Jayne Belnap

List of Publications by Year
in descending order

56 papers	9,038 citations	66315 42 h-index	155592 55 g-index
65 all docs	65 docs citations	65 times ranked	7452 citing authors

#	Article	IF	Citations
1	Regional vegetation die-off in response to global-change-type drought. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15144-15148.	3.3	1,779
2	The potential roles of biological soil crusts in dryland hydrologic cycles. Hydrological Processes, 2006, 20, 3159-3178.	1.1	581
3	Roads as Conduits for Exotic Plant Invasions in a Semiarid Landscape. Conservation Biology, 2003, 17, 420-432.	2.4	506
4	Vulnerability of desert biological soil crusts to wind erosion: the influences of crust development, soil texture, and disturbance. Journal of Arid Environments, 1998, 39, 133-142.	1.2	483
5	The world at your feet: desert biological soil crusts. Frontiers in Ecology and the Environment, 2003, 1, 181-189.	1.9	356
6	Response of Colorado River runoff to dust radiative forcing in snow. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17125-17130.	3.3	324
7	Surface disturbances: Their role in accelerating desertification. Environmental Monitoring and Assessment, 1995, 37, 39-57.	1.3	320
8	Dryland photoautotrophic soil surface communities endangered by global change. Nature Geoscience, 2018, 11, 185-189.	5.4	302
9	LINKAGES BETWEEN MICROBIAL AND HYDROLOGIC PROCESSES IN ARID AND SEMIARID WATERSHEDS. Ecology, 2005, 86, 298-307.	1.5	269
10	Changes to dryland rainfall result in rapid moss mortality and altered soil fertility. Nature Climate Change, 2012, 2, 752-755.	8.1	257
11	The ecology of dust. Frontiers in Ecology and the Environment, 2010, 8, 423-430.	1.9	248
12	Responses of wind erosion to climate-induced vegetation changes on the Colorado Plateau. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3854-3859.	3.3	242
13	Climate change and physical disturbance cause similar community shifts in biological soil crusts. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12116-12121.	3.3	225
14	Impacts of Biological Soil Crust Disturbance and Composition on C and N Loss from Water Erosion. Biogeochemistry, 2006, 77, 247-263.	1.7	164
15	SOIL BIOTA CAN CHANGE AFTER EXOTIC PLANT INVASION: DOES THIS AFFECT ECOSYSTEM PROCESSES?. Ecology, 2005, 86, 3007-3017.	1.5	158
16	Wind erosion and dust from <scp>US</scp> drylands: a review of causes, consequences, and solutions in a changing world. Ecosphere, 2019, 10, e02650.	1.0	151
17	Shifting species interactions in terrestrial dryland ecosystems under altered water availability and climate change. Biological Reviews, 2012, 87, 563-582.	4.7	141
18	Correlates of biological soil crust abundance across a continuum of spatial scales: support for a hierarchical conceptual model. Journal of Applied Ecology, 2006, 43, 152-163.	1.9	140

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19	Soil lichen and moss cover and species richness can be highly dynamic: The effects of invasion by the annual exotic grass Bromus tectorum, precipitation, and temperature on biological soil crusts in SE Utah. Applied Soil Ecology, 2006, 32, 63-76.	2.1	137
20	Revisiting classic water erosion models in drylands: The strong impact of biological soil crusts. Soil Biology and Biochemistry, 2008, 40, 2309-2316.	4.2	134
21	EVIDENCE FOR MICRONUTRIENT LIMITATION OF BIOLOGICAL SOIL CRUSTS: IMPORTANCE TO ARID-LANDS RESTORATION. , 2005, 15, 1941-1951.		129
22	Patterns and Controls on Nitrogen Cycling of Biological Soil Crusts. Ecological Studies, 2016, , 257-285.	0.4	113
23	Boundaries in Miniature: Two Examples from Soil. BioScience, 2003, 53, 739.	2.2	110
24	Warming and increased precipitation frequency on the Colorado Plateau: implications for biological soil crusts and soil processes. Plant and Soil, 2012, 355, 265-282.	1.8	105
25	Precipitationâ€driven carbon balance controls survivorship of desert biocrust mosses. Ecology, 2012, 93, 1626-1636.	1.5	104
26	Sediment losses and gains across a gradient of livestock grazing and plant invasion in a cool, semi-arid grassland, Colorado Plateau, USA. Aeolian Research, 2009, 1, 27-43.	1.1	102
27	Biological soil crusts (biocrusts) as a model system in community, landscape and ecosystem ecology. Biodiversity and Conservation, 2014, 23, 1619-1637.	1.2	98
28	Biological soil crust and disturbance controls on surface hydrology in a semiâ€arid ecosystem. Ecosphere, 2017, 8, e01691.	1.0	94
29	Towards a predictive framework for biocrust mediation of plant performance: A metaâ€analysis. Journal of Ecology, 2019, 107, 2789-2807.	1.9	92
30	What is a biocrust? A refined, contemporary definition for a broadening research community. Biological Reviews, 2022, 97, 1768-1785.	4.7	87
31	Albedo feedbacks to future climate via climate change impacts on dryland biocrusts. Scientific Reports, 2017, 7, 44188.	1.6	84
32	Controls on Distribution Patterns of Biological Soil Crusts at Micro- to Global Scales. Ecological Studies, 2016, , 173-197.	0.4	77
33	Observations of net soil exchange of CO2 in a dryland show experimental warming increases carbon losses in biocrust soils. Biogeochemistry, 2015, 126, 363-378.	1.7	74
34	C3 and C4 plant responses to increased temperatures and altered monsoonal precipitation in a cool desert on the Colorado Plateau, USA. Oecologia, 2015, 177, 997-1013.	0.9	64
35	Biological Soil Crusts as Soil Stabilizers. Ecological Studies, 2016, , 305-320.	0.4	62
36	Shrub persistence and increased grass mortality in response to drought in dryland systems. Global Change Biology, 2019, 25, 3121-3135.	4.2	60

