Will K Cornwell

List of Publications by Year
in descending order

129 papers	23,722 citations	34100 52 h-index	13770 129 g-index
144 all docs	144 docs citations	144 times ranked	27191 citing authors

#	Article	IF	Citations
1	Picante: R tools for integrating phylogenies and ecology. Bioinformatics, 2010, 26, 1463-1464.	4.1	4,517
2	TRY â€“ a global database of plant traits. Global Change Biology, 2011, 17, 2905-2935.	9.5	2,002
3	Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecology Letters, 2008, 11, 1065-1071.	6.4	1,913
4	Three keys to the radiation of angiosperms into freezing environments. Nature, 2014, 506, 89-92.	27.8	1,284
5	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
6	A TRAIT-BASED TEST FOR HABITAT FILTERING: CONVEX HULL VOLUME. Ecology, 2006, 87, 1465-1471.	3.2	963
7	Community assembly and shifts in plant trait distributions across an environmental gradient in coastal California. Ecological Monographs, 2009, 79, 109-126.	5.4	940
8	The effects of phenotypic plasticity and local adaptation on forecasts of species range shifts under climate change. Ecology Letters, 2014, 17, 1351-1364.	6.4	802
9	A trait-based approach to community assembly: partitioning of species trait values into within- and among-community components. Ecology Letters, 2007, 10, 135-145.	6.4	638
10	Trait Evolution, Community Assembly, and the Phylogenetic Structure of Ecological Communities. American Naturalist, 2007, 170, 271-283.	2.1	625
11	The geography of climate change: implications for conservation biogeography. Diversity and Distributions, 2010, 16, 476-487.	4.1	490
12	Plant functional trait change across a warming tundra biome. Nature, 2018, 562, 57-62.	27.8	451
13	Global metaâ€analysis of wood decomposition rates: a role for trait variation among tree species?. Ecology Letters, 2009, 12, 45-56.	6.4	394
14	Wood density and vessel traits as distinct correlates of ecological strategy in 51 California coast range angiosperms. New Phytologist, 2006, 170, 807-818.	7.3	374
15	Linking litter decomposition of aboveâ€and belowâ€ground organs to plantâ€“soil feedbacks worldwide. Journal of Ecology, 2013, 101, 943-952.	4.0	362
16	Why are non-photosynthetic tissues generally 13C enriched compared with leaves in C3 plants? Review and synthesis of current hypotheses. Functional Plant Biology, 2009, 36, 199.	2.1	348
17	A global method for calculating plant <scp>CSR</scp> ecological strategies applied across biomes worldâ€wide. Functional Ecology, 2017, 31, 444-457.	3.6	330
18	Which is a better predictor of plant traits: temperature or precipitation?. Journal of Vegetation Science, 2014, 25, 1167-1180.	2.2	323

