Christopher E Doughty

List of Publications by Citations

83 papers	4,739 citations	35 h-index	68 g-index
91 ext. papers	5,694 ext. citations	8 avg, IF	5.62 L-index

#	Paper	IF	Citations
83	Drought impact on forest carbon dynamics and fluxes in Amazonia. *Nature*, **2015**, 519, 78-82	50.4	341
82	Death from drought in tropical forests is triggered by hydraulics not carbon starvation. *Nature*, **2015**, 528, 119-22	50.4	339
81	Drought sensitivity of Amazonian carbon balance revealed by atmospheric measurements. *Nature*, **2014**, 506, 76-80	50.4	323
80	The allocation of ecosystem net primary productivity in tropical forests. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2011**, 366, 3225-45	5.8	256
79	Megafauna and ecosystem function from the Pleistocene to the Anthropocene. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 838-46	11.5	245
78	Global nutrient transport in a world of giants. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 868-73	11.5	215
77	Drivers and mechanisms of tree mortality in moist tropical forests. *New Phytologist*, **2018**, 219, 851-869	9.8	209
76	Are tropical forests near a high temperature threshold?. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		160
75	Herbivory makes major contributions to ecosystem carbon and nutrient cycling in tropical forests. *Ecology Letters*, **2014**, 17, 324-32	10	140
74	Rewilding: Science, Practice, and Politics. *Annual Review of Environment and Resources*, **2015**, 40, 39-62	17.2	135
73	Seasonal patterns of tropical forest leaf area index and CO2 exchange. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		127
72	The legacy of the Pleistocene megafauna extinctions on nutrient availability in Amazonia. *Nature Geoscience*, **2013**, 6, 761-764	18.3	120
71	The linkages between photosynthesis, productivity, growth and biomass in lowland Amazonian forests. *Global Change Biology*, **2015**, 21, 2283-95	11.4	105
70	Leaf aging of Amazonian canopy trees as revealed by spectral and physiochemical measurements. *New Phytologist*, **2017**, 214, 1049-1063	9.8	101
69	Animals and the zoogeochemistry of the carbon cycle. *Science*, **2018**, 362,	33.3	93
68	Residence times of woody biomass in tropical forests. *Plant Ecology and Diversity*, **2013**, 6, 139-157	2.2	90
67	Predicting tropical plant physiology from leaf and canopy spectroscopy. *Oecologia*, **2011**, 165, 289-99	2.9	88

66	Allocation trade-offs dominate the response of tropical forest growth to seasonal and interannual drought. *Ecology*, **2014**, 95, 2192-201	4.6	73
65	The productivity, metabolism and carbon cycle of two lowland tropical forest plots in south-western Amazonia, Peru. *Plant Ecology and Diversity*, **2014**, 7, 85-105	2.2	73
64	Temperature and rainfall interact to control carbon cycling in tropical forests. *Ecology Letters*, **2017**, 20, 779-788	10	71
63	The variation of productivity and its allocation along a tropical elevation gradient: a whole carbon budget perspective. *New Phytologist*, **2017**, 214, 1019-1032	9.8	68
62	Megafauna extinction, tree species range reduction, and carbon storage in Amazonian forests. *Ecography*, **2016**, 39, 194-203	6.5	64
61	Lateral diffusion of nutrients by mammalian herbivores in terrestrial ecosystems. *PLoS ONE*, **2013**, 8, e71352	3.7	59
60	Biophysical feedbacks between the Pleistocene megafauna extinction and climate: The first human-induced global warming?. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	58
59	An In Situ Leaf and Branch Warming Experiment in the Amazon. *Biotropica*, **2011**, 43, 658-665	2.3	56
58	Productivity and carbon allocation in a tropical montane cloud forest in the Peruvian Andes. *Plant Ecology and Diversity*, **2014**, 7, 107-123	2.2	55
57	A comparison of plot-based satellite and Earth system model estimates of tropical forest net primary production. *Global Biogeochemical Cycles*, **2015**, 29, 626-644	5.9	52
56	Ecosystem respiration and net primary productivity after 8–10 years of experimental through-fall reduction in an eastern Amazon forest. *Plant Ecology and Diversity*, **2014**, 7, 7-24	2.2	43
55	The impact of the megafauna extinctions on savanna woody cover in South America. *Ecography*, **2016**, 39, 213-222	6.5	42
54	The production, allocation and cycling of carbon in a forest on fertile terra preta soil in eastern Amazonia compared with a forest on adjacent infertile soil. *Plant Ecology and Diversity*, **2014**, 7, 41-53	2.2	40
53	Can crop albedo be increased through the modification of leaf trichomes, and could this cool regional climate?. *Climatic Change*, **2011**, 104, 379-387	4.5	39
52	Seasonal production, allocation and cycling of carbon in two mid-elevation tropical montane forest plots in the Peruvian Andes. *Plant Ecology and Diversity*, **2014**, 7, 125-142	2.2	38
51	Megafauna in the Earth system. *Ecography*, **2016**, 39, 99-108	6.5	37
50	Ecosystem productivity and carbon cycling in intact and annually burnt forest at the dry southern limit of the Amazon rainforest (Mato Grosso, Brazil). *Plant Ecology and Diversity*, **2014**, 7, 25-40	2.2	36
49	The megabiota are disproportionately important for biosphere functioning. *Nature Communications* , **2020**, 11, 699	17.4	35

