

Michael G Ryan

List of Publications by Year in descending order

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139
papers

22,761
citations

11651

70
h-index

11939

134
g-index

145
all docs

145
docs citations

145
times ranked

17091
citing authors

#	ARTICLE	IF	CITATIONS
1	Emergence of Cross-Scale Structural and Functional Processes in Ecosystem Science. , 2021, , 140-201.		0
2	Physical structure and biological composition of canopies in tropical secondary and old-growth forests. PLoS ONE, 2021, 16, e0256571.	2.5	5
3	Foliar respiration is related to photosynthetic, growth and carbohydrate response to experimental drought and elevated temperature. Plant, Cell and Environment, 2021, 44, 3853-3865.	5.7	12
4	Plant respiration: Controlled by photosynthesis or biomass?. Global Change Biology, 2020, 26, 1739-1753.	9.5	66
5	Baseline of Carbon Stocks in Pinus radiata and Eucalyptus spp. Plantations of Chile. Forests, 2020, 11, 1063.	2.1	8
6	Cross-site patterns in the response of Eucalyptus plantations to irrigation, climate and intra-annual weather variation. Forest Ecology and Management, 2020, 475, 118444.	3.2	8
7	Climate and genotype influences on carbon fluxes and partitioning in Eucalyptus plantations. Forest Ecology and Management, 2020, 475, 118445.	3.2	13
8	Assessing the cross-site and within-site response of potential production to atmospheric demand for water in Eucalyptus plantations. Forest Ecology and Management, 2020, 464, 118068.	3.2	7
9	Changes in soil organic carbon contents and fractionations of forests along a climatic gradient in China. Forest Ecosystems, 2019, 6, .	3.1	46
10	Clues for our missing respiration model. New Phytologist, 2019, 222, 1167-1170.	7.3	6
11	Fruiting and sink competition. Tree Physiology, 2018, 38, 1261-1266.	3.1	14
12	Estimating Soil Respiration in a Subalpine Landscape Using Point, Terrain, Climate, and Greenness Data. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 3231-3249.	3.0	15
13	Mulching fuels treatments promote understory plant communities in three Colorado, USA, coniferous forest types. Forest Ecology and Management, 2017, 385, 214-224.	3.2	26
14	Tropical rainforest carbon sink declines during El Niño as a result of reduced photosynthesis and increased respiration rates. New Phytologist, 2017, 216, 136-149.	7.3	42
15	Zero-calorie sugar delivery to roots. Nature Plants, 2017, 3, 922-923.	9.3	2
16	Reviews and syntheses: Field data to benchmark the carbon cycle models for tropical forests. Biogeosciences, 2017, 14, 4663-4690.	3.3	27
17	A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. Nature Ecology and Evolution, 2017, 1, 1285-1291.	7.8	739
18	Total belowground carbon flux in subalpine forests is related to leaf area index, soil nitrogen, and tree height. Ecosphere, 2016, 7, e01418.	2.2	12

