James F Cahill

List of Publications by Year
in descending order

134 papers	6,476 citations	66343 42 h-index	74163 75 g-index
135 all docs	135 docs citations	135 times ranked	7487 citing authors

#	Article	IF	Citations
1	Interspecific differences in root foraging precision cannot be directly inferred from species' mycorrhizal status or fine root economics. Oikos, 2023, 2023, .	2.7	3
2	Host Defense Metabolites Alter the Interactions between a Bark Beetle and its Symbiotic Fungi. Microbial Ecology, 2022, 84, 834-843.	2.8	4
3	Multiâ€year drought alters plant species composition more than productivity across northern temperate grasslands. Journal of Ecology, 2022, 110, 197-209.	4.0	11
4	Harnessing root-foraging capacity to improve nutrient-use efficiency for sustainable maize production. Field Crops Research, 2022, 279, 108462.	5.1	15
5	Disturbance has lasting effects on functional traits and diversity of grassland plant communities. PeerJ, 2022, 10, e13179.	2.0	6
6	Competitive size asymmetry, not intensity, is linked to species loss and gain in a native grassland community. Ecology, 2022, 103, e3675.	3.2	9
7	A global inventory of animal diversity measured in different grazing treatments. Scientific Data, 2022, 9, 209.	5.3	6
8	Limited impacts of adaptive multiâ€paddock grazing systems on plant diversity in the Northern Great Plains. Journal of Applied Ecology, 2022, 59, 1734-1744.	4.0	1
9	Soil transfers from intact to disturbed boreal forests neither alter ectomycorrhizal fungal communities nor improve pine seedling performance. Journal of Applied Ecology, 2022, 59, 2430-2439.	4.0	3
10	Changes in soil fungal community composition depend on functional group and forest disturbance type. New Phytologist, 2021, 229, 1105-1117.	7.3	50
11	Presence of a dominant native shrub is associated with minor shifts in the function and composition of grassland communities in a northern savannah. AoB PLANTS, 2021, 13, plab011.	2.3	0
12	Grazing alters the sensitivity of plant productivity to precipitation in northern temperate grasslands. Journal of Vegetation Science, 2021, 32, e13008.	2.2	16
13	Temperature and pH define the realised niche space of arbuscular mycorrhizal fungi. New Phytologist, 2021, 231, 763-776.	7.3	126
14	Replication in field ecology: Identifying challenges and proposing solutions. Methods in Ecology and Evolution, 2021, 12, 1780-1792.	5.2	35
15	Limited evidence of vertical fineâ€root segregation in a subtropical forest. New Phytologist, 2021, 231, 2308-2318.	7.3	11
16	Comparative Pasture Management on Canadian Cattle Ranches With and Without Adaptive Multipaddock Grazing. Rangeland Ecology and Management, 2021, 78, 5-14.	2.3	15
17	An invasive grass and litter impact tree encroachment into a native grassland. Applied Vegetation Science, 2021, 24, e12618.	1.9	1
18	Neighbouring plants modify maize root foraging for phosphorus: coupling nutrients and neighbours for improved nutrientâ€use efficiency. New Phytologist, 2020, 226, 244-253.	7.3	66

