Simon L Lewis

List of Publications by Year
in descending order

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148 papers	31,323 citations	16411 64 h-index	9311 143 g-index
154 all docs	154 docs citations	154 times ranked	26843 citing authors

#	Article	IF	Citations
1	A Large and Persistent Carbon Sink in the Worldâ€™s Forests. Science, 2011, 333, 988-993.	6.0	5,393
2	Towards a worldwide wood economics spectrum. Ecology Letters, 2009, 12, 351-366.	3.0	2,219
3	Defining the Anthropocene. Nature, 2015, 519, 171-180.	13.7	2,143
4	Benchmark map of forest carbon stocks in tropical regions across three continents. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9899-9904.	3.3	1,659
5	Drought Sensitivity of the Amazon Rainforest. Science, 2009, 323, 1344-1347.	6.0	1,443
6	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	4.2	1,038
7	The 2010 Amazon Drought. Science, 2011, 331, 554-554.	6.0	912
8	Positive biodiversity-productivity relationship predominant in global forests. Science, 2016, 354, .	6.0	864
9	Increasing carbon storage in intact African tropical forests. Nature, 2009, 457, 1003-1006.	13.7	816
10	Variation in wood density determines spatial patterns inAmazonian forest biomass. Global Change Biology, 2004, 10, 545-562.	4.2	633
11	Increasing human dominance of tropical forests. Science, 2015, 349, 827-832.	6.0	551
12	Restoring natural forests is the best way to remove atmospheric carbon. Nature, 2019, 568, 25-28.	13.7	508
13	Increasing dominance of large lianas in Amazonian forests. Nature, 2002, 418, 770-774.	13.7	500
14	The regional variation of aboveground live biomass in old-growth Amazonian forests. Global Change Biology, 2006, 12, 1107-1138.	4.2	497
15	Droughtâ€“mortality relationships for tropical forests. New Phytologist, 2010, 187, 631-646.	3.5	487
16	An integrated panâ€tropical biomass map using multiple reference datasets. Global Change Biology, 2016, 22, 1406-1420.	4.2	469
17	Asynchronous carbon sink saturation in African and Amazonian tropical forests. Nature, 2020, 579, 80-87.	13.7	439
18	The above-ground coarse wood productivity of 104 Neotropical forest plots. Global Change Biology, 2004, 10, 563-591.	4.2	436

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19	Age, extent and carbon storage of the central Congo Basin peatland complex. Nature, 2017, 542, 86-90.	13.7	428
20	Increasing biomass in Amazonian forest plots. Philosophical Transactions of the Royal Society B: Biological Sciences, 2004, 359, 353-365.	1.8	405
21	Simulated resilience of tropical rainforests to CO2-induced climate change. Nature Geoscience, 2013, 6, 268-273.	5.4	358
22	Earth system impacts of the European arrival and Great Dying in the Americas after 1492. Quaternary Science Reviews, 2019, 207, 13-36.	1.4	299
23	Compositional response of Amazon forests to climate change. Global Change Biology, 2019, 25, 39-56.	4.2	265
24	Above-ground biomass and structure of 260 African tropical forests. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120295.	1.8	264
25	Predictable waves of sequential forest degradation and biodiversity loss spreading from an African city. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14556-14561.	3.3	263
26	Tropical forests and the changing earth system. Philosophical Transactions of the Royal Society B: Biological Sciences, 2006, 361, 195-210.	1.8	262
27	The high value of logged tropical forests: lessons from northern Borneo. Biodiversity and Conservation, 2010, 19, 985-997.	1.2	253
28	Diversity and carbon storage across the tropical forest biome. Scientific Reports, 2017, 7, 39102.	1.6	251
29	Markedly divergent estimates of ‹scp›A‹/scp›mazon forest carbon density from ground plots and satellites. Global Ecology and Biogeography, 2014, 23, 935-946.	2.7	248
30	Changing Ecology of Tropical Forests: Evidence and Drivers. Annual Review of Ecology, Evolution, and Systematics, 2009, 40, 529-549.	3.8	229
31	Topography shapes the structure, composition and function of tropical forest landscapes. Ecology Letters, 2018, 21, 989-1000.	3.0	215
32	Hyperdominance in Amazonian forest carbon cycling. Nature Communications, 2015, 6, 6857.	5.8	214
33	Fingerprinting the impacts of global change on tropical forests. Philosophical Transactions of the Royal Society B: Biological Sciences, 2004, 359, 437-462.	1.8	213
34	Droughtâ€‐induced shifts in the floristic and functional composition of tropical forests in Ghana. Ecology Letters, 2012, 15, 1120-1129.	3.0	205
35	Long-term thermal sensitivity of Earthâ€™s tropical forests. Science, 2020, 368, 869-874.	6.0	198
36	The changing Amazon forest. Philosophical Transactions of the Royal Society B: Biological Sciences, 2008, 363, 1819-1827.	1.8	188

