Katriona Shea

List of Publications by Year
in descending order

155 papers	8,429 citations	87401 40 h-index	66518 82 g-index
162 all docs	162 docs citations	162 times ranked	11073 citing authors

#	Article	IF	Citations
1	Community ecology theory as a framework for biological invasions. Trends in Ecology and Evolution, 2002, 17, 170-176.	4.2	1,812
2	THE INTERMEDIATE DISTURBANCE HYPOTHESIS: PATCH DYNAMICS AND MECHANISMS OF SPECIES COEXISTENCE. Ecology, 2004, 85, 359-371.	1.5	471
3	Moving from pattern to process: coexistence mechanisms under intermediate disturbance regimes. Ecology Letters, 2004, 7, 491-508.	3.0	386
4	ESTIMATING BIOCONTROL AGENT IMPACT WITH MATRIX MODELS:CARDUUS NUTANSIN NEW ZEALAND. , 1998, 8, 824-832.		221
5	How frequency and intensity shape diversityâ€“disturbance relationships. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5643-5648.	3.3	201
6	Integrating the Study of Non-native Plant Invasions across Spatial Scales. Biological Invasions, 2006, 8, 399-413.	1.2	184
7	Measuring plant dispersal: an introduction to field methods and experimental design. Plant Ecology, 2006, 186, 217-234.	0.7	165
8	Optimal release strategies for biological control agents: an application of stochastic dynamic programming to population management. Journal of Applied Ecology, 2000, 37, 77-86.	1.9	158
9	Dispersal, demography and spatial population models for conservation and control management. Perspectives in Plant Ecology, Evolution and Systematics, 2008, 9, 153-170.	1.1	139
10	ACTIVE ADAPTIVE MANAGEMENT IN INSECT PEST AND WEED CONTROL: INTERVENTION WITH A PLAN FOR LEARNING. , 2002, 12, 927-936.		136
11	Management of populations in conservation, harvesting and control. Trends in Ecology and Evolution, 1998, 13, 371-375.	4.2	129
12	Dispersal Patterns, Dispersal Mechanisms, and Invasion Wave Speeds for Invasive Thistles. American Naturalist, 2007, 170, 421-430.	1.0	126
13	Modeling of Future COVID-19 Cases, Hospitalizations, and Deaths, by Vaccination Rates and Nonpharmaceutical Intervention Scenarios â€” United States, Aprilâ€“September 2021. Morbidity and Mortality Weekly Report, 2021, 70, 719-724.	9.0	126
14	To sample or eradicate? A cost minimization model for monitoring and managing an invasive species. Journal of Applied Ecology, 2008, 45, 1134-1142.	1.9	121
15	The SEIRS model for infectious disease dynamics. Nature Methods, 2020, 17, 557-558.	9.0	115
16	CONTEXT-DEPENDENT BIOLOGICAL CONTROL OF AN INVASIVE THISTLE. Ecology, 2005, 86, 3174-3181.	1.5	114
17	Modeling the Mutualistic Interactions between Tubeworms and Microbial Consortia. PLoS Biology, 2005, 3, e77.	2.6	102
18	Adaptive Management and the Value of Information: Learning Via Intervention in Epidemiology. PLoS Biology, 2014, 12, e1001970.	2.6	98

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19	Supporting crop pollinators with floral resources: networkâ€based phenological matching. Ecology and Evolution, 2013, 3, 3125-3140.	0.8	96
20	Embracing uncertainty in applied ecology. Journal of Applied Ecology, 2017, 54, 2063-2068.	1.9	94
21	Linking Wild and Captive Populations to Maximize Species Persistence: Optimal Translocation Strategies. Conservation Biology, 2004, 18, 1304-1314.	2.4	92
22	A network model for plantâ€"pollinator community assembly. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 197-202.	3.3	90
23	Plant populations track rather than buffer climate fluctuations. Ecology Letters, 2010, 13, 736-743.	3.0	80
24	Dispersal and demography contributions to population spread of <i>Carduus nutans </i>in its native and invaded ranges. Journal of Ecology, 2008, 96, 687-697.	1.9	77
25	Modeling infectious epidemics. Nature Methods, 2020, 17, 455-456.	9.0	75
26	Diversityâ€"disturbance relationships: frequency and intensity interact. Biology Letters, 2012, 8, 768-771.	1.0	71
27	Decision-making for foot-and-mouth disease control: Objectives matter. Epidemics, 2016, 15, 10-19.	1.5	71
28	Optimizing dispersal study design by Monte Carlo simulation. Journal of Applied Ecology, 2005, 42, 731-739.	1.9	67
29	Importance of individual and environmental variation for invasive species spread: a spatial integral projection model. Ecology, 2011, 92, 86-97.	1.5	67
30	Hydrogen sulphide demand of long-lived vestimentiferan tube worm aggregations modifies the chemical environment at deep-sea hydrocarbon seeps. Ecology Letters, 2003, 6, 212-219.	3.0	66
31	Harnessing multiple models for outbreak management. Science, 2020, 368, 577-579.	6.0	64
32	Optimal management strategies to control local population growth or population spread may not be the same. Ecological Applications, 2010, 20, 1148-1161.	1.8	63
33	Pollinator Behavior Mediates Negative Interactions between Two Congeneric Invasive Plant Species. American Naturalist, 2011, 177, 110-118.	1.0	61
34	Environmental variability and the initiation of dispersal: turbulence strongly increases seed release. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 751-756.	1.2	56
35	The total dispersal kernel: a review and future directions. AoB PLANTS, 2019, 11, plz042.	1.2	56
36	EVALUATION OF ECOLOGICAL RISK TO POPULATIONS OF A THREATENED PLANT FROM AN INVASIVE BIOCONTROL INSECT. , 2005, 15, 234-249.		55

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37	Intrinsic and extrinsic drivers of intraspecific variation in seed dispersal are diverse and pervasive. AoB PLANTS, 2019, 11, plz067.	1.2	53
38	What controls the population dynamics of the invasive thistleCarduus nutansin its native range?. Journal of Applied Ecology, 2006, 43, 877-886.	1.9	50
39	A STATE-DEPENDENT MODEL FOR THE OPTIMAL MANAGEMENT OF AN INVASIVE METAPOPULATION. , 2008, 18, 748-761.		50
40	Competing harvesting strategies in a simulated population under uncertainty. Animal Conservation, 2001, 4, 157-167.	1.5	48
41	Amphibian