 159, 108298.	4.2	5
16	Root control of fungal communities and soil carbon stocks in a temperate forest. <i>Soil Biology and Biochemistry</i> , 2021, 161, 108390.	4.2	14
17	Patterns and trends of organic matter processing and transport: Insights from the US long-term ecological research network. <i>Climate Change Ecology</i> , 2021, 2, 100025.	0.9	3
18	Fungal community and functional responses to soil warming are greater than for soil nitrogen enrichment. <i>Elementa</i> , 2021, 9, .	1.1	7

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19	Assessing microbial residues in soil as a potential carbon sink and moderator of carbon use efficiency. <i>Biogeochemistry</i> , 2020, 151, 237-249.	1.7	33
20	Microbial diversity drives carbon use efficiency in a model soil. <i>Nature Communications</i> , 2020, 11, 3684.	5.8	217
21	Carbon budget of the Harvard Forest Long-Term Ecological Research site: pattern, process, and response to global change. <i>Ecological Monographs</i> , 2020, 90, e01423.	2.4	67
22	Plant invasion impacts on fungal community structure and function depend on soil warming and nitrogen enrichment. <i>Oecologia</i> , 2020, 194, 659-672.	0.9	22
23	Carbon Use Efficiency and Its Temperature Sensitivity Covary in Soil Bacteria. <i>MBio</i> , 2020, 11, .	1.8	52
24	Indolic glucosinolate pathway provides resistance to mycorrhizal fungal colonization in a non-host Brassicaceae. <i>Ecosphere</i> , 2020, 11, e03100.	1.0	16
25	Stoichiometrically coupled carbon and nitrogen cycling in the Microbial-Mineral Carbon Stabilization model version 1.0 (MIMICS-CN v1.0). <i>Geoscientific Model Development</i> , 2020, 13, 4413-4434.	1.3	35
26	Mycorrhizal Fungi as Mediators of Soil Organic Matter Dynamics. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2019, 50, 237-259.	3.8	233
27	Fungal communities do not recover after removing invasive <i>Alliaria petiolata</i> (garlic mustard). <i>Biological Invasions</i> , 2019, 21, 3085-3099.	1.2	14
28	Microbial responses to experimental soil warming: Five testable hypotheses. , 2019, , 141-156.		1
29	Soil Macroinvertebrate Presence Alters Microbial Community Composition and Activity in the Rhizosphere. <i>Frontiers in Microbiology</i> , 2019, 10, 256.	1.5	28
30	Warming alters fungal communities and litter chemistry with implications for soil carbon stocks. <i>Soil Biology and Biochemistry</i> , 2019, 132, 120-130.	4.2	36
31	Reduced carbon use efficiency and increased microbial turnover with soil warming. <i>Global Change Biology</i> , 2019, 25, 900-910.	4.2	70
32	Decreased atmospheric nitrogen deposition in eastern North America: Predicted responses of forest ecosystems. <i>Environmental Pollution</i> , 2019, 244, 560-574.	3.7	133
33	Clarifying the interpretation of carbon use efficiency in soil through methods comparison. <i>Soil Biology and Biochemistry</i> , 2019, 128, 79-88.	4.2	164
34	Species associations overwhelm abiotic conditions to dictate the structure and function of wood-decay fungal communities. <i>Ecology</i> , 2018, 99, 801-811.	1.5	42
35	Manganese limitation as a mechanism for reduced decomposition in soils under atmospheric nitrogen deposition. <i>Soil Biology and Biochemistry</i> , 2018, 127, 252-263.	4.2	60
36	Molecular-level changes in soil organic matter composition after 10 years of litter, root and nitrogen manipulation in a temperate forest. <i>Biogeochemistry</i> , 2018, 141, 183-197.	1.7	19

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37	Effects of long-term nitrogen addition on phosphorus cycling in organic soil horizons of temperate forests. <i>Biogeochemistry</i> , 2018, 141, 167-181.	1.7	48
38	Guidelines and considerations for designing field experiments simulating precipitation extremes in forest ecosystems. <i>Methods in Ecology and Evolution</i> , 2018, 9, 2310-2325.	2.2	24
39	Responses of non-native earthworms to experimental eradication of garlic mustard and implications for native vegetation. <i>Ecosphere</i> , 2018, 9, e02353.	1.0	7
40	Simulated nitrogen deposition favors stress-tolerant fungi with low potential for decomposition. <i>Soil Biology and Biochemistry</i> , 2018, 125, 75-85.	4.2	43
41	Regional Patterns of Floristic Diversity and Composition in Forests Invaded by Garlic Mustard ( <i>Alliaria petiolata</i> ). <i>Northeastern Naturalist</i> , 2018, 25, 399-417.	0.1	7