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19	Not a melting pot: Plant species aggregate in their nonâ€native range. Global Ecology and Biogeography, 2020, 29, 482-490.	5.8	16
20	Climate change and defoliation interact to affect root length across northern temperate grasslands. Functional Ecology, 2020, 34, 2611-2621.	3.6	10
21	The effects of livestock grazing on biodiversity are multiâ€trophic: a metaâ€analysis. Ecology Letters, 2020, 23, 1298-1309.	6.4	138
22	The multi-response of root foraging strategy to a neighbor, soil heterogeneity and earthworm. Applied Soil Ecology, 2020, 155, 103684.	4.3	4
23	The effects of ectomycorrhizal fungal networks on seedling establishment are contingent on species and severity of overstorey mortality. Mycorrhiza, 2020, 30, 173-183.	2.8	14
24	Changes in soil fungal communities following anthropogenic disturbance are linked to decreased lodgepole pine seedling performance. Journal of Applied Ecology, 2020, 57, 1292-1302.	4.0	6
25	Standing vegetation as a coarse biotic filter for seed bank dynamics: Effects of gap creation on seed inputs and outputs in a native grassland. Journal of Vegetation Science, 2020, 31, 1006-1016.	2.2	5
26	Methods in belowground botany. Applications in Plant Sciences, 2019, 7, e01239.	2.1	2
27	The inevitability of plant behavior. American Journal of Botany, 2019, 106, 903-905.	1.7	3
28	Damage to leaf veins suppresses root foraging precision. American Journal of Botany, 2019, 106, 1126-1130.	1.7	4
29	Global change effects on plant communities are magnified by time and the number of global change factors imposed. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17867-17873.	7.1	141
30	Vertical size structure is associated with productivity and species diversity in a shortâ€stature grassland: Evidence for the importance of height variability within herbaceous communities. Journal of Vegetation Science, 2019, 30, 789-798.	2.2	8
31	Effects of neighbour location and nutrient distributions on root foraging behaviour of the common sunflower. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190955.	2.6	26
32	Soil Nitrogen and Greenhouse Gas Dynamics in a Temperate Grassland under Experimental Warming and Defoliation. Soil Science Society of America Journal, 2019, 83, 780-790.	2.2	10
33	Biotic homogenization within and across eight widely distributed grasslands following invasion by <i>Bromus inermis</i>. Ecology, 2019, 100, e02717.	3.2	33
34	Speciesâ€specific size vulnerabilities in a competitive arena: Nutrient heterogeneity and soil fertility alter plant competitive size asymmetries. Functional Ecology, 2019, 33, 1491-1503.	3.6	13
35	Large-scale insect outbreak homogenizes the spatial structure of ectomycorrhizal fungal communities. PeerJ, 2019, 7, e6895.	2.0	2
36	Flowering and floral visitation predict changes in community structure provided that mycorrhizas remain intact. Ecology, 2018, 99, 1480-1489.	3.2	3

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37	A new method for the rapid characterization of root growth and distribution using digital image correlation. New Phytologist, 2018, 218, 835-846.	7.3	12
38	Checkerboard scoreâ€"area relationships reveal spatial scales of plant community structure. Oikos, 2018, 127, 415-426.	2.7	21
39	Maternal experience and soil origin influence interactions between resident species and a dominant invasive species. Oecologia, 2018, 186, 247-257.	2.0	5
40	Soil biotic quality lacks spatial structure and is positively associated with fertility in a northern grassland. Journal of Ecology, 2018, 106, 195-206.	4.0	13
41	Photosynthetic opportunity cost and energetic cost of a rapid leaf closure behavior in <i>Mimosa pudica</i>. American Journal of Botany, 2018, 105, 1491-1498.	1.7	7
42	Root condensed tannins vary over time, but are unrelated to leaf tannins. AoB PLANTS, 2018, 10, ply044.	2.3	12
43	Asymmetric responses of primary productivity to precipitation extremes: A synthesis of grassland precipitation manipulation experiments. Global Change Biology, 2017, 23, 4376-4385.	9.5	231
44	Differential responses of native and exotic plant species to an invasive grass are driven by variation in biotic and abiotic factors. Journal of Vegetation Science, 2017, 28, 325-336.	2.2	25
45	No silver bullet: different soil handling techniques are useful for different research questions, exhibit differential type I and II error rates, and are sensitive to sampling intensity. New Phytologist, 2017, 216, 11-14.	7.3	48
46	Change in soil fungal community structure driven by a decline in ectomycorrhizal fungi following a mountain pine beetle (Dendroctonus ponderosae) outbreak. New Phytologist, 2017, 213, 864-873.	7.3	45
47	Nutrient foraging behaviour of four coâ€occurring perennial grassland plant species alone does not predict behaviour with neighbours. Functional Ecology, 2016, 30, 420-430.	3.6	36
48	Is biotic resistance to invaders dependent upon local environmental conditions or primary productivity? A meta-analysis. Basic and Applied Ecology, 2016, 17, 377-387.	2.7	15
49	Community-level determinants of smooth brome (Bromus inermis) growth and survival in the aspen parkland. Plant Ecology, 2016, 217, 1395-1413.	1.6	11
50	Spatial pattern of invasion and the evolutionary responses of native plant species. Evolutionary Applications, 2016, 9, 939-951.	3.1	15
51	Fungal effects on plantâ€"plant interactions contribute to grassland plant abundances: evidence from the field. Journal of Ecology, 2016, 104, 755-764.	4.0	65
52	Response to Comment on â€œWorldwide evidence of a unimodal relationship between productivity and plant species richnessâ€• Science, 2016, 351, 457-457.	12.6	5
53	Introduction to the Special Issue: Beyond traits: integrating behaviour into plant ecology and biology. AoB PLANTS, 2015, 7, plv120.	2.3	11
54	Disentangling root system responses to neighbours: identification of novel root behavioural strategies. AoB PLANTS, 2015, 7, plv059.	2.3	53

