Christian Messier

List of Publications by Year in descending order

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22153 27406 12,094 132 59 106 citations h-index g-index papers 134 134 134 10490 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	The effect of biodiversity on tree productivity: from temperate to boreal forests. Global Ecology and Biogeography, 2011, 20, 170-180.	5 . 8	699
2	Reconciling niche and neutrality: the continuum hypothesis. Ecology Letters, 2006, 9, 399-409.	6.4	635
3	Retention Forestry to Maintain Multifunctional Forests: A World Perspective. BioScience, 2012, 62, 633-645.	4.9	633
4	Silviculture for old-growth attributes. Forest Ecology and Management, 2009, 258, 525-537.	3.2	483
5	The role of plantations in managing the world's forests in the Anthropocene. Frontiers in Ecology and the Environment, 2010, 8, 27-34.	4.0	409
6	Can forest management based on natural disturbances maintain ecological resilience?. Canadian Journal of Forest Research, 2006, 36, 2285-2299.	1.7	338
7	REVIEW: Can retention forestry help conserve biodiversity? A metaâ€analysis. Journal of Applied Ecology, 2014, 51, 1669-1679.	4.0	314
8	Functional ecology of advance regeneration in relation to light in boreal forests. Canadian Journal of Forest Research, 1999, 29, 812-823.	1.7	301
9	Effects of overstory and understory vegetation on the understory light environment in mixed boreal forests. Journal of Vegetation Science, 1998, 9, 511-520.	2.2	297
10	Leaf bacterial diversity mediates plant diversity and ecosystem function relationships. Nature, 2017, 546, 145-147.	27.8	294
11	Spatial complementarity in tree crowns explains overyielding in species mixtures. Nature Ecology and Evolution, 2017, 1, 63.	7.8	285
12	Diversity increases carbon storage and tree productivity in <scp>S</scp> panish forests. Global Ecology and Biogeography, 2014, 23, 311-322.	5 . 8	237
13	Contributions of a global network of tree diversity experiments to sustainable forest plantations. Ambio, 2016, 45, 29-41.	5. 5	203
14	Growth and morphological responses of yellow birch, sugar maple, and beech seedlings growing under a natural light gradient. Canadian Journal of Forest Research, 1998, 28, 1007-1015.	1.7	194
15	From Management to Stewardship: Viewing Forests As Complex Adaptive Systems in an Uncertain World. Conservation Letters, 2015, 8, 368-377.	5.7	183
16	Functional identity is the main driver of diversity effects in young tree communities. Ecology Letters, 2016, 19, 638-647.	6.4	182
17	A simple and efficient method to estimate microsite light availability under a forest canopy. Canadian Journal of Forest Research, 1996, 26, 151-154.	1.7	177
18	The functional complex network approach to foster forest resilience to global changes. Forest Ecosystems, 2019, 6, .	3.1	167

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19	Physiological, morphological and allocational plasticity in understory deciduous trees: importance of plant size and light availability. Tree Physiology, 2004, 24, 775-784.	3.1	155
20	Comparison of various methods for estimating the mean growing season percent photosynthetic photon flux density in forests. Agricultural and Forest Meteorology, 1998, 92, 55-70.	4.8	154
21	Comparing composition and structure in old-growth and harvested (selection and diameter-limit) Tj ETQq $1\ 1\ 0$.7843]4 rgE 3.2	BT /Overlock
22	Spatial and temporal variation in the Bight environment of developing Scots pine stands: the basis for a quick and efficient method of characterizing Bight. Canadian Journal of Forest Research, 1995, 25, 343-354.	1.7	146
23	Growth and crown morphological responses of boreal conifer seedlings and saplings with contrasting shade tolerance to a gradient of light and height. Canadian Journal of Forest Research, 2002, 32, 458-468.	1.7	142
24	Globally, functional traits are weak predictors of juvenile tree growth, and we do not know why. Journal of Ecology, 2015, 103, 978-989.	4.0	131
