

# Mark Garnett

## List of Publications by Year in descending order

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93  
papers

3,568  
citations

117625

34  
h-index

149698

56  
g-index

96  
all docs

96  
docs citations

96  
times ranked

4764  
citing authors

#	ARTICLE	IF	CITATIONS
1	Carbon Loss Pathways in Degraded Peatlands: New Insights From Radiocarbon Measurements of Peatland Waters. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2022, 127, .	3.0	1
2	No evidence for increased loss of old carbon in a temperate organic soil after 13 years of simulated climatic warming despite increased CO <sub>2</sub> emissions. <i>Global Change Biology</i> , 2021, 27, 1836-1847.	9.5	6
3	Radiocarbon Data Reveal Contrasting Sources for Carbon Fractions in Thermokarst Lakes and Rivers of Eastern Canada (Nunavik, Quebec). <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG005938.	3.0	6
4	A HIGHLY PORTABLE AND INEXPENSIVE FIELD SAMPLING KIT FOR RADIOCARBON ANALYSIS OF CARBON DIOXIDE. <i>Radiocarbon</i> , 2021, 63, 1355-1368.	1.8	3
5	Temperature control on CO <sub>2</sub> emissions from the weathering of sedimentary rocks. <i>Nature Geoscience</i> , 2021, 14, 665-671.	12.9	31
6	Radiocarbon dating. <i>Nature Reviews Methods Primers</i> , 2021, 1, .	21.2	79
7	An assessment of chamber <sup>14</sup> C methodologies for sampling aquatic CO <sub>2</sub> evasion. <i>Ecohydrology</i> , 2020, 13, e2191.	2.4	0
8	Predicting climate change impacts on maritime Antarctic soils: a space-for-time substitution study. <i>Soil Biology and Biochemistry</i> , 2020, 141, 107682.	8.8	15
9	Assessing the Potential for Mobilization of Old Soil Carbon After Permafrost Thaw: A Synthesis of <sup>14</sup> C Measurements From the Northern Permafrost Region. <i>Global Biogeochemical Cycles</i> , 2020, 34, e2020GB006672.	4.9	36
10	A Previously Undescribed Helotialean Fungus That Is Superabundant in Soil Under Maritime Antarctic Higher Plants. <i>Frontiers in Microbiology</i> , 2020, 11, 615608.	3.5	4
11	Long-term patterns of hillslope erosion by earthquake-induced landslides shape mountain landscapes. <i>Science Advances</i> , 2020, 6, eaaz6446.	10.3	30
12	Plant carbon allocation drives turnover of old soil organic matter in permafrost tundra soils. <i>Global Change Biology</i> , 2020, 26, 4559-4571.	9.5	31
13	Radiocarbon analysis reveals that vegetation facilitates the release of old methane in a temperate raised bog. <i>Biogeochemistry</i> , 2020, 148, 1-17.	3.5	6
14	Substrate quality and not dominant plant community determines the vertical distribution and C assimilation of enchytraeids in peatlands. <i>Functional Ecology</i> , 2020, 34, 1280-1290.	3.6	3
15	East Siberian Arctic inland waters emit mostly contemporary carbon. <i>Nature Communications</i> , 2020, 11, 1627.	12.8	43
16	C mobilisation in disturbed tropical peat swamps: old DOC can fuel the fluvial efflux of old carbon dioxide, but site recovery can occur. <i>Scientific Reports</i> , 2019, 9, 11429.	3.3	12
17	Advances in the Radiocarbon Analysis of Carbon dioxide at the NERC Radiocarbon Facility (East) Tj ETQq1 1 0.784314 rgBT /Qverlock 10	1.8	9
18	Comment on: "Peatland carbon stocks and burn history: Blanket bog peat core evidence highlights charcoal impacts on peat physical properties and long-term carbon storage," by A. Heinemeyer, Q. Asena, W. L. Burn and A. L. Jones ( <i>Geo: Geography and Environment</i> 2018; e00063). <i>Geo: Geography and Environment</i> , 2019, 6, e00075.	0.8	2

