Joseph Craine

List of Publications by Year
in descending order

129 papers	21,502 citations	18482 62 h-index	15266 126 g-index
156 all docs	156 docs citations	156 times ranked	23272 citing authors

#	Article	IF	Citations
1	New handbook for standardised measurement of plant functional traits worldwide. Australian Journal of Botany, 2013, 61, 167.	0.6	2,818
2	TRY â€“ a global database of plant traits. Global Change Biology, 2011, 17, 2905-2935.	9.5	2,002
3	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
4	Consistent effects of nitrogen amendments on soil microbial communities and processes across biomes. Global Change Biology, 2012, 18, 1918-1927.	9.5	936
5	MICROBIAL NITROGEN LIMITATION INCREASES DECOMPOSITION. Ecology, 2007, 88, 2105-2113.	3.2	765
6	Global patterns of foliar nitrogen isotopes and their relationships with climate, mycorrhizal fungi, foliar nutrient concentrations, and nitrogen availability. New Phytologist, 2009, 183, 980-992.	7.3	744
7	LITTER QUALITY AND THE TEMPERATURE SENSITIVITY OF DECOMPOSITION. Ecology, 2005, 86, 320-326.	3.2	566
8	Plant diversity enhances ecosystem responses to elevated CO2 and nitrogen deposition. Nature, 2001, 410, 809-810.	27.8	517
9	Fifty thousand years of Arctic vegetation and megafaunal diet. Nature, 2014, 506, 47-51.	27.8	505
10	Mechanisms of plant competition for nutrients, water and light. Functional Ecology, 2013, 27, 833-840.	3.6	472
11	Plant functional trait change across a warming tundra biome. Nature, 2018, 562, 57-62.	27.8	451
12	Ecological interpretations of nitrogen isotope ratios of terrestrial plants and soils. Plant and Soil, 2015, 396, 1-26.	3.7	424
13	Linking leaf and root trait syndromes among 39 grassland and savannah species. New Phytologist, 2005, 167, 493-508.	7.3	413
14	Corrigendum to: New handbook for standardised measurement of plant functional traits worldwide. Australian Journal of Botany, 2016, 64, 715.	0.6	361
15	Reconciling plant strategy theories of Grime and Tilman. Journal of Ecology, 2005, 93, 1041-1052.	4.0	345
16	Changes through time: integrating microorganisms into the study of succession. Research in Microbiology, 2010, 161, 635-642.	2.1	334
17	Functional traits, productivity and effects on nitrogen cycling of 33 grassland species. Functional Ecology, 2002, 16, 563-574.	3.6	331
18	The relationships among root and leaf traits of 76 grassland species and relative abundance along fertility and disturbance gradients. Oikos, 2001, 93, 274-285.	2.7	330

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19	Widespread coupling between the rate and temperature sensitivity of organic matter decay. Nature Geoscience, 2010, 3, 854-857.	12.9	328
20	Multiple facets of biodiversity drive the diversityâ€"stability relationship. Nature Ecology and Evolution, 2018, 2, 1579-1587.	7.8	296
21	Global diversity of drought tolerance and grassland climate-change resilience. Nature Climate Change, 2013, 3, 63-67.	18.8	262
22	Timing of climate variability and grassland productivity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3401-3405.	7.1	257
23	Nitrogen fertilization inhibits soil microbial respiration regardless of the form of nitrogen applied. Soil Biology and Biochemistry, 2010, 42, 2336-2338.	8.8	246
24	Do species and functional groups differ in acquisition and use of C, N and water under varying atmospheric CO2 and N availability regimes? A field test with 16 grassland species. New Phytologist, 2001, 150, 435-448.	7.3	240
25	Climate, soil and plant functional types as drivers of global fineâ€root trait variation. Journal of Ecology, 2017, 105, 1182-1196.	4.0	234
26	Species and functional group diversity independently influence biomass accumulation and its response to CO2 and N. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10101-10106.	7.1	233
27	Predominance of ecophysiological controls on soil CO2 flux in a Minnesota grassland. Plant and Soil, 1998, 207, 77-86.	3.7	226
28	The moisture response of soil heterotrophic respiration: interaction with soil properties. Biogeosciences, 2012, 9, 1173-1182.	3.3	224
29	ENVIRONMENTAL CONSTRAINTS ON A GLOBAL RELATIONSHIP AMONG LEAF AND ROOT TRAITS OF GRASSES. Ecology, 2005, 86, 12-19.	3.2	192
30	Soil properties control decomposition of soil organic carbon: Results from data-assimilation analysis. Geoderma, 2016, 262, 235-242.	5.1	162
31	Mapping local and global variability in plant trait distributions. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10937-E10946.	7.1	159
32	Nutrient concentration ratios and coâ€limitation in South African grasslands. New Phytologist, 2008, 179, 829-836.	7.3	147
33	Isotopic evidence for oligotrophication of terrestrial ecosystems. Nature Ecology and Evolution, 2018, 2, 1735-1744.	7.8	138
34	A 250 plastome phylogeny of the grass family (Poaceae): topological support under different data partitions. PeerJ, 2018, 6, e4299.	2.0	138
35	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
36	Covariation in leaf and root traits for native and non-native grasses along an altitudinal gradient in New Zealand. Oecologia, 2003, 134, 471-478.	2.0	133

