

Sasha C Reed

List of Publications by Citations

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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.

132
papers

7,065
citations

45
h-index

82
g-index

145
ext. papers

8,990
ext. citations

6.5
avg, IF

6.2
L-index

#	Paper	IF	Citations
132	Biological nitrogen fixation: rates, patterns and ecological controls in terrestrial ecosystems. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013 , 368, 20130119	5.8	420
131	Functional Ecology of Free-Living Nitrogen Fixation: A Contemporary Perspective. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2011 , 42, 489-512	13.5	346
130	Relationships among net primary productivity, nutrients and climate in tropical rain forest: a pan-tropical analysis. <i>Ecology Letters</i> , 2011 , 14, 939-47	10	306
129	Microbial community assembly and metabolic function during mammalian corpse decomposition. <i>Science</i> , 2016 , 351, 158-62	33.3	256
128	The origin of litter chemical complexity during decomposition. <i>Ecology Letters</i> , 2012 , 15, 1180-8	10	242
127	Biogeochemical consequences of rapid microbial turnover and seasonal succession in soil. <i>Ecology</i> , 2007 , 88, 1379-85	4.6	241
126	Large divergence of satellite and Earth system model estimates of global terrestrial CO ₂ fertilization. <i>Nature Climate Change</i> , 2016 , 6, 306-310	21.4	239
125	Changes to dryland rainfall result in rapid moss mortality and altered soil fertility. <i>Nature Climate Change</i> , 2012 , 2, 752-755	21.4	195
124	Patterns of new versus recycled primary production in the terrestrial biosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 12733-7	11.5	193
123	Nutrient regulation of organic matter decomposition in a tropical rain forest. <i>Ecology</i> , 2006 , 87, 492-503	4.6	187
122	The earliest stages of ecosystem succession in high-elevation (5000 metres above sea level), recently deglaciated soils. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2008 , 275, 2793-802	4.4	184
121	Multiple elements of soil biodiversity drive ecosystem functions across biomes. <i>Nature Ecology and Evolution</i> , 2020 , 4, 210-220	12.3	160
120	Climate change and physical disturbance cause similar community shifts in biological soil crusts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 12116-21	11.5	158
119	Stoichiometric patterns in foliar nutrient resorption across multiple scales. <i>New Phytologist</i> , 2012 , 196, 173-180	9.8	150
118	Temporal variation in community composition, pigmentation, and F(v)/F(m) of desert cyanobacterial soil crusts. <i>Microbial Ecology</i> , 2002 , 43, 13-25	4.4	138
117	Urgent need for warming experiments in tropical forests. <i>Global Change Biology</i> , 2015 , 21, 2111-21	11.4	134
116	Litter quality versus soil microbial community controls over decomposition: a quantitative analysis. <i>Oecologia</i> , 2014 , 174, 283-94	2.9	130

