

Jennifer C Mcelwain

List of Publications by Year in descending order

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Version: 2024-02-01

102
papers

6,474
citations

76326

40
h-index

66911

78
g-index

115
all docs

115
docs citations

115
times ranked

5104
citing authors

#	ARTICLE	IF	CITATIONS
1	CO_2 -induced biochemical changes in leaf volatiles decreased fire intensity in the run-up to the Triassic-Jurassic boundary. <i>New Phytologist</i> , 2022, 235, 1442-1454.	7.3	3
2	Impact of soil salinity on mangrove restoration in a semiarid region: a case study from the Saloum Delta, Senegal. <i>Restoration Ecology</i> , 2021, 29, e13186.	2.9	14
3	Jennifer McElwain. <i>Current Biology</i> , 2021, 31, R772-R774.	3.9	1
4	Effects of Sulfur Dioxide Exposure on Leaf Mass per Area of Selected Gymnosperms and Implications for Interpreting the Plant Fossil Record. <i>International Journal of Plant Sciences</i> , 2021, 182, 564-575.	1.3	1
5	Palaeobotanical experiences of plant diversity in deep time. 1: How well can we identify past plant diversity in the fossil record?. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 576, 110481.	2.3	20
6	Palaeobotanical experiences of plant diversity in deep time. 2: How to measure and analyse past plant biodiversity. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2021, 580, 110618.	2.3	15
7	Enhancing the productivity of ryegrass at elevated CO_2 is dependent on tillering and leaf area development rather than leaf-level photosynthesis. <i>Journal of Experimental Botany</i> , 2021, 72, 1962-1977.	4.8	11
8	Freeze tolerance influenced forest cover and hydrology during the Pennsylvanian. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	11
9	Consistent Relationship between Field-Measured Stomatal Conductance and Theoretical Maximum Stomatal Conductance in C_3 Woody Angiosperms in Four Major Biomes. <i>International Journal of Plant Sciences</i> , 2020, 181, 142-154.	1.3	23
10	An inter-comparison study of three stomatal-proxy methods for CO_2 reconstruction applied to early Jurassic Ginkgoales plants. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2020, 542, 109547.	2.3	16
11	A process-based ecosystem model (Paleo-BGC) to simulate the dynamic response of Late Carboniferous plants to elevated O_2 and aridification. <i>Numerische Mathematik</i> , 2020, 320, 547-598.	1.4	17
12	Variability of water supply affected shoot biomass and root depth distribution of four temperate grassland species in monocultures and mixtures. <i>Journal of Plant Ecology</i> , 2020, 13, 554-562.	2.3	7
13	Past climates inform our future. <i>Science</i> , 2020, 370, .	12.6	253
14	Plant responses to decadal scale increments in atmospheric CO_2 concentration: comparing two stomatal conductance sampling methods. <i>Planta</i> , 2020, 251, 52.	3.2	4
15	Carboniferous plant physiology breaks the mold. <i>New Phytologist</i> , 2020, 227, 667-679.	7.3	18
16	A Novel Hypothesis for the Role of Photosynthetic Physiology in Shaping Macroevolutionary Patterns. <i>Plant Physiology</i> , 2019, 181, 1148-1162.	4.8	16
17	Testing the accuracy of new paleoatmospheric CO_2 proxies based on plant stable carbon isotopic composition and stomatal traits in a range of simulated paleoatmospheric $\text{O}_2:\text{CO}_2$ ratios. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 259, 69-90.	3.9	23
18	Convergence in Maximum Stomatal Conductance of C_3 Woody Angiosperms in Natural Ecosystems Across Bioclimatic Zones. <i>Frontiers in Plant Science</i> , 2019, 10, 558.	3.6	22

