Knute J Nadelhoffer

List of Publications by Year
in descending order

151	24,187	13827 67	12558 132
papers	citations	h-index	g-index

155	155	155	16091
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Retention of deposited ammonium and nitrate and its impact on the global forest carbon sink. Nature Communications, 2022, 13, 880.	5.8	55
2	Fire after clear-cut harvesting minimally affects the recovery of ecosystem carbon pools and fluxes in a Great Lakes forest. Forest Ecology and Management, 2022, 519, 120301.	1.4	2
3	Soil organic carbon is not just for soil scientists: measurement recommendations for diverse practitioners. Ecological Applications, 2021, 31, e02290.	1.8	18
4	Old-growth forest carbon sinks overestimated. Nature, 2021, 591, E21-E23.	13.7	65
5	Competing Processes Drive the Resistance of Soil Carbon to Alterations in Organic Inputs. Frontiers in Environmental Science, 2021, 9, .	1.5	11
6	SoDaH: the SOils DAta Harmonization database, an open-source synthesis of soil data from research networks, version 1.0. Earth System Science Data, 2021, 13, 1843-1854.	3.7	17
7	Mineral stabilization of soil carbon is suppressed by live roots, outweighing influences from litter quality or quantity. Biogeochemistry, 2021, 154, 433-449.	1.7	20
8	Disturbanceâ€accelerated succession increases the production of a temperate forest. Ecological Applications, 2021, 31, e02417.	1.8	15
9	Isotopic composition of mercury deposited via snow into mid-latitude ecosystems. Science of the Total Environment, 2021, 784, 147252.	3.9	5
10	Root control of fungal communities and soil carbon stocks in a temperate forest. Soil Biology and Biochemistry, 2021, 161, 108390.	4.2	14
11	Carbon budget of the Harvard Forest Longâ€Term Ecological Research site: pattern, process, and response to global change. Ecological Monographs, 2020, 90, e01423.	2.4	67
12	Deer browsing effects on temperate forest soil nitrogen cycling shift from positive to negative across fertility gradients. Canadian Journal of Forest Research, 2020, 50, 1281-1288.	0.8	5
13	Stand age, disturbance history and the temporal stability of forest production. Forest Ecology and Management, 2020, 460, 117865.	1.4	24
14	Decadal post-fire succession of soil invertebrate communities is dependent on the soil surface properties in a northern temperate forest. Science of the Total Environment, 2019, 647, 1058-1068.	3.9	20
15	Defining a spectrum of integrative traitâ€based vegetation canopy structural types. Ecology Letters, 2019, 22, 2049-2059.	3.0	52
16	Decadal fates and impacts of nitrogen additions on temperate forest carbon storage: a dataâ€“model comparison. Biogeosciences, 2019, 16, 2771-2793.	1.3	10
17	Multidecadal trajectories of soil chemistry and nutrient availability following cutting vs. burning disturbances in Upper Great Lakes forests. Canadian Journal of Forest Research, 2019, 49, 731-742.	0.8	6
18	Exploring the role of ectomycorrhizal fungi in soil carbon dynamics. New Phytologist, 2019, 223, 33-39.	3.5	147

