

T Matthew Robson

List of Publications by Year in descending order

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Version: 2024-02-01

86
papers

5,685
citations

109264

35
h-index

82499

72
g-index

92
all docs

92
docs citations

92
times ranked

8133
citing authors

#	ARTICLE	IF	CITATIONS
1	Incorporating plant functional diversity effects in ecosystem service assessments. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20684-20689.	3.3	1,242
2	Assessing the Effects of Land-use Change on Plant Traits, Communities and Ecosystem Functioning in Grasslands: A Standardized Methodology and Lessons from an Application to 11 European Sites. Annals of Botany, 2007, 99, 967-985.	1.4	453
3	Intra-specific variability and plasticity influence potential tree species distributions under climate change. Global Ecology and Biogeography, 2011, 20, 766-778.	2.7	249
4	Leaf traits capture the effects of land use changes and climate on litter decomposability of grasslands across Europe. Ecology, 2009, 90, 598-611.	1.5	243
5	Reinterpreting plant morphological responses to UV-B radiation. Plant, Cell and Environment, 2015, 38, 856-866.	2.8	222
6	Trait SDMs: species distribution models that account for local adaptation and phenotypic plasticity. New Phytologist, 2019, 222, 1757-1765.	3.5	181
7	Environmental effects of ozone depletion, UV radiation and interactions with climate change: UNEP Environmental Effects Assessment Panel, update 2017. Photochemical and Photobiological Sciences, 2018, 17, 127-179.	1.6	177
8	Ozone depletion, ultraviolet radiation, climate change and prospects for a sustainable future. Nature Sustainability, 2019, 2, 569-579.	11.5	156
9	Impacts of solar ultraviolet-B radiation on terrestrial ecosystems of Tierra del Fuego (southern) Tj ETQq1 1 0.784314.rgBT /Overlock 1	1.7	140
10	Linkages between stratospheric ozone, UV radiation and climate change and their implications for terrestrial ecosystems. Photochemical and Photobiological Sciences, 2019, 18, 681-716.	1.6	125
11	Solar UV-B decreases decomposition in herbaceous plant litter in Tierra del Fuego, Argentina: potential role of an altered decomposer community. Global Change Biology, 2003, 9, 1465-1474.	4.2	99
12	Assessing the response of plant flavonoids to UV radiation: an overview of appropriate techniques. Phytochemistry Reviews, 2015, 14, 273-297.	3.1	98
13	Environmental effects of stratospheric ozone depletion, UV radiation, and interactions with climate change: UNEP Environmental Effects Assessment Panel, Update 2020. Photochemical and Photobiological Sciences, 2021, 20, 1-67.	1.6	93
14	Six years of solar UV-B manipulations affect growth of Sphagnum and vascular plants in a Tierra del Fuego peatland. New Phytologist, 2003, 160, 379-389.	3.5	91
15	Neglect of mowing and manuring leads to slower nitrogen cycling in subalpine grasslands. Soil Biology and Biochemistry, 2007, 39, 930-941.	4.2	91
16	Chlorophyll a fluorescence illuminates a path connecting plant molecular biology to Earth-system science. Nature Plants, 2021, 7, 998-1009.	4.7	88
17	Plant response traits mediate the effects of subalpine grasslands on soil moisture. New Phytologist, 2008, 180, 652-662.	3.5	85
18	Relative climatic, edaphic and management controls of plant functional trait signatures. Journal of Vegetation Science, 2009, 20, 148-159.	1.1	84

