Christopher W Woodall

List of Publications by Year
in descending order

121 papers	6,039 citations	87843 38 h-index	95218 68 g-index
143 all docs	143 docs citations	143 times ranked	6220 citing authors

#	Article	IF	Citations
1	Failure to migrate: lack of tree range expansion in response to climate change. Global Change Biology, 2012, 18, 1042-1052.	4.2	519
2	The impacts of increasing drought on forest dynamics, structure, and biodiversity in the United States. Global Change Biology, 2016, 22, 2329-2352.	4.2	428
3	Forest carbon storage: ecology, management, and policy. Frontiers in Ecology and the Environment, 2010, 8, 245-252.	1.9	237
4	An indicator of tree migration in forests of the eastern United States. Forest Ecology and Management, 2009, 257, 1434-1444.	1.4	194
5	Quantifying carbon stores and decomposition in dead wood: A review. Forest Ecology and Management, 2015, 350, 107-128.	1.4	190
6	More than the sum of the parts: forest climate response from joint species distribution models. Ecological Applications, 2014, 24, 990-999.	1.8	189
7	Changes in global terrestrial live biomass over the 21st century. Science Advances, 2021, 7, eabe9829.	4.7	136
8	Imputing forest carbon stock estimates from inventory plots to a nationally continuous coverage. Carbon Balance and Management, 2013, 8, 1.	1.4	130
9	Residence Times and Decay Rates of Downed Woody Debris Biomass/Carbon in Eastern US Forests. Ecosystems, 2014, 17, 765-777.	1.6	126
10	Determining maximum stand density index in mixed species stands for strategic-scale stocking assessments. Forest Ecology and Management, 2005, 216, 367-377.	1.4	123
11	Does biodiversity make a difference? Relationships between species richness, evolutionary diversity, and aboveground live tree biomass across U.S. forests. Forest Ecology and Management, 2014, 321, 117-129.	1.4	98
12	Release of coarse woody detritus-related carbon: a synthesis across forest biomes. Carbon Balance and Management, 2020, 15, 1.	1.4	93
13	Dual impacts of climate change: forest migration and turnover through life history. Global Change Biology, 2014, 20, 251-264.	4.2	92
14	Applications of the United States Forest Inventory and Analysis dataset: a review and future directions. Canadian Journal of Forest Research, 2018, 48, 1251-1268.	0.8	92
15	Interactions between white-tailed deer density and the composition of forest understories in the northern United States. Forest Ecology and Management, 2017, 384, 26-33.	1.4	87
16	Biomass and carbon attributes of downed woody materials in forests of the United States. Forest Ecology and Management, 2013, 305, 48-59.	1.4	85
17	Prevalence and strength of densityâ€dependent tree recruitment. Ecology, 2015, 96, 2319-2327.	1.5	85
18	Carbon concentration of standing and downed woody detritus: Effects of tree taxa, decay class, position, and tissue type. Forest Ecology and Management, 2013, 291, 259-267.	1.4	84