25	Use of a spatially explicit individual-tree model (SORTIE/BC) to explore the implications of patchiness in structurally complex forests. Forest Ecology and Management, 2003, 186, 297-310.	3.2	128
26	For the sake of resilience and multifunctionality, let's diversify planted forests!. Conservation Letters, 2022, 15, e12829.	5.7	124
27	Soil e $ ilde{A}$ —ploitation strategies of fine roots in different tree species of the southern boreal forest of eastern Canada. Canadian Journal of Forest Research, 1999, 29, 260-273.	1.7	121
28	Synthesis and future research directions linking tree diversity to growth, survival, and damage in a global network of tree diversity experiments. Environmental and Experimental Botany, 2018, 152, 68-89.	4.2	113
29	Shade tolerance, canopy gaps and mechanisms of coexistence of forest trees. Oikos, 2010, 119, 475-484.	2.7	110
30	Overstory influences on light attenuation patterns and understory plant community diversity and composition in southern boreal forests of Quebec. Canadian Journal of Forest Research, 2006, 36, 2065-2079.	1.7	109
31	Sapling size influences shade tolerance ranking among southern boreal tree species. Journal of Ecology, 2006, 94, 471-480.	4.0	109
32	Retention as an integrated biodiversity conservation approach for continuous-cover forestry in Europe. Ambio, 2020, 49, 85-97.	5.5	106
33	Tree range expansion in eastern North America fails to keep pace with climate warming at northern range limits. Global Change Biology, 2017, 23, 3292-3301.	9.5	104
34	Evaluation of Fine Root Length and Diameter Measurements Obtained Using RHIZO Image Analysis. Agronomy Journal, 1999, 91, 142-147.	1.8	96
35	Ectomycorrhizal fungal diversity and saprotrophic fungal diversity are linked to different tree community attributes in a fieldâ€based tree experiment. Molecular Ecology, 2016, 25, 4032-4046.	3.9	95
36	Soil exploitation strategies of fine roots in different tree species of the southern boreal forest of eastern Canada. Canadian Journal of Forest Research, 1999, 29, 260-273.	1.7	94

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37	Variation in canopy openness and light transmission following selection cutting in northern hardwood stands: an assessment based on hemispherical photographs. Agricultural and Forest Meteorology, 2002, 110, 217-228.	4.8	93
38	Effects of light availability and sapling size on the growth and crown morphology of understory Douglas-fir and lodgepole pine. Canadian Journal of Forest Research, 1999, 29, 222-231.	1.7	90
39	A shade tolerance index for common understory species of northeastern North America. Ecological Indicators, 2007, 7, 195-207.	6.3	88
40	Can Boreal and Temperate Forest Management be Adapted to the Uncertainties of 21st Century Climate Change?. Critical Reviews in Plant Sciences, 2014, 33, 251-285.	5.7	88
41	Can plantations develop understory biological and physical attributes of naturally regenerated forests?. Biological Conservation, 2008, 141, 2461-2476.	4.1	86
42	Advancing biodiversity–ecosystem functioning science using high-density tree-based experiments over functional diversity gradients. Oecologia, 2014, 174, 609-621.	2.0	86
43	Effects of light availability and sapling size on the growth, biomass allocation, and crown morphology of understory sugar maple, yellow birch, and beech. Ecoscience, 2000, 7, 345-356.	1.4	85
44	Tree phyllosphere bacterial communities: exploring the magnitude of intra- and inter-individual variation among host species. PeerJ, 2016, 4, e2367.	2.0	85
45	Comparing different forest zoning options for landscape-scale management of the boreal forest: Possible benefits of the TRIAD. Forest Ecology and Management, 2010, 259, 418-427.	3.2	83
46	A framework towards a composite indicator for urban ecosystem services. Ecological Indicators, 2016, 60, 38-44.	6.3	83
