Sasha C Reed

List of Publications by Year
in descending order

137 papers	10,565 citations	30070 54 h-index	36028 97 g-index
145 all docs	145 docs citations	145 times ranked	11555 citing authors

#	Article	IF	Citations
1	Vertical movement of soluble carbon and nutrients from biocrusts to subsurface mineral soils. Geoderma, 2022, 405, 115495.	5.1	18
2	Satellite solar-induced chlorophyll fluorescence and near-infrared reflectance capture complementary aspects of dryland vegetation productivity dynamics. Remote Sensing of Environment, 2022, 270, 112858.	11.0	26
3	Quantifying the influence of different biocrust community states and their responses to warming temperatures on soil biogeochemistry in field and mesocosm studies. Geoderma, 2022, 409, 115633.	5.1	6
4	Environmental filtering controls soil biodiversity in wet tropical ecosystems. Soil Biology and Biochemistry, 2022, 166, 108571.	8.8	3
5	Multiple resource limitation of dryland soil microbial carbon cycling on the Colorado Plateau. Ecology, 2022, 103, e3671.	3.2	10
6	Mapping biological soil crusts in a Hawaiian dryland. International Journal of Remote Sensing, 2022, 43, 484-509.	2.9	3
7	Biogeochemical and ecosystem properties in three adjacent semiâ€arid grasslands are resistant to nitrogen deposition but sensitive to edaphic variability. Journal of Ecology, 2022, 110, 1615-1631.	4.0	13
8	What is a biocrust? A refined, contemporary definition for a broadening research community. Biological Reviews, 2022, 97, 1768-1785.	10.4	87
9	The consequences of climate change for dryland biogeochemistry. New Phytologist, 2022, 236, 15-20.	7.3	12
10	Nitrogen Enrichment Reduces Nitrogen and Phosphorus Resorption Through Changes to Species Resorption and Plant Community Composition. Ecosystems, 2021, 24, 602-612.	3.4	19
11	Warming and microbial uptake influence the fate of added soil carbon across a Hawai'ian weathering gradient. Soil Biology and Biochemistry, 2021, 153, 108080.	8.8	8
12	Muted responses to chronic experimental nitrogen deposition on the Colorado Plateau. Oecologia, 2021, 195, 513-524.	2.0	7
13	Response to â€˜Stochastic and deterministic interpretation of pool modelsâ€™. Global Change Biology, 2021, 27, e11-e12.	9.5	1
14	A roadmap for sampling and scaling biological nitrogen fixation in terrestrial ecosystems. Methods in Ecology and Evolution, 2021, 12, 1122-1137.	5.2	20
15	Five Decades of Observed Daily Precipitation Reveal Longer and More Variable Drought Events Across Much of the Western United States. Geophysical Research Letters, 2021, 48, e2020GL092293.	4.0	70
16	Resistance, Resilience, and Recovery of Dryland Soil Bacterial Communities Across Multiple Disturbances. Frontiers in Microbiology, 2021, 12, 648455.	3.5	13
17	Global resorption efficiencies of trace elements in leaves of terrestrial plants. Functional Ecology, 2021, 35, 1596-1602.	3.6	19
18	Incorporating Biogeochemistry into Dryland Restoration. BioScience, 2021, 71, 907-917.	4.9	8

