Mark Garnett

List of Publications by Year
in descending order

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93	3,568	117625	149698
papers	citations	34 h-index	56 g-index

96	96	96	4764
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Deep instability of deforested tropical peatlands revealed by fluvial organic carbon fluxes. Nature, 2013, 493, 660-663.	27.8	270
2	Heterotrophic microbial communities use ancient carbon following glacial retreat. Biology Letters, 2007, 3, 487-490.	2.3	201
3	A potential loss of carbon associated with greater plant growth in the European Arctic. Nature Climate Change, 2012, 2, 875-879.	18.8	192
4	Soil microbial respiration in arctic soil does not acclimate to temperature. Ecology Letters, 2008, 11, 1092-1100.	6.4	177
5	The natural abundance of13C,15N,34S and14C in archived (1923-2000) plant and soil samples from the Askov long-term experiments on animal manure and mineral fertilizer. Rapid Communications in Mass Spectrometry, 2005, 19, 3216-3226.	1.5	122
6	Evidence against recent climate-induced destabilisation of soil carbon from14C analysis of riverine dissolved organic matter. Geophysical Research Letters, 2007, 34, .	4.0	115
7	Effects of burning and grazing on carbon sequestration in a Pennine blanket bog, UK. Holocene, 2000, 10, 729-736.	1.7	103
8	Vascular plants promote ancient peatland carbon loss with climate warming. Global Change Biology, 2016, 22, 1880-1889.	9.5	87
9	Carbon Dioxide Capture Using a Zeolite Molecular Sieve Sampling System for Isotopic Studies (¹³C and ¹⁴C) of Respiration. Radiocarbon, 2005, 47, 441-451.	1.8	81
10	Dynamics and pathways of autotrophic and heterotrophic soil CO₂ efflux revealed by forest girdling. Journal of Ecology, 2011, 99, 186-193.	4.0	80
11	Radiocarbon dating. Nature Reviews Methods Primers, 2021, 1, .	21.2	79
12	UK peatland streams release old carbon dioxide to the atmosphere and young dissolved organic carbon to rivers. Geophysical Research Letters, 2007, 34, .	4.0	75
13	Contrasting vulnerability of drained tropical and highâ€latitude peatlands to fluvial loss of stored carbon. Global Biogeochemical Cycles, 2014, 28, 1215-1234.	4.9	69
14	Limited contribution of permafrost carbon to methane release from thawing peatlands. Nature Climate Change, 2017, 7, 507-511.	18.8	69
15	Earthworm ecological groupings based on 14C analysis. Soil Biology and Biochemistry, 2005, 37, 2145-2149.	8.8	66
16	Test of AMS14C dating of pollen concentrates using tephrochronology. Journal of Quaternary Science, 2007, 22, 37-51.	2.1	62
17	The use of â€˜bomb spikeâ€™ calibration and high-precision AMS ¹⁴C analyses to date salt-marsh sediments deposited during the past three centuries. Quaternary Research, 2007, 68, 325-337.	1.7	62
18	Terrestrial organic carbon storage in a British moorland. Global Change Biology, 2001, 7, 375-388.	9.5	61

