Jennifer S Powers

List of Publications by Year
in descending order

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122 papers	10,258 citations	53794 45 h-index	36028 97 g-index
124 all docs	124 docs citations	124 times ranked	11937 citing authors

#	Article	IF	Citations
1	Stoichiometry of soil enzyme activity at global scale. Ecology Letters, 2008, 11, 1252-1264.	6.4	1,684
2	Biomass resilience of Neotropical secondary forests. Nature, 2016, 530, 211-214.	27.8	763
3	Hanging by a thread? Forests and drought. Science, 2020, 368, 261-266.	12.6	431
4	Carbon sequestration potential of second-growth forest regeneration in the Latin American tropics. Science Advances, 2016, 2, e1501639.	10.3	423
5	An estimate of the number of tropical tree species. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7472-7477.	7.1	335
6	Biodiversity recovery of Neotropical secondary forests. Science Advances, 2019, 5, eaau3114.	10.3	291
7	Diversity in plant hydraulic traits explains seasonal and interâ€annual variations of vegetation dynamics in seasonally dry tropical forests. New Phytologist, 2016, 212, 80-95.	7.3	274
8	Succession and management of tropical dry forests in the Americas: Review and new perspectives. Forest Ecology and Management, 2009, 258, 1014-1024.	3.2	260
9	Decomposition in tropical forests: a panâ€tropical study of the effects of litter type, litter placement and mesofaunal exclusion across a precipitation gradient. Journal of Ecology, 2009, 97, 801-811.	4.0	256
10	Stoichiometry of microbial carbon use efficiency in soils. Ecological Monographs, 2016, 86, 172-189.	5.4	253
11	Geographic bias of field observations of soil carbon stocks with tropical land-use changes precludes spatial extrapolation. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6318-6322.	7.1	225
12	Will seasonally dry tropical forests be sensitive or resistant to future changes in rainfall regimes?. Environmental Research Letters, 2017, 12, 023001.	5.2	210
13	Diversity and structure of regenerating tropical dry forests in Costa Rica: Geographic patterns and environmental drivers. Forest Ecology and Management, 2009, 258, 959-970.	3.2	200
14	Relationships among soil carbon distributions and biophysical factors at nested spatial scales in rain forests of northeastern Costa Rica. Geoderma, 2002, 109, 165-190.	5.1	171
15	Multidimensional tropical forest recovery. Science, 2021, 374, 1370-1376.	12.6	165
16	Stand age and soils as drivers of plant functional traits and aboveground biomass in secondary tropical dry forest. Canadian Journal of Forest Research, 2014, 44, 604-613.	1.7	161
17	Aboveground biomass in mature and secondary seasonally dry tropical forests: A literature review and global synthesis. Forest Ecology and Management, 2012, 276, 88-95.	3.2	148
18	Lianas reduce carbon accumulation and storage in tropical forests. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13267-13271.	7.1	147