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19	A belowground perspective on the drought sensitivity of forests: Towards improved understanding and simulation. <i>Forest Ecology and Management</i> , 2016, 380, 309-320.	3.2	92
20	Tree mortality: Large trees losing out to drought. <i>Nature Plants</i> , 2015, 1, .	9.3	10
21	Ecosystem resistance in the face of climate change: a case study from the freshwater marshes of the Florida Everglades. <i>Ecosphere</i> , 2015, 6, 1-23.	2.2	10
22	Peer review report 2 On "Trenching reduces soil heterotrophic activity in a loblolly pine (Pinus Taeda) forest exposed to elevated atmospheric [CO2] and N-fertilization". <i>Agricultural and Forest Meteorology</i> , 2015, 201, 490.	4.8	0
23	Carbon Dynamics in Central US Rockies Lodgepole Pine Type after Mountain Pine Beetle Outbreaks. <i>Forest Science</i> , 2015, 61, 665-679.	1.0	19
24	Carbohydrate regulation of photosynthesis and respiration from branch girdling in four species of wet tropical rain forest trees. <i>Tree Physiology</i> , 2015, 35, 608-620.	3.1	40
25	Tree physiology and bark beetles. <i>New Phytologist</i> , 2015, 205, 955-957.	7.3	21
26	Global variability in leaf respiration in relation to climate, plant functional types and leaf traits. <i>New Phytologist</i> , 2015, 206, 614-636.	7.3	350
27	Variation in foliar respiration and wood CO2 efflux rates among species and canopy layers in a wet tropical forest. <i>Tree Physiology</i> , 2015, 35, 148-159.	3.1	19
28	Forest ecosystem respiration estimated from eddy covariance and chamber measurements under high turbulence and substantial tree mortality from bark beetles. <i>Global Change Biology</i> , 2015, 21, 708-721.	9.5	66
29	Non-structural carbohydrates in woody plants compared among laboratories. <i>Tree Physiology</i> , 2015, 35, tpv073.	3.1	163
30	LiDAR based prediction of forest biomass using hierarchical models with spatially varying coefficients. <i>Remote Sensing of Environment</i> , 2015, 169, 113-127.	11.0	40
31	El Niño Southern Oscillation (ENSO) Enhances CO2 Exchange Rates in Freshwater Marsh Ecosystems in the Florida Everglades. <i>PLoS ONE</i> , 2014, 9, e115058.	2.5	20
32	Managing for water-use efficient wood production in Eucalyptus globulus plantations. <i>Forest Ecology and Management</i> , 2014, 331, 272-280.	3.2	41
33	Seasonal patterns in energy partitioning of two freshwater marsh ecosystems in the Florida Everglades. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014, 119, 1487-1505.	3.0	23
34	Converging patterns of vertical variability in leaf morphology and nitrogen across seven Eucalyptus plantations in Brazil and Hawaii, USA. <i>Trees - Structure and Function</i> , 2014, 28, 1-15.	1.9	32
35	Short and long-term carbon balance of bioenergy electricity production fueled by forest treatments. <i>Carbon Balance and Management</i> , 2014, 9, 6.	3.2	6
36	Phloem transport in trees. <i>Tree Physiology</i> , 2014, 34, 1-4.	3.1	77

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37	Overview of the Manitou Experimental Forest Observatory: site description and selected science results from 2008 to 2013. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 6345-6367.	4.9	62
38	Forest Processes. <i>Advances in Global Change Research</i> , 2014, , 25-54.	1.6	3
39	Feature: Improving our knowledge of drought-induced forest mortality through experiments, observations, and modeling. <i>New Phytologist</i> , 2013, 200, 289-293.	7.3	113
40	Evaluating theories of drought-induced vegetation mortality using a multimodel "experiment framework. <i>New Phytologist</i> , 2013, 200, 304-321.	7.3	340
41	Comparison of direct and indirect methods for assessing leaf area index across a tropical rain forest landscape. <i>Agricultural and Forest Meteorology</i> , 2013, 177, 110-116.	4.8	60
42	Effects of simulated drought on the carbon balance of Everglades short-hydroperiod marsh. <i>Global Change Biology</i> , 2013, 19, 2511-2523.	9.5	42
43	Postfire changes in forest carbon storage over a 300-year chronosequence of <i>Pinus contorta</i> -dominated forests. <i>Ecological Monographs</i> , 2013, 83, 49-66.	5.4	100
44	Three decades of research at Flakaliden advancing whole-tree physiology, forest ecosystem and global change research. <i>Tree Physiology</i> , 2013, 33, 1123-1131.	3.1	27
45	Introduction to the invited issue on carbon allocation of trees and forests. <i>Tree Physiology</i> , 2012, 32, 639-643.	3.1	30
46	Short- and medium-term effects of fuel reduction mulch treatments on soil nitrogen availability in Colorado conifer forests. <i>Forest Ecology and Management</i> , 2012, 276, 231-238.	3.2	36
47	A synthesis of current knowledge on forests and carbon storage in the United States. , 2011, 21, 1902-1924.		354
48	Temperature and soil organic matter decomposition rates - synthesis of current knowledge and a way forward. <i>Global Change Biology</i> , 2011, 17, 3392-3404.	9.5	1,143
49	Continued warming could transform Greater Yellowstone fire regimes by mid-21st century. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 13165-13170.	7.1	536
50	Tree responses to drought. <i>Tree Physiology</i> , 2011, 31, 237-239.	3.1	137
51	Relationships Between Tree Height and Carbon Isotope Discrimination. <i>Tree Physiology</i> , 2011, , 255-286.	2.5	69
52	Temperature and tree growth. <i>Tree Physiology</i> , 2010, 30, 667-668.	3.1	45
53	Height is more important than light in determining leaf morphology in a tropical forest. <i>Ecology</i> , 2010, 91, 1730-1739.	3.2	113
54	Carbon pools and fluxes in small temperate forest landscapes: Variability and implications for sampling design. <i>Forest Ecology and Management</i> , 2010, 259, 1245-1254.	3.2	36