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19	Epidermal UV-A absorbance and whole leaf flavonoid composition in pea respond more to solar blue light than to solar UV radiation. <i>Plant, Cell and Environment</i> , 2015, 38, 941-952.	2.8	79
20	Interactive effects of PAR and UV radiation on the physiology, morphology and leaf optical properties of two barley varieties. <i>Environmental and Experimental Botany</i> , 2012, 75, 52-64.	2.0	73
21	A perspective on ecologically relevant plant-UV research and its practical application. <i>Photochemical and Photobiological Sciences</i> , 2019, 18, 970-988.	1.6	69
22	Ultraviolet and photosynthetically active radiation can both induce photoprotective capacity allowing barley to overcome high radiation stress. <i>Plant Physiology and Biochemistry</i> , 2015, 93, 74-83.	2.8	67
23	Diffuse solar radiation and canopy photosynthesis in a changing environment. <i>Agricultural and Forest Meteorology</i> , 2021, 311, 108684.	1.9	66
24	Range-wide variation in local adaptation and phenotypic plasticity of fitness-related traits in <i>Fagus sylvatica</i> and their implications under climate change. <i>Global Ecology and Biogeography</i> , 2019, 28, 1336-1350.	2.7	61
25	Variation in functional leaf traits among beech provenances during a Spanish summer reflects the differences in their origin. <i>Tree Genetics and Genomes</i> , 2012, 8, 1111-1121.	0.6	59
26	Environmental effects of stratospheric ozone depletion, UV radiation and interactions with climate change: UNEP Environmental Effects Assessment Panel, update 2019. <i>Photochemical and Photobiological Sciences</i> , 2020, 19, 542-584.	1.6	59
27	Differences in the leaf functional traits of six beech (<i>Fagus sylvatica</i> L.) populations are reflected in their response to water limitation. <i>Environmental and Experimental Botany</i> , 2013, 87, 110-119.	2.0	56
28	Flushing phenology and fitness of European beech (<i>Fagus sylvatica</i> L.) provenances from a trial in La Rioja, Spain, segregate according to their climate of origin. <i>Agricultural and Forest Meteorology</i> , 2013, 180, 76-85.	1.9	55
29	Thermal acclimation of leaf dark respiration of beech seedlings experiencing summer drought in high and low light environments. <i>Tree Physiology</i> , 2010, 30, 214-224.	1.4	49
30	How does solar ultraviolet-B radiation improve drought tolerance of silver birch (<i>Betula pendula</i> L.) seedlings? <i>Plant, Cell and Environment</i> , 2015, 38, 953-967.	2.8	47
31	Land use in subalpine grasslands affects nitrogen cycling via changes in plant community and soil microbial uptake dynamics. <i>Journal of Ecology</i> , 2010, 98, 62-73.	1.9	44
32	Summer drought impedes beech seedling performance more in a sub-Mediterranean forest understory than in small gaps. <i>Tree Physiology</i> , 2008, 29, 249-259.	1.4	43
33	Patterns in the spectral composition of sunlight and biologically meaningful spectral photon ratios as affected by atmospheric factors. <i>Agricultural and Forest Meteorology</i> , 2020, 291, 108041.	1.9	42
34	Solar UV-B influences microfaunal community composition in a Tierra del Fuego peatland. <i>Soil Biology and Biochemistry</i> , 2005, 37, 2205-2215.	4.2	41
35	Environmental effects of stratospheric ozone depletion, UV radiation, and interactions with climate change: UNEP Environmental Effects Assessment Panel, Update 2021. <i>Photochemical and Photobiological Sciences</i> , 2022, 21, 275-301.	1.6	40
36	Reduction of solar UV-B mediates changes in the <i>Sphagnum capitulum</i> microenvironment and the peatland microfungus community. <i>Oecologia</i> , 2004, 140, 480-490.	0.9	36

