Debra P C Peters

List of Publications by Year
in descending order

118 papers	7,748 citations	57758 44 h-index	53230 85 g-index
125 all docs	125 docs citations	125 times ranked	9321 citing authors

#	Article	IF	Citations
1	The changing landscape: ecosystem responses to urbanization and pollution across climatic and societal gradients. Frontiers in Ecology and the Environment, 2008, 6, 264-272.	4.0	597
2	Legacies of precipitation fluctuations on primary production: theory and data synthesis. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 3135-3144.	4.0	471
3	Ecosystem resilience despite large-scale altered hydroclimatic conditions. Nature, 2013, 494, 349-352.	27.8	450
4	Shrub encroachment in North American grasslands: shifts in growth form dominance rapidly alters control of ecosystem carbon inputs. Global Change Biology, 2008, 14, 615-623.	9.5	435
5	Cross-scale interactions, nonlinearities, and forecasting catastrophic events. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15130-15135.	7.1	393
6	Ecological services to and from rangelands of the United States. Ecological Economics, 2007, 64, 261-268.	5.7	275
7	Analysis of abrupt transitions in ecological systems. Ecosphere, 2011, 2, art129.	2.2	239
8	Crossâ€"Scale Interactions and Changing Patternâ€"Process Relationships: Consequences for System Dynamics. Ecosystems, 2007, 10, 790-796.	3.4	205
9	Do Changes in Connectivity Explain Desertification?. BioScience, 2009, 59, 237-244.	4.9	200
10	Disentangling Complex Landscapes: New Insights into Arid and Semiarid System Dynamics. BioScience, 2006, 56, 491.	4.9	189
11	Precipitation legacies in desert grassland primary production occur through previousâ€year tiller density. Ecology, 2013, 94, 435-443.	3.2	169
12	Connectivity in dryland landscapes: shifting concepts of spatial interactions. Frontiers in Ecology and the Environment, 2015, 13, 20-27.	4.0	161
13	Living in an increasingly connected world: a framework for continental-scale environmental science. Frontiers in Ecology and the Environment, 2008, 6, 229-237.	4.0	157
14	Long-Term and Large-Scale Perspectives on the Relationship between Biodiversity and Ecosystem Functioning. BioScience, 2003, 53, 89.	4.9	156
15	Tree Mortality in Gap Models: Application to Climate Change. Climatic Change, 2001, 51, 509-540.	3.6	151
16	Directional climate change and potential reversal of desertification in arid and semiarid ecosystems. Global Change Biology, 2012, 18, 151-163.	9.5	140
17	Accelerate Synthesis in Ecology and Environmental Sciences. BioScience, 2009, 59, 699-701.	4.9	132
18	Large area mapping of southwestern forest crown cover, canopy height, and biomass using the NASA Multiangle Imaging Spectro-Radiometer. Remote Sensing of Environment, 2008, 112, 2051-2063.	11.0	126

#	Article	IF	Citations
19	Plant species dominance at a grasslandâ€"shrubland ecotone: an individual-based gap dynamics model of herbaceous and woody species. Ecological Modelling, 2002, 152, 5-32.	2.5	123
20	Cross-system comparisons elucidate disturbance complexities and generalities. Ecosphere, 2011, 2, art81.	2.2	107
21	Harnessing the power of big data: infusing the scientific method with machine learning to transform ecology. Ecosphere, 2014, 5, 1-15.	2.2	105
22	Using Mechanistic Models to Scale Ecological Processes across Space and Time. BioScience, 2003, 53, 68.	4.9	101
23	Integrating Patch and Boundary Dynamics to Understand and Predict Biotic Transitions at Multiple Scales. Landscape Ecology, 2006, 21, 19-33.	4.2	87
24	Nonlinear dynamics in arid and semi-arid systems: Interactions among drivers and processes across scales. Journal of Arid Environments, 2006, 65, 196-206.	2.4	86
25	High-resolution images reveal rate and pattern of shrub encroachment over six decades in New Mexico, U.S.A.. Journal of Arid Environments, 2003, 54, 755-767.	2.4	81
26	The Grasslandâ€"Shrubland Regime Shift in the Southwestern United States: Misconceptions and Their Implications for Management. BioScience, 2018, 68, 678-690.	4.9	81
27	Accessible ecology: synthesis of the long, deep, and broad. Trends in Ecology and Evolution, 2010, 25, 592-601.	8.7	77
28	Functional response of U.S. grasslands to the early 21stâ€century drought. Ecology, 2014, 95, 2121-2133.	3.2	75
29	Soil animal responses to moisture availability are largely scale, not ecosystem dependent: insight from a crossâ€site study. Global Change Biology, 2014, 20, 2631-2643.	9.5	75
30	Extreme precipitation patterns and reductions of terrestrial ecosystem production across biomes. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 148-157.	3.0	74
31	Strategies for ecological extrapolation. Oikos, 2004, 106, 627-636.	2.7	71
32	Regional grassland productivity responses to precipitation during multiyear aboveâ€•and belowâ€average rainfall periods. Global Change Biology, 2018, 24, 1935-1951.	9.5	71
33	Water controls on nitrogen transformations and stocks in an arid ecosystem. Ecosphere, 2013, 4, 1-17.	2.2	67
34	Support vector machines for recognition of semi-arid vegetation types using MISR multi-angle imagery. Remote Sensing of Environment, 2007, 107, 299-311.	11.0	64
35	Remote sensing of woody shrub cover in desert grasslands using MISR with a geometric-optical canopy reflectance model. Remote Sensing of Environment, 2008, 112, 19-34.	11.0	63
36	Taking the pulse of a continent: expanding siteâ€based research infrastructure for regionalâ€•to continentalâ€scale ecology. Ecosphere, 2014, 5, 1-23.	2.2	62