47	Light extinction coefficients specific to the understory vegetation of the southern boreal forest, Quebec. Canadian Journal of Forest Research, 2000, 30, 168-177.	1.7	82
48	Patterns of above- and below-ground response of understory conifer release 6 years after partial cutting. Canadian Journal of Forest Research, 2002, 32, 255-265.	1.7	81
49	TRIAD zoning in Quebec: Experiences and results after 5 years. Forestry Chronicle, 2009, 85, 885-896.	0.6	74
50	Effects of light and intraspecific competition on growth and crown morphology of two size classes of understory balsam fir saplings. Forest Ecology and Management, 2001, 140, 215-225.	3.2	73
51	Avoiding ecosystem collapse in managed forest ecosystems. Frontiers in Ecology and the Environment, 2016, 14, 561-568.	4.0	66
52	Do understory sapling respond to both light and below-ground competition?: a field experiment in a north-eastern American hardwood forest and a literature review. Annals of Forest Science, 2003, 60, 749-756.	2.0	64
53	Do temperate tree species diversity and identity influence soil microbial community function and composition?. Ecology and Evolution, 2017, 7, 7965-7974.	1.9	64
54	Nearâ€infrared spectroscopy (<scp>NIRS</scp>) predicts nonâ€structural carbohydrate concentrations in different tissue types of a broad range of tree species. Methods in Ecology and Evolution, 2015, 6, 1018-1025.	5. 2	63

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55	Effets d'un gradient de lumière sur la croissance en hauteur et la morphologie de la cime du sapin baumier régénéré naturellement. Canadian Journal of Forest Research, 1995, 25, 878-885.	1.7	62
56	Understorey light profiles in temperate deciduous forests: recovery process following selection cutting. Journal of Ecology, 2004, 92, 328-338.	4.0	62
57	Does shade improve light interception efficiency? A comparison among seedlings from shadeâ€tolerant and â€intolerant temperate deciduous tree species. New Phytologist, 2006, 172, 293-304.	7.3	62
58	Light quantity and quality on the forest floor of pioneer and climax stages in a birch–beech–sugar maple stand. Canadian Journal of Forest Research, 1988, 18, 615-622.	1.7	61
59	Managing understory light conditions in boreal mixedwoods through variation in the intensity and spatial pattern of harvest: A modelling approach. Forest Ecology and Management, 2011, 261, 84-94.	3.2	61
60	A general framework for the quantification and valuation of ecosystem services of tree-based intercropping systems. Agroforestry Systems, 2014, 88, 679-691.	2.0	61
61	Consequences of various landscape-scale ecosystem management strategies and fire cycles on age-class structure and harvest in boreal forests. Canadian Journal of Forest Research, 2004, 34, 310-322.	1.7	60
62	Abundance, growth and allometry of red raspberry (Rubus idaeus L.) along a natural light gradient in a northern hardwood forest. Forest Ecology and Management, 1996, 81, 153-160.	3.2	58
63	How resilient are northern hardwood forests to human disturbance? An evaluation using a plant functional group approach. Ecoscience, 2007, 14, 259-271.	1.4	58
64	Above- and below-ground vegetation recovery in recently clearcut and burned sites dominated by Gaultheria shallon in coastal British Columbia. Forest Ecology and Management, 1991, 46, 275-294.	3.2	57
65	Effect of a major canopy disturbance on the coexistence of Acer saccharum and Fagus grandifolia in the understorey of an old-growth forest. Journal of Ecology, 2007, 95, 458-467.	4.0	56
66	Comparison of two plant functional approaches to evaluate natural restoration along an oldâ€field – deciduous forest chronosequence. Journal of Vegetation Science, 2009, 20, 185-198.	2.2	55
67	Predictions of understorey light conditions in northern hardwood forests following parameterization, sensitivity analysis, and tests of the SORTIE light model. Forest Ecology and Management, 2002, 165, 235-248.	3.2	53
