John Barrett

List of Publications by Year in descending order

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90	4,874	76326	98798
papers	citations	40 h-index	67 g-index

92	92	92	4282
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the rocks: the microbiology of Antarctic Dry Valley soils. Nature Reviews Microbiology, 2010, 8, 129-138.	28.6	505
2	Microbial community composition in soils of Northern Victoria Land, Antarctica. Environmental Microbiology, 2008, 10, 1713-1724.	3.8	182
3	Potential nitrogen immobilization in grassland soils across a soil organic matter gradient. Soil Biology and Biochemistry, 2000, 32, 1707-1716.	8.8	176
4	Soil Microbial Responses to Increased Moisture and Organic Resources along a Salinity Gradient in a Polar Desert. Applied and Environmental Microbiology, 2014, 80, 3034-3043.	3.1	171
5	Wind dispersal of soil invertebrates in the McMurdo Dry Valleys, Antarctica. Polar Biology, 2006, 29, 346-352.	1.2	134
6	Hydrologic response to extreme warm and cold summers in the McMurdo Dry Valleys, East Antarctica. Antarctic Science, 2008, 20, 499-509.	0.9	128
7	Co-variation in soil biodiversity and biogeochemistry in northern and southern Victoria Land, Antarctica. Antarctic Science, 2006, 18, 535-548.	0.9	127
8	VARIATION IN BIOGEOCHEMISTRY AND SOIL BIODIVERSITY ACROSS SPATIAL SCALES IN A POLAR DESERT ECOSYSTEM. Ecology, 2004, 85, 3105-3118.	3.2	124
9	Terrestrial ecosystem processes of Victoria Land, Antarctica. Soil Biology and Biochemistry, 2006, 38, 3019-3034.	8.8	119
10	Persistent effects of a discrete warming event on a polar desert ecosystem. Global Change Biology, 2008, 14, 2249-2261.	9.5	119
11	Soil Carbon Dioxide Flux in Antarctic Dry Valley Ecosystems. Ecosystems, 2004, 7, 286.	3.4	112
12	Bacterial Community Structure Along Moisture Gradients in the Parafluvial Sediments of Two Ephemeral Desert Streams. Microbial Ecology, 2011, 61, 543-556.	2.8	107
13	Factors Controlling Soil Microbial Biomass and Bacterial Diversity and Community Composition in a Cold Desert Ecosystem: Role of Geographic Scale. PLoS ONE, 2013, 8, e66103.	2.5	98
14	Biogeochemical stoichiometry of Antarctic Dry Valley ecosystems. Journal of Geophysical Research, 2007, 112, .	3.3	97
15	Snow-Patch Influence on Soil Biogeochemical Processes and Invertebrate Distribution in the McMurdo Dry Valleys, Antarctica. Arctic, Antarctic, and Alpine Research, 2003, 35, 91-99.	1.1	94
16	Long-term experimental warming reduces soil nematode populations in the McMurdo Dry Valleys, Antarctica. Soil Biology and Biochemistry, 2009, 41, 2052-2060.	8.8	90
17	Interactions between physical and biotic factors influence CO2 flux in Antarctic dry valley soils. Soil Biology and Biochemistry, 2009, 41, 1510-1517.	8.8	87
18	Salt tolerance and survival thresholds for two species of Antarctic soil nematodes. Polar Biology, 2006, 29, 643-651.	1.2	79

