Roel J Brienen

List of Publications by Year
in descending order

85 papers	9,799 citations	43973 48 h-index	56606 83 g-index
90 all docs	90 docs citations	90 times ranked	11453 citing authors

#	Article	IF	Citations
1	Hyperdominance in the Amazonian Tree Flora. Science, 2013, 342, 1243092.	6.0	873
2	Long-term decline of the Amazon carbon sink. Nature, 2015, 519, 344-348.	13.7	796
3	Persistent effects of pre-Columbian plant domestication on Amazonian forest composition. Science, 2017, 355, 925-931.	6.0	443
4	Asynchronous carbon sink saturation in African and Amazonian tropical forests. Nature, 2020, 579, 80-87.	13.7	439
5	Tree height integrated into pantropical forest biomass estimates. Biogeosciences, 2012, 9, 3381-3403.	1.3	373
6	Drivers and mechanisms of tree mortality in moist tropical forests. New Phytologist, 2018, 219, 851-869.	3.5	341
7	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO₂. New Phytologist, 2021, 229, 2413-2445.	3.5	286
8	Intensification of the Amazon hydrological cycle over the last two decades. Geophysical Research Letters, 2013, 40, 1729-1733.	1.5	284
9	Compositional response of Amazon forests to climate change. Global Change Biology, 2019, 25, 39-56.	4.2	265
10	Diversity and carbon storage across the tropical forest biome. Scientific Reports, 2017, 7, 39102.	1.6	251
11	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
12	Relating tree growth to rainfall in Bolivian rain forests: a test for six species using tree ring analysis. Oecologia, 2005, 146, 1-12.	0.9	229
13	Detecting trends in tree growth: not so simple. Trends in Plant Science, 2013, 18, 11-17.	4.3	222
14	Hyperdominance in Amazonian forest carbon cycling. Nature Communications, 2015, 6, 6857.	5.8	214
15	Recent intensification of Amazon flooding extremes driven by strengthened Walker circulation. Science Advances, 2018, 4, eaat8785.	4.7	205
16	Amazon forest response to repeated droughts. Global Biogeochemical Cycles, 2016, 30, 964-982.	1.9	201
17	Long-term thermal sensitivity of Earthâ€™s tropical forests. Science, 2020, 368, 869-874.	6.0	198
18	What controls tropical forest architecture? Testing environmental, structural and floristic drivers. Global Ecology and Biogeography, 2012, 21, 1179-1190.	2.7	187

#	Article	IF	Citations
19	Size and frequency of natural forest disturbances and the Amazon forest carbon balance. Nature Communications, 2014, 5, 3434.	5.8	169
20	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
21	Oxygen isotopes in tree rings are a good proxy for Amazon precipitation and El NiÃ±o-Southern Oscillation variability. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16957-16962.	3.3	158
22	Seasonal drought limits tree species across the Neotropics. Ecography, 2017, 40, 618-629.	2.1	143
23	Estimating the global conservation status of more than 15,000 Amazonian tree species. Science Advances, 2015, 1, e1500936.	4.7	122
24	Forest carbon sink neutralized by pervasive growth-lifespan trade-offs. Nature Communications, 2020, 11, 4241.	5.8	122
25	Tree Rings in the Tropics: Insights into the Ecology and Climate Sensitivity of Tropical Trees. Tree Physiology, 2016, , 439-461.	0.9	117
26	Variation in stem mortality rates determines patterns of aboveâ€ground biomass in <scp>A</scp>mazonian forests: implications for dynamic global vegetation models. Global Change Biology, 2016, 22, 3996-4013.	4.2	116
27	Species Distribution Modelling: Contrasting presence-only models with plot abundance data. Scientific Reports, 2018, 8, 1003.	1.6	113
28	Recent Amazon climate as background for possible ongoing and future changes of Amazon humid forests. Global Biogeochemical Cycles, 2015, 29, 1384-1399.	1.9	107
29	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.	1.4	101
30	Detecting evidence for CO₂ fertilization from tree ring studies: The potential role of sampling biases. Global Biogeochemical Cycles, 2012, 26, .	1.9	100
31	Carbon uptake by mature Amazon forests has mitigated Amazon nationsâ€™ carbon emissions. Carbon Balance and Management, 2017, 12, 1.	1.4	98
32	Tree height strongly affects estimates of water-use efficiency responses to climate and CO2 using isotopes. Nature Communications, 2017, 8, 288.	5.8	97
33	Climateâ€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.	4.2	86
34	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.	0.9	80
35	The carbon balance of South America: a review of the status, decadal trends and main determinants. Biogeosciences, 2012, 9, 5407-5430.	1.3	78
36	Field methods for sampling tree height for tropical forest biomass estimation. Methods in Ecology and Evolution, 2018, 9, 1179-1189.	2.2	78

