

David G. Williams

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

83

papers

9,906

citations

46

h-index

84

g-index

84

ext. papers

10,976

ext. citations

6.3

avg, IF

5.68

L-index

#	Paper	IF	Citations
83	Hydraulic and photosynthetic limitations prevail over root non-structural carbohydrate reserves as drivers of resprouting in two Mediterranean oaks. <i>Plant, Cell and Environment</i> , 2020 , 43, 1944-1957	8.4	8
82	Climate warming alters photosynthetic responses to elevated CO in prairie plants. <i>American Journal of Botany</i> , 2020 , 107, 1238-1252	2.7	1
81	Atmospheric vapour and precipitation are not in isotopic equilibrium in a continental mountain environment. <i>Hydrological Processes</i> , 2020 , 34, 3078-3101	3.3	4
80	Antecedent moisture and temperature conditions modulate the response of ecosystem respiration to elevated CO and warming. <i>Global Change Biology</i> , 2015 , 21, 2588-2602	11.4	38
79	Daily and seasonal changes in soil amino acid composition in a semiarid grassland exposed to elevated CO ₂ and warming. <i>Biogeochemistry</i> , 2015 , 123, 135-146	3.8	6
78	Long-term exposure to elevated CO ₂ enhances plant community stability by suppressing dominant plant species in a mixed-grass prairie. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 15456-61	11.5	48
77	Transitions from grassland to savanna under drought through passive facilitation by grasses. <i>Journal of Vegetation Science</i> , 2014 , 25, 937-946	3.1	23
76	Functional trade-offs in succulent stems predict responses to climate change in columnar cacti. <i>Journal of Experimental Botany</i> , 2014 , 65, 3405-13	7	22
75	Terrestrial water fluxes dominated by transpiration: Comment. <i>Ecosphere</i> , 2014 , 5, art61	3.1	42
74	Antecedent Conditions Influence Soil Respiration Differences in Shrub and Grass Patches. <i>Ecosystems</i> , 2013 , 16, 1230-1247	3.9	33
73	A novel in situ water perfusion and extraction method for soil amino acid quantification. <i>Soil Biology and Biochemistry</i> , 2013 , 59, 86-88	7.5	7
72	Invasive forb benefits from water savings by native plants and carbon fertilization under elevated CO ₂ and warming. <i>New Phytologist</i> , 2013 , 200, 1156-65	9.8	49
71	Photosynthesis of temperate Eucalyptus globulus trees outside their native range has limited adjustment to elevated CO ₂ and climate warming. <i>Global Change Biology</i> , 2013 , 19, 3790-807	11.4	80
70	Warming reduces carbon losses from grassland exposed to elevated atmospheric carbon dioxide. <i>PLoS ONE</i> , 2013 , 8, e71921	3.7	49
69	Climate change alters stoichiometry of phosphorus and nitrogen in a semiarid grassland. <i>New Phytologist</i> , 2012 , 196, 807-815	9.8	150
68	Shrub encroachment alters sensitivity of soil respiration to temperature and moisture. <i>Journal of Geophysical Research</i> , 2012 , 117,		24
67	Windows of opportunity for Prosopis velutina seedling establishment and encroachment in a semiarid grassland. <i>Perspectives in Plant Ecology, Evolution and Systematics</i> , 2012 , 14, 275-282	3	8