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19	Toarcian land vegetation loss. <i>Nature Geoscience</i> , 2019, 12, 405-406.	12.9	4
20	Terrestrial and marginal-marine record of the mid-Cretaceous Oceanic Anoxic Event 2 (OAE 2): High-resolution framework, carbon isotopes, CO ₂ and sea-level change. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 524, 118-136.	2.3	27
21	Heritable Changes in Physiological Gas Exchange Traits in Response to Long-Term, Moderate Free-Air Carbon Dioxide Enrichment. <i>Frontiers in Plant Science</i> , 2019, 10, 1210.	3.6	2
22	Rising CO ₂ drives divergence in water use efficiency of evergreen and deciduous plants. <i>Science Advances</i> , 2019, 5, eaax7906.	10.3	56
23	Reconstruction of atmospheric CO ₂ concentration during the late Changhsingian based on fossil conifers from the Dalong Formation in South China. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2019, 519, 37-48.	2.3	23
24	Paleobotany and Global Change: Important Lessons for Species to Biomes from Vegetation Responses to Past Global Change. <i>Annual Review of Plant Biology</i> , 2018, 69, 761-787.	18.7	38
25	Higher species richness enhances yield stability in intensively managed grasslands with experimental disturbance. <i>Scientific Reports</i> , 2018, 8, 15047.	3.3	52
26	Paleoecology, Ploidy, Paleoatmospheric Composition, and Developmental Biology: A Review of the Multiple Uses of Fossil Stomata. <i>Plant Physiology</i> , 2017, 174, 650-664.	4.8	64
27	Evolutionary differences in $\delta^{13}C$ detected between spore and seed bearing plants following exposure to a range of atmospheric O ₂ :CO ₂ ratios; implications for paleoatmosphere reconstruction. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 213, 517-533.	3.9	37
28	Dynamic Carboniferous tropical forests: new views of plant function and potential for physiological forcing of climate. <i>New Phytologist</i> , 2017, 215, 1333-1353.	7.3	64
29	Palaeobotany: New ways with old fossils. <i>Nature Plants</i> , 2017, 3, 17121.	9.3	0
30	Differences in the photosynthetic plasticity of ferns and Ginkgo grown in experimentally controlled low [O ₂]:[CO ₂] atmospheres may explain their contrasting ecological fate across the Triassic–Jurassic mass extinction boundary. <i>Annals of Botany</i> , 2017, 119, 1385-1395.	2.9	12
31	Fossil plant stomata indicate decreasing atmospheric CO ₂ prior to the Eocene–Oligocene boundary. <i>Climate of the Past</i> , 2016, 12, 439-454.	3.4	47
32	Does Size Matter? Atmospheric CO ₂ May Be a Stronger Driver of Stomatal Closing Rate Than Stomatal Size in Taxa That Diversified under Low CO ₂ . <i>Frontiers in Plant Science</i> , 2016, 7, 1253.	3.6	99
33	Co-ordination in Morphological Leaf Traits of Early Diverging Angiosperms Is Maintained Following Exposure to Experimental Palaeo-atmospheric Conditions of Sub-ambient O ₂ and Elevated CO ₂ . <i>Frontiers in Plant Science</i> , 2016, 07, 1368.	3.6	5
34	Using modern plant trait relationships between observed and theoretical maximum stomatal conductance and vein density to examine patterns of plant macroevolution. <i>New Phytologist</i> , 2016, 209, 94-103.	7.3	153
35	Climate, pCO ₂ and terrestrial carbon cycle linkages during late Palaeozoic glacial–interglacial cycles. <i>Nature Geoscience</i> , 2016, 9, 824-828.	12.9	189
36	Evolutionary trade-offs in stomatal spacing. <i>New Phytologist</i> , 2016, 210, 1149-1151.	7.3	15

