Osvaldo E Sala

List of Publications by Year
in descending order

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122 papers	18,074 citations	20817 60 h-index	19190 118 g-index
124 all docs	124 docs citations	124 times ranked	19374 citing authors

#	Article	IF	Citations
1	Consequences of changing biodiversity. Nature, 2000, 405, 234-242.	27.8	3,209
2	Convergence across biomes to a common rain-use efficiency. Nature, 2004, 429, 651-654.	27.8	968
3	Biotic Control over the Functioning of Ecosystems. Science, 1997, 277, 500-504.	12.6	948
4	The Origins of C ₄ Grasslands: Integrating Evolutionary and Ecosystem Science. Science, 2010, 328, 587-591.	12.6	899
5	Ecological Forecasts: An Emerging Imperative. Science, 2001, 293, 657-660.	12.6	774
6	Hierarchy of responses to resource pulses in arid and semi-arid ecosystems. Oecologia, 2004, 141, 211-220.	2.0	772
7	Patch structure, dynamics and implications for the functioning of arid ecosystems. Trends in Ecology and Evolution, 1999, 14, 273-277.	8.7	579
8	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
9	HABITAT LOSS, TROPHIC COLLAPSE, AND THE DECLINE OF ECOSYSTEM SERVICES. Ecology, 2006, 87, 1915-1924.	3.2	458
10	Multidimensional evaluation of managed relocation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9721-9724.	7.1	339
11	A rainout shelter design for intercepting different amounts of rainfall. Oecologia, 2002, 133, 95-101.	2.0	328
12	Ecosystem Consequences of Changing Biodiversity. BioScience, 1998, 48, 45-52.	4.9	319
13	Thresholds, memory, and seasonality: understanding pulse dynamics in arid/semi-arid ecosystems. Oecologia, 2004, 141, 191-193.	2.0	309
14	Grassland Precipitation-Use Efficiency Varies Across a Resource Gradient. Ecosystems, 1999, 2, 64-68.	3.4	264
15	Characterizing differences in precipitation regimes of extreme wet and dry years: implications for climate change experiments. Global Change Biology, 2015, 21, 2624-2633.	9.5	233
16	VEGETATION STRUCTURE CONSTRAINS PRIMARY PRODUCTION RESPONSE TO WATER AVAILABILITY IN THE PATAGONIAN STEPPE. Ecology, 2006, 87, 952-962.	3.2	213
17	Managed Relocation: Integrating the Scientific, Regulatory, and Ethical Challenges. BioScience, 2012, 62, 732-743.	4.9	212
18	Enhanced precipitation variability decreases grass- and increases shrub-productivity. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12735-12740.	7.1	212

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19	PATTERNS AND CONTROLS OF PRIMARY PRODUCTION IN THE PATAGONIAN STEPPE: A REMOTE SENSING APPROACH*. Ecology, 2002, 83, 307-319.	3.2	198
20	Competition, Facilitation, Seed Distribution and the Origin of Patches in a Patagonian Steppe. Oikos, 1994, 70, 26.	2.7	189
21	Precipitation legacies in desert grassland primary production occur through previousâ€year tiller density. Ecology, 2013, 94, 435-443.	3.2	169
22	Effects of Global Changes on Above- and Belowground Biodiversity in Terrestrial Ecosystems: Implications for Ecosystem Functioning. BioScience, 2000, 50, 1089.	4.9	165
23	Interâ€annual variation in primary production of a semiâ€arid grassland related to previousâ€year production. Journal of Vegetation Science, 2001, 12, 137-142.	2.2	163
24	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
25	SEED DISTRIBUTION CONSTRAINS THE DYNAMICS OF THE PATAGONIAN STEPPE. Ecology, 1997, 78, 93-100.	3.2	150
26	Ecosystem responses to changes in plant functional type composition: An example from the Patagonian steppe. Journal of Vegetation Science, 1996, 7, 381-390.	2.2	146
27	Functional traits of graminoids in semi-arid steppes: a test of grazing histories. Journal of Applied Ecology, 2004, 41, 653-663.	4.0	145
28	Effect of woody-plant encroachment on livestock production in North and South America. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12948-12953.	7.1	145
29	Global change effects on plant communities are magnified by time and the number of global change factors imposed. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17867-17873.	7.1	141
30	Impacts of solar ultraviolet-B radiation on terrestrial ecosystems of Tierra del Fuego (southern) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302	3.8	140
31	Directional climate change and potential reversal of desertification in arid and semiarid ecosystems. Global Change Biology, 2012, 18, 151-163.	9.5	140
32	Rangeland ecosystem services: shifting focus from supply to reconciling supply and demand. Frontiers in Ecology and the Environment, 2015, 13, 44-51.	4.0	139
33	Differential Controls of Water Input on Litter Decomposition and Nitrogen Dynamics in the Patagonian Steppe. Ecosystems, 2006, 9, 128-141.	3.4	137
34	Asynchrony among local communities stabilises ecosystem function of metacommunities. Ecology Letters, 2017, 20, 1534-1545.	6.4	136
35	Current Distribution of Ecosystem Functional Types in Temperate South America. Ecosystems, 2001, 4, 683-698.	3.4	135
36	Carbon and nitrogen dynamics across a natural precipitation gradient in Patagonia, Argentina. Journal of Vegetation Science, 2002, 13, 351-360.	2.2	132