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37	Convergence of soil nitrogen isotopes across global climate gradients. Scientific Reports, 2015, 5, 8280.	3.3	127
38	Plant structural defences against browsing birds: a legacy of New Zealand's extinct moas. Oikos, 2004, 104, 500-508.	2.7	123
39	Title is missing!. Plant Ecology, 2003, 165, 85-100.	1.6	120
40	Soil moisture controls on temperature sensitivity of soil organic carbon decomposition for a mesic grassland. Soil Biology and Biochemistry, 2011, 43, 455-457.	8.8	117
41	Competition for Nutrients and Optimal Root Allocation. Plant and Soil, 2006, 285, 171-185.	3.7	116
42	Changes in global nitrogen cycling during the Holocene epoch. Nature, 2013, 495, 352-355.	27.8	108
43	Changes in nitrogen cycling during the past century in a northern hardwood forest. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7466-7470.	7.1	105
44	Climate change and cattle nutritional stress. Global Change Biology, 2010, 16, 2901-2911.	9.5	105
45	Seasonal Shifts in Diet and Gut Microbiota of the American Bison (Bison bison). PLoS ONE, 2015, 10, e0142409.	2.5	104
46	A methodology to derive global maps of leaf traits using remote sensing and climate data. Remote Sensing of Environment, 2018, 218, 69-88.	11.0	104
47	Supply preâ€emption, not concentration reduction, is the mechanism of competition for nutrients. New Phytologist, 2005, 166, 933-940.	7.3	103
48	Decline in alkali meadow vegetation cover in California: the effects of groundwater extraction and drought. Journal of Applied Ecology, 2006, 43, 770-779.	4.0	100
49	Evidence, causes, and consequences of declining nitrogen availability in terrestrial ecosystems. Science, 2022, 376, eabh3767.	12.6	100
50	Global root traits (GRooT) database. Global Ecology and Biogeography, 2021, 30, 25-37.	5.8	90
51	Root characteristics of C4 grasses limit reliance on deep soil water in tallgrass prairie. Plant and Soil, 2012, 355, 385-394.	3.7	89
52	Climatic and soil factors explain the two-dimensional spectrum of global plant trait variation. Nature Ecology and Evolution, 2022, 6, 36-50.	7.8	89
53	A multiâ€isotope (Î´¹³C, Î´¹⁵N, Î´²H) feather isoscape to assign Afrotropical migrant birds to origins. Ecosphere, 2012, 3, 1-20.	2.2	83
54	Flowering phenology as a functional trait in a tallgrass prairie. New Phytologist, 2012, 193, 673-682.	7.3	83

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55	Leafâ€level light compensation points in shadeâ€tolerant woody seedlings. New Phytologist, 2005, 166, 710-713.	7.3	81
56	Thirteen decades of foliar isotopes indicate declining nitrogen availability in central North American grasslands. New Phytologist, 2010, 187, 1135-1145.	7.3	77
57	The response of soil CO2 flux to changes in atmospheric CO2 , nitrogen supply and plant diversity. Global Change Biology, 2001, 7, 947-953.	9.5	75
58	Plant nitrogen and phosphorus limitation in 98 North American grassland soils. Plant and Soil, 2010, 334, 73-84.	3.7	74
59	Climatic warming and the future of bison as grazers. Scientific Reports, 2015, 5, 16738.	3.3	72
60	Evolutionary relationships in Panicoid grasses based on plastome phylogenomics (Panicoideae;) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 54	3.6	72
61	Relationships between Biological and Thermal Indices of Soil Organic Matter Stability Differ with Soil Organic Carbon Level. Soil Science Society of America Journal, 2013, 77, 2020-2028.	2.2	70
62	Improved Characterization of Soil Organic Matter by Thermal Analysis Using CO₂/H₂O Evolved Gas Analysis. Environmental Science & Technology, 2012, 46, 8921-8927.	10.0	64
63	Landscape-level variation in temperature sensitivity of soil organic carbon decomposition. Soil Biology and Biochemistry, 2010, 42, 373-375.	8.8	56
64	Physiological drought tolerance and the structuring of tallgrass prairie assemblages. Ecosphere, 2011, 2, art48.	2.2	56
65	Robustness of trait connections across environmental gradients and growth forms. Global Ecology and Biogeography, 2019, 28, 1806-1826.	5.8	56
66	The role of plant species in biomass production and response to elevated CO2 and N. Ecology Letters, 2003, 6, 623-625.	6.4	53
67	Which traits determine shifts in the abundance of tree species in a fireâ€prone savanna?. Journal of Ecology, 2012, 100, 1400-1410.	4.0	53
68	Centennial-scale reductions in nitrogen availability in temperate forests of the United States. Scientific Reports, 2017, 7, 7856.	3.3	53
69	Earlier springs are causing reduced nitrogen availability in North American eastern deciduous forests. Nature Plants, 2016, 2, 16133.	9.3	52
70	Global plant trait relationships extend to the climatic extremes of the tundra biome. Nature Communications, 2020, 11, 1351.	12.8	52
71	Consequences of climate variability for the performance of bison in tallgrass prairie. Global Change Biology, 2009, 15, 772-779.	9.5	48
72	Resource limitation, tolerance, and the future of ecological plant classification. Frontiers in Plant Science, 2012, 3, 246.	3.6	45