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55	Ectomycorrhizal fungi mediate indirect effects of a bark beetle outbreak on secondary chemistry and establishment of pine seedlings. New Phytologist, 2015, 208, 904-914.	7.3	50
56	Linkages of plant-soil feedbacks and underlying invasion mechanisms. AoB PLANTS, 2015, 7, plv022-plv022.	2.3	40
57	Rapid Increases in Forest Understory Diversity and Productivity following a Mountain Pine Beetle (Dendroctonus ponderosae) Outbreak in Pine Forests. PLoS ONE, 2015, 10, e0124691.	2.5	48
58	Phylogenetic patterns are not proxies of community assembly mechanisms (they are far better). Functional Ecology, 2015, 29, 600-614.	3.6	396
59	Worldwide evidence of a unimodal relationship between productivity and plant species richness. Science, 2015, 349, 302-305.	12.6	315
60	Influence of bark beetle outbreaks on nutrient cycling in native pine stands in western Canada. Plant and Soil, 2015, 390, 29-47.	3.7	31
61	Limited impacts of extensive human land use on dominance, specialization, and biotic homogenization in boreal plant communities. BMC Ecology, 2015, 15, 5.	3.0	9
62	Direct and indirect drivers of plant diversity responses to climate and clipping across northern temperate grassland. Ecology, 2014, 95, 3093-3103.	3.2	39
63	Decline of ectomycorrhizal fungi following a mountain pine beetle epidemic. Ecology, 2014, 95, 1096-1103.	3.2	60
64	A Molecular Identification Protocol for Roots of Boreal Forest Tree Species. Applications in Plant Sciences, 2014, 2, 1400069.	2.1	7
65	Contrasting impacts of defoliation on root colonization by arbuscular mycorrhizal and dark septate endophytic fungi of Medicago sativa. Mycorrhiza, 2014, 24, 239-245.	2.8	34
66	Patterns of phylogenetic diversity are linked to invasion impacts, not invasion resistance, in a native grassland. Journal of Vegetation Science, 2014, 25, 1315-1326.	2.2	45
67	Shoot competition, root competition and reproductive allocation in <i><scp>C</scp>henopodium acuminatum</i>. Journal of Ecology, 2014, 102, 1688-1696.	4.0	26
68	Small-scale bee patch use is affected equally by flower availability and local habitat configuration. Basic and Applied Ecology, 2014, 15, 260-268.	2.7	12
69	Implications of Precipitation, Warming, and Clipping for Grazing Resources in Canadian Prairies. Agronomy Journal, 2014, 106, 33-42.	1.8	23
70	Root Foraging Influences Plant Growth Responses to Earthworm Foraging. PLoS ONE, 2014, 9, e108873.	2.5	31
71	Irrigation but not <scp>N</scp> fertilization enhances seedhead density in plains rough fescue (<scp><i>F</i></scp><i>estuca hallii</i>). Grass and Forage Science, 2013, 68, 120-124.	2.9	2
72	Increased competition does not lead to increased phylogenetic overdispersion in a native grassland. Ecology Letters, 2013, 16, 1168-1176.	6.4	89