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37	Tropical forest tree mortality, recruitment and turnover rates: calculation, interpretation and comparison when census intervals vary. Journal of Ecology, 2004, 92, 929-944.	1.9	181
38	Ecosystem heterogeneity determines the ecological resilience of the Amazon to climate change. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 793-797.	3.3	161
39	ForestPlots.net: a web application and research tool to manage and analyse tropical forest plot data. Journal of Vegetation Science, 2011, 22, 610-613.	1.1	157
40	TESSA: A toolkit for rapid assessment of ecosystem services at sites of biodiversity conservation importance. Ecosystem Services, 2013, 5, 51-57.	2.3	153
41	Seasonal drought limits tree species across the Neotropics. Ecography, 2017, 40, 618-629.	2.1	143
42	Area-based vs tree-centric approaches to mapping forest carbon in Southeast Asian forests from airborne laser scanning data. Remote Sensing of Environment, 2017, 194, 77-88.	4.6	142
43	Mechanisms of monodominance in diverse tropical tree-dominated systems. Journal of Ecology, 2011, 99, 891-898.	1.9	137
44	African rainforests: past, present and future. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120312.	1.8	131
45	EFFECTS OF ABOVE- AND BELOWGROUND COMPETITION ON GROWTH AND SURVIVAL OF RAIN FOREST TREE SEEDLINGS. Ecology, 2000, 81, 2525-2538.	1.5	119
46	Implementation and opportunity costs of reducing deforestation and forest degradation in Tanzania. Nature Climate Change, 2011, 1, 161-164.	8.1	117
47	Long-term carbon sink in Borneoâ€™s forests halted by drought and vulnerable to edge effects. Nature Communications, 2017, 8, 1966.	5.8	116
48	The odd man out? Might climate explain the lower tree Î±â€diversity of African rain forests relative to Amazonian rain forests?. Journal of Ecology, 2007, 95, 1058-1071.	1.9	115
49	Predictive systems ecology. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20131452.	1.2	114
50	Aboveground biomass density models for NASAâ€™s Global Ecosystem Dynamics Investigation (GEDI) lidar mission. Remote Sensing of Environment, 2022, 270, 112845.	4.6	108
51	On the delineation of tropical vegetation types with an emphasis on forest/savanna transitions. Plant Ecology and Diversity, 2013, 6, 101-137.	1.0	105
52	Residence times of woody biomass in tropical forests. Plant Ecology and Diversity, 2013, 6, 139-157.	1.0	104
53	Getting ready for REDD+ in Tanzania: a case study of progress and challenges. Oryx, 2010, 44, 339-351.	0.5	103
54	Ground Data are Essential for Biomass Remote Sensing Missions. Surveys in Geophysics, 2019, 40, 863-880.	2.1	91

