Thomas W Crowther

List of Publications by Year
in descending order

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	Forest tree growth is linked to mycorrhizal fungal composition and function across Europe. ISME Journal, 2022, 16, 1327-1336.	9.8	62
2	Priming effects in soils across Europe. Global Change Biology, 2022, 28, 2146-2157.	9.5	22
3	Global maps of soil temperature. Global Change Biology, 2022, 28, 3110-3144.	9.5	113
4	Alternative stable states of the forest mycobiome are maintained through positive feedbacks. Nature Ecology and Evolution, 2022, 6, 375-382.	7.8	21
5	Uniting the scales of microbial biogeochemistry with traitâ€based modelling. Functional Ecology, 2022, 36, 1457-1472.	3.6	8
6	Strategy games to improve environmental policymaking. Nature Sustainability, 2022, 5, 464-471.	23.7	14
7	Lowland plant arrival in alpine ecosystems facilitates a decrease in soil carbon content under experimental climate warming. ELife, 2022, 11, .	6.0	4
8	Restor: Transparency and connectivity for the global environmental movement. One Earth, 2022, 5, 476-481.	6.8	5
9	Carbon Source Reduction Postpones Autumn Leaf Senescence in a Widespread Deciduous Tree. Frontiers in Plant Science, 2022, 13, .	3.6	1
10	Global relationships in tree functional traits. Nature Communications, 2022, 13, .	12.8	29
11	Direct and indirect impacts of urbanization on vegetation growth across the worldâ€™s cities. Science Advances, 2022, 8, .	10.3	80
12	Tracking, targeting, and conserving soil biodiversity. Science, 2021, 371, 239-241.	12.6	151
13	Response to Comment on â€œIncreased growing-season productivity drives earlier autumn leaf senescence in temperate treesâ€• Science, 2021, 371, .	12.6	3
14	Increased CO2 emissions surpass reductions of non-CO2 emissions more under higher experimental warming in an alpine meadow. Science of the Total Environment, 2021, 769, 144559.	8.0	18
15	How changes in spring and autumn phenology translate into growthâ€experimental evidence of asymmetric effects. Journal of Ecology, 2021, 109, 2717-2728.	4.0	10
16	Evidence for large microbial-mediated losses of soil carbon under anthropogenic warming. Nature Reviews Earth & Environment, 2021, 2, 507-517.	29.7	85
17	The global distribution and environmental drivers of aboveground versus belowground plant biomass. Nature Ecology and Evolution, 2021, 5, 1110-1122.	7.8	88
18	Belowground community turnover accelerates the decomposition of standing dead wood. Ecology, 2021, 102, e03484.	3.2	13

