Roel J Brienen

List of Publications by Citations

84 papers	6,747 citations	43 h-index	82 g-index
90 ext. papers	8,299 ext. citations	9.1 avg, IF	5.26 L-index

#	Paper	IF	Citations
84	Hyperdominance in the Amazonian tree flora. *Science*, **2013**, 342, 1243092	33.3	637
83	Long-term decline of the Amazon carbon sink. *Nature*, **2015**, 519, 344-8	50.4	583
82	Tree height integrated into pantropical forest biomass estimates. *Biogeosciences*, **2012**, 9, 3381-3403	4.6	289
81	Persistent effects of pre-Columbian plant domestication on Amazonian forest composition. *Science* , **2017**, 355, 925-931	33.3	280
80	Intensification of the Amazon hydrological cycle over the last two decades. *Geophysical Research Letters*, **2013**, 40, 1729-1733	4.9	233
79	Drivers and mechanisms of tree mortality in moist tropical forests. *New Phytologist*, **2018**, 219, 851-869	9.8	209
78	Markedly divergent estimates of Amazon forest carbon density from ground plots and satellites. *Global Ecology and Biogeography*, **2014**, 23, 935-946	6.1	205
77	Asynchronous carbon sink saturation in African and Amazonian tropical forests. *Nature*, **2020**, 579, 80-87	50.4	202
76	Relating tree growth to rainfall in Bolivian rain forests: a test for six species using tree ring analysis. *Oecologia*, **2005**, 146, 1-12	2.9	197
75	Diversity and carbon storage across the tropical forest biome. *Scientific Reports*, **2017**, 7, 39102	4.9	177
74	Detecting trends in tree growth: not so simple. *Trends in Plant Science*, **2013**, 18, 11-7	13.1	171
73	What controls tropical forest architecture? Testing environmental, structural and floristic drivers. *Global Ecology and Biogeography*, **2012**, 21, 1179-1190	6.1	158
72	Compositional response of Amazon forests to climate change. *Global Change Biology*, **2019**, 25, 39-56	11.4	158
71	Hyperdominance in Amazonian forest carbon cycling. *Nature Communications*, **2015**, 6, 6857	17.4	157
70	Amazon forest response to repeated droughts. *Global Biogeochemical Cycles*, **2016**, 30, 964-982	5.9	149
69	Oxygen isotopes in tree rings are a good proxy for Amazon precipitation and El Nino-Southern Oscillation variability. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 16957-62	11.5	130
68	Size and frequency of natural forest disturbances and the Amazon forest carbon balance. *Nature Communications*, **2014**, 5, 3434	17.4	128

67	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, 793-7	11.5	127
66	Recent intensification of Amazon flooding extremes driven by strengthened Walker circulation. *Science Advances*, **2018**, 4, eaat8785	14.3	126
65	Variation in stem mortality rates determines patterns of above-ground biomass in Amazonian forests: implications for dynamic global vegetation models. *Global Change Biology*, **2016**, 22, 3996-4013	11.4	99
64	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO. *New Phytologist*, **2021**, 229, 2413-2445	9.8	94
63	Seasonal drought limits tree species across the Neotropics. *Ecography*, **2017**, 40, 618-629	6.5	93
62	Long-term thermal sensitivity of Earth's tropical forests. *Science*, **2020**, 368, 869-874	33.3	92
61	Estimating the global conservation status of more than 15,000 Amazonian tree species. *Science Advances*, **2015**, 1, e1500936	14.3	91
60	Tree Rings in the Tropics: Insights into the Ecology and Climate Sensitivity of Tropical Trees. *Tree Physiology*, **2016**, 439-461		87
59	Detecting evidence for CO2 fertilization from tree ring studies: The potential role of sampling biases. *Global Biogeochemical Cycles*, **2012**, 26, n/a-n/a	5.9	86
58	The use of tree rings in tropical forest management: Projecting timber yields of four Bolivian tree species. *Forest Ecology and Management*, **2006**, 226, 256-267	3.9	84
57	Species Distribution Modelling: Contrasting presence-only models with plot abundance data. *Scientific Reports*, **2018**, 8, 1003	4.9	78
56	Climate-growth analysis for a Mexican dry forest tree shows strong impact of sea surface temperatures and predicts future growth declines. *Global Change Biology*, **2010**, 16, 2001-2012	11.4	76
55	Stable carbon isotopes in tree rings indicate improved water use efficiency and drought responses of a tropical dry forest tree species. *Trees - Structure and Function*, **2011**, 25, 103-113	2.6	73
54	Tree height strongly affects estimates of water-use efficiency responses to climate and CO using isotopes. *Nature Communications*, **2017**, 8, 288	17.4	72
53	Recent Amazon climate as background for possible ongoing and future changes of Amazon humid forests. *Global Biogeochemical Cycles*, **2015**, 29, 1384-1399	5.9	72
52	The carbon balance of South America: a review of the status, decadal trends and main determinants. *Biogeosciences*, **2012**, 9, 5407-5430	4.6	70
51	Tropical tree rings reveal preferential survival of fast-growing juveniles and increased juvenile growth rates over time. *New Phytologist*, **2010**, 185, 759-69	9.8	61
50	Carbon uptake by mature Amazon forests has mitigated Amazon nations' carbon emissions. *Carbon Balance and Management*, **2017**, 12, 1	3.6	56

