James A Powell

List of Publications by Year
in descending order

54 papers	2,896 citations	304743 22 h-index	182427 51 g-index
54 all docs	54 docs citations	54 times ranked	2835 citing authors

#	Article	IF	Citations
1	Warming increased bark beetleâ€induced tree mortality by 30% during an extreme drought in California. Global Change Biology, 2022, 28, 509-523.	9.5	36
2	28 Models Later: Model Competition and the Zombie Apocalypse. Bulletin of Mathematical Biology, 2021, 83, 22.	1.9	3
3	Modeling the impact of temperature on the population abundance of the ambrosia beetle Xyleborus affinis (Curculionidae: Scolytinae) under laboratory-reared conditions. Journal of Thermal Biology, 2021, 101, 103001.	2.5	0
4	Nonlinear reactionâ€"diffusion process models improve inference for population dynamics. Environmetrics, 2020, 31, e2604.	1.4	11
5	Animal movement models with mechanistic selection functions. Spatial Statistics, 2020, 37, 100406.	1.9	8
6	Progressive ultrastructural changes in the casein matrix during the ripening of inadequately acidified feta cheese. Journal of Dairy Science, 2019, 102, 7734-7746.	3.4	4
7	Modeling mountain pine beetle (Dendroctonus ponderosae) oviposition. Entomologia Experimentalis Et Applicata, 2019, 167, 457-466.	1.4	3
8	Differential dispersal and the Allee effect create powerâ€law behaviour: Distribution of spot infestations during mountain pine beetle outbreaks. Journal of Animal Ecology, 2018, 87, 73-86.	2.8	12
9	Developmental parameters of a southern mountain pine beetle (Coleoptera: Curculionidae) population reveal potential source of latitudinal differences in generation time. Canadian Entomologist, 2018, 151, 1-15.	0.8	17
10	Effects of Climate Change on Ecological Disturbance in the Northern Rockies. Advances in Global Change Research, 2018, , 115-141.	1.6	9
11	Yeast for Mathematicians: A Ferment of Discovery and Model Competition to Describe Data. Bulletin of Mathematical Biology, 2017, 79, 356-382.	1.9	1
12	Analytic Approximation of Invasion Wave Amplitude Predicts Severity of Insect Outbreaks. SIAM Journal on Applied Mathematics, 2017, 77, 294-314.	1.8	0
13	Multi-scale methods predict invasion speeds in variable landscapes. Theoretical Ecology, 2017, 10, 287-303.	1.0	8
14	When mechanism matters: Bayesian forecasting using models of ecological diffusion. Ecology Letters, 2017, 20, 640-650.	6.4	57
15	Understanding pH-Induced Softening of Feta Cheese During Storage at the Ultrastructural Level - A Structure-Function Case Study. Microscopy and Microanalysis, 2017, 23, 1128-1129.	0.4	1
16	Developing a Degree-Day Model to Predict Billbug (Coleoptera: Curculionidae) Seasonal Activity in Utah and Idaho Turfgrass. Journal of Economic Entomology, 2017, 110, 2180-2189.	1.8	5
17	Modeling Zombie Outbreaks: A Problem-Based Approach to Improving Mathematics One Brain at a Time. Primus, 2016, 26, 705-726.	0.5	9
18	Elevational shifts in thermal suitability for mountain pine beetle population growth in a changing climate. Forestry, 2016, 89, 271-283.	2.3	42