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19	Decadal ecosystem response to an anomalous melt season in a polar desert in Antarctica. Nature Ecology and Evolution, 2017, 1, 1334-1338.	7.8	79
20	Organic matter and soil biota of upland wetlands in Taylor Valley, Antarctica. Polar Biology, 2003, 26, 567-576.	1.2	72
21	Soil carbon turnover in the McMurdo Dry Valleys, Antarctica. Soil Biology and Biochemistry, 2006, 38, 3065-3082.	8.8	68
22	Landscape Distribution of Microbial Activity in the McMurdo Dry Valleys: Linked Biotic Processes, Hydrology, and Geochemistry in a Cold Desert Ecosystem. Ecosystems, 2009, 12, 562-573.	3.4	68
23	The Influence of Soil Geochemistry on Nematode Distribution, Mcmurdo Dry Valleys, Antarctica. Arctic, Antarctic, and Alpine Research, 2008, 40, 119-128.	1.1	67
24	Plant Invasions Associated with Change in Root-Zone Microbial Community Structure and Diversity. PLoS ONE, 2015, 10, e0141424.	2.5	64
25	Niche and metabolic principles explain patterns of diversity and distribution: theory and a case study with soil bacterial communities. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20142630.	2.6	61
26	Decline in a dominant invertebrate species contributes to altered carbon cycling in a lowâ€diversity soil ecosystem. Global Change Biology, 2008, 14, 1734-1744.	9.5	60
27	Resolving environmental drivers of microbial community structure in Antarctic soils. Antarctic Science, 2010, 22, 673-680.	0.9	59
28	Microbial Community Responses to Increased Water and Organic Matter in the Arid Soils of the McMurdo Dry Valleys, Antarctica. Frontiers in Microbiology, 2016, 7, 1040.	3.5	59
29	Stable Nitrogen and Carbon Pools in Grassland Soils of Variable Texture and Carbon Content. Ecosystems, 2002, 5, 461-471.	3.4	58
30	Substrate and nutrient limitation of ammonia-oxidizing bacteria and archaea in temperate forest soil. Soil Biology and Biochemistry, 2014, 69, 141-146.	8.8	58
31	Stoichiometric Shifts in Soil C:N:P Promote Bacterial Taxa Dominance, Maintain Biodiversity, and Deconstruct Community Assemblages. Frontiers in Microbiology, 2018, 9, 1401.	3.5	56
32	NITROGEN RETENTION IN SEMIARID ECOSYSTEMS ACROSS A SOIL ORGANIC-MATTER GRADIENT. , 2002, 12, 878-890.		52
33	Trends in Resin and KCl-extractable Soil Nitrogen Across Landscape Gradients in Taylor Valley, Antarctica. Ecosystems, 2002, 5, 289-299.	3.4	50
34	Characterization of growing bacterial populations in McMurdo Dry Valley soils through stable isotope probing with¹⁸O-water. FEMS Microbiology Ecology, 2014, 89, 415-425.	2.7	49
35	Global environmental change and the nature of aboveground net primary productivity responses: insights from long-term experiments. Oecologia, 2015, 177, 935-947.	2.0	48
36	Observed trends of soil fauna in the Antarctic Dry Valleys: early signs of shifts predicted under climate change. Ecology, 2018, 99, 312-321.	3.2	46