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19	Mycorrhizal Distributions Impact Global Patterns of Carbon and Nutrient Cycling. Geophysical Research Letters, 2021, 48, e2021GL094514.	4.0	14
20	A â€˜debtâ€™ based approach to land degradation as an indicator of global change. Global Change Biology, 2021, 27, 5407-5410.	9.5	15
21	Using Model Analysis to Unveil Hidden Patterns in Tropical Forest Structures. Frontiers in Ecology and Evolution, 2021, 9, .	2.2	0
22	Past climate conditions predict the influence of nitrogen enrichment on the temperature sensitivity of soil respiration. Communications Earth & Environment, 2021, 2, .	6.8	22
23	High stability and metabolic capacity of bacterial community promote the rapid reduction of easily decomposing carbon in soil. Communications Biology, 2021, 4, 1376.	4.4	31
24	Fungal functional ecology: bringing a traitâ€based approach to plantâ€associated fungi. Biological Reviews, 2020, 95, 409-433.	10.4	171
25	Increased growing-season productivity drives earlier autumn leaf senescence in temperate trees. Science, 2020, 370, 1066-1071.	12.6	202
26	Mapping carbon accumulation potential from global natural forest regrowth. Nature, 2020, 585, 545-550.	27.8	278
27	Ten years to restore a planet. One Earth, 2020, 3, 647-652.	6.8	3
28	Late-spring frost risk between 1959 and 2017 decreased in North America but increased in Europe and Asia. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12192-12200.	7.1	140
29	A trait-based understanding of wood decomposition by fungi. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11551-11558.	7.1	102
30	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. Data in Brief, 2020, 31, 105720.	1.0	4
31	Distinct Assembly Processes and Microbial Communities Constrain Soil Organic Carbon Formation. One Earth, 2020, 2, 349-360.	6.8	74
32	A global database of soil nematode abundance and functional group composition. Scientific Data, 2020, 7, 103.	5.3	46
33	Nutrient availability controls the impact of mammalian herbivores on soil carbon and nitrogen pools in grasslands. Global Change Biology, 2020, 26, 2060-2071.	9.5	43
34	Interactive climate factors restrict future increases in spring productivity of temperate and boreal trees. Global Change Biology, 2020, 26, 4042-4055.	9.5	34
35	How plastic mulching affects net primary productivity, soil C fluxes and organic carbon balance in dry agroecosystems in China. Journal of Cleaner Production, 2020, 263, 121470.	9.3	53
36	Quantitative analysis of the links between forest structure and land surface albedo on a global scale. Remote Sensing of Environment, 2020, 246, 111854.	11.0	33

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37	Recent deforestation drove the spike in Amazonian fires. Environmental Research Letters, 2020, 15, 121003.	5.2	46
38	Building a global database of soil microbial biomass and function: a call for collaboration. Soil Organisms, 2020, 91, 139-142.	2.2	1
39	The scaling of fine root nitrogen versus phosphorus in terrestrial plants: A global synthesis. Functional Ecology, 2019, 33, 2081-2094.	3.6	35
40	Water scaling of ecosystem carbon cycle feedback to climate warming. Science Advances, 2019, 5, eaav1131.	10.3	118
41	The Importance of Consistent Global Forest Aboveground Biomass Product Validation. Surveys in Geophysics, 2019, 40, 979-999.	4.6	106
42	Understanding climate change from a global analysis of city analogues. PLoS ONE, 2019, 14, e0217592.	2.5	75
43	Soil nematode abundance and functional group composition at a global scale. Nature, 2019, 572, 194-198.	27.8	635
44	The global tree restoration potential. Science, 2019, 365, 76-79.	12.6	1,181
45	Climate warming alters subsoil but not topsoil carbon dynamics in alpine grassland. Global Change Biology, 2019, 25, 4383-4393.	9.5	94
46	Response to Comments on â€œThe global tree restoration potentialâ€• Science, 2019, 366, .	12.6	20
47	Forest restoration: Transformative treesâ€”Response. Science, 2019, 366, 317-317.	12.6	2
48	Global distribution of earthworm diversity. Science, 2019, 366, 480-485.	12.6	248
49	The global soil community and its influence on biogeochemistry. Science, 2019, 365, .	12.6	586
50	Magnitude of urban heat islands largely explained by climate and population. Nature, 2019, 573, 55-60.	27.8	546
51	Scientistsâ€™ warning to humanity: microorganisms and climate change. Nature Reviews Microbiology, 2019, 17, 569-586.	28.6	1,138
52	Climatic controls of decomposition drive the global biogeography of forest-tree symbioses. Nature, 2019, 569, 404-408.	27.8	371
53	Temperature sensitivity of soil carbon. , 2019, , 175-208.		7
54	Sensitivity of global soil carbon stocks to combined nutrient enrichment. Ecology Letters, 2019, 22, 936-945.	6.4	75