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73	Ecological implications of single and mixed nitrogen nutrition in Arabidopsis thaliana. BMC Ecology, 2013, 13, 28.	3.0	6
74	Conservatism of responses to environmental change is rare under natural conditions in a native grassland. Perspectives in Plant Ecology, Evolution and Systematics, 2013, 15, 328-337.	2.7	31
75	Mechanical leaf damage causes localized, but not systemic, changes in leaf movement behavior of the Sensitive Plant, <i>Mimosa pudica</i> (Fabaceae) L.. Botany, 2013, 91, 43-47.	1.0	9
76	Coordinated distributed experiments: an emerging tool for testing global hypotheses in ecology and environmental science. Frontiers in Ecology and the Environment, 2013, 11, 147-155.	4.0	237
77	Using structural equation modelling to test the passenger, driver and opportunist concepts in a <i>Poa pratensis</i> invasion. Oikos, 2013, 122, 377-384.	2.7	28
78	Extending the stressâ€gradient hypothesis â€" is competition among animals less common in harsh environments?. Oikos, 2013, 122, 516-523.	2.7	49
79	Disentangling herbivore impacts on Populus tremuloides: a comparison of native ungulates and cattle in Canadaâ€™s Aspen Parkland. Oecologia, 2013, 173, 895-904.	2.0	23
80	Climate change experiments in temperate grasslands: synthesis and future directions. Biology Letters, 2012, 8, 484-487.	2.3	38
81	Similarity between grassland vegetation and seed bank shifts with altered precipitation and clipping, but not warming. Community Ecology, 2012, 13, 129-136.	0.9	8
82	Context dependence in foraging behaviour of Achillea millefolium. Oecologia, 2012, 170, 925-933.	2.0	14
83	Root system size determines plant performance following short-term soil nutrient pulses. Plant Ecology, 2012, 213, 1803-1812.	1.6	15
84	Effect of aboveground litter on belowground plant interactions in a native Rough Fescue grassland. Basic and Applied Ecology, 2012, 13, 615-622.	2.7	3
85	Regional boreal biodiversity peaks at intermediate human disturbance. Nature Communications, 2012, 3, 1142.	12.8	53
86	Evaluating the Relationship between Competition and Productivity within a Native Grassland. PLoS ONE, 2012, 7, e43703.	2.5	12
87	Interactive effects of insects and ungulates on root growth in a native grassland. Oikos, 2012, 121, 1585-1592.	2.7	7
88	The Behavioral Ecology of Nutrient Foraging by Plants. Annual Review of Ecology, Evolution, and Systematics, 2011, 42, 289-311.	8.3	185
89	Finding the â€œPitchâ€• in Ecological Writing. Bulletin of the Ecological Society of America, 2011, 92, 196-205.	0.2	2
90	Molecular identification of roots from a grassland community using size differences in fluorescently labelled PCR amplicons of three cpDNA regions. Molecular Ecology Resources, 2011, 11, 185-195.	4.8	23

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91	Independent Evolution of Leaf and Root Traits within and among Temperate Grassland Plant Communities. PLoS ONE, 2011, 6, e19992.	2.5	94
92	Applying Behavioral-Ecological Theory to Plant Defense: Light-Dependent Movement in Mimosa pudica Suggests a Trade-Off between Predation Risk and Energetic Reward. American Naturalist, 2011, 177, 377-381.	2.1	38
93	Short-Term Plant Community Responses to Warming and Defoliation in a Northern Temperate Grassland. ISRN Ecology, 2011, 2011, 1-8.	1.0	6
94	Plant genetic diversity yields increased plant productivity and herbivore performance. Journal of Ecology, 2010, 98, 237-245.	4.0	101
95	Are competitive effect and response two sides of the same coin, or fundamentally different?. Functional Ecology, 2010, 24, 196-207.	3.6	101
96	<i>Festuca campestris</i> alters root morphology and growth in response to simulated grazing and nitrogen form. Functional Ecology, 2010, 24, 283-292.	3.6	22
97	Plants Integrate Information About Nutrients and Neighbors. Science, 2010, 328, 1657-1657.	12.6	266
98	Plant root growth and the marginal value theorem. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4747-4751.	7.1	67
99	Plant interactions are unimportant in a subarcticâ€"alpine plant community. Ecology, 2009, 90, 2360-2367.	3.2	37
100	Shoot, but not root, competition reduces community diversity in experimental mesocosms. Journal of Ecology, 2009, 97, 155-163.	4.0	104
101	Limited effects of aboveâ€and belowground insects on community structure and function in a speciesâ€rich grassland. Journal of Vegetation Science, 2009, 20, 121-129.	2.2	18
102	Focusing the metaphor: plant root foraging behaviour. Trends in Ecology and Evolution, 2009, 24, 419-426.	8.7	84
103	Does phylogenetic relatedness influence the strength of competition among vascular plants?. Perspectives in Plant Ecology, Evolution and Systematics, 2008, 10, 41-50.	2.7	278
104	A PCR-based method for the identification of the roots of 10 co-occurring grassland species in mesocosm experiments. Botany, 2008, 86, 485-490.	1.0	19
105	DISRUPTION OF A BELOWGROUND MUTUALISM ALTERS INTERACTIONS BETWEEN PLANTS AND THEIR FLORAL VISITORS. Ecology, 2008, 89, 1791-1801.	3.2	85
106	Improving the Scale and Precision of Hypotheses to Explain Root Foraging Ability. Annals of Botany, 2008, 101, 1295-1301.	2.9	111
107	When Competition Does Not Matter: Grassland Diversity and Community Composition. American Naturalist, 2008, 171, 777-787.	2.1	91
108	Water and nitrogen addition differentially impact plant competition in a native rough fescue grassland. Plant Ecology, 2007, 192, 21-33.	1.6	59

