Gerhard Gebauer

List of Publications by Citations

120 papers	6,134 citations	47 h-index	76 g-index
125 ext. papers	6,682 ext. citations	5.4 avg, IF	5.74 L-index

#	Paper	IF	Citations
120	Effects of forest decline on uptake and leaching of deposited nitrate determined from 15N and 18O measurements. *Nature*, **1994**, 372, 765-767	50.4	340
119	Changing partners in the dark: isotopic and molecular evidence of ectomycorrhizal liaisons between forest orchids and trees. *Proceedings of the Royal Society B: Biological Sciences*, **2004**, 271, 1799-806	4.4	312
118	Carbon and nitrogen isotope ratios in different compartments of a healthy and a declining Picea abies forest in the Fichtelgebirge, NE Bavaria. *Oecologia*, **1991**, 87, 198-207	2.9	278
117	N and C natural abundance of autotrophic and myco-heterotrophic orchids provides insight into nitrogen and carbon gain from fungal association. *New Phytologist*, **2003**, 160, 209-223	9.8	241
116	Disentangling a rainforest food web using stable isotopes: dietary diversity in a species-rich ant community. *Oecologia*, **2003**, 137, 426-35	2.9	230
115	Mixotrophy in orchids: insights from a comparative study of green individuals and nonphotosynthetic individuals of Cephalanthera damasonium. *New Phytologist*, **2005**, 166, 639-53	9.8	218
114	Nitrogen nutrition and isotope differences among life forms at the northern treeline of Alaska. *Oecologia*, **1994**, 100, 406-412	2.9	214
113	Estimates of nitrogen fixation by trees on an aridity gradient in Namibia. *Oecologia*, **1991**, 88, 451-455	2.9	167
112	The effects of above- and belowground mutualisms on orchid speciation and coexistence. *American Naturalist*, **2011**, 177, E54-68	3.7	149
111	Loss of functional diversity of ant assemblages in secondary tropical forests. *Ecology*, **2010**, 91, 782-92	4.6	131
110	Wide geographical and ecological distribution of nitrogen and carbon gains from fungi in pyroloids and monotropoids (Ericaceae) and in orchids. *New Phytologist*, **2007**, 175, 166-175	9.8	128
109	Cephalanthera longifolia (Neottieae, Orchidaceae) is mixotrophic: a comparative study between green and nonphotosynthetic individuals. *Canadian Journal of Botany*, **2006**, 84, 1462-1477		116
108	15N natural abundance in fruit bodies of different functional groups of fungi in relation to substrate utilization. *New Phytologist*, **1999**, 142, 93-101	9.8	116
107	Isotope ratios and concentrations of sulfur and nitrogen in needles and soils of Picea abies stands as influenced by atmospheric deposition of sulfur and nitrogen compounds. *Plant and Soil*, **1994**, 164, 267-281	4.2	116
106	Evidence for novel and specialized mycorrhizal parasitism: the orchid Gastrodia confusa gains carbon from saprotrophic Mycena. *Proceedings of the Royal Society B: Biological Sciences*, **2009**, 276, 761-7	4.4	105
105	Drought turns a Central European Norway spruce forest soil from an N2O source to a transient N2O sink. *Global Change Biology*, **2009**, 15, 850-860	11.4	103
104	Nitrate, nitrate reduction and organic nitrogen in plants from different ecological and taxonomic groups of Central Europe. *Oecologia*, **1988**, 75, 371-385	2.9	98

103	Photosynthetic Mediterranean meadow orchids feature partial mycoheterotrophy and specific mycorrhizal associations. *American Journal of Botany*, **2011**, 98, 1148-63	2.7	91
102	Below-ground interactions in dryland agroforestry. *Forest Ecology and Management*, **1998**, 111, 157-169	3.9	90
