William T Pockman

List of Publications by Year
in descending order

90 papers	18,540 citations	29994 54 h-index	45213 90 g-index
94 all docs	94 docs citations	94 times ranked	14785 citing authors

#	Article	IF	Citations
1	State changes: insights from the U.S. Long Term Ecological Research Network. Ecosphere, 2021, 12, e03433.	1.0	6
2	Global transpiration data from sap flow measurements: the SAPFLUXNET database. Earth System Science Data, 2021, 13, 2607-2649.	3.7	65
3	Divergent responses of primary production to increasing precipitation variability in global drylands. Global Change Biology, 2021, 27, 5225-5237.	4.2	31
4	Ecosystemâ€Level Energy and Water Budgets Are Resilient to Canopy Mortality in Sparse Semiarid Biomes. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG005858.	1.3	2
5	A heuristic classification of woody plants based on contrasting shade and drought strategies. Tree Physiology, 2019, 39, 767-781.	1.4	12
6	Sensitivity of dryland plant allometry to climate. Functional Ecology, 2019, 33, 2290-2303.	1.7	24
7	Minimal mortality and rapid recovery of the dominant shrub Larrea tridentata following an extreme cold event in the northern Chihuahuan Desert. Journal of Vegetation Science, 2019, 30, 963-972.	1.1	10
8	Experimental drought reduces genetic diversity in the grassland foundation species Bouteloua eriopoda. Oecologia, 2019, 189, 1107-1120.	0.9	15
9	Mechanisms of a coniferous woodland persistence under drought and heat. Environmental Research Letters, 2019, 14, 045014.	2.2	72
10	Early exposure to UV radiation overshadowed by precipitation and litter quality as drivers of decomposition in the northern Chihuahuan Desert. PLoS ONE, 2019, 14, e0210470.	1.1	8
11	Drought consistently alters the composition of soil fungal and bacterial communities in grasslands from two continents. Global Change Biology, 2018, 24, 2818-2827.	4.2	221
12	Interannual variations in needle and sapwood traits of Pinus edulis branches under an experimental drought. Ecology and Evolution, 2018, 8, 1655-1672.	0.8	15
13	Is desiccation tolerance and avoidance reflected in xylem and phloem anatomy of two coexisting aridâ€zone coniferous trees?. Plant, Cell and Environment, 2018, 41, 1551-1564.	2.8	16
14	Manipulative experiments demonstrate how long-term soil moisture changes alter controls of plant water use. Environmental and Experimental Botany, 2018, 152, 19-27.	2.0	49
15	Impacts of longâ€term precipitation manipulation on hydraulic architecture and xylem anatomy of piÃ±on and juniper in Southwest USA. Plant, Cell and Environment, 2018, 41, 421-435.	2.8	28
16	Transport in a coordinated soil-root-xylem-phloem leaf system. Advances in Water Resources, 2018, 119, 1-16.	1.7	31
17	Tree water dynamics in a drying and warming world. Plant, Cell and Environment, 2017, 40, 1861-1873.	2.8	96
18	Asymmetric responses of primary productivity to precipitation extremes: A synthesis of grassland precipitation manipulation experiments. Global Change Biology, 2017, 23, 4376-4385.	4.2	231

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19	Tree Mortality Decreases Water Availability and Ecosystem Resilience to Drought in PiÃ±onâ€Juniper Woodlands in the Southwestern U.S.. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 3343-3361.	1.3	25
20	Interacting Effects of Leaf Water Potential and Biomass on Vegetation Optical Depth. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 3031-3046.	1.3	91
21	Pressâ€“pulse interactions: effects of warming, N deposition, altered winter precipitation, and fire on desert grassland community structure and dynamics. Global Change Biology, 2017, 23, 1095-1108.	4.2	49
22	A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. Nature Ecology and Evolution, 2017, 1, 1285-1291.	3.4	739
23	Pragmatic hydraulic theory predicts stomatal responses to climatic water deficits. New Phytologist, 2016, 212, 577-589.	3.5	168
24	Too dry for lizards: shortâ€term rainfall influence onÂlizard microhabitat use in an experimental rainfall manipulation within a piÃ±onâ€juniper. Functional Ecology, 2016, 30, 964-973.	1.7	32
25	An allometryâ€based model of the survival strategies of hydraulic failure and carbon starvation. Ecohydrology, 2016, 9, 529-546.	1.1	33
26	Multi-scale predictions of massive conifer mortality due to chronic temperature rise. Nature Climate Change, 2016, 6, 295-300.	8.1	296
27	Prolonged experimental drought reduces plant hydraulic conductance and transpiration and increases mortality in a piÃ±onâ€“juniper woodland. Ecology and Evolution, 2015, 5, 1618-1638.	0.8	63
28	Interdependence of chronic hydraulic dysfunction and canopy processes can improve integrated models of tree response to drought. Water Resources Research, 2015, 51, 6156-6176.	1.7	99
29	Winter climate change promotes an altered spring growing season in piÃ±on pine-juniper woodlands. Agricultural and Forest Meteorology, 2015, 214-215, 357-368.	1.9	12
30	Integrating ecophysiology and forest landscape models to improve projections of drought effects under climate change. Global Change Biology, 2015, 21, 843-856.	4.2	43
31	Convergence in resource use efficiency across trees with differing hydraulic strategies in response to ecosystem precipitation manipulation. Functional Ecology, 2015, 29, 1125-1136.	1.7	35
32	Photoprotective response to chilling differs among high and low latitude Larrea divaricata grown in a common garden. Journal of Arid Environments, 2015, 120, 51-54.	1.2	7
33	Carbohydrate dynamics and mortality in a piÃ±onâ€juniper woodland under three future precipitation scenarios. Plant, Cell and Environment, 2015, 38, 729-739.	2.8	102
34	A Multiscale, Hierarchical Model of Pulse Dynamics in Arid-Land Ecosystems. Annual Review of Ecology, Evolution, and Systematics, 2014, 45, 397-419.	3.8	153
35	Effects of monsoon precipitation variability on the physiological response of two dominant C4 grasses across a semiarid ecotone. Oecologia, 2014, 176, 751-762.	0.9	20
36	Differential effects of extreme drought on production and respiration: synthesis and modeling analysis. Biogeosciences, 2014, 11, 621-633.	1.3	87