115	Convergent responses of nitrogen and phosphorus resorption to nitrogen inputs in a semiarid grassland. <i>Global Change Biology</i> , 2013 , 19, 2775-84	11.4	129
114	Experimental drought in a tropical rain forest increases soil carbon dioxide losses to the atmosphere. <i>Ecology</i> , 2010 , 91, 2313-23	4.6	126
113	Spatially robust estimates of biological nitrogen (N) fixation imply substantial human alteration of the tropical N cycle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 8101-6	11.5	122
112	Fumarole-supported islands of biodiversity within a hyperarid, high-elevation landscape on Socoma Volcano, Puna de Atacama, Andes. <i>Applied and Environmental Microbiology</i> , 2009 , 75, 735-47	4.8	120
111	Controls Over Leaf Litter and Soil Nitrogen Fixation in Two Lowland Tropical Rain Forests. <i>Biotropica</i> , 2007 , 39, 585-592	2.3	108
110	Incorporating phosphorus cycling into global modeling efforts: a worthwhile, tractable endeavor. <i>New Phytologist</i> , 2015 , 208, 324-9	9.8	106
109	Microbial community shifts influence patterns in tropical forest nitrogen fixation. <i>Oecologia</i> , 2010 , 164, 521-31	2.9	97
108	Remote sensing of dryland ecosystem structure and function: Progress, challenges, and opportunities. <i>Remote Sensing of Environment</i> , 2019 , 233, 111401	13.2	94
107	Phosphorus fertilization stimulates nitrogen fixation and increases inorganic nitrogen concentrations in a restored prairie. <i>Applied Soil Ecology</i> , 2007 , 36, 238-242	5	90
106	Tree species control rates of free-living nitrogen fixation in a tropical rain forest. <i>Ecology</i> , 2008 , 89, 2924-34	4.34	87
105	Tropical forest carbon balance in a warmer world: a critical review spanning microbial- to ecosystem-scale processes. <i>Biological Reviews</i> , 2012 , 87, 912-27	13.5	81
104	Changes in belowground biodiversity during ecosystem development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 6891-6896	11.5	78
103	Production of greenhouse-grown biocrust mosses and associated cyanobacteria to rehabilitate dryland soil function. <i>Restoration Ecology</i> , 2016 , 24, 324-335	3.1	71
102	Relationships among phosphorus, molybdenum and free-living nitrogen fixation in tropical rain forests: results from observational and experimental analyses. <i>Biogeochemistry</i> , 2013 , 114, 135-147	3.8	65
101	Soil CO ₂ flux and photoautotrophic community composition in high-elevation, barren soil. <i>Environmental Microbiology</i> , 2009 , 11, 674-86	5.2	65
100	Albedo feedbacks to future climate via climate change impacts on dryland biocrusts. <i>Scientific Reports</i> , 2017 , 7, 44188	4.9	64
99	Functional shifts in unvegetated, perhumid, recently-deglaciated soils do not correlate with shifts in soil bacterial community composition. <i>Journal of Microbiology</i> , 2009 , 47, 673-81	3	64
98	Observations of net soil exchange of CO ₂ in a dryland show experimental warming increases carbon losses in biocrust soils. <i>Biogeochemistry</i> , 2015 , 126, 363-378	3.8	62

97	Assessing nutrient limitation in complex forested ecosystems: alternatives to large-scale fertilization experiments. <i>Ecology</i> , 2014 , 95, 668-81	4.6	61
96	Global ecological predictors of the soil priming effect. <i>Nature Communications</i> , 2019 , 10, 3481	17.4	56
95	Are patterns in nutrient limitation belowground consistent with those aboveground: results from a 4 million year chronosequence. <i>Biogeochemistry</i> , 2011 , 106, 323-336	3.8	55
94	Water from air: an overlooked source of moisture in arid and semiarid regions. <i>Scientific Reports</i> , 2015 , 5, 13767	4.9	53
93	The pervasive and multifaceted influence of biocrusts on water in the world's drylands. <i>Global Change Biology</i> , 2020 , 26, 6003-6014	11.4	53
92	Biological soil crusts: diminutive communities of potential global importance. <i>Frontiers in Ecology and the Environment</i> , 2017 , 15, 160-167	5.5	52
91	Management intensity alters decomposition via biological pathways. <i>Biogeochemistry</i> , 2011 , 104, 365-379	3.8	50
90	Climate change and physical disturbance manipulations result in distinct biological soil crust communities. <i>Applied and Environmental Microbiology</i> , 2015 , 81, 7448-59	4.8	45
89	Ecological consequences of the expansion of N-fixing plants in cold biomes. <i>Oecologia</i> , 2014 , 176, 11-24	2.9	45
88	Maximizing establishment and survivorship of field-collected and greenhouse-cultivated biocrusts in a semi-cold desert. <i>Plant and Soil</i> , 2018 , 429, 213-225	4.2	42
87	Soil and plant responses to increased temperatures and altered monsoonal precipitation in a cool desert on the Colorado Plateau, USA. <i>Oecologia</i> , 2015 , 177, 997-1013	2.9	39
86	Temperate and Tropical Forest Canopies are Already Functioning beyond Their Thermal Thresholds for Photosynthesis. <i>Forests</i> , 2018 , 9, 47	2.8	38
85	Using indirect methods to constrain symbiotic nitrogen fixation rates: a case study from an Amazonian rain forest. <i>Biogeochemistry</i> , 2010 , 99, 1-13	3.8	37
84	Biocrusts enhance soil fertility and <i>Bromus tectorum</i> growth, and interact with warming to influence germination. <i>Plant and Soil</i> , 2018 , 429, 77-90	4.2	34
83	Eco-evolutionary responses of <i>Bromus tectorum</i> to climate change: implications for biological invasions. <i>Ecology and Evolution</i> , 2013 , 3, 1374-87	2.8	34
82	Nutrient resorption helps drive intra-specific coupling of foliar nitrogen and phosphorus under nutrient-enriched conditions. <i>Plant and Soil</i> , 2016 , 398, 111-120	4.2	33
81	Biocrusts in the Context of Global Change. <i>Ecological Studies</i> , 2016 , 451-476	1.1	33
80	Effects of canopy tree species on belowground biogeochemistry in a lowland wet tropical forest. <i>Soil Biology and Biochemistry</i> , 2013 , 58, 61-69	7.5	33