66	Environmental and physiological controls on the carbon isotope composition of CO ₂ respired by leaves and roots of a C ₃ woody legume (<i>Prosopis velutina</i>) and a C ₄ perennial grass (<i>Sporobolus wrightii</i>). <i>Plant, Cell and Environment</i> , 2012 , 35, 567-77	8.4	13
65	C ₄ grasses prosper as carbon dioxide eliminates desiccation in warmed semi-arid grassland. <i>Nature</i> , 2011 , 476, 202-5	50.4	370
64	Seasonal photosynthetic gas exchange and water-use efficiency in a constitutive CAM plant, the giant saguaro cactus (<i>Carnegiea gigantea</i>). <i>Oecologia</i> , 2011 , 167, 861-71	2.9	13
63	The stable isotope ecology of terrestrial plant succession. <i>Plant Ecology and Diversity</i> , 2011 , 4, 117-130	2.2	19
62	The genetic architecture of ecophysiological and circadian traits in <i>Brassica rapa</i> . <i>Genetics</i> , 2011 , 189, 375-90	4	45
61	Daily to decadal patterns of precipitation, humidity, and photosynthetic physiology recorded in the spines of the columnar cactus, <i>Carnegiea gigantea</i> . <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		6
60	A 26-year stable isotope record of humidity and El Niño-enhanced precipitation in the spines of saguaro cactus, <i>Carnegiea gigantea</i> . <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2010 , 293, 108-119	2.9	16
59	Using the dual approach of FAO-56 for partitioning ET into soil and plant components for olive orchards in a semi-arid region. <i>Agricultural Water Management</i> , 2010 , 97, 1769-1778	5.9	87
58	Elevated carbon dioxide alters impacts of precipitation pulses on ecosystem photosynthesis and respiration in a semi-arid grassland. <i>Oecologia</i> , 2010 , 162, 791-802	2.9	32
57	Nocturnal and seasonal patterns of carbon isotope composition of leaf dark-respired carbon dioxide differ among dominant species in a semiarid savanna. <i>Oecologia</i> , 2010 , 164, 297-310	2.9	18
56	Carbon and oxygen isotope analysis of leaf biomass reveals contrasting photosynthetic responses to elevated CO ₂ near geologic vents in Yellowstone National Park. <i>Biogeosciences</i> , 2009 , 6, 25-31	4.6	12
55	Genotypes of <i>Brassica rapa</i> respond differently to plant-induced variation in air CO ₂ concentration in growth chambers with standard and enhanced venting. <i>Theoretical and Applied Genetics</i> , 2009 , 119, 991-1004	6	13
54	Diurnal and seasonal variation in the carbon isotope composition of leaf dark-respired CO ₂ in velvet mesquite (<i>Prosopis velutina</i>). <i>Plant, Cell and Environment</i> , 2009 , 32, 1390-400	8.4	26
53	Drought-induced hydraulic limitations constrain leaf gas exchange recovery after precipitation pulses in the C ₃ woody legume, <i>Prosopis velutina</i> . <i>New Phytologist</i> , 2009 , 181, 672-82	9.8	91
52	Why are non-photosynthetic tissues generally C enriched compared with leaves in C ₃ plants? Review and synthesis of current hypotheses. <i>Functional Plant Biology</i> , 2009 , 36, 199-213	2.7	304
51	Mechanisms of plant survival and mortality during drought: why do some plants survive while others succumb to drought?. <i>New Phytologist</i> , 2008 , 178, 719-739	9.8	2499
50	Chlorophyll fluorescence, predawn water potential and photosynthesis in precipitation pulse-driven ecosystems – implications for ecological studies. <i>Functional Ecology</i> , 2008 , 22, 479-483	5.6	42
49	An integrated modelling and remote sensing approach for hydrological study in arid and semi-arid regions: the SUDMED Programme. <i>International Journal of Remote Sensing</i> , 2008 , 29, 5161-5181	3.1	91

