

Bradley J Cardinale

List of Publications by Year in descending order

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101
papers

23,452
citations

34076

52
h-index

31818

101
g-index

101
all docs

101
docs citations

101
times ranked

24406
citing authors

#	ARTICLE	IF	CITATIONS
1	Biodiversity loss and its impact on humanity. <i>Nature</i> , 2012, 486, 59-67.	13.7	4,969
2	A global synthesis reveals biodiversity loss as a major driver of ecosystem change. <i>Nature</i> , 2012, 486, 105-108.	13.7	1,750
3	Effects of biodiversity on the functioning of trophic groups and ecosystems. <i>Nature</i> , 2006, 443, 989-992.	13.7	1,516
4	Impacts of plant diversity on biomass production increase through time because of species complementarity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18123-18128.	3.3	1,175
5	Stability and Aggregation of Metal Oxide Nanoparticles in Natural Aqueous Matrices. <i>Environmental Science & Technology</i> , 2010, 44, 1962-1967.	4.6	1,162
6	The functional role of producer diversity in ecosystems. <i>American Journal of Botany</i> , 2011, 98, 572-592.	0.8	991
7	The functional role of biodiversity in ecosystems: incorporating trophic complexity. <i>Ecology Letters</i> , 2007, 10, 522-538.	3.0	808
8	Species diversity enhances ecosystem functioning through interspecific facilitation. <i>Nature</i> , 2002, 415, 426-429.	13.7	692
9	Extinction and Ecosystem Function in the Marine Benthos. <i>Science</i> , 2004, 306, 1177-1180.	6.0	646
10	Biodiversity improves water quality through niche partitioning. <i>Nature</i> , 2011, 472, 86-89.	13.7	577
11	Investigating the relationship between biodiversity and ecosystem multifunctionality: challenges and solutions. <i>Methods in Ecology and Evolution</i> , 2014, 5, 111-124.	2.2	533
12	Biodiversity enhances ecosystem multifunctionality across trophic levels and habitats. <i>Nature Communications</i> , 2015, 6, 6936.	5.8	515
13	Evolutionary history and the effect of biodiversity on plant productivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 17012-17017.	3.3	503
14	Biodiversity effects in the wild are common and as strong as key drivers of productivity. <i>Nature</i> , 2017, 549, 261-264.	13.7	466
15	Biodiversity and biocontrol: emergent impacts of a multi-enemy assemblage on pest suppression and crop yield in an agroecosystem. <i>Ecology Letters</i> , 2003, 6, 857-865.	3.0	447
16	Species Richness and the Temporal Stability of Biomass Production: A New Analysis of Recent Biodiversity Experiments. <i>American Naturalist</i> , 2014, 183, 1-12.	1.0	309
17	The Role of Biodiversity in the Functioning of Freshwater and Marine Benthic Ecosystems. <i>BioScience</i> , 2004, 54, 767.	2.2	296
18	Biodiversity conservation in agriculture requires a multi-scale approach. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014, 281, 20141358.	1.2	232