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19	National inventories of down and dead woody material forest carbon stocks in the United States: Challenges and opportunities. Forest Ecology and Management, 2008, 256, 221-228.	1.4	81
20	Status and future of the forest health indicators program of the USA. Environmental Monitoring and Assessment, 2011, 177, 419-436.	1.3	80
21	A Call to Improve Methods for Estimating Tree Biomass for Regional and National Assessments. Journal of Forestry, 2015, 113, 414-424.	0.5	72
22	Woody Debris Volume Depletion Through Decay: Implications for Biomass and Carbon Accounting. Ecosystems, 2013, 16, 1262-1272.	1.6	66
23	Evidence of biotic resistance to invasions in forests of the Eastern USA. Landscape Ecology, 2016, 31, 85-99.	1.9	65
24	Estimating Dead Wood During National Forest Inventories: A Review of Inventory Methodologies and Suggestions for Harmonization. Environmental Management, 2009, 44, 624-631.	1.2	64
25	Consequences of alternative tree-level biomass estimation procedures on U.S. forest carbon stock estimates. Forest Ecology and Management, 2012, 270, 108-116.	1.4	64
26	Estimating litter carbon stocks on forest land in the United States. Science of the Total Environment, 2016, 557-558, 469-478.	3.9	55
27	Climatic regions as an indicator of forest coarse and fine woody debris carbon stocks in the United States. Carbon Balance and Management, 2008, 3, 5.	1.4	54
28	North America's net terrestrial CO₂ exchange with the atmosphere 1990â€“2009. Biogeosciences, 2015, 12, 399-414.	1.3	54
29	Carbon stocks on forestland of the United States, with emphasis on USDA Forest Service ownership. Ecosphere, 2011, 2, art6.	1.0	52
30	Estimates of Down Woody Materials in Eastern US Forests. Environmental Management, 2004, 33, S44.	1.2	51
31	Estimating uncertainty in the volume and carbon storage of downed coarse woody debris. Ecological Applications, 2019, 29, e01844.	1.8	51
32	Decomposing biodiversity data using the Latent Dirichlet Allocation model, a probabilistic multivariate statistical method. Ecology Letters, 2014, 17, 1591-1601.	3.0	50
33	The downed and dead wood inventory of forests in the United States. Scientific Data, 2019, 6, 180303.	2.4	49
34	Coarse woody type: A new method for analyzing coarse woody debris and forest change. Forest Ecology and Management, 2006, 227, 115-121.	1.4	46
35	Relationships between forest fine and coarse woody debris carbon stocks across latitudinal gradients in the United States as an indicator of climate change effects. Ecological Indicators, 2008, 8, 686-690.	2.6	46
36	Accounting for density reduction and structural loss in standing dead trees: Implications for forest biomass and carbon stock estimates in the United States. Carbon Balance and Management, 2011, 6, 14.	1.4	42

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37	Trends over time in tree and seedling phylogenetic diversity indicate regional differences in forest biodiversity change. , 2012, 22, 517-531.		42
38	Assessing the stability of tree ranges and influence of disturbance in eastern US forests. Forest Ecology and Management, 2013, 291, 172-180.	1.4	42
39	Net carbon flux of dead wood in forests of the Eastern US. Oecologia, 2015, 177, 861-874.	0.9	41
40	Carbon emissions associated with the procurement and utilization of forest harvest residues for energy, northern Minnesota, USA. Biomass and Bioenergy, 2012, 36, 141-150.	2.9	40
41	Measurement repeatability of a large-scale inventory of forest fuels. Forest Ecology and Management, 2007, 253, 171-176.	1.4	38
42	Evaluating Site-Specific and Generic Spatial Models of Aboveground Forest Biomass Based on Landsat Time-Series and LiDAR Strip Samples in the Eastern USA. Remote Sensing, 2017, 9, 598.	1.8	37
43	Delineating managed land for reporting national greenhouse gas emissions and removals to the United Nations framework convention on climate change. Carbon Balance and Management, 2018, 13, 9.	1.4	37
44	Modeling forest biomass and growth: Coupling long-term inventory and LiDAR data. Remote Sensing of Environment, 2016, 182, 1-12.	4.6	36
45	Using Landsat Time-Series and LiDAR to Inform Aboveground Forest Biomass Baselines in Northern Minnesota, USA. Canadian Journal of Remote Sensing, 2017, 43, 28-47.	1.1	36
46	Applying survival analysis to a large-scale forest inventory for assessment of tree mortality in Minnesota. Ecological Modelling, 2005, 189, 199-208.	1.2	35
47	Assessing the potential for urban trees to facilitate forest tree migration in the eastern United States. Forest Ecology and Management, 2010, 259, 1447-1454.	1.4	33
48	Climate and species functional traits influence maximum live tree stocking in the Lake States, USA. Forest Ecology and Management, 2017, 386, 51-61.	1.4	33
49	When a tree falls: Controls on wood decay predict standing dead tree fall and new risks in changing forests. PLoS ONE, 2018, 13, e0196712.	1.1	33
50	Tracking downed dead wood in forests over time: Development of a piece matching algorithm for line intercept sampling. Forest Ecology and Management, 2012, 277, 196-204.	1.4	32
51	The relative density of forests in the United States. Forest Ecology and Management, 2006, 226, 368-372.	1.4	31
52	Downed woody fuel loading dynamics of a large-scale blowdown in northern Minnesota, U.S.A.. Forest Ecology and Management, 2007, 247, 194-199.	1.4	31
53	Comparing field- and model-based standing dead tree carbon stock estimates across forests of the US. Forestry, 2012, 85, 125-133.	1.2	31
54	From Models to Measurements: Comparing Downed Dead Wood Carbon Stock Estimates in the U.S. Forest Inventory. PLoS ONE, 2013, 8, e59949.	1.1	30