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19	Nineteenth and twentieth century sea-level changes in Tasmania and New Zealand. Earth and Planetary Science Letters, 2012, 315-316, 94-102.	4.4	59
20	Invertebrates increase the sensitivity of non-labile soil carbon to climate change. Soil Biology and Biochemistry, 2007, 39, 816-818.	8.8	54
21	Vascular plantâ€mediated controls on atmospheric carbon assimilation and peat carbon decomposition under climate change. Global Change Biology, 2018, 24, 3911-3921.	9.5	48
22	Current forest carbon fixation fuels stream CO2 emissions. Nature Communications, 2019, 10, 1876.	12.8	48
23	Bomb-14C analysis of ecosystem respiration reveals that peatland vegetation facilitates release of old carbon. Geoderma, 2009, 153, 393-401.	5.1	46
24	The MILLENNIA peat cohort model: predicting past, present and future soil carbon budgets and fluxes under changing climates in peatlands. Climate Research, 2010, 45, 207-226.	1.1	45
25	Tropical forest soil carbon stocks do not increase despite 15 years of doubled litter inputs. Scientific Reports, 2019, 9, 18030.	3.3	43
26	East Siberian Arctic inland waters emit mostly contemporary carbon. Nature Communications, 2020, 11, 1627.	12.8	43
27	Salt-marsh reconstructions of relative sea-level change in the North Atlantic during the last 2000 years. Quaternary Science Reviews, 2014, 99, 1-16.	3.0	41
28	Fluvial organic carbon fluxes from oil palm plantations on tropical peatland. Biogeosciences, 2018, 15, 7435-7450.	3.3	41
29	Limited release of previously-frozen C and increased new peat formation after thaw in permafrost peatlands. Soil Biology and Biochemistry, 2018, 118, 115-129.	8.8	40
30	No evidence for compensatory thermal adaptation of soil microbial respiration in the study of Bradford etÂal. (2008). Ecology Letters, 2009, 12, E12-4; discussion E15-8.	6.4	39
31	Aquatic export of young dissolved and gaseous carbon from a pristine boreal fen: Implications for peat carbon stock stability. Global Change Biology, 2017, 23, 5523-5536.	9.5	38
32	Soil biology and warming play a key role in the release of â€˜old Câ€™ from organic soils. Soil Biology and Biochemistry, 2010, 42, 960-967.	8.8	37
33	Old organic carbon in soil solution DOC after afforestationâ€”evidence from 14C analysis. Geoderma, 2005, 127, 188-195.	5.1	36
34	Source and age of dissolved and gaseous carbon in a peatlandâ€“ripարianâ€“stream continuum: a dual isotope (14C and Î´13C) analysis. Biogeochemistry, 2014, 119, 415-433.	3.5	36
35	Assessing the Potential for Mobilization of Old Soil Carbon After Permafrost Thaw: A Synthesis of ¹⁴C Measurements From the Northern Permafrost Region. Global Biogeochemical Cycles, 2020, 34, e2020GB006672.	4.9	36
36	Age and source of different forms of carbon released from boreal peatland streams during spring snowmelt in E. Finland. Biogeochemistry, 2012, 111, 273-286.	3.5	35

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37	Variable source and age of different forms of carbon released from natural peatland pipes. Journal of Geophysical Research, 2012, 117, .	3.3	35
38	Carbon dynamics in a model grassland with functionally different soil communities. Functional Ecology, 2007, 21, 690-697.	3.6	32
39	Plant carbon allocation drives turnover of old soil organic matter in permafrost tundra soils. Global Change Biology, 2020, 26, 4559-4571.	9.5	31
40	Temperature control on CO2 emissions from the weathering of sedimentary rocks. Nature Geoscience, 2021, 14, 665-671.	12.9	31
41	Long-term patterns of hillslope erosion by earthquake-induced landslides shape mountain landscapes. Science Advances, 2020, 6, eaaz6446.	10.3	30
42	A Direct Method to Measure¹⁴CO₂Lost by Evasion from Surface Waters. Radiocarbon, 2006, 48, 61-68.	1.8	27
43	Annual variability in the radiocarbon age and source of dissolved CO2 in a peatland stream. Science of the Total Environment, 2012, 427-428, 277-285.	8.0	27
44	Discrete taxa of saprotrophic fungi respire different ages of carbon from Antarctic soils. Scientific Reports, 2018, 8, 7866.	3.3	27
45	Living roots magnify the response of soil organic carbon decomposition to temperature in temperate grassland. Global Change Biology, 2015, 21, 1368-1375.	9.5	26
46	Abiotic drivers and their interactive effect on the flux and carbon isotope (14C and Î´13C) composition of peat-respired CO2. Soil Biology and Biochemistry, 2011, 43, 2432-2440.	8.8	25
47	Abundant pre-industrial carbon detected in Canadian Arctic headwaters: implications for the permafrost carbon feedback. Environmental Research Letters, 2018, 13, 034024.	5.2	25
48	The Potential Hidden Age of Dissolved Organic Carbon Exported by Peatland Streams. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 328-341.	3.0	24
49	Processing of CO₂ Samples Collected Using Zeolite Molecular Sieve for ¹⁴C Analysis at the NERC Radiocarbon Facility (East Kilbride, UK). Radiocarbon, 2013, 55, 410-415.	1.8	23
50	Use of near-infrared reflectance spectroscopy (NIRS) in palaeoecological studies of peat. Holocene, 1998, 8, 729-740.	1.7	22
51	Radiocarbon and Stable Carbon Analysis of Dissolved Methane and Carbon Dioxide from the Profile of a Raised Peat Bog. Radiocarbon, 2011, 53, 71-83.	1.8	22
52	Isotope (14C and 13C) analysis of deep peat CO2 using a passive sampling technique. Soil Biology and Biochemistry, 2009, 41, 2477-2483.	8.8	21
53	A passive sampling method for radiocarbon analysis of atmospheric CO2 using molecular sieve. Atmospheric Environment, 2010, 44, 877-883.	4.1	20
54	Radiocarbon dating of methane and carbon dioxide evaded from a temperate peatland stream. Biogeochemistry, 2013, 114, 213-223.	3.5	20