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55	Explaining growth of individual trees: Light interception and efficiency of light use by Eucalyptus at four sites in Brazil. <i>Forest Ecology and Management</i> , 2010, 259, 1704-1713.	3.2	156
56	Effects of irrigation on water use and water use efficiency in two fast growing Eucalyptus plantations. <i>Forest Ecology and Management</i> , 2010, 259, 1714-1721.	3.2	90
57	The Brazil Eucalyptus Potential Productivity Project: Influence of water, nutrients and stand uniformity on wood production. <i>Forest Ecology and Management</i> , 2010, 259, 1684-1694.	3.2	308
58	Factors controlling Eucalyptus productivity: How water availability and stand structure alter production and carbon allocation. <i>Forest Ecology and Management</i> , 2010, 259, 1695-1703.	3.2	156
59	Surface fuel loadings within mulching treatments in Colorado coniferous forests. <i>Forest Ecology and Management</i> , 2010, 260, 1557-1566.	3.2	54
60	Detrital carbon pools in temperate forests: magnitude and potential for landscape-scale assessment. <i>Canadian Journal of Forest Research</i> , 2009, 39, 802-813.	1.7	48
61	Wood CO ₂ efflux and foliar respiration for Eucalyptus in Hawaii and Brazil. <i>Tree Physiology</i> , 2009, 29, 1213-1222.	3.1	33
62	Long-Term Nitrogen Storage and Soil Nitrogen Availability in Post-Fire Lodgepole Pine Ecosystems. <i>Ecosystems</i> , 2009, 12, 792-806.	3.4	48
63	Modeling the effects of fire and climate change on carbon and nitrogen storage in lodgepole pine (<i>Pinus contorta</i>) stands. <i>Global Change Biology</i> , 2009, 15, 535-548.	9.5	61
64	Detecting defects in conifers with ground penetrating radar: applications and challenges. <i>Forest Pathology</i> , 2009, 39, 309-322.	1.1	47
65	First direct landscape-scale measurement of tropical rain forest Leaf Area Index, a key driver of global primary productivity. <i>Ecology Letters</i> , 2008, 11, 163-172.	6.4	130
66	Tree age, disturbance history, and carbon stocks and fluxes in subalpine Rocky Mountain forests. <i>Global Change Biology</i> , 2008, 14, 2882-2897.	9.5	164
67	Foliar and ecosystem respiration in an old-growth tropical rain forest. <i>Plant, Cell and Environment</i> , 2008, 31, 473-483.	5.7	91
68	Production and carbon allocation in a clonal Eucalyptus plantation with water and nutrient manipulations. <i>Forest Ecology and Management</i> , 2008, 255, 920-930.	3.2	129
69	Landscape-Scale Carbon Sampling Strategy "Lessons Learned." , 2008, , 227-238.		1
70	Quantifying Soil Respiration at Landscape Scales. , 2008, , 143-162.		2
71	Why don't our stands grow even faster? Control of production and carbon cycling in eucalypt plantations. <i>Southern Forests</i> , 2008, 70, 99-104.	0.7	13
72	Forest structure estimation and pattern exploration from discrete-return lidar in subalpine forests of the central Rockies. <i>Canadian Journal of Forest Research</i> , 2008, 38, 2081-2096.	1.7	35