#	Article	IF	Citations
37	Enhanced precipitation variability effects on water losses and ecosystem functioning: differential response of arid and mesic regions. Climatic Change, 2015, 131, 213-227.	3.6	62
38	Climatic variation and simulated patterns in seedling establishment of two dominant grasses at a semi-arid-arid grassland ecotone. Journal of Vegetation Science, 2000, 11, 493-504.	2.2	61
39	Beyond desertification: new paradigms for dryland landscapes. Frontiers in Ecology and the Environment, 2015, 13, 4-12.	4.0	60
40	Modeling invasive weeds in grasslands: the role of allelopathy in Acroptilon repens invasion. Ecological Modelling, 2001, 139, 31-45.	2.5	57
41	Multi-scale factors and long-term responses of Chihuahuan Desert grasses to drought. Landscape Ecology, 2006, 21, 1217-1231.	4.2	55
42	Regional signatures of plant response to drought and elevated temperature across a desert ecosystem. Ecology, 2013, 94, 2030-2041.	3.2	52
43	Predicting and understanding ecosystem responses to climate change at continental scales. Frontiers in Ecology and the Environment, 2008, 6, 273-280.	4.0	48
44	Mapping shrub abundance in desert grasslands using geometric-optical modeling and multi-angle remote sensing with CHRIS/Proba. Remote Sensing of Environment, 2006, 104, 62-73.	11.0	47
45	Mechanisms of grass response in grasslands and shrublands during dry or wet periods. Oecologia, 2014, 174, 1323-1334.	2.0	46
46	Intensity of intra- and interspecific competition in coexisting shortgrass species. Journal of Ecology, 2001, 89, 40-47.	4.0	42
47	Cascading events in linked ecological and socioeconomic systems. Frontiers in Ecology and the Environment, 2007, 5, 221-224.	4.0	42
48	Foraging behavior of heritage versus recently introduced herbivores on desert landscapes of the American Southwest. Ecosphere, 2011, 2, art57.	2.2	38
49	Longâ€term experimental loss of foundation species: consequences for dynamics at ecotones across heterogeneous landscapes. Ecosphere, 2012, 3, 1-23.	2.2	38
50	An Integrated View of Complex Landscapes: A Big Data-Model Integration Approach to Transdisciplinary Science. BioScience, 2018, 68, 653-669.	4.9	38
51	Recruitment potential of two perennial grasses with different growth forms at a semiaridâ€arid transition zone. American Journal of Botany, 2002, 89, 1616-1623.	1.7	37
52	Soil-vegetation-climate interactions in arid landscapes: Effects of the North American monsoon on grass recruitment. Journal of Arid Environments, 2010, 74, 618-623.	2.4	37
53	Long-Term Ecological Research and Evolving Frameworks of Disturbance Ecology. BioScience, 2020, 70, 141-156.	4.9	37
54	Longâ€term data collection at USDA experimental sites for studies of ecohydrology. Ecohydrology, 2008, 1, 377-393.	2.4	36