48	Seasonal trends of Amazonian rainforest phenology, net primary productivity, and carbon allocation. *Global Biogeochemical Cycles*, **2016**, 30, 700-715	5.9	34
47	The sensitivity of wood production to seasonal and interannual variations in climate in a lowland Amazonian rainforest. *Oecologia*, **2014**, 174, 295-306	2.9	34
46	Source and sink carbon dynamics and carbon allocation in the Amazon basin. *Global Biogeochemical Cycles*, **2015**, 29, 645-655	5.9	33
45	Effect of smoke on subcanopy shaded light, canopy temperature, and carbon dioxide uptake in an Amazon rainforest. *Global Biogeochemical Cycles*, **2010**, 24, n/a-n/a	5.9	33
44	Preindustrial Human Impacts on Global and Regional Environment. *Annual Review of Environment and Resources*, **2013**, 38, 503-527	17.2	32
43	Circadian rhythms constrain leaf and canopy gas exchange in an Amazonian forest. *Geophysical Research Letters*, **2006**, 33,	4.9	32
42	Detecting tree-like multicellular life on extrasolar planets. *Astrobiology*, **2010**, 10, 869-79	3.7	30
41	Assessing trait-based scaling theory in tropical forests spanning a broad temperature gradient. *Global Ecology and Biogeography*, **2017**, 26, 1357-1373	6.1	29
40	Modelling climate change responses in tropical forests: similar productivity estimates across five models, but different mechanisms and responses. *Geoscientific Model Development*, **2015**, 8, 1097-1110	6.3	29
39	The productivity, allocation and cycling of carbon in forests at the dry margin of the Amazon forest in Bolivia. *Plant Ecology and Diversity*, **2014**, 7, 55-69	2.2	28
38	ENSO Drives interannual variation of forest woody growth across the tropics. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	28
37	Carbon stocks in central African forests enhanced by elephant disturbance. *Nature Geoscience*, **2019**, 12, 725-729	18.3	26
36	The seasonal cycle of productivity, metabolism and carbon dynamics in a wet aseasonal forest in north-west Amazonia (Iquitos, Peru). *Plant Ecology and Diversity*, **2014**, 7, 71-83	2.2	22
35	Andean grasslands are as productive as tropical cloud forests. *Environmental Research Letters*, **2014** , 9, 115011	6.2	21
34	Herbivores increase the global availability of nutrients over millions of years. *Nature Ecology and Evolution*, **2017**, 1, 1820-1827	12.3	20
33	What controls variation in carbon use efficiency among Amazonian tropical forests?. *Biotropica*, **2018**, 50, 16-25	2.3	20
32	Seasonality of above-ground net primary productivity along an Andean altitudinal transect in Peru. *Journal of Tropical Ecology*, **2014**, 30, 503-519	1.3	20
31	Assessing the role of megafauna in tropical forest ecosystems and biogeochemical cycles the potential of vegetation models. *Ecography*, **2018**, 41, 1934-1954	6.5	19