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37	The impact of precipitation change on nitrogen cycling in a semiâ€arid ecosystem. Functional Ecology, 2014, 28, 1534-1544.	1.7	84
38	How do trees die? A test of the hydraulic failure and carbon starvation hypotheses. Plant, Cell and Environment, 2014, 37, 153-161.	2.8	642
39	Freezing regime and tradeâ€offs with water transport efficiency generate variation in xylem structure across diploid populations of Larrea sp. (Zygophyllaceae). American Journal of Botany, 2014, 101, 598-607.	0.8	22
40	Effects of experimental rainfall manipulations on Chihuahuan Desert grassland and shrubland plant communities. Oecologia, 2013, 172, 1117-1127.	0.9	115
41	Reduced transpiration response to precipitation pulses precedes mortality in a piÃ±onâ€“juniper woodland subject to prolonged drought. New Phytologist, 2013, 200, 375-387.	3.5	77
42	Evaluating theories of droughtâ€induced vegetation mortality using a multimodelâ€“experiment framework. New Phytologist, 2013, 200, 304-321.	3.5	340
43	Regulation and acclimation of leaf gas exchange in a piÃ±onâ€“juniper woodland exposed to three different precipitation regimes. Plant, Cell and Environment, 2013, 36, 1812-1825.	2.8	83
44	Drought predisposes piÃ±onâ€“juniper woodlands to insect attacks and mortality. New Phytologist, 2013, 198, 567-578.	3.5	256
45	Hydrologic control of the oxygen isotope ratio of ecosystem respiration in a semi-arid woodland. Biogeosciences, 2013, 10, 4937-4956.	1.3	5
46	Spatio-temporal decoupling of stomatal and mesophyll conductance induced by vein cutting in leaves of Helianthus annuus. Frontiers in Plant Science, 2013, 4, 365.	1.7	9
47	Response of the Soil Microbial Community to Changes in Precipitation in a Semiarid Ecosystem. Applied and Environmental Microbiology, 2012, 78, 8587-8594.	1.4	179
48	Methodology and performance of a rainfall manipulation experiment in a piÃ±onâ€“juniper woodland. Ecosphere, 2012, 3, 1-20.	1.0	50
49	Variation in seedling freezing response is associated with climate in Larrea. Oecologia, 2012, 169, 73-84.	0.9	9
50	Hydraulic limits preceding mortality in a piÃ±onâ€“juniper woodland under experimental drought. Plant, Cell and Environment, 2012, 35, 1601-1617.	2.8	170
51	Drought increases freezing tolerance of both leaves and xylem of Larrea tridentata. Plant, Cell and Environment, 2011, 34, 43-51.	2.8	50
52	The role of interannual, seasonal, and synoptic climate on the carbon isotope ratio of ecosystem respiration at a semiarid woodland. Global Change Biology, 2011, 17, 2584-2600.	4.2	11
53	The Influence of Spatial Patterns of Soil Moisture on the Grass and Shrub Responses to a Summer Rainstorm in a Chihuahuan Desert Ecotone. Ecosystems, 2010, 13, 511-525.	1.6	59
54	Positive feedback between microclimate and shrub encroachment in the northern Chihuahuan desert. Ecosphere, 2010, 1, 1-11.	1.0	290