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73	Carbon allocation in forest ecosystems. <i>Global Change Biology</i> , 2007, 13, 2089-2109.	9.5	849
74	The likely impact of elevated [CO ₂], nitrogen deposition, increased temperature and management on carbon sequestration in temperate and boreal forest ecosystems: a literature review. <i>New Phytologist</i> , 2007, 173, 463-480.	7.3	579
75	Patterns of growth dominance in forests of the Rocky Mountains, USA. <i>Forest Ecology and Management</i> , 2006, 236, 193-201.	3.2	95
76	The hydraulic limitation hypothesis revisited. <i>Plant, Cell and Environment</i> , 2006, 29, 367-381.	5.7	543
77	Wood CO ₂ efflux in a primary tropical rain forest. <i>Global Change Biology</i> , 2006, 12, 2442-2458.	9.5	76
78	Reconciling Carbon-cycle Concepts, Terminology, and Methods. <i>Ecosystems</i> , 2006, 9, 1041-1050.	3.4	904
79	Tree-girdling to separate root and heterotrophic respiration in two Eucalyptus stands in Brazil. <i>Oecologia</i> , 2006, 148, 447-454.	2.0	83
80	Carbon Storage on Landscapes with Stand-replacing Fires. <i>BioScience</i> , 2006, 56, 598.	4.9	206
81	Aboveground sink strength in forests controls the allocation of carbon below ground and its [CO ₂]-induced enhancement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 19362-19367.	7.1	109
82	Seasonal patterns in soil surface CO ₂ flux under snow cover in 50 and 300-year old subalpine forests. <i>Biogeochemistry</i> , 2005, 73, 93-107.	3.5	74
83	Interpreting, measuring, and modeling soil respiration. <i>Biogeochemistry</i> , 2005, 73, 3-27.	3.5	572
84	The Response of Belowground Carbon Allocation in Forests to Global Change. , 2005, , 119-154.		35
85	Water use, water limitation, and water use efficiency in a Eucalyptus plantation. <i>Bosque</i> , 2004, 25, 35.	0.3	42
86	First-Order Rotation Changes in Soil Carbon and Nitrogen in a <i>Eucalyptus</i> Plantation in Hawaii. <i>Soil Science Society of America Journal</i> , 2004, 68, 1713-1719.	2.2	58
87	EFFECTS OF TREE DENSITY AND STAND AGE ON CARBON ALLOCATION PATTERNS IN POSTFIRE LODGEPOLE PINE. , 2004, 14, 460-475.		108
88	The effect of fertilization on sap flux and canopy conductance in a <i>Eucalyptus saligna</i> experimental forest. <i>Global Change Biology</i> , 2004, 10, 427-436.	9.5	62
89	Below-ground process responses to elevated CO ₂ and temperature: a discussion of observations, measurement methods, and models. <i>New Phytologist</i> , 2004, 162, 311-322.	7.3	358
90	Belowground carbon cycling in a humid tropical forest decreases with fertilization. <i>Oecologia</i> , 2004, 139, 545-550.	2.0	137