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19	Only sun-lit leaves of the uppermost canopy exceed both air temperature and photosynthetic thermal optima in a wet tropical forest. Agricultural and Forest Meteorology, 2021, 301-302, 108347.	4.8	31
20	Coexistence of multiple leaf nutrient resorption strategies in a single ecosystem. Science of the Total Environment, 2021, 772, 144951.	8.0	25
21	Experimental warming across a tropical forest canopy height gradient reveals minimal photosynthetic and respiratory acclimation. Plant, Cell and Environment, 2021, 44, 2879-2897.	5.7	20
22	Response to â€œConnectivity and pore accessibility in models of soil carbon cyclingâ€• Global Change Biology, 2021, 27, e15-e16.	9.5	0
23	Experimental warming and its legacy effects on root dynamics following two hurricane disturbances in a wet tropical forest. Global Change Biology, 2021, 27, 6423-6435.	9.5	12
24	Plant growth and biocrust-fire interactions across five North American deserts. Geoderma, 2021, 401, 115325.	5.1	5
25	Climatic Controls on Soil Carbon Accumulation and Loss in a Dryland Ecosystems. Journal of Geophysical Research G: Biogeosciences, 2021, 126, .	3.0	3
26	Addressing barriers to improve biocrust colonization and establishment in dryland restoration. Restoration Ecology, 2020, 28, S150.	2.9	25
27	Traversing the Wasteland: A Framework for Assessing Ecological Threats to Drylands. BioScience, 2020, 70, 35-47.	4.9	74
28	Inoculation and habitat amelioration efforts in biological soil crust recovery vary by desert and soil texture. Restoration Ecology, 2020, 28, S96.	2.9	26
29	Biological soil crust salvage for dryland restoration: an opportunity for natural resource restoration. Restoration Ecology, 2020, 28, S9.	2.9	14
30	From pools to flow: The PROMISE framework for new insights on soil carbon cycling in a changing world. Global Change Biology, 2020, 26, 6631-6643.	9.5	57
31	Photosynthetic and Respiratory Acclimation of Understory Shrubs in Response to in situ Experimental Warming of a Wet Tropical Forest. Frontiers in Forests and Global Change, 2020, 3, .	2.3	21
32	Biological nitrogen fixation across major biomes in Latin America: Patterns and global change effects. Science of the Total Environment, 2020, 746, 140998.	8.0	22
33	Experimental Warming Changes Phenology and Shortens Growing Season of the Dominant Invasive Plant Bromus tectorum (Cheatgrass). Frontiers in Plant Science, 2020, 11, 570001.	3.6	12
34	Modest Residual Effects of Short-Term Warming, Altered Hydration, and Biocrust Successional State on Dryland Soil Heterotrophic Carbon and Nitrogen Cycling. Frontiers in Ecology and Evolution, 2020, 8, .	2.2	5
35	Seasonal and individual event-responsiveness are key determinants of carbon exchange across plant functional types. Oecologia, 2020, 193, 811-825.	2.0	5
36	The pervasive and multifaceted influence of biocrusts on water in the world's drylands. Global Change Biology, 2020, 26, 6003-6014.	9.5	129

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37	Riparian Plant Communities Remain Stable in Response to a Second Cycle of Tamarix Biocontrol Defoliation. Wetlands, 2020, 40, 1863-1875.	1.5	6
38	Tropical understory herbaceous community responds more strongly to hurricane disturbance than to experimental warming. Ecology and Evolution, 2020, 10, 8906-8915.	1.9	16
39	The influence of soil age on ecosystem structure and function across biomes. Nature Communications, 2020, 11, 4721.	12.8	47
40	Altered climate leads to positive densityâ€dependent feedbacks in a tropical wet forest. Global Change Biology, 2020, 26, 3417-3428.	9.5	20
41	Soil biogeochemical responses of a tropical forest to warming and hurricane disturbance. Advances in Ecological Research, 2020, , 225-252.	2.7	21
42	Multiple mechanisms determine the effect of warming on plant litter decomposition in a dryland. Soil Biology and Biochemistry, 2020, 145, 107799.	8.8	20
43	Broader Impacts for Ecologists: Biological Soil Crust as a Model System for Education. Frontiers in Microbiology, 2020, 11, 577922.	3.5	4
44	Multiple elements of soil biodiversity drive ecosystem functions across biomes. Nature Ecology and Evolution, 2020, 4, 210-220.	7.8	543
45	Earlier plant growth helps compensate for reduced carbon fixation after 13Âyears of warming. Functional Ecology, 2019, 33, 2071-2080.	3.6	25
46	Global ecological predictors of the soil priming effect. Nature Communications, 2019, 10, 3481.	12.8	148
47	Biocrust science and global change. New Phytologist, 2019, 223, 1047-1051.	7.3	19
48	Remote sensing of dryland ecosystem structure and function: Progress, challenges, and opportunities. Remote Sensing of Environment, 2019, 233, 111401.	11.0	193
49	Temporal and abiotic fluctuations may be preventing successful rehabilitation of soilâ€stabilizing biocrust communities. Ecological Applications, 2019, 29, e01908.	3.8	18
50	Soil warming effects on tropical forests with highly weathered soils. , 2019, , 385-439.		13
51	Shrub persistence and increased grass mortality in response to drought in dryland systems. Global Change Biology, 2019, 25, 3121-3135.	9.5	60
52	Seed bank community and soil texture relationships in a cold desert. Journal of Arid Environments, 2019, 164, 46-52.	2.4	12
53	Changes in belowground biodiversity during ecosystem development. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6891-6896.	7.1	151
54	On the Shoulders of Giants: Continuing the Legacy of Large-Scale Ecosystem Manipulation Experiments in Puerto Rico. Forests, 2019, 10, 210.	2.1	12