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55	Stand density index in uneven-aged ponderosa pine stands. Canadian Journal of Forest Research, 2003, 33, 96-100.	0.8	28
56	Filling the gap: improving estimates of working tree resources in agricultural landscapes. Agroforestry Systems, 2009, 75, 91-101.	0.9	28
57	Defining and assessing urban forests to inform management and policy. Environmental Research Letters, 2019, 14, 085002.	2.2	28
58	Relationships between the stocking levels of live trees and dead tree attributes in forests of the United States. Forest Ecology and Management, 2009, 258, 2602-2608.	1.4	27
59	North American tree migration paced by climate in the West, lagging in the East. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	27
60	Intertree competition in uneven-aged ponderosa pine stands. Canadian Journal of Forest Research, 2003, 33, 1719-1726.	0.8	25
61	An empirical assessment of forest floor carbon stock components across the United States. Forest Ecology and Management, 2012, 269, 1-9.	1.4	25
62	Technical Note: Linking climate change and downed woody debris decomposition across forests of the eastern United States. Biogeosciences, 2014, 11, 6417-6425.	1.3	23
63	Estimates of downed woody debris decay class transitions for forests across the eastern United States. Ecological Modelling, 2013, 251, 22-31.	1.2	22
64	Selecting tree species for testing climate change migration hypotheses using forest inventory data. Forest Ecology and Management, 2010, 259, 778-785.	1.4	21
65	Improved accuracy of aboveground biomass and carbon estimates for live trees in forests of the eastern United States. Forestry, 2017, 90, 32-46.	1.2	21
66	Climateâ€driven trends in stem wood density of tree species in the eastern United States: Ecological impact and implications for national forest carbon assessments. Global Ecology and Biogeography, 2017, 26, 1153-1164.	2.7	20
67	Beyond mean functional traits: Influence of functional trait profiles on forest structure, production, and mortality across the eastern US. Forest Ecology and Management, 2014, 328, 1-9.	1.4	19
68	Implications of land-use change on forest carbon stocks in the eastern United States. Environmental Research Letters, 2017, 12, 024011.	2.2	19
69	High-Dimensional Coexistence of Temperate Tree Species: Functional Traits, Demographic Rates, Life-History Stages, and Their Physical Context. PLoS ONE, 2011, 6, e16253.	1.1	19
70	Decadal changes in tree range stability across forests of the eastern U.S.. Forest Ecology and Management, 2018, 429, 503-510.	1.4	18
71	A technique for conducting point pattern analysis of cluster plot stem-maps. Forest Ecology and Management, 2004, 198, 31-37.	1.4	17
72	Estimating the quadratic mean diameters of fine woody debris in forests of the United States. Forest Ecology and Management, 2010, 260, 1088-1093.	1.4	17