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91	Production, Respiration, and Overall Carbon Balance in an Old-growth Pseudotsuga-Tsuga Forest Ecosystem. <i>Ecosystems</i> , 2004, 7, 498.	3.4	134
92	AN EXPERIMENTAL TEST OF THE CAUSES OF FOREST GROWTH DECLINE WITH STAND AGE. <i>Ecological Monographs</i> , 2004, 74, 393-414.	5.4	310
93	Thinking about efficiency of resource use in forests. <i>Forest Ecology and Management</i> , 2004, 193, 5-16.	3.2	234
94	Eucalyptus production and the supply, use and efficiency of use of water, light and nitrogen across a geographic gradient in Brazil. <i>Forest Ecology and Management</i> , 2004, 193, 17-31.	3.2	246
95	Testing the utility of the 3-PG model for growth of with natural and manipulated supplies of water and nutrients. <i>Forest Ecology and Management</i> , 2004, 193, 219-234.	3.2	98
96	A test of the hydraulic limitation hypothesis in fast-growing Eucalyptus saligna. <i>Plant, Cell and Environment</i> , 2003, 26, 1235-1245.	5.7	104
97	Primary production and carbon allocation in relation to nutrient supply in a tropical experimental forest. <i>Global Change Biology</i> , 2003, 9, 1438-1450.	9.5	163
98	Soil-surface carbon dioxide efflux and microbial biomass in relation to tree density 13 years after a stand replacing fire in a lodgepole pine ecosystem. <i>Global Change Biology</i> , 2003, 9, 680-696.	9.5	82
99	Leaf area compounds height-related hydraulic costs of water transport in Oregon White Oak trees. <i>Functional Ecology</i> , 2003, 17, 832-840.	3.6	48
100	Belowground and aboveground biomass in young postfire lodgepole pine forests of contrasting tree density. <i>Canadian Journal of Forest Research</i> , 2003, 33, 351-363.	1.7	119
101	Canopy and hydraulic conductance in young, mature and old Douglas-fir trees. <i>Tree Physiology</i> , 2002, 22, 205-211.	3.1	132
102	An investigation of hydraulic limitation and compensation in large, old Douglas-fir trees. <i>Tree Physiology</i> , 2002, 22, 763-774.	3.1	225
103	Canopy processes research. <i>Tree Physiology</i> , 2002, 22, 1035-1043.	3.1	20
104	Effects of branch height on leaf gas exchange, branch hydraulic conductance and branch sap flux in open-grown ponderosa pine. <i>Tree Physiology</i> , 2002, 22, 575-581.	3.1	31
105	The relationship between tree height and leaf area: sapwood area ratio. <i>Oecologia</i> , 2002, 132, 12-20.	2.0	283
106	Age-related Decline in Forest Ecosystem Growth: An Individual-Tree, Stand-Structure Hypothesis. <i>Ecosystems</i> , 2002, 5, 58-67.	3.4	214
107	Total Belowground Carbon Allocation in a Fast-growing Eucalyptus Plantation Estimated Using a Carbon Balance Approach. <i>Ecosystems</i> , 2002, 5, 487-499.	3.4	207
108	Seasonal respiration of foliage, fine roots, and woody tissues in relation to growth, tissue N, and photosynthesis. <i>Global Change Biology</i> , 2002, 8, 182-193.	9.5	135