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19	Plant traits and wood fates across the globe: rotted, burned, or consumed?. Global Change Biology, 2009, 15, 2431-2449.	9.5	318
20	A single evolutionary innovation drives the deep evolution of symbiotic N2-fixation in angiosperms. Nature Communications, 2014, 5, 4087.	12.8	260
21	Global effects of soil and climate on leaf photosynthetic traits and rates. Global Ecology and Biogeography, 2015, 24, 706-717.	5.8	254
22	Towards a universal model for carbon dioxide uptake by plants. Nature Plants, 2017, 3, 734-741.	9.3	237
23	Regional and local patterns in plant species richness with respect to resource availability. Oikos, 2003, 100, 417-428.	2.7	176
24	Taller and larger: shifts in Arctic tundra leaf traits after 16 years of experimental warming. Global Change Biology, 2011, 17, 1013-1021.	9.5	171
25	Fungal functional ecology: bringing a traitâ€based approach to plantâ€associated fungi. Biological Reviews, 2020, 95, 409-433.	10.4	171
26	Global patterns of plant root colonization intensity by mycorrhizal fungi explained by climate and soil chemistry. Global Ecology and Biogeography, 2015, 24, 371-382.	5.8	163
27	Putting plant resistance traits on the map: a test of the idea that plants are better defended at lower latitudes. New Phytologist, 2011, 191, 777-788.	7.3	155
28	Model Adequacy and the Macroevolution of Angiosperm Functional Traits. American Naturalist, 2015, 186, E33-E50.	2.1	154
29	Global relationship of wood and leaf litter decomposability: the role of functional traits within and across plant organs. Global Ecology and Biogeography, 2014, 23, 1046-1057.	5.8	136
30	Generalists are the most urbanâ€tolerant of birds: a phylogenetically controlled analysis of ecological and life history traits using a novel continuous measure of bird responses to urbanization. Oikos, 2019, 128, 845-858.	2.7	132
31	A link between plant traits and abundance: evidence from coastal California woody plants. Journal of Ecology, 2010, 98, 814-821.	4.0	129
32	Correlations between physical and chemical defences in plants: tradeoffs, syndromes, or just many different ways to skin a herbivorous cat?. New Phytologist, 2013, 198, 252-263.	7.3	124
33	A rediscovered treasure: mycorrhizal intensity database for 3000 vascular plant species across the former Soviet Union. Ecology, 2012, 93, 689-690.	3.2	113
34	Functional distinctiveness of major plant lineages. Journal of Ecology, 2014, 102, 345-356.	4.0	108
35	Improving big citizen science data: Moving beyond haphazard sampling. PLoS Biology, 2019, 17, e3000357.	5.6	108
36	Global to community scale differences in the prevalence of convergent over divergent leaf trait distributions in plant assemblages. Global Ecology and Biogeography, 2011, 20, 755-765.	5.8	106

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37	Plant-driven variation in decomposition rates improves projections of global litter stock distribution. Biogeosciences, 2012, 9, 565-576.	3.3	105
38	Phylogenetic tests of community assembly across regional to continental scales in tropical and subtropical rain forests. Global Ecology and Biogeography, 2011, 20, 707-716.	5.8	95
39	Leaf traits within communities: Context may affect the mapping of traits to function. Ecology, 2013, 94, 1893-1897.	3.2	94
40	Occurrence of arbuscular mycorrhizal fungi in a phosphorus-poor wetland and mycorrhizal response to phosphorus fertilization. American Journal of Botany, 2001, 88, 1824-1829.	1.7	93
41	Burn or rot: leaf traits explain why flammability and decomposability are decoupled across species. Functional Ecology, 2015, 29, 1486-1497.	3.6	91
42	Symbiont switching and alternative resource acquisition strategies drive mutualism breakdown. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5229-5234.	7.1	90
43	How much of the world is woody?. Journal of Ecology, 2014, 102, 1266-1272.	4.0	88
44	Mutualism Persistence and Abandonment during the Evolution of the Mycorrhizal Symbiosis. American Naturalist, 2016, 188, E113-E125.	2.1	87
45	Climate and soils together regulate photosynthetic carbon isotope discrimination within C₃ plants worldwide. Global Ecology and Biogeography, 2018, 27, 1056-1067.	5.8	85
46	What we (don't) know about global plant diversity. Ecography, 2019, 42, 1819-1831.	4.5	79
47	AusTraits, a curated plant trait database for the Australian flora. Scientific Data, 2021, 8, 254.	5.3	73
48	Evolutionary signals of symbiotic persistence in the legumeâ€“rhizobia mutualism. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10262-10269.	7.1	71
49	Phylogenetic comparative methods. Current Biology, 2017, 27, R333-R336.	3.9	66
50	Global abundance estimates for 9,700 bird species. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	66
51	Plants show more flesh in the tropics: variation in fruit type along latitudinal and climatic gradients. Ecography, 2017, 40, 531-538.	4.5	65
52	Flammability across the gymnosperm phylogeny: the importance of litter particle size. New Phytologist, 2015, 206, 672-681.	7.3	64
53	Sexual dimorphism in trait variability and its eco-evolutionary and statistical implications. ELife, 2020, 9, .	6.0	64
54	Functional biogeography of angiosperms: life at the extremes. New Phytologist, 2018, 218, 1697-1709.	7.3	61

