Christian P Giardina

List of Publications by Year
in descending order

128 papers	9,442 citations	81839 39 h-index	43868 91 g-index
135 all docs	135 docs citations	135 times ranked	11641 citing authors

#	Article	IF	Citations
1	Temperature and soil organic matter decomposition rates - synthesis of current knowledge and a way forward. Global Change Biology, 2011, 17, 3392-3404.	4.2	1,143
2	Forest response to elevated CO2 is conserved across a broad range of productivity. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18052-18056.	3.3	880
3	Evidence that decomposition rates of organic carbon in mineral soil do not vary with temperature. Nature, 2000, 404, 858-861.	13.7	867
4	Why do Tree Species Affect Soils? The Warp and Woof of Tree-soil Interactions. Biogeochemistry, 1998, 42, 89-106.	1.7	514
5	<scp>CTFS</scp>â€Forest<scp>GEO</scp>: a worldwide network monitoring forests in an era of global change. Global Change Biology, 2015, 21, 528-549.	4.2	473
6	A synthesis of current knowledge on forests and carbon storage in the United States. , 2011, 21, 1902-1924.		354
7	Global importance of largeâ€diameter trees. Global Ecology and Biogeography, 2018, 27, 849-864.	2.7	330
8	AN EXPERIMENTAL TEST OF THE CAUSES OF FOREST GROWTH DECLINE WITH STAND AGE. Ecological Monographs, 2004, 74, 393-414.	2.4	310
9	Plant diversity increases with the strength of negative density dependence at the global scale. Science, 2017, 356, 1389-1392.	6.0	222
10	Total Belowground Carbon Allocation in a Fast-growing Eucalyptus Plantation Estimated Using a Carbon Balance Approach. Ecosystems, 2002, 5, 487-499.	1.6	207
11	Tropospheric O 3 compromises net primary production in young stands of trembling aspen, paper birch and sugar maple in response to elevated atmospheric CO 2. New Phytologist, 2005, 168, 623-636.	3.5	183
12	Warming-related increases in soil CO2 efflux are explained by increased below-ground carbon flux. Nature Climate Change, 2014, 4, 822-827.	8.1	166
13	Primary production and carbon allocation in relation to nutrient supply in a tropical experimental forest. Global Change Biology, 2003, 9, 1438-1450.	4.2	163
14	Title is missing!. Plant and Soil, 2000, 220, 247-260.	1.8	151
15	Tree Species and Soil Textural Controls on Carbon and Nitrogen Mineralization Rates. Soil Science Society of America Journal, 2001, 65, 1272-1279.	1.2	142
16	Belowground carbon cycling in a humid tropical forest decreases with fertilization. Oecologia, 2004, 139, 545-550.	0.9	137
17	Temperature and vegetation effects on soil organic carbon quality along a forested mean annual temperature gradient in North America. Global Change Biology, 2008, 14, 193-205.	4.2	127
18	Reduction of soil carbon formation by tropospheric ozone under increased carbon dioxide levels. Nature, 2003, 425, 705-707.	13.7	124