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73	Quantifying allometric model uncertainty for plot-level live tree biomass stocks with a data-driven, hierarchical framework. Forest Ecology and Management, 2016, 372, 175-188.	1.4	17
74	Modeling browse impacts on sapling and tree recruitment across forests in the northern United States. Canadian Journal of Forest Research, 2017, 47, 1474-1481.	0.8	17
75	Strategies to compensate for the effects of nonresponse on forest carbon baseline estimates from the national forest inventory of the United States. Forest Ecology and Management, 2014, 315, 112-120.	1.4	16
76	Emerging Themes in the Ecology and Management of North American Forests. International Journal of Forestry Research, 2010, 2010, 1-11.	0.2	15
77	Strategies for enhancing long-term carbon sequestration in mixed-species, naturally regenerated Northern temperate forests. Carbon Management, 2020, 11, 381-397.	1.2	15
78	A statistical power analysis of woody carbon flux from forest inventory data. Climatic Change, 2013, 118, 919-931.	1.7	14
79	Forest sector carbon analyses support land management planning and projects: assessing the influence of anthropogenic and natural factors. Climatic Change, 2017, 144, 207-220.	1.7	14
80	Tree basal area and conifer abundance predict soil carbon stocks and concentrations in an actively managed forest of northern New Hampshire, USA. Forest Ecology and Management, 2019, 451, 117534.	1.4	14
81	Contemporary forest carbon dynamics in the northern U.S. associated with land cover changes. Ecological Indicators, 2020, 110, 105901.	2.6	14
82	Niche Shifts From Trees to Fecundity to Recruitment That Determine Species Response to Climate Change. Frontiers in Ecology and Evolution, 2021, 9, .	1.1	14
83	Survival Analysis for a Large-Scale Forest Health Issue: Missouri Oak Decline. Environmental Monitoring and Assessment, 2005, 108, 295-307.	1.3	13
84	Forest production dynamics along a wood density spectrum in eastern US forests. Trees - Structure and Function, 2015, 29, 299-310.	0.9	13
85	Comparisons of allometric and climate-derived estimates of tree coarse root carbon stocks in forests of the United States. Carbon Balance and Management, 2015, 10, 20.	1.4	12
86	Quantifying density-independent mortality of temperate tree species. Ecological Indicators, 2016, 66, 1-9.	2.6	12
87	Using matrix models to estimate aboveground forest biomass dynamics in the eastern USA through various combinations of LiDAR, Landsat, and forest inventory data. Environmental Research Letters, 2018, 13, 125004.	2.2	12
88	Functional form and interactions of the drivers of understory nonâ€native plant invasions in northern US forests. Journal of Applied Ecology, 2019, 56, 2596-2608.	1.9	12
89	Ecological memory and regional context influence performance of adaptation plantings in northeastern US temperate forests. Journal of Applied Ecology, 2022, 59, 314-329.	1.9	12
90	End-point diameter and total length coarse woody debris models for the United States. Forest Ecology and Management, 2008, 255, 3700-3706.	1.4	11