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19	Food-web interactions govern the resistance of communities after non-random extinctions. <i>Nature</i> , 2004, 429, 174-177.	13.7	227
20	Estimating local biodiversity change: a critique of papers claiming no net loss of local diversity. <i>Ecology</i> , 2016, 97, 1949-1960.	1.5	224
21	Effects of species diversity on the primary productivity of ecosystems: extending our spatial and temporal scales of inference. <i>Oikos</i> , 2004, 104, 437-450.	1.2	203
22	Separating the influence of resource "availability" from resource "imbalance" on productivity-diversity relationships. <i>Ecology Letters</i> , 2009, 12, 475-487.	3.0	198
23	Marine biodiversity and ecosystem functioning: what's known and what's next?. <i>Oikos</i> , 2015, 124, 252-265.	1.2	195
24	Diversity has stronger top-down than bottom-up effects on decomposition. <i>Ecology</i> , 2009, 90, 1073-1083.	1.5	187
25	Consumer effects decline with prey diversity. <i>Ecology Letters</i> , 2004, 7, 192-201.	3.0	180
26	Cascading effects of predator richness. <i>Frontiers in Ecology and the Environment</i> , 2008, 6, 539-546.	1.9	176
27	Niche and fitness differences relate the maintenance of diversity to ecosystem function. <i>Ecology</i> , 2011, 92, 1157-1165.	1.5	173
28	Climate-driven increases in storm frequency simplify kelp forest food webs. <i>Global Change Biology</i> , 2011, 17, 2513-2524.	4.2	172
29	An Ecological Perspective on Nanomaterial Impacts in the Environment. <i>Journal of Environmental Quality</i> , 2010, 39, 1954-1965.	1.0	168
30	REVIEW: Do polycultures promote win-win or trade-offs in agricultural ecosystem services? A meta-analysis. <i>Journal of Applied Ecology</i> , 2014, 51, 1593-1602.	1.9	164
31	Effects of predator richness on prey suppression: a meta-analysis. <i>Ecology</i> , 2013, 94, 2180-2187.	1.5	160
32	Experimental evidence that evolutionary relatedness does not affect the ecological mechanisms of coexistence in freshwater green algae. <i>Ecology Letters</i> , 2013, 16, 1373-1381.	3.0	158
33	THE INFLUENCE OF SUBSTRATE HETEROGENEITY ON BIOFILM METABOLISM IN A STREAM ECOSYSTEM. <i>Ecology</i> , 2002, 83, 412-422.	1.5	149
34	Biodiversity simultaneously enhances the production and stability of community biomass, but the effects are independent. <i>Ecology</i> , 2013, 94, 1697-1707.	1.5	146
35	Herbivore metabolism and stoichiometry each constrain herbivory at different organizational scales across ecosystems. <i>Ecology Letters</i> , 2009, 12, 516-527.	3.0	144
36	Is local biodiversity declining or not? A summary of the debate over analysis of species richness time trends. <i>Biological Conservation</i> , 2018, 219, 175-183.	1.9	127

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37	Species richness, but not phylogenetic diversity, influences community biomass production and temporal stability in a re-examination of 16 grassland biodiversity studies. <i>Functional Ecology</i> , 2015, 29, 615-626.	1.7	124
38	Reciprocal effects of host plant and natural enemy diversity on herbivore suppression: an empirical study of a model tritrophic system. <i>Oikos</i> , 2005, 108, 275-282.	1.2	119
39	Producer Nutritional Quality Controls Ecosystem Trophic Structure. <i>PLoS ONE</i> , 2009, 4, e4929.	1.1	119
40	EFFECTS OF SPECIES DIVERSITY ON COMMUNITY BIOMASS PRODUCTION CHANGE OVER THE COURSE OF SUCCESSION. <i>Ecology</i> , 2007, 88, 929-939.	1.5	112
41	A general biodiversity-function relationship is mediated by trophic level. <i>Oikos</i> , 2017, 126, 18-31.	1.2	112
42	Does productivity drive diversity or vice versa? A test of the multivariate productivity-diversity hypothesis in streams. <i>Ecology</i> , 2009, 90, 1227-1241.	1.5	111
43	Biodiversity as both a cause and consequence of resource availability: a study of reciprocal causality in a predator-prey system. <i>Journal of Animal Ecology</i> , 2006, 75, 497-505.	1.3	109
44	The functional consequences of random vs. ordered species extinctions. <i>Ecology Letters</i> , 2005, 8, 409-418.	3.0	102
45	DIVERSITY-PRODUCTIVITY RELATIONSHIPS IN STREAMS VARY AS A FUNCTION OF THE NATURAL DISTURBANCE REGIME. <i>Ecology</i> , 2005, 86, 716-726.	1.5	97
46	The economic value of grassland species for carbon storage. <i>Science Advances</i> , 2017, 3, e1601880.	4.7	96
47	DISTURBANCE MODERATES BIODIVERSITY-ECOSYSTEM FUNCTION RELATIONSHIPS: EXPERIMENTAL EVIDENCE FROM CADDISFLIES IN STREAM MESOCOSMS. <i>Ecology</i> , 2002, 83, 1915-1927.	1.5	89
48	Competition-defense tradeoffs and the maintenance of plant diversity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 17217-17222.	3.3	74
49	Geographic patterns of diversity in streams are predicted by a multivariate model of disturbance and productivity. <i>Journal of Ecology</i> , 2006, 94, 609-618.	1.9	73
50	Impacts of tree species diversity on litter decomposition in northern temperate forests of Wisconsin, USA: a multi-site experiment along a latitudinal gradient. <i>Plant and Soil</i> , 2007, 292, 147-159.	1.8	71
51	Effects of Algal Diversity on the Production of Biomass in Homogeneous and Heterogeneous Nutrient Environments: A Microcosm Experiment. <i>PLoS ONE</i> , 2008, 3, e2825.	1.1	66
52	Ecosystem services in the Great Lakes. <i>Journal of Great Lakes Research</i> , 2017, 43, 161-168.	0.8	56
53	Evolutionary history and the strength of species interactions: testing the phylogenetic limiting similarity hypothesis. <i>Ecology</i> , 2014, 95, 1407-1417.	1.5	54
54	Impacts of Biodiversity Loss. <i>Science</i> , 2012, 336, 552-553.	6.0	53