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19	A Model for Mountain Pine Beetle Outbreaks in an Age-Structured Forest: Predicting Severity and Outbreak-Recovery Cycle Period. Bulletin of Mathematical Biology, 2015, 77, 1256-1284.	1.9	13
20	Integrating models to investigate critical phenological overlaps in complex ecological interactions: The mountain pine beetle-fungus symbiosis. Journal of Theoretical Biology, 2015, 368, 55-66.	1.7	17
21	Invasion speeds with active dispersers in highly variable landscapes: Multiple scales, homogenization, and the migration of trees. Journal of Theoretical Biology, 2015, 387, 111-119.	1.7	12
22	Body Size Mediated Coexistence in Swans. Scientific World Journal, The, 2014, 2014, 1-12.	2.1	3
23	Complementarity in the provision of ecosystem services reduces the cost of mitigating amplified natural disturbance events. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16718-16723.	7.1	10
24	Phenology and density-dependent dispersal predict patterns of mountain pine beetle (Dendroctonus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.5	54
25	Mountain Pine Beetle Seasonal Timing and Constraints to Bivoltinism. American Naturalist, 2014, 184, 787-796.	2.1	35
26	Computationally Efficient Statistical Differential Equation Modeling Using Homogenization. Journal of Agricultural, Biological, and Environmental Statistics, 2013, 18, 405-428.	1.4	23
27	Animal Life Cycle Models (Poikilotherms). , 2013, , 295-316.		13
28	Carrying BioMath Education in a Leaky Bucket. Bulletin of Mathematical Biology, 2012, 74, 2232-2264.	1.9	7
29	Sensitivity of mean annual primary production to precipitation. Global Change Biology, 2012, 18, 2246-2255.	9.5	201
30	Effects of temperature on development, survival and reproduction of insects: Experimental design, data analysis and modeling. Journal of Insect Physiology, 2012, 58, 634-647.	2.0	287
31	Prepupal diapause and instar IV developmental rates of the spruce beetle, Dendroctonus rufipennis (Coleoptera: Curculionidae, Scolytinae). Journal of Insect Physiology, 2011, 57, 1347-1357.	2.0	36
32	Homogenization of Large-Scale Movement Models inÂEcology. Bulletin of Mathematical Biology, 2011, 73, 2088-2108.	1.9	60
33	Leading Students to Investigate Diffusion as a Model ofÂBrine Shrimp Movement. Bulletin of Mathematical Biology, 2010, 72, 230-257.	1.9	13
34	Modeling the Effects of Developmental Variation on Insect Phenology. Bulletin of Mathematical Biology, 2010, 72, 1334-1360.	1.9	17
35	Connecting phenological predictions with population growth rates for mountain pine beetle, an outbreak insect. Landscape Ecology, 2009, 24, 657-672.	4.2	82
36	A NOVEL METHOD OF FITTING SPATIOâ€TEMPORAL MODELS TO DATA, WITH APPLICATIONS TO THE DYNAMICS OF MOUNTAIN PINE BEETLES. Natural Resource Modelling, 2008, 21, 489-524.	2.0	29

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37	Synchrony's double edge: transient dynamics and the Allee effect in stage structured populations. Ecology Letters, 2007, 10, 564-573.	6.4	38
38	Changing temperatures influence suitability for modeled mountain pine beetle (Dendroctonus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 70	3.3	134
39	Insect seasonality: circle map analysis of temperature-driven life cycles. Theoretical Population Biology, 2005, 67, 161-179.	1.1	131
40	Comparison of three models predicting developmental milestones given environmental and individual variation. Bulletin of Mathematical Biology, 2004, 66, 1821-1850.	1.9	50
41	MULTISCALE ANALYSIS OF ACTIVE SEED DISPERSAL CONTRIBUTES TO RESOLVING REID'S PARADOX. Ecology, 2004, 85, 490-506.	3.2	65
42	Assessing the impacts of global warming on forest pest dynamics. Frontiers in Ecology and the Environment, 2003, 1, 130-137.	4.0	655
43	Assessing the Impacts of Global Warming on Forest Pest Dynamics. Frontiers in Ecology and the Environment, 2003, 1, 130.	4.0	7
44	Ghost Forests, Global Warming, and the Mountain Pine Beetle (Coleoptera: Scolytidae). American Entomologist, 2001, 47, 160-173.	0.2	386
45	Low Seasonal Temperatures Promote Life Cycle Synchronization. Bulletin of Mathematical Biology, 2001, 63, 573-595.	1.9	40
46	Seasonal Temperature Alone Can Synchronize Life Cycles. Bulletin of Mathematical Biology, 2000, 62, 977-998.	1.9	63
47	Optimal Trajectories for the Short-Distance Foraging Flights of Swans. Journal of Theoretical Biology, 2000, 204, 415-430.	1.7	7
48	Direct and indirect parametrization of a localized model for the mountain pine beetle â€" lodgepole pine system. Ecological Modelling, 2000, 129, 273-296.	2.5	19
49	Model Analysis of Spatial Patterns in Mountain Pine Beetle Outbreaks. Theoretical Population Biology, 1998, 53, 236-255.	1.1	104
50	Games to Teach Mathematical Modelling. SIAM Review, 1998, 40, 87-95.	9.5	9
51	Local consequences of a global model for mountain pine beetle mass attack. Dynamical Systems, 1997, 12, 3-24.	0.7	5
52	Phase transition from environmental to dynamic determinism in mountain pine beetle attack. Bulletin of Mathematical Biology, 1997, 59, 609-643.	1.9	13
53	Phase transition from environmental to dynamic determinism in mountain pine beetle attack. Bulletin of Mathematical Biology, 1997, 59, 609-643.	1.9	1
54	Local Projections for a Global Model of Mountain Pine Beetle Attacks. Journal of Theoretical Biology, 1996, 179, 243-260.	1.7	31