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19	The Potential Hidden Age of Dissolved Organic Carbon Exported by Peatland Streams. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 328-341.	3.0	24
20	Current forest carbon fixation fuels stream CO <sub>2</sub> emissions. <i>Nature Communications</i> , 2019, 10, 1876.	12.8	48
21	Radiocarbon Analysis of Methane at the NERC Radiocarbon Facility (East Kilbride). <i>Radiocarbon</i> , 2019, 61, 1477-1487.	1.8	5
22	Tropical forest soil carbon stocks do not increase despite 15 years of doubled litter inputs. <i>Scientific Reports</i> , 2019, 9, 18030.	3.3	43
23	Vascular plant-mediated controls on atmospheric carbon assimilation and peat carbon decomposition under climate change. <i>Global Change Biology</i> , 2018, 24, 3911-3921.	9.5	48
24	Limited release of previously-frozen C and increased new peat formation after thaw in permafrost peatlands. <i>Soil Biology and Biochemistry</i> , 2018, 118, 115-129.	8.8	40
25	Isotopic methods for non-destructive assessment of carbon dynamics in shrublands under long-term climate change manipulation. <i>Methods in Ecology and Evolution</i> , 2018, 9, 866-880.	5.2	6
26	Technical note: In situ measurement of flux and isotopic composition of CO <sub>2</sub> released during oxidative weathering of sedimentary rocks. <i>Biogeosciences</i> , 2018, 15, 4087-4102.	3.3	18
27	Fluvial organic carbon fluxes from oil palm plantations on tropical peatland. <i>Biogeosciences</i> , 2018, 15, 7435-7450.	3.3	41
28	A Holocene "Frozen Accident": Sediments of Extreme Paleofloods and Fires in the Bedrock-Confined Upper Huis River, Western Cape, South Africa. <i>Journal of Sedimentary Research</i> , 2018, 88, 696-716.	1.6	4
29	Isotopic evidence of biotrophy and unusual nitrogen nutrition in soil-dwelling Hygrophoraceae. <i>Environmental Microbiology</i> , 2018, 20, 3573-3588.	3.8	18
30	Discrete taxa of saprotrophic fungi respire different ages of carbon from Antarctic soils. <i>Scientific Reports</i> , 2018, 8, 7866.	3.3	27
31	Abundant pre-industrial carbon detected in Canadian Arctic headwaters: implications for the permafrost carbon feedback. <i>Environmental Research Letters</i> , 2018, 13, 034024.	5.2	25
32	Ancient dissolved methane in inland waters revealed by a new collection method at low field concentrations for radiocarbon ( <sup>14</sup> C) analysis. <i>Water Research</i> , 2017, 115, 236-244.	11.3	12
33	Aquatic export of young dissolved and gaseous carbon from a pristine boreal fen: Implications for peat carbon stock stability. <i>Global Change Biology</i> , 2017, 23, 5523-5536.	9.5	38
34	Limited contribution of permafrost carbon to methane release from thawing peatlands. <i>Nature Climate Change</i> , 2017, 7, 507-511.	18.8	69
35	A new field approach for the collection of samples for aquatic <sup>14</sup> CO <sub>2</sub> analysis using headspace equilibration and molecular sieve traps: the super headspace method. <i>Ecohydrology</i> , 2016, 9, 1630-1638.	2.4	12
36	Vascular plants promote ancient peatland carbon loss with climate warming. <i>Global Change Biology</i> , 2016, 22, 1880-1889.	9.5	87

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37	Quantifying Charcoal Degradation and Negative Priming of Soil Organic Matter with a <sup>14</sup> C-Dead Tracer. <i>Radiocarbon</i> , 2016, 58, 905-919.	1.8	9
38	A rapid method to collect methane from peatland streams for radiocarbon analysis. <i>Ecohydrology</i> , 2016, 9, 113-121.	2.4	18
39	Should Aquatic CO <sub>2</sub> Evasion be Included in Contemporary Carbon Budgets for Peatland Ecosystems?. <i>Ecosystems</i> , 2015, 18, 471-480.	3.4	19
40	Living roots magnify the response of soil organic carbon decomposition to temperature in temperate grassland. <i>Global Change Biology</i> , 2015, 21, 1368-1375.	9.5	26
41	Determining the biomass fraction of mixed waste fuels: A comparison of existing industry and <sup>14</sup> C-based methodologies. <i>Waste Management</i> , 2015, 35, 293-300.	7.4	18
42	Old carbon contributes to aquatic emissions of carbon dioxide in the Amazon. <i>Biogeosciences</i> , 2014, 11, 3635-3645.	3.3	13
43	Contrasting vulnerability of drained tropical and high-latitude peatlands to fluvial loss of stored carbon. <i>Global Biogeochemical Cycles</i> , 2014, 28, 1215-1234.	4.9	69
44	Salt-marsh reconstructions of relative sea-level change in the North Atlantic during the last 2000 years. <i>Quaternary Science Reviews</i> , 2014, 99, 1-16.	3.0	41
45	Source and age of dissolved and gaseous carbon in a peatland "riparian" stream continuum: a dual isotope ( <sup>14</sup> C and <sup>13</sup> C) analysis. <i>Biogeochemistry</i> , 2014, 119, 415-433.	3.5	36
46	Radiocarbon dating of methane and carbon dioxide evaded from a temperate peatland stream. <i>Biogeochemistry</i> , 2013, 114, 213-223.	3.5	20
47	The age of CO <sub>2</sub> released from soils in contrasting ecosystems during the arctic winter. <i>Soil Biology and Biochemistry</i> , 2013, 63, 1-4.	8.8	10
48	Deep instability of deforested tropical peatlands revealed by fluvial organic carbon fluxes. <i>Nature</i> , 2013, 493, 660-663.	27.8	270
49	Processing of CO <sub>2</sub> Samples Collected Using Zeolite Molecular Sieve for <sup>14</sup> C Analysis at the NERC Radiocarbon Facility (East Kilbride, UK). <i>Radiocarbon</i> , 2013, 55, 410-415.	1.8	23
50	Processing of CO <sub>2</sub> Samples Collected Using Zeolite Molecular Sieve for <sup>14</sup> C Analysis at the NERC Radiocarbon Facility (East Kilbride, UK). <i>Radiocarbon</i> , 2013, 55, .	1.8	5
51	A potential loss of carbon associated with greater plant growth in the European Arctic. <i>Nature Climate Change</i> , 2012, 2, 875-879.	18.8	192
52	Age and source of different forms of carbon released from boreal peatland streams during spring snowmelt in E. Finland. <i>Biogeochemistry</i> , 2012, 111, 273-286.	3.5	35
53	Nineteenth and twentieth century sea-level changes in Tasmania and New Zealand. <i>Earth and Planetary Science Letters</i> , 2012, 315-316, 94-102.	4.4	59
54	Variable source and age of different forms of carbon released from natural peatland pipes. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	35