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55	The influence of phylogenetic relatedness on species interactions among freshwater green algae in a mesocosm experiment. <i>Journal of Ecology</i> , 2014, 102, 1288-1299.	1.9	53
56	How do stream organisms respond to, and influence, the concentration of titanium dioxide nanoparticles? A mesocosm study with algae and herbivores. <i>Environmental Toxicology and Chemistry</i> , 2012, 31, 2414-2422.	2.2	51
57	A critique for meta-analyses and the productivity-diversity relationship. <i>Ecology</i> , 2010, 91, 2545-2549.	1.5	45
58	Learning by the parasitoid wasp, <i>Aphidius ervi</i> (Hymenoptera: Braconidae), alters individual fixed preferences for pea aphid color morphs. <i>Oecologia</i> , 2006, 150, 172-179.	0.9	42
59	An empiricist's guide to modern coexistence theory for competitive communities. <i>Oikos</i> , 2020, 129, 1109-1127.	1.2	39
60	The independent and coupled effects of feedstock characteristics and reaction conditions on biocrude production by hydrothermal liquefaction. <i>Applied Energy</i> , 2019, 235, 714-728.	5.1	38
61	Does Facilitation of Faunal Recruitment Benefit Ecosystem Restoration? An Experimental Study of Invertebrate Assemblages in Wetland Mesocosms. <i>Restoration Ecology</i> , 2002, 10, 617-626.	1.4	37
62	Scaling up biodiversity-ecosystem function relationships across space and over time. <i>Ecology</i> , 2020, 101, e03166.	1.5	37
63	Effects of biodiversity on the functioning of ecosystems: a summary of 164 experimental manipulations of species richness. <i>Ecology</i> , 2009, 90, 854-854.	1.5	36
64	Interactions between large and small detritivores influence how biodiversity impacts litter decomposition. <i>Journal of Animal Ecology</i> , 2018, 87, 1465-1474.	1.3	36
65	Species richness enhances both algal biomass and rates of oxygen production in aquatic microcosms. <i>Oikos</i> , 2009, 118, 1703-1711.	1.2	31
66	Anthropogenic land use is associated with N-fixing cyanobacterial dominance in lakes across the continental United States. <i>Aquatic Sciences</i> , 2015, 77, 681-694.	0.6	30
67	Ecological factors associated with the strength of trophic cascades in streams. <i>Oikos</i> , 2011, 120, 1897-1908.	1.2	29
68	Is the relationship between algal diversity and biomass in North American lakes consistent with biodiversity experiments?. <i>Oikos</i> , 2014, 123, 267-278.	1.2	28
69	Power of Plankton: Effects of Algal Biodiversity on Biocrude Production and Stability. <i>Environmental Science & Technology</i> , 2016, 50, 13142-13150.	4.6	28
70	Influence of biodiversity, biochemical composition, and species identity on the quality of biomass and biocrude oil produced via hydrothermal liquefaction. <i>Algal Research</i> , 2017, 26, 203-214.	2.4	28
71	Biodiversity improves the ecological design of sustainable biofuel systems. <i>GCB Bioenergy</i> , 2018, 10, 752-765.	2.5	27
72	Hedonic Price Estimates of Lake Water Quality: Valued Attribute, Instrumental Variables, and Ecological-Economic Benefits. <i>Ecological Economics</i> , 2020, 176, 106692.	2.9	27