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55	Carbon sequestration and biodiversity following 18 years of active tropical forest restoration. Forest Ecology and Management, 2016, 373, 44-55.	1.4	88
56	The number of tree species on Earth. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	86
57	Measuring, modeling and mapping ecosystem services in the Eastern Arc Mountains of Tanzania. Progress in Physical Geography, 2011, 35, 595-611.	1.4	84
58	Field methods for sampling tree height for tropical forest biomass estimation. Methods in Ecology and Evolution, 2018, 9, 1179-1189.	2.2	78
59	Panâ€tropical prediction of forest structure from the largest trees. Global Ecology and Biogeography, 2018, 27, 1366-1383.	2.7	78
60	Estimating aboveground net biomass change for tropical and subtropical forests: Refinement of IPCC default rates using forest plot data. Global Change Biology, 2019, 25, 3609-3624.	4.2	78
61	Tropical forest wood production: a crossâ€continental comparison. Journal of Ecology, 2014, 102, 1025-1037.	1.9	77
62	Methods to estimate aboveground wood productivity from long-term forest inventory plots. Forest Ecology and Management, 2014, 320, 30-38.	1.4	75
63	Drier tropical forests are susceptible to functional changes in response to a longâ€term drought. Ecology Letters, 2019, 22, 855-865.	3.0	75
64	Phylogenetic diversity of Amazonian tree communities. Diversity and Distributions, 2015, 21, 1295-1307.	1.9	72
65	Implications of future climate and atmospheric CO₂ content for regional biogeochemistry, biogeography and ecosystem services across East Africa. Global Change Biology, 2010, 16, 617-640.	4.2	71
66	Carbon storage, structure and composition of miombo woodlands in Tanzaniaâ€™s Eastern Arc Mountains. African Journal of Ecology, 2011, 49, 332-342.	0.4	69
67	High aboveground carbon stock of African tropical montane forests. Nature, 2021, 596, 536-542.	13.7	65
68	Congo Basin peatlands: threats and conservation priorities. Mitigation and Adaptation Strategies for Global Change, 2019, 24, 669-686.	1.0	64
69	Fast demographic traits promote high diversification rates of Amazonian trees. Ecology Letters, 2014, 17, 527-536.	3.0	63
70	We must set planetary boundaries wisely. Nature, 2012, 485, 417-417.	13.7	62
71	Tree mode of death and mortality risk factors across Amazon forests. Nature Communications, 2020, 11, 5515.	5.8	62
72	The global abundance of tree palms. Global Ecology and Biogeography, 2020, 29, 1495-1514.	2.7	62

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73	Diversity and aboveground biomass in three tropical forest types in the Dja Biosphere Reserve, Cameroon. African Journal of Ecology, 2010, 48, 1053-1063.	0.4	61
74	Long-term droughts may drive drier tropical forests towards increased functional, taxonomic and phylogenetic homogeneity. Nature Communications, 2020, 11, 3346.	5.8	61
75	Comparison of Small- and Large-Footprint Lidar Characterization of Tropical Forest Aboveground Structure and Biomass: A Case Study From Central Gabon. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3512-3526.	2.3	60
76	Competition influences tree growth, but not mortality, across environmental gradients in Amazonia and tropical Africa. Ecology, 2020, 101, e03052.	1.5	57
77	Comment on â€œThe global tree restoration potentialâ€• Science, 2019, 366, .	6.0	55
78	A transparent framework for defining the Anthropocene Epoch. Infrastructure Asset Management, 2015, 2, 128-146.	1.2	54
79	Land cover change and carbon emissions over 100Âyears in an <scp>A</scp>frican biodiversity hotspot. Global Change Biology, 2016, 22, 2787-2800.	4.2	52
80	Biogeographic distributions of neotropical trees reflect their directly measured drought tolerances. Scientific Reports, 2017, 7, 8334.	1.6	51
81	In Situ Reference Datasets From the TropiSAR and AfriSAR Campaigns in Support of Upcoming Spaceborne Biomass Missions. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3617-3627.	2.3	49
82	A comprehensive framework for assessing the accuracy and uncertainty of global above-ground biomass maps. Remote Sensing of Environment, 2022, 272, 112917.	4.6	48
83	Soil Does Not Explain Monodominance in a Central African Tropical Forest. PLoS ONE, 2011, 6, e16996.	1.1	47
84	Estimating aboveground carbon density and its uncertainty in Borneo's structurally complex tropical forests using airborne laser scanning. Biogeosciences, 2018, 15, 3811-3830.	1.3	47
85	Anthropocene: Earth System, geological, philosophical and political paradigm shifts. Infrastructure Asset Management, 2015, 2, 108-116.	1.2	46
86	An Integrated Framework to Assess Greenwashing. Sustainability, 2022, 14, 4431.	1.6	46
87	African Savanna-Forest Boundary Dynamics: A 20-Year Study. PLoS ONE, 2016, 11, e0156934.	1.1	44
88	Spatial Distribution of Carbon Stored in Forests of theÂDemocratic Republic of Congo. Scientific Reports, 2017, 7, 15030.	1.6	44
89	The Forest Observation System, building a global reference dataset for remote sensing of forest biomass. Scientific Data, 2019, 6, 198.	2.4	44
90	The persistence of carbon in the African forest understory. Nature Plants, 2019, 5, 133-140.	4.7	41