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19	ForestGEO: Understanding forest diversity and dynamics through a global observatory network. Biological Conservation, 2021, 253, 108907.	1.9	122
20	Changes in Soil Phosphorus and Nitrogen During Slashâ€andâ€Burn Clearing of a Dry Tropical Forest. Soil Science Society of America Journal, 2000, 64, 399-405.	1.2	121
21	Soil phosphorus pools and supply under the influence of Eucalyptus saligna and nitrogen-fixing Albizia facaltaria. Forest Ecology and Management, 2000, 128, 241-247.	1.4	101
22	Effects of elevated concentrations of atmospheric CO2 and tropospheric O3 on leaf litter production and chemistry in trembling aspen and paper birch communities. Tree Physiology, 2005, 25, 1511-1522.	1.4	101
23	Future atmospheric CO₂ leads to delayed autumnal senescence. Global Change Biology, 2008, 14, 264-275.	4.2	95
24	Long-term effects of fragmentation and fragment properties on bird species richness in Hawaiian forests. Biological Conservation, 2010, 143, 280-288.	1.9	85
25	Enhanced litter input rather than changes in litter chemistry drive soil carbon and nitrogen cycles under elevated CO₂: a microcosm study. Global Change Biology, 2009, 15, 441-453.	4.2	80
26	Embracing the sacred: an indigenous framework for tomorrowâ€™s sustainability science. Sustainability Science, 2016, 11, 57-67.	2.5	74
27	Culturally Grounded Indicators of Resilience in Social-Ecological Systems. Environment and Society: Advances in Research, 2017, 8, .	0.3	64
28	The effect of fertilization on sap flux and canopy conductance in a Eucalyptus saligna experimental forest. Global Change Biology, 2004, 10, 427-436.	4.2	62
29	Comparison of modeling approaches for carbon partitioning: Impact on estimates of global net primary production and equilibrium biomass of woody vegetation from MODIS GPP. Journal of Geophysical Research, 2010, 115, .	3.3	55
30	Clear cutting and burning affect nitrogen supply, phosphorus fractions and seedling growth in soils from a Wyoming lodgepole pine forest. Forest Ecology and Management, 2001, 140, 19-28.	1.4	54
31	The Contemporary Scale and Context of Wildfire in Hawaiâ€˜i. Pacific Science, 2015, 69, 427-444.	0.2	54
32	Leaf litter decomposition rates increase with rising mean annual temperature in Hawaiian tropical montane wet forests. PeerJ, 2014, 2, e685.	0.9	52
33	Climate driven changes to rainfall and streamflow patterns in a model tropical island hydrological system. Journal of Hydrology, 2015, 523, 160-169.	2.3	51
34	Forest Structure in Low-Diversity Tropical Forests: A Study of Hawaiian Wet and Dry Forests. PLoS ONE, 2014, 9, e103268.	1.1	47
35	Variable temperature sensitivity of soil organic carbon in North American forests. Global Change Biology, 2009, 15, 2295-2310.	4.2	46
36	Coarse woody debris carbon storage across a mean annual temperature gradient in tropical montane wet forest. Forest Ecology and Management, 2013, 291, 336-343.	1.4	45

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37	Will nitrogen deposition mitigate warming-increased soil respiration in a young subtropical plantation?. Agricultural and Forest Meteorology, 2017, 246, 78-85.	1.9	44
38	Ecosystem carbon storage does not vary with mean annual temperature in Hawaiian tropical montane wet forests. Global Change Biology, 2014, 20, 2927-2937.	4.2	43
39	Reduced substrate supply limits the temperature response of soil organic carbon decomposition. Soil Biology and Biochemistry, 2013, 67, 306-311.	4.2	42
40	DIURNAL VARIATION IN THE BASAL EMISSION RATE OF ISOPRENE. , 2003, 13, 269-278.		41
41	Climate sensitive size-dependent survival in tropical trees. Nature Ecology and Evolution, 2018, 2, 1436-1442.	3.4	41
42	Plant growth, biomass partitioning and soil carbon formation in response to altered lignin biosynthesis in Populus tremuloides. New Phytologist, 2007, 173, 732-742.	3.5	40
43	Soil organic carbon quality in forested mineral wetlands at different mean annual temperature. Soil Biology and Biochemistry, 2009, 41, 458-466.	4.2	40
44	Litter quality and site characteristics interact to affect the response of priming effect to temperature in subtropical forests. Functional Ecology, 2019, 33, 2226-2238.	1.7	40
45	Why do tree species affect soils? The Warp and Woof of tree-soil interactions. , 1998, , 89-106.		38
46	Rapid forest carbon assessments of oceanic islands: a case study of the Hawaiian archipelago. Carbon Balance and Management, 2016, 11, 1.	1.4	38
47	Regional forcing explains local species diversity and turnover on tropical islands. Global Ecology and Biogeography, 2018, 27, 474-486.	2.7	38
48	Understory Colonization of<i> Eucalyptus </i>Plantations in Hawaii in Relation to Light and Nutrient Levels. Restoration Ecology, 2008, 16, 475-485.	1.4	37
49	Densityâ€dependent seedling mortality varies with light availability and species abundance in wet and dry Hawaiian forests. Journal of Ecology, 2016, 104, 773-780.	1.9	37
50	An extensive suite of functional traits distinguishes Hawaiian wet and dry forests and enables prediction of species vital rates. Functional Ecology, 2019, 33, 712-734.	1.7	37
51	Title is missing!. Plant and Soil, 1999, 209, 137-157.	1.8	35
52	Methods for Estimating Litter Decomposition. , 2008, , 103-111.		35
53	The Influence of Chemistry, Production and Community Composition on Leaf Litter Decomposition Under Elevated Atmospheric CO2 and Tropospheric O3 in a Northern Hardwood Ecosystem. Ecosystems, 2009, 12, 401-416.	1.6	35
54	The Response of Belowground Carbon Allocation in Forests to Global Change. , 2005, , 119-154.		35