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37	Pushing precipitation to the extremes in distributed experiments: recommendations for simulating wet and dry years. Global Change Biology, 2017, 23, 1774-1782.	9.5	132
38	FUNCTIONAL AND STRUCTURAL CONVERGENCE OF TEMPERATE GRASSLAND AND SHRUBLAND ECOSYSTEMS. , 1998, 8, 194-206.		131
39	Effect of interannual precipitation variability on dryland productivity: A global synthesis. Global Change Biology, 2019, 25, 269-276.	9.5	126
40	Higher effect of plant species diversity on productivity in natural than artificial ecosystems. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6087-6090.	7.1	123
41	Water Losses in the Patagonian Steppe: A Modelling Approach. Ecology, 1995, 76, 510-520.	3.2	115
42	Enhanced interannual precipitation variability increases plant functional diversity that in turn ameliorates negative impact on productivity. Ecology Letters, 2015, 18, 1293-1300.	6.4	109
43	Sensitivity of primary production to precipitation across the United States. Ecology Letters, 2020, 23, 527-536.	6.4	109
44	Climate change will increase savannas at the expense of forests and treeless vegetation in tropical and subtropical <scp>A</scp>mericas. Journal of Ecology, 2014, 102, 1363-1373.	4.0	107
45	Few multiyear precipitationâ€“reduction experiments find aÂshift in the productivityâ€“precipitation relationship. Global Change Biology, 2016, 22, 2570-2581.	9.5	105
46	Patch structure and dynamics in a Patagonian arid steppe. Plant Ecology, 1994, 111, 127-135.	1.2	101
47	Solar UV-B decreases decomposition in herbaceous plant litter in Tierra del Fuego, Argentina: potential role of an altered decomposer community. Global Change Biology, 2003, 9, 1465-1474.	9.5	99
48	Sheep Grazing Decreases Organic Carbon and Nitrogen Pools in the Patagonian Steppe: Combination of Direct and Indirect Effects. Ecosystems, 2009, 12, 686-697.	3.4	98
49	Effects of grazing on seedling establishment: the role of seed and safe-site availability. Journal of Vegetation Science, 1990, 1, 353-358.	2.2	96
50	Legacy effects in linked ecologicalâ€“soilâ€“geomorphic systems of drylands. Frontiers in Ecology and the Environment, 2015, 13, 13-19.	4.0	92
51	Methods of Estimating Aboveground Net Primary Productivity. , 2000, , 31-43.		92
52	Six years of solar UVâ€B manipulations affect growth of Sphagnum and vascular plants in a Tierra del Fuego peatland. New Phytologist, 2003, 160, 379-389.	7.3	91
53	Plant functional types and ecological strategies in Patagonian forbs. Journal of Vegetation Science, 1993, 4, 839-846.	2.2	87
54	Response of dominant grass and shrub species to water manipulation: an ecophysiological basis for shrub invasion in a Chihuahuan Desert Grassland. Oecologia, 2012, 169, 373-383.	2.0	79