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55	Consistent trade-offs in fungal trait expression across broad spatial scales. Nature Microbiology, 2019, 4, 846-853.	13.3	94
56	Response to Comment on â€œThe global tree restoration potentialâ€. Science, 2019, 366, .	12.6	4
57	Cross-biome patterns in soil microbial respiration predictable from evolutionary theory on thermal adaptation. Nature Ecology and Evolution, 2019, 3, 223-231.	7.8	100
58	Crowther et al. reply. Nature, 2018, 554, E7-E8.	27.8	14
59	Species associations overwhelm abiotic conditions to dictate the structure and function of woodâ€decay fungal communities. Ecology, 2018, 99, 801-811.	3.2	42
60	Intransitive competition is common across five major taxonomic groups and is driven by productivity, competitive rank and functional traits. Journal of Ecology, 2018, 106, 852-864.	4.0	36
61	Navigating the unfolding open data landscape in ecology and evolution. Nature Ecology and Evolution, 2018, 2, 420-426.	7.8	47
62	The use of artificial media in fungal ecology. Fungal Ecology, 2018, 32, 87-91.	1.6	36
63	Detecting macroecological patterns in bacterial communities across independent studies of global soils. Nature Microbiology, 2018, 3, 189-196.	13.3	136
64	A global test of ecoregions. Nature Ecology and Evolution, 2018, 2, 1889-1896.	7.8	79
65	A salamander's top down effect on fungal communities in a detritivore ecosystem. FEMS Microbiology Ecology, 2018, 94, .	2.7	7
66	Climate shapes the protein abundance of dominant soil bacteria. Science of the Total Environment, 2018, 640-641, 18-21.	8.0	12
67	Internet Blogs, Polar Bears, and Climate-Change Denial by Proxy. BioScience, 2018, 68, 281-287.	4.9	45
68	Substrate identity and amount overwhelm temperature effects on soil carbon formation. Soil Biology and Biochemistry, 2018, 124, 218-226.	8.8	26
69	Field-warmed soil carbon changes imply high 21st-century modeling uncertainty. Biogeosciences, 2018, 15, 3659-3671.	3.3	38
70	How to do meta-analysis of open datasets. Nature Ecology and Evolution, 2018, 2, 1053-1056.	7.8	34
71	Diversity begets diversity in competition for space. Nature Ecology and Evolution, 2017, 1, 156.	7.8	79
72	Decoupling direct and indirect effects of temperature on decomposition. Soil Biology and Biochemistry, 2017, 112, 110-116.	8.8	25

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73	Competitive network determines the direction of the diversityâ€“function relationship. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11464-11469.	7.1	102
74	Fungal interactions reduce carbon use efficiency. Ecology Letters, 2017, 20, 1034-1042.	6.4	65
75	A test of the hierarchical model of litter decomposition. Nature Ecology and Evolution, 2017, 1, 1836-1845.	7.8	172
76	Applying allometric theory to fungi. ISME Journal, 2017, 11, 2175-2180.	9.8	10
77	The relative roles of local climate adaptation and phylogeny in determining leaf-out timing of temperate tree species. Forest Ecosystems, 2017, 4, .	3.1	8
78	Gold Open Access Publishing in Mega-Journals: Developing Countries Pay the Price of Western Premium Academic Output. Journal of Scholarly Publishing, 2017, 49, 89-102.	0.6	20
79	Quantifying global soil carbon losses in response to warming. Nature, 2016, 540, 104-108.	27.8	879
80	Forest value: More than commercialâ€”Response. Science, 2016, 354, 1541-1542.	12.6	4
81	Greenhouse trace gases in deadwood. Biogeochemistry, 2016, 130, 215-226.	3.5	31
82	Managing uncertainty in soil carbon feedbacks to climate change. Nature Climate Change, 2016, 6, 751-758.	18.8	491
83	Positive biodiversity-productivity relationship predominant in global forests. Science, 2016, 354, .	12.6	864
84	Temperature response of soil respiration largely unaltered with experimental warming. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13797-13802.	7.1	308
85	Patterns of natural fungal community assembly during initial decay of coniferous and broadleaf tree logs. Ecosphere, 2016, 7, e01393.	2.2	38
86	Spatially-explicit models of global tree density. Scientific Data, 2016, 3, 160069.	5.3	7
87	The role of bottom-up and top-down interactions in determining microbial and fungal diversity and function. , 2015, , 260-287.		12
88	Growing the urban forest: tree performance in response to biotic and abiotic land management. Restoration Ecology, 2015, 23, 707-718.	2.9	51
89	Biotic interactions mediate soil microbial feedbacks to climate change. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7033-7038.	7.1	201
90	Modelling the multidimensional niche by linking functional traits to competitive performance. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20150516.	2.6	8