79	Shrub persistence and increased grass mortality in response to drought in dryland systems. <i>Global Change Biology</i> , 2019 , 25, 3121-3135	11.4	32
78	Phosphorus Cycling in Tropical Forests Growing on Highly Weathered Soils. <i>Soil Biology</i> , 2011 , 339-369	1	31
77	Bacterial, fungal, and plant communities exhibit no biomass or compositional response to two years of simulated nitrogen deposition in a semiarid grassland. <i>Environmental Microbiology</i> , 2017 , 19, 1600-1611	5.2	30
76	Improving predictions of tropical forest response to climate change through integration of field studies and ecosystem modeling. <i>Global Change Biology</i> , 2018 , 24, e213-e232	11.4	28
75	Infrared heater system for warming tropical forest understory plants and soils. <i>Ecology and Evolution</i> , 2018 , 8, 1932-1944	2.8	27
74	Traversing the Wasteland: A Framework for Assessing Ecological Threats to Drylands. <i>BioScience</i> , 2020 , 70, 35-47	5.7	27
73	Species-specific nitrogenase activity in lichen-dominated biological soil crusts from the Colorado Plateau, USA. <i>Plant and Soil</i> , 2018 , 429, 113-125	4.2	25
72	Experimental warming in a dryland community reduced plant photosynthesis and soil CO ₂ efflux although the relationship between the fluxes remained unchanged. <i>Functional Ecology</i> , 2017 , 31, 297-305 ^{5,6}	5.6	25
71	The concurrent use of novel soil surface microclimate measurements to evaluate CO ₂ pulses in biocrusted interspaces in a cool desert ecosystem. <i>Biogeochemistry</i> , 2017 , 135, 239-249	3.8	25
70	Agricultural conversion without external water and nutrient inputs reduces terrestrial vegetation productivity. <i>Geophysical Research Letters</i> , 2014 , 41, 449-455	4.9	24
69	From pools to flow: The PROMISE framework for new insights on soil carbon cycling in a changing world. <i>Global Change Biology</i> , 2020 , 26, 6631-6643	11.4	24
68	Climatic Sensitivity of Dryland Soil CO ₂ Fluxes Differs Dramatically with Biological Soil Crust Successional State. <i>Ecosystems</i> , 2019 , 22, 15-32	3.9	24
67	Low soil moisture during hot periods drives apparent negative temperature sensitivity of soil respiration in a dryland ecosystem: a multi-model comparison. <i>Biogeochemistry</i> , 2016 , 128, 155-169	3.8	23
66	Bioenergy potential of the United States constrained by satellite observations of existing productivity. <i>Environmental Science & Technology</i> , 2012 , 46, 3536-44	10.3	22
65	Terrestrial nitrogen cycling in Earth system models revisited. <i>New Phytologist</i> , 2016 , 210, 1165-8	9.8	22
64	Reviews and syntheses: Field data to benchmark the carbon cycle models for tropical forests. <i>Biogeosciences</i> , 2017 , 14, 4663-4690	4.6	21
63	Ecohydrological role of biological soil crusts across a gradient in levels of development. <i>Ecohydrology</i> , 2017 , 10, e1875	2.5	21
62	Using research networks to create the comprehensive datasets needed to assess nutrient availability as a key determinant of terrestrial carbon cycling. <i>Environmental Research Letters</i> , 2018 , 13, 125006	6.2	21