49	Phylogenetic diversity of Amazonian tree communities. *Diversity and Distributions*, **2015**, 21, 1295-1307	5	56
48	Autocorrelated growth of tropical forest trees: Unraveling patterns and quantifying consequences. *Forest Ecology and Management*, **2006**, 237, 179-190	3.9	56
47	Attaining the canopy in dry and moist tropical forests: strong differences in tree growth trajectories reflect variation in growing conditions. *Oecologia*, **2010**, 163, 485-96	2.9	55
46	Field methods for sampling tree height for tropical forest biomass estimation. *Methods in Ecology and Evolution*, **2018**, 9, 1179-1189	7.7	53
45	Do persistently fast-growing juveniles contribute disproportionately to population growth? A new analysis tool for matrix models and its application to rainforest trees. *American Naturalist*, **2009**, 174, 709-19	3.7	53
44	Pan-tropical prediction of forest structure from the largest trees. *Global Ecology and Biogeography*, **2018**, 27, 1366-1383	6.1	52
43	Fast demographic traits promote high diversification rates of Amazonian trees. *Ecology Letters*, **2014**, 17, 527-36	10	48
42	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	11.4	44
41	Forest carbon sink neutralized by pervasive growth-lifespan trade-offs. *Nature Communications*, **2020**, 11, 4241	17.4	43
40	Tropical forest warming: looking backwards for more insights. *Trends in Ecology and Evolution*, **2012** , 27, 193-4	10.9	42
39	The Potential of Tree Rings for the Study of Forest Succession in Southern Mexico. *Biotropica*, **2009**, 41, 186-195	2.3	40
38	Tree demography dominates long-term growth trends inferred from tree rings. *Global Change Biology*, **2017**, 23, 474-484	11.4	39
37	Oxygen isotopes in tree rings show good coherence between species and sites in Bolivia. *Global and Planetary Change*, **2015**, 133, 298-308	4.2	38
36	Incorporating persistent tree growth differences increases estimates of tropical timber yield. *Frontiers in Ecology and the Environment*, **2007**, 5, 302-306	5.5	38
35	Low Phylogenetic Beta Diversity and Geographic Neo-endemism in Amazonian White-sand Forests. *Biotropica*, **2016**, 48, 34-46	2.3	36
34	Soil physical conditions limit palm and tree basal area in Amazonian forests. *Plant Ecology and Diversity*, **2014**, 7, 215-229	2.2	35
33	Tree height integrated into pan-tropical forest biomass estimates		30
32	The Forest Observation System, building a global reference dataset for remote sensing of forest biomass. *Scientific Data*, **2019**, 6, 198	8.2	29

