

Thomas W Crowther

List of Publications by Year in descending order

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Version: 2024-02-01

113
papers

14,352
citations

36303

51
h-index

22166

113
g-index

134
all docs

134
docs citations

134
times ranked

17917
citing authors

#	ARTICLE	IF	CITATIONS
1	The global tree restoration potential. <i>Science</i> , 2019, 365, 76-79.	12.6	1,181
2	Scientists's warning to humanity: microorganisms and climate change. <i>Nature Reviews Microbiology</i> , 2019, 17, 569-586.	28.6	1,138
3	Quantifying global soil carbon losses in response to warming. <i>Nature</i> , 2016, 540, 104-108.	27.8	879
4	Positive biodiversity-productivity relationship predominant in global forests. <i>Science</i> , 2016, 354, .	12.6	864
5	Mapping tree density at a global scale. <i>Nature</i> , 2015, 525, 201-205.	27.8	642
6	Soil nematode abundance and functional group composition at a global scale. <i>Nature</i> , 2019, 572, 194-198.	27.8	635
7	The global soil community and its influence on biogeochemistry. <i>Science</i> , 2019, 365, .	12.6	586
8	Magnitude of urban heat islands largely explained by climate and population. <i>Nature</i> , 2019, 573, 55-60.	27.8	546
9	Managing uncertainty in soil carbon feedbacks to climate change. <i>Nature Climate Change</i> , 2016, 6, 751-758.	18.8	491
10	Climatic controls of decomposition drive the global biogeography of forest-tree symbioses. <i>Nature</i> , 2019, 569, 404-408.	27.8	371
11	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.	7.1	308
12	Biogeographic patterns in below-ground diversity in New York City's Central Park are similar to those observed globally. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014, 281, 20141988.	2.6	295
13	Climate fails to predict wood decomposition at regional scales. <i>Nature Climate Change</i> , 2014, 4, 625-630.	18.8	281
14	Mapping carbon accumulation potential from global natural forest regrowth. <i>Nature</i> , 2020, 585, 545-550.	27.8	278
15	Global distribution of earthworm diversity. <i>Science</i> , 2019, 366, 480-485.	12.6	248
16	Untangling the fungal niche: the trait-based approach. <i>Frontiers in Microbiology</i> , 2014, 5, 579.	3.5	211
17	Increased growing-season productivity drives earlier autumn leaf senescence in temperate trees. <i>Science</i> , 2020, 370, 1066-1071.	12.6	202
18	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.	7.1	201

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19	Functional and ecological consequences of saprotrophic fungus–grazer interactions. <i>ISME Journal</i> , 2012, 6, 1992-2001.	9.8	189
20	A test of the hierarchical model of litter decomposition. <i>Nature Ecology and Evolution</i> , 2017, 1, 1836-1845.	7.8	172
21	Fungal functional ecology: bringing a trait-based approach to plant-associated fungi. <i>Biological Reviews</i> , 2020, 95, 409-433.	10.4	171
22	Thermal acclimation in widespread heterotrophic soil microbes. <i>Ecology Letters</i> , 2013, 16, 469-477.	6.4	164
23	Tracking, targeting, and conserving soil biodiversity. <i>Science</i> , 2021, 371, 239-241.	12.6	151
24	Predicting rates of isotopic turnover across the animal kingdom: a synthesis of existing data. <i>Journal of Animal Ecology</i> , 2015, 84, 861-870.	2.8	144
25	Late-spring frost risk between 1959 and 2017 decreased in North America but increased in Europe and Asia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12192-12200.	7.1	140
26	Outcomes of fungal interactions are determined by soil invertebrate grazers. <i>Ecology Letters</i> , 2011, 14, 1134-1142.	6.4	136
27	Detecting macroecological patterns in bacterial communities across independent studies of global soils. <i>Nature Microbiology</i> , 2018, 3, 189-196.	13.3	136
28	Top-down control of soil fungal community composition by a globally distributed keystone consumer. <i>Ecology</i> , 2013, 94, 2518-2528.	3.2	119
29	Water scaling of ecosystem carbon cycle feedback to climate warming. <i>Science Advances</i> , 2019, 5, eaav1131.	10.3	118
30	Global maps of soil temperature. <i>Global Change Biology</i> , 2022, 28, 3110-3144.	9.5	113
31	The Importance of Consistent Global Forest Aboveground Biomass Product Validation. <i>Surveys in Geophysics</i> , 2019, 40, 979-999.	4.6	106
32	Competitive network determines the direction of the diversity–function relationship. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 11464-11469.	7.1	102
33	A trait-based understanding of wood decomposition by fungi. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 11551-11558.	7.1	102
34	Predicting the responsiveness of soil biodiversity to deforestation: a cross-biome study. <i>Global Change Biology</i> , 2014, 20, 2983-2994.	9.5	101
35	Cross-biome patterns in soil microbial respiration predictable from evolutionary theory on thermal adaptation. <i>Nature Ecology and Evolution</i> , 2019, 3, 223-231.	7.8	100
36	Climate warming alters subsoil but not topsoil carbon dynamics in alpine grassland. <i>Global Change Biology</i> , 2019, 25, 4383-4393.	9.5	94