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37	Was atmospheric CO ₂ capped at 1000 ppm over the past 300 million years?. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2016, 441, 653-658.	2.3	39
38	Can atmospheric composition influence plant fossil preservation potential via changes in leaf mass per area? A new hypothesis based on simulated palaeoatmosphere experiments.. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2016, 464, 51-64.	2.3	13
39	How well do you know your growth chambers? Testing for chamber effect using plant traits. <i>Plant Methods</i> , 2015, 11, 44.	4.3	33
40	The severity of wheat diseases increases when plants and pathogens are acclimatized to elevated carbon dioxide. <i>Global Change Biology</i> , 2015, 21, 2661-2669.	9.5	103
41	Reconstructing Extinct Plant Water Use for Understanding Vegetationâ€ˆClimate Feedbacks: Methods, Synthesis, and a Case Study Using the Paleozoic-Era Medullosan Seed Ferns. <i>The Paleontological Society Papers</i> , 2015, 21, 167-196.	0.6	23
42	Genome-wide transcriptomic analysis of the effects of sub-ambient atmospheric oxygen and elevated atmospheric carbon dioxide levels on gametophytes of the moss, <i>Physcomitrella patens</i> . <i>Journal of Experimental Botany</i> , 2015, 66, 4001-4012.	4.8	14
43	EVIDENCE FOR INSECT AND ANNELID ACTIVITY ACROSS THE TRIASSIC-JURASSIC TRANSITION OF EAST GREENLAND. <i>Palaios</i> , 2015, 30, 597-607.	1.3	12
44	On the reconstruction of plant photosynthetic and stress physiology across the Triassicâ€ˆJurassic boundary. <i>Turkish Journal of Earth Sciences</i> , 2014, 23, 321-329.	1.0	13
45	A gymnosperm affinity for <i>Ricciisporites tuberculatus</i> Lundblad: implications for vegetation and environmental reconstructions in the Late Triassic. <i>Palaeobiodiversity and Palaeoenvironments</i> , 2014, 94, 295-305.	1.5	19
46	An organic record of terrestrial ecosystem collapse and recovery at the Triassicâ€ˆJurassic boundary in East Greenland. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 127, 251-263.	3.9	38
47	Damage structures in leaf epidermis and cuticle as an indicator of elevated atmospheric sulphur dioxide in early Mesozoic floras. <i>Review of Palaeobotany and Palynology</i> , 2014, 208, 25-42.	1.5	17
48	Palynostratigraphy and vegetation history of the Triassicâ€ˆJurassic transition in East Greenland. <i>Journal of the Geological Society</i> , 2013, 170, 37-46.	2.1	57
49	New methods reveal oldest known fossil epiphyllous moss: <i>Bryiidites utahensis</i> gen. et sp. nov. (Bryidae). <i>American Journal of Botany</i> , 2013, 100, 2450-2457.	1.7	9
50	Co-ordination of physiological and morphological responses of stomata to elevated [CO ₂] in vascular plants. <i>Oecologia</i> , 2013, 171, 71-82.	2.0	108
51	Increased Atmospheric SO ₂ Detected from Changes in Leaf Physiognomy across the Triassicâ€ˆJurassic Boundary Interval of East Greenland. <i>PLoS ONE</i> , 2013, 8, e60614.	2.5	41
52	Deep-time evidence of a link between elevated CO ₂ concentrations and perturbations in the hydrological cycle via drop in plant transpiration. <i>Geology</i> , 2012, 40, 815-818.	4.4	56
53	Sulphur dioxide fumigation effects on stomatal density and index of non-resistant plants: Implications for the stomatal palaeo-[CO ₂] proxy method. <i>Review of Palaeobotany and Palynology</i> , 2012, 182, 44-54.	1.5	29
54	Tracking Taphonomic Regimes Using Chemical and Mechanical Damage of Pollen and Spores: An Example from the Triassicâ€ˆJurassic Mass Extinction. <i>PLoS ONE</i> , 2012, 7, e49153.	2.5	16