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55	Rapid plant community responses during the summer monsoon to nighttime warming in a northern Chihuahuan Desert grassland. Journal of Arid Environments, 2010, 74, 611-617.	1.2	35
56	Carbon gain and hydraulic limits on water use differ between size classes of Larrea tridentata. Journal of Arid Environments, 2010, 74, 1121-1129.	1.2	11
57	Tree dieâ€off in response to global changeâ€type drought: mortality insights from a decade of plant water potential measurements. Frontiers in Ecology and the Environment, 2009, 7, 185-189.	1.9	436
58	Transpiration and stomatal conductance across a steep climate gradient in the southern Rocky Mountains. Ecohydrology, 2008, 1, 193-204.	1.1	71
59	Allometry, growth and population regulation of the desert shrub Larrea tridentata. Functional Ecology, 2008, 22, 197-204.	1.7	38
60	Mechanisms of plant survival and mortality during drought: why do some plants survive while others succumb to drought?. New Phytologist, 2008, 178, 719-739.	3.5	3,232
61	Leaf Anatomy of Orcuttieae (Poaceae: Chloridoideae): More Evidence of C4Photosynthesis without Kranz Anatomy. MadroÃ±o, 2008, 55, 143-150.	0.3	3
62	Aquaporinâ€mediated changes in hydraulic conductivity of deep tree roots accessed via caves. Plant, Cell and Environment, 2007, 30, 1411-1421.	2.8	82
63	Integrating Patch and Boundary Dynamics to Understand and Predict Biotic Transitions at Multiple Scales. Landscape Ecology, 2006, 21, 19-33.	1.9	87
64	Influence of soil texture on hydraulic properties and water relations of a dominant warm-desert phreatophyte. Tree Physiology, 2006, 26, 313-323.	1.4	70
65	Water storage capacitance and xylem tension in isolated branches of temperate and tropical trees. Tree Physiology, 2005, 25, 457-466.	1.4	120
66	ECOHYDROLOGICAL CONTROL OF DEEP DRAINAGE IN ARID AND SEMIARID REGIONS. Ecology, 2005, 86, 277-287.	1.5	159
67	ECOHYDROLOGICAL IMPLICATIONS OF WOODY PLANT ENCROACHMENT. Ecology, 2005, 86, 308-319.	1.5	582
68	Variation in xylem structure and function in stems and roots of trees to 20Âm depth. New Phytologist, 2004, 163, 507-517.	3.5	243
69	The Cohesionâ€Tension Theory. New Phytologist, 2004, 163, 451-452.	3.5	68
70	Convergence across biomes to a common rain-use efficiency. Nature, 2004, 429, 651-654.	13.7	968
71	Precipitation pulses and carbon fluxes in semiarid and arid ecosystems. Oecologia, 2004, 141, 254-268.	0.9	942
72	Nutrient uptake as a contributing explanation for deep rooting in arid and semi-arid ecosystems. Oecologia, 2004, 141, 620-628.	0.9	145

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73	ADAPTIVE VARIATION IN THE VULNERABILITY OF WOODY PLANTS TO XYLEM CAVITATION. Ecology, 2004, 85, 2184-2199.	1.5	584
74	Assessing the Response of Terrestrial Ecosystems to Potential Changes in Precipitation. BioScience, 2003, 53, 941.	2.2	680
75	The vulnerability to freezingâ€induced xylem cavitation of Larrea tridentata (Zygophyllaceae) in the Chihuahuan desert. American Journal of Botany, 2002, 89, 1916-1924.	0.8	49
76	Heavy and Light Beer:Â A Carbon Isotope Approach To Detect C4Carbon in Beers of Different Origins, Styles, and Prices. Journal of Agricultural and Food Chemistry, 2002, 50, 6413-6418.	2.4	66
77	Ecosystem carbon loss with woody plant invasion of grasslands. Nature, 2002, 418, 623-626.	13.7	833
78	Trends in wood density and structure are linked to prevention of xylem implosion by negative pressure. Oecologia, 2001, 126, 457-461.	0.9	1,257
79	Vulnerability to xylem cavitation and the distribution of Sonoran Desert vegetation. American Journal of Botany, 2000, 87, 1287-1299.	0.8	497
80	Measuring Water Availability and Uptake in Ecosystem Studies. , 2000, , 199-214.		17
81	Vulnerability to xylem cavitation and the distribution of Sonoran Desert vegetation. American Journal of Botany, 2000, 87, 1287-99.	0.8	78
82	Ecosystem rooting depth determined with caves and DNA. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 11387-11392.	3.3	241
83	Use of centrifugal force in the study of xylem cavitation. Journal of Experimental Botany, 1997, 48, 665-674.	2.4	267
84	Freezing-induced xylem cavitation and the northern limit of Larrea tridentata. Oecologia, 1997, 109, 19-27.	0.9	134
85	Root and stem xylem embolism, stomatal conductance, and leaf turgor in Acer grandidentatum populations along a soil moisture gradient. Oecologia, 1996, 105, 293-301.	0.9	255
86	New evidence for large negative xylem pressures and their measurement by the pressure chamber method. Plant, Cell and Environment, 1996, 19, 427-436.	2.8	121
87	Sustained and significant negative water pressure in xylem. Nature, 1995, 378, 715-716.	13.7	289
88	Interactions between C3 and C4 salt marsh plant species during four years of exposure to elevated atmospheric CO2. Plant Ecology, 1993, 104-105, 133-143.	1.2	94
89	Limitation of transpiration by hydraulic conductance and xylem cavitation in Betula occidentalis. Plant, Cell and Environment, 1993, 16, 279-287.	2.8	292
90	Interactions between C3 and C4 salt marsh plant species during four years of exposure to elevated atmospheric CO2. , 1993, , 133-143.		16