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91	Environmental stress response limits microbial necromass contributions to soil organic carbon. Soil Biology and Biochemistry, 2015, 85, 153-161.	8.8	50
92	Temperate forest termites: ecology, biogeography, and ecosystem impacts. Ecological Entomology, 2015, 40, 199-210.	2.2	36
93	Reply to Veresoglou: Overdependence on â€œsignificanceâ€• testing in biology. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5114-E5114.	7.1	2
94	Mapping tree density at a global scale. Nature, 2015, 525, 201-205.	27.8	642
95	Predicting rates of isotopic turnover across the animal kingdom: a synthesis of existing data. Journal of Animal Ecology, 2015, 84, 861-870.	2.8	144
96	Higher Trophic Levels Overwhelm Climate Change Impacts on Terrestrial Ecosystem Functioning. PLoS ONE, 2015, 10, e0136344.	2.5	8
97	Effects of Elevated CO2 on Litter Chemistry and Subsequent Invertebrate Detritivore Feeding Responses. PLoS ONE, 2014, 9, e86246.	2.5	24
98	Untangling the fungal niche: the trait-based approach. Frontiers in Microbiology, 2014, 5, 579.	3.5	211
99	Climate fails to predict wood decomposition at regional scales. Nature Climate Change, 2014, 4, 625-630.	18.8	281
100	Predicting the responsiveness of soil biodiversity to deforestation: a crossâ€biome study. Global Change Biology, 2014, 20, 2983-2994.	9.5	101
101	Biogeographic patterns in below-ground diversity in New York City's Central Park are similar to those observed globally. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141988.	2.6	295
102	Topâ€down control of soil fungal community composition by a globally distributed keystone consumer. Ecology, 2013, 94, 2518-2528.	3.2	119
103	Carbon use efficiency and storage in terrestrial ecosystems. New Phytologist, 2013, 199, 7-9.	7.3	79
104	Localised invertebrate grazing moderates the effect of warming on competitive fungal interactions. Fungal Ecology, 2013, 6, 137-140.	1.6	27
105	Thermal acclimation in widespread heterotrophic soil microbes. Ecology Letters, 2013, 16, 469-477.	6.4	164
106	Impacts of grazing soil fauna on decomposer fungi are species-specific and density-dependent. Fungal Ecology, 2012, 5, 277-281.	1.6	67
107	Functional and ecological consequences of saprotrophic fungusâ€“grazer interactions. ISME Journal, 2012, 6, 1992-2001.	9.8	189
108	Interactive effects of warming and invertebrate grazing on the outcomes of competitive fungal interactions. FEMS Microbiology Ecology, 2012, 81, 419-426.	2.7	32

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109	Species-specific effects of grazing invertebrates on mycelial emergence and growth from woody resources into soil. Fungal Ecology, 2011, 4, 333-341.	1.6	42
110	Outcomes of fungal interactions are determined by soil invertebrate grazers. Ecology Letters, 2011, 14, 1134-1142.	6.4	136
111	Invertebrate grazing determines enzyme production by basidiomycete fungi. Soil Biology and Biochemistry, 2011, 43, 2060-2068.	8.8	67
112	Invertebrate grazing affects nitrogen partitioning in the saprotrophic fungus Phanerochaete velutina. Soil Biology and Biochemistry, 2011, 43, 2338-2346.	8.8	14
113	Species-specific effects of soil fauna on fungal foraging and decomposition. Oecologia, 2011, 167, 535-545.	2.0	74