61	Elevated CO ₂ did not mitigate the effect of a short-term drought on biological soil crusts. <i>Biology and Fertility of Soils</i> , 2012 , 48, 797-805	6.1	20
60	Estimating phosphorus availability for microbial growth in an emerging landscape. <i>Geoderma</i> , 2011 , 163, 135-140	6.7	19
59	The influence of soil age on ecosystem structure and function across biomes. <i>Nature Communications</i> , 2020 , 11, 4721	17.4	19
58	Patterns of longer-term climate change effects on CO ₂ efflux from biocrusted soils differ from those observed in the short term. <i>Biogeosciences</i> , 2018 , 15, 4561-4573	4.6	17
57	Beyond traditional ecological restoration on the Colorado Plateau. <i>Restoration Ecology</i> , 2018 , 26, 1055-1060	10.6	15
56	Nitrogenase activity by biological soil crusts in cold sagebrush steppe ecosystems. <i>Biogeochemistry</i> , 2017 , 134, 57-76	3.8	14
55	Inoculation and habitat amelioration efforts in biological soil crust recovery vary by desert and soil texture. <i>Restoration Ecology</i> , 2020 , 28, S96	3.1	14
54	Temporal and abiotic fluctuations may be preventing successful rehabilitation of soil-stabilizing biocrust communities. <i>Ecological Applications</i> , 2019 , 29, e01908	4.9	13
53	Addressing barriers to improve biocrust colonization and establishment in dryland restoration. <i>Restoration Ecology</i> , 2020 , 28, S150	3.1	13
52	Biological nitrogen fixation across major biomes in Latin America: Patterns and global change effects. <i>Science of the Total Environment</i> , 2020 , 746, 140998	10.2	12
51	Only sun-lit leaves of the uppermost canopy exceed both air temperature and photosynthetic thermal optima in a wet tropical forest. <i>Agricultural and Forest Meteorology</i> , 2021 , 301-302, 108347	5.8	11
50	Nitrogen cycling responses to mountain pine beetle disturbance in a high elevation whitebark pine ecosystem. <i>PLoS ONE</i> , 2013 , 8, e65004	3.7	10
49	Five Decades of Observed Daily Precipitation Reveal Longer and More Variable Drought Events Across Much of the Western United States. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL092293	4.9	10
48	Isotopic Evidence that Nitrogen Enrichment Intensifies Nitrogen Losses to the Atmosphere from Subtropical Mangroves. <i>Ecosystems</i> , 2019 , 22, 1126-1144	3.9	10
47	Altered climate leads to positive density-dependent feedbacks in a tropical wet forest. <i>Global Change Biology</i> , 2020 , 26, 3417-3428	11.4	9
46	Soil biogeochemical responses of a tropical forest to warming and hurricane disturbance. <i>Advances in Ecological Research</i> , 2020 , 225-252	4.6	9
45	Multiple mechanisms determine the effect of warming on plant litter decomposition in a dryland. <i>Soil Biology and Biochemistry</i> , 2020 , 145, 107799	7.5	9
44	Temporal variability of foliar nutrients: responses to nitrogen deposition and prescribed fire in a temperate steppe. <i>Biogeochemistry</i> , 2017 , 133, 295-305	3.8	8