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109	Tree Species and Soil Textural Controls on Carbon and Nitrogen Mineralization Rates. Soil Science Society of America Journal, 2001, 65, 1272-1279.	2.2	142
110	Gas exchange and hydraulic properties in the crowns of two tree species in a Panamanian moist forest. Trees - Structure and Function, 2001, 15, 123-130.	1.9	30
111	Tree and forest functioning in response to global warming. New Phytologist, 2001, 149, 369-399.	7.3	647
112	Stomatal conductance and photosynthesis vary linearly with plant hydraulic conductance in ponderosa pine. Plant, Cell and Environment, 2001, 24, 113-121.	5.7	471
113	Evaluating different soil and plant hydraulic constraints on tree function using a model and sap flow data from ponderosa pine. Plant, Cell and Environment, 2001, 24, 679-690.	5.7	133
114	Evidence that decomposition rates of organic carbon in mineral soil do not vary with temperature. Nature, 2000, 404, 858-861.	27.8	867
115	reply: Soil warming and organic carbon content. Nature, 2000, 408, 790-790.	27.8	20
116	Transpiration and whole-tree conductance in ponderosa pine trees of different heights. Oecologia, 2000, 124, 553-560.	2.0	188
117	Introduction to BOREAS special issue. Tree Physiology, 2000, 20, 709-711.	3.1	1
118	Seasonal and annual respiration of a ponderosa pine ecosystem. Global Change Biology, 1999, 5, 169-182.	9.5	428
119	Evidence that hydraulic conductance limits photosynthesis in old Pinus ponderosa trees. Tree Physiology, 1999, 19, 165-172.	3.1	361
120	Net primary production and nutrient cycling in replicated stands of Eucalyptus saligna and Albizia facaltaria. Forest Ecology and Management, 1998, 112, 79-85.	3.2	73
121	Water flux in boreal forest during two hydrologically contrasting years; species specific regulation of canopy conductance and transpiration. Annales Des Sciences ForestiÃres, 1998, 55, 47-61.	1.2	56
122	A physiological basis for biosphere-atmosphere interactions in the boreal forest: an overview. Tree Physiology, 1997, 17, 491-499.	3.1	53
123	Hydraulic Limits to Tree Height and Tree Growth. BioScience, 1997, 47, 235-242.	4.9	974
124	Magnitudes and seasonal patterns of energy, water, and carbon exchanges at a boreal young jack pine forest in the BOREAS northern study area. Journal of Geophysical Research, 1997, 102, 28997-29007.	3.3	75
125	Annual carbon cost of autotrophic respiration in boreal forest ecosystems in relation to species and climate. Journal of Geophysical Research, 1997, 102, 28871-28883.	3.3	331
126	Declining forest productivity in aging forest stands: a modeling analysis of alternative hypotheses. Tree Physiology, 1996, 16, 187-200.	3.1	77

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127	Woody tissue maintenance respiration of four conifers in contrasting climates. <i>Oecologia</i> , 1995, 101, 133-140.	2.0	228
128	Foliar maintenance respiration of subalpine and boreal trees and shrubs in relation to nitrogen content. <i>Plant, Cell and Environment</i> , 1995, 18, 765-772.	5.7	198
129	Respiration from the Organ Level to the Stand. , 1995, , 255-299.		103
130	The Boreal Ecosystem's Atmosphere Study (BOREAS): An Overview and Early Results from the 1994 Field Year. <i>Bulletin of the American Meteorological Society</i> , 1995, 76, 1549-1577.	3.3	547
131	Woody-tissue respiration for <i>Simarouba amara</i> and <i>Minquartia guianensis</i> , two tropical wet forest trees with different growth habits. <i>Oecologia</i> , 1994, 100, 213-220.	2.0	99
132	Maintenance Respiration and Stand Development in a Subalpine Lodgepole Pine Forest. <i>Ecology</i> , 1992, 73, 2100-2108.	3.2	225
133	Effects of Climate Change on Plant Respiration. , 1991, 1, 157-167.		736
134	Performance of a canopy light interception model for conifer shoots, trees and stands. <i>Tree Physiology</i> , 1991, 9, 227-243.	3.1	33
135	A general biogeochemical model describing the responses of the C and N cycles in terrestrial ecosystems to changes in CO ₂ , climate, and N deposition. <i>Tree Physiology</i> , 1991, 9, 101-126.	3.1	299
136	A simple method for estimating gross carbon budgets for vegetation in forest ecosystems. <i>Tree Physiology</i> , 1991, 9, 255-266.	3.1	197
137	Sapwood volume for three subalpine conifers: predictive equations and ecological implications. <i>Canadian Journal of Forest Research</i> , 1989, 19, 1397-1401.	1.7	52
138	Adjusting estimates in two-way tables by incorporating outside information. <i>Canadian Journal of Forest Research</i> , 1988, 18, 1280-1285.	1.7	2
139	Physiographic, stand, and environmental effects on individual tree growth and growth efficiency in subalpine forests. <i>Tree Physiology</i> , 1986, 2, 47-59.	3.1	64