101	Partitioning of 15N-labeled ammonium and nitrate among soil, litter, below- and above-ground biomass of trees and understory in a 15-year-old Picea abies plantation. *Biogeochemistry*, **1996**, 33, 1	3.8	90
100	Repeated drying□ewetting cycles and their effects on the emission of CO2, N2O, NO, and CH4 in a forest soil. *Journal of Plant Nutrition and Soil Science*, **2008**, 171, 719-728	2.3	78
99	Distinguishing sources of N2O in European grasslands by stable isotope analysis. *Rapid Communications in Mass Spectrometry*, **2004**, 18, 1201-7	2.2	78
98	Nitrogen Isotope Ratios in Different Compartments of a Mixed Stand of Spruce, Larch and Beech Trees and of Understorey Vegetation Including Fungi. *Isotopes in Environmental and Health Studies*, **1993**, 29, 35-44		78
97	Impact of altering the water table height of an acidic fen on N2O and NO fluxes and soil concentrations. *Global Change Biology*, **2010**, 16, 220-233	11.4	76
96	N-ammonium and N-nitrate uptake of a 15-year-old Picea abies plantation. *Oecologia*, **1995**, 102, 361-370	2.9	76
95	Partial mycoheterotrophy is more widespread among orchids than previously assumed. *New Phytologist*, **2016**, 211, 11-5	9.8	74
94	Plastic mulching in agriculture□riend or foe of N2O emissions?. *Agriculture, Ecosystems and Environment*, **2013**, 167, 43-51	5.7	74
93	The ectomycorrhizal specialist orchid Corallorhiza trifida is a partial myco-heterotroph. *New Phytologist*, **2008**, 178, 395-400	9.8	73
92	The Physiological Ecology of Mycoheterotrophy **2013**, 297-342		70
91	Irradiance governs exploitation of fungi: fine-tuning of carbon gain by two partially myco-heterotrophic orchids. *Proceedings of the Royal Society B: Biological Sciences*, **2010**, 277, 1333-6	4.4	70
90	C and N stable isotope signatures reveal constraints to nutritional modes in orchids from the Mediterranean and Macaronesia. *American Journal of Botany*, **2010**, 97, 903-12	2.7	65
89	Isotopic evidence of full and partial myco-heterotrophy in the plant tribe Pyroleae (Ericaceae). *New Phytologist*, **2009**, 182, 719-726	9.8	65
88	Emission of gaseous nitrogen oxides from an extensively managed grassland in NE Bavaria, Germany. *Biogeochemistry*, **2003**, 63, 249-267	3.8	65
87	Increased emissions of nitric oxide and nitrous oxide following tillage of a perennial pasture. *Nutrient Cycling in Agroecosystems*, **2004**, 70, 13-22	3.3	62
86	Nitrate content and nitrate reductase activity in Rumex obtusifolius L. : I. Differences in organs and diurnal changes. *Oecologia*, **1984**, 63, 136-142	2.9	60

85	The chlorophyll-containing orchid Corallorhiza trifida derives little carbon through photosynthesis. *New Phytologist*, **2009**, 183, 358-364	9.8	57
84	N2O emission in a Norway spruce forest due to soil frost: concentration and isotope profiles shed a new light on an old story. *Biogeochemistry*, **2010**, 97, 21-30	3.8	57
83	A methodological approach to improve estimates of nutrient gains by partially myco-heterotrophic plants. *Isotopes in Environmental and Health Studies*, **2008**, 44, 393-401	1.5	57
82	Carbon and nitrogen gain during the growth of orchid seedlings in nature. *New Phytologist*, **2014**, 202, 606-615	9.8	55
81	Short term effect of ploughing a permanent pasture on N2O production from nitrification and denitrification. *Plant and Soil*, **2002**, 239, 253-265	4.2	54
80	Carbon and nitrogen isotope ratios of mistletoes growing on nitrogen and non-nitrogen fixing hosts and on CAM plants in the Namib desert confirm partial heterotrophy. *Oecologia*, **1991**, 88, 457-462	2.9	54
