Travis E Huxman

List of Publications by Year
in descending order

82 papers	10,629 citations	57758 44 h-index	62596 80 g-index
83 all docs	83 docs citations	83 times ranked	12733 citing authors

#	Article	IF	Citations
1	Convergence across biomes to a common rain-use efficiency. Nature, 2004, 429, 651-654.	27.8	968
2	Precipitation pulses and carbon fluxes in semiarid and arid ecosystems. Oecologia, 2004, 141, 254-268.	2.0	942
3	Temperature sensitivity of drought-induced tree mortality portends increased regional die-off under global-change-type drought. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7063-7066.	7.1	857
4	A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. Nature Ecology and Evolution, 2017, 1, 1285-1291.	7.8	739
5	ECOHYDROLOGICAL IMPLICATIONS OF WOODY PLANT ENCROACHMENT. Ecology, 2005, 86, 308-319.	3.2	582
6	Elevated CO2 increases productivity and invasive species success in an arid ecosystem. Nature, 2000, 408, 79-82.	27.8	529
7	Functional tradeoffs determine species coexistence via the storage effect. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 11641-11645.	7.1	390
8	Leaf development and demography explain photosynthetic seasonality in Amazon evergreen forests. Science, 2016, 351, 972-976.	12.6	336
9	Water and climate: Recognize anthropogenic drought. Nature, 2015, 524, 409-411.	27.8	278
10	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. Oecologia, 2004, 141, 295-305.	2.0	228
11	Nonstructural leaf carbohydrate dynamics of <scp>P</scp>inus edulis during droughtâ€induced tree mortality reveal role for carbon metabolism in mortality mechanism. New Phytologist, 2013, 197, 1142-1151.	7.3	221
12	Ecohydrological consequences of droughtâ€and infestationâ€triggered tree dieâ€off: insights and hypotheses. Ecohydrology, 2012, 5, 145-159.	2.4	211
13	Ecohydrological impacts of woody-plant encroachment: seasonal patterns of water and carbon dioxide exchange within a semiarid riparian environment. Global Change Biology, 2006, 12, 311-324.	9.5	201
14	Soil Texture Drives Responses of Soil Respiration to Precipitation Pulses in the Sonoran Desert: Implications for Climate Change. Ecosystems, 2008, 11, 961-979.	3.4	192
15	Effects of seasonal drought on net carbon dioxide exchange from a woodyâ€plantâ€encroached semiarid grassland. Journal of Geophysical Research, 2009, 114, .	3.3	187
16	Partitioning of evapotranspiration and its relation to carbon dioxide exchange in a Chihuahuan Desert shrubland. Hydrological Processes, 2006, 20, 3227-3243.	2.6	184
17	Partitioning evapotranspiration across gradients of woody plant cover: Assessment of a stable isotope technique. Geophysical Research Letters, 2010, 37, .	4.0	179
18	Climate and vegetation water use efficiency at catchment scales. Hydrological Processes, 2009, 23, 2409-2414.	2.6	176

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19	Hysteresis of soil moisture spatial heterogeneity and the â€œhomogenizingâ€•effect of vegetation. Water Resources Research, 2010, 46, .	4.2	139
20	Interactions Between Biogeochemistry and Hydrologic Systems. Annual Review of Environment and Resources, 2009, 34, 65-96.	13.4	138
21	Contemporary climate change in the Sonoran Desert favors coldâ€•adapted species. Global Change Biology, 2010, 16, 1555-1565.	9.5	130
22	Effects of Drought Manipulation on Soil Nitrogen Cycling: A Metaâ€•Analysis. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 3260-3272.	3.0	124
23	Costâ€•effective ecological restoration. Restoration Ecology, 2015, 23, 800-810.	2.9	123
24	How Water, Carbon, and Energy Drive Critical Zone Evolution: The Jemezâ€“Santa Catalina Critical Zone Observatory. Vadose Zone Journal, 2011, 10, 884-899.	2.2	111
25	Nocturnal stomatal conductance responses to rising [CO₂], temperature and drought. New Phytologist, 2012, 193, 929-938.	7.3	111
26	Withinâ€•plant isoprene oxidation confirmed by direct emissions of oxidation products methyl vinyl ketone and methacrolein. Global Change Biology, 2012, 18, 973-984.	9.5	107
27	An open system framework for integrating critical zone structure and function. Biogeochemistry, 2011, 102, 15-29.	3.5	103
28	The temperature responses of soil respiration in deserts: a seven desert synthesis. Biogeochemistry, 2011, 103, 71-90.	3.5	101
29	Resilience and resistance of ecosystem functional response to a precipitation pulse in a semi-arid grassland. Journal of Ecology, 2006, 94, 23-30.	4.0	100
30	Differential daytime and nightâ€•time stomatal behavior in plants from North American deserts. New Phytologist, 2012, 194, 464-476.	7.3	99
31	The relative controls of temperature, soil moisture, and plant functional group on soil CO₂efflux at diel, seasonal, and annual scales. Journal of Geophysical Research, 2011, 116, .	3.3	94
32	PHOTOSYNTHETIC RESOURCE-USE EFFICIENCY AND DEMOGRAPHIC VARIABILITY IN DESERT WINTER ANNUAL PLANTS. Ecology, 2008, 89, 1554-1563.	3.2	77
33	Coevolution of nonlinear trends in vegetation, soils, and topography with elevation and slope aspect: A case study in the sky islands of southern Arizona. Journal of Geophysical Research F: Earth Surface, 2013, 118, 741-758.	2.8	76
34	Traversing the Wasteland: A Framework for Assessing Ecological Threats to Drylands. BioScience, 2020, 70, 35-47.	4.9	74
35	Adaptive differences in plant physiology and ecosystem paradoxes: insights from metabolic scaling theory. Global Change Biology, 2007, 13, 591-609.	9.5	71
36	Photosynthetic responses of Mojave Desert shrubs to free air CO2 enrichment are greatest during wet years. Global Change Biology, 2003, 9, 276-285.	9.5	69