43	Reductions in tree performance during hotter droughts are mitigated by shifts in nitrogen cycling. <i>Plant, Cell and Environment</i> , 2018 , 41, 2627-2637	8.4	8
42	Soil warming effects on tropical forests with highly weathered soils 2019 , 385-439		7
41	Earlier plant growth helps compensate for reduced carbon fixation after 13 years of warming. <i>Functional Ecology</i> , 2019 , 33, 2071-2080	5.6	7
40	Photochemical generation and matrix-isolation detection of dimethylvinylidene. <i>Journal of Organic Chemistry</i> , 2001 , 66, 287-99	4.2	7
39	Photosynthetic and Respiratory Acclimation of Understory Shrubs in Response to in situ Experimental Warming of a Wet Tropical Forest. <i>Frontiers in Forests and Global Change</i> , 2020 , 3,	3.7	7
38	Tropical understory herbaceous community responds more strongly to hurricane disturbance than to experimental warming. <i>Ecology and Evolution</i> , 2020 , 10, 8906-8915	2.8	7
37	Nitrogen Enrichment Reduces Nitrogen and Phosphorus Resorption Through Changes to Species Resorption and Plant Community Composition. <i>Ecosystems</i> , 2021 , 24, 602-612	3.9	7
36	Biocrust ecology: unifying micro- and macro-scales to confront global change. <i>New Phytologist</i> , 2017 , 216, 643-646	9.8	6
35	Seed bank community and soil texture relationships in a cold desert. <i>Journal of Arid Environments</i> , 2019 , 164, 46-52	2.5	6
34	Coexistence of multiple leaf nutrient resorption strategies in a single ecosystem. <i>Science of the Total Environment</i> , 2021 , 772, 144951	10.2	6
33	Interactions of Microhabitat and Time Control Grassland Bacterial and Fungal Composition. <i>Frontiers in Ecology and Evolution</i> , 2019 , 7,	3.7	6
32	Spectrally monitoring the response of the biocrust moss <i>Syntrichia caninervis</i> to altered precipitation regimes. <i>Scientific Reports</i> , 2017 , 7, 41793	4.9	5
31	Spatial variation in edaphic characteristics is a stronger control than nitrogen inputs in regulating soil microbial effects on a desert grass. <i>Journal of Arid Environments</i> , 2017 , 142, 59-65	2.5	5
30	Biological soil crust salvage for dryland restoration: an opportunity for natural resource restoration. <i>Restoration Ecology</i> , 2020 , 28, S9	3.1	5
29	Riparian Plant Communities Remain Stable in Response to a Second Cycle of Tamarix Biocontrol Defoliation. <i>Wetlands</i> , 2020 , 40, 1863-1875	1.7	5
28	A roadmap for sampling and scaling biological nitrogen fixation in terrestrial ecosystems. <i>Methods in Ecology and Evolution</i> , 2021 , 12, 1122-1137	7.7	5
27	On the Shoulders of Giants: Continuing the Legacy of Large-Scale Ecosystem Manipulation Experiments in Puerto Rico. <i>Forests</i> , 2019 , 10, 210	2.8	5
26	Spatially explicit patterns in a dryland soil respiration and relationships with climate, whole plant photosynthesis and soil fertility. <i>Oikos</i> , 2018 , 127, 1280-1290	4	4