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37	Consistent trade-offs in fungal trait expression across broad spatial scales. <i>Nature Microbiology</i> , 2019, 4, 846-853.	13.3	94
38	The global distribution and environmental drivers of aboveground versus belowground plant biomass. <i>Nature Ecology and Evolution</i> , 2021, 5, 1110-1122.	7.8	88
39	Evidence for large microbial-mediated losses of soil carbon under anthropogenic warming. <i>Nature Reviews Earth & Environment</i> , 2021, 2, 507-517.	29.7	85
40	Direct and indirect impacts of urbanization on vegetation growth across the world's cities. <i>Science Advances</i> , 2022, 8, .	10.3	80
41	Carbon use efficiency and storage in terrestrial ecosystems. <i>New Phytologist</i> , 2013, 199, 7-9.	7.3	79
42	Diversity begets diversity in competition for space. <i>Nature Ecology and Evolution</i> , 2017, 1, 156.	7.8	79
43	A global test of ecoregions. <i>Nature Ecology and Evolution</i> , 2018, 2, 1889-1896.	7.8	79
44	Understanding climate change from a global analysis of city analogues. <i>PLoS ONE</i> , 2019, 14, e0217592.	2.5	75
45	Sensitivity of global soil carbon stocks to combined nutrient enrichment. <i>Ecology Letters</i> , 2019, 22, 936-945.	6.4	75
46	Species-specific effects of soil fauna on fungal foraging and decomposition. <i>Oecologia</i> , 2011, 167, 535-545.	2.0	74
47	Distinct Assembly Processes and Microbial Communities Constrain Soil Organic Carbon Formation. <i>One Earth</i> , 2020, 2, 349-360.	6.8	74
48	Invertebrate grazing determines enzyme production by basidiomycete fungi. <i>Soil Biology and Biochemistry</i> , 2011, 43, 2060-2068.	8.8	67
49	Impacts of grazing soil fauna on decomposer fungi are species-specific and density-dependent. <i>Fungal Ecology</i> , 2012, 5, 277-281.	1.6	67
50	Fungal interactions reduce carbon use efficiency. <i>Ecology Letters</i> , 2017, 20, 1034-1042.	6.4	65
51	Forest tree growth is linked to mycorrhizal fungal composition and function across Europe. <i>ISME Journal</i> , 2022, 16, 1327-1336.	9.8	62
52	How plastic mulching affects net primary productivity, soil C fluxes and organic carbon balance in dry agroecosystems in China. <i>Journal of Cleaner Production</i> , 2020, 263, 121470.	9.3	53
53	Growing the urban forest: tree performance in response to biotic and abiotic land management. <i>Restoration Ecology</i> , 2015, 23, 707-718.	2.9	51
54	Environmental stress response limits microbial necromass contributions to soil organic carbon. <i>Soil Biology and Biochemistry</i> , 2015, 85, 153-161.	8.8	50