#	Article	IF	Citations
55	Revolutionary Land Use Change in the 21st Century: Is (Rangeland) Science Relevant?. Rangeland Ecology and Management, 2012, 65, 590-598.	2.3	35
56	Vegetation and climate characteristics of arid and semi-arid grasslands in North America and their biome transition zone. Journal of Arid Environments, 2002, 51, 55-78.	2.4	34
57	Title is missing!. Plant Ecology, 2003, 166, 157-166.	1.6	33
58	Woody plant invasion at a semiâ€arid/arid transition zone: importance of ecosystem type to colonization and patch expansion. Journal of Vegetation Science, 2006, 17, 389-396.	2.2	33
59	Modeling the effects of historical vegetation change on near-surface atmosphere in the northern Chihuahuan Desert. Journal of Arid Environments, 2008, 72, 1897-1910.	2.4	32
60	A typology of timeâ€scale mismatches and behavioral interventions to diagnose and solve conservation problems. Conservation Biology, 2016, 30, 42-49.	4.7	31
61	Woody Plant Encroachment has a Larger Impact than Climate Change on Dryland Water Budgets. Scientific Reports, 2020, 10, 8112.	3.3	31
62	Does shrub invasion indirectly limit grass establishment via seedling herbivory? A test at grasslandâ€shrubland ecotones. Journal of Vegetation Science, 2007, 18, 363-371.	2.2	27
63	Soil water dynamics at 15 locations distributed across a desert landscape: insights from a 27â€yr dataset. Ecosphere, 2018, 9, e02335.	2.2	23
64	Big dataâ€"model integration and AI for vectorâ€borne disease prediction. Ecosphere, 2020, 11, e03157.	2.2	22
65	Scaling Up Agricultural Research With Artificial Intelligence. IT Professional, 2020, 22, 33-38.	1.5	22
66	Life form influences survivorship patterns for 109 herbaceous perennials from six semiâ€arid ecosystems. Journal of Vegetation Science, 2014, 25, 947-954.	2.2	21
67	Modifying connectivity to promote state change reversal: the importance of geomorphic context and plantâ€"soil feedbacks. Ecology, 2020, 101, e03069.	3.2	21
68	Population and clonal level responses of a perennial grass following fire in the northern Chihuahuan Desert. Oecologia, 2006, 150, 29-39.	2.0	19
69	Nematodes as an indicator of plantâ€"soil interactions associated with desertification. Applied Soil Ecology, 2012, 58, 66-77.	4.3	19
70	Distribution of plant species at a biome transition zone in New Mexico. Journal of Vegetation Science, 2004, 15, 531-538.	2.2	18
71	Spatiotemporal Patterns of Production Can Be Used to Detect State Change Across an Arid Landscape. Ecosystems, 2012, 15, 34-47.	3.4	18
72	The Western United States Rangelands: A Major Resource. Assa, Cssa and Sssa, 0, , 75-93.	0.6	18

#	Article	IF	Citations
73	Constraints on shrub cover and shrubâ€"shrub competition in a U.S. southwest desert. Ecosphere, 2019, 10, e02590.	2.2	18
74	Spatial Variation in Remnant Grasses After a Grassland-to-Shrubland State Change: Implications for Restoration. Rangeland Ecology and Management, 2006, 59, 343-350.	2.3	16
75	Spatial Prediction of Invasion Success Across Heterogeneous Landscapes using an Individual-Based Model. Biological Invasions, 2006, 8, 193-200.	2.4	15
76	Deciphering the past to inform the future: preparing for the next (â€œreally bigâ€) extreme event. Frontiers in Ecology and the Environment, 2020, 18, 401-408.	4.0	14
77	Management Strategies for Reducing the Risk of Equines Contracting Vesicular Stomatitis Virus (VSV) in the Western United States. Journal of Equine Veterinary Science, 2020, 90, 103026.	0.9	14
78	Subdominant species distribution in microsites around two life forms at a desert grasslandâ€shrubland transition zone. Journal of Vegetation Science, 2004, 15, 615-622.	2.2	13
79	Mapping woody plant cover in desert grasslands using canopy reflectance modeling and MISR data. Geophysical Research Letters, 2006, 33, .	4.0	13
80	Modifying landscape connectivity by reducing wind driven sediment redistribution, Northern Chihuahuan Desert, USA. Aeolian Research, 2015, 17, 129-137.	2.7	13
81	A Toolkit for Ecosystem Ecologists in the Time of Big Science. Ecosystems, 2017, 20, 259-266.	3.4	13
82	Synchronous species responses reveal phenological guilds: implications for management. Ecosphere, 2018, 9, e02395.	2.2	13
83	Contributions of Hydrology to Vesicular Stomatitis Virus Emergence in the Western USA. Ecosystems, 2019, 22, 416-433.	3.4	13
84	How Can Science Be General, Yet Specific? The Conundrum of Rangeland Science in the 21st Century. Rangeland Ecology and Management, 2012, 65, 613-622.	2.3	12
85	Harnessing AI to Transform Agriculture and Inform Agricultural Research. IT Professional, 2020, 22, 16-21.	1.5	11
86	Ecology in a connected world: a vision for a â€œnetwork of networksâ€. Frontiers in Ecology and the Environment, 2008, 6, 227-227.	4.0	10
87	Longâ€term research catchments to investigate shrub encroachment in the Sonoran and Chihuahuan deserts: Santa Rita and Jornada experimental ranges. Hydrological Processes, 2021, 35, e14031.	2.6	10
88	Landform influences on the resistance of grasslands to shrub encroachment, Northern Chihuahuan Desert, USA. Journal of Maps, 2012, 8, 507-513.	2.0	9
89	Review of Vesicular Stomatitis in the United States with Focus on 2019 and 2020 Outbreaks. Pathogens, 2021, 10, 993.	2.8	9
90	Response of Individual Bouteloua gracilis (Gramineae) Plants and Tillers to Small Disturbances. American Midland Naturalist, 2001, 145, 147-158.	0.4	8