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91	Evaluating the tropical forest carbon sink. Global Change Biology, 2014, 20, 2039-2041.	4.2	39
92	Neogene origins and implied warmth tolerance of Amazon tree species. Ecology and Evolution, 2013, 3, 162-169.	0.8	38
93	Pantropical modelling of canopy functional traits using Sentinel-2 remote sensing data. Remote Sensing of Environment, 2021, 252, 112122.	4.6	38
94	Are the dynamics of tropical forests dominated by large and rare disturbance events?. Ecology Letters, 2009, 12, E19-21; discussion E22-5.	3.0	37
95	Height-diameter allometry and above ground biomass in tropical montane forests: Insights from the Albertine Rift in Africa. PLoS ONE, 2017, 12, e0179653.	1.1	37
96	Resistance of African tropical forests to an extreme climate anomaly. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	37
97	Assessment of Bias in Pan-Tropical Biomass Predictions. Frontiers in Forests and Global Change, 2020, 3, .	1.0	36
98	The Role of Forest Elephants in Shaping Tropical Forestâ€“Savanna Coexistence. Ecosystems, 2020, 23, 602-616.	1.6	33
99	The NASA AfriSAR campaign: Airborne SAR and lidar measurements of tropical forest structure and biomass in support of current and future space missions. Remote Sensing of Environment, 2021, 264, 112533.	4.6	33
100	Evaluating the potential of fullâ€waveform lidar for mapping panâ€tropical tree species richness. Global Ecology and Biogeography, 2020, 29, 1799-1816.	2.7	31
101	Predicting alpha diversity of African rain forests: models based on climate and satellite-derived data do not perform better than a purely spatial model. Journal of Biogeography, 2011, 38, 1164-1176.	1.4	30
102	New insights on above ground biomass and forest attributes in tropical montane forests. Forest Ecology and Management, 2017, 399, 235-246.	1.4	30
103	Phylogenetic composition and structure of tree communities shed light on historical processes influencing tropical rainforest diversity. Ecography, 2017, 40, 521-530.	2.1	29
104	Impacts of global atmospheric change on tropical forests. Trends in Ecology and Evolution, 2006, 21, 173-174.	4.2	27
105	Pantropical variability in tree crown allometry. Global Ecology and Biogeography, 2021, 30, 459-475.	2.7	27
106	Towards Regional, Error-Bounded Landscape Carbon Storage Estimates for Data-Deficient Areas of the World. PLoS ONE, 2012, 7, e44795.	1.1	27
107	Quantifying and understanding carbon storage and sequestration within the Eastern Arc Mountains of Tanzania, a tropical biodiversity hotspot. Carbon Balance and Management, 2014, 9, 2.	1.4	26
108	Biome-specific effects of nitrogen and phosphorus on the photosynthetic characteristics of trees at a forest-savanna boundary in Cameroon. Oecologia, 2015, 178, 659-672.	0.9	25