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73	Do grazers alter nitrogen dynamics on grazing lawns in a South African savannah?. African Journal of Ecology, 2011, 49, 62-69.	0.9	44
74	Leaf shape and size track habitat transitions across forestâ€“grassland boundaries in the grass family (Poaceae). Evolution; International Journal of Organic Evolution, 2019, 73, 927-946.	2.3	44
75	Measurement of leaf longevity of 14 species of grasses and forbs using a novel approach. New Phytologist, 1999, 142, 475-481.	7.3	42
76	Climate controls on grass culm production over a quarter century in a tallgrass prairie. Ecology, 2010, 91, 2132-2140.	3.2	42
77	Cohort variation in individual body mass dissipates with age in large herbivores. Ecological Monographs, 2016, 86, 517-543.	5.4	42
78	Grazing and landscape controls on nitrogen availability across 330 South African savanna sites. Austral Ecology, 2009, 34, 731-740.	1.5	41
79	Community traitscape of foliar nitrogen isotopes reveals N availability patterns in a tallgrass prairie. Plant and Soil, 2012, 356, 395-403.	3.7	40
80	Foraging plasticity allows a large herbivore to persist in a sheltering forest habitat: DNA metabarcoding diet analysis of the European bison. Forest Ecology and Management, 2019, 449, 117474.	3.2	39
81	Identifying the diet of a declining prairie grouse using DNA metabarcoding. Auk, 2018, 135, 583-608.	1.4	38
82	Determinants of growing season soil CO2flux in a Minnesota grassland. Biogeochemistry, 2002, 59, 303-313.	3.5	37
83	Biodiversityâ€“ecosystem function relationships change through primary succession. Oikos, 2017, 126, 1637-1649.	2.7	37
84	Functional consequences of climate change-induced plant species loss in a tallgrass prairie. Oecologia, 2011, 165, 1109-1117.	2.0	36
85	Elevated CO2 and nitrogen supply alter leaf longevity of grassland species. New Phytologist, 2001, 150, 397-403.	7.3	34
86	Ecological Consequences of Shifting the Timing of Burning Tallgrass Prairie. PLoS ONE, 2014, 9, e103423.	2.5	32
87	Inter- and intraspecific variation in leaf economic traits in wheat and maize. AoB PLANTS, 2018, 10, ply006.	2.3	31
88	Maternal allocation in bison: co-occurrence of senescence, cost of reproduction, and individual quality. , 2012, 22, 1628-1639.		30
89	Reduction of the temperature sensitivity of soil organic matter decomposition with sustained temperature increase. Biogeochemistry, 2013, 113, 359-368.	3.5	29
90	Isolationâ€driven functional assembly of plant communities on islands. Ecography, 2016, 39, 1066-1077.	4.5	29