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55	Manufacturing Simple and Inexpensive Soil Surface Temperature and Gravimetric Water Content Sensors. Journal of Visualized Experiments, 2019, , .	0.3	2
56	Interactions of Microhabitat and Time Control Grassland Bacterial and Fungal Composition. Frontiers in Ecology and Evolution, 2019, 7, .	2.2	12
57	Isotopic Evidence that Nitrogen Enrichment Intensifies Nitrogen Losses to the Atmosphere from Subtropical Mangroves. Ecosystems, 2019, 22, 1126-1144.	3.4	13
58	Climatic Sensitivity of Dryland Soil CO2 Fluxes Differs Dramatically with Biological Soil Crust Successional State. Ecosystems, 2019, 22, 15-32.	3.4	49
59	Species-specific nitrogenase activity in lichen-dominated biological soil crusts from the Colorado Plateau, USA. Plant and Soil, 2018, 429, 113-125.	3.7	37
60	Biocrusts enhance soil fertility and Bromus tectorum growth, and interact with warming to influence germination. Plant and Soil, 2018, 429, 77-90.	3.7	71
61	Infrared heater system for warming tropical forest understory plants and soils. Ecology and Evolution, 2018, 8, 1932-1944.	1.9	51
62	Spatially explicit patterns in a dryland's soil respiration and relationships with climate, whole plant photosynthesis and soil fertility. Oikos, 2018, 127, 1280-1290.	2.7	5
63	Maximizing establishment and survivorship of field-collected and greenhouse-cultivated biocrusts in a semi-cold desert. Plant and Soil, 2018, 429, 213-225.	3.7	53
64	Improving predictions of tropical forest response to climate change through integration of field studies and ecosystem modeling. Global Change Biology, 2018, 24, e213-e232.	9.5	48
65	Patterns of longer-term climate change effects on CO₂ efflux from biocrusted soils differ from those observed in the short term. Biogeosciences, 2018, 15, 4561-4573.	3.3	26
66	Using research networks to create the comprehensive datasets needed to assess nutrient availability as a key determinant of terrestrial carbon cycling. Environmental Research Letters, 2018, 13, 125006.	5.2	36
67	Reductions in tree performance during hotter droughts are mitigated by shifts in nitrogen cycling. Plant, Cell and Environment, 2018, 41, 2627-2637.	5.7	15
68	Biocrusts: the living skin of the earth. Plant and Soil, 2018, 429, 1-7.	3.7	111
69	Temperate and Tropical Forest Canopies are Already Functioning beyond Their Thermal Thresholds for Photosynthesis. Forests, 2018, 9, 47.	2.1	71
70	Beyond traditional ecological restoration on the Colorado Plateau. Restoration Ecology, 2018, 26, 1055-1060.	2.9	25
71	Bacterial, fungal, and plant communities exhibit no biomass or compositional response to two years of simulated nitrogen deposition in a semiarid grassland. Environmental Microbiology, 2017, 19, 1600-1611.	3.8	62
72	Spectrally monitoring the response of the biocrust moss Syntrichia caninervis to altered precipitation regimes. Scientific Reports, 2017, 7, 41793.	3.3	9

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73	Temporal variability of foliar nutrients: responses to nitrogen deposition and prescribed fire in a temperate steppe. Biogeochemistry, 2017, 133, 295-305.	3.5	8
74	Albedo feedbacks to future climate via climate change impacts on dryland biocrusts. Scientific Reports, 2017, 7, 44188.	3.3	84
75	Nitrogenase activity by biological soil crusts in cold sagebrush steppe ecosystems. Biogeochemistry, 2017, 134, 57-76.	3.5	22
76	Biological soil crusts: diminutive communities of potential global importance. Frontiers in Ecology and the Environment, 2017, 15, 160-167.	4.0	88
77	Spatial variation in edaphic characteristics is a stronger control than nitrogen inputs in regulating soil microbial effects on a desert grass. Journal of Arid Environments, 2017, 142, 59-65.	2.4	6
78	Disentangling the complexities of how legumes and their symbionts regulate plant nitrogen access and storage. New Phytologist, 2017, 213, 478-480.	7.3	5
79	Biocrust ecology: unifying microâ€•and macroâ€scales to confront global change. New Phytologist, 2017, 216, 643-646.	7.3	9
80	8 The Response of Arid Soil Communities to Climate Change. , 2017, , 139-158.		1
81	Ecohydrological role of biological soil crusts across a gradient in levels of development. Ecohydrology, 2017, 10, e1875.	2.4	31
82	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.	3.6	34
83	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.	3.5	58
84	Reviews and syntheses: Field data to benchmark the carbon cycle models for tropical forests. Biogeosciences, 2017, 14, 4663-4690.	3.3	27
85	Terrestrial nitrogen cycling in Earth system models revisited. New Phytologist, 2016, 210, 1165-1168.	7.3	35
86	Production of greenhouseâ€grown biocrust mosses and associated cyanobacteria to rehabilitate dryland soil function. Restoration Ecology, 2016, 24, 324-335.	2.9	95
87	Low soil moisture during hot periods drives apparent negative temperature sensitivity of soil respiration in a dryland ecosystem: a multi-model comparison. Biogeochemistry, 2016, 128, 155-169.	3.5	30
88	Biocrusts in the Context of Global Change. Ecological Studies, 2016, , 451-476.	1.2	45
89	Microbial community assembly and metabolic function during mammalian corpse decomposition. Science, 2016, 351, 158-162.	12.6	381
90	Large divergence of satellite and Earth system model estimates of global terrestrial CO2Âfertilization. Nature Climate Change, 2016, 6, 306-310.	18.8	309