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55	Annual variability in the radiocarbon age and source of dissolved CO <sub>2</sub> in a peatland stream. <i>Science of the Total Environment</i> , 2012, 427-428, 277-285.	8.0	27
56	Radiocarbon analysis of methane emitted from the surface of a raised peat bog. <i>Soil Biology and Biochemistry</i> , 2012, 50, 158-163.	8.8	19
57	Radiocarbon and Stable Carbon Analysis of Dissolved Methane and Carbon Dioxide from the Profile of a Raised Peat Bog. <i>Radiocarbon</i> , 2011, 53, 71-83.	1.8	22
58	An assessment of the effect of Sitka Spruce ( <i>Picea sitchensis</i> Bong. Carr) plantation forest cover on carbon turnover and storage in a peaty gley soil. <i>European Journal of Soil Science</i> , 2011, 62, 560-571.	3.9	1
59	Dynamics and pathways of autotrophic and heterotrophic soil CO <sub>2</sub> efflux revealed by forest girdling. <i>Journal of Ecology</i> , 2011, 99, 186-193.	4.0	80
60	Natural abundance radiocarbon in soil microbial biomass: Results from a glacial foreland. <i>Soil Biology and Biochemistry</i> , 2011, 43, 1356-1361.	8.8	6
61	Abiotic drivers and their interactive effect on the flux and carbon isotope ( <sup>14</sup> C and <sup>13</sup> C) composition of peat-respired CO <sub>2</sub> . <i>Soil Biology and Biochemistry</i> , 2011, 43, 2432-2440.	8.8	25
62	Soil biology and warming play a key role in the release of "old C" from organic soils. <i>Soil Biology and Biochemistry</i> , 2010, 42, 960-967.	8.8	37
63	A passive sampling method for radiocarbon analysis of atmospheric CO <sub>2</sub> using molecular sieve. <i>Atmospheric Environment</i> , 2010, 44, 877-883.	4.1	20
64	Testing the use of septum-capped vials for <sup>13</sup> C isotope abundance analysis of carbon dioxide. <i>Rapid Communications in Mass Spectrometry</i> , 2010, 24, 1805-1809.	1.5	11
65	Use of bomb <sup>14</sup> C to investigate the growth and carbon turnover rates of a crustose lichen. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2010, 92, 53-63.	1.5	4
66	Nerc Radiocarbon Age Measurements Determined By Radiometric Counting 1996-2005. <i>Radiocarbon</i> , 2010, 52, 1553-1555.	1.8	2
67	Isotopic composition of carbon dioxide lost by evasion from surface water to the atmosphere: Methodological comparison of a direct and indirect approach. <i>Limnology and Oceanography: Methods</i> , 2010, 8, 45-53.	2.0	5
68	The MILLENNIA peat cohort model: predicting past, present and future soil carbon budgets and fluxes under changing climates in peatlands. <i>Climate Research</i> , 2010, 45, 207-226.	1.1	45
69	Isotopic composition of carbon dioxide lost by evasion from surface water to the atmosphere: Methodological comparison of a direct and indirect approach. <i>Limnology and Oceanography: Methods</i> , 2010, 8, 45-53.	2.0	6
70	A passive sampling method for radiocarbon analysis of soil respiration using molecular sieve. <i>Soil Biology and Biochemistry</i> , 2009, 41, 1450-1456.	8.8	19
71	Isotope ( <sup>14</sup> C and <sup>13</sup> C) analysis of deep peat CO <sub>2</sub> using a passive sampling technique. <i>Soil Biology and Biochemistry</i> , 2009, 41, 2477-2483.	8.8	21
72	No evidence for compensatory thermal adaptation of soil microbial respiration in the study of Bradford <i>et al.</i> (2008). <i>Ecology Letters</i> , 2009, 12, E12-4; discussion E15-8.	6.4	39