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37	An integrated modelling framework of catchmentâ€scale ecohydrological processes: 1. Model description and tests over an energyâ€limited watershed. Ecohydrology, 2014, 7, 427-439.	2.4	68
38	Ageâ€dependent leaf physiology and consequences for crownâ€scale carbon uptake during the dry season in an Amazon evergreen forest. New Phytologist, 2018, 219, 870-884.	7.3	66
39	Temperature and precipitation controls over leafâ€and ecosystemâ€level <scp>CO₂</scp> flux along a woody plant encroachment gradient. Global Change Biology, 2012, 18, 1389-1400.	9.5	65
40	Increases in Desert Shrub Productivity under Elevated Carbon Dioxide Vary with Water Availability. Ecosystems, 2006, 9, 374-385.	3.4	64
41	Seasonal and droughtâ€related changes in leaf area profiles depend on height and light environment in an Amazon forest. New Phytologist, 2019, 222, 1284-1297.	7.3	64
42	Empirical evidence for resilience of tropical forest photosynthesis in a warmer world. Nature Plants, 2020, 6, 1225-1230.	9.3	64
43	In situ photosynthetic freezing tolerance for plants exposed to a global warming manipulation in the Rocky Mountains, Colorado, USA. New Phytologist, 2004, 162, 331-341.	7.3	56
44	CO2ENRICHMENT REDUCES THE ENERGETIC COST OF BIOMASS CONSTRUCTION IN AN INVASIVE DESERT GRASS. Ecology, 2004, 85, 100-106.	3.2	53
45	The Landscape Evolution Observatory: A large-scale controllable infrastructure to study coupled Earth-surface processes. Geomorphology, 2015, 244, 190-203.	2.6	47
46	Understanding past, contemporary, and future dynamics of plants, populations, and communities using Sonoran Desert winter annuals. American Journal of Botany, 2013, 100, 1369-1380.	1.7	44
47	Phenotypic Selection Favors Missing Trait Combinations in Coexisting Annual Plants. American Naturalist, 2013, 182, 191-207.	2.1	43
48	Woody plant encroachment impacts on soil carbon and microbial processes: results from a hierarchical Bayesian analysis of soil incubation data. Plant and Soil, 2009, 320, 153-167.	3.7	41
49	Waterâ€use efficiency and relative growth rate mediate competitive interactions in Sonoran Desert winter annual plants. American Journal of Botany, 2013, 100, 2009-2015.	1.7	41
50	Can biological invasions induce desertification?. New Phytologist, 2009, 181, 512-515.	7.3	40
51	Quantifying the timescales over which exogenous and endogenous conditions affect soil respiration. New Phytologist, 2014, 202, 442-454.	7.3	40
52	Quantifying soil surface change in degraded drylands: Shrub encroachment and effects of fire and vegetation removal in a desert grassland. Journal of Geophysical Research, 2012, 117, .	3.3	39
53	Phenotypic plasticity and precipitation response in Sonoran Desert winter annuals. American Journal of Botany, 2010, 97, 405-411.	1.7	38
54	Antecedent Conditions Influence Soil Respiration Differences in Shrub and Grass Patches. Ecosystems, 2013, 16, 1230-1247.	3.4	37