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55	Science Driven Restoration: A Candle in a Demon Haunted World?Response to Cabin (2007). Restoration Ecology, 2007, 15, 171-176.	1.4	33
56	The magnitude and variability of soil-surface CO2 efflux increase with mean annual temperature in Hawaiian tropical montane wet forests. Soil Biology and Biochemistry, 2011, 43, 2315-2323.	4.2	31
57	Future directions for forest restoration in Hawaiâ€˜i. New Forests, 2015, 46, 733-746.	0.7	31
58	Patterns of nitrogenâ€fixing tree abundance in forests across Asia and America. Journal of Ecology, 2019, 107, 2598-2610.	1.9	29
59	Soil microbial community responses to altered lignin biosynthesis in Populus tremuloides vary among three distinct soils. Plant and Soil, 2007, 294, 185-201.	1.8	28
60	Climate Change and Land Use Drivers of Fecal Bacteria in Tropical Hawaiian Rivers. Journal of Environmental Quality, 2014, 43, 1475-1483.	1.0	28
61	Ritual + Sustainability Science? A Portal into the Science of Aloha. Sustainability, 2018, 10, 3478.	1.6	28
62	Arbuscular mycorrhizal trees influence the latitudinal beta-diversity gradient of tree communities in forests worldwide. Nature Communications, 2021, 12, 3137.	5.8	28
63	Effects of elevated atmospheric CO2 and tropospheric O3 on nutrient dynamics: decomposition of leaf litter in trembling aspen and paper birch communities. Plant and Soil, 2007, 299, 65-82.	1.8	27
64	Carbon fluxes, storage and harvest removals through 60years of stand development in red pine plantations and mixed hardwood stands in Northern Michigan, USA. Forest Ecology and Management, 2015, 337, 88-97.	1.4	25
65	Impact of nonnative feral pig removal on soil structure and nutrient availability in Hawaiian tropical montane wet forests. Biological Invasions, 2017, 19, 749-763.	1.2	25
66	Influence of nutrient availability, stand age, and canopy structure on isoprene flux in aEucalyptus salignaexperimental forest. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	24
67	Seedling recruitment factors in lowâ€diversity Hawaiian wet forest: towards global comparisons among tropical forests. Ecosphere, 2013, 4, 1-19.	1.0	24
68	Distribution of biomass dynamics in relation to tree size in forests across the world. New Phytologist, 2022, 234, 1664-1677.	3.5	24
69	Centennial impacts of fragmentation on the canopy structure of tropical montane forest. Ecological Applications, 2014, 24, 1638-1650.	1.8	23
70	Increases in mean annual temperature do not alter soil bacterial community structure in tropical montane wet forests. Ecosphere, 2016, 7, e01296.	1.0	23
71	Understory ferns alter soil carbon chemistry and increase carbon storage during reforestation with native pine on previously degraded sites. Soil Biology and Biochemistry, 2019, 132, 80-92.	4.2	22
72	Biocultural stewardship, Indigenous and local ecological knowledge, and the urban crucible. Ecology and Society, 2020, 25, .	1.0	22