#	Article	IF	Citations
37	Panâ€tropical prediction of forest structure from the largest trees. Global Ecology and Biogeography, 2018, 27, 1366-1383.	2.7	78
38	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
39	Phylogenetic diversity of Amazonian tree communities. Diversity and Distributions, 2015, 21, 1295-1307.	1.9	72
40	Attaining the canopy in dry and moist tropical forests: strong differences in tree growth trajectories reflect variation in growing conditions. Oecologia, 2010, 163, 485-496.	0.9	67
41	Autocorrelated growth of tropical forest trees: Unraveling patterns and quantifying consequences. Forest Ecology and Management, 2006, 237, 179-190.	1.4	66
42	Tropical tree rings reveal preferential survival of fastâ€growing juveniles and increased juvenile growth rates over time. New Phytologist, 2010, 185, 759-769.	3.5	63
43	Fast demographic traits promote high diversification rates of Amazonian trees. Ecology Letters, 2014, 17, 527-536.	3.0	63
44	Tree mode of death and mortality risk factors across Amazon forests. Nature Communications, 2020, 11, 5515.	5.8	62
45	Do Persistently Fastâ€Growing Juveniles Contribute Disproportionately to Population Growth? A New Analysis Tool for Matrix Models and Its Application to Rainforest Trees. American Naturalist, 2009, 174, 709-719.	1.0	61
46	Competition influences tree growth, but not mortality, across environmental gradients in Amazonia and tropical Africa. Ecology, 2020, 101, e03052.	1.5	57
47	Biased-corrected richness estimates for the Amazonian tree flora. Scientific Reports, 2020, 10, 10130.	1.6	53
48	Oxygen isotopes in tree rings show good coherence between species and sites in Bolivia. Global and Planetary Change, 2015, 133, 298-308.	1.6	52
49	Low Phylogenetic Beta Diversity and Geographic Neoâ€endemism in Amazonian Whiteâ€sand Forests. Biotropica, 2016, 48, 34-46.	0.8	52
50	The Potential of Tree Rings for the Study of Forest Succession in Southern Mexico. Biotropica, 2009, 41, 186-195.	0.8	50
51	Tree demography dominates longâ€term growth trends inferred from tree rings. Global Change Biology, 2017, 23, 474-484.	4.2	49
52	Incorporating persistent tree growth differences increases estimates of tropical timber yield. Frontiers in Ecology and the Environment, 2007, 5, 302-306.	1.9	47
53	Tropical forest warming: looking backwards for more insights. Trends in Ecology and Evolution, 2012, 27, 193-194.	4.2	46
54	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.	3.3	46

