Jill F Johnstone

List of Publications by Year
in descending order

104 papers	9,997 citations	47004 47 h-index	36025 97 g-index
107 all docs	107 docs citations	107 times ranked	10389 citing authors

#	Article	IF	Citations
1	Changing disturbance regimes, ecological memory, and forest resilience. Frontiers in Ecology and the Environment, 2016, 14, 369-378.	4.0	947
2	Plot-scale evidence of tundra vegetation change and links to recent summer warming. Nature Climate Change, 2012, 2, 453-457.	18.8	745
3	Open-top designs for manipulating field temperature in high-latitude ecosystems. Global Change Biology, 1997, 3, 20-32.	9.5	605
4	Plant functional trait change across a warming tundra biome. Nature, 2018, 562, 57-62.	27.8	451
5	Changes in fire regime break the legacy lock on successional trajectories in Alaskan boreal forest. Global Change Biology, 2010, 16, 1281-1295.	9.5	448
6	Effects of Soil Burn Severity on Post-Fire Tree Recruitment in Boreal Forest. Ecosystems, 2006, 9, 14-31.	3.4	313
7	Fire, climate change, and forest resilience in interior AlaskaThis article is one of a selection of papers from The Dynamics of Change in Alaska's Boreal Forests: Resilience and Vulnerability in Response to Climate Warming.. Canadian Journal of Forest Research, 2010, 40, 1302-1312.	1.7	306
8	Increasing wildfires threaten historic carbon sink of boreal forest soils. Nature, 2019, 572, 520-523.	27.8	293
9	BioTIME: A database of biodiversity time series for the Anthropocene. Global Ecology and Biogeography, 2018, 27, 760-786.	5.8	289
10	SPECIES COMPOSITION INTERACTS WITH FERTILIZER TO CONTROL LONG-TERM CHANGE IN TUNDRA PRODUCTIVITY. Ecology, 2001, 82, 3163-3181.	3.2	271
11	Fire Interval Effects on Successional Trajectory in Boreal Forests of Northwest Canada. Ecosystems, 2006, 9, 268-277.	3.4	208
12	Decadal observations of tree regeneration following fire in boreal forests. Canadian Journal of Forest Research, 2004, 34, 267-273.	1.7	203
13	Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. Environmental Research Letters, 2016, 11, 034014.	5.2	199
14	DEVELOPMENTAL PLASTICITY ALLOWSBETULA NANATO DOMINATE TUNDRA SUBJECTED TO AN ALTERED ENVIRONMENT. Ecology, 2001, 82, 18-32.	3.2	181
15	Stand-level effects of soil burn severity on postfire regeneration in a recently burned black spruce forest. Canadian Journal of Forest Research, 2005, 35, 2151-2163.	1.7	171
16	Global Change and the Boreal Forest: Thresholds, Shifting States or Gradual Change?. Ambio, 2004, 33, 361-365.	5.5	168
17	Variation in postfire organic layer thickness in a black spruce forest complex in interior Alaska and its effects on soil temperature and moisture. Canadian Journal of Forest Research, 2005, 35, 2164-2177.	1.7	168
18	Quantifying fire severity, carbon, and nitrogen emissions in Alaska's boreal forest. Ecological Applications, 2010, 20, 1633-1647.	3.8	145