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91	Nutrient resorption helps drive intra-specific coupling of foliar nitrogen and phosphorus under nutrient-enriched conditions. Plant and Soil, 2016, 398, 111-120.	3.7	50
92	Incorporating phosphorus cycling into global modeling efforts: a worthwhile, tractable endeavor. New Phytologist, 2015, 208, 324-329.	7.3	163
93	Water from air: an overlooked source of moisture in arid and semiarid regions. Scientific Reports, 2015, 5, 13767.	3.3	81
94	Observations of net soil exchange of CO2 in a dryland show experimental warming increases carbon losses in biocrust soils. Biogeochemistry, 2015, 126, 363-378.	3.5	74
95	Urgent need for warming experiments in tropical forests. Global Change Biology, 2015, 21, 2111-2121.	9.5	168
96	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.	2.0	64
97	Climate Change and Physical Disturbance Manipulations Result in Distinct Biological Soil Crust Communities. Applied and Environmental Microbiology, 2015, 81, 7448-7459.	3.1	66
98	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.	7.1	225
99	Litter quality versus soil microbial community controls over decomposition: a quantitative analysis. Oecologia, 2014, 174, 283-294.	2.0	169
100	Assessing nutrient limitation in complex forested ecosystems: alternatives to largeâ€scale fertilization experiments. Ecology, 2014, 95, 668-681.	3.2	87
101	Spatially robust estimates of biological nitrogen (N) fixation imply substantial human alteration of the tropical N cycle. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8101-8106.	7.1	138
102	Ecological consequences of the expansion of N2-fixing plants in cold biomes. Oecologia, 2014, 176, 11-24.	2.0	55
103	Agricultural conversion without external water and nutrient inputs reduces terrestrial vegetation productivity. Geophysical Research Letters, 2014, 41, 449-455.	4.0	29
104	Relationships among phosphorus, molybdenum and free-living nitrogen fixation in tropical rain forests: results from observational and experimental analyses. Biogeochemistry, 2013, 114, 135-147.	3.5	80
105	Biological nitrogen fixation: rates, patterns and ecological controls in terrestrial ecosystems. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20130119.	4.0	537
106	Effects of canopy tree species on belowground biogeochemistry in a lowland wet tropical forest. Soil Biology and Biochemistry, 2013, 58, 61-69.	8.8	38
107	Patterns of new versus recycled primary production in the terrestrial biosphere. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12733-12737.	7.1	270
108	Ecoâ€evolutionary responses of <i><scp>B</scp>romus tectorum</i> to climate change: implications for biological invasions. Ecology and Evolution, 2013, 3, 1374-1387.	1.9	41