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55	A passive sampling method for radiocarbon analysis of soil respiration using molecular sieve. Soil Biology and Biochemistry, 2009, 41, 1450-1456.	8.8	19
56	Radiocarbon analysis of methane emitted from the surface of a raised peat bog. Soil Biology and Biochemistry, 2012, 50, 158-163.	8.8	19
57	Should Aquatic CO2 Evasion be Included in Contemporary Carbon Budgets for Peatland Ecosystems?. Ecosystems, 2015, 18, 471-480.	3.4	19
58	Testing the Use of Bomb Radiocarbon to Date the Surface Layers of Blanket Peat. Radiocarbon, 2004, 46, 841-851.	1.8	18
59	Chronologies for Recent Peat Deposits Using Wiggle-Matched Radiocarbon Ages: Problems with Old Carbon Contamination. Radiocarbon, 2005, 47, 135-145.	1.8	18
60	Determining the biomass fraction of mixed waste fuels: A comparison of existing industry and 14C-based methodologies. Waste Management, 2015, 35, 293-300.	7.4	18
61	A rapid method to collect methane from peatland streams for radiocarbon analysis. Ecohydrology, 2016, 9, 113-121.	2.4	18
62	Technical note: In situ measurement of flux and isotopic composition of CO₂ released during oxidative weathering of sedimentary rocks. Biogeosciences, 2018, 15, 4087-4102.	3.3	18
63	Isotopic evidence of biotrophy and unusual nitrogen nutrition in soilâ€dwelling Hygrophoraceae. Environmental Microbiology, 2018, 20, 3573-3588.	3.8	18
64	Predicting climate change impacts on maritime Antarctic soils: a space-for-time substitution study. Soil Biology and Biochemistry, 2020, 141, 107682.	8.8	15
65	Old carbon contributes to aquatic emissions of carbon dioxide in the Amazon. Biogeosciences, 2014, 11, 3635-3645.	3.3	13
66	A new field approach for the collection of samples for aquatic ¹⁴CO₂ analysis using headspace equilibration and molecular sieve traps: the super headspace method. Ecohydrology, 2016, 9, 1630-1638.	2.4	12
67	Ancient dissolved methane in inland waters revealed by a new collection method at low field concentrations for radiocarbon (14C) analysis. Water Research, 2017, 115, 236-244.	11.3	12
68	C mobilisation in disturbed tropical peat swamps: old DOC can fuel the fluvial efflux of old carbon dioxide, but site recovery can occur. Scientific Reports, 2019, 9, 11429.	3.3	12
69	Testing the use of septumâ€capped vials for ¹³Câ€isotope abundance analysis of carbon dioxide. Rapid Communications in Mass Spectrometry, 2010, 24, 1805-1809.	1.5	11
70	The age of CO2 released from soils in contrasting ecosystems during the arctic winter. Soil Biology and Biochemistry, 2013, 63, 1-4.	8.8	10
71	Do Riparian Plants Fix CO2 Lost by Evasion from Surface Waters? An Investigation Using Carbon Isotopes. Radiocarbon, 2007, 49, 993-1001.	1.8	9
72	Quantifying Charcoal Degradation and Negative Priming of Soil Organic Matter with a ¹⁴C-Dead Tracer. Radiocarbon, 2016, 58, 905-919.	1.8	9