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73	Bomb-14C analysis of ecosystem respiration reveals that peatland vegetation facilitates release of old carbon. <i>Geoderma</i> , 2009, 153, 393-401.	5.1	46
74	Soil microbial respiration in arctic soil does not acclimate to temperature. <i>Ecology Letters</i> , 2008, 11, 1092-1100.	6.4	177
75	Evidence against recent climate-induced destabilisation of soil carbon from 14C analysis of riverine dissolved organic matter. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	115
76	UK peatland streams release old carbon dioxide to the atmosphere and young dissolved organic carbon to rivers. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	75
77	Heterotrophic microbial communities use ancient carbon following glacial retreat. <i>Biology Letters</i> , 2007, 3, 487-490.	2.3	201
78	Do Riparian Plants Fix CO <sub>2</sub> Lost by Evasion from Surface Waters? An Investigation Using Carbon Isotopes. <i>Radiocarbon</i> , 2007, 49, 993-1001.	1.8	9
79	Spatial Variability of Bomb 14C in an Upland Peat Bog. <i>Radiocarbon</i> , 2007, 49, 1055-1063.	1.8	8
80	Test of AMS 14C dating of pollen concentrates using tephrochronology. <i>Journal of Quaternary Science</i> , 2007, 22, 37-51.	2.1	62
81	Carbon dynamics in a model grassland with functionally different soil communities. <i>Functional Ecology</i> , 2007, 21, 690-697.	3.6	32
82	The use of <sup>14</sup> C bomb spike calibration and high-precision AMS <sup>14</sup> C analyses to date salt-marsh sediments deposited during the past three centuries. <i>Quaternary Research</i> , 2007, 68, 325-337.	1.7	62
83	Invertebrates increase the sensitivity of non-labile soil carbon to climate change. <i>Soil Biology and Biochemistry</i> , 2007, 39, 816-818.	8.8	54
84	A Direct Method to Measure <sup>14</sup> CO <sub>2</sub> Lost by Evasion from Surface Waters. <i>Radiocarbon</i> , 2006, 48, 61-68.	1.8	27
85	Carbon Dioxide Capture Using a Zeolite Molecular Sieve Sampling System for Isotopic Studies ( <sup>13</sup> C and <sup>14</sup> C) of Respiration. <i>Radiocarbon</i> , 2005, 47, 441-451.	1.8	81
86	Earthworm ecological groupings based on 14C analysis. <i>Soil Biology and Biochemistry</i> , 2005, 37, 2145-2149.	8.8	66
87	The natural abundance of <sup>13</sup> C, <sup>15</sup> N, <sup>34</sup> S and <sup>14</sup> C in archived (1923-2000) plant and soil samples from the Askov long-term experiments on animal manure and mineral fertilizer. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 3216-3226.	1.5	122
88	Chronologies for Recent Peat Deposits Using Wiggle-Matched Radiocarbon Ages: Problems with Old Carbon Contamination. <i>Radiocarbon</i> , 2005, 47, 135-145.	1.8	18
89	Old organic carbon in soil solution DOC after afforestation – evidence from 14C analysis. <i>Geoderma</i> , 2005, 127, 188-195.	5.1	36
90	Testing the Use of Bomb Radiocarbon to Date the Surface Layers of Blanket Peat. <i>Radiocarbon</i> , 2004, 46, 841-851.	1.8	18

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91	Terrestrial organic carbon storage in a British moorland. <i>Global Change Biology</i> , 2001, 7, 375-388.	9.5	61
92	Effects of burning and grazing on carbon sequestration in a Pennine blanket bog, UK. <i>Holocene</i> , 2000, 10, 729-736.	1.7	103
93	Use of near-infrared reflectance spectroscopy (NIRS) in palaeoecological studies of peat. <i>Holocene</i> , 1998, 8, 729-740.	1.7	22