#	Article	IF	Citations
19	Once burned, twice shy: Repeat fires reduce seed availability and alter substrate constraints on Picea mariana regeneration. Forest Ecology and Management, 2012, 266, 34-41.	3.2	145
20	Variable temperature effects of Open Top Chambers at polar and alpine sites explained by irradiance and snow depth. Global Change Biology, 2013, 19, 64-74.	9.5	143
21	Carbon loss from boreal forest wildfires offset by increased dominance of deciduous trees. Science, 2021, 372, 280-283.	12.6	127
22	Resilience of Alaskaâ€™s boreal forest to climatic changeThis article is one of a selection of papers from The Dynamics of Change in Alaskaâ€™s Boreal Forests: Resilience and Vulnerability in Response to Climate Warming.. Canadian Journal of Forest Research, 2010, 40, 1360-1370.	1.7	125
23	Non-equilibrium succession dynamics indicate continued northern migration of lodgepole pine. Global Change Biology, 2003, 9, 1401-1409.	9.5	114
24	Experimental warming and burn severity alter soil CO2 flux and soil functional groups in a recently burned boreal forest. Global Change Biology, 2004, 10, 1996-2004.	9.5	108
25	Increasing fire and the decline of fire adapted black spruce in the boreal forest. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	107
26	Temporal coexistence mechanisms contribute to the latitudinal gradient in forest diversity. Nature, 2017, 550, 105-108.	27.8	106
27	The Impacts of Changing Disturbance Regimes on Serotinous Plant Populations and Communities. BioScience, 2013, 63, 866-876.	4.9	105
28	Multi-Decadal Changes in Tundra Environments and Ecosystems: Synthesis of the International Polar Year-Back to the Future Project (IPY-BTF). Ambio, 2011, 40, 705-716.	5.5	98
29	Fire Severity Filters Regeneration Traits to Shape Community Assembly in Alaskaâ€™s Boreal Forest. PLoS ONE, 2013, 8, e56033.	2.5	95
30	Stable carbon isotope analysis reveals widespread drought stress in boreal black spruce forests. Global Change Biology, 2015, 21, 3102-3113.	9.5	95
31	Modeling impacts of fire severity on successional trajectories and future fire behavior in Alaskan boreal forests. Landscape Ecology, 2011, 26, 487-500.	4.2	92
32	Expansion of Canopy-Forming Willows Over the Twentieth Century on Herschel Island, Yukon Territory, Canada. Ambio, 2011, 40, 610-623.	5.5	91
33	Persistent effects of fire severity on early successional forests in interior Alaska. Forest Ecology and Management, 2011, 261, 381-390.	3.2	85
34	Fuel availability not fire weather controls boreal wildfire severity and carbon emissions. Nature Climate Change, 2020, 10, 1130-1136.	18.8	82
35	Examining forest resilience to changing fire frequency in a fireâ€prone region of boreal forest. Global Change Biology, 2019, 25, 869-884.	9.5	79
36	Widespread negative correlations between black spruce growth and temperature across topographic moisture gradients in the boreal forest. Environmental Research Letters, 2014, 9, 064016.	5.2	78

#	Article	IF	Citations
37	Climate sensitivity of reproduction in a mast-seeding boreal conifer across its distributional range from lowland to treeline forests. Oecologia, 2014, 174, 665-677.	2.0	74
38	Wildfire severity reduces richness and alters composition of soil fungal communities in boreal forests of western Canada. Global Change Biology, 2019, 25, 2310-2324.	9.5	72
39	Assessing spatial and temporal variations in surface soil moisture in fire-disturbed black spruce forests in Interior Alaska using spaceborne synthetic aperture radar imagery â€" Implications for post-fire tree recruitment. Remote Sensing of Environment, 2007, 108, 42-58.	11.0	70
40	Modeling the effects of fire severity and climate warming on active layer thickness and soil carbon storage of black spruce forests across the landscape in interior Alaska. Environmental Research Letters, 2013, 8, 045016.	5.2	66
41	The changing water cycle: the Boreal Plains ecozone of Western Canada. Wiley Interdisciplinary Reviews: Water, 2015, 2, 505-521.	6.5	63
42	Age and size effects on seed productivity of northern black spruce. Canadian Journal of Forest Research, 2013, 43, 534-543.	1.7	60
43	Crossâ€scale controls on carbon emissions from boreal forest megafires. Global Change Biology, 2018, 24, 4251-4265.	9.5	60
44	Tundra Trait Team: A database of plant traits spanning the tundra biome. Global Ecology and Biogeography, 2018, 27, 1402-1411.	5.8	57
45	A sensitive slope: estimating landscape patterns of forest resilience in a changing climate. Ecosphere, 2010, 1, art14.	2.2	55
46	Retrospective Analysis of Growth and Reproduction in Cassiope tetragona and Relations to Climate in the Canadian High Arctic. Arctic and Alpine Research, 1997, 29, 459.	1.3	54
47	Global plant trait relationships extend to the climatic extremes of the tundra biome. Nature Communications, 2020, 11, 1351.	12.8	52
48	Effects of fire severity on plant nutrient uptake reinforce alternate pathways of succession in boreal forests. Plant Ecology, 2013, 214, 587-596.	1.6	50
49	Traditional plant functional groups explain variation in economic but not sizeâ€related traits across the tundra biome. Global Ecology and Biogeography, 2019, 28, 78-95.	5.8	49
50	Wildfire combustion and carbon stocks in the southern Canadian boreal forest: Implications for a warming world. Global Change Biology, 2020, 26, 6062-6079.	9.5	49
51	Soil organic layer combustion in boreal black spruce and jack pine stands of the Northwest Territories, Canada. International Journal of Wildland Fire, 2018, 27, 125.	2.4	48
52	Absence of net longâ€term successional facilitation by alder in a boreal Alaska floodplain. Ecology, 2016, 97, 2986-2997.	3.2	47
53	Continent-wide tree fecundity driven by indirect climate effects. Nature Communications, 2021, 12, 1242.	12.8	46
54	Postfire seed rain of black spruce, a semiserotinous conifer, in forests of interior Alaska. Canadian Journal of Forest Research, 2009, 39, 1575-1588.	1.7	44