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91	Performance of the Forest Vegetation Simulator in Managed White Spruce Plantations Influenced by Eastern Spruce Budworm in Northern Minnesota. Forest Science, 2015, 61, 723-730.	0.5	11
92	A Tale of Two Forest Carbon Assessments in the Eastern United States: Forest Use Versus Cover as a Metric of Change. Ecosystems, 2016, 19, 1401-1417.	1.6	11
93	Comparing evaluations of forest health based on aerial surveys and field inventories: Oak forests in the Northern United States. Ecological Indicators, 2010, 10, 713-718.	2.6	10
94	Quantifying understorey vegetation in the US Lake States: a proposed framework to inform regional forest carbon stocks. Forestry, 2014, 87, 629-638.	1.2	10
95	Influence of transect length and downed woody debris abundance on precision of the line-intersect sampling method. Forest Ecosystems, 2018, 5, .	1.3	10
96	Systematic variation in North American tree species abundance distributions along macroecological climatic gradients. Global Ecology and Biogeography, 2019, 28, 601-611.	2.7	10
97	Burial of downed deadwood is strongly affected by log attributes, forest ground vegetation, edaphic conditions, and climate zones. Canadian Journal of Forest Research, 2016, 46, 1451-1457.	0.8	9
98	A Framework for Assessing Global Change Risks to Forest Carbon Stocks in the United States. PLoS ONE, 2013, 8, e73222.	1.1	8
99	Making the US national forest inventory spatially contiguous and temporally consistent. Environmental Research Letters, 2022, 17, 065002.	2.2	8
100	Controlling coarse woody debris inventory quality: taper and relative size methods. Canadian Journal of Forest Research, 2008, 38, 631-636.	0.8	7
101	Estimation of Merchantable Bole Volume and Biomass above Sawlog Top in the National Forest Inventory of the United States. Journal of Forestry, 2013, 111, 383-387.	0.5	7
102	Evaluating the influence of spatial resolution of Landsat predictors on the accuracy of biomass models for large-area estimation across the eastern USA. Environmental Research Letters, 2018, 13, 055004.	2.2	7
103	Real-time monitoring of deadwood moisture in forests: lessons learned from an intensive case study. Canadian Journal of Forest Research, 2020, 50, 1244-1252.	0.8	7
104	Managing Carbon. Advances in Global Change Research, 2014, , 151-182.	1.6	7
105	Stand age versus tree diameter as a driver of forest carbon inventory simulations in the northeastern U.S.. Canadian Journal of Forest Research, 2018, 48, 1135-1147.	0.8	6
106	Increasing Atmospheric CO2 Concentration Stand Development in Trembling Aspen Forests: Are Outdated Density Management Guidelines in Need of Revision for All Species?. Journal of Forestry, 2019, 117, 38-45.	0.5	6
107	Contribution of Dead Wood to Biomass and Carbon Stocks in the Caribbean: St. John, U.S. Virgin Islands. Biotropica, 2007, 40, 070806195655002-???.	0.8	5
108	An inventory of carbon storage in forest soil and down woody material of the United States. Geophysical Monograph Series, 2009, , 101-116.	0.1	5

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109	Comparing tree foliage biomass models fitted to a multispecies, felled-tree biomass dataset for the United States. Ecological Modelling, 2016, 333, 79-91.	1.2	5
110	Decadal dead wood biomass dynamics of coterminous US forests. Environmental Research Letters, 2021, 16, 104034.	2.2	5
111	Similar tree species richness-productivity response but differing effects on carbon stocks and timber production in eastern US and continental Spain. Science of the Total Environment, 2021, 793, 148399.	3.9	5
112	Predicting downed woody material carbon stocks in forests of the conterminous United States. Science of the Total Environment, 2022, 803, 150061.	3.9	5
113	Does deadwood moisture vary jointly with surface soil water content?. Soil Science Society of America Journal, 2022, 86, 1113-1121.	1.2	5
114	Carbon conundrums: Do United States' current carbon market baselines represent an undesirable ecological threshold?. Global Change Biology, 2022, 28, 3991-3994.	4.2	5
115	Reaching a forest land per capita milestone in the United States. The Environmentalist, 2008, 28, 315-317.	0.7	4
116	Land Use Changes, Disturbances, and Their Interactions on Future Forest Aboveground Biomass Dynamics in the Northern US. Forests, 2019, 10, 606.	0.9	4
117	Refined forest land use classification with implications for United States national carbon accounting. Land Use Policy, 2016, 59, 536-542.	2.5	3
118	Effects of tree size and spatial distribution on growth of ponderosa pine forests under alternative management scenarios. The Environmentalist, 2009, 29, 301-309.	0.7	2
119	Assessing the effect of snow/water obstructions on the measurement of tree seedlings in a large-scale temperate forest inventory. Forestry, 2013, 86, 421-427.	1.2	2
120	Development of a Downed Woody Debris Forecasting Tool Using Strategic-Scale Multiresource Forest Inventories. Journal of Forestry, 2017, 115, 276-282.	0.5	2
121	Shifting Forests and Carbon: Linking Community Composition and Aboveground Carbon Attributes. Ecosystems, 2023, 26, 412-427.	1.6	1