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37	Local and regional influences over soil microbial metacommunities in the Transantarctic Mountains. Ecosphere, 2013, 4, 1-24.	2.2	45
38	Influence of soil properties on archaeal diversity and distribution in the McMurdo Dry Valleys, Antarctica. FEMS Microbiology Ecology, 2014, 89, 347-359.	2.7	44
39	Bacterial community composition of divergent soil habitats in a polar desert. FEMS Microbiology Ecology, 2014, 89, 490-494.	2.7	44
40	Substrate availability drives spatial patterns in richness of ammonia-oxidizing bacteria and archaea in temperate forest soils. Soil Biology and Biochemistry, 2016, 94, 169-172.	8.8	43
41	Biotic interactions are an unexpected yet critical control on the complexity of an abiotically driven polar ecosystem. Communications Biology, 2019, 2, 62.	4.4	42
42	Spatial variation in soil active-layer geochemistry across hydrologic margins in polar desert ecosystems. Hydrology and Earth System Sciences, 2009, 13, 2349-2358.	4.9	40
43	Influence of climate variability on plant production and Nâ€mineralization in Central US grasslands. Journal of Vegetation Science, 2002, 13, 383-394.	2.2	39
44	Experimentally increased snow accumulation alters soil moisture and animal community structure in a polar desert. Polar Biology, 2010, 33, 897-907.	1.2	39
45	Shallow groundwater systems in a polar desert, McMurdo Dry Valleys, Antarctica. Hydrogeology Journal, 2013, 21, 171-183.	2.1	39
46	Soil phosphorus cycling in an Antarctic polar desert. Geoderma, 2008, 144, 21-31.	5.1	38
47	Effects of Human Trampling on Populations of Soil Fauna in the McMurdo Dry Valleys, Antarctica. Conservation Biology, 2008, 22, 1544-1551.	4.7	37
48	Hydrologic characteristics of lakeâ€and streamâ€side riparian wetted margins in the McMurdo Dry Valleys, Antarctica. Hydrological Processes, 2009, 23, 1255-1267.	2.6	37
49	Thermal characterisation of active layer across a soil moisture gradient in the McMurdo Dry Valleys, Antarctica. Permafrost and Periglacial Processes, 2009, 20, 27-39.	3.4	37
50	Stable C and N isotope ratios reveal soil food web structure and identify the nematode Eudorylaimus antarcticus as an omnivoreâ€“predator inÂTaylor Valley, Antarctica. Polar Biology, 2018, 41, 1013-1018.	1.2	37
51	Soil Bacterial and Fungal Communities Exhibit Distinct Long-Term Responses to Disturbance in Temperate Forests. Frontiers in Microbiology, 2019, 10, 2872.	3.5	37
52	Potential Soil Organic Matter Turnover in Taylor Valley, Antarctica. Arctic, Antarctic, and Alpine Research, 2005, 37, 108-117.	1.1	35
53	Nitrogen in the Central Grasslands Region of the United States. BioScience, 2002, 52, 813.	4.9	34
54	Nematodes in a polar desert reveal the relative role of biotic interactions in the coexistence of soil animals. Communications Biology, 2019, 2, 63.	4.4	34

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55	Environmental controls over bacterial communities in polar desert soils. Ecosphere, 2013, 4, 1-17.	2.2	32
56	A simulationâ€based approach to understand how metacommunity characteristics influence emergent biodiversity patterns. Oikos, 2017, 126, 723-737.	2.7	32
57	Evidence for dispersal and habitat controls on pond diatom communities from the McMurdo Sound Region of Antarctica. Polar Biology, 2016, 39, 2441-2456.	1.2	31
58	Abiotic Nitrogen Uptake in Semiarid Grassland Soils of the U.S. Great Plains. Soil Science Society of America Journal, 2002, 66, 979-987.	2.2	30
59	Prolonged exposure to manure from livestockâ€administered antibiotics decreases ecosystem carbonâ€use efficiency and alters nitrogen cycling. Ecology Letters, 2019, 22, 2067-2076.	6.4	30
60	Unique Similarity of Faunal Communities across Aquaticâ€“Terrestrial Interfaces in a Polar Desert Ecosystem. Ecosystems, 2007, 10, 523-535.	3.4	29
61	Linking management to biodiversity in built ponds using metacommunity simulations. Ecological Modelling, 2015, 296, 36-45.	2.5	29
62	Catch and release: Hyporheic retention and mineralization of Nâ€fixing Nostoc sustains downstream microbial mat biomass in two polar desert streams. Limnology and Oceanography Letters, 2018, 3, 357-364.	3.9	24
63	Phosphorus Fractions in Soils of Taylor Valley, Antarctica. Soil Science Society of America Journal, 2006, 70, 806-815.	2.2	23
64	Controls on the Spatial Dimensions of Wetted Hydrologic Margins of Two Antarctic Lakes. Vadose Zone Journal, 2007, 6, 841-848.	2.2	21
65	Remote characterization of photosynthetic communities in the Fryxell basin of Taylor Valley, Antarctica. Antarctic Science, 2020, 32, 255-270.	0.9	19
66	Terrestrial mesofauna in above- and below-ground habitats: Taylor Valley, Antarctica. Polar Biology, 2009, 32, 1549-1558.	1.2	18
67	Impact of labile and recalcitrant carbon treatments on available nitrogen and plant communities in a semiarid ecosystem. , 2013, 23, 537-545.		18
68	Implications of meltwater pulse events for soil biology and biogeochemical cycling in a polar desert. Polar Research, 2011, 30, 14555.	1.6	17
69	Water track modification of soil ecosystems in the Lake Hoare basin, Taylor Valley, Antarctica. Antarctic Science, 2014, 26, 153-162.	0.9	17
70	Estimating microbial mat biomass in the McMurdo Dry Valleys, Antarctica using satellite imagery and ground surveys. Polar Biology, 2020, 43, 1753-1767.	1.2	16
71	Abiotic Nitrogen Uptake in Semiarid Grassland Soils of the U.S. Great Plains. Soil Science Society of America Journal, 2002, 66, 979.	2.2	16
72	Volatile methanol and acetone additions increase labile soil carbon and inhibit nitrification. Biogeochemistry, 2019, 145, 127-140.	3.5	14