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55	Extremely elevated CO ₂ concentrations at the Triassic/Jurassic boundary. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2011, 308, 418-432.	2.3	144
56	Bennettitalean leaf cuticle fragments (here <i>Anomozamites</i> and <i>Pterophyllum</i>) can be used interchangeably in stomatal frequency-based palaeo-CO ₂ reconstructions. <i>Palaeontology</i> , 2011, 54, 867-882.	2.2	23
57	Ferns: a xylem success story. <i>New Phytologist</i> , 2011, 192, 307-310.	7.3	12
58	Cycads show no stomatal-density and index response to elevated carbon dioxide and subambient oxygen. <i>Australian Journal of Botany</i> , 2011, 59, 630.	0.6	21
59	The stomatal CO ₂ proxy does not saturate at high atmospheric CO ₂ concentrations: evidence from stomatal index responses of Araucariaceae conifers. <i>Oecologia</i> , 2011, 167, 11-19.	2.0	32
60	Stomatal control as a driver of plant evolution. <i>Journal of Experimental Botany</i> , 2011, 62, 2419-2423.	4.8	115
61	THE TRIASSIC-JURASSIC BOUNDARY CARBON-ISOTOPE EXCURSIONS EXPRESSED IN TAXONOMICALLY IDENTIFIED LEAF CUTICLES. <i>Palaios</i> , 2011, 26, 461-469.	1.3	33
62	Ancient Atmospheres and the Evolution of Oxygen Sensing Via the Hypoxia-Inducible Factor in Metazoans. <i>Physiology</i> , 2010, 25, 272-279.	3.1	108
63	Stomatal index responses of <i>Agrostis canina</i> to CO ₂ and sulphur dioxide: implications for palaeo-[CO ₂] using the stomatal proxy. <i>New Phytologist</i> , 2010, 188, 845-855.	7.3	27
64	Increased fire activity at the Triassic/Jurassic boundary in Greenland due to climate-driven floral change. <i>Nature Geoscience</i> , 2010, 3, 426-429.	12.9	156
65	Differences in the response sensitivity of stomatal index to atmospheric CO ₂ among four genera of Cupressaceae conifers. <i>Annals of Botany</i> , 2010, 105, 411-418.	2.9	61
66	An explanation for conflicting records of Triassic-Jurassic plant diversity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 15351-15356.	7.1	86
67	Baseline intrinsic flammability of Earth's ecosystems estimated from paleoatmospheric oxygen over the past 350 million years. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 22448-22453.	7.1	158
68	Sorting It Out in Endosomes: An Emerging Concept in Renal Epithelial Cell Transport Regulation. <i>Physiology</i> , 2010, 25, 280-292.	3.1	24
69	Carbon sequestration activated by a volcanic CO ₂ pulse during Ocean Anoxic Event 2. <i>Nature Geoscience</i> , 2010, 3, 205-208.	12.9	204
70	Fossil Plant Relative Abundances Indicate Sudden Loss of Late Triassic Biodiversity in East Greenland. <i>Science</i> , 2009, 324, 1554-1556.	12.6	130
71	Bipinnate <i>Ptilozamites nilssonii</i> from Jameson Land and new considerations on the genera <i>Ptilozamites</i> Nathorst 1878 and <i>Ctenozamites</i> Nathorst 1886. <i>Review of Palaeobotany and Palynology</i> , 2009, 153, 386-393.	1.5	16
72	Reply to the comment on "Hot, dry, wet, cold or toxic? Revisiting the ecological significance of leaf cuticular micromorphology" by M. Haworth and J.C. McElwain [<i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> 262 (2008) 79-90]. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2009, 273, 209-211.	2.3	8