68	Sustainable management of Canada's boreal forests: Progress and prospects. Ecoscience, 2006, 13, 234-248.	1.4	51
69	The Effects of Spatial Legacies following Shifting Management Practices and Fire on Boreal Forest Age Structure. Ecosystems, 2007, 10, 1261-1277.	3.4	51
70	Effects of Urbanization on Tree Species Functional Diversity in Eastern North America. Ecosystems, 2013, 16, 1487-1497.	3.4	51
71	Factors limiting early growth of western redcedar, western hemlock and Sitka spruce seedlings on ericaceous-dominated clearcut sites in coastal British Columbia. Forest Ecology and Management, 1993, 60, 181-206.	3.2	49
72	Resource and nonâ€resource root competition effects of grasses on early―versus lateâ€successional trees. Journal of Ecology, 2009, 97, 548-554.	4.0	49

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73	Juvenile growth of hybrid poplars on acidic boreal soil determined by environmental effects of soil preparation, vegetation control, and fertilization. Forest Ecology and Management, 2011, 261, 620-629.	3.2	48
74	Photosynthetic photon flux density, red:far-red ratio, and minimum light requirement for survival of ⟨i⟩Gaultheria⟨ i⟩⟨i⟩shallon⟨ i⟩ in western red cedar–western hemlock stands in coastal British Columbia. Canadian Journal of Forest Research, 1989, 19, 1470-1477.	1.7	47
75	Possible mechanisms of sugar maple regeneration failure and replacement by beech in the Boisé-des-Muir old-growth forest, Québec. Ecoscience, 1999, 6, 264-271.	1.4	47
76	The effect of light availability and basal area on cone production in Abies balsamea and Picea glauca. Canadian Journal of Botany, 2002, 80, 370-377.	1.1	47
77	Norway maple displays greater seasonal growth and phenotypic plasticity to light than native sugar maple. Tree Physiology, 2012, 32, 1339-1347.	3.1	47
78	Application of the Functional-Structural Tree Model LIGNUM to Sugar Maple Saplings (Acer) Tj ETQq0 0 0 rgBT	Overlock :	10 Tf 50 542 T
79	Growth, allocation and leaf gas exchanges of hybrid poplar plants in their establishment phase on previously forested sites: effect of different vegetation management techniques. Annals of Forest Science, 2007, 64, 275-285.	2.0	45
80	Shoot growth and crown development: effect of crown position in three-dimensional simulations. Tree Physiology, 2003, 23, 129-136.	3.1	44
81	Interacting influence of light and size on aboveground biomass distribution in sub-boreal conifer saplings with contrasting shade tolerance. Tree Physiology, 2005, 25, 373-384.	3.1	44
82	Leaf- and plant-level carbon gain in yellow birch, sugar maple, and beech seedlings from contrasting forest light environments. Canadian Journal of Forest Research, 2000, 30, 390-404.	1.7	43
83	Moving forward in implementing green infrastructures: Stakeholder perceptions of opportunities and obstacles in a major North American metropolitan area. Cities, 2018, 81, 61-70.	5.6	43
84	Predicting understory maximum shrubs cover using altitude and overstory basal area in different Mediterranean forests. European Journal of Forest Research, 2011, 130, 55-65.	2.5	42
85	The Potential of Agricultural Conversion to Shape Forest Fire Regimes in Mediterranean Landscapes. Ecosystems, 2020, 23, 34-51.	3.4	37
86	Functional traits influence biomass and productivity through multiple mechanisms in a temperate secondary forest. European Journal of Forest Research, 2020, 139, 959-968.	2.5	37
87	Beech regeneration of seed and root sucker origin: A comparison of morphology, growth, survival, and response to defoliation. Forest Ecology and Management, 2008, 255, 3659-3666.	3.2	36
88	Fire and the relative roles of weather, climate and landscape characteristics in the Great Lakesâ€St. Lawrence forest of Canada. Journal of Vegetation Science, 2008, 19, 57-66.	2.2	35
89	Explaining forest productivity using tree functional traits and phylogenetic information: two sides of the same coin over evolutionary scale?. Ecology and Evolution, 2015, 5, 1774-1783.	1.9	35