42	Minerals in the rhizosphere: overlooked mediators of soil nitrogen availability to plants and microbes. <i>Biogeochemistry</i> , 2018, 139, 103-122.	1.7	203
43	Diversity begets diversity in competition for space. <i>Nature Ecology and Evolution</i> , 2017, 1, 156.	3.4	79
44	Long-term pattern and magnitude of soil carbon feedback to the climate system in a warming world. <i>Science</i> , 2017, 358, 101-105.	6.0	548
45	Fungal community homogenization, shift in dominant trophic guild, and appearance of novel taxa with biotic invasion. <i>Ecosphere</i> , 2017, 8, e01951.	1.0	82
46	Tree seedling responses to multiple environmental stresses: Interactive effects of soil warming, nitrogen fertilization, and plant invasion. <i>Forest Ecology and Management</i> , 2017, 403, 44-51.	1.4	20
47	Fungi exposed to chronic nitrogen enrichment are less able to decay leaf litter. <i>Ecology</i> , 2017, 98, 5-11.	1.5	44
48	Slowed Biogeochemical Cycling in Sub-arctic Birch Forest Linked to Reduced Mycorrhizal Growth and Community Change after a Defoliation Event. <i>Ecosystems</i> , 2017, 20, 316-330.	1.6	29
49	The ecologist's field guide to sequence-based identification of biodiversity. <i>Methods in Ecology and Evolution</i> , 2016, 7, 1008-1018.	2.2	316
50	Quantifying global soil carbon losses in response to warming. <i>Nature</i> , 2016, 540, 104-108.	13.7	879
51	Direct evidence for microbial-derived soil organic matter formation and its ecophysiological controls. <i>Nature Communications</i> , 2016, 7, 13630.	5.8	954
52	Winter soil respiration in a humid temperate forest: The roles of moisture, temperature, and snowpack. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 3072-3088.	1.3	14
53	Terrestrial and marine perspectives on modeling organic matter degradation pathways. <i>Global Change Biology</i> , 2016, 22, 121-136.	4.2	50
54	Long-Term Warming Alters Carbohydrate Degradation Potential in Temperate Forest Soils. <i>Applied and Environmental Microbiology</i> , 2016, 82, 6518-6530.	1.4	68

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55	Chronic nitrogen additions fundamentally restructure the soil fungal community in a temperate forest. <i>Fungal Ecology</i> , 2016, 23, 48-57.	0.7	172
56	Temperature response of soil respiration largely unaltered with experimental warming. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 13797-13802.	3.3	308
57	Microbial carbon use efficiency: accounting for population, community, and ecosystem-scale controls over the fate of metabolized organic matter. <i>Biogeochemistry</i> , 2016, 127, 173-188.	1.7	249
58	Biotic interactions mediate soil microbial feedbacks to climate change. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 7033-7038.	3.3	201
59	Long-term forest soil warming alters microbial communities in temperate forest soils. <i>Frontiers in Microbiology</i> , 2015, 6, 104.	1.5	270
60	Illuminating next steps for NEON. <i>Science</i> , 2015, 349, 1176-1177.	6.0	1
61	Revisiting the hypothesis that fungal to bacterial dominance characterizes turnover of soil organic matter and nutrients. <i>Ecological Monographs</i> , 2015, 85, 457-472.	2.4	126
62	Soil warming and nitrogen deposition alter soil organic matter composition at the molecular-level. <i>Biogeochemistry</i> , 2015, 123, 391-409.	1.7	73
63	Global environmental change and the nature of aboveground net primary productivity responses: insights from long-term experiments. <i>Oecologia</i> , 2015, 177, 935-947.	0.9	48
64	Soil microbial communities vary as much over time as with chronic warming and nitrogen additions. <i>Soil Biology and Biochemistry</i> , 2015, 88, 19-24.	4.2	84
65	Microbial physiology and necromass regulate agricultural soil carbon accumulation. <i>Soil Biology and Biochemistry</i> , 2015, 91, 279-290.	4.2	235
66	Changes in litter quality caused by simulated nitrogen deposition reinforce the N-induced suppression of litter decay. <i>Ecosphere</i> , 2015, 6, 1-16.	1.0	55
67	Reply to Veresoglou: Overdependence on "significance" testing in biology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E5114-E5114.	3.3	2
68	The effect of nitrogen addition on soil organic matter dynamics: a model analysis of the Harvard Forest Chronic Nitrogen Amendment Study and soil carbon response to anthropogenic N deposition. <i>Biogeochemistry</i> , 2014, 117, 431-454.	1.7	32
69	Chronic nitrogen additions suppress decomposition and sequester soil carbon in temperate forests. <i>Biogeochemistry</i> , 2014, 121, 305-316.	1.7	302