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109	Nitrogen Cycling Responses to Mountain Pine Beetle Disturbance in a High Elevation Whitebark Pine Ecosystem. PLoS ONE, 2013, 8, e65004.	2.5	12
110	Convergent responses of nitrogen and phosphorus resorption to nitrogen inputs in a semiarid grassland. Global Change Biology, 2013, 19, 2775-2784.	9.5	171
111	Changes to dryland rainfall result in rapid moss mortality and altered soil fertility. Nature Climate Change, 2012, 2, 752-755.	18.8	257
112	Elevated CO2 did not mitigate the effect of a short-term drought on biological soil crusts. Biology and Fertility of Soils, 2012, 48, 797-805.	4.3	22
113	Bioenergy Potential of the United States Constrained by Satellite Observations of Existing Productivity. Environmental Science & Technology, 2012, 46, 3536-3544.	10.0	24
114	The origin of litter chemical complexity during decomposition. Ecology Letters, 2012, 15, 1180-1188.	6.4	316
115	Stoichiometric patterns in foliar nutrient resorption across multiple scales. New Phytologist, 2012, 196, 173-180.	7.3	190
116	Tropical forest carbon balance in a warmer world: a critical review spanning microbialâ€•to ecosystemâ€scale processes. Biological Reviews, 2012, 87, 912-927.	10.4	109
117	Estimating phosphorus availability for microbial growth in an emerging landscape. Geoderma, 2011, 163, 135-140.	5.1	26
118	Functional Ecology of Free-Living Nitrogen Fixation: A Contemporary Perspective. Annual Review of Ecology, Evolution, and Systematics, 2011, 42, 489-512.	8.3	479
119	Relationships among net primary productivity, nutrients and climate in tropical rain forest: a panâ€tropical analysis. Ecology Letters, 2011, 14, 939-947.	6.4	379
120	Management intensity alters decomposition via biological pathways. Biogeochemistry, 2011, 104, 365-379.	3.5	58
121	Are patterns in nutrient limitation belowground consistent with those aboveground: results from a 4 million year chronosequence. Biogeochemistry, 2011, 106, 323-336.	3.5	59
122	Phosphorus Cycling in Tropical Forests Growing on Highly Weathered Soils. Soil Biology, 2011, , 339-369.	0.8	47
123	Microbial community shifts influence patterns in tropical forest nitrogen fixation. Oecologia, 2010, 164, 521-531.	2.0	120
124	Using indirect methods to constrain symbiotic nitrogen fixation rates: a case study from an Amazonian rain forest. Biogeochemistry, 2010, 99, 1-13.	3.5	44
125	Experimental drought in a tropical rain forest increases soil carbon dioxide losses to the atmosphere. Ecology, 2010, 91, 2313-2323.	3.2	155
126	Functional shifts in unvegetated, perhumid, recently-deglaciated soils do not correlate with shifts in soil bacterial community composition. Journal of Microbiology, 2009, 47, 673-681.	2.8	70

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127	Soil CO₂ flux and photoautotrophic community composition in highâ€elevation, â€˜barrenâ€™ soil. Environmental Microbiology, 2009, 11, 674-686.	3.8	83
128	Fumarole-Supported Islands of Biodiversity within a Hyperarid, High-Elevation Landscape on Socompa Volcano, Puna de Atacama, Andes. Applied and Environmental Microbiology, 2009, 75, 735-747.	3.1	133
129	TREE SPECIES CONTROL RATES OF FREE-LIVING NITROGEN FIXATION IN A TROPICAL RAIN FOREST. Ecology, 2008, 89, 2924-2934.	3.2	107
130	The earliest stages of ecosystem succession in high-elevation (5000 metres above sea level), recently deglaciated soils. Proceedings of the Royal Society B: Biological Sciences, 2008, 275, 2793-2802.	2.6	222
131	Phosphorus fertilization stimulates nitrogen fixation and increases inorganic nitrogen concentrations in a restored prairie. Applied Soil Ecology, 2007, 36, 238-242.	4.3	118
132	BIOGEOCHEMICAL CONSEQUENCES OF RAPID MICROBIAL TURNOVER AND SEASONAL SUCCESSION IN SOIL. Ecology, 2007, 88, 1379-1385.	3.2	297
133	Controls Over Leaf Litter and Soil Nitrogen Fixation in Two Lowland Tropical Rain Forests. Biotropica, 2007, 39, 585-592.	1.6	124
134	NUTRIENT REGULATION OF ORGANIC MATTER DECOMPOSITION IN A TROPICAL RAIN FOREST. Ecology, 2006, 87, 492-503.	3.2	225
135	Temporal Variation in Community Composition, Pigmentation, and Fv/Fm of Desert Cyanobacterial Soil Crusts. Microbial Ecology, 2002, 43, 13-25.	2.8	169
136	Photochemical Generation and Matrix-Isolation Detection of Dimethylvinylidene. Journal of Organic Chemistry, 2001, 66, 287-299.	3.2	9
137	Conformational effects on the excited state 1,2-hydrogen migration in alkyldiazomethanes. Tetrahedron Letters, 1996, 37, 7209-7212.	1.4	5