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19	Tree taxa and pyrolysis temperature interact to control pyrogenic organic matter induced native soil organic carbon priming. Soil Biology and Biochemistry, 2018, 119, 174-183.	4.2	7
20	Nitrate is an important nitrogen source for Arctic tundra plants. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3398-3403.	3.3	102
21	Interacting Controls of Pyrolysis Temperature and Plant Taxa on the Degradability of PyOM in Fire-Prone Northern Temperate Forest Soil. Soil Systems, 2018, 2, 48.	1.0	9
22	Molecular-level changes in soil organic matter composition after 10Âyears of litter, root and nitrogen manipulation in a temperate forest. Biogeochemistry, 2018, 141, 183-197.	1.7	19
23	The detrital input and removal treatment (DIRT) network: Insights into soil carbon stabilization. Science of the Total Environment, 2018, 640-641, 1112-1120.	3.9	97
24	Effects of canopy structure and species diversity on primary production in upper Great Lakes forests. Oecologia, 2018, 188, 405-415.	0.9	29
25	Impacts of experimentally accelerated forest succession on belowground plant and fungal communities. Soil Biology and Biochemistry, 2018, 125, 44-53.	4.2	4
26	Whatâ€™s to do?. Biogeochemistry, 2017, 134, 1-3.	1.7	2
27	Physiographic factors underlie rates of biomass production during succession in Great Lakes forest landscapes. Forest Ecology and Management, 2017, 397, 157-173.	1.4	20
28	Research Article: Soil respiration in upper Great Lakes old-growth forest ecosystems. Bios, 2017, 88, 105-115.	0.0	3
29	The Detrital Input and Removal Treatment (DIRT) Network. , 2017, , .		4
30	Rapid fine root C and N mineralization in a northern temperate forest soil. Biogeochemistry, 2016, 128, 187-200.	1.7	17
31	Tree taxa and pyrolysis temperature interact to control the efficacy of pyrogenic organic matter formation. Biogeochemistry, 2016, 130, 103-116.	1.7	22
32	Using satelliteâ€derived optical thickness to assess the influence of clouds on terrestrial carbon uptake. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1747-1761.	1.3	17
33	Long-term doubling of litter inputs accelerates soil organic matter degradation and reduces soil carbon stocks. Biogeochemistry, 2016, 127, 1-14.	1.7	71
34	Validation of an agroecosystem process model (AGRO-BGC) on annual and perennial bioenergy feedstocks. Ecological Modelling, 2016, 321, 23-34.	1.2	3
35	Exotic earthworm community composition interacts with soil texture to affect redistribution and retention of litter-derived C and N in northern temperate forest soils. Biogeochemistry, 2015, 126, 379-395.	1.7	22
36	Isotopic study of mercury sources and transfer between a freshwater lake and adjacent forest food web. Science of the Total Environment, 2015, 532, 220-229.	3.9	64

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37	Variations in the influence of diffuse light on gross primary productivity in temperate ecosystems. Agricultural and Forest Meteorology, 2015, 201, 98-110.	1.9	114
38	Effects and Empirical Critical Loads of Nitrogen for Ecoregions of the United States. Environmental Pollution, 2015, , 129-169.	0.4	3
39	Litter and Root Manipulations Provide Insights into Soil Organic Matter Dynamics and Stability. Soil Science Society of America Journal, 2014, 78, S261.	1.2	103
40	Litter Input Controls on Soil Carbon in a Temperate Deciduous Forest. Soil Science Society of America Journal, 2014, 78, S66.	1.2	78
41	Changes in soil nitrogen cycling in a northern temperate forest ecosystem during succession. Biogeochemistry, 2014, 121, 471-488.	1.7	19
42	Hydraulic â€œFrackingâ€• Are surface water impacts an ecological concern?. Environmental Toxicology and Chemistry, 2014, 33, 1679-1689.	2.2	80
43	Chronic nitrogen additions suppress decomposition and sequester soil carbon in temperate forests. Biogeochemistry, 2014, 121, 305-316.	1.7	302
44	Changes to particulate versus mineral-associated soil carbon after 50 years of litter manipulation in forest and prairie experimental ecosystems. Biogeochemistry, 2014, 119, 341-360.	1.7	99
45	Historical patterns of exotic earthworm distributions inform contemporary associations with soil physical and chemical factors across a northern temperate forest. Soil Biology and Biochemistry, 2014, 68, 503-514.	4.2	40
46	Terrestrial Ecosystems at Toolik Lake, Alaska. , 2014, , 90-142.		29
47	The impacts of climate change on ecosystem structure and function. Frontiers in Ecology and the Environment, 2013, 11, 474-482.	1.9	433
48	Nitrogen Uptake by Trees and Mycorrhizal Fungi in a Successional Northern Temperate Forest: Insights from Multiple Isotopic Methods. Ecosystems, 2013, 16, 590-603.	1.6	18
49	Sustained carbon uptake and storage following moderate disturbance in a Great Lakes forest. Ecological Applications, 2013, 23, 1202-1215.	1.8	137
50	Communityâ€specific impacts of exotic earthworm invasions on soil carbon dynamics in a sandy temperate forest. Ecology, 2013, 94, 2827-2837.	1.5	30
51	Soil respiration in a northeastern US temperate forest: a 22â€year synthesis. Ecosphere, 2013, 4, 1-28.	1.0	83
52	Afforestation Effects on Soil Carbon Storage in the United States: A Synthesis. Soil Science Society of America Journal, 2013, 77, 1035-1047.	1.2	109
53	Sinks for nitrogen inputs in terrestrial ecosystems: a metaâ€analysis of ¹⁵N tracer field studies. Ecology, 2012, 93, 1816-1829.	1.5	192
54	Disturbance and the resilience of coupled carbon and nitrogen cycling in a north temperate forest. Journal of Geophysical Research, 2011, 116, .	3.3	108