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73	Advances in the Radiocarbon Analysis of Carbon dioxide at the NERC Radiocarbon Facility (East) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.8	9
74	Spatial Variability of Bomb 14C in an Upland Peat Bog. Radiocarbon, 2007, 49, 1055-1063.	1.8	8
75	Natural abundance radiocarbon in soil microbial biomass: Results from a glacial foreland. Soil Biology and Biochemistry, 2011, 43, 1356-1361.	8.8	6
76	Isotopic methods for nonâ€destructive assessment of carbon dynamics in shrublands under longâ€term climate change manipulation. Methods in Ecology and Evolution, 2018, 9, 866-880.	5.2	6
77	Radiocarbon analysis reveals that vegetation facilitates the release of old methane in a temperate raised bog. Biogeochemistry, 2020, 148, 1-17.	3.5	6
78	No evidence for increased loss of old carbon in a temperate organic soil after 13Âyears of simulated climatic warming despite increased CO₂ emissions. Global Change Biology, 2021, 27, 1836-1847.	9.5	6
79	Radiocarbon Data Reveal Contrasting Sources for Carbon Fractions in Thermokarst Lakes and Rivers of Eastern Canada (Nunavik, Quebec). Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005938.	3.0	6
80	Isotopic composition of carbon dioxide lost by evasion from surface water to the atmosphere: Methodological comparison of a direct and indirect approach. Limnology and Oceanography: Methods, 2010, 8, 45-53.	2.0	6
81	Isotopic composition of carbon dioxide lost by evasion from surface water to the atmosphere: Methodological comparison of a direct and indirect approach. Limnology and Oceanography: Methods, 2010, 8, 45-53.	2.0	5
82	Processing of CO2 Samples Collected Using Zeolite Molecular Sieve for 14C Analysis at the NERC Radiocarbon Facility (East Kilbride, UK). Radiocarbon, 2013, 55, .	1.8	5
83	Radiocarbon Analysis of Methane at the NERC Radiocarbon Facility (East Kilbride). Radiocarbon, 2019, 61, 1477-1487.	1.8	5
84	Use of bombâ€14c to investigate the growth and carbon turnover rates of a crustose lichen. Geografiska Annaler, Series A: Physical Geography, 2010, 92, 53-63.	1.5	4
85	A Holocene â€œFrozen Accidentâ€• Sediments of Extreme Paleofloods and Fires in the Bedrock-Confined Upper Huis River, Western Cape, South Africa. Journal of Sedimentary Research, 2018, 88, 696-716.	1.6	4
86	A Previously Undescribed Helotialean Fungus That Is Superabundant in Soil Under Maritime Antarctic Higher Plants. Frontiers in Microbiology, 2020, 11, 615608.	3.5	4
87	Substrate quality and not dominant plant community determines the vertical distribution and C assimilation of enchytraeids in peatlands. Functional Ecology, 2020, 34, 1280-1290.	3.6	3
88	A HIGHLY PORTABLE AND INEXPENSIVE FIELD SAMPLING KIT FOR RADIOCARBON ANALYSIS OF CARBON DIOXIDE. Radiocarbon, 2021, 63, 1355-1368.	1.8	3
89	Nerc Radiocarbon Age Measurements Determined By Radiometric Counting 1996â€“2005. Radiocarbon, 2010, 52, 1553-1555.	1.8	2
90	Comment on: â€œPeatland carbon stocks and burn history: Blanket bog peat core evidence highlights charcoal impacts on peat physical properties and longâ€term carbon storage,â€•by A. Heinemeyer, Q. Asena, W. L. Burn and A. L. Jones (Geo: Geography and Environment 2018; e00063). Geo: Geography and Environment, 2019, 6, e00075.	0.8	2

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91	An assessment of the effect of Sitka Spruce (Picea sitchensis Bong. Carr) plantation forest cover on carbon turnover and storage in a peaty gley soil. European Journal of Soil Science, 2011, 62, 560-571.	3.9	1
92	Carbon Loss Pathways in Degraded Peatlands: New Insights From Radiocarbon Measurements of Peatland Waters. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	3.0	1
93	An assessment of chamber 14 C methodologies for sampling aquatic CO 2 evasion. Ecohydrology, 2020, 13, e2191.	2.4	0