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73	Evolutionary relatedness does not predict competition and co-occurrence in natural or experimental communities of green algae. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20141745.	1.2	26
74	Stream nitrogen concentration, but not plant N-fixing capacity, modulates litter diversity effects on decomposition. <i>Functional Ecology</i> , 2017, 31, 1471-1481.	1.7	26
75	Biotic vs. Abiotic Control of Decomposition: A Comparison of the Effects of Simulated Extinctions and Changes in Temperature. <i>PLoS ONE</i> , 2014, 9, e87426.	1.1	26
76	Non-Additive Increases in Sediment Stability Are Generated by Macroinvertebrate Species Interactions in Laboratory Streams. <i>PLoS ONE</i> , 2014, 9, e103417.	1.1	26
77	Plant biodiversity effects in reducing fluvial erosion are limited to low species richness. <i>Ecology</i> , 2016, 97, 17-24.	1.5	25
78	Ecological interactions and coexistence are predicted by gene expression similarity in freshwater green algae. <i>Journal of Ecology</i> , 2017, 105, 580-591.	1.9	25
79	Overlooked local biodiversity loss. <i>Science</i> , 2014, 344, 1098-1098.	6.0	22
80	Ecological Stoichiometry Meets Ecological Engineering: Using Polycultures to Enhance the Multifunctionality of Algal Biocrude Systems. <i>Environmental Science & Technology</i> , 2017, 51, 11450-11458.	4.6	21
81	Toward a Better Integration of Ecological Principles into Ecogeoscience Research. <i>BioScience</i> , 2014, 64, 444-454.	2.2	20
82	Common Ancestry Is a Poor Predictor of Competitive Traits in Freshwater Green Algae. <i>PLoS ONE</i> , 2015, 10, e0137085.	1.1	20
83	Biodiversity Improves Life Cycle Sustainability Metrics in Algal Biofuel Production. <i>Environmental Science & Technology</i> , 2019, 53, 9279-9288.	4.6	17
84	Do not downplay biodiversity loss. <i>Nature</i> , 2022, 601, E27-E28.	13.7	17
85	Zebra Mussels in a Coastal Marsh: The Seasonal and Spatial Limits of Colonization. <i>Journal of Great Lakes Research</i> , 1995, 21, 587-593.	0.8	16
86	Impacts of Channel Reconstruction on Invertebrate Assemblages in a Restored River. <i>Restoration Ecology</i> , 2011, 19, 627-638.	1.4	16
87	Interactions between sea urchin grazing and prey diversity on temperate rocky reef communities. <i>Ecology</i> , 2013, 94, 1636-1646.	1.5	16
88	Aquatic macroinvertebrates stabilize gravel bed sediment: A test using silk net-spinning caddisflies in semi-natural river channels. <i>PLoS ONE</i> , 2019, 14, e0209087.	1.1	16
89	Shared ancestry influences community stability by altering competitive interactions: evidence from a laboratory microcosm experiment using freshwater green algae. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2013, 280, 20131548.	1.2	13
90	Further analyses looking for effects of phylogenetic diversity on community biomass and stability. <i>Functional Ecology</i> , 2015, 29, 1607-1610.	1.7	13

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91	Species diversity of resident green algae slows the establishment and proliferation of the cyanobacterium <i>Microcystis aeruginosa</i> . <i>Limnologia</i> , 2019, 74, 23-27.	0.7	13
92	Ranking stressor impacts on periphyton structure and function with mesocosm experiments and environmental-change forecasts. <i>PLoS ONE</i> , 2018, 13, e0204510.	1.1	12
93	Herbivores control effects of algal species richness on community biomass and stability in a laboratory microcosm experiment. <i>Oikos</i> , 2016, 125, 1627-1635.	1.2	10
94	The individual and synergistic impacts of feedstock characteristics and reaction conditions on the aqueous co-product from hydrothermal liquefaction. <i>Algal Research</i> , 2019, 42, 101568.	2.4	10
95	Abundance, size structure, and growth rates of Sacramento pikeminnow (<i>Ptychocheilus grandis</i>) following a large-scale stream channel restoration in California. <i>Journal of Freshwater Ecology</i> , 2012, 27, 495-505.	0.5	6
96	Riparian plant biodiversity reduces stream channel migration rates in three rivers in Michigan, U.S.A.. <i>Ecohydrology</i> , 2018, 11, e1972.	1.1	6
97	Cardinale reply. <i>Nature</i> , 2011, 477, E3-E4.	13.7	4
98	Intra-guild predation (IGP) can increase or decrease prey density depending on the strength of IGP. <i>Ecology</i> , 2020, 101, e03012.	1.5	4
99	Weak intra-guild predation facilitates consumer coexistence but does not guarantee higher consumer density. <i>Ecological Modelling</i> , 2020, 424, 109019.	1.2	4
100	Biodiversity and disease risk in an algal biofuel system: An experimental test in outdoor ponds using a before-after-control-impact (BACI) design. <i>PLoS ONE</i> , 2022, 17, e0267674.	1.1	3
101	Biodiversity: what value should we use?. <i>Frontiers in Ecology and the Environment</i> , 2017, 15, 283-283.	1.9	2