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19	Phylogenetic classification of the worldâ€™s tropical forests. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1837-1842.	7.1	144
20	A catastrophic tropical drought kills hydraulically vulnerable tree species. Global Change Biology, 2020, 26, 3122-3133.	9.5	132
21	Tropical reforestation and climate change: beyond carbon. Restoration Ecology, 2015, 23, 337-343.	2.9	127
22	Deforestation and reforestation impacts on soils in the tropics. Nature Reviews Earth & Environment, 2020, 1, 590-605.	29.7	121
23	Climate Change Risks to Global Forest Health: Emergence of Unexpected Events of Elevated Tree Mortality Worldwide. Annual Review of Plant Biology, 2022, 73, 673-702.	18.7	117
24	Fine roots, arbuscular mycorrhizal hyphae and soil nutrients in four neotropical rain forests: patterns across large geographic distances. New Phytologist, 2005, 165, 913-921.	7.3	114
25	Increased Litterfall in Tropical Forests Boosts the Transfer of Soil CO2 to the Atmosphere. PLoS ONE, 2007, 2, e1299.	2.5	113
26	Plant functional type classifications in tropical dry forests in Costa Rica: leaf habit versus taxonomic approaches. Functional Ecology, 2010, 24, 927-936.	3.6	112
27	Legume abundance along successional and rainfall gradients in Neotropical forests. Nature Ecology and Evolution, 2018, 2, 1104-1111.	7.8	107
28	Geographic and vertical patterns of stable carbon isotopes in tropical rain forest soils of Costa Rica. Geoderma, 2002, 109, 141-160.	5.1	104
29	Changes in Soil Carbon and Nitrogen after Contrasting Land-use Transitions in Northeastern Costa Rica. Ecosystems, 2004, 7, 134.	3.4	100
30	Liana Impacts on Carbon Cycling, Storage and Sequestration in Tropical Forests. Biotropica, 2013, 45, 682-692.	1.6	98
31	Pervasive and strong effects of plants on soil chemistry: a meta-analysis of individual plant â€˜Zinkeâ€™ effects. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20151001.	2.6	93
32	Variable Responses of Lowland Tropical Forest Nutrient Status to Fertilization and Litter Manipulation. Ecosystems, 2012, 15, 387-400.	3.4	91
33	Spatial variation of throughfall volume in an old-growth tropical wet forest, Costa Rica. Journal of Tropical Ecology, 2002, 18, 397-407.	1.1	85
34	Scaleâ€dependent variation in nitrogen cycling and soil fungal communities along gradients of forest composition and age in regenerating tropical dry forests. New Phytologist, 2016, 209, 845-854.	7.3	82
35	Ecosystem Processes and Biogeochemical Cycles in Secondary Tropical Forest Succession. Annual Review of Ecology, Evolution, and Systematics, 2017, 48, 497-519.	8.3	78
36	Shifting grassland plant community structure drives positive interactive effects of warming and diversity on aboveground net primary productivity. Global Change Biology, 2016, 22, 741-749.	9.5	77

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37	Regional variation in soil carbon and Î´13C in forests and pastures of northeastern Costa Rica. Biogeochemistry, 2005, 72, 315-336.	3.5	66
38	Resilience of tropical dry forests â€“ a metaâ€analysis of changes in species diversity and composition during secondary succession. Oikos, 2016, 125, 1386-1397.	2.7	65
39	Variation in Small Sapling Density, Understory Cover, and Resource Availability in Four Neotropical Forests. Biotropica, 2004, 36, 40-51.	1.6	61
40	Lianas suppress seedling growth and survival of 14 tree species in a Panamanian tropical forest. Ecology, 2016, 97, 215-224.	3.2	55
41	Macro- and micronutrient effects on decomposition of leaf litter from two tropical tree species: inferences from a short-term laboratory incubation. Plant and Soil, 2011, 346, 245-257.	3.7	54
42	Allometric scaling laws linking biomass and rooting depth vary across ontogeny and functional groups in tropical dry forest lianas and trees. New Phytologist, 2020, 226, 714-726.	7.3	53
43	Do legumes and non-legumes tree species affect soil properties in unmanaged forests and plantations in Costa Rican dry forests?. Soil Biology and Biochemistry, 2013, 57, 264-272.	8.8	52
44	Using soil amendments and plant functional traits to select native tropical dry forest species for the restoration of degraded Vertisols. Journal of Applied Ecology, 2018, 55, 1019-1028.	4.0	52
45	Environmental gradients and the evolution of successional habitat specialization: a test case with 14 Neotropical forest sites. Journal of Ecology, 2015, 103, 1276-1290.	4.0	50
46	Impacts of climate variability on tree demography in second growth tropical forests: the importance of regional context for predicting successional trajectories. Biotropica, 2016, 48, 780-797.	1.6	50
47	Lianas reduce communityâ€level canopy tree reproduction in a Panamanian forest. Journal of Ecology, 2018, 106, 737-745.	4.0	50
48	Edaphic Factors are a More Important Control on Surface Fine Roots than Stand Age in Secondary Tropical Dry Forests. Biotropica, 2013, 45, 1-9.	1.6	49
49	Pitfalls of Tree Planting Show Why We Need People-Centered Natural Climate Solutions. BioScience, 0, , .	4.9	49
50	Contrasting patterns of leaf trait variation among and within species during tropical dry forest succession in Costa Rica. Scientific Reports, 2018, 8, 285.	3.3	48
51	Risk factors for Aboriginal low birthweight, intrauterine growth retardation and preterm birth in the Darwin Health Region. Australian and New Zealand Journal of Public Health, 1997, 21, 524-530.	1.8	47
52	Contribution of lianas to plant area index and canopy structure in a Panamanian forest. Ecology, 2016, 97, 3271-3277.	3.2	45
53	Leaf traits and water relations of 12 evergreen species in Costa Rican wet and dry forests: patterns of intra-specific variation across forests and seasons. Plant Ecology, 2010, 211, 133-146.	1.6	44
54	Liana competition with tropical trees varies seasonally but not with tree species identity. Ecology, 2015, 96, 39-45.	3.2	43