#	Article	IF	Citations
55	How does increased fire frequency affect carbon loss from fire? A case study in the northern boreal forest. International Journal of Wildland Fire, 2011, 20, 829.	2.4	44
56	Disentangling legacy effects from environmental filters of postfire assembly of boreal tree assemblages. Ecology, 2015, 96, 3023-3032.	3.2	42
57	Directional Changes in Ecological Communities and Socialâ€Ecological Systems: A Framework for Prediction Based on Alaskan Examples. American Naturalist, 2006, 168, S36-S49.	2.1	40
58	Differences in Ecosystem Carbon Distribution and Nutrient Cycling Linked to Forest Tree Species Composition in a Mid-Successional Boreal Forest. Ecosystems, 2015, 18, 1472-1488.	3.4	39
59	Factors shaping alternate successional trajectories in burned black spruce forests of Alaska. Ecosphere, 2020, 11, e03129.	2.2	39
60	Distribution of vegetation along environmental gradients on Sable Island, Nova Scotia. Ecoscience, 2013, 20, 361-372.	1.4	38
61	Reproduction as a bottleneck to treeline advance across the circumarctic forest tundra ecotone. Ecography, 2019, 42, 137-147.	4.5	36
62	Response of boreal plant communities to variations in previous fire-free interval. International Journal of Wildland Fire, 2006, 15, 497.	2.4	36
63	Environmental effects of oil and gas lease sites in a grassland ecosystem. Journal of Environmental Management, 2011, 92, 195-204.	7.8	34
64	Geographic scale and disturbance influence intraspecific trait variability in leaves and roots of North American understorey plants. Functional Ecology, 2019, 33, 1771-1784.	3.6	34
65	Experimental assessment of tree canopy and leaf litter controls on the microbiome and nitrogen fixation rates of two boreal mosses. New Phytologist, 2020, 227, 1335-1349.	7.3	33
66	Variations in plant forage quality in the range of the Porcupine caribou herd. Rangifer, 2002, 22, 83.	0.6	31
67	Climate change decreases the cooling effect from postfire albedo in boreal North America. Global Change Biology, 2020, 26, 1592-1607.	9.5	29
68	North American tree migration paced by climate in the West, lagging in the East. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	27
69	Patterns of bryophyte succession in a 160-year chronosequence in deciduous and coniferous forests of boreal Alaska. Canadian Journal of Forest Research, 2017, 47, 1021-1032.	1.7	25
70	Losing Legacies, Ecological Release, and Transient Responses: Key Challenges for the Future of Northern Ecosystem Science. Ecosystems, 2017, 20, 23-30.	3.4	25
71	Predicting Ecosystem Resilience to Fire from Tree Ring Analysis in Black Spruce Forests. Ecosystems, 2017, 20, 1137-1150.	3.4	24
72	Fire characteristics and environmental conditions shape plant communities via regeneration strategy. Ecography, 2020, 43, 1464-1474.	4.5	24