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73	The influence of climate on the spatial patterning of Neotropical plant families. <i>Journal of Biogeography</i> , 2008, 35, 117-130.	3.0	47
74	Sensitivity of leaf size and shape to climate within <i>Acer rubrum</i> and <i>Quercus kelloggii</i> . <i>New Phytologist</i> , 2008, 179, 808-817.	7.3	120
75	70 MILLION YEARS OF VEGETATION DYNAMICS. <i>Diversity and Distributions</i> , 2008, 6, 205-206.	4.1	0
76	Hot, dry, wet, cold or toxic? Revisiting the ecological significance of leaf and cuticular micromorphology. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2008, 262, 79-90.	2.3	124
77	Limits for Combustion in Low O ₂ Redefine Paleatmospheric Predictions for the Mesozoic. <i>Science</i> , 2008, 321, 1197-1200.	12.6	160
78	Quantitative estimates of glacial and Holocene temperature and precipitation change in lowland Amazonian Bolivia. <i>Geology</i> , 2008, 36, 667.	4.4	25
79	Macroecological responses of terrestrial vegetation to climatic and atmospheric change across the Triassic/Jurassic boundary in East Greenland. <i>Paleobiology</i> , 2007, 33, 547-573.	2.0	156
80	Mass extinction events and the plant fossil record. <i>Trends in Ecology and Evolution</i> , 2007, 22, 548-557.	8.7	261
81	9. Stomatal Frequency Change Over Altitudinal Gradients: Prospects for Paleoaltimetry. , 2007, , 215-242.		7
82	A new transfer technique to extract and process thin and fragmented fossil cuticle using polyester overlays. <i>Review of Palaeobotany and Palynology</i> , 2007, 145, 243-248.	1.5	15
83	Climate-independent paleoaltimetry using stomatal density in fossil leaves as a proxy for CO ₂ partial pressure: Comment and Reply: REPLY. <i>Geology</i> , 2005, 33, e83-e83.	4.4	5
84	Mid-Cretaceous pCO ₂ based on stomata of the extinct conifer <i>Pseudofrenelopsis</i> (Cheirolepidiaceae). <i>Geology</i> , 2005, 33, 749.	4.4	99
85	Changes in carbon dioxide during an oceanic anoxic event linked to intrusion into Gondwana coals. <i>Nature</i> , 2005, 435, 479-482.	27.8	422
86	Cretaceous CO ₂ Decline and the Radiation and Diversification of Angiosperms. , 2005, , 133-165.		27
87	Climate-independent paleoaltimetry using stomatal density in fossil leaves as a proxy for CO ₂ partial pressure. <i>Geology</i> , 2004, 32, 1017.	4.4	84
88	Stomatal frequency adjustment of four conifer species to historical changes in atmospheric CO ₂ . <i>American Journal of Botany</i> , 2003, 90, 610-619.	1.7	101
89	Carbon Cycle Perturbation in the Middle Jurassic and Accompanying Changes in the Terrestrial Paleoenvironment. <i>Journal of Geology</i> , 2003, 111, 259-276.	1.4	106
90	Willis, K.J., McElwain, J.C. The evolution of plants. <i>Annals of Botany</i> , 2002, 90, 678-679.	2.9	5

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91	Is the greenhouse theory a fallacy? A paleontological paradox. <i>Palaios</i> , 2002, 17, 417-418.	1.3	4
92	Fossil Plants and Global Warming at the Triassic-Jurassic Boundary. <i>Science</i> , 1999, 285, 1386-1390.	12.6	574
93	Do fossil plants signal palaeoatmospheric carbon dioxide concentration in the geological past?. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 1998, 353, 83-96.	4.0	157
94	Short communication. Stomatal responses of the 'living fossil' <i>Ginkgo biloba</i> L. to changes in atmospheric CO ₂ concentrations. <i>Journal of Experimental Botany</i> , 1998, 49, 1603-1607.	4.8	104
95	The fossil plant record and global climatic change. <i>Review of Palaeobotany and Palynology</i> , 1997, 95, 73-82.	1.5	75
96	The Fossil Cuticle as a Skeletal Record of Environmental Change. <i>Palaios</i> , 1996, 11, 376.	1.3	128
97	Relationship of stomatal density and index of <i>Salix cinerea</i> to atmospheric carbon dioxide concentrations in the Holocene. <i>Holocene</i> , 1995, 5, 216-219.	1.7	38
98	Stomatal Density and Index of Fossil Plants Track Atmospheric Carbon Dioxide in the Palaeozoic. <i>Annals of Botany</i> , 1995, 76, 389-395.	2.9	256
99	Atmospheric Carbon Dioxide-stomata. , 0, , 479-480.		2
100	Long-term fluctuations in atmospheric CO ₂ concentration influence plant speciation rates. , 0, , 122-140.		4
101	First occurrence of <i>Camptotheca</i> fruits from late Miocene of southwestern China. <i>Historical Biology</i> , 0, , 1-8.	1.4	1
102	Searching for a nearest living equivalent for Bennettitales: a promising extinct plant group for stomatal proxy reconstructions of Mesozoic pCO ₂ . <i>Gff</i> , 0, , 1-12.	1.2	2