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37	On the brink of change: plant responses to climate on the Colorado Plateau. Ecosphere, 2011, 2, art68.	1.0	58
38	The concurrent use of novel soil surface microclimate measurements to evaluate CO2 pulses in biocrusted interspaces in a cool desert ecosystem. Biogeochemistry, 2017, 135, 239-249.	1.7	58
39	Dust: Smallâ€scale processes with global consequences. Eos, 2011, 92, 241-242.	0.1	56
40	The Role of Biocrusts in Arid Land Hydrology. Ecological Studies, 2016, , 321-346.	0.4	54
41	Maximizing establishment and survivorship of field-collected and greenhouse-cultivated biocrusts in a semi-cold desert. Plant and Soil, 2018, 429, 213-225.	1.8	53
42	Spatial and temporal patterns of dust emissions (2004â€"2012) in semi-arid landscapes, southeastern Utah, USA. Aeolian Research, 2014, 15, 31-43.	1.1	51
43	Biocrusts in the Context of Global Change. Ecological Studies, 2016, , 451-476.	0.4	45
44	Growth responses of five desert plants as influenced by biological soil crusts from a temperate desert, China. Ecological Research, 2015, 30, 1037-1045.	0.7	37
45	Elevated aeolian sediment transport on the Colorado Plateau, USA: The role of grazing, vehicle disturbance, and increasing aridity. Earth Surface Processes and Landforms, 2018, 43, 2897-2914.	1.2	35
46	Experimental warming in a dryland community reduced plant photosynthesis and soil <scp>CO</scp>₂ efflux although the relationship between the fluxes remained unchanged. Functional Ecology, 2017, 31, 297-305.	1.7	34
47	Ecohydrological role of biological soil crusts across a gradient in levels of development. Ecohydrology, 2017, 10, e1875.	1.1	31
48	Insights from Long-Term Ungrazed and Grazed Watersheds in a Salt Desert Colorado Plateau Ecosystem. Rangeland Ecology and Management, 2018, 71, 492-505.	1.1	26
49	Beyond traditional ecological restoration on the Colorado Plateau. Restoration Ecology, 2018, 26, 1055-1060.	1.4	25
50	Earlier plant growth helps compensate for reduced carbon fixation after 13Âyears of warming. Functional Ecology, 2019, 33, 2071-2080.	1.7	25
51	Temporal and abiotic fluctuations may be preventing successful rehabilitation of soilâ€stabilizing biocrust communities. Ecological Applications, 2019, 29, e01908.	1.8	18
52	Grazing-Induced Changes to Biological Soil Crust Cover Mediate Hillslope Erosion in Long-Term Exclosure Experiment. Rangeland Ecology and Management, 2020, 73, 61-72.	1.1	16
53	Interactions of Microhabitat and Time Control Grassland Bacterial and Fungal Composition. Frontiers in Ecology and Evolution, 2019, 7, .	1.1	12
54	Seasonal and individual event-responsiveness are key determinants of carbon exchange across plant functional types. Oecologia, 2020, 193, 811-825.	0.9	5

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55	Biocrusts do not differentially influence emergence and early establishment of native and nonâ€native grasses. Ecosphere, 2021, 12, .	1.0	2
56	Comment on â€˜Kidron, G. J. (2018). Biocrust research: A critical view on eight common hydrologicalâ€related paradigms and dubious theses. <i>Ecohydrology</i>, e2061â€™. Ecohydrology, 2020, 13, e2215.	1.1	1