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55	Trees, branches and (square) roots: why evolutionary relatedness is not linearly related to functional distance. Methods in Ecology and Evolution, 2015, 6, 439-444.	5.2	56
56	Decomposition trajectories of diverse litter types: a model selection analysis. Methods in Ecology and Evolution, 2014, 5, 173-182.	5.2	51
57	Are litter decomposition and fire linked through plant species traits?. New Phytologist, 2017, 216, 653-669.	7.3	50
58	Traditional plant functional groups explain variation in economic but not sizeâ€related traits across the tundra biome. Global Ecology and Biogeography, 2019, 28, 78-95.	5.8	49
59	Optimizing future biodiversity sampling by citizen scientists. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20191487.	2.6	45
60	Bridging reproductive and microbial ecology: a case study in arbuscular mycorrhizal fungi. ISME Journal, 2019, 13, 873-884.	9.8	43
61	A simple approach for maximizing the overlap of phylogenetic and comparative data. Methods in Ecology and Evolution, 2016, 7, 751-758.	5.2	41
62	Australian Tropical and Subtropical Rain Forest Community Assembly: Phylogeny, Functional Biogeography, and Environmental Gradients. Biotropica, 2012, 44, 668-679.	1.6	40
63	Species composition and fire: non-additive mixture effects on ground fuel flammability. Frontiers in Plant Science, 2012, 3, 63.	3.6	39
64	Termites amplify the effects of wood traits on decomposition rates among multiple bamboo and dicot woody species. Journal of Ecology, 2015, 103, 1214-1223.	4.0	38
65	Plant functional traits in Australian subtropical rain forest: partitioning withinâ€community from crossâ€landscape variation. Journal of Ecology, 2010, 98, 517-525.	4.0	37
66	A Geographic Mosaic of Climate Change Impacts on Terrestrial Vegetation: Which Areas Are Most at Risk?. PLoS ONE, 2015, 10, e0130629.	2.5	37
67	Rapidly mapping fire effects on biodiversity at a large-scale using citizen science. Science of the Total Environment, 2021, 755, 142348.	8.0	36
68	Abundance, rarity and invasion debt among exotic species in a patchy ecosystem. Biological Invasions, 2013, 15, 707-716.	2.4	35
69	Topographic, latitudinal and climatic distribution of Pinus coulteri: geographic range limits are not at the edge of the climate envelope. Ecography, 2015, 38, 590-601.	4.5	35
70	Contest competition and men's facial hair: beards may not provide advantages in combat. Evolution and Human Behavior, 2018, 39, 147-153.	2.2	35
71	Winners always win: growth of a wide range of plant species from low to future high <scp>CO</scp>₂. Ecology and Evolution, 2015, 5, 4949-4961.	1.9	34
72	A global database for metacommunity ecology, integrating species, traits, environment and space. Scientific Data, 2020, 7, 6.	5.3	28