90	Light and tree size influence belowground development in yellow birch and sugar maple. Plant and Soil, 2005, 270, 321-330.	3.7	33

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91	Fire and canopy species composition in the Great Lakes-St. Lawrence forest of Témiscamingue, Québec. Forest Ecology and Management, 2006, 231, 27-37.	3.2	31
92	Praise for diversity: A functional approach to reduce risks in urban forests. Urban Forestry and Urban Greening, 2021, 62, 127157.	5. 3	31
93	Partitioning the effect of composition and diversity of tree communities on leaf litter decomposition and soil respiration. Oikos, 2017, 126, 959-971.	2.7	30
94	Evaluating forest resilience to global threats using functional response traits and network properties. Ecological Applications, 2020, 30, e02095.	3.8	28
95	Temporal variations in the understorey photosynthetic photon flux density of a deciduous stand: the effects of canopy development, solar elevation, and sky conditions. Agricultural and Forest Meteorology, 2001, 106, 23-40.	4.8	27
96	Mountain maple and balsam fir early response to partial and clear-cut harvesting under aspen stands of northern Quebec. Canadian Journal of Forest Research, 2004, 34, 2049-2059.	1.7	27
97	Light heterogeneity affects understory plant species richness in temperate forests supporting the heterogeneity–diversity hypothesis. Ecology and Evolution, 2022, 12, e8534.	1.9	26
98	A simple-to-use management approach to boost adaptive capacity of forests to global uncertainty. Forest Ecology and Management, 2021, 481, 118692.	3. 2	24
99	Enhanced light interception and light use efficiency explain overyielding in young tree communities. Ecology Letters, 2021, 24, 996-1006.	6.4	24
100	Population structure and growth acclimation of mountain maple along a successional gradient in the southern boreal forest. Ecoscience, 2005, 12, 540-548.	1.4	23
101	Crown openness as influenced by tree and site characteristics for yellow birch, sugar maple, and eastern hemlock. Canadian Journal of Forest Research, 2008, 38, 488-497.	1.7	23
102	Adaptation of the LIGNUM model for simulations of growth and light response in Jack pine. Forest Ecology and Management, 2001, 150, 279-291.	3. 2	22
103	Priority effects will impede range shifts of temperate tree species into the boreal forest. Journal of Ecology, 2020, 108, 1155-1173.	4.0	21
104	Complexifying the urban lawn improves heat mitigation and arthropod biodiversity. Urban Forestry and Urban Greening, 2021, 60, 127007.	5. 3	21
105	Managing for the unexpected: Building resilient forest landscapes to cope with global change. Global Change Biology, 2022, 28, 4323-4341.	9.5	21
106	Effects of climate on occurrence and size of large fires in a northern hardwood landscape: historical trends, forecasts, and implications for climate change in TÃ@miscamingue, QuÃ@bec. Applied Vegetation Science, 2009, 12, 261-272.	1.9	20
107	Species-specific responses to forest soil inoculum in planted trees in an abandoned agricultural field. Applied Soil Ecology, 2017, 112, 1-10.	4.3	20
108	Perspectives: Thirty years of triad forestry, a critical clarification of theory and recommendations for implementation and testing. Forest Ecology and Management, 2022, 510, 120103.	3.2	20

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109	Root production of hybrid poplars and nitrogen mineralization improve following mounding of boreal Podzols. Canadian Journal of Forest Research, 2013, 43, 1092-1103.	1.7	18
110	Implications of contrasted above―and belowâ€ground biomass responses in a diversity experiment with trees. Journal of Ecology, 2020, 108, 405-414.	4.0	18
111	Management of vegetation under electric distribution lines will affect the supply of multiple ecosystem services. Land Use Policy, 2016, 51, 66-75.	5.6	17