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109	Foliar trait contrasts between African forest and savanna trees: genetic versus environmental effects. Functional Plant Biology, 2015, 42, 63.	1.1	23
110	Mixed-Forest Species Establishment in a Monodominant Forest in Central Africa: Implications for Tropical Forest Invasibility. PLoS ONE, 2014, 9, e97585.	1.1	23
111	Earth System Models Are Not Capturing Presentâ€Day Tropical Forest Carbon Dynamics. Earth's Future, 2021, 9, e2020EF001874.	2.4	22
112	Investigating diversity dependence of tropical forest litter decomposition: experiments and observations from Central Africa. Journal of Vegetation Science, 2012, 23, 223-235.	1.1	21
113	The Paris Agreement has solved a troubling problem. Nature, 2016, 532, 283-283.	13.7	21
114	Aboveground forest biomass varies across continents, ecological zones and successional stages: refined IPCC default values for tropical and subtropical forests. Environmental Research Letters, 2022, 17, 014047.	2.2	21
115	The past, present and future of Africa's rainforests. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120293.	1.8	20
116	Exploring the relation between remotely sensed vertical canopy structure and tree species diversity in Gabon. Environmental Research Letters, 2019, 14, 094013.	2.2	20
117	The production, storage, and flow of carbon in Amazonian forests. Geophysical Monograph Series, 2009, , 355-372.	0.1	19
118	Conservation implications of recent advances in biodiversityâ€“functioning research. Biological Conservation, 2012, 151, 26-31.	1.9	19
119	Old growth Afrotropical forests critical for maintaining forest carbon. Global Ecology and Biogeography, 2020, 29, 1785-1798.	2.7	19
120	Shifting dynamics of climate-functional groups in old-growth Amazonian forests. Plant Ecology and Diversity, 2014, 7, 267-279.	1.0	18
121	First Evidence of Peat Domes in the Congo Basin using LiDAR from a Fixed-Wing Drone. Remote Sensing, 2020, 12, 2196.	1.8	18
122	Effects of Earth system feedbacks on the potential mitigation of large-scale tropical forest restoration. Biogeosciences, 2021, 18, 2627-2647.	1.3	18
123	Making forest data fair and open. Nature Ecology and Evolution, 2022, 6, 656-658.	3.4	18
124	Water table depth modulates productivity and biomass across Amazonian forests. Global Ecology and Biogeography, 2022, 31, 1571-1588.	2.7	17
125	Changes in Amazonian forest biomass, dynamics, and composition, 1980â€“2002. Geophysical Monograph Series, 2009, , 373-387.	0.1	16
126	Consistent, small effects of treefall disturbances on the composition and diversity of four Amazonian forests. Journal of Ecology, 2016, 104, 497-506.	1.9	15

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127	Recent Changes in Amazon Forest Biomass and Dynamics. Ecological Studies, 2016, , 191-224.	0.4	11
128	How the Glasgow Declaration on Forests can help keep alive the 1.5â€‰Â°C target. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	11
129	Stand structure and species co-occurrence in mixed and monodominant Central African tropical forests. Journal of Tropical Ecology, 2014, 30, 447-455.	0.5	10
130	Recent changes in tropical forest biomass and dynamics. , 2014, , 77-108.		10
131	How to beat the media in the climate street fight. Nature, 2010, 468, 7-7.	13.7	9
132	Congo Basin rainforest â€" invest US$150 million in science. Nature, 2021, 598, 411-414.	13.7	9
133	Geological evidence for the Anthropocene. Science, 2015, 349, 246-247.	6.0	8
134	Functional susceptibility of tropical forests to climate change. Nature Ecology and Evolution, 2022, 6, 878-889.	3.4	8
135	MODIS Vegetation Continuous Fields tree cover needs calibrating in tropical savannas. Biogeosciences, 2022, 19, 1377-1394.	1.3	7
136	Forests are more than sticks of carbon. Nature, 2014, 507, 306-306.	13.7	4
137	Carbon emissions: the poorest forest dwellers could suffer. Nature, 2009, 462, 567-567.	13.7	3
138	Additive influences of soil and climate gradients drive tree community composition of Central African rain forests. Journal of Vegetation Science, 2020, 31, 1154-1167.	1.1	3
139	Late twentieth-century patterns and trends in Amazon tree turnover. , 2005, , 107-128.		3
140	EFFECTS OF ABOVE- AND BELOWGROUND COMPETITION ON GROWTH AND SURVIVAL OF RAIN FOREST TREE SEEDLINGS. , 2000, 81, 2525.		3
141	Browse from Three Tree Legumes Increases Forage Production for Cattle in a Silvopastoral System in the Southwest Amazon. Animals, 2021, 11, 3585.	1.0	3
142	Late twentieth-century trends in the biomass of Amazonian forest plots. , 2005, , 129-142.		2
143	Geological evidence for the Anthropocene. Science, 2015, 349, 246-247.	6.0	2
144	Scientist-versus-activist debates mislead the public. Nature, 2014, 506, 409-409.	13.7	1

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145	Aboveground biomass estimation in tropical forests at single tree level with ALS data. , 2016, , .		1
146	Changing Tropical Forest Dynamics and Their Effects on Canopy Geometry and Tropical Forest Biodiversity. , 2013, , 247-260.		1
147	Predicting the impacts of global environmental changes on tropical forests. , 2005, , 41-56.		1
148	Late twentieth-century trends in the structure and dynamics of South American forests. , 2005, , 143-154.		0