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73	Decomposition of 51 semidesert species from wide-ranging phylogeny is faster in standing and sand-buried than in surface leaf litters: implications for carbon and nutrient dynamics. Plant and Soil, 2015, 396, 175-187.	3.7	27
74	Modelling the distribution of fish around an artificial reef. Marine and Freshwater Research, 2017, 68, 1955.	1.3	25
75	Natural and Regenerated Saltmarshes Exhibit Similar Soil and Belowground Organic Carbon Stocks, Root Production and Soil Respiration. Ecosystems, 2019, 22, 1803-1822.	3.4	25
76	Species mixture effects on flammability across plant phylogeny: the importance of litter particle size and the special role for nonâ€Pinus Pinaceae. Ecology and Evolution, 2016, 6, 8223-8234.	1.9	24
77	When and where soil is important to modify the carbon and water economy of leaves. New Phytologist, 2020, 228, 121-135.	7.3	24
78	Is color data from citizen science photographs reliable for biodiversity research?. Ecology and Evolution, 2021, 11, 4071-4083.	1.9	24
79	Metaâ€analysis reveals profound responses of plant traits to glacial <scp>CO</scp>₂ levels. Ecology and Evolution, 2013, 3, 4525-4535.	1.9	22
80	The Tree of Life in ecosystems: evolution of plant effects on carbon and nutrient cycling. Journal of Ecology, 2014, 102, 269-274.	4.0	22
81	Using citizen science data to define and track restoration targets in urban areas. Journal of Applied Ecology, 2019, 56, 1998.	4.0	22
82	Three Frontiers for the Future of Biodiversity Research Using Citizen Science Data. BioScience, 0, , .	4.9	22
83	Functional traits drive the contribution of solar radiation to leaf litter decomposition among multiple arid-zone species. Scientific Reports, 2015, 5, 13217.	3.3	21
84	A unique web resource for physiology, ecology and the environmental sciences: PrometheusWiki. Functional Plant Biology, 2010, 37, 687.	2.1	20
85	Intraspecific leaf trait variability along a boreal-to-tropical community diversity gradient. PLoS ONE, 2017, 12, e0172495.	2.5	20
86	A continental measure of urbanness predicts avian response to local urbanization. Ecography, 2020, 43, 528-538.	4.5	19
87	Widespread shortâ€term persistence of frog species after the 2019â€“2020 bushfires in eastern Australia revealed by citizen science. Conservation Science and Practice, 2020, 2, e287.	2.0	19
88	Interactions between Fine Wood Decomposition and Flammability. Forests, 2014, 5, 827-846.	2.1	18
89	Weak phylogenetic signal in physiological traits of methaneâ€oxidizing bacteria. Journal of Evolutionary Biology, 2014, 27, 1240-1247.	1.7	18
90	Good neighbors aplenty: fungal endophytes rarely exhibit competitive exclusion patterns across a span of woody habitats. Ecology, 2019, 100, e02790.	3.2	18

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91	Conservation birding: A quantitative conceptual framework for prioritizing citizen science observations. Biological Conservation, 2021, 253, 108912.	4.1	18
92	Understanding the ecosystem implications of the angiosperm rise to dominance: leaf litter decomposability among magnoliids and other basal angiosperms. Journal of Ecology, 2014, 102, 337-344.	4.0	17
93	A global growthâ€form database for 143,616 vascular plant species. Ecology, 2019, 100, e02614.	3.2	17
94	How to build a biodiverse city: environmental determinants of bird diversity within and among 1581 cities. Biodiversity and Conservation, 2021, 30, 217-234.	2.6	16
95	Lichens buffer tundra microclimate more than the expanding shrub Betula nana. Annals of Botany, 2021, 128, 407-418.	2.9	16
96	Experimental evidence that the O rnsteinâ€•U hlenbeck model best describes the evolution of leaf litter decomposability. Ecology and Evolution, 2014, 4, 3339-3349.	1.9	15
97	Hungry and thirsty: Effects of CO2 and limited water availability on plant performance. Flora: Morphology, Distribution, Functional Ecology of Plants, 2019, 254, 188-193.	1.2	13
98	Urban tolerance of birds changes throughout the full annual cycle. Journal of Biogeography, 2021, 48, 1503-1517.	3.0	13
99	Effects of Growth Form and Functional Traits on Response of Woody Plants to Clearing and Fragmentation of Subtropical Rainforest. Conservation Biology, 2013, 27, 1468-1477.	4.7	12
100	A broader perspective on plant domestication and nutrient and carbon cycling. New Phytologist, 2013, 198, 331-333.	7.3	12
101	Increases in CO 2 from past low to future high levels result in â€œslowerâ€•strategies on the leaf economic spectrum. Perspectives in Plant Ecology, Evolution and Systematics, 2017, 29, 41-50.	2.7	12
102	Pelagic citizen science data reveal declines of seabirds off south-eastern Australia. Biological Conservation, 2019, 235, 226-235.	4.1	12
103	An evolutionary attractor model for sapwood cross section in relation to leaf area. Journal of Theoretical Biology, 2012, 303, 98-109.	1.7	10
104	Shifts in fine root traits within and among species along a fine-scale hydrological gradient. Annals of Botany, 2021, 127, 473-481.	2.9	9
105	Impact of land-use on carbon storage as dependent on soil texture: Evidence from a desertified dryland using repeated paired sampling design. Journal of Environmental Management, 2015, 150, 489-498.	7.8	8
106	Does plant size affect growth responses to water availability at glacial, modern and future CO₂ concentrations?. Ecological Research, 2016, 31, 213-227.	1.5	8
107	Finding fungal ecological strategies: Is recycling an option?. Fungal Ecology, 2020, 46, 100902.	1.6	8
108	Divergence of above- and belowground C and N pool within predominant plant species along two precipitation gradients in North China. Biogeosciences, 2015, 12, 457-465.	3.3	7