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55	Size of Precipitation Pulses Controls Nitrogen Transformation and Losses in an Arid Patagonian Ecosystem. Ecosystems, 2010, 13, 575-585.	3.4	77
56	Grassâ€“woodland transitions: determinants and consequences for ecosystem functioning and provisioning of services. Journal of Ecology, 2014, 102, 1357-1362.	4.0	77
57	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
58	Traversing the Wasteland: A Framework for Assessing Ecological Threats to Drylands. BioScience, 2020, 70, 35-47.	4.9	74
59	Regional grassland productivity responses to precipitation during multiyear aboveâ€and belowâ€average rainfall periods. Global Change Biology, 2018, 24, 1935-1951.	9.5	71
60	Water controls on nitrogen transformations and stocks in an arid ecosystem. Ecosphere, 2013, 4, 1-17.	2.2	67
61	Understory bamboo flowering provides a very narrow light window of opportunity for canopy-tree recruitment in a neotropical forest of Misiones, Argentina. Forest Ecology and Management, 2011, 262, 1360-1369.	3.2	62
62	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
63	Responses to solar ultraviolet-B radiation in a shrub-dominated natural ecosystem of Tierra del Fuego (southern Argentina). Global Change Biology, 2001, 7, 467-478.	9.5	61
64	Global patterns and climatic controls of belowground net carbon fixation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20038-20043.	7.1	61
65	Beyond desertification: new paradigms for dryland landscapes. Frontiers in Ecology and the Environment, 2015, 13, 4-12.	4.0	60
66	Drought suppresses soil predators and promotes root herbivores in mesic, but not in xeric grasslands. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12883-12888.	7.1	57
67	Differential sensitivities of grassland structural components to changes in precipitation mediate productivity response in a desert ecosystem. Functional Ecology, 2014, 28, 1292-1298.	3.6	54
68	Automated rainfall manipulation system: a reliable and inexpensive tool for ecologists. Ecosphere, 2013, 4, 1-10.	2.2	49
69	Responses of a desert nematode community to changes in water availability. Ecosphere, 2015, 6, 1-15.	2.2	47
70	Ecological consequences of a massive flowering event of bamboo (Chusquea culeou) in a temperate forest of Patagonia, Argentina. Journal of Vegetation Science, 2009, 20, 424-432.	2.2	46
71	Inhibition of Nitrification Alters Carbon Turnover in the Patagonian Steppe. Ecosystems, 2006, 9, 1257-1265.	3.4	43
72	Rangeland Ecosystem Services: Natureâ€™s Supply and Humansâ€™ Demand. Springer Series on Environmental Management, 2017, , 467-489.	0.3	43

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73	Cascading events in linked ecological and socioeconomic systems. Frontiers in Ecology and the Environment, 2007, 5, 221-224.	4.0	42
74	The Interactive Role of Wind and Water in Functioning of Drylands: What Does the Future Hold?. BioScience, 2018, 68, 670-677.	4.9	42
75	Preference for different inorganic nitrogen forms among plant functional types and species of the Patagonian steppe. Oecologia, 2013, 173, 1075-1081.	2.0	41
76	Are Existing Global Scenarios Consistent with Ecological Feedbacks?. Ecosystems, 2005, 8, 143-152.	3.4	40
77	An Integrated View of Complex Landscapes: A Big Data-Model Integration Approach to Transdisciplinary Science. BioScience, 2018, 68, 653-669.	4.9	38
78	Price put on biodiversity. Nature, 2001, 412, 34-36.	27.8	37
79	Reduction of solar UV-B mediates changes in the Sphagnum capitulum microenvironment and the peatland microfungal community. Oecologia, 2004, 140, 480-490.	2.0	36
80	Bridging historical and ecological approaches in biogeography. Australian Systematic Botany, 2006, 19, 1.	0.9	35
81	Aggregate measures of ecosystem services: can we take the pulse of nature?. Frontiers in Ecology and the Environment, 2005, 3, 56-59.	4.0	34
82	Woody Plant Encroachment has a Larger Impact than Climate Change on Dryland Water Budgets. Scientific Reports, 2020, 10, 8112.	3.3	31
83	Groundwater recharge in desert playas: current rates and future effects of climate change. Environmental Research Letters, 2018, 13, 014025.	5.2	30
84	Body size structure of soil fauna along geographic and temporal gradients of precipitation in grasslands. Soil Biology and Biochemistry, 2020, 140, 107638.	8.8	28
85	Globalâ€change drivers of ecosystem functioning modulated by natural variability and saturating responses. Global Change Biology, 2017, 23, 503-511.	9.5	25
86	Granivory rates by rodents, insects, and birds at different microsites in the Patagonian steppe. Ecography, 2002, 25, 417-427.	4.5	22
87	Controls on nitrification in a water-limited ecosystem: experimental inhibition of ammonia-oxidising bacteria in the Patagonian steppe. Soil Biology and Biochemistry, 2003, 35, 1609-1613.	8.8	22
88	Direct and indirect effects of solar ultraviolet-B radiation on long-term decomposition. Global Change Biology, 2005, 11, 051006062331002-???.	9.5	22
89	Climate Change Impacts on South American Rangelands. Rangelands, 2008, 30, 34-39.	1.9	21
90	Now is the Time for Action: Transitions and Tipping Points in Complex Environmental Systems. Environment, 2010, 52, 38-45.	1.4	20