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73	Tree Canopies Reflect Mycorrhizal Composition. Geophysical Research Letters, 2021, 48, e2021GL092764.	1.5	21
74	reply: Soil warming and organic carbon content. Nature, 2000, 408, 790-790.	13.7	20
75	Soil and hydrological responses to wild pig (Sus scofa) exclusion from native and strawberry guava (Psidium cattleianum)-invaded tropical montane wet forests. Geoderma, 2016, 279, 53-60.	2.3	20
76	The influence of soil type and altered lignin biosynthesis on the growth and above and belowground biomass allocation of Populus tremuloides. Plant and Soil, 2008, 308, 239-253.	1.8	18
77	Role of soil texture, clay mineralogy, location, and temperature in coarse wood decompositionâ€"a mesocosm experiment. Ecosphere, 2016, 7, e01605.	1.0	16
78	A watershed decision support tool for managing invasive species on Hawaiâ€˜i Island, USA. Forest Ecology and Management, 2017, 400, 300-320.	1.4	16
79	Modeled Effects of Climate Change and Plant Invasion on Watershed Function Across a Steep Tropical Rainfall Gradient. Ecosystems, 2017, 20, 583-600.	1.6	16
80	Influence of declining mean annual rainfall on the behavior and yield of sediment and particulate organic carbon from tropical watersheds. Geomorphology, 2018, 306, 28-39.	1.1	16
81	The role of remnant forest patches for habitat restoration in degraded areas of Palau. Restoration Ecology, 2015, 23, 872-881.	1.4	15
82	Warming exerts greater impacts on subsoil than topsoil CO2 efflux in a subtropical forest. Agricultural and Forest Meteorology, 2018, 263, 137-146.	1.9	15
83	Long-Term Leaf Production Response to Elevated Atmospheric Carbon Dioxide and Tropospheric Ozone. Ecosystems, 2012, 15, 71-82.	1.6	14
84	Soil warming effects on tropical forests with highly weathered soils. , 2019, , 385-439.		13
85	Linking rainforest ecophysiology and microclimate through fusion of airborne LiDAR and hyperspectral imagery. Ecosphere, 2014, 5, 1-37.	1.0	11
86	Long-term fragmentation effects on the distribution and dynamics of canopy gaps in a tropical montane forest. Ecosphere, 2015, 6, art271.	1.0	11
87	A decision support tool for the conservation of tropical forest and nearshore environments on Babeldaob Island, Palau. Forest Ecology and Management, 2020, 476, 118480.	1.4	11
88	Nutrientâ€use strategy and not competition determines native and invasive species response to changes in soil nutrient availability. Restoration Ecology, 2021, 29, e13374.	1.4	11
89	Advancing Our Understanding of Woody Debris in Tropical Forests. Ecosystems, 2019, 22, 1173-1175.	1.6	10
90	Interannual variation in rainfall modulates temperature sensitivity of carbon allocation and flux in a tropical montane wet forest. Global Change Biology, 2021, 27, 3824-3836.	4.2	10

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91	Dynamics of Anthropogenic Wildfire on Babeldaob Island (Palau) as Revealed by Fire History. Fire, 2022, 5, 45.	1.2	10
92	Evaluating the role of land cover and climate uncertainties in computing gross primary production in Hawaiian Island ecosystems. PLoS ONE, 2017, 12, e0184466.	1.1	9
93	Response to Comment on â€œPlant diversity increases with the strength of negative density dependence at the global scaleâ€. Science, 2018, 360, .	6.0	9
94	Changes in soil bacterial community diversity following the removal of invasive feral pigs from a Hawaiian tropical montane wet forest. Scientific Reports, 2019, 9, 14681.	1.6	9
95	Empowering Indigenous agency through community-driven collaborative management to achieve effective conservation: Hawaiâ€˜i as an example. Pacific Conservation Biology, 2021, 27, 337-344.	0.5	9
96	OpenNahele: the open Hawaiian forest plot database. Biodiversity Data Journal, 2018, 6, e28406.	0.4	9
97	Partitioning hydrologic contributions to an â€˜oldâ€growthâ€™ riparian area in the Huron Mountains of Michigan, USA. Ecohydrology, 2010, 3, 315-324.	1.1	8
98	Digital data collection in forest dynamics plots. Methods in Ecology and Evolution, 2010, 1, 274-279.	2.2	8
99	Impact of Mean Annual Temperature on Nutrient Availability in a Tropical Montane Wet Forest. Frontiers in Plant Science, 2020, 11, 784.	1.7	8
100	Restoring Mexican Tropical Dry Forests: A National Review. Sustainability, 2022, 14, 3937.	1.6	8
101	Movements of four native Hawaiian birds across a naturally fragmented landscape. Journal of Avian Biology, 2017, 48, 921-931.	0.6	7
102	Vertical foraging shifts in Hawaiian forest birds in response to invasive rat removal. PLoS ONE, 2018, 13, e0202869.	1.1	7
103	Regional Highlights of Climate Change. Advances in Global Change Research, 2014, , 113-148.	1.6	7
104	Polar grid fraction as an estimator of montane tropical forest canopy structure using airborne lidar. International Journal of Remote Sensing, 2013, 34, 7464-7473.	1.3	6
105	Response to Comment on â€œPlant diversity increases with the strength of negative density dependence at the global scaleâ€. Science, 2018, 360, .	6.0	6
106	A new remote sensing-based carbon sequestration potential index (CSPI): A tool to support land carbon management. Forest Ecology and Management, 2021, 494, 119343.	1.4	6
107	KÅ«ua aku, KÅ«ua mai: An Indigenous Consensus-driven and Place-based Approach to Community Led Dryland Restoration and Stewardship. Forest Ecology and Management, 2022, 506, 119949.	1.4	6
108	Integrating ecosystem services modeling and efficiencies in decision-support models conceptualization for watershed management. Ecological Modelling, 2022, 466, 109879.	1.2	6

