Simon M. LandhÃ¤usser

List of Publications by Year
in descending order

137 papers	6,425 citations	76326 40 h-index	76900 74 g-index
139 all docs	139 docs citations	139 times ranked	6036 citing authors

#	Article	IF	Citations
1	A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. Nature Ecology and Evolution, 2017, 1, 1285-1291.	7.8	739
2	A method for routine measurements of total sugar and starch content in woody plant tissues. Tree Physiology, 2004, 24, 1129-1136.	3.1	472
3	Forest restoration following surface mining disturbance: challenges and solutions. New Forests, 2015, 46, 703-732.	1.7	265
4	An analysis of sucker regeneration of trembling aspen. Canadian Journal of Forest Research, 2003, 33, 1169-1179.	1.7	207
5	Standardized protocols and procedures can precisely and accurately quantify non-structural carbohydrates. Tree Physiology, 2018, 38, 1764-1778.	3.1	171
6	Predicting landscape patterns of aspen dieback: mechanisms and knowledge gaps. Canadian Journal of Forest Research, 2004, 34, 1379-1390.	1.7	170
7	Non-structural carbohydrates in woody plants compared among laboratories. Tree Physiology, 2015, 35, tpv073.	3.1	163
8	Root carbon reserve dynamics in aspen seedlings: does simulated drought induce reserve limitation?. Tree Physiology, 2011, 31, 250-257.	3.1	148
9	A synthesis of tree functional traits related to droughtâ€induced mortality in forests across climatic zones. Journal of Applied Ecology, 2017, 54, 1669-1686.	4.0	148
10	Seasonal changes in carbohydrate reserves in mature northern Populus tremuloides clones. Trees - Structure and Function, 2003, 17, 471-476.	1.9	136
11	Restoring forests: What constitutes success in the twenty-first century?. New Forests, 2015, 46, 601-614.	1.7	135
12	Postfire Vegetation Recovery and Tree Establishment at the Arctic Treeline: Climate-Change-Vegetation-Response Hypotheses. Journal of Ecology, 1993, 81, 665.	4.0	122
13	Growth of<i> Populus tremuloides</i> in association with <i>Calamagrostis canadensis</i>. Canadian Journal of Forest Research, 1998, 28, 396-401.	1.7	121
14	Identifying differences in carbohydrate dynamics of seedlings and mature trees to improve carbon allocation in models for trees and forests. Environmental and Experimental Botany, 2018, 152, 7-18.	4.2	115
15	Leaf area renewal, root retention and carbohydrate reserves in a clonal tree species following above-ground disturbance. Journal of Ecology, 2002, 90, 658-665.	4.0	106
16	Disturbance facilitates rapid range expansion of aspen into higher elevations of the Rocky Mountains under a warming climate. Journal of Biogeography, 2010, 37, 68-76.	3.0	104
17	Defoliation increases risk of carbon starvation in root systems of mature aspen. Trees - Structure and Function, 2012, 26, 653-661.	1.9	104
18	Effects of leaf litter on the growth of boreal feather mosses: Implication for forest floor development. Journal of Vegetation Science, 2008, 19, 253-260.	2.2	100

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19	Low root reserve accumulation during drought may lead to winter mortality in poplar seedlings. New Phytologist, 2013, 198, 139-148.	7.3	98
20	Coarse and fine root respiration in aspen (Populus tremuloides). Tree Physiology, 2002, 22, 725-732.	3.1	88
21	Living on next to nothing: tree seedlings can survive weeks with very low carbohydrate concentrations. New Phytologist, 2018, 218, 107-118.	7.3	69
22	The handbook for standardized field and laboratory measurements in terrestrial climate change experiments and observational studies (ClimEx). Methods in Ecology and Evolution, 2020, 11, 22-37.	5.2	68
23	Variation in carbon availability, defense chemistry and susceptibility to fungal invasion along the stems of mature trees. New Phytologist, 2013, 197, 586-594.	7.3	65