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55	Navigating the unfolding open data landscape in ecology and evolution. <i>Nature Ecology and Evolution</i> , 2018, 2, 420-426.	7.8	47
56	A global database of soil nematode abundance and functional group composition. <i>Scientific Data</i> , 2020, 7, 103.	5.3	46
57	Recent deforestation drove the spike in Amazonian fires. <i>Environmental Research Letters</i> , 2020, 15, 121003.	5.2	46
58	Internet Blogs, Polar Bears, and Climate-Change Denial by Proxy. <i>BioScience</i> , 2018, 68, 281-287.	4.9	45
59	Nutrient availability controls the impact of mammalian herbivores on soil carbon and nitrogen pools in grasslands. <i>Global Change Biology</i> , 2020, 26, 2060-2071.	9.5	43
60	Species-specific effects of grazing invertebrates on mycelial emergence and growth from woody resources into soil. <i>Fungal Ecology</i> , 2011, 4, 333-341.	1.6	42
61	Species associations overwhelm abiotic conditions to dictate the structure and function of wood-decay fungal communities. <i>Ecology</i> , 2018, 99, 801-811.	3.2	42
62	Patterns of natural fungal community assembly during initial decay of coniferous and broadleaf tree logs. <i>Ecosphere</i> , 2016, 7, e01393.	2.2	38
63	Field-warmed soil carbon changes imply high 21st-century modeling uncertainty. <i>Biogeosciences</i> , 2018, 15, 3659-3671.	3.3	38
64	Temperate forest termites: ecology, biogeography, and ecosystem impacts. <i>Ecological Entomology</i> , 2015, 40, 199-210.	2.2	36
65	Intransitive competition is common across five major taxonomic groups and is driven by productivity, competitive rank and functional traits. <i>Journal of Ecology</i> , 2018, 106, 852-864.	4.0	36
66	The use of artificial media in fungal ecology. <i>Fungal Ecology</i> , 2018, 32, 87-91.	1.6	36
67	The scaling of fine root nitrogen versus phosphorus in terrestrial plants: A global synthesis. <i>Functional Ecology</i> , 2019, 33, 2081-2094.	3.6	35
68	How to do meta-analysis of open datasets. <i>Nature Ecology and Evolution</i> , 2018, 2, 1053-1056.	7.8	34
69	Interactive climate factors restrict future increases in spring productivity of temperate and boreal trees. <i>Global Change Biology</i> , 2020, 26, 4042-4055.	9.5	34
70	Quantitative analysis of the links between forest structure and land surface albedo on a global scale. <i>Remote Sensing of Environment</i> , 2020, 246, 111854.	11.0	33
71	Interactive effects of warming and invertebrate grazing on the outcomes of competitive fungal interactions. <i>FEMS Microbiology Ecology</i> , 2012, 81, 419-426.	2.7	32
72	Greenhouse trace gases in deadwood. <i>Biogeochemistry</i> , 2016, 130, 215-226.	3.5	31

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73	High stability and metabolic capacity of bacterial community promote the rapid reduction of easily decomposing carbon in soil. <i>Communications Biology</i> , 2021, 4, 1376.	4.4	31
74	Global relationships in tree functional traits. <i>Nature Communications</i> , 2022, 13, .	12.8	29
75	Localised invertebrate grazing moderates the effect of warming on competitive fungal interactions. <i>Fungal Ecology</i> , 2013, 6, 137-140.	1.6	27
76	Substrate identity and amount overwhelm temperature effects on soil carbon formation. <i>Soil Biology and Biochemistry</i> , 2018, 124, 218-226.	8.8	26
77	Decoupling direct and indirect effects of temperature on decomposition. <i>Soil Biology and Biochemistry</i> , 2017, 112, 110-116.	8.8	25
78	Effects of Elevated CO ₂ on Litter Chemistry and Subsequent Invertebrate Detritivore Feeding Responses. <i>PLoS ONE</i> , 2014, 9, e86246.	2.5	24
79	Priming effects in soils across Europe. <i>Global Change Biology</i> , 2022, 28, 2146-2157.	9.5	22
80	Past climate conditions predict the influence of nitrogen enrichment on the temperature sensitivity of soil respiration. <i>Communications Earth & Environment</i> , 2021, 2, .	6.8	22
81	Alternative stable states of the forest mycobiome are maintained through positive feedbacks. <i>Nature Ecology and Evolution</i> , 2022, 6, 375-382.	7.8	21
82	Response to Comments on "The global tree restoration potential". <i>Science</i> , 2019, 366, .	12.6	20
83	Gold Open Access Publishing in Mega-Journals: Developing Countries Pay the Price of Western Premium Academic Output. <i>Journal of Scholarly Publishing</i> , 2017, 49, 89-102.	0.6	20
84	Increased CO ₂ emissions surpass reductions of non-CO ₂ emissions more under higher experimental warming in an alpine meadow. <i>Science of the Total Environment</i> , 2021, 769, 144559.	8.0	18
85	A "debt" based approach to land degradation as an indicator of global change. <i>Global Change Biology</i> , 2021, 27, 5407-5410.	9.5	15
86	Invertebrate grazing affects nitrogen partitioning in the saprotrophic fungus <i>Phanerochaete velutina</i> . <i>Soil Biology and Biochemistry</i> , 2011, 43, 2338-2346.	8.8	14
87	Crowther et al. reply. <i>Nature</i> , 2018, 554, E7-E8.	27.8	14
88	Mycorrhizal Distributions Impact Global Patterns of Carbon and Nutrient Cycling. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094514.	4.0	14
89	Strategy games to improve environmental policymaking. <i>Nature Sustainability</i> , 2022, 5, 464-471.	23.7	14
90	Belowground community turnover accelerates the decomposition of standing dead wood. <i>Ecology</i> , 2021, 102, e03484.	3.2	13