79	The utilization of nitrogen from insect capture by different growth forms of Drosera from Southwest Australia. *Oecologia*, **1991**, 87, 240-246	2.9	54
78	15N and 13C natural abundance of two mycoheterotrophic and a putative partially mycoheterotrophic species associated with arbuscular mycorrhizal fungi. *New Phytologist*, **2010**, 188, 590-6	9.8	50
77	Storm pulses and varying sources of hydrologic carbon export from a mountainous watershed. *Journal of Hydrology*, **2012**, 440-441, 90-101	6	48
76	The importance of associations with saprotrophic non-Rhizoctonia fungi among fully mycoheterotrophic orchids is currently under-estimated: novel evidence from sub-tropical Asia. *Annals of Botany*, **2015**, 116, 423-35	4.1	47
75	Anthropogenic impacts on natural nitrogen isotope variations in Pinus sylvestris stands in an industrially polluted area. *Environmental Pollution*, **1997**, 97, 175-81	9.3	47
74	Stable N-isotope signatures of central European ants assessing positions in a trophic gradient. *Insectes Sociaux*, **2007**, 54, 393-402	1.5	47
73	Uptake of nitrogen and carbon from double-labelled (N and C) glycine by mycorrhizal pine seedlings. *New Phytologist*, **2004**, 164, 383-388	9.8	47
72	Emission of gaseous nitrogen oxides from an extensively managed grassland in NE Bavaria, Germany.. *Biogeochemistry*, **2003**, 63, 229-247	3.8	45
71	Fluxes of climate-relevant trace gases between a Norway spruce forest soil and atmosphere during repeated freeze thaw cycles in mesocosms. *Journal of Plant Nutrition and Soil Science*, **2008**, 171, 729-739	2.3	44
70	Temporal Stability of Spatial Patterns of Nitrous Oxide Fluxes from Sloping Grassland. *Journal of Environmental Quality*, **2000**, 29, 1397-1407	3.4	44
69	N(2)O concentration and isotope signature along profiles provide deeper insight into the fate of N(2)O in soils. *Isotopes in Environmental and Health Studies*, **2008**, 44, 377-91	1.5	42
68	A record of N2O and CH4 emissions and underlying soil processes of Korean rice paddies as affected by different water management practices. *Biogeochemistry*, **2013**, 115, 317-332	3.8	40

67	Exploiting mycorrhizas in broad daylight: Partial mycoheterotrophy is a common nutritional strategy in meadow orchids. *Journal of Ecology*, **2018**, 106, 168-178	6	38
66	You are what you get from your fungi: nitrogen stable isotope patterns in Epipactis species. *Annals of Botany*, **2017**, 119, 1085-1095	4.1	34
65	Plant family identity distinguishes patterns of carbon and nitrogen stable isotope abundance and nitrogen concentration in mycoheterotrophic plants associated with ectomycorrhizal fungi. *Annals of Botany*, **2016**, 118, 467-79	4.1	34
64	N2O and NO fluxes between a Norway spruce forest soil and atmosphere as affected by prolonged summer drought. *Soil Biology and Biochemistry*, **2009**, 41, 1986-1995	7.5	32
63	The degree of mycoheterotrophic carbon gain in green, variegated and vegetative albino individuals of Cephalanthera damasonium is related to leaf chlorophyll concentrations. *New Phytologist*, **2011**, 189, 790-796	9.8	31
62	Biomass production and nitrate metabolism of Atriplex hortensis L. (C plant) and Amaranthus retroflexus L. (C plant) in cultures at different levels of nitrogen supply. *Oecologia*, **1987**, 72, 303-314	2.9	30
61	Limited carbon and mineral nutrient gain from mycorrhizal fungi by adult Australian orchids. *American Journal of Botany*, **2012**, 99, 1133-45	2.7	29
60	Nitrate content and nitrate reductase activity in Rumex obtusifolius L. : II. Responses to nitrate starvation and nitrogen fertilization. *Oecologia*, **1984**, 63, 380-385	2.9	26