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91	Solar UVB and warming affect decomposition and earthworms in a fen ecosystem in Tierra del Fuego, Argentina. Global Change Biology, 2009, 15, 2493-2502.	9.5	19
92	Land degradation and climate change: a sin of omission?. Frontiers in Ecology and the Environment, 2013, 11, 283-283.	4.0	18
93	Grasses have larger response than shrubs to increased nitrogen availability: A fertilization experiment in the Patagonian steppe. Journal of Arid Environments, 2014, 102, 17-20.	2.4	18
94	Nematode exclusion and recovery in experimental soil microcosms. Soil Biology and Biochemistry, 2017, 108, 78-83.	8.8	17
95	Root herbivory controls the effects of water availability on the partitioning between aboveâ€•and belowâ€ground grass biomass. Functional Ecology, 2020, 34, 2403-2410.	3.6	17
96	Precipitation versus temperature as phenology controls in drylands. Ecology, 2022, 103, .	3.2	17
97	Effects of plant species traits on ecosystem processes: experiments in the Patagonian steppe. Ecology, 2012, 93, 227-234.	3.2	15
98	Ecto- and endoparasitic nematodes respond differently across sites to changes in precipitation. Oecologia, 2020, 193, 761-771.	2.0	14
99	Foundations and Frontiers of Ecosystem Science: Legacy of a Classic Paper (Odum 1969). Ecosystems, 2019, 22, 1160-1172.	3.4	13
100	Biophysical controls over concentration and depth distribution of soil organic carbon and nitrogen in desert playas. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 3019-3029.	3.0	12
101	Why Coordinated Distributed Experiments Should Go Global. BioScience, 2021, 71, 918-927.	4.9	12
102	Interactions among resource partitioning, sampling effect, and facilitation on the biodiversity effect: a modeling approach. Oecologia, 2014, 174, 559-566.	2.0	11
103	Precipitation effects on nematode diversity and carbon footprint across grasslands. Global Change Biology, 2022, 28, 2124-2132.	9.5	11
104	Growth responses to ultraviolet-B radiation of two Carex species dominating an Argentinian fen ecosystem. Basic and Applied Ecology, 2004, 5, 153-162.	2.7	10
105	Structural heterogeneity and productivity of a tall fescue pasture grazed rotationally by cattle at four stocking densities. Grassland Science, 2008, 54, 9-16.	1.1	10
106	A Concept Map of Evolutionary Biology to Promote Meaningful Learning in Biology. American Biology Teacher, 2019, 81, 79-87.	0.2	10
107	Woodyâ€plant encroachment: Precipitation, herbivory, and grassâ€competition interact to affect shrub recruitment. Ecological Applications, 2022, 32, e2536.	3.8	10
108	Temporal Effects of Monsoon Rainfall Pulses on Plant Available Nitrogen in a Chihuahuan Desert Grassland. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	3.0	10

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109	Plant Species Richness in Multiyear Wet and Dry Periods in the Chihuahuan Desert. Climate, 2021, 9, 130.	2.8	8
110	Achieving a sustainable biosphere: An international endeavour. Trends in Ecology and Evolution, 1992, 7, 324-326.	8.7	6
111	Determinants of Biodiversity Change: Ecological Tools for Building Scenarios1. Ecology, 2006, 87, 1875-1876.	3.2	5
112	Connectivity: insights from the U.S. Long Term Ecological Research Network. Ecosphere, 2021, 12, e03432.	2.2	4
113	Ecological maturity and stability of nematode communities in response to precipitation manipulations in grasslands. Applied Soil Ecology, 2022, 170, 104263.	4.3	4
114	Playaâ€Wetlands Effects on Dryland Biogeochemistry: Space and Time Interactions. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1879-1887.	3.0	3
115	Expanding the Pulseâ€“Reserve Paradigm to Microorganisms on the Basis of Differential Reserve Management Strategies. BioScience, 2022, 72, 638-650.	4.9	3
116	Seedling responses to soil moisture amount versus pulse frequency in a successfully encroaching semi-arid shrub. Oecologia, 0, , .	2.0	2
117	How Scientists Can Help End the Land-Use Conflict. BioScience, 2016, 66, 915-915.	4.9	1
118	The sustainability publication gap and its implications. Current Opinion in Environmental Sustainability, 2019, 39, 39-43.	6.3	1
119	Leveraging the anthropause. Frontiers in Ecology and the Environment, 2021, 19, 315-315.	4.0	1
120	VEGETATION STRUCTURE CONSTRAINS PRIMARY PRODUCTION RESPONSE TO WATER AVAILABILITY IN THE PATAGONIAN STEPPE. , 2006, 87, 952.		1
121	Open access is a misnomer. Frontiers in Ecology and the Environment, 2022, 20, 71-71.	4.0	1
122	Peer review report 1 on â€œDrought manipulation and its direct and legacy effects on productivity of a monodominant and mixed-species semi-arid grasslandâ€• Agricultural and Forest Meteorology, 2016, 217, 250.	4.8	0