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55	Effects of nitrogen deposition and empirical nitrogen critical loads for ecoregions of the United States. , 2011, 21, 3049-3082.		373
56	Nitrogen dynamics in a small arctic watershed: retention and downhill movement of¹⁵N. Ecological Monographs, 2010, 80, 331-351.	2.4	41
57	Using Nitrogen Isotope Ratios to Assess Terrestrial Ecosystems at Regional and Global Scales. , 2010, , 221-249.		58
58	Climate change impacts on terrestrial ecosystems in metropolitan Chicago and its surrounding, multi-state region. Journal of Great Lakes Research, 2010, 36, 74-85.	0.8	18
59	The changing landscape: ecosystem responses to urbanization and pollution across climatic and societal gradients. Frontiers in Ecology and the Environment, 2008, 6, 264-272.	1.9	597
60	Living in an increasingly connected world: a framework for continental-scale environmental science. Frontiers in Ecology and the Environment, 2008, 6, 229-237.	1.9	157
61	The Impacts of Nitrogen Deposition on Forest Ecosystems. , 2008, , 463-482.		4
62	Climate and species affect fine root production with long-term fertilization in acidic tussock tundra near Toolik Lake, Alaska. Oecologia, 2007, 153, 643-652.	0.9	87
63	Atmospheric Nitrogen Deposition: Implications for Terrestrial Ecosystem Structure and Functioning. , 2007, , 77-95.		2
64	Carbon turnover in Alaskan tundra soils: effects of organic matter quality, temperature, moisture and fertilizer. Journal of Ecology, 2006, 94, 740-753.	1.9	137
65	Regional Assessment of N Saturation using Foliar and Root $$varvec {delta}^{f 15}{f N}$$. Biogeochemistry, 2006, 80, 143-171.	1.7	172
66	Carbon cycling in soil. Frontiers in Ecology and the Environment, 2004, 2, 522-528.	1.9	111
67	Detritus, trophic dynamics and biodiversity. Ecology Letters, 2004, 7, 584-600.	3.0	948
68	Seasonal dynamics of leaf- and root-derived C in arctic tundra mesocosms. Soil Biology and Biochemistry, 2004, 36, 655-666.	4.2	56
69	Decomposing litter as a sink for -enriched additions to an oak forest and a red pine plantation. Forest Ecology and Management, 2004, 196, 71-87.	1.4	52
70	Decadal-scale fates of tracers added to oak and pine stands under ambient and elevated N inputs at the Harvard Forest (USA). Forest Ecology and Management, 2004, 196, 89-107.	1.4	129
71	Redistributions of highlight turnover and replenishment of mineral soil organic N as a long-term control on forest C balance. Forest Ecology and Management, 2004, 196, 109-127.	1.4	46
72	Ecosystem response to 15 years of chronic nitrogen additions at the Harvard Forest LTER, Massachusetts, USA. Forest Ecology and Management, 2004, 196, 7-28.	1.4	387