59	Fungal host specificity is not a bottleneck for the germination of Pyroleae species (Ericaceae) in a Bavarian forest. *Molecular Ecology*, **2013**, 22, 1473-81	5.7	25
58	Is it better to give than to receive? A stable isotope perspective on orchid-fungal carbon transport in the green orchid species Goodyera repens and Goodyera oblongifolia. *New Phytologist*, **2009**, 182, 8-11	9.8	25
57	Nitrate reduction and nitrate content in ash trees (Fraxinus excelsior L.): distribution between compartments, site comparison and seasonal variation. *Trees - Structure and Function*, **1992**, 6, 236	2.6	24
56	Mucoromycotina Fine Root Endophyte Fungi Form Nutritional Mutualisms with Vascular Plants. *Plant Physiology*, **2019**, 181, 565-577	6.6	24
55	Are carbon and nitrogen exchange between fungi and the orchid Goodyera repens affected by irradiance?. *Annals of Botany*, **2015**, 115, 251-61	4.1	23
54	Stable isotope signatures of underground seedlings reveal the organic matter gained by adult orchids from mycorrhizal fungi. *Functional Ecology*, **2018**, 32, 870-881	5.6	23
53	Temporal variation in mycorrhizal diversity and carbon and nitrogen stable isotope abundance in the wintergreen meadow orchid Anacamptis morio. *New Phytologist*, **2015**, 205, 1308-1319	9.8	21
52	Abundance of Methanogens, Methanotrophic Bacteria, and Denitrifiers in Rice Paddy Soils. *Wetlands*, **2014**, 34, 213-223	1.7	21
51	Controlling nitrous oxide emissions from grassland livestock production systems. *Nutrient Cycling in Agroecosystems*, **1998**, 52, 141-149	3.3	20
50	The giant mycoheterotrophic orchid Erythrorchis altissima is associated mainly with a divergent set of wood-decaying fungi. *Molecular Ecology*, **2018**, 27, 1324-1337	5.7	19

49	Discreet heterotrophs: green plants that receive fungal carbon through Paris-type arbuscular mycorrhiza. *New Phytologist*, **2020**, 226, 960-966	9.8	18
48	Tree species of the Central Amazon and soil moisture alter stable isotope composition of nitrogen and oxygen in nitrous oxide evolved from soil. *Isotopes in Environmental and Health Studies*, **2003**, 39, 41-52	1.5	17
47	Effects of acid irrigation and liming on nitrate reduction and nitrate content of Picea abies (L.) Karst. and Oxalis acetosella L.. *Plant and Soil*, **1998**, 199, 59-70	4.2	16
46	Nitrogen uptake of sorghum (Sorghum bicolor L.) from tree mulch and mineral fertilizer under high leaching conditions estimated by nitrogen-15 enrichment. *Biology and Fertility of Soils*, **1999**, 30, 90-95	6.1	16
45	The Influence of Ammonium on Nitrate Uptake and Assimilation in 2-Year-Old Ash and Oak Trees - A Tracer-Study with 15N. *Isotopes in Environmental and Health Studies*, **1993**, 29, 85-92		16
44	Origin and fate of nitrate runoff in an agricultural catchment: Haean, South Korea - Comparison of two extremely different monsoon seasons. *Science of the Total Environment*, **2019**, 648, 66-79	10.2	15
43	Nutrient interactions of alley cropped Sorghum bicolor and Acacia saligna in a runoff irrigation system in Northern Kenya. *Plant and Soil*, **1999**, 210, 249-262	4.2	15
42	Biomass production and nitrogen content of C- and C- grasses in pure and mixed culture with different nitrogen supply. *Oecologia*, **1987**, 71, 613-617	2.9	15
41	Stable isotope signatures confirm carbon and nitrogen gain through ectomycorrhizas in the ghost orchid Epipogium aphyllum Swartz. *Plant Biology*, **2011**, 13, 270-5	3.7	14