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37	The contribution of photodegradation to litter decomposition in a temperate forest gap and understorey. <i>New Phytologist</i> , 2021, 229, 2625-2636.	3.5	36
38	Phenotypic trait variation measured on European genetic trials of <i>Fagus sylvatica</i> L. <i>Scientific Data</i> , 2018, 5, 180149.	2.4	35
39	Do UV-A radiation and blue light during growth prime leaves to cope with acute high light in photoreceptor mutants of <i>Arabidopsis thaliana</i> ? <i>Physiologia Plantarum</i> , 2019, 165, 537-554.	2.6	34
40	The influence of spectral composition on spring and autumn phenology in trees. <i>Tree Physiology</i> , 2019, 39, 925-950.	1.4	32
41	The effects of snow-N deposition and snowmelt dynamics on soil-N cycling in marginal terraced grasslands in the French Alps. <i>Biogeochemistry</i> , 2012, 108, 297-315.	1.7	30
42	Blue light advances bud burst in branches of three deciduous tree species under short-day conditions. <i>Trees - Structure and Function</i> , 2018, 32, 1157-1164.	0.9	30
43	Solar UV-A radiation and blue light enhance tree leaf litter decomposition in a temperate forest. <i>Oecologia</i> , 2019, 191, 191-203.	0.9	30
44	Species-specific effect of UV-B radiation on the temporal pattern of leaf growth. <i>Physiologia Plantarum</i> , 2012, 144, 146-160.	2.6	28
45	Light quality characterization under climate screens and shade nets for controlled-environment agriculture. <i>PLoS ONE</i> , 2018, 13, e0199628.	1.1	28
46	Assessing scale-wise similarity of curves with a thick pen: As illustrated through comparisons of spectral irradiance. <i>Ecology and Evolution</i> , 2018, 8, 10206-10218.	0.8	27
47	A new generation of sensors and monitoring tools to support climate-smart forestry practices. <i>Canadian Journal of Forest Research</i> , 2021, 51, 1751-1765.	0.8	26
48	Comparison of inorganic nitrogen uptake dynamics following snowmelt and at peak biomass in subalpine grasslands. <i>Biogeosciences</i> , 2013, 10, 7631-7645.	1.3	23
49	UV-screening and springtime recovery of photosynthetic capacity in leaves of <i>Vaccinium vitis-idaea</i> above and below the snow pack. <i>Plant Physiology and Biochemistry</i> , 2019, 134, 40-52.	2.8	23
50	Direct and indirect effects of solar ultraviolet-B radiation on long-term decomposition. <i>Global Change Biology</i> , 2005, 11, 051006062331002-???	4.2	22
51	Ultraviolet radiation accelerates photodegradation under controlled conditions but slows the decomposition of senescent leaves from forest stands in southern Finland. <i>Plant Physiology and Biochemistry</i> , 2020, 146, 42-54.	2.8	22
52	Testing trait plasticity over the range of spectral composition of sunlight in forb species differing in shade tolerance. <i>Journal of Ecology</i> , 2020, 108, 1923-1940.	1.9	20
53	Seedlings from marginal and core populations of European beech (<i>Fagus sylvatica</i> L.) respond differently to imposed drought and shade. <i>Trees - Structure and Function</i> , 2021, 35, 53-67.	0.9	19
54	Blue radiation stimulates photosynthetic induction in <i>Fagus sylvatica</i> L.. <i>Photosynthetica</i> , 2009, 47, .	0.9	18