30	Theoretical Impact of Changing Albedo on Precipitation at the Southernmost Boundary of the ITCZ in South America. *Earth Interactions*, **2012**, 16, 1-14	1.5	18
29	Interdependency of plants and animals in controlling the sodium balance of ecosystems and the impacts of global defaunation. *Ecography*, **2016**, 39, 204-212	6.5	18
28	Assessing above-ground woody debris dynamics along a gradient of elevation in Amazonian cloud forests in Peru: balancing above-ground inputs and respiration outputs. *Plant Ecology and Diversity*, **2014**, 7, 143-160	2.2	17
27	Mapping the Leaf Economic Spectrum across West African Tropical Forests Using UAV-Acquired Hyperspectral Imagery. *Remote Sensing*, **2018**, 10, 1532	5	16
26	Tropical forest leaves may darken in response to climate change. *Nature Ecology and Evolution*, **2018**, 2, 1918-1924	12.3	16
25	Impacts of fire on sources of soil CO efflux in a dry Amazon rain forest. *Global Change Biology*, **2018**, 24, 3629-3641	11.4	15
24	Mycorrhizal symbioses influence the trophic structure of the Serengeti. *Journal of Ecology*, **2018**, 106, 536-546	6	14
23	The impact of large animal extinctions on nutrient fluxes in early river valley civilizations. *Ecosphere*, **2013**, 4, art148	3.1	14
22	Individual-Based Modeling of Amazon Forests Suggests That Climate Controls Productivity While Traits Control Demography. *Frontiers in Earth Science*, **2019**, 7,	3.5	12
21	The Global Ecosystems Monitoring network: Monitoring ecosystem productivity and carbon cycling across the tropics. *Biological Conservation*, **2021**, 253, 108889	6.2	12
20	Agricultural net primary production in relation to that liberated by the extinction of Pleistocene mega-herbivores: an estimate of agricultural carrying capacity?. *Environmental Research Letters*, **2010**, 5, 044001	6.2	11
19	Can Leaf Spectroscopy Predict Leaf and Forest Traits Along a Peruvian Tropical Forest Elevation Gradient?. *Journal of Geophysical Research G: Biogeosciences*, **2017**, 122, 2952-2965	3.7	10
18	Montane forest root growth and soil organic layer depth as potential factors stabilizing Cenozoic global change. *Geophysical Research Letters*, **2014**, 41, 983-990	4.9	9
17	The development of agriculture in the Americas: an ecological perspective. *Ecosphere*, **2010**, 1, art21	3.1	9
16	Megafauna decline have reduced pathogen dispersal which may have increased emergent infectious diseases. *Ecography*, **2020**, 43, 1107-1117	6.5	7
15	Greater stem growth, woody allocation, and aboveground biomass in Paleotropical forests than in Neotropical forests. *Ecology*, **2019**, 100, e02589	4.6	5
14	Changing NPP consumption patterns in the Holocene: From megafauna-liberated NPP to ecological bankruptcy *Infrastructure Asset Management*, **2016**, 3, 174-187	1.8	4
13	Variations of carbon allocation and turnover time across tropical forests. *Global Ecology and Biogeography*, **2021**, 30, 1271-1285	6.1	3

12	Detecting 3D Vegetation Structure with the Galileo Space Probe: Can a Distant Probe Detect Vegetation Structure on Earth?. *PLoS ONE*, **2016**, 11, e0167188	3.7	2
11	Megafauna decline have reduced pathogen dispersal which may have increased emergent infectious diseases		2
10	Large predators can mitigate nutrient losses associated with off-site removal of animals from a wildlife reserve. *Journal of Applied Ecology*, **2021**, 58, 1360	5.8	2
9	Fine root dynamics across pantropical rainforest ecosystems. *Global Change Biology*, **2021**, 27, 3657-3680	11.4	2
8	Predicting tropical tree mortality with leaf spectroscopy. *Biotropica*, **2021**, 53, 581-595	2.3	1
7	Hyaenas play unique ecosystem role by recycling key nutrients in bones. *African Journal of Ecology*,	0.8	1
6	Improved estimation of gut passage time considerably affects trait-based dispersal models. *Functional Ecology*, **2021**, 35, 860-869	5.6	1
5	The Biogeochemistry of the Main Forest Vegetation Types in Amazonia. *Ecological Studies*, **2016**, 225-266	1.1	0
4	The sixth R: Revitalizing the natural phosphorus pump.. *Science of the Total Environment*, **2022**, 832, 155023	12.2	0
3	Reply to 'Coal geology affects nutrient diffusion modelling in the prehistoric record'. *Nature Ecology and Evolution*, **2019**, 3, 507	12.3	
2	Distinguishing multicellular life on exoplanets by testing Earth as an exoplanet. *International Journal of Astrobiology*, **2020**, 19, 492-499	1.4	
1	Forest Thinning in Ponderosa Pines Increases Carbon Use Efficiency and Energy Flow From Primary Producers to Primary Consumers. *Journal of Geophysical Research G: Biogeosciences*, **2021**, 126, e2020JG005947	3.7	