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55	Shrub encroachment alters sensitivity of soil respiration to temperature and moisture. Journal of Geophysical Research, 2012, 117, .	3.3	28
56	Sensitivity of regional evapotranspiration partitioning to variation in woody plant cover: insights from experimental dryland tree mosaics. Global Ecology and Biogeography, 2015, 24, 1040-1048.	5.8	28
57	Transitions from grassland to savanna under drought through passive facilitation by grasses. Journal of Vegetation Science, 2014, 25, 937-946.	2.2	27
58	Seasonal dry-down rates and high stress tolerance promote bamboo invasion above and below treeline. Plant Ecology, 2016, 217, 1219-1234.	1.6	27
59	Cryptic phenology in plants: Case studies, implications, and recommendations. Global Change Biology, 2019, 25, 3591-3608.	9.5	26
60	Biological invasions and climate change amplify each otherâ€™s effects on dryland degradation. Global Change Biology, 2022, 28, 285-295.	9.5	23
61	Climate controls over ecosystem metabolism: insights from a fifteen-year inductive artificial neural network synthesis for a subalpine forest. Oecologia, 2017, 184, 25-41.	2.0	22
62	Predicting drought tolerance from slope aspect preference in restored plant communities. Ecology and Evolution, 2017, 7, 3123-3131.	1.9	22
63	Landscape and environmental controls over leaf and ecosystem carbon dioxide fluxes under woody plant expansion. Journal of Ecology, 2013, 101, 1471-1483.	4.0	21
64	Warming as a Driver of Vegetation Loss in the Sonoran Desert of California. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005942.	3.0	21
65	Functional ecology of shrub seedlings after a natural recruitment event at the Nevada Desert FACE Facility. Global Change Biology, 2003, 9, 718-728.	9.5	19
66	Rising temperature may negate the stimulatory effect of rising CO2 on growth and physiology of Wollemi pine (Wollemia nobilis). Functional Plant Biology, 2015, 42, 836.	2.1	18
67	Rapid alignment of functional trait variation with locality across the invaded range of Sahara mustard (Brassica tournefortii). American Journal of Botany, 2018, 105, 1188-1197.	1.7	18
68	Land surface modeling inside the Biosphere 2 tropical rain forest biome. Journal of Geophysical Research, 2010, 115, .	3.3	16
69	The effect of soil inoculants on seed germination of native and invasive species. Botany, 2017, 95, 469-480.	1.0	16
70	The interaction of drought and habitat explain spaceâ€“time patterns of establishment in saguaro (Carnegiea gigantea). Ecology, 2018, 99, 621-631.	3.2	16
71	Native shrubland and managed buffelgrass savanna in drylands: Implications for ecosystem carbon and water fluxes. Agricultural and Forest Meteorology, 2019, 268, 269-278.	4.8	16
72	Effectiveness of seed sowing techniques for sloped restoration sites. Restoration Ecology, 2017, 25, 942-952.	2.9	14

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73	Multiple introductions and population structure during the rapid expansion of the invasive Sahara mustard (Brassica tournefortii). Ecology and Evolution, 2019, 9, 7928-7941.	1.9	13
74	Functional trait tradeâ€off and species abundance: insights from a multiâ€decadal study. Ecology Letters, 2019, 22, 583-592.	6.4	13
75	Land degradation in the Thar Desert. Frontiers in Ecology and the Environment, 2009, 7, 517-518.	4.0	12
76	Restoring a Mediterraneanâ€climate shrub community with perennial species reduces future invasion. Restoration Ecology, 2019, 27, 298-307.	2.9	6
77	Early life history responses and phenotypic shifts in a rare endemic plant responding to climate change. , 2019, 7, coz076.		4
78	Analyzing Highâ€Frequency Soil Respiration Using a Probabilistic Model in a Semiarid, Mediterranean Climate. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 509-520.	3.0	4
79	A common garden superâ€experiment: An impossible dream to inspire possible synthesis. Journal of Ecology, 2022, 110, 997-1004.	4.0	4
80	Facilitation at early growth stages results in spatial associations and stable coexistence in late growth stages of two longâ€lived, dominant shrubs. Oikos, 0, , .	2.7	3
81	Impacts of competition and herbivory on native plants in a communityâ€engaged, adaptively managed restoration experiment. Conservation Science and Practice, 2019, 1, e122.	2.0	2
82	Sahara mustard as a major threat to desert biodiversity in the southwest United States and the need to integrate contemporary methods to understand its biology. Ecology and Evolution, 2020, 10, 14453-14455.	1.9	0