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109	Relationships between mycorrhizal type and leaf flammability in the Australian flora. Pedobiologia, 2017, 65, 43-49.	1.2	7
110	When to cut your losses: Dispersal allocation in an asexual filamentous fungus in response to competition. Ecology and Evolution, 2019, 9, 4129-4137.	1.9	7
111	The Role of Climate Niche, Geofloristic History, Habitat Preference, and Allometry on Wood Density within a California Plant Community. Forests, 2020, 11, 105.	2.1	7
112	A systematic review of transplant experiments in lichens and bryophytes. Bryologist, 2020, 123, .	0.6	7
113	Rainforest bird communities threatened by extreme fire. Global Ecology and Conservation, 2022, 33, e01985.	2.1	7
114	Continentalâ€scale shifts in termite diversity and nesting and feeding strategies. Ecography, 2022, 2022, .	4.5	7
115	Using citizen science to measure recolonisation of birds after the Australian 2019â€“2020 megaâ€fires. Austral Ecology, 2023, 48, 31-40.	1.5	6
116	Strong but diverging clonality - climate relationships of different plant clades explain weak overall pattern across China. Scientific Reports, 2016, 6, 26850.	3.3	5
117	Strong restrictions on the trait range of co-occurring species in the newly created riparian zone of the Three Gorges Reservoir Area, China. Journal of Plant Ecology, 2019, 12, 825-833.	2.3	5
118	Dam Effect on Soil Nutrients and Potentially Toxic Metals in a Reservoir Riparian Zone. Clean - Soil, Air, Water, 2019, 47, 1700497.	1.1	5
119	From dangerous branches to urban banyan: Facilitating aerial root growth of Ficus rubiginosa. PLoS ONE, 2019, 14, e0226845.	2.5	4
120	Zanne et al. reply. Nature, 2015, 521, E6-E7.	27.8	3
121	Datastorr: a workflow and package for delivering successive versions of 'evolving data' directly into R. GigaScience, 2019, 8, .	6.4	3
122	Tissue chemistry of biocrust species along an aridity gradient and comparison to vascular plant leaves. Functional Ecology, 2021, 35, 2604.	3.6	3
123	Environmental cues for dispersal in a filamentous fungus in simulated islands. Oikos, 2020, 129, 1084-1092.	2.7	2
124	Measuring reflectance of tiny organisms: The promise of species level biocrust remote sensing. Methods in Ecology and Evolution, 2021, 12, 2174-2183.	5.2	2
125	Initial wood trait variation overwhelms endophyte community effects for explaining decay trajectories. Functional Ecology, 2022, 36, 1243-1257.	3.6	2
126	Reply to Robinson etÂal.: Data integration will form the basis of future abundance estimates. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117920119.	7.1	2

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127	Toward a better understanding of variation in the amount of leaf area in vegetation. Journal of Vegetation Science, 2015, 26, 1028-1029.	2.2	1
128	A new metric to assess the predictive accuracy of multinomial land cover models. Journal of Biogeography, 2017, 44, 1212-1224.	3.0	1
129	Frequent consumption of sap suggests that omnivory is widespread among Australian geckos. Die Naturwissenschaften, 2021, 108, 14.	1.6	0