

Matthew P Ayres

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135
papers

7,743
citations

41
h-index

87
g-index

136
ext. papers

8,610
ext. citations

4
avg, IF

5.83
L-index

#	Paper	IF	Citations
135	Climate Change and Forest Disturbances. <i>BioScience</i> , 2001 , 51, 723	5.7	1392
134	Jensen's inequality predicts effects of environmental variation. <i>Trends in Ecology and Evolution</i> , 1999 , 14, 361-366	10.9	536
133	Assessing the consequences of global change for forest disturbance from herbivores and pathogens. <i>Science of the Total Environment</i> , 2000 , 262, 263-86	10.2	526
132	Responses of insect pests, pathogens, and invasive plant species to climate change in the forests of northeastern North America: What can we predict? This article is one of a selection of papers from NE Forests 2100: A Synthesis of Climate Change Impacts on Forests of the Northeastern US and Eastern Canada.. <i>Canadian Journal of Forest Research</i> , 2009 , 39, 231-248	1.9	318
131	Consequences of climate change for biotic disturbances in North American forests. <i>Ecological Monographs</i> , 2013 , 83, 441-470	9	275
130	Linking breeding and wintering ranges of a migratory songbird using stable isotopes. <i>Science</i> , 2002 , 295, 1062-5	33.3	240
129	Observed and anticipated impacts of drought on forest insects and diseases in the United States. <i>Forest Ecology and Management</i> , 2016 , 380, 321-334	3.9	227
128	DIVERSITY OF STRUCTURE AND ANTIHERBIVORE ACTIVITY IN CONDENSED TANNINS. <i>Ecology</i> , 1997 , 78, 1696-1712	4.6	213
127	Nonnative forest insects and pathogens in the United States: Impacts and policy options 2016 , 26, 1437-1455		212
126	NITROGEN BUDGETS OF PHLOEM-FEEDING BARK BEETLES WITH AND WITHOUT SYMBIOTIC FUNGI. <i>Ecology</i> , 2000 , 81, 2198-2210	4.6	205
125	Local Adaptation to Regional Climates in <i>Papilio Canadensis</i> (Lepidoptera: Papilionidae). <i>Ecological Monographs</i> , 1994 , 64, 465-482	9	172
124	Environmental effects on constitutive and inducible resin defences of <i>Pinus taeda</i> . <i>Ecology Letters</i> , 2000 , 3, 329-339	10	171
123	Climate and the northern distribution limits of <i>Dendroctonus frontalis</i> Zimmermann (Coleoptera: Scolytidae). <i>Journal of Biogeography</i> , 1999 , 26, 1133-1145	4.1	147
122	Causes of cyclicity of <i>Epirrita autumnata</i> (Lepidoptera, Geometridae): grandiose theory and tedious practice. <i>Population Ecology</i> , 2000 , 42, 211-223	2.1	139
121	Antagonisms, mutualisms and commensalisms affect outbreak dynamics of the southern pine beetle. <i>Oecologia</i> , 2006 , 147, 679-91	2.9	128
120	Impact of minimum winter temperatures on the population dynamics of <i>Dendroctonus frontalis</i> 2007 , 17, 882-99		106
119	Climate affects severity and altitudinal distribution of outbreaks in an eruptive bark beetle. <i>Climatic Change</i> , 2012 , 115, 327-341	4.5	100