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73	Carbon Cycling in Soil. Frontiers in Ecology and the Environment, 2004, 2, 522.	1.9	4
74	Natural 15 N Abundance of Plants and Soil N in a Temperate Coniferous Forest. Ecosystems, 2003, 6, 457-469.	1.6	75
75	Pulse-labeling studies of carbon cycling in Arctic tundra ecosystems: The contribution of photosynthates to methane emission. Global Biogeochemical Cycles, 2002, 16, 10-1-10-8.	1.9	61
76	Pulse-labeling studies of carbon cycling in arctic tundra ecosystems: Contribution of photosynthates to soil organic matter. Global Biogeochemical Cycles, 2002, 16, 48-1-48-8.	1.9	24
77	The Imprint of Land-use History: Patterns of Carbon and Nitrogen in Downed Woody Debris at the Harvard Forest. Ecosystems, 2002, 5, 446-460.	1.6	69
78	Resource-based niches provide a basis for plant species diversity and dominance in arctic tundra. Nature, 2002, 415, 68-71.	13.7	749
79	Long-term movement of 15N tracers into fine woody debris under chronically elevated N inputs. Plant and Soil, 2002, 238, 313-323.	1.8	9
80	Title is missing!. Biogeochemistry, 2002, 57, 171-197.	1.7	396
81	Title is missing!. Biogeochemistry, 2002, 57, 267-293.	1.7	298
82	Title is missing!. Biogeochemistry, 2002, 57, 239-266.	1.7	50
83	Title is missing!. Plant and Soil, 2002, 242, 107-113.	1.8	37
84	A synthesis: The role of nutrients as constraints on carbon balances in boreal and arctic regions. Plant and Soil, 2002, 242, 163-170.	1.8	232
85	Forest nitrogen sinks in large eastern U.S. watersheds: estimates from forest inventory and an ecosystem model. , 2002, , 239-266.		0
86	Plant Carbon-Nutrient Interactions Control CO 2 Exchange in Alaskan Wet Sedge Tundra Ecosystems. Ecology, 2000, 81, 453.	1.5	5
87	The potential effects of nitrogen deposition on fine-root production in forest ecosystems. New Phytologist, 2000, 147, 131-139.	3.5	334
88	Nitrogen Controls on Fine Root Substrate Quality in Temperate Forest Ecosystems. Ecosystems, 2000, 3, 57-69.	1.6	77
89	Long-Term Nitrogen Additions and Nitrogen Saturation in Two Temperate Forests. Ecosystems, 2000, 3, 238-253.	1.6	301
90	PLANT CARBONâ€“NUTRIENT INTERACTIONS CONTROL CO2EXCHANGE IN ALASKAN WET SEDGE TUNDRA ECOSYSTEMS. Ecology, 2000, 81, 453-469.	1.5	105

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91	SOIL DETRITAL PROCESSES CONTROLLING THE MOVEMENT OF15N TRACERS TO FOREST VEGETATION. , 1999, 9, 87-102.		24
92	SINKS FOR15N-ENRICHED ADDITIONS TO AN OAK FOREST AND A RED PINE PLANTATION. , 1999, 9, 72-86.		167
93	A Revised Assessment of Species Redundancy and Ecosystem Reliability. Conservation Biology, 1999, 13, 440-443.	2.4	24
94	Nitrogen deposition makes a minor contribution to carbon sequestration in temperate forests. Nature, 1999, 398, 145-148.	13.7	676
95	Nitrogen deposition and carbon sequestration. Nature, 1999, 400, 630-630.	13.7	2
96	Title is missing!. Environmental Monitoring and Assessment, 1999, 55, 165-185.	1.3	28
97	Controls on N Retention and Exports in a Forested Watershed. Environmental Monitoring and Assessment, 1999, 55, 187-210.	1.3	53
98	Routine Measurement of Dissolved Inorganic 15N in Precipitation and Streamwater. Environmental Monitoring and Assessment, 1999, 55, 211-220.	1.3	25
99	Original Articles: Dynamic Redistribution of Isotopically Labeled Cohorts of Nitrogen Inputs in Two Temperate Forests. Ecosystems, 1999, 2, 4-18.	1.6	49
100	EFFECTS OF CHRONIC NITROGEN ADDITIONS ON UNDERSTORY SPECIES IN A RED PINE PLANTATION. , 1999, 9, 949-957.		41
101	Soil Detrital Processes Controlling the Movement of 15 N Tracers to Forest Vegetation. , 1999, 9, 87.		1
102	Controls on N Retention and Exports in a Forested Watershed. , 1999, , 187-210.		8
103	EFFECTS OF CHRONIC NITROGEN ADDITIONS ON UNDERSTORY SPECIES IN A RED PINE PLANTATION. , 1999, 9, 949.		2
104	Mineral Soil and Solution Responses to Experimental N and S Enrichment at the Bear Brook Watershed in Maine (BBWM). , 1999, , 165-185.		0
105	Routine Measurement of Dissolved Inorganic 15N in Precipitation and Streamwater. , 1999, , 211-220.		4
106	Roots exert a strong influence on the temperature sensitivityof soil respiration. Nature, 1998, 396, 570-572.	13.7	817
107	Nitrogen Saturation in Temperate Forest Ecosystems. BioScience, 1998, 48, 921-934.	2.2	1,630
108	BIOMASS AND CO2FLUX IN WET SEDGE TUNDRAS: RESPONSES TO NUTRIENTS, TEMPERATURE, AND LIGHT. Ecological Monographs, 1998, 68, 75-97.	2.4	100