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109	Interactions Between Root and Shoot Competition and Plant Traits. Hortscience: A Publication of the American Society for Hortcultural Science, 2007, 42, 1110-1112.	1.0	13
110	Light, Wind, and Touch Influence Leaf Chemistry and Rates of Herbivory in Apocynum cannabinum (Apocynaceae). International Journal of Plant Sciences, 2006, 167, 969-978.	1.3	14
111	Consequences of differing competitive abilities between juvenile and adult plants. Oikos, 2006, 112, 502-512.	2.7	31
112	A NONLINEAR REGRESSION APPROACH TO TEST FOR SIZE-DEPENDENCE OF COMPETITIVE ABILITY. Ecology, 2006, 87, 1452-1457.	3.2	11
113	Differential genetic influences on competitive effect and response in Arabidopsis thaliana. Journal of Ecology, 2005, 93, 958-967.	4.0	91
114	In vitro measurements of the competitive interactions between two saprobic basidiomycetes on Typha latifolia. Canadian Journal of Botany, 2005, 83, 1523-1527.	1.1	1
115	Plant Phenotypic Plasticity Belowground: A Phylogenetic Perspective on Root Foraging Tradeâ€Offs. American Naturalist, 2005, 166, 216-230.	2.1	205
116	Antagonistic interactions between competition and insect herbivory on plant growth. Journal of Ecology, 2004, 92, 156-167.	4.0	51
117	Patch-background contrast and patch density have limited effects on root proliferation and plant performance in Abutilon theophrasti. Functional Ecology, 2004, 18, 836-843.	3.6	37
118	SPATIAL HETEROGENEITY, NOT VISITATION BIAS, DOMINATES VARIATION IN HERBIVORY: COMMENT. Ecology, 2004, 85, 2901-2906.	3.2	5
119	Canopy gaps are sites of reduced belowground plant competition in a productive old field. Plant Ecology, 2003, 164, 29-36.	1.6	24
120	Lack of relationship between below-ground competition and allocation to roots in 10 grassland species. Journal of Ecology, 2003, 91, 532-540.	4.0	99
121	Neighbourhood-scale diversity, composition and root crowding do not alter competition during drought in a native grassland. Ecology Letters, 2003, 6, 599-603.	6.4	28
122	Effects of insects on primary production in temperate herbaceous communities: a meta-analysis. Ecological Entomology, 2003, 28, 511-521.	2.2	60
123	Prevalence and predictability of handling effects in field studies: results from field experiments and a metaâ€analysis. American Journal of Botany, 2003, 90, 270-277.	1.7	26
124	Separate effects of human visitation and touch on plant growth and herbivory in an oldâ€field community. American Journal of Botany, 2002, 89, 1401-1409.	1.7	29
125	Interactions between root and shoot competition vary among species. Oikos, 2002, 99, 101-112.	2.7	93
126	What evidence is necessary in studies which separate root and shoot competition along productivity gradients?. Journal of Ecology, 2002, 90, 201-205.	4.0	43

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127	THE HERBIVORY UNCERTAINTY PRINCIPLE: VISITING PLANTS CAN ALTER HERBIVORY. Ecology, 2001, 82, 307-312.	3.2	77
128	Investigating the relationship between neighbor root biomass and belowground competition: field evidence for symmetric competition belowground. Oikos, 2000, 90, 311-320.	2.7	123
129	FERTILIZATION EFFECTS ON INTERACTIONS BETWEEN ABOVE- AND BELOWGROUND COMPETITION IN AN OLD FIELD. Ecology, 1999, 80, 466-480.	3.2	185
130	Growth Consequences of Soil Nutrient Heterogeneity for two Old-field Herbs,Ambrosia artemisiifoliaandPhytolacca americana, Grown Individually and in Combination. Annals of Botany, 1999, 83, 471-478.	2.9	48
131	Aboveâ€ground competition does not alter biomass allocated to roots in Abutilon theophrasti. New Phytologist, 1998, 140, 231-238.	7.3	55
132	Population-level responses to nutrient heterogeneity and density by Abutilon theophrasti (Malvaceae): an experimental neighborhood approach. American Journal of Botany, 1998, 85, 1680-1687.	1.7	38
133	Limited effects of soil nutrient heterogeneity on populations of <i>Abutilon theophrasti</i> (Malvaceae). American Journal of Botany, 1996, 83, 333-341.	1.7	37
134	Limited Effects of Soil Nutrient Heterogeneity on Populations of Abutilon theophrasti (Malvaceae). American Journal of Botany, 1996, 83, 333.	1.7	25