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91	The role of bottom-up and top-down interactions in determining microbial and fungal diversity and function. , 2015, , 260-287.		12
92	Climate shapes the protein abundance of dominant soil bacteria. <i>Science of the Total Environment</i> , 2018, 640-641, 18-21.	8.0	12
93	Applying allometric theory to fungi. <i>ISME Journal</i> , 2017, 11, 2175-2180.	9.8	10
94	How changes in spring and autumn phenology translate into growthâ€œexperimental evidence of asymmetric effects. <i>Journal of Ecology</i> , 2021, 109, 2717-2728.	4.0	10
95	Modelling the multidimensional niche by linking functional traits to competitive performance. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20150516.	2.6	8
96	The relative roles of local climate adaptation and phylogeny in determining leaf-out timing of temperate tree species. <i>Forest Ecosystems</i> , 2017, 4, .	3.1	8
97	Higher Trophic Levels Overwhelm Climate Change Impacts on Terrestrial Ecosystem Functioning. <i>PLoS ONE</i> , 2015, 10, e0136344.	2.5	8
98	Uniting the scales of microbial biogeochemistry with traitâ€œbased modelling. <i>Functional Ecology</i> , 2022, 36, 1457-1472.	3.6	8
99	Spatially-explicit models of global tree density. <i>Scientific Data</i> , 2016, 3, 160069.	5.3	7
100	A salamander's top down effect on fungal communities in a detritivore ecosystem. <i>FEMS Microbiology Ecology</i> , 2018, 94, .	2.7	7
101	Temperature sensitivity of soil carbon. , 2019, , 175-208.		7
102	Restor: Transparency and connectivity for the global environmental movement. <i>One Earth</i> , 2022, 5, 476-481.	6.8	5
103	Forest value: More than commercialâ€œResponse. <i>Science</i> , 2016, 354, 1541-1542.	12.6	4
104	Response to Comment on â€œThe global tree restoration potentialâ€œ. <i>Science</i> , 2019, 366, .	12.6	4
105	Land surface black-sky albedo at a fixed solar zenith angle and its relation to forest structure during peak growing season based on remote sensing data. <i>Data in Brief</i> , 2020, 31, 105720.	1.0	4
106	Lowland plant arrival in alpine ecosystems facilitates a decrease in soil carbon content under experimental climate warming. <i>ELife</i> , 2022, 11, .	6.0	4
107	Ten years to restore a planet. <i>One Earth</i> , 2020, 3, 647-652.	6.8	3
108	Response to Comment on â€œIncreased growing-season productivity drives earlier autumn leaf senescence in temperate treesâ€œ. <i>Science</i> , 2021, 371, .	12.6	3

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109	Reply to Veresoglou: Overdependence on “significance” testing in biology. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5114-E5114.	7.1	2
110	Forest restoration: Transformative trees”Response. Science, 2019, 366, 317-317.	12.6	2
111	Building a global database of soil microbial biomass and function: a call for collaboration. Soil Organisms, 2020, 91, 139-142.	2.2	1
112	Carbon Source Reduction Postpones Autumn Leaf Senescence in a Widespread Deciduous Tree. Frontiers in Plant Science, 2022, 13, .	3.6	1
113	Using Model Analysis to Unveil Hidden Patterns in Tropical Forest Structures. Frontiers in Ecology and Evolution, 2021, 9, .	2.2	0