40	Nitrogen uptake from 15N-enriched fertilizer by four tree crops in an Amazonian agroforest. *Agroforestry Systems*, **2003**, 57, 213-224	2	12
39	Uptake of 15NH3 by Picea abies in Closed Chamber Experiments. *Isotopes in Environmental and Health Studies*, **1993**, 29, 71-76		12
38	Unveiling community patterns and trophic niches of tropical and temperate ants using an integrative framework of field data, stable isotopes and fatty acids. *PeerJ*, **2018**, 6, e5467	3.1	12
37	Denitrification at two nitrogen-polluted, ombrotrophic Sphagnum bogs in Central Europe: Insights from porewater N2O-isotope profiles. *Soil Biology and Biochemistry*, **2015**, 81, 48-57	7.5	11
36	Biomass production and nitrogen contents of the CAM plants Kalanchoe daigremontiana and K. tubiflora in cultures with different nitrogen and water supply. *Oecologia*, **1990**, 82, 478-483	2.9	11
35	Nitrogen cycling assessment in a hedgerow intercropping system using 15N enrichment. *Nutrient Cycling in Agroecosystems*, **2002**, 62, 1-9	3.3	10
34	On-Line Analysis of Stable Isotopes of Nitrogen in NH(3), NO, and NO(2) at Natural Abundance Levels. *Analytical Chemistry*, **1998**, 70, 2750-6	7.8	10
33	Mycoheterotrophic plants living on arbuscular mycorrhizal fungi are generally enriched in 13C, 15N and 2H isotopes. *Journal of Ecology*, **2020**, 108, 1250-1261	6	9
32	Inferring the mycorrhizal status of introduced plants of Cypripedium calceolus (Orchidaceae) in northern England using stable isotope analysis. *Botanical Journal of the Linnean Society*, **2018**, 186, 587-590	2.3	9

31	Complementary use of H NMR and multi-element IRMS in association with chemometrics enables effective origin analysis of cocoa beans (Theobroma cacao L.). *Food Chemistry*, **2019**, 299, 125105	8.5	9
30	Monsoon rains, drought periods and soil texture as drivers of soil N2O fluxes Soil drought turns East Asian temperate deciduous forest soils into temporary and unexpectedly persistent N2O sinks. *Soil Biology and Biochemistry*, **2013**, 57, 273-281	7.5	9
29	Trophic ecology of parabiotic ants: Do the partners have similar food niches?. *Austral Ecology*, **2012**, 37, 537-546	1.5	9
28	Nitrogen use in mixed tree crop plantations with a legume cover crop. *Plant and Soil*, **2000**, 225, 63-72	4.2	9
27	Light limitation and partial mycoheterotrophy in rhizoctonia-associated orchids. *Oecologia*, **2019**, 189, 375-383	2.9	8
26	Drying-Rewetting and Flooding Impact Denitrifier Activity Rather than Community Structure in a Moderately Acidic Fen. *Frontiers in Microbiology*, **2016**, 7, 727	5.7	8
25	Peatlands in a eutrophic world Assessing the state of a poor fen-bog transition in southern Ontario, Canada, after long term nutrient input and altered hydrological conditions. *Soil Biology and Biochemistry*, **2017**, 114, 131-144	7.5	7
24	Influence of Nitrogen Supply and Temperature on Stable Carbon Isotope Ratios in Plants of Different Photosynthetic Pathways (C3, C4, CAM). *Isotopes in Environmental and Health Studies*, **1993**, 29, 9-13		7
23	Fluctuations in nitrate reductase activity, and nitrate and organic nitrogen concentrations of succulent plants under different nitrogen and water regimes. *Oecologia*, **1993**, 94, 146-152	2.9	7
22	Sucrose unloading in the hypocotyl of the Ricinus communis L. seedling measured by 13C-nuclear magnetic resonance spectroscopy in vivo. *Planta*, **1999**, 208, 358-364	4.7	6
21	Dark septate endophytes and arbuscular mycorrhizal fungi (Paris-morphotype) affect the stable isotope composition of classically non-mycorrhizal plants. *Functional Ecology*, **2020**, 34, 2453-2466	5.6	6