70	Plant community structure mediates potential methane production and potential iron reduction in wetland mesocosms. <i>Ecosphere</i> , 2013, 4, 1-17.	1.0	12
71	The temperature response of soil microbial efficiency and its feedback to climate. <i>Nature Climate Change</i> , 2013, 3, 395-398.	8.1	604
72	Bacterial growth and growth-limiting nutrients following chronic nitrogen additions to a hardwood forest soil. <i>Soil Biology and Biochemistry</i> , 2013, 59, 32-37.	4.2	39

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73	Soil respiration does not acclimatize to warmer temperatures when modeled over seasonal timescales. <i>Biogeochemistry</i> , 2013, 112, 555-570.	1.7	12
74	Long-term changes in forest carbon under temperature and nitrogen amendments in a temperate northern hardwood forest. <i>Global Change Biology</i> , 2013, 19, 2389-2400.	4.2	41
75	Soil respiration in a northeastern US temperate forest: a 22-year synthesis. <i>Ecosphere</i> , 2013, 4, 1-28.	1.0	83
76	Overyielding and the role of complementary use of nitrogen in wetland plant communities. <i>Aquatic Botany</i> , 2012, 97, 1-9.	0.8	15
77	Predicting decadal trends and transient responses of radiocarbon storage and fluxes in a temperate forest soil. <i>Biogeosciences</i> , 2012, 9, 3013-3028.	1.3	24
78	The effect of experimental warming and precipitation change on proteolytic enzyme activity: positive feedbacks to nitrogen availability are not universal. <i>Global Change Biology</i> , 2012, 18, 2617-2625.	4.2	80
79	Temperature adaptation of bacterial communities in experimentally warmed forest soils. <i>Global Change Biology</i> , 2012, 18, 3252-3258.	4.2	111
80	Examining N-limited soil microbial activity using community-level physiological profiling based on O <sub>2</sub> consumption. <i>Soil Biology and Biochemistry</i> , 2012, 47, 46-52.	4.2	14
81	Multivariate approach to characterizing soil microbial communities in pristine and agricultural sites in Northwest Argentina. <i>Applied Soil Ecology</i> , 2011, 47, 176-183.	2.1	45
82	Temperature and soil organic matter decomposition rates - synthesis of current knowledge and a way forward. <i>Global Change Biology</i> , 2011, 17, 3392-3404.	4.2	1,143
83	Plant Community Composition More Predictive than Diversity of Carbon Cycling in Freshwater Wetlands. <i>Wetlands</i> , 2011, 31, 965-977.	0.7	25
84	Responses and feedbacks of coupled biogeochemical cycles to climate change: examples from terrestrial ecosystems. <i>Frontiers in Ecology and the Environment</i> , 2011, 9, 61-67.	1.9	214
85	No-net-loss not met for nutrient function in freshwater marshes: recommendations for wetland mitigation policies. <i>Ecosphere</i> , 2011, 2, art82.	1.0	31
86	Seasonal dynamics of soil respiration and N mineralization in chronically warmed and fertilized soils. <i>Ecosphere</i> , 2011, 2, art36.	1.0	137
87	Decreased mass specific respiration under experimental warming is robust to the microbial biomass method employed. <i>Ecology Letters</i> , 2009, 12, E15.	3.0	19
88	Adjustment of Forest Ecosystem Root Respiration as Temperature Warms. <i>Journal of Integrative Plant Biology</i> , 2008, 50, 1467-1483.	4.1	44
89	Stoichiometry of soil enzyme activity at global scale. <i>Ecology Letters</i> , 2008, 11, 1252-1264.	3.0	1,684
90	Thermal adaptation of soil microbial respiration to elevated temperature. <i>Ecology Letters</i> , 2008, 11, 1316-1327.	3.0	690

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91	Microbial biomass, functional capacity, and community structure after 12 years of soil warming. <i>Soil Biology and Biochemistry</i> , 2008, 40, 2904-2907.	4.2	339
92	Optimization of an oxygen-based approach for community-level physiological profiling of soils. <i>Soil Biology and Biochemistry</i> , 2008, 40, 2960-2969.	4.2	17
93	Residue Carbon Stabilization in Soil Aggregates of No-till and Tillage Management of Dryland Cropping Systems. <i>Soil Science Society of America Journal</i> , 2008, 72, 507-513.	1.2	54
94	SPATIAL DISTRIBUTION OF SOIL ORGANISMS. , 2007, , 283-300.		15
95	EFFECTS OF MACROPHYTE FUNCTIONAL GROUP RICHNESS ON EMERGENT FRESHWATER WETLAND FUNCTIONS. <i>Ecology</i> , 2007, 88, 2903-2914.	1.5	92
96	The role of spatial and temporal scale in colonization and spread of invasive shrubs in early successional habitats. <i>Forest Ecology and Management</i> , 2006, 228, 124-134.	1.4	39