25	Conformational effects on the excited state 1,2-hydrogen migration in alkyldiazomethanes. <i>Tetrahedron Letters</i> , 1996 , 37, 7209-7212	2	4
24	Global resorption efficiencies of trace elements in leaves of terrestrial plants. <i>Functional Ecology</i> , 2021 , 35, 1596-1602	5.6	4
23	Experimental warming across a tropical forest canopy height gradient reveals minimal photosynthetic and respiratory acclimation. <i>Plant, Cell and Environment</i> , 2021 , 44, 2879-2897	8.4	4
22	Disentangling the complexities of how legumes and their symbionts regulate plant nitrogen access and storage. <i>New Phytologist</i> , 2017 , 213, 478-480	9.8	3
21	Satellite solar-induced chlorophyll fluorescence and near-infrared reflectance capture complementary aspects of dryland vegetation productivity dynamics. <i>Remote Sensing of Environment</i> , 2022 , 270, 112858	13.2	3
20	Vertical movement of soluble carbon and nutrients from biocrusts to subsurface mineral soils. <i>Geoderma</i> , 2022 , 405, 115495	6.7	3
19	Modest Residual Effects of Short-Term Warming, Altered Hydration, and Biocrust Successional State on Dryland Soil Heterotrophic Carbon and Nitrogen Cycling. <i>Frontiers in Ecology and Evolution</i> , 2020 , 8,	3.7	3
18	Warming and microbial uptake influence the fate of added soil carbon across a Hawaiian weathering gradient. <i>Soil Biology and Biochemistry</i> , 2021 , 153, 108080	7.5	3
17	What is a biocrust? A refined, contemporary definition for a broadening research community.. <i>Biological Reviews</i> , 2022 ,	13.5	3
16	Experimental Warming Changes Phenology and Shortens Growing Season of the Dominant Invasive Plant (Cheatgrass). <i>Frontiers in Plant Science</i> , 2020 , 11, 570001	6.2	2
15	Seasonal and individual event-responsiveness are key determinants of carbon exchange across plant functional types. <i>Oecologia</i> , 2020 , 193, 811-825	2.9	2
14	Resistance, Resilience, and Recovery of Dryland Soil Bacterial Communities Across Multiple Disturbances. <i>Frontiers in Microbiology</i> , 2021 , 12, 648455	5.7	2
13	Muted responses to chronic experimental nitrogen deposition on the Colorado Plateau. <i>Oecologia</i> , 2021 , 195, 513-524	2.9	2
12	Experimental warming and its legacy effects on root dynamics following two hurricane disturbances in a wet tropical forest. <i>Global Change Biology</i> , 2021 , 27, 6423-6435	11.4	2
11	8 The Response of Arid Soil Communities to Climate Change 2017 , 139-158		1
10	Response to Stochastic and deterministic interpretation of pool models <i>Global Change Biology</i> , 2021 , 27, e11-e12	11.4	1
9	Incorporating Biogeochemistry into Dryland Restoration. <i>BioScience</i> , 2021 , 71, 907-917	5.7	1
8	Manufacturing Simple and Inexpensive Soil Surface Temperature and Gravimetric Water Content Sensors. <i>Journal of Visualized Experiments</i> , 2019 ,	1.6	1

7	Broader Impacts for Ecologists: Biological Soil Crust as a Model System for Education. <i>Frontiers in Microbiology</i> , 2020 , 11, 577922	5.7	1
6	Mapping biological soil crusts in a Hawaiian dryland. <i>International Journal of Remote Sensing</i> , 2022 , 43, 484-509	3.1	1
5	Environmental filtering controls soil biodiversity in wet tropical ecosystems. <i>Soil Biology and Biochemistry</i> , 2022 , 166, 108571	7.5	0
4	Quantifying the influence of different biocrust community states and their responses to warming temperatures on soil biogeochemistry in field and mesocosm studies. <i>Geoderma</i> , 2022 , 409, 115633	6.7	0
3	Plant growth and biocrust-fire interactions across five North American deserts. <i>Geoderma</i> , 2021 , 401, 115325	6.7	0
2	Multiple resource limitation of dryland soil microbial carbon cycling on the Colorado Plateau.. <i>Ecology</i> , 2022 , e3671	4.6	0
1	Response to "Connectivity and pore accessibility in models of soil carbon cycling". <i>Global Change Biology</i> , 2021 , 27, e15-e16	11.4	