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55	Unraveling the mechanisms underlying pulse dynamics of soil respiration in tropical dry forests. Environmental Research Letters, 2016, 11, 105005.	5.2	41
56	Tropical dry forest trees and lianas differ in leaf economic spectrum traits but have overlapping water-use strategies. Tree Physiology, 2018, 38, 517-530.	3.1	40
57	Observed variation in soil properties can drive large variation in modelled forest functioning and composition during tropical forest secondary succession. New Phytologist, 2019, 223, 1820-1833.	7.3	40
58	Forest composition modifies litter dynamics and decomposition in regenerating tropical dry forest. Oecologia, 2016, 182, 287-297.	2.0	36
59	Plant community responses to standâ€level nutrient fertilization in a secondary tropical dry forest. Ecology, 2019, 100, e02691.	3.2	36
60	Tree species do not influence local soil chemistry in a species-rich Costa Rica rain forest. Journal of Tropical Ecology, 2004, 20, 587-590.	1.1	34
61	Nutrient addition effects on tropical dry forests: a mini-review from microbial to ecosystem scales. Frontiers in Earth Science, 0, 3, .	1.8	33
62	Overlooking what is underground: Root:shoot ratios and coarse root allometric equations for tropical forests. Forest Ecology and Management, 2017, 385, 10-15.	3.2	32
63	Coarse woody debris stocks as a function of forest type and stand age in Costa Rican tropical dry forest: long-lasting legacies of previous land use. Journal of Tropical Ecology, 2010, 26, 467-471.	1.1	31
64	Explaining Legume Success in Tropical Dry Forests Based on Seed Germination Niches: A New Hypothesis. Biotropica, 2015, 47, 277-280.	1.6	29
65	Beyond leaf habit: generalities in plant function across 97 tropical dry forest tree species. New Phytologist, 2021, 232, 148-161.	7.3	28
66	Modeling the Carbon Cost of Plant Nitrogen and Phosphorus Uptake Across Temperate and Tropical Forests. Frontiers in Forests and Global Change, 2020, 3, .	2.3	27
67	Unraveling the relative role of light and water competition between lianas and trees in tropical forests: A vegetation model analysis. Journal of Ecology, 2021, 109, 519-540.	4.0	24
68	Phenological responses of prairie plants vary among species and year in a threeâ€year experimental warming study. Ecosphere, 2015, 6, 1-15.	2.2	23
69	Nitrogen, phosphorus, and cation use efficiency in stands of regenerating tropical dry forest. Oecologia, 2015, 178, 887-897.	2.0	23
70	Effects of dryâ€season irrigation on leaf physiology and biomass allocation in tropical lianas and trees. Ecology, 2019, 100, e02827.	3.2	22
71	How politics shapes the outcomes of forest carbon finance. Current Opinion in Environmental Sustainability, 2021, 51, 7-14.	6.3	22
72	Vehicle and Driver Attributes Affecting Distance from the Steering Wheel in Motor Vehicles. Human Factors, 2000, 42, 676-682.	3.5	20