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73	Primary productivity as a control over soil microbial diversity along environmental gradients in a polar desert ecosystem. PeerJ, 2017, 5, e3377.	2.0	14
74	Unimodal productivityâ€“diversity relationships among bacterial communities in a simple polar soil ecosystem. Environmental Microbiology, 2019, 21, 2523-2532.	3.8	12
75	Emergent properties of microbial communities drive accelerated biogeochemical cycling in disturbed temperate forests. Ecology, 2021, 102, e03553.	3.2	12
76	Spatial and temporal patterns of snow accumulation and aerial ablation across the McMurdo Dry Valleys, Antarctica. Hydrological Processes, 2013, 27, 2864-2875.	2.6	11
77	Seasonal controls on snow distribution and aerial ablation at the snow-patch and landscape scales, McMurdo Dry Valleys, Antarctica. Cryosphere, 2013, 7, 917-931.	3.9	10
78	Historical forest disturbance mediates soil microbial community responses to drought. Environmental Microbiology, 2021, 23, 6405-6419.	3.8	10
79	Recovery of Antarctic stream epilithon from simulated scouring events. Antarctic Science, 2015, 27, 341-354.	0.9	9
80	Livestock manure and antibiotics alter extracellular enzyme activity. Applied Soil Ecology, 2020, 155, 103667.	4.3	9
81	A synthesis of soil biodiversity and ecosystem functioning in Victoria Land, Antarctica. Soil Biology and Biochemistry, 2006, 38, 3001-3002.	8.8	8
82	Pedogenic carbonate distribution within glacial till in Taylor Valley, Southern Victoria Land, Antarctica. , 2006, , .		7
83	Paired carbon and nitrogen metabolism by ammoniaâ€oxidizing bacteria and archaea in temperate forest soils. Ecosphere, 2015, 6, 1-11.	2.2	5
84	INTERACTIONS OF WATER AND NITROGEN ON PRIMARY PRODUCTIVITY ACROSS SPATIAL AND TEMPORAL SCALES IN GRASSLAND AND SHRUBLAND ECOSYSTEMS. , 2006, , 201-216.		5
85	Counting Carbon: Quantifying Biomass in the McMurdo Dry Valleys through Orbital & Field Observations. International Journal of Remote Sensing, 2021, 42, 8597-8623.	2.9	5
86	Connectivity: insights from the U.S. Long Term Ecological Research Network. Ecosphere, 2021, 12, e03432.	2.2	4
87	The legacy of aqueous environments on soils of the McMurdo Dry Valleys: contexts for future exploration of martian soils. , 2010, , 78-109.		3
88	Evaluating Alternative Metacommunity Hypotheses for Diatoms in the McMurdo Dry Valleys Using Simulations and Remote Sensing Data. Frontiers in Ecology and Evolution, 2020, 8, .	2.2	1
89	Interactions of Water and Nitrogen on Primary Productivity Across Spatial and Temporal Scales in Grassland and Shrubland Ecosystems. , 2019, , 417-437.		1
90	A Cross-sectional Cohort Study to Assess Long-term Neurocognitive and Psychiatric Symptoms of Mefloquine Use in Veterans. Military Medicine, 2022, , .	0.8	1