#	Article	IF	Citations
91	Selection of Models of Invasive Species Dynamics¹. Weed Technology, 2004, 18, 1236-1239.	0.9	8
92	Vector Surveillance, Host Species Richness, and Demographic Factors as West Nile Disease Risk Indicators. Viruses, 2021, 13, 934.	3.3	8
93	Plant Species Richness in Multiyear Wet and Dry Periods in the Chihuahuan Desert. Climate, 2021, 9, 130.	2.8	8
94	Approaches to Predicting Broad-Scale Regime Shifts Using Changing Pattern-Process Relationships Across Scales. , 2009, , 47-72.		8
95	IV.5 Boundary Dynamics in Landscapes. , 2009, , 458-463.		7
96	Agroecosystem research with big data and a modified scientific method using machine learning concepts. Ecosphere, 2016, 7, e01493.	2.2	7
97	Mechanisms and drivers of alternative shrubland states. Ecosphere, 2022, 13, .	2.2	7
98	Distribution of Russian Knapweed in Colorado: Climate and Environmental Factors. Journal of Range Management, 2003, 56, 206.	0.3	6
99	AI Recommender System With ML for Agricultural Research. IT Professional, 2020, 22, 30-32.	1.5	6
100	Insights to Invasive Species Dynamics from Desertification Studies1. Weed Technology, 2004, 18, 1221-1225.	0.9	5
101	Differing climate and landscape effects on regional dryland vegetation responses during wet periods allude to future patterns. Global Change Biology, 2019, 25, 3305-3318.	9.5	5
102	A FRAMEWORK AND METHODS FOR SIMPLIFYING COMPLEX LANDSCAPES TO REDUCE UNCERTAINTY IN PREDICTIONS. , 2006, , 131-146.		5
103	Distribution of plant species at a biome transition zone in New Mexico. Journal of Vegetation Science, 2004, 15, 531.	2.2	5
104	Woody plant invasion at a semi-arid/arid transition zone: importance of ecosystem type to colonization and patch expansion. Journal of Vegetation Science, 2006, 17, 389.	2.2	5
105	Connectivity: insights from the U.S. Long Term Ecological Research Network. Ecosphere, 2021, 12, e03432.	2.2	4
106	Evolution and expansion dynamics of a vectorâ€borne virus: 2004â€“2006 vesicular stomatitis outbreak in the western USA. Ecosphere, 2021, 12, e03793.	2.2	4
107	The effect of small mammal exclusion on grassland recovery from disturbance in the Chihuahuan Desert. Journal of Arid Environments, 2019, 166, 11-16.	2.4	3
108	Landscape Diversity. , 2013, , 476-487.		2

#	Article	IF	Citations
109	Localâ€regional similarity in drylands increases during multiyear wet and dry periods and in response to extreme events. Ecosphere, 2019, 10, e02939.	2.2	2
110	Integrating Spatiotemporal Epidemiology, Eco-Phylogenetics, and Distributional Ecology to Assess West Nile Disease Risk in Horses. Viruses, 2021, 13, 1811.	3.3	2
111	Spatial Nonlinearities: Cascading Effects in the Earth System. Global Change - the IGBP Series, 2007, , 165-174.	2.1	2
112	Predicting the Geographic Range of an Invasive Livestock Disease across the Contiguous USA under Current and Future Climate Conditions. Climate, 2021, 9, 159.	2.8	2
113	Simulated distribution of <i>Eragrostis lehmanniana</i> (Lehmann lovegrass): Soilâ€"climate interactions complicate predictions. Ecosphere, 2022, 13, .	2.2	2
114	Ecology and Climate of the Earthâ€"The Same Biogeophysical System. Climate, 2022, 10, 25.	2.8	1
115	Complex Disease Problems Across Scales: Perspectives on Advancing Disease Ecology with Transâ€Disciplinary Research. Bulletin of the Ecological Society of America, 2020, 101, e01649.	0.2	0
116	Full Genomic Sequencing of Vesicular Stomatitis Virus Isolates from the 2004â€"2006 US Outbreaks Reveals Associations of Viral Genetics to Environmental Variables. Proceedings (mdpi), 2020, 50, .	0.2	0
117	Grassland Simulation Models. Applied Ecology and Environmental Management, 2011, , 175-201.	0.1	0
118	Ecotone. , 2014, , 187-191.		0