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109	A GLOBAL TREND IN BELOWGROUND CARBON ALLOCATION: COMMENT. Ecology, 1998, 79, 1822-1825.	1.5	18
110	Nitrogen Cyclic in Forest and Grass Ecosystems Irrigated with 15 N-Enriched Wastewater. , 1997, 7, 864.		1
111	NITROGEN CYCLING IN FOREST AND GRASS ECOSYSTEMS IRRIGATED WITH15N-ENRICHED WASTEWATER. , 1997, 7, 864-881.		24
112	CLIMATIC EFFECTS ON TUNDRA CARBON STORAGE INFERRED FROM EXPERIMENTAL DATA AND A MODEL. Ecology, 1997, 78, 1170-1187.	1.5	147
113	RECONSTRUCTION AND ANALYSIS OF HISTORICAL CHANGES IN CARBON STORAGE IN ARCTIC TUNDRA. Ecology, 1997, 78, 1188-1198.	1.5	66
114	A 15 N tracer technique for assessing fine root production and mortality. Oecologia, 1997, 112, 300-304.	0.9	20
115	Potential Impacts of Climate Change on Nutrient Cycling, Decomposition, and Productivity in Arctic Ecosystems. Ecological Studies, 1997, , 349-364.	0.4	30
116	Analysis of CO2, Temperature, and Moisture Effects on Carbon Storage in Alaskan Arctic Tundra Using a General Ecosystem Model. Ecological Studies, 1997, , 437-451.	0.4	19
117	Forest ecosystem response to four years of chronic nitrate and sulfate additions at Bear Brooks Watershed, Maine, USA. Forest Ecology and Management, 1996, 84, 29-37.	1.4	92
118	Effects of drainage and temperature on carbon balance of tussock tundra micrososms. Oecologia, 1996, 108, 737-748.	0.9	99
119	Experimental Soil Acidification and Recovery at the Bear Brook Watershed in Maine. Soil Science Society of America Journal, 1996, 60, 1933-1943.	1.2	45
120	Changes in Live Plant Biomass, Primary Production, and Species Composition along a Riverside Toposequence in Arctic Alaska, U.S.A.. Arctic and Alpine Research, 1996, 28, 363.	1.3	67
121	15N natural abundances and N use by tundra plants. Oecologia, 1996, 107, 386-394.	0.9	295
122	Immobilization of a 15N-labeled nitrate addition by decomposing forest litter. Oecologia, 1996, 105, 141-150.	0.9	71
123	Modelling the soil-plant-atmosphere continuum in a Quercus-Acer stand at Harvard Forest: the regulation of stomatal conductance by light, nitrogen and soil/plant hydraulic properties. Plant, Cell and Environment, 1996, 19, 911-927.	2.8	510
124	The fate of 15N-labelled nitrate additions to a northern hardwood forest in eastern Maine, USA. Oecologia, 1995, 103, 292-301.	0.9	134
125	Forest biogeochemistry and primary production altered by nitrogen saturation. Water, Air, and Soil Pollution, 1995, 85, 1665-1670.	1.1	210
126	Responses of Arctic Tundra to Experimental and Observed Changes in Climate. Ecology, 1995, 76, 694-711.	1.5	1,168