20	The Fate of [(15)N]Ammonium and [(15)N]Nitrate in the Soil of a 140-Year-Old Spruce Stand (Picea Abies) in the Fichtelgebirge (NE-Bavaria). *Isotopes in Environmental and Health Studies*, **1996**, 32, 149-58	1.5	5
19	Partial mycoheterotrophy is common among chlorophyllous plants with Paris-type arbuscular mycorrhiza. *Annals of Botany*, **2021**, 127, 645-653	4.1	5
18	Relationship between nitrogen isotope ratios of NO3 and N2O in vertical porewater profiles through a polluted rain-fed peat bog. *Soil Biology and Biochemistry*, **2018**, 123, 7-9	7.5	5
17	Picky carnivorous plants? Investigating preferences for preys' trophic levels - a stable isotope natural abundance approach with two terrestrial and two aquatic Lentibulariaceae tested in Central Europe. *Annals of Botany*, **2019**, 123, 1167-1177	4.1	3
16	Uptake of [(15)N] Ammonium and [(15)N]Nitrate in a 140-Year-Old Spruce Stand (Picea abies) in the Fichtelgebirge (NE Bavaria). *Isotopes in Environmental and Health Studies*, **1996**, 32, 141-8	1.5	3
15	15N-Labelled Ammonium and Nitrate Uptake by the Grass Calamagrostis villosa. *Isotopes in Environmental and Health Studies*, **1993**, 29, 77-84		3
14	The use of stable isotopes in ecosystem research. First results of a field study with 15N. *Isotopes in Environmental and Health Studies*, **1992**, 28, 51-59		3

13	Impact of Global Climate Change on the European Barley Market Requires Novel Multi-Method Approaches to Preserve Crop Quality and Authenticity. *Foods*, **2021**, 10,	4.9	3
12	An ecological perspective on 'plant carnivory beyond bogs': nutritional benefits of prey capture for the Mediterranean carnivorous plant Drosophyllum lusitanicum. *Annals of Botany*, **2019**, 124, 65-76	4.1	2
11	On-line analysis of nitrogen stable isotopes in NO from ambient air samples. *Analytical Chemistry*, **2001**, 73, 1126-33	7.8	2
10	Investigations on the Nitrogen Metabolism of Forest Trees by Mathematical Modelling of Natural Isotope Ratios. *Isotopes in Environmental and Health Studies*, **1993**, 29, 199-214		2
9	Mucoromycotina fine root endophyte fungi form nutritional mutualisms with vascular plants		2
8	The fate of monsoonal atmospheric nitrate deposition in two forest catchments in Soyang lake watershed, South Korea: a mass balance and stable isotope approach. *Biogeochemistry*, **2019**, 142, 95-116	3.8	2
7	Stealing sugar from the honey fungus. *Plant, Cell and Environment*, **2021**, 44, 17-19	8.4	2
6	Ecosystem Processes Show Uniform Sensitivity to Winter Soil Temperature Change Across a Gradient from Central to Cold Marginal Stands of a Major Temperate Forest Tree. *Ecosystems*, **2021**, 24, 1545-1560	3.9	2
5	15N tracer enrichment in response to winter soil temperature manipulation differs between canopy trees and juveniles. *Trees - Structure and Function*, **2021**, 35, 325-331	2.6	1
4	Specific response of sugar beet cultivars to different nitrogen forms. *Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science*, **1986**, 149, 561-571		
3	Dinner with the roommates: trophic niche differentiation and competition in a mutualistic ant-ant association. *Ecological Entomology*, **2021**, 46, 562-572	2.1	
2	Allochthonous resources are less important for faunal communities on highly productive, small tropical islands. *Ecology and Evolution*, **2021**, 11, 13128-13138	2.8	
1	Impacts on food web properties of island invertebrate communities vary between different human land uses.. *Science of the Total Environment*, **2022**, 154838	10.2	