#	Article	IF	Citations
55	Soil physical conditions limit palm and tree basal area in Amazonian forests. Plant Ecology and Diversity, 2014, 7, 215-229.	1.0	45
56	Does Cedrela always form annual rings? Testing ring periodicity across South America using radiocarbon dating. Trees - Structure and Function, 2017, 31, 1999-2009.	0.9	45
57	The Forest Observation System, building a global reference dataset for remote sensing of forest biomass. Scientific Data, 2019, 6, 198.	2.4	44
58	Evolutionary heritage influences Amazon tree ecology. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20161587.	1.2	43
59	Large apparent growth increases in boreal forests inferred from tree-rings are an artefact of sampling biases. Scientific Reports, 2019, 9, 6832.	1.6	38
60	Tropical tree growth driven by dry-season climate variability. Nature Geoscience, 2022, 15, 269-276.	5.4	38
61	Evolutionary diversity is associated with wood productivity in Amazonian forests. Nature Ecology and Evolution, 2019, 3, 1754-1761.	3.4	32
62	Oxygen isotopes in tree rings record variation in precipitation <i>Î´</i>¹⁸O and amount effects in the south of Mexico. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 1604-1615.	1.3	30
63	Rarity of monodominance in hyperdiverse Amazonian forests. Scientific Reports, 2019, 9, 13822.	1.6	28
64	What drives interannual variation in tree ring oxygen isotopes in the Amazon?. Geophysical Research Letters, 2016, 43, 11,831.	1.5	27
65	Amazon tree dominance across forest strata. Nature Ecology and Evolution, 2021, 5, 757-767.	3.4	27
66	Imaging spectroscopy predicts variable distance decay across contrasting Amazonian tree communities. Journal of Ecology, 2019, 107, 696-710.	1.9	25
67	Dominant tree species drive beta diversity patterns in western Amazonia. Ecology, 2019, 100, e02636.	1.5	23
68	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
69	Contrasting controls on tree ring isotope variation for Amazon floodplain and terra firme trees. Tree Physiology, 2019, 39, 845-860.	1.4	19
70	Individual-Based Modeling of Amazon Forests Suggests That Climate Controls Productivity While Traits Control Demography. Frontiers in Earth Science, 2019, 7, .	0.8	19
71	Water table depth modulates productivity and biomass across Amazonian forests. Global Ecology and Biogeography, 2022, 31, 1571-1588.	2.7	17
72	Expanding tropical forest monitoring into Dry Forests: The DRYFLOR protocol for permanent plots. Plants People Planet, 2021, 3, 295-300.	1.6	12

#	Article	IF	Citations
73	Economically important species dominate aboveground carbon storage in forests of southwestern Amazonia. Ecology and Society, 2017, 22, .	1.0	10
74	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.	1.5	10
75	Tree-ring oxygen isotopes record a decrease in Amazon dry season rainfall over the past 40Âyears. Climate Dynamics, 2022, 59, 1401-1414.	1.7	10
76	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.	1.4	9
77	Intra-annual oxygen isotopes in the tree rings record precipitation extremes and water reservoir levels in the Metropolitan Area of SÃ£o Paulo, Brazil. Science of the Total Environment, 2020, 743, 140798.	3.9	9
78	Can We Detect Changes in Amazon Forest Structure Using Measurements of the Isotopic Composition of Precipitation?. Geophysical Research Letters, 2019, 46, 14807-14816.	1.5	7
79	Paired analysis of tree ring width and carbon isotopes indicates when controls on tropical tree growth change from light to water limitations. Tree Physiology, 2022, 42, 1131-1148.	1.4	7
80	Does soil pyrogenic carbon determine plant functional traits in Amazon Basin forests?. Plant Ecology, 2017, 218, 1047-1062.	0.7	5
81	How Robust Is the Apparent Breakâ€Down of Northern Highâ€Latitude Temperature Control on Spring Carbon Uptake?. Geophysical Research Letters, 2021, 48, e2020GL091601.	1.5	2
82	Relationships between species richness and ecosystem services in Amazonian forests strongly influenced by biogeographical strata and forest types. Scientific Reports, 2022, 12, 5960.	1.6	1
83	A response to â€˜Trends in tropical tree growth: reanalysis confirms earlier findingsâ€™. Global Change Biology, 2017, 23, e5-e6.	4.2	0
84	Increasing Landsat 5 TM Spatial Resolution to 15 M Using a Super-Resolution Deep Learning Model Trained with Pan-Sharpened Landsat 7 ETM+ DATA. , 2021, , .		0
85	Photosynthesis in action: The global view. , 2022, , 243-269.		0