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127	Response of Buried Mineral Soil Bags to Experimental Acidification of Forest Ecosystem. Soil Science Society of America Journal, 1994, 58, 556-563.	1.2	15
128	Measuring Nutrient Availability in Arctic Soils Using Ion Exchange Resins: A Field Test. Soil Science Society of America Journal, 1994, 58, 1154-1162.	1.2	123
129	Foliar and fine root nitrate reductase activity in seedlings of four forest tree species in relation to nitrogen availability. Trees - Structure and Function, 1993, 7, 233.	0.9	76
130	Assessing the role of fine roots in carbon and nutrient cycling. Trends in Ecology and Evolution, 1993, 8, 174-178.	4.2	187
131	Contributions of aboveground litter, belowground litter, and root respiration to total soil respiration in a temperate mixed hardwood forest. Canadian Journal of Forest Research, 1993, 23, 1402-1407.	0.8	378
132	Experimental inducement of nitrogen saturation at the watershed scale. Environmental Science & Technology, 1993, 27, 565-568.	4.6	138
133	Fine Root Production Estimates and Belowground Carbon Allocation in Forest Ecosystems. Ecology, 1992, 73, 1139-1147.	1.5	407
134	Global Change and the Carbon Balance of Arctic Ecosystems. BioScience, 1992, 42, 433-441.	2.2	416
135	Microbial Processes and Plant Nutrient Availability in Arctic Soils. , 1992, , 281-300.		168
136	Determination of nitrogen, lignin, and cellulose content of decomposing leaf material by near infrared reflectance spectroscopy. Canadian Journal of Forest Research, 1991, 21, 1684-1688.	0.8	140
137	Comparison of wet chemistry and near infrared reflectance measurements of carbon-fraction chemistry and nitrogen concentration of forest foliage. Canadian Journal of Forest Research, 1991, 21, 1689-1693.	0.8	109
138	Biogeochemical Diversity Along a Riverside Toposequence in Arctic Alaska. Ecological Monographs, 1991, 61, 415-435.	2.4	366
139	A general biogeochemical model describing the responses of the C and N cycles in terrestrial ecosystems to changes in CO2, climate, and N deposition. Tree Physiology, 1991, 9, 101-126.	1.4	299
140	Effects of Temperature and Substrate Quality on Element Mineralization in Six Arctic Soils. Ecology, 1991, 72, 242-253.	1.5	557
141	Factors Controlling Nitrogen Cycling and Nitrogen Saturation in Northern Temperate Forest Ecosystems. , 1991, 1, 303-315.		157
142	Biogeochemical Diversity and Element Transport in a Heterogeneous Landscape, the North Slope of Alaska. Ecological Studies, 1991, , 105-125.	0.4	51
143	Microlysimeter for Measuring Nitrogen Mineralization and Microbial Respiration in Aerobic Soil Incubations. Soil Science Society of America Journal, 1990, 54, 411-415.	1.2	111
144	Carbon and nitrogen dynamics along the decay continuum: Plant litter to soil organic matter. Plant and Soil, 1989, 115, 189-198.	1.8	605

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145	Nitrogen Saturation in Northern Forest Ecosystems. BioScience, 1989, 39, 378-386.	2.2	2,074
146	Belowground Carbon Allocation in Forest Ecosystems: Global Trends. Ecology, 1989, 70, 1346-1354.	1.5	654
147	Nitrogen availability in some Wisconsin forests: comparisons of resin bags and on-site incubations. Biology and Fertility of Soils, 1986, 2, 77.	2.3	80
148	Fine root turnover in forest ecosystems in relation to quantity and form of nitrogen availability: a comparison of two methods. Oecologia, 1985, 66, 317-321.	0.9	345
149	Fine Roots, Net Primary Production, and Soil Nitrogen Availability: A New Hypothesis. Ecology, 1985, 66, 1377-1390.	1.5	451
150	Seasonal patterns of ammonium and nitrate uptake in nine temperate forest ecosystems. Plant and Soil, 1984, 80, 321-335.	1.8	174
151	Leaf-litter production and soil organic matter dynamics along a nitrogen-availability gradient in Southern Wisconsin (U.S.A.). Canadian Journal of Forest Research, 1983, 13, 12-21.	0.8	191