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55	Spectral Composition of Sunlight Affects the Microbial Functional Structure of Beech Leaf Litter During the Initial Phase of Decomposition. <i>Plant and Soil</i> , 2020, 451, 515-530.	1.8	18
56	UV responses of <i>Lolium perenne</i> raised along a latitudinal gradient across Europe: a filtration study. <i>Physiologia Plantarum</i> , 2012, 145, 604-618.	2.6	17
57	Tree species richness induces strong intraspecific variability of beech (<i>Fagus sylvatica</i>) leaf traits and alleviates edaphic stress. <i>European Journal of Forest Research</i> , 2016, 135, 707-717.	1.1	17
58	Fossil pollen and spores as a tool for reconstructing ancient solar-ultraviolet irradiance received by plants: an assessment of prospects and challenges using proxy-system modelling. <i>Photochemical and Photobiological Sciences</i> , 2019, 18, 275-294.	1.6	15
59	Limited capacity to cope with excessive light in the open and with seasonal drought in the shade in Mediterranean <i>Ilex aquifolium</i> populations. <i>Trees - Structure and Function</i> , 2008, 22, 375-384.	0.9	14
60	Seasonal Patterns in Spectral Irradiance and Leaf UV-A Absorbance Under Forest Canopies. <i>Frontiers in Plant Science</i> , 2019, 10, 1762.	1.7	14
61	Plant growth drives soil nitrogen cycling and N-related microbial activity through changing root traits. <i>Fungal Ecology</i> , 2020, 44, 100910.	0.7	14
62	The contribution of PIP2-type aquaporins to photosynthetic response to increased vapour pressure deficit. <i>Journal of Experimental Botany</i> , 2021, 72, 5066-5078.	2.4	14
63	The effect of canopy architecture on the patterning of "windflecks" within a wheat canopy. <i>Plant, Cell and Environment</i> , 2021, 44, 3524-3537.	2.8	14
64	Sunfleck properties from time series of fluctuating light. <i>Agricultural and Forest Meteorology</i> , 2021, 308-309, 108554.	1.9	14
65	Stomatal and non-stomatal limitations on leaf carbon assimilation in beech (<i>Fagus sylvatica</i> L.) seedlings under natural conditions. <i>Forest Systems</i> , 2012, 21, 405.	0.1	12
66	Canopy structure and phenology modulate the impacts of solar radiation on C and N dynamics during litter decomposition in a temperate forest. <i>Science of the Total Environment</i> , 2022, 820, 153185.	3.9	12
67	Transmission of ultraviolet, visible and near-infrared solar radiation to plants within a seasonal snow pack. <i>Photochemical and Photobiological Sciences</i> , 2019, 18, 1963-1971.	1.6	11
68	Greater capacity to exploit warming temperatures in northern populations of European beech is partly driven by delayed leaf senescence. <i>Agricultural and Forest Meteorology</i> , 2020, 284, 107908.	1.9	10
69	Contributions of cryptochromes and phototropins to stomatal opening through the day. <i>Functional Plant Biology</i> , 2020, 47, 226.	1.1	10
70	Effects of land use and climate on carbon and nitrogen pool partitioning in European mountain grasslands. <i>Science of the Total Environment</i> , 2022, 822, 153380.	3.9	10
71	Alpine forbs rely on different photoprotective strategies during spring snowmelt. <i>Physiologia Plantarum</i> , 2021, 172, 1506-1517.	2.6	9
72	The success of the Montreal Protocol in mitigating interactive effects of stratospheric ozone depletion and climate change on the environment. <i>Global Change Biology</i> , 2021, 27, 5681-5683.	4.2	9

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73	Increased root investment can explain the higher survival of seedlings of <i>Quercus suber</i> than <i>Quercus ilex</i> in sandy soils during a summer drought. <i>Tree Physiology</i> , 2019, 39, 64-75.	1.4	8
74	Leaf density and chemical composition explain variation in leaf mass area with spectral composition among 11 widespread forbs in a common garden. <i>Physiologia Plantarum</i> , 2021, 173, 698-708.	2.6	8
75	Plant responses to fluctuating UV environments.. , 2017, , 72-89.		8
76	Sunflecks in the upper canopy: dynamics of light-use efficiency in sun and shade leaves of <i>Fagus sylvatica</i> . <i>New Phytologist</i> , 2022, 235, 1365-1378.	3.5	7
77	UAS spherical photography for the vertical characterisation of canopy structural traits. <i>New Phytologist</i> , 2022, , .	3.5	5
78	The benefits of informed management of sunlight in production greenhouses and polytunnels. <i>Plants People Planet</i> , 2022, 4, 314-325.	1.6	5
79	Pollen-chemistry variations along elevation gradients and their implications for a proxy for UV-B radiation in the plant-fossil record. <i>Journal of Ecology</i> , 2021, 109, 3060-3073.	1.9	4
80	LED lights can be used to improve the water deficit tolerance of tomato seedlings grown in greenhouses. <i>Acta Horticulturae</i> , 2015, , 107-112.	0.1	4
81	Understorey light quality affects leaf pigments and leaf phenology in different plant functional types. <i>Physiologia Plantarum</i> , 2022, 174, .	2.6	3
82	Freezing induces an increase in leaf spectral transmittance of forest understorey and alpine forbs. <i>Photochemical and Photobiological Sciences</i> , 2022, , 1.	1.6	2
83	Martyn M. Caldwell, 1941-2021, in memoriam. <i>Physiologia Plantarum</i> , 2021, 173, 663-665.	2.6	1
84	Floral bullseyes and stratospheric ozone. <i>Current Biology</i> , 2021, 31, R885-R887.	1.8	1
85	Beyond APAR and NPQ: Factors Coupling and Decoupling SIF and GPP Across Scales. , 2021, , .		0
86	Practical Activities Promoting Engagement in Forest Ecology Research. <i>Citizen Science: Theory and Practice</i> , 2022, 7, 27.	0.6	0