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109	Ecosystem consequences of plant genetic divergence with colonization of new habitat. Ecosphere, 2017, 8, e01743.	1.0	5
110	Restoration benefits of soil nutrient manipulation and weeding in invaded dry and wet tropical ecosystems in HawaiÊ»i. Restoration Ecology, 2021, 29, e13390.	1.4	5
111	Optimizing invasive species management using mathematical programming to support stewardship of water and carbon-based ecosystem services. Journal of Environmental Management, 2022, 301, 113803.	3.8	5
112	Centennial-Scale Land-Cover Change on Babeldaob Island, Palau. Land, 2022, 11, 830.	1.2	5
113	Mean annual temperature influences local fine root proliferation and arbuscular mycorrhizal colonization in a tropical wet forest. Ecology and Evolution, 2020, 10, 9635-9646.	0.8	4
114	Successful management of invasive rats across a fragmented landscape. Environmental Conservation, 2021, 48, 200-207.	0.7	4
115	Moisture availability and ecological restoration limit fine fuels and modelled wildfire intensity following nonâ€native ungulate removal in Hawaii. Journal of Applied Ecology, 2021, 58, 2207-2219.	1.9	4
116	A framework for establishing a rapid â€˜ÅŒhiâ€˜a death resistance program. New Forests, 2023, 54, 637-660.	0.7	4
117	Rapid â€˜ÅŒhiâ€˜a Death in Hawaiâ€˜i. , 2022, , 267-289.		4
118	Using a prescribed fire to test custom and standard fuel models for fire behaviour prediction in a nonâ€native, grassâ€invaded tropical dry shrubland. Applied Vegetation Science, 2014, 17, 700-710.	0.9	3
119	Increasing conservation capacity by embracing ritual: kuahu as a portal to the sacred. Pacific Conservation Biology, 2021, 27, 327-336.	0.5	3
120	Climate Adaptation for Tropical Island Land Stewardship: Adapting a Workshop Planning Process to Hawaiâ€˜i. Bulletin of the American Meteorological Society, 2022, 103, E402-E409.	1.7	3
121	A Pantropical Overview of Soils across Tropical Dry Forest Ecoregions. Sustainability, 2022, 14, 6803.	1.6	3
122	Multiscale analysis of canopy arthropod diversity in a volcanically fragmented landscape. Ecosphere, 2019, 10, e02653.	1.0	2
123	Living in kinship within urban landscapes through equitable, multicultural, collaborative stewardship in New York City. , 2020, , 219-240.		2
124	The Influence of Riparian Areas on Direct Surface Runoff of Precipitation Events. Floresta E Ambiente, 2020, 27, .	0.1	1
125	Multi-Stemmed Habit in Trees Contributes Climate Resilience in Tropical Dry Forest. Sustainability, 2022, 14, 6779.	1.6	1
126	On the horizon. Developments in Soil Science, 2019, , 505-510.	0.5	0

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127	Intraspecific Variation Along an Elevational Gradient Alters Seed Scarification Responses in the Polymorphic Tree Species Acacia koa. Frontiers in Plant Science, 2021, 12, 716678.	1.7	0
128	The Important Role of Environmental Stewardship Groups in Supporting Human Health and Well-Being. Frontiers in Sustainable Cities, 2021, 3, .	1.2	0