#	Article	IF	Citations
73	Plant Responses to Natural and Experimental Variations in Temperature in Alpine Tundra, Southern Yukon, Canada. Arctic, Antarctic, and Alpine Research, 2011, 43, 442-456.	1.1	23
74	Explaining Spatial Heterogeneity in Population Dynamics and Genetics from Spatial Variation in Resources for a Large Herbivore. PLoS ONE, 2012, 7, e47858.	2.5	22
75	Tree rings provide early warning signals of jack pine mortality across a moisture gradient in the southern boreal forest. Environmental Research Letters, 2015, 10, 084021.	5.2	21
76	Limits to reproduction and seed size-number trade-offs that shape forest dominance and future recovery. Nature Communications, 2022, 13, 2381.	12.8	21
77	Summary and synthesis of Changing Cold Regions Network (CCRN) research in the interior of western Canada â€“ PartÂ2: Future change in cryosphere, vegetation, and hydrology. Hydrology and Earth System Sciences, 2021, 25, 1849-1882.	4.9	20
78	MASTREE+: Timeâ€series of plant reproductive effort from six continents. Global Change Biology, 2022, 28, 3066-3082.	9.5	19
79	Patterns of Ecosystem Structure and Wildfire Carbon Combustion Across Six Ecoregions of the North American Boreal Forest. Frontiers in Forests and Global Change, 2020, 3, .	2.3	18
80	Spatial and temporal variation in moss-associated dinitrogen fixation in coniferous- and deciduous-dominated Alaskan boreal forests. Plant Ecology, 2018, 219, 837-851.	1.6	17
81	Moose alter the rate but not the trajectory of forest canopy succession after low and high severity fire in Alaska. Forest Ecology and Management, 2017, 391, 154-163.	3.2	15
82	Broadleaf Litter Controls Feather Moss Growth in Black Spruce and Birch Forests of Interior Alaska. Ecosystems, 2020, 23, 18-33.	3.4	15
83	Identifying Functional Impacts of Heat-Resistant Fungi on Boreal Forest Recovery After Wildfire. Frontiers in Forests and Global Change, 2020, 3, .	2.3	15
84	Effects of aspen (Populus tremuloides) sucker removal on postfire conifer regeneration in central Alaska. Canadian Journal of Forest Research, 2005, 35, 483-486.	1.7	14
85	Our plants, our land: bridging aboriginal generations through cross-cultural plant workshops. Polar Geography, 2012, 35, 195-210.	1.9	13
86	Understory vascular plant community assembly in relation to time-since-fire and environmental variables in a Chinese boreal forest. Journal of Mountain Science, 2017, 14, 1317-1328.	2.0	13
87	Species Composition Interacts with Fertilizer to Control Long-Term Change in Tundra Productivity. Ecology, 2001, 82, 3163.	3.2	11
88	Globally, tree fecundity exceeds productivity gradients. Ecology Letters, 2022, 25, 1471-1482.	6.4	11
89	Environmental Conditions and Vegetation Recovery at Abandoned Drilling Mud Sumps in the Mackenzie Delta Region, Northwest Territories, Canada. Arctic, 2009, 61, .	0.4	10
90	Predicting patterns of terrestrial lichen biomass recovery following boreal wildfires. Ecosphere, 2021, 12, e03481.	2.2	8

#	Article	IF	Citations
91	Cascading effects: insights from the U.S. Long Term Ecological Research Network. Ecosphere, 2021, 12, e03430.	2.2	8
92	Aboveâ€•and belowground drivers of intraspecific trait variability across subcontinental gradients for five ubiquitous forest plants in North America. Journal of Ecology, 2022, 110, 1590-1605.	4.0	8
93	What is the most efficient and effective method for long-term monitoring of alpine tundra vegetation?. Arctic Science, 2016, 2, 127-141.	2.3	7
94	Case Study: Novel Socioâ€Ecological Systems in the North: Potential Pathways Toward Ecological and Societal Resilience. , 2013, , 334-344.		6
95	Alpine Plant Life: Functional Plant Ecology of High Mountain Ecosystems. By Christian KÃ¶rner. Mountain Research and Development, 2021, 41, .	1.0	6
96	Impacts of pre-fire conifer density and wildfire severity on ecosystem structure and function at the forest-tundra ecotone. PLoS ONE, 2021, 16, e0258558.	2.5	6
97	Northern boreal caribou conservation should focus on anthropogenic disturbance, not disturbance-mediated apparent competition. Biological Conservation, 2022, 265, 109426.	4.1	6
98	Controlled Soil Warming Powered by Alternative Energy for Remote Field Sites. PLoS ONE, 2013, 8, e82903.	2.5	5
99	A novel stochastic method for reconstructing daily precipitation times-series using tree-ring data from the western Canadian Boreal Forest. Dendrochronologia, 2017, 44, 9-18.	2.2	4
100	Fuelâ€reduction management alters plant composition, carbon and nitrogen pools, and soil thaw in Alaskan boreal forest. Ecological Applications, 2018, 28, 149-161.	3.8	4
101	Impacts of fire on non-native plant recruitment in black spruce forests of interior Alaska. PLoS ONE, 2017, 12, e0171599.	2.5	3
102	Recovery of Tundra Vegetation Three Decades after Hydrocarbon Drilling with and without Seeding of Non-Native Grasses + Supplementary Appendices (See Article Tools). Arctic, 2015, 68, 16.	0.4	3
103	Material Legacies and Environmental Constraints Underlie Fire Resilience of a Dominant Boreal Forest Type. Ecosystems, 2023, 26, 473-490.	3.4	2
104	A goodness-of-fit test for zero-inflated Poisson mixed effects models in tree abundance studies. Computational Statistics and Data Analysis, 2020, 144, 106887.	1.2	1