31	Evolutionary heritage influences Amazon tree ecology. *Proceedings of the Royal Society B: Biological Sciences*, **2016**, 283,	4.4	29
30	Does always form annual rings? Testing ring periodicity across South America using radiocarbon dating. *Trees - Structure and Function*, **2017**, 31, 1999-2009	2.6	28
29	Oxygen isotopes in tree rings record variation in precipitation O and amount effects in the south of Mexico. *Journal of Geophysical Research G: Biogeosciences*, **2013**, 118, 1604-1615	3.7	27
28	Large apparent growth increases in boreal forests inferred from tree-rings are an artefact of sampling biases. *Scientific Reports*, **2019**, 9, 6832	4.9	24
27	Biased-corrected richness estimates for the Amazonian tree flora. *Scientific Reports*, **2020**, 10, 10130	4.9	24
26	Competition influences tree growth, but not mortality, across environmental gradients in Amazonia and tropical Africa. *Ecology*, **2020**, 101, e03052	4.6	24
25	Tree mode of death and mortality risk factors across Amazon forests. *Nature Communications*, **2020** , 11, 5515	17.4	24
24	What drives interannual variation in tree ring oxygen isotopes in the Amazon?. *Geophysical Research Letters*, **2016**, 43, 11,831	4.9	21
23	Rarity of monodominance in hyperdiverse Amazonian forests. *Scientific Reports*, **2019**, 9, 13822	4.9	19
22	Evolutionary diversity is associated with wood productivity in Amazonian forests. *Nature Ecology and Evolution*, **2019**, 3, 1754-1761	12.3	17
21	Imaging spectroscopy predicts variable distance decay across contrasting Amazonian tree communities. *Journal of Ecology*, **2019**, 107, 696-710	6	17
20	Global tree-ring analysis reveals rapid decrease in tropical tree longevity with temperature. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 33358-33364	11.5	14
19	Dominant tree species drive beta diversity patterns in western Amazonia. *Ecology*, **2019**, 100, e02636	4.6	13
18	Contrasting controls on tree ring isotope variation for Amazon floodplain and terra firme trees. *Tree Physiology*, **2019**, 39, 845-860	4.2	12
17	Individual-Based Modeling of Amazon Forests Suggests That Climate Controls Productivity While Traits Control Demography. *Frontiers in Earth Science*, **2019**, 7,	3.5	12
16	Expanding tropical forest monitoring into Dry Forests: The DRYFLOR protocol for permanent plots. *Plants People Planet*, **2021**, 3, 295-300	4.1	9
15	Current Brazilian forest management guidelines are unsustainable for Swietenia , Cedrela , Amburana , and Copaifera : A response to da Cunha and colleagues. *Forest Ecology and Management* , **2017**, 386, 81-83	3.9	8
14	Economically important species dominate aboveground carbon storage in forests of southwestern Amazonia. *Ecology and Society*, **2017**, 22,	4.1	6

13	Questioning the Influence of Sunspots on Amazon Hydrology: Even a Broken Clock Tells the Right Time Twice a Day. *Geophysical Research Letters*, **2018**, 45, 1419-1422	4.9	6
12	Can We Detect Changes in Amazon Forest Structure Using Measurements of the Isotopic Composition of Precipitation?. *Geophysical Research Letters*, **2019**, 46, 14807-14816	4.9	5
11	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	6.2	5
10	Amazon tree dominance across forest strata. *Nature Ecology and Evolution*, **2021**, 5, 757-767	12.3	5
9	Intra-annual oxygen isotopes in the tree rings record precipitation extremes and water reservoir levels in the Metropolitan Area of São Paulo, Brazil. *Science of the Total Environment*, **2020**, 743, 140798	10.2	3
8	Does soil pyrogenic carbon determine plant functional traits in Amazon Basin forests?. *Plant Ecology*, **2017**, 218, 1047-1062	1.7	2
7	Tree-ring oxygen isotopes record a decrease in Amazon dry season rainfall over the past 40 years. *Climate Dynamics*,1	4.2	2
6	Tropical tree growth driven by dry-season climate variability. *Nature Geoscience*,	18.3	2
5	Paired analysis of tree ring width and carbon isotopes indicate when controls on tropical tree growth change from light to water limitations. *Tree Physiology*, **2021**,	4.2	1
4	How Robust Is the Apparent Break-Down of Northern High-Latitude Temperature Control on Spring Carbon Uptake?. *Geophysical Research Letters*, **2021**, 48, e2020GL091601	4.9	0
3	Relationships between species richness and ecosystem services in Amazonian forests strongly influenced by biogeographical strata and forest types.. *Scientific Reports*, **2022**, 12, 5960	4.9	0
2	A response to Trends in tropical tree growth: reanalysis confirms earlier findings *Global Change Biology*, **2017**, 23, e5-e6	11.4	
1	Photosynthesis in action: The global view **2022**, 243-269		