48	Sensitivity of mesquite shrubland CO ₂ exchange to precipitation in contrasting landscape settings. <i>Ecology</i> , 2008 , 89, 2900-10	4.6	37
47	Soil Texture Drives Responses of Soil Respiration to Precipitation Pulses in the Sonoran Desert: Implications for Climate Change. <i>Ecosystems</i> , 2008 , 11, 961-979	3.9	162
46	Dynamics of labile and recalcitrant soil carbon pools in a sorghum free-air CO ₂ enrichment (FACE) agroecosystem. <i>Soil Biology and Biochemistry</i> , 2007 , 39, 2250-2263	7.5	64
45	Hydrogen isotope fractionation during water uptake by woody xerophytes. <i>Plant and Soil</i> , 2007 , 291, 93-107	4.2	246
44	Leaf gas exchange and water status responses of a native and non-native grass to precipitation across contrasting soil surfaces in the Sonoran Desert. <i>Oecologia</i> , 2007 , 152, 401-13	2.9	48
43	Past climate changes and ecophysiological responses recorded in the isotope ratios of saguaro cactus spines. <i>Oecologia</i> , 2007 , 154, 247-58	2.9	30
42	Intraseasonal Variation in Water and Carbon Dioxide Flux Components in a Semiarid Riparian Woodland. <i>Ecosystems</i> , 2007 , 10, 1100-1115	3.9	51
41	Root allocation and water uptake patterns in riparian tree saplings: Responses to irrigation and defoliation. <i>Forest Ecology and Management</i> , 2007 , 246, 222-231	3.9	29
40	Sensitivity of riparian ecosystems in arid and semiarid environments to moisture pulses. <i>Hydrological Processes</i> , 2006 , 20, 3191-3205	3.3	43
39	Influence of soil texture on hydraulic properties and water relations of a dominant warm-desert phreatophyte. <i>Tree Physiology</i> , 2006 , 26, 313-23	4.2	61
38	Controls on transpiration in a semiarid riparian cottonwood forest. <i>Agricultural and Forest Meteorology</i> , 2006 , 137, 56-67	5.8	91
37	Antecedent moisture and seasonal precipitation influence the response of canopy-scale carbon and water exchange to rainfall pulses in a semi-arid grassland. <i>New Phytologist</i> , 2006 , 170, 849-60	9.8	140
36	Resilience and resistance of ecosystem functional response to a precipitation pulse in a semi-arid grassland. <i>Journal of Ecology</i> , 2006 , 94, 23-30	6	92
35	Ecohydrological impacts of woody-plant encroachment: seasonal patterns of water and carbon dioxide exchange within a semiarid riparian environment. <i>Global Change Biology</i> , 2006 , 12, 311-324	11.4	179
34	The sensitivity of ecosystem carbon exchange to seasonal precipitation and woody plant encroachment. <i>Oecologia</i> , 2006 , 150, 453-63	2.9	37
33	The influence of soil texture and vegetation on soil moisture under rainout shelters in a semi-desert grassland. <i>Journal of Arid Environments</i> , 2005 , 63, 324-343	2.5	93
32	Oxygen isotopes in cellulose identify source water for archaeological maize in the American Southwest. <i>Journal of Archaeological Science</i> , 2005 , 32, 931-939	2.9	27
31	Dynamics of transpiration and evaporation following a moisture pulse in semiarid grassland: A chamber-based isotope method for partitioning flux components. <i>Agricultural and Forest Meteorology</i> , 2005 , 132, 359-376	5.8	110