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73	Short and Long-Term Soil Moisture Effects of Liana Removal in a Seasonally Moist Tropical Forest. PLoS ONE, 2015, 10, e0141891.	2.5	20
74	Initial white rot type dominance of wood decomposition and its functional consequences in a regenerating tropical dry forest. Soil Biology and Biochemistry, 2015, 88, 58-68.	8.8	20
75	Resilience of seed production to a severe El NiÃ±oâ€induced drought across functional groups and dispersal types. Global Change Biology, 2018, 24, 5270-5280.	9.5	20
76	Edaphic factors, successional status and functional traits drive habitat associations of trees in naturally regenerating tropical dry forests. Functional Ecology, 2018, 32, 2766-2776.	3.6	19
77	Soil biogeochemistry across Central and South American tropical dry forests. Ecological Monographs, 2021, 91, e01453.	5.4	19
78	New Perspectives in Comparative Ecology of Neotropical Rain Forests: Reflections on the Past, Present, and Future. Biotropica, 2004, 36, 2-6.	1.6	17
79	Lowâ€cost agricultural waste accelerates tropical forest regeneration. Restoration Ecology, 2018, 26, 275-283.	2.9	17
80	Focus on tropical dry forest ecosystems and ecosystem services in the face of global change. Environmental Research Letters, 2018, 13, 090201.	5.2	17
81	Effect of lianas on forestâ€level tree carbon accumulation does not differ between seasons: Results from a liana removal experiment in Panama. Journal of Ecology, 2019, 107, 1890-1900.	4.0	17
82	Multiple Factors Influence Seasonal and Interannual Litterfall Production in a Tropical Dry Forest in Mexico. Forests, 2020, 11, 1241.	2.1	17
83	Estimating soil carbon fluxes following land-cover change: a test of some critical assumptions for a region in Costa Rica. Global Change Biology, 2004, 10, 170-181.	9.5	16
84	Mapping Tree Species Deciduousness of Tropical Dry Forests Combining Reflectance, Spectral Unmixing, and Texture Data from High-Resolution Imagery. Forests, 2020, 11, 1234.	2.1	16
85	Consequences of elevated temperatures on legume biomass and nitrogen cycling in a field warming and biodiversity experiment in a North American prairie. Functional Plant Biology, 2013, 40, 1147.	2.1	15
86	Biological potential of four indigenous tree species from seasonally dry tropical forest for soil restoration. Agroforestry Systems, 2015, 89, 455-467.	2.0	15
87	Reply to Verbeeck and Kearsley: Addressing the challenges of including lianas in global vegetation models. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5-6.	7.1	15
88	Beyond MAP: A guide to dimensions of rainfall variability for tropical ecology. Biotropica, 2020, 52, 1319-1332.	1.6	15
89	The influence of seasonality and species effects on surface fine roots and nodulation in tropical legume tree plantations. Plant and Soil, 2015, 388, 187-196.	3.7	14
90	Ensuring tests of conservation interventions build on existing literature. Conservation Biology, 2020, 34, 781-783.	4.7	14