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91	Long-term declines in dietary nutritional quality for North American cattle. Environmental Research Letters, 2017, 12, 044019.	5.2	29
92	Precipitation timing and grazer performance in a tallgrass prairie. Oikos, 2013, 122, 191-198.	2.7	28
93	Correspondence between Î´13C and Î´15N in soils suggests coordinated fractionation processes for soil C and N. Plant and Soil, 2018, 423, 257-271.	3.7	28
94	The roles of shifting and filtering in generating communityâ€level flowering phenology. Ecography, 2012, 35, 1033-1038.	4.5	27
95	Grassland species effects on soil CO2 flux track the effects of elevated CO2 and nitrogen. New Phytologist, 2001, 150, 425-434.	7.3	25
96	Title is missing!. Plant and Soil, 2003, 250, 39-47.	3.7	25
97	The resource economics of chemical and structural defenses across nitrogen supply gradients. Oecologia, 2003, 137, 547-556.	2.0	25
98	Molecular analysis of environmental plant DNA in house dust across the United States. Aerobiologia, 2017, 33, 71-86.	1.7	25
99	Species-specific trajectories of nitrogen isotopes in Indiana hardwood forests, USA. Biogeosciences, 2012, 9, 867-874.	3.3	24
100	Natural and anthropogenic drivers of calcium depletion in a northern forest during the last millennium. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6934-6938.	7.1	24
101	Continental-Scale Patterns Reveal Potential for Warming-Induced Shifts in Cattle Diet. PLoS ONE, 2016, 11, e0161511.	2.5	22
102	Building EDENs: The Rise of Environmentally Distributed Ecological Networks. BioScience, 2007, 57, 45-54.	4.9	21
103	Plant strategy theories: replies to Grime and Tilman. Journal of Ecology, 2007, 95, 235-240.	4.0	21
104	NUTRIENTS IN SENESCED LEAVES:COMMENT. Ecology, 1998, 79, 1818-1820.	3.2	20
105	Long-Term Climate Sensitivity of Grazer Performance: A Cross-Site Study. PLoS ONE, 2013, 8, e67065.	2.5	19
106	The influence of biotic drivers on North American palaeorecords: alternatives to climate. Holocene, 2004, 14, 787-791.	1.7	18
107	The functional trait spectrum of European temperate grasslands. Journal of Vegetation Science, 2019, 30, 777-788.	2.2	17
108	The importance of precipitation timing for grassland productivity. Plant Ecology, 2013, 214, 1085-1089.	1.6	16

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109	A Critical Examination of Timing of Burning in the Kansas Flint Hills. Rangeland Ecology and Management, 2016, 69, 28-34.	2.3	14
110	High leaf tissue density grassland species consistently more abundant across topographic and disturbance contrasts in a North American tallgrass prairie. Plant and Soil, 2010, 337, 193-203.	3.7	13
111	Interannual variability of pollen productivity and transport in mid-North America from 1997 to 2009. Aerobiologia, 2011, 27, 181-189.	1.7	13
112	Cessation of Burning Dries Soils Long Term in a Tallgrass Prairie. Ecosystems, 2014, 17, 54-65.	3.4	13
113	Spectroscopic Analysis of Canopy Nitrogen and Nitrogen Isotopes in Managed Pastures and Hay Land. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2491-2498.	6.3	12
114	Seasonal patterns of bison diet across climate gradients in North America. Scientific Reports, 2021, 11, 6829.	3.3	12
115	Lack of eutrophication in a tallgrass prairie ecosystem over 27 years. Ecology, 2014, 95, 1225-1235.	3.2	11
116	Dynamic microbial populations along the Cuyahoga River. PLoS ONE, 2017, 12, e0186290.	2.5	11
117	DNA metabarcoding of the phytoplankton of Great Salt Lakeâ€™s Gilbert Bay: Spatiotemporal assemblage changes and comparisons to microscopy. Journal of Great Lakes Research, 2022, 48, 110-124.	1.9	10
118	Continental scale variability of foliar nitrogen and carbon isotopes in Populus balsamifera and their relationships with climate. Scientific Reports, 2017, 7, 7759.	3.3	9
119	The Context of Plant Invasions in New Zealand: Evolutionary History and Novel Niches. , 2006, , 167-177.		8
120	Climate structures bison dietary quality and composition at the continental scale. Environmental DNA, 2020, 2, 77-90.	5.8	8
121	Intra-annual bison body mass trajectories in a tallgrass prairie. Mammal Research, 2015, 60, 263-270.	1.3	5
122	Increased C₃ productivity in Midwestern lawns since 1982 revealed by carbon isotopes in <i>Amanita thiersii</i>. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 280-288.	3.0	5
123	Reply to: Data do not support large-scale oligotrophication of terrestrial ecosystems. Nature Ecology and Evolution, 2019, 3, 1287-1288.	7.8	4
124	Looking back in time to reconstruct nitrogen availability trajectories. Global Change Biology, 2020, 26, 5353-5355.	9.5	3
125	Explanations for nitrogen declineâ€”Response. Science, 2022, 376, 1170-1170.	12.6	2
126	Communication in a divided world. Nature Geoscience, 2014, 7, 322-324.	12.9	1

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127	Mischaracterization of bison migratory patterns in Yellowstone National Park: Consequences for the Green Wave Hypothesis. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9169-9170.	7.1	1
128	Nutrients in Senesced Leaves: Comment. Ecology, 1998, 79, 1818.	3.2	0
129	Teaching Biogeochemistry and Ecosystem Ecology in the United States: Survey Results. Bulletin of the Ecological Society of America, 2013, 94, 105-106.	0.2	0