97	Do growth yield efficiencies differ between soil microbial communities differing in fungal:bacterial ratios? Reality check and methodological issues. <i>Soil Biology and Biochemistry</i> , 2006, 38, 837-844.	4.2	215
98	Bacterial and Fungal Contributions to Carbon Sequestration in Agroecosystems. <i>Soil Science Society of America Journal</i> , 2006, 70, 555-569.	1.2	1,541
99	Physiological and molecular characterisation of microbial communities associated with different water-stable aggregate size classes. <i>Soil Biology and Biochemistry</i> , 2005, 37, 2007-2016.	4.2	48
100	NITROGEN ADDITIONS AND LITTER DECOMPOSITION: A META-ANALYSIS. <i>Ecology</i> , 2005, 86, 3252-3257.	1.5	842
101	Effects of Soil Carbon Amendment on Nitrogen Availability and Plant Growth in an Experimental Tallgrass Prairie Restoration. <i>Restoration Ecology</i> , 2004, 12, 568-574.	1.4	76
102	Chronic nitrogen enrichment affects the structure and function of the soil microbial community in temperate hardwood and pine forests. <i>Forest Ecology and Management</i> , 2004, 196, 159-159.	1.4	2
103	Chronic nitrogen enrichment affects the structure and function of the soil microbial community in temperate hardwood and pine forests. <i>Forest Ecology and Management</i> , 2004, 196, 159-171.	1.4	657
104	Management effects on the dynamics and storage rates of organic matter in long-term crop rotations. <i>Canadian Journal of Soil Science</i> , 2004, 84, 49-61.	0.5	21
105	Preferential Accumulation of Microbial Carbon in Aggregate Structures of No-tillage Soils. <i>Soil Science Society of America Journal</i> , 2004, 68, 1249-1255.	1.2	124
106	Reciprocal transfer of carbon and nitrogen by decomposer fungi at the soil-litter interface. <i>Soil Biology and Biochemistry</i> , 2003, 35, 1001-1004.	4.2	230
107	Influence of microbial populations and residue quality on aggregate stability. <i>Applied Soil Ecology</i> , 2001, 16, 195-208.	2.1	382
108	Influence of dry-wet cycles on the interrelationship between aggregate, particulate organic matter, and microbial community dynamics. <i>Soil Biology and Biochemistry</i> , 2001, 33, 1599-1611.	4.2	560

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109	Protozoan grazing affects estimates of carbon utilization efficiency of the soil microbial community. <i>Soil Biology and Biochemistry</i> , 2001, 33, 1759-1768.	4.2	90
110	Fungal translocation as a mechanism for soil nitrogen inputs to surface residue decomposition in a no-tillage agroecosystem. <i>Soil Biology and Biochemistry</i> , 2000, 32, 689-698.	4.2	187
111	Bacterial and Fungal Cell-Wall Residues in Conventional and No-Tillage Agroecosystems. <i>Soil Science Society of America Journal</i> , 1999, 63, 1188-1198.	1.2	318
112	Microbial contributions to the aggregation of a cultivated grassland soil amended with starch. <i>Soil Biology and Biochemistry</i> , 1999, 31, 407-419.	4.2	100
113	Bacterial and fungal abundance and biomass in conventional and no-tillage agroecosystems along two climatic gradients. <i>Soil Biology and Biochemistry</i> , 1999, 31, 573-585.	4.2	540
114	Application of the hexokinase-glucose-6-phosphate dehydrogenase enzymatic assay for measurement of glucose in amended soil. <i>Soil Biology and Biochemistry</i> , 1999, 31, 933-935.	4.2	11
115	Modeling the Measurable or Measuring the Modelable: A Hierarchical Approach to Isolating Meaningful Soil Organic Matter Fractionations. , 1996, , 161-179.		71
116	Effects of filter type and extraction efficiency on nitrogen mineralization measurements using the aerobic leaching soil incubation method. <i>Biology and Fertility of Soils</i> , 1995, 20, 197-204.	2.3	16
117	Soil pH and organic C dynamics in tropical forest soils: Evidence from laboratory and simulation studies. <i>Soil Biology and Biochemistry</i> , 1995, 27, 1589-1599.	4.2	161
118	Nitrogen Mineralization in Humid Tropical Forest Soils: Mineralogy, Texture, and Measured Nitrogen Fractions. <i>Soil Science Society of America Journal</i> , 1995, 59, 1168-1175.	1.2	37
119	Effect of pH on competition for nodule occupancy by type I and type II strains of <i>Rhizobium leguminosarum</i> bv. phaseoli. <i>Plant and Soil</i> , 1994, 163, 157-164.	1.8	30
120	Comparison of laboratory and modeling simulation methods for estimating soil carbon pools in tropical forest soils. <i>Soil Biology and Biochemistry</i> , 1994, 26, 935-944.	4.2	104