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91	Using largeâ€scale tropical dry forest restoration to test successional theory. Ecological Applications, 2020, 30, e02116.	3.8	13
92	Tradeoffs and Synergies in Tropical Forest Root Traits and Dynamics for Nutrient and Water Acquisition: Field and Modeling Advances. Frontiers in Forests and Global Change, 2021, 4, .	2.3	13
93	Spatial variation of soil organic carbon concentrations and stable isotopic composition in 1-ha plots of forest and pasture in Costa Rica: implications for the natural abundance technique. Biology and Fertility of Soils, 2006, 42, 580-584.	4.3	12
94	Reduced ecosystem resilience quantifies fineâ€scale heterogeneity in tropical forest mortality responses to drought. Global Change Biology, 2022, 28, 2081-2094.	9.5	12
95	Ectomycorrhizal diversity and community structure in stands of Quercus oleoides in the seasonally dry tropical forests of Costa Rica. Environmental Research Letters, 2016, 11, 125007.	5.2	11
96	Lianas maintain insectivorous bird abundance and diversity in a neotropical forest. Ecology, 2020, 101, e03176.	3.2	11
97	Aboveâ€ground net primary productivity in regenerating seasonally dry tropical forest: Contributions of rainfall, forest age and soil. Journal of Ecology, 2021, 109, 3903-3915.	4.0	11
98	Plantâ€“microbe interactions along a gradient of soil fertility in tropical dry forest. Journal of Tropical Ecology, 2016, 32, 314-323.	1.1	10
99	Effects of soil type and light on height growth, biomass partitioning, and nitrogen dynamics on 22 species of tropical dry forest tree seedlings: Comparisons between legumes and nonlegumes. American Journal of Botany, 2017, 104, 399-410.	1.7	9
100	Tropical forest composition and function across space and time: Insights from diverse gradients in Ãrea de ConservaciÃ³n Guanacaste. Biotropica, 2020, 52, 1065-1075.	1.6	9
101	Growth responses, biomass partitioning, and nitrogen isotopes of prairie legumes in response to elevated temperature and varying nitrogen source in a growth chamber experiment. American Journal of Botany, 2012, 99, 838-846.	1.7	8
102	Intra-annual variation in microclimatic conditions in relation to vegetation type and structure in two tropical dry forests undergoing secondary succession. Forest Ecology and Management, 2022, 511, 120132.	3.2	8
103	Early chemical changes during wood decomposition are controlled by fungal communities inhabiting stems at treefall in a tropical dry forest. Plant and Soil, 2021, 466, 373-389.	3.7	7
104	Landscapeâ€scale Variation in Pathogenâ€suppressive Bacteria in Tropical Dry Forest Soils of Costa Rica. Biotropica, 2014, 46, 657-666.	1.6	6
105	Biotropica announces a new paper category: Natural History Field Notes. Biotropica, 2021, 53, 352-353.	1.6	6
106	Traitâ€based signatures of cloud base height in a tropical cloud forest. American Journal of Botany, 2020, 107, 886-894.	1.7	5
107	Lianas and Trees From a Seasonally Dry and a Wet Tropical Forest Did Not Differ in Embolism Resistance but Did Differ in Xylem Anatomical Traits in the Dry Forest. Frontiers in Forests and Global Change, 2022, 5, .	2.3	5
108	Demographic consequences of heterogeneity in conspecific density dependence among mast-fruiting tropical trees. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, .	2.6	5

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109	Tree species effects on pathogen-suppressive capacities of soil bacteria across two tropical dry forests in Costa Rica. Oecologia, 2016, 182, 789-802.	2.0	3
110	A sweet new study: tropical forest species use nonstructural carbohydrates in different ways during drought. Journal of Plant Ecology, 2020, 13, 387-388.	2.3	3
111	Opportunities for Integrating Social Science into Research on Dry Forest Restoration: A Mini-Review. Sustainability, 2022, 14, 7351.	3.2	3
112	Climate and hydraulic traits interact to set thresholds for liana viability. Nature Communications, 2022, 13, .	12.8	3
113	Integrating tropical research into biology education is urgently needed. PLoS Biology, 2022, 20, e3001674.	5.6	3
114	Increasing Liana Abundance and Associated Reductions in Tree Growth in Secondary Seasonally Dry Tropical Forest. Frontiers in Forests and Global Change, 2022, 5, .	2.3	2
115	Discovering the forest in plain sight: a popâ€up Symposium focusing on seasonally dry tropical forests. New Phytologist, 2022, 233, 62-65.	7.3	1
116	Two Co-occurring Liana Species Strongly Differ in Their Hydraulic Traits in a Water-Limited Neotropical Forest. Frontiers in Forests and Global Change, 2022, 5, .	2.3	1
117	Plantâ€“microbe interactions along a gradient of soil fertility in tropical dry forest â€“ CORRIGENDUM. Journal of Tropical Ecology, 2016, 32, 324-324.	1.1	0
118	2019 ATBC Honorary Fellows. Biotropica, 2019, 51, 957-958.	1.6	0
119	Biotropica requests permit numbers. Biotropica, 2020, 52, 794-794.	1.6	0
120	2021 ATBC Honorary Fellows. Biotropica, 2021, 53, 1712-1713.	1.6	0
121	Tropical biologyÂand conservation in the time of the COVIDâ€19 pandemic. Biotropica, 2020, 52, 399-399.	1.6	0
122	2021 Student and Early Career Awards. Biotropica, 2021, 53, 1710-1711.	1.6	0