24	A comparison of growth and physiology in <i>Picea glauca</i> and <i>Populus tremuloides</i> at different soil temperatures. Canadian Journal of Forest Research, 2001, 31, 1922-1929.	1.7	64
25	Carbohydrate transfer through root grafts to support shaded trees. Tree Physiology, 2006, 26, 1019-1023.	3.1	62
26	Signals controlling root suckering and adventitious shoot formation in aspen (Populus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td (tre	3.1	60
27	Differential transpiration by three boreal tree species in response to increased evaporative demand after variable retention harvesting. Agricultural and Forest Meteorology, 2006, 138, 104-119.	4.8	59
28	Atmospheric and soil moisture controls on evapotranspiration from above and within a Western Boreal Plain aspen forest. Hydrological Processes, 2014, 28, 4449-4462.	2.6	59
29	Stress differentially causes roots of tree seedlings to exude carbon. Tree Physiology, 2017, 37, 154-164.	3.1	58
30	Ecosystem dynamics and management after forest dieâ€off: a global synthesis with conceptual stateâ€andâ€transition models. Ecosphere, 2017, 8, e02034.	2.2	56
31	Trembling aspen seedling establishment, growth and response to fertilization on contrasting soils used in oil sands reclamation. Canadian Journal of Soil Science, 2012, 92, 143-151.	1.2	54
32	Hydraulic acclimation to shading in boreal conifers of varying shade tolerance. Plant, Cell and Environment, 2010, 33, 382-393.	5.7	52
33	Nonstructural carbohydrate dynamics of lodgepole pine dying from mountain pine beetle attack. New Phytologist, 2016, 209, 550-562.	7.3	50
34	Dying piece by piece: carbohydrate dynamics in aspen (Populus tremuloides) seedlings under severe carbon stress. Journal of Experimental Botany, 2017, 68, 5221-5232.	4.8	49
35	Partitioning of carbon allocation to reserves or growth determines future performance of aspen seedlings. Forest Ecology and Management, 2012, 275, 43-51.	3.2	47
36	Forest floor development and biochemical properties in reconstructed boreal forest soils. Applied Soil Ecology, 2011, 49, 139-147.	4.3	46

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37	Aspen shoots are carbon autonomous during bud break. Trees - Structure and Function, 2011, 25, 531-536.	1.9	46
38	A comparison of growth and physiology in <i>Picea glauca</i> and <i>Populus tremuloides</i> at different soil temperatures. Canadian Journal of Forest Research, 2001, 31, 1922-1929.	1.7	45
39	A global view of aspen: Conservation science for widespread keystone systems. Global Ecology and Conservation, 2020, 21, e00828.	2.1	44
40	Gas exchange and growth of three arctic tree-line tree species under different soil temperature and drought preconditioning regimes. Canadian Journal of Botany, 1996, 74, 686-693.	1.1	43
41	Soil nutrition and temperature as drivers of root suckering in trembling aspen. Canadian Journal of Forest Research, 2002, 32, 1685-1691.	1.7	43
42	Response ofPopulus tremuloides,Populus balsamifera,Betula papyriferaandPicea glaucaSeedlings to Low Soil Temperature and Water-logged Soil Conditions. Scandinavian Journal of Forest Research, 2003, 18, 391-400.	1.4	42
43	Identifying the relevant carbohydrate storage pools available for remobilization in aspen roots. Tree Physiology, 2019, 39, 1109-1120.	3.1	42
44	Tamm Review: Seedling-based ecology, management, and restoration in aspen (Populus tremuloides). Forest Ecology and Management, 2019, 432, 231-245.	3.2	41
45	Seed release in serotinous lodgepole pine forests after mountain pine beetle outbreak. , 2011, 21, 150-162.		40
46	The effect of fire severity and salvage logging traffic on regeneration and early growth of aspen suckers in north-central Alberta. Forestry Chronicle, 2004, 80, 251-256.	0.6	39
47	A Functional Framework for Improved Management of Western North American Aspen (Populus) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.0	39
48	Elevated mortality of residual trees following structural retention harvesting in boreal mixedwoods. Forestry Chronicle, 2008, 84, 70-75.	0.6	38
49	Photosynthetic strategies of summergreen and evergreen understory herbs of the boreal mixedwood forest. Oecologia, 1997, 112, 173-178.	2.0	36
50	Effect of stock type characteristics and time of planting on field performance of aspen (Populus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	1.7	36
51	Rebuilding boreal forest ecosystems after industrial disturbance. , 2012, , .		35
52	The effect of ectomycorrhizae on water relations in aspen (Populus tremuloides) and white spruce (Picea glauca) at low soil temperatures. Canadian Journal of Botany, 2002, 80, 684-689.	1.1	33
53	Effects of soil temperature and time of decapitation on sucker initiation of intact <i>Populus tremuloides</i> root systems. Scandinavian Journal of Forest Research, 2006, 21, 299-305.	1.4	33
54	Nutrient loaded seedlings reduce the need for field fertilization and vegetation management on boreal forest reclamation sites. New Forests, 2016, 47, 393-410.	1.7	33

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55	Regeneration of Populus nine years after variable retention harvest in boreal mixedwood forests. Forest Ecology and Management, 2010, 259, 383-389.	3.2	32
56	Early trajectories of forest understory development on reclamation sites: influence of forest floor placement and a cover crop. Restoration Ecology, 2015, 23, 698-706.	2.9	30
57	Effects of harvesting and drought on CO₂and H₂O fluxes in an aspen-dominated western boreal plain forest: early chronosequence recovery. Canadian Journal of Forest Research, 2015, 45, 87-100.	1.7	30
58	Nutrient uptake and growth of fireweed (Chamerion angustifolium) on reclamation soils. Canadian Journal of Forest Research, 2014, 44, 1-7.	1.7	29
59	Screening for Control of a Forest Weed: Early Competition Between Three Replacement Species and Calamagrostis canadensis of Picea glauca. Journal of Applied Ecology, 1996, 33, 1517.	4.0	28
60	Stomatal conductance and xylem sap properties of aspen (Populus tremuloides) in response to low soil temperature. Physiologia Plantarum, 2004, 122, 79-85.	5.2	28
61	Wounding of aspen roots promotes suckering. Canadian Journal of Botany, 2004, 82, 310-315.	1.1	27
62	Premature shoot growth termination allows nutrient loading of seedlings with an indeterminate growth strategy. New Forests, 2013, 44, 635-647.	1.7	27
63	The role of seedling nutrient status on development of ectomycorrhizal fungal communities in two soil types following surface mining disturbance. Pedobiologia, 2015, 58, 129-135.	1.2	27
64	Impact of slash removal, drag scarification, and mounding on lodgepole pine cone distribution and seedling regeneration after cut-to-length harvesting on high elevation sites. Forest Ecology and Management, 2009, 258, 43-49.	3.2	26
65	Fire Drives Transcontinental Variation in Tree Birch Defense against Browsing by Snowshoe Hares. American Naturalist, 2009, 174, 13-23.	2.1	25
66	Age, stand density, and tree size as factors in root and basal grafting of lodgepole pine. Canadian Journal of Botany, 2005, 83, 983-988.	1.1	24
67	Differences in initial root development and soil conditions affect establishment of trembling aspen and balsam poplar seedlings. Botany, 2010, 88, 275-285.	1.0	24
68	Reserves Accumulated in Non-Photosynthetic Organs during the Previous Growing Season Drive Plant Defenses and Growth in Aspen in the Subsequent Growing Season. Journal of Chemical Ecology, 2014, 40, 21-30.	1.8	24
69	Host phenology and potential saprotrophism of ectomycorrhizal fungi in the boreal forest. Functional Ecology, 2017, 31, 116-126.	3.6	24
70	Competition between <i>Calamagrostis</i><i>canadensis</i> and <i>Epilobium</i><i>angustifolium</i> under different soil temperature and nutrient regimes. Canadian Journal of Forest Research, 1994, 24, 2244-2250.	1.7	23
71	Carbon isotope discrimination and water stress in trembling aspen following variable retention harvesting. Tree Physiology, 2007, 27, 1065-1071.	3.1	23
72	Effects of overstory retention and site preparation on growth of planted white spruce seedlings in deciduous and coniferous dominated boreal plains mixedwoods. Forest Ecology and Management, 2008, 255, 3744-3749.	3.2	23

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73	Seedling growth and water use of boreal conifers across different temperatures and near-flooded soil conditions. Canadian Journal of Forest Research, 2011, 41, 2292-2300.	1.7	23
74	Viability of forest floor and canopy seed banks in <i>Pinus contorta</i> var. <i>latifolia</i> (Pinaceae) forests after a mountain pine beetle outbreak. American Journal of Botany, 2011, 98, 630-637.	1.7	23
75	Root carbohydrates and aspen regeneration in relation to season of harvest and machine traffic. Forest Ecology and Management, 2008, 255, 68-74.	3.2	22
76	First-year growth response of cold-stored, nursery-grown aspen planting stock. New Forests, 2007, 33, 281-295.	1.7	21
77	The effect of roots and litter of Calamagrostis canadensis on root sucker regeneration of Populus tremuloides. Forestry, 2007, 80, 481-488.	2.3	19
78	Propagating trembling aspen from root cuttings: impact of storage length and phenological period of root donor plants. New Forests, 2010, 39, 169-182.	1.7	18
79	Seasonal changes in carbohydrate storage and regrowth in rhizomes and stems of four boreal forest shrubs: Applications in<i>picea glauca</i>understorey regeneration. Scandinavian Journal of Forest Research, 1997, 12, 27-32.	1.4	17
80	Effects of timing of cleaning and residual density on regeneration of juvenile aspen stands. Forest Ecology and Management, 2006, 232, 198-204.	3.2	17
81	Influence of tree species and salvaged soils on the recovery of ectomycorrhizal fungi in upland boreal forest restoration after surface mining. Botany, 2015, 93, 267-277.	1.0	17
82	Root competition, not soil compaction, restricts access to soil resources for aspen on a reclaimed mine soil. Botany, 2017, 95, 685-695.	1.0	17
83	Title is missing!. New Forests, 2003, 25, 49-66.	1.7	16
84	Nitrate stimulates root suckering in trembling aspen (Populus tremuloides). Canadian Journal of Forest Research, 2010, 40, 1962-1969.	1.7	14
85	Quantification of uncertainties introduced by data-processing procedures of sap flow measurements using the cut-tree method on a large mature tree. Agricultural and Forest Meteorology, 2020, 287, 107926.	4.8	14
86	Nitrogen-15 Uptake byPinus contortaSeedlings in Relation to Phenological Stage and Season. Scandinavian Journal of Forest Research, 2004, 19, 329-338.	1.4	13
87	Impact of chipping residues and its leachate on the initiation and growth of aspen root suckers. Canadian Journal of Soil Science, 2007, 87, 361-367.	1.2	13
88	Role of microtopography in the expression of soil propagule banks on reclamation sites. Restoration Ecology, 2018, 26, S200.	2.9	13
89	Utilizing pioneer species as a hydrological nurse crop to lower water table for reforestation of poorly drained boreal sites. Annals of Forest Science, 2003, 60, 741-748.	2.0	13
90	Rhizome growth of Calamagrostis canadensis in response to soil nutrients and bulk density. Canadian Journal of Plant Science, 1996, 76, 545-550.	0.9	12

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91	Le gel de printemps et la pourriture fongique sont impliquÃ©s dans la suppression de la repousse des trembles rejetant aprÃ¨s un nettoiement partiel dans des peuplements juvÃ©niles. Annals of Forest Science, 2009, 66, 805-805.	2.0	12
92	Tracking Stable Isotope Enrichment in Tree Seedlings with Solid-State NMR Spectroscopy. Scientific Reports, 2012, 2, 719.	3.3	12
93	Microbial Response to Fertilization in Contrasting Soil Materials used during Oil Sands Reclamation. Soil Science Society of America Journal, 2013, 77, 145-154.	2.2	12
94	The Role of Microsite Conditions in Restoring Trembling Aspen (Populus tremuloidesMichx) from Seed. Restoration Ecology, 2014, 22, 292-295.	2.9	12
95	The impact of light quality and quantity on root-to-shoot ratio and root carbon reserves in aspen seedling stock. New Forests, 2015, 46, 527-545.	1.7	12
96	Predicting natural regeneration of white spruce in boreal mixedwood understories. Forestry Chronicle, 2001, 77, 1006-1013.	0.6	11
97	Low soil temperatures increase carbon reserves in Picea mariana and Pinus contorta. Annals of Forest Science, 2014, 71, 371-380.	2.0	11
98	Viewing forests from below: fine root mass declines relative to leaf area in aging lodgepole pine stands. Oecologia, 2016, 181, 733-747.	2.0	11
99	Mature beech and spruce trees under drought â€“ Higher C investment in reproduction at the expense of whole-tree NSC stores. Environmental and Experimental Botany, 2021, 191, 104615.	4.2	11
100	Effects of Corylus cornuta stem density on root suckering and rooting depth of Populus tremuloidesThis article is one of a selection of papers published in the Special Issue on Poplar Research in Canada.. Canadian Journal of Botany, 2007, 85, 1041-1045.	1.1	10
101	Regeneration of aspen following partial and strip understory protection harvest in boreal mixedwood forests. Forestry Chronicle, 2009, 85, 631-638.	0.6	10
102	Title is missing!. New Forests, 2003, 25, 67-81.	1.7	9
103	The persistence and function of living roots on lodgepole pine snags and stumps grafted to living trees. Annals of Forest Science, 2007, 64, 31-36.	2.0	9
104	Suckering response of aspen to traffic-induced-root wounding and the barrier-effect of log storage. Forest Ecology and Management, 2009, 258, 2083-2089.	3.2	9
105	Depth of root placement, root size and carbon reserves determine reproduction success of aspen root fragments. Forest Ecology and Management, 2014, 313, 83-90.	3.2	9
106	Effects of substrate availability and competing vegetation on natural regeneration of white spruce on logged boreal mixedwood sites. Canadian Journal of Forest Research, 2018, 48, 324-332.	1.7	9
107	Preferential allocation of carbohydrate reserves belowground supports disturbance-based management of American chestnut (Castanea dentata). Forest Ecology and Management, 2022, 509, 120078.	3.2	9
108	Rhizome growth of Calamagrostis canadensis into mounds created for tree seedling establishment. , 1999, 18, 245-262.		8

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109	Does mechanical site preparation affect trembling aspen density and growth 9â€“12Âyears after treatment?. New Forests, 2006, 32, 299-306.	1.7	8
110	Fertilization of lodgepole pine trees increased diameter growth but reduced root carbohydrate concentrations. Forest Ecology and Management, 2010, 260, 1914-1920.	3.2	8
111	Spruce shows greater sensitivity to recent warming than Douglas-fir in central British Columbia. Ecosphere, 2018, 9, e02221.	2.2	8
112	Uniform versus Asymmetric Shading Mediates Crown Recession in Conifers. PLoS ONE, 2014, 9, e104187.	2.5	8
113	Modelling plant water relations and net primary productivity as affected by reclamation cover depth in reclaimed forestlands of northern Alberta. Plant and Soil, 2020, 446, 627-654.	3.7	7
114	Splitting the Difference: Heterogeneous Soil Moisture Availability Affects Aboveground and Belowground Reserve and Mass Allocation in Trembling Aspen. Frontiers in Plant Science, 2021, 12, 654159.	3.6	7
115	N-transfer through aspen litter and feather moss layers after fertilization with ammonium nitrate and urea. Plant and Soil, 2008, 311, 51-59.	3.7	6
116	Transfer of live aspen root fragments, an effective tool for large-scale boreal forest reclamation. Canadian Journal of Forest Research, 2015, 45, 1056-1064.	1.7	6
117	Growth traits of juvenile American chestnut and red oak as adaptations to disturbance. Restoration Ecology, 2018, 26, 712-719.	2.9	6
118	Aspen regeneration on log decking areas as influenced by season and duration of log storage. New Forests, 2009, 38, 323-335.	1.7	5
119	Assessing structural and functional indicators of soil nitrogen availability in reclaimed forest ecosystems using¹⁵N-labelled aspen litter. Canadian Journal of Soil Science, 2018, 98, 357-368.	1.2	5
120	Exploring drivers and dynamics of early boreal forest recovery of heavily disturbed mine sites: a case study from a reconstructed landscape. New Forests, 2019, 50, 217-239.	1.7	5
121	Plant recolonization of reclamation areas from patches of salvaged forest floor material. Applied Vegetation Science, 2018, 21, 94-103.	1.9	4
122	Restoration of belowground fungal communities in reclaimed landscapes of the Canadian boreal forest. Restoration Ecology, 2019, 27, 1369-1380.	2.9	4
123	Seasonal patterns of water uptake in Populus tremuloides and Picea glauca on a boreal reclamation site is species specific and modulated by capping soil depth and slope position. Plant and Soil, 2019, 439, 487-504.	3.7	4
124	Regional differences in aspen (Populus tremuloides Michx.) seedling response to an established nursery protocol. New Forests, 2020, 51, 367-378.	1.7	4
125	Exploring seedling-based aspen (Populus tremuloides) restoration near range limits in the Intermountain West, USA. Forest Ecology and Management, 2020, 476, 118470.	3.2	4
126	Surface and subsurface material selections influence the early outcomes of boreal upland forest restoration. Ecological Engineering, 2020, 144, 105705.	3.6	4

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127	Forest floor protection during drilling pad construction promotes resprouting of aspen. Ecological Engineering, 2015, 75, 9-15.	3.6	3
128	Responses of planted Populus tremuloides seedlings to grass competition during early establishment. Trees - Structure and Function, 2018, 32, 1279-1289.	1.9	3
129	Additive or synergistic? Early ectomycorrhizal fungal community response to mixed tree plantings in boreal forest reclamation. Oecologia, 2019, 189, 9-19.	2.0	3
130	Species-specific responses to targeted fertilizer application on reconstructed soils in a reclaimed upland area. Canadian Journal of Soil Science, 2021, 101, 45-61.	1.2	3
131	Biases underlying species detection using fluorescent amplified-fragment length polymorphisms yielded from roots. Plant Methods, 2015, 11, 36.	4.3	2
132	Rapid understory plant recovery following forest floor protection on temporary drilling pads. Restoration Ecology, 2018, 26, 48-55.	2.9	2
133	Regeneration dynamics of planted seedling-origin aspen (Populus tremuloides Michx.). New Forests, 2018, 49, 215-229.	1.7	2
134	Choices on sampling, sequencing, and analyzing DNA influence the estimation of community composition of plant fungal symbionts. Applications in Plant Sciences, 2021, 9, e11449.	2.1	2
135	Inconsistent Growth Response to Fertilization and Thinning of Lodgepole Pine in the Rocky Mountain Foothills Is Linked to Site Index. International Journal of Forestry Research, 2012, 2012, 1-7.	0.8	1
136	Manipulating aspen (<i>Populus tremuloides</i>) seedling size characteristics to improve initial establishment and growth on competitive sites. Scandinavian Journal of Forest Research, 2020, 35, 29-45.	1.4	1
137	RESOLVING THE NEED FOR GROUNDWATER RECHARGE VERSUS FOREST PRODUCTIVITY IN A RECLAIMED WATERSHED USING NUMERICAL MODELLING. , 2017, , .		0