112	Low Light Availability Associated with American Beech Is the Main Factor for Reduced Sugar Maple Seedling Survival and Growth Rates in a Hardwood Forest of Southern Quebec. Forests, 2017, 8, 413.	2.1	17
113	Early above- and below-ground responses of subboreal conifer seedlings to various levels of deciduous canopy removal. Canadian Journal of Forest Research, 2006, 36, 1891-1899.	1.7	16
114	Retention of tree-related microhabitats is more dependent on selection of habitat trees than their spatial distribution. European Journal of Forest Research, 2020, 139, 1015-1028.	2.5	16
115	Tree diversity effects on soil microbial biomass and respiration are context dependent across forest diversity experiments. Global Ecology and Biogeography, 2022, 31, 872-885.	5.8	16
116	Evergreenness influences fine root growth more than tree diversity in a common garden experiment. Oecologia, 2019, 189, 1027-1039.	2.0	15
117	Functional Relationships Between Old-Growth Forest Canopies, Understorey Light and Vegetation Dynamics. Ecological Studies, 2009, , 115-139.	1.2	12
118	Forest processes from stands to landscapes: exploring model forecast uncertainties using cross-scale model comparison. Canadian Journal of Forest Research, 2010, 40, 2345-2359.	1.7	11
119	Effects of adventitious roots on age determination in Balsam fir (<i>Abies balsamea</i>) regeneration. Canadian Journal of Forest Research, 2000, 30, 513-518.	1.7	11
120	Convergence of urban forest and socio-economic indicators of resilience: A study of environmental inequality in four major cities in eastern Canada. Landscape and Urban Planning, 2020, 202, 103856.	7.5	10
121	Direct and Indirect Effects of Forest Anthropogenic Disturbance on Above and Below Ground Communities and Litter Decomposition. Ecosystems, 2021, 24, 1716-1737.	3.4	9
122	Structural changes and potential vertebrate responses following simulated partial harvesting of boreal mixedwood stands. Forest Ecology and Management, 2011, 261, 1362-1371.	3.2	7
123	Do partial cuts create forest complexity? A new approach to measuring the complexity of forest patterns using photographs and the mean information gain. Forestry Chronicle, 2013, 89, 340-349.	0.6	6
124	Sugar maple (Acer saccharum Marsh.) shoot architecture reveals coordinated ontogenetic changes between shoot specialization and branching pattern. Trees - Structure and Function, 2019, 33, 1615-1625.	1.9	5
125	Does soil heterogeneity and compaction in ingrowth-cores affect growth and morphology of black spruce fine-roots?. Communications in Soil Science and Plant Analysis, 2002, 33, 1027-1037.	1.4	4
126	Crown reaction and acclimation to cyclical V-trimming of city trees: An analysis using terrestrial laser scanning. Urban Forestry and Urban Greening, 2018, 29, 183-191.	5.3	4

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127	Optimizing Reduction Pruning of Trees Under Electrical Lines: The Influence of Intensity and Season of Pruning on Epicormic Branch Growth and Wound Compartmentalization. Arboriculture and Urban Forestry, 2020, 46, 432-449.	0.6	4
128	Growth, biomass allocation, and adventitious roots of balsam fir seedlings growing in closed-canopy stands. Ecoscience, 2006, 13, 89-94.	1.4	3
129	Determinants of delayed traumatic tree reiteration growth: Levels of branch growth control and insights for urban tree management, modeling and future research. Urban Forestry and Urban Greening, 2020, 47, 126541.	5.3	3
130	Exotics are more complementary over time in tree biodiversity–ecosystem functioning experiments. Functional Ecology, 2021, 35, 2550.	3.6	2
131	Trimming influences tree light interception and space exploration: contrasted responses of two cultivars of Fraxinus pennsylvanica at various scales of their architecture. Trees - Structure and Function, 2022, 36, 1067-1083.	1.9	1
132	Patterns of belowground overyielding and fineâ€root biomass in native and exotic angiosperms and gymnosperms. Oikos, 0, , .	2.7	1