30	Precipitation pulse use by an invasive woody legume: the role of soil texture and pulse size. <i>Oecologia</i> , 2005 , 144, 618-27	2.9	97
29	Comparison of measured and modeled variations in piñon pine leaf water isotopic enrichment across a summer moisture gradient. <i>Oecologia</i> , 2005 , 145, 605-18	2.9	29
28	Sonoran Desert Winter Annuals Affected by Density of Red Brome and Soil Nitrogen. <i>American Midland Naturalist</i> , 2005 , 153, 95-109	0.7	15
27	Hydraulic redistribution by a dominant, warm-desert phreatophyte: seasonal patterns and response to precipitation pulses. <i>Functional Ecology</i> , 2004 , 18, 530-538	5.6	111
26	Convergence across biomes to a common rain-use efficiency. <i>Nature</i> , 2004 , 429, 651-4	50.4	786
25	Response of net ecosystem gas exchange to a simulated precipitation pulse in a semi-arid grassland: the role of native versus non-native grasses and soil texture. <i>Oecologia</i> , 2004 , 141, 295-305	2.9	201
24	Floral CO ₂ emission may indicate food abundance to nectar-feeding moths. <i>Die Naturwissenschaften</i> , 2004 , 91, 329-33	2	59
23	Evapotranspiration components determined by stable isotope, sap flow and eddy covariance techniques. <i>Agricultural and Forest Meteorology</i> , 2004 , 125, 241-258	5.8	352
22	Contrasting patterns of hydraulic redistribution in three desert phreatophytes. <i>Oecologia</i> , 2003 , 135, 167-75	2.9	96
21	Defoliation alters water uptake by deep and shallow roots of <i>Prosopis velutina</i> (Velvet Mesquite). <i>Functional Ecology</i> , 2003 , 17, 363-374	5.6	59
20	Partitioning overstory and understory evapotranspiration in a semiarid savanna woodland from the isotopic composition of water vapor. <i>Agricultural and Forest Meteorology</i> , 2003 , 119, 53-68	5.8	193
19	Assessing the Response of Terrestrial Ecosystems to Potential Changes in Precipitation. <i>BioScience</i> , 2003 , 53, 941	5.7	591
18	Hydraulic redistribution by deep roots of a Chihuahuan Desert phreatophyte. <i>Tree Physiology</i> , 2003 , 23, 353-60	4.2	61
17	Carbon isotope discrimination and bundle sheath leakiness in three C(4) subtypes grown under variable nitrogen, water and atmospheric CO ₂ supply. <i>Journal of Experimental Botany</i> , 2002 , 53, 2261-97		31
16	Heavy and light beer: a carbon isotope approach to detect C(4) carbon in beers of different origins, styles, and prices. <i>Journal of Agricultural and Food Chemistry</i> , 2002 , 50, 6413-8	5.7	58
15	Carbon isotope discrimination by <i>Sorghum bicolor</i> under CO ₂ enrichment and drought. <i>New Phytologist</i> , 2001 , 150, 285-293	9.8	62
14	Elevated atmospheric CO ₂ improved <i>Sorghum</i> plant water status by ameliorating the adverse effects of drought. <i>New Phytologist</i> , 2001 , 152, 231-248	9.8	118
13	INTRA- AND INTERSPECIFIC VARIATION FOR SUMMER PRECIPITATION USE IN PINYON-PUNIPER WOODLANDS. <i>Ecological Monographs</i> , 2000 , 70, 517-537	9	192

12	Preface paper to the Semi-Arid Land-Surface-Atmosphere (SALSA) Program special issue. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 3-20	5.8	44
11	Spatial and temporal properties of water vapor and latent energy flux over a riparian canopy. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 161-183	5.8	29
10	Transpiration of cottonwood/willow forest estimated from sap flux. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 257-270	5.8	98
9	Water sources used by riparian trees varies among stream types on the San Pedro River, Arizona. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 227-240	5.8	193
8	Seasonal estimates of riparian evapotranspiration using remote and in situ measurements. <i>Agricultural and Forest Meteorology</i> , 2000 , 105, 281-309	5.8	87
7	Limits to water transport in <i>Juniperus osteosperma</i> and <i>Pinus edulis</i> : implications for drought tolerance and regulation of transpiration. <i>Functional Ecology</i> , 1998 , 12, 906-911	5.6	130
6	Carbon isotope discrimination in three semi-arid woodland species along a monsoon gradient. <i>Oecologia</i> , 1996 , 106, 455-460	2.9	59
5	Effects of nutrient amendment and environment on growth and gas exchange for introduced <i>Pennisetum setaceum</i> in Hawaii. <i>Canadian Journal of Botany</i> , 1996 , 74, 268-275		6
4	Ecophysiology of Introduced <i>Pennisetum Setaceum</i> on Hawaii: The Role of Phenotypic Plasticity. <i>Ecology</i> , 1995 , 76, 1569-1580	4.6	167
3	Drought response of a native and introduced Hawaiian grass. <i>Oecologia</i> , 1994 , 97, 512-519	2.9	72
2	Phenotypic Variation in Contrasting Temperature Environments: Growth and Photosynthesis in <i>Pennisetum Setaceum</i> from Different Altitudes on Hawaii. <i>Functional Ecology</i> , 1993 , 7, 623	5.6	63
1	Size and Ecological Significance of the Physiological Individual in the Bunchgrass <i>Schizachyrium scoparium</i> . <i>Oikos</i> , 1991 , 62, 41	4	18