118	Development of Birch Leaves and the Growth Energetics of <i>Epirrita Autumnata</i> (Geometridae). <i>Ecology</i> , 1987 , 68, 558-568	4.6	93
117	The distribution and abundance of animal populations in a climate of uncertainty. <i>Oikos</i> , 2009 , 118, 1121-1126	8.1	
116	Effects of variation in quality of leaf detritus on growth of the eastern tree-hole mosquito, <i>Aedes triseriatus</i> (Diptera: Culicidae). <i>Canadian Journal of Zoology</i> , 1997 , 75, 706-718	1.5	79
115	In a warmer Arctic, mosquitoes avoid increased mortality from predators by growing faster. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015 , 282,	4.4	76
114	Strong indirect interactions of <i>Tarsonemus</i> mites (Acarina: Tarsonemidae) and <i>Dendroctonus frontalis</i> (Coleoptera: Scolytidae). <i>Oikos</i> , 2003 , 102, 243-252	4	75
113	Cold Tolerance of Four Species of Bark Beetle (Coleoptera: Scolytidae) in North America. <i>Environmental Entomology</i> , 2000 , 29, 421-432	2.1	71
112	Loblolly pine responds to mechanical wounding with increased resin flow. <i>Canadian Journal of Forest Research</i> , 1998 , 28, 596-602	1.9	69
111	Resource partitioning and overlap in three sympatric species of <i>Ips</i> bark beetles (Coleoptera: Scolytidae). <i>Oecologia</i> , 2001 , 128, 443-453	2.9	67
110	ALTERNATIVE FORMULATIONS OF THE MIXED-MODEL ANOVA APPLIED TO QUANTITATIVE GENETICS. <i>Evolution; International Journal of Organic Evolution</i> , 1990 , 44, 221-226	3.8	66
109	Effects of tree phytochemistry on the interactions among endophloedic fungi associated with the southern pine beetle. <i>Journal of Chemical Ecology</i> , 2005 , 31, 539-60	2.7	65
108	Interactions between fire and bark beetles in an old growth pine forest. <i>Forest Ecology and Management</i> , 2001 , 144, 245-254	3.9	61
107	Temperature-dependent effects on mutualistic, antagonistic, and commensalistic interactions among insects, fungi and mites. <i>Community Ecology</i> , 2007 , 8, 47-56	1.2	59
106	Host-driven population dynamics in an herbivorous insect. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999 , 96, 10735-40	11.5	55
105	Cold tolerance of the pupae in relation to the distribution of swallowtail butterflies. <i>Canadian Journal of Zoology</i> , 1991 , 69, 3028-3037	1.5	54
104	Effects of fire and mechanical wounding on <i>Pinus resinosa</i> resin defenses, beetle attacks, and pathogens. <i>Forest Ecology and Management</i> , 2006 , 225, 349-358	3.9	52
103	Within-Tree and Among-Tree Variation in Leaf Characteristics of Mountain Birch and Its Implications for Herbivory. <i>Oikos</i> , 1994 , 70, 212	4	49
102	Molt as a Component of Insect Development: <i>Galerucella sagittariae</i> (Chrysomelidae) and <i>Epirrita autumnata</i> (Geometridae). <i>Oikos</i> , 1987 , 48, 273	4	49
101	Tropical phenology: bi-annual rhythms and interannual variation in an Afrotropical butterfly assemblage. <i>Ecosphere</i> , 2013 , 4, art36	3.1	46

100	Altitudinal patterns in host suitability for forest insects. <i>Oecologia</i> , 1998 , 117, 133-142	2.9	46
99	Adult Nutrition Affects Male Virility in <i>Papilio glaucus</i> L.. <i>Functional Ecology</i> , 1990 , 4, 743	5.6	46
98	Growth performance of <i>Epirrita autumnata</i> (Lepidoptera: Geometridae) on mountain birch: trees, broods, and tree x brood interactions. <i>Oecologia</i> , 1987 , 74, 450-457	2.9	46
97	Differential Use of Lauraceous Hosts by Swallowtail Butterflies, <i>Papilio troilus</i> and <i>P. palamedes</i> (Papilionidae). <i>Oikos</i> , 1992 , 63, 244	4	44
96	Seasonal Dynamics of Mites and Fungi and Their Interaction with Southern Pine Beetle. <i>Environmental Entomology</i> , 2006 , 35, 22-30	2.1	43
95	Predation risk shapes thermal physiology of a predaceous damselfly. <i>Oecologia</i> , 2014 , 176, 653-60	2.9	41
94	Biology, demography and community interactions of <i>Tarsonemus</i> (Acarina: Tarsonemidae) mites phoretic on <i>Dendroctonus frontalis</i> (Coleoptera: Scolytidae). <i>Agricultural and Forest Entomology</i> , 2000 , 2, 193-202	1.9	40
93	Host Suitability, Predation, and Bark Beetle Population Dynamics 1995 , 339-357		40
92	Fitness consequences of pheromone production and host selection strategies in a tree-killing bark beetle (Coleoptera: Curculionidae: Scolytinae). <i>Oecologia</i> , 2006 , 148, 720-8	2.9	39
91	Environmental controls on the phenology of moths: predicting plasticity and constraint under climate change. <i>Oecologia</i> , 2011 , 165, 237-48	2.9	38
90	Larval Adaptation to Lauraceous Hosts: Geographic Divergence in the Spicebush Swallowtail Butterfly. <i>Ecology</i> , 1991 , 72, 1428-1435	4.6	37
89	Geographically variable response of <i>Dendroctonus ponderosae</i> to winter warming in the western United States. <i>Landscape Ecology</i> , 2015 , 30, 1075-1093	4.3	35
88	Breeding timed to maximize reproductive success for a migratory songbird: the importance of phenological asynchrony. <i>Oikos</i> , 2016 , 125, 656-666	4	33
87	Northern forest winters have lost cold, snowy conditions that are important for ecosystems and human communities. <i>Ecological Applications</i> , 2019 , 29, e01974	4.9	32
86	Assessing the Impact of Climate Change on Outbreak Potential 2012 , 429-450		31
85	Understory herb assemblages 25 and 60 years after clearcutting of a northern hardwood forest, USA. <i>Biological Conservation</i> , 1999 , 90, 203-215	6.2	31
84	Synchrony & double edge: transient dynamics and the Allee effect in stage structured populations. <i>Ecology Letters</i> , 2007 , 10, 564-73	10	30
83	High-resolution analysis of stem increment and sap flow for loblolly pine trees attacked by southern pine beetle. <i>Canadian Journal of Forest Research</i> , 2004 , 34, 2387-2393	1.9	28

82	Alternate attractors in the population dynamics of a tree-killing bark beetle. <i>Population Ecology</i> , 2013 , 55, 95-106	2.1	27
81	Climate Change Impacts: Insects 2010 ,		26
80	Climatic effects on caterpillar fluctuations in northern hardwood forests. <i>Canadian Journal of Forest Research</i> , 2007 , 37, 481-491	1.9	26
79	Long-term species loss and homogenization of moth communities in Central Europe. <i>Journal of Animal Ecology</i> , 2017 , 86, 730-738	4.7	25
78	Factors influencing bark beetle outbreaks after forest fires on the Iberian Peninsula. <i>Environmental Entomology</i> , 2011 , 40, 1007-18	2.1	25
77	Effects of available water on growth and competition of southern pine beetle associated fungi. <i>Mycological Research</i> , 2004 , 108, 183-8		25
76	Host use patterns by the European woodwasp, <i>Sirex noctilio</i> , in its native and invaded range. <i>PLoS ONE</i> , 2014 , 9, e90321	3.7	24
75	High individual variation in pheromone production by tree-killing bark beetles (Coleoptera: Curculionidae: Scolytinae). <i>Die Naturwissenschaften</i> , 2008 , 95, 33-44	2	24
74	Temperature extremes, density dependence, and southern pine beetle (Coleoptera: Curculionidae) population dynamics in east Texas. <i>Environmental Entomology</i> , 2008 , 37, 650-9	2.1	24
73	Forest pests and their management in the Anthropocene. <i>Canadian Journal of Forest Research</i> , 2018 , 48, 292-301	1.9	22
72	Impact of climatic variation on populations of pine processionary moth <i>Thaumetopoea pityocampa</i> in a core area of its distribution. <i>Agricultural and Forest Entomology</i> , 2011 , 13, 273-281	1.9	21
71	Old pests in new places: Effects of stand structure and forest type on susceptibility to a bark beetle on the edge of its native range. <i>Forest Ecology and Management</i> , 2018 , 419-420, 206-219	3.9	20
70	Role of plant enemies in the forestry of indigenous vs. nonindigenous pines 2008 , 18, 1171-81		20
69	Influence of temperature on the northern distribution limits of <i>Scirpophaga incertulas</i> Walker (Lepidoptera: Pyralidae) in China. <i>Journal of Thermal Biology</i> , 2012 , 37, 130-137	2.9	19
68	Interannual dynamics of aerial and arboreal green spruce aphid populations. <i>Population Ecology</i> , 2010 , 52, 317-327	2.1	19
67	Geographical variation in seasonality and life history of pine sawyer beetles <i>Monochamus</i> spp: its relationship with phoresy by the pinewood nematode <i>Bursaphelenchus xylophilus</i> . <i>Agricultural and Forest Entomology</i> , 2014 , 16, 196-206	1.9	17
66	Is climate warming more consequential towards poles? The phenology of Lepidoptera in Finland. <i>Global Change Biology</i> , 2014 , 20, 16-27	11.4	17
65	<i>Monochamus galloprovincialis</i> and <i>Bursaphelenchus xylophilus</i> life history in an area severely affected by pine wilt disease: Implications for forest management. <i>Forest Ecology and Management</i> , 2017 , 389, 105-115	3.9	16

64	Effects of Atmospheric CO ₂ , Light Availability and Tree Species on the Quality of Leaf Detritus as a Resource for Treehole Mosquitoes. <i>Oikos</i> , 1999 , 84, 277	4	16
63	Evolutionary history predicts high-impact invasions by herbivorous insects. <i>Ecology and Evolution</i> , 2019 , 9, 12216-12230	2.8	15
62	Subcontinental impacts of an invasive tree disease on forest structure and dynamics. <i>Journal of Ecology</i> , 2011 , 99, no-no	6	15
61	Plasticity and Constraint in Growth and Protein Mineralization of Ectomycorrhizal Fungi under Simulated Nitrogen Deposition. <i>Mycologia</i> , 2002 , 94, 921	2.4	15
60	Population biology of the European woodwasp, <i>Sirex noctilio</i> , in Galicia, Spain. <i>Bulletin of Entomological Research</i> , 2016 , 106, 569-80	1.7	15
59	Concordant population dynamics of Lepidoptera herbivores in a forest ecosystem. <i>Ecography</i> , 2011 , 34, 772-779	6.5	14
58	Temperature alters the relative abundance and population growth rates of species within the <i>Dendroctonus frontalis</i> (Coleoptera: Curculionidae) community. <i>Environmental Entomology</i> , 2011 , 40, 824-34	2.1	13
57	Disease ontogeny overshadows effects of climate and species interactions on population dynamics in a nonnative forest disease complex. <i>Ecography</i> , 2012 , 35, 412-421	6.5	12
56	Why does longleaf pine have low susceptibility to southern pine beetle?. <i>Canadian Journal of Forest Research</i> , 2007 , 37, 1966-1977	1.9	12
55	Disturbance Regimes and Stressors. <i>Advances in Global Change Research</i> , 2014 , 55-92	1.2	12
54	Relative Suitability of Virginia Pine and Loblolly Pine as Host Species for <i>Dendroctonus frontalis</i> (Coleoptera: Scolytidae). <i>Environmental Entomology</i> , 2003 , 32, 668-679	2.1	11
53	Pinewood nematode population growth in relation to pine phloem chemical composition. <i>Plant Pathology</i> , 2017 , 66, 856-864	2.8	10
52	Signal diversification in <i>Oecanthus</i> tree crickets is shaped by energetic, morphometric, and acoustic trade-offs. <i>Evolution; International Journal of Organic Evolution</i> , 2015 , 69, 1518-1527	3.8	10
51	Inferring controls on the epidemiology of beech bark disease from spatial patterning of disease organisms. <i>Agricultural and Forest Entomology</i> , 2013 , 15, 146-156	1.9	10
50	Temperature Effects on Growth and Molt of <i>Nematus calais</i> (Hymenoptera: Tenthredinidae). <i>Environmental Entomology</i> , 1994 , 23, 719-725	2.1	10
49	Fine roots and mycorrhizal fungi accelerate leaf litter decomposition in a northern hardwood forest regardless of dominant tree mycorrhizal associations. <i>New Phytologist</i> , 2021 , 230, 316-326	9.8	10
48	Latitudinal patterns in temperature-dependent growth rates of a forest pathogen. <i>Journal of Thermal Biology</i> , 2018 , 72, 39-43	2.9	10
47	Spatial heterogeneity in the abundance and fecundity of Arctic mosquitoes. <i>Ecosphere</i> , 2018 , 9, e02345	3.1	10

46	Spatio-temporal dynamics of a tree-killing beetle and its predator. <i>Ecography</i> , 2017 , 40, 221-234	6.5	9
45	Differential impacts of the southern pine beetle, <i>Dendroctonus frontalis</i> , on <i>Pinus palustris</i> and <i>Pinus taeda</i> . <i>Canadian Journal of Forest Research</i> , 2007 , 37, 1427-1437	1.9	9
44	Estimation of Soil Temperature from Climatic Variables at Barrow, Alaska, U.S.A.. <i>Arctic and Alpine Research</i> , 1985 , 17, 425		9
43	Field Performance of F 1 -Sterile Gypsy Moth Larvae (Lepidoptera: Lymantriidae) on Loblolly Pine and Sweetgum. <i>Environmental Entomology</i> , 1996 , 25, 749-756	2.1	8
42	Effects of defoliation and site quality on growth and defenses of <i>Pinus pinaster</i> and <i>P. radiata</i> . <i>Forest Ecology and Management</i> , 2016 , 382, 39-50	3.9	8
41	Temperature affects phenological synchrony in a tree-killing bark beetle. <i>Oecologia</i> , 2018 , 188, 117-127	2.9	8
40	Tree basal area and conifer abundance predict soil carbon stocks and concentrations in an actively managed forest of northern New Hampshire, USA. <i>Forest Ecology and Management</i> , 2019 , 451, 117534	3.9	7
39	Pine defenses against the pitch canker disease are modulated by a native insect newly associated with the invasive fungus. <i>Forest Ecology and Management</i> , 2019 , 437, 253-262	3.9	7
38	Population Dynamics of Bark Beetles 2015 , 157-176		6
37	Foliar terpene chemistry of <i>Pinus pinaster</i> and <i>P. radiata</i> responds differently to Methyl Jasmonate and feeding by larvae of the pine processionary moth. <i>Forest Ecology and Management</i> , 2013 , 310, 935-943	3.9	6
36	Disruptive selection maintains variable pheromone blends in the bark beetle <i>Ips pini</i> . <i>Environmental Entomology</i> , 2011 , 40, 1530-40	2.1	6
35	Interactive effects of defoliation and climate change on compensatory growth of silver birch seedlings. <i>Silva Fennica</i> , 2013 , 47,	1.9	6
34	Consumer-resource dynamics in Arctic ponds. <i>Ecology</i> , 2020 , 101, e03135	4.6	6
33	The global diversity of <i>Deladenus siricidicola</i> in native and non-native populations. <i>Biological Control</i> , 2019 , 132, 57-65	3.8	6
32	Attack rates of <i>Sirex noctilio</i> and patterns of pine tree defenses and mortality in northern Patagonia. <i>Bulletin of Entomological Research</i> , 2019 , 109, 141-149	1.7	6
31	Roe deer prefer mixed-sex willow stands over monosexual stands but do not discriminate between male and female plants. <i>Environmental and Experimental Botany</i> , 2018 , 146, 62-67	5.9	5
30	Effect of Rising Temperature on Lyme Disease: Population Dynamics and Transmission and Prevalence. <i>Canadian Journal of Infectious Diseases and Medical Microbiology</i> , 2019 , 2019, 9817930	2.6	5
29	The Fire and Tree Mortality Database, for empirical modeling of individual tree mortality after fire. <i>Scientific Data</i> , 2020 , 7, 194	8.2	5

28	Plasticity and constraint in growth and protein mineralization of ectomycorrhizal fungi under simulated nitrogen deposition. <i>Mycologia</i> , 2002 , 94, 921-32	2.4	5
27	Streams in an uninhabited watershed have predictably different thermal sensitivities to variable summer air temperatures. <i>Freshwater Biology</i> , 2018 , 63, 676-686	3.1	4
26	Isotopic studies of leaf water. Part 2: Between-age isotopic variations in pine needles. <i>Geochimica Et Cosmochimica Acta</i> , 2008 , 72, 5189-5200	5.5	4
25	Higher Soil Respiration Rate Beneath Arbuscular Mycorrhizal Trees in a Northern Hardwood Forest is Driven by Associated Soil Properties. <i>Ecosystems</i> , 2020 , 23, 1243-1253	3.9	4
24	Sublethal infection of different pine species by the pinewood nematode. <i>Plant Pathology</i> , 2020 , 69, 1565-1573	3.8	4
23	Modeling the Sensitivity of Blacklegged Ticks (<i>Ixodes scapularis</i>) to Temperature and Land Cover in the Northeastern United States. <i>Journal of Medical Entomology</i> , 2021 , 58, 416-427	2.2	3
22	Comparison of methods to obtain and maintain cultures of the pinewood nematode, <i>Bursaphelenchus xylophilus</i> . <i>Journal of Forest Research</i> , 2020 , 25, 101-107	1.4	3
21	Aggressive tree killer or natural thinning agent? Assessing the impacts of a globally important forest insect. <i>Forest Ecology and Management</i> , 2021 , 483, 118728	3.9	3
20	Seedling survival declines with increasing conspecific density in a common temperate tree. <i>Ecosphere</i> , 2020 , 11, e03292	3.1	2
19	Augmentation of AM fungi fails to ameliorate the adverse effects of temporal resource variation on a lettuce crop. <i>Plant and Soil</i> , 2001 , 236, 251-262	4.2	2
18	The impact is in the details: evaluating a standardized protocol and scale for determining non-native insect impact. <i>NeoBiota</i> , 2011 , 55, 61-83	4.2	2
17	Impact of Stand and Landscape Management on Forest Pest Damage. <i>Annual Review of Entomology</i> , 2021 ,	21.8	2
16	Increasing shrub damage by invertebrate herbivores in the warming and drying tundra of West Greenland. <i>Oecologia</i> , 2021 , 195, 995-1005	2.9	2
15	Emerging mosquitoes (<i>Aedes nigripes</i>) as a resource subsidy for wolf spiders (<i>Pardosa glacialis</i>) in western Greenland. <i>Polar Biology</i> , 2021 ,	2	2
14	Phloem and xylem nitrogen variability in <i>Quercus rubra</i> attacked by <i>Enaphalodes rufulus</i> . <i>Canadian Entomologist</i> , 2011 , 143, 380-383	0.7	1
13	Speaking out: weighing advocacy and objectivity as a junior scientist. <i>Frontiers in Ecology and the Environment</i> , 2010 , 8, 50-51	5.5	1
12	NITROGEN BUDGETS OF PHLOEM-FEEDING BARK BEETLES WITH AND WITHOUT SYMBIOTIC FUNGI 2000 , 81, 2198		1
11	Interactions between pinewood nematodes and the fungal community of pine trees. <i>Fungal Ecology</i> , 2021 , 51, 101046	4.1	1

10	Predicting non-native insect impact: focusing on the trees to see the forest. <i>Biological Invasions</i> , 1	2.7	1
9	Global Change and Disturbance in Southern Forest Ecosystems. <i>Ecological Studies</i> , 1998, 741-752	1.1	1
8	Analytical approaches for evaluating passive acoustic monitoring data: A case study of avian vocalizations.. <i>Ecology and Evolution</i> , 2022, 12, e8797	2.8	1
7	Limited evidence that larger acorns buffer <i>Quercus rubra</i> seedlings from density-dependent biotic stressors. <i>American Journal of Botany</i> , 2021, 108, 1861-1872	2.7	0
6	Extreme climatic events affect populations of Asian chestnut gall wasps, <i>Dryocosmus kuriphilus</i> , but do not stop the spread. <i>Agricultural and Forest Entomology</i> , 2021, 23, 473	1.9	0
5	Quantifying the nature and strength of intraspecific density dependence in Arctic mosquitoes. <i>Oecologia</i> , 2021, 196, 1061-1072	2.9	0
4	Demography of an invading forest insect reunited with hosts and parasitoids from its native range. <i>NeoBiota</i> , 72, 81-107	4.2	0
3	Life-history strategies and virulence in the pinewood nematode. <i>Physiological and Molecular Plant Pathology</i> , 2022, 117, 101756	2.6	
2	Insect infestations and the persistence and functioning of oak-pine mixedwood forests in the mid-Atlantic region, USA.. <i>PLoS ONE</i> , 2022, 17, e0265955	3.7	
1	Obtaining and Maintaining Cultures of Pinewood Nematodes <i>Bursaphelenchus xylophilus</i> from Wild Dauers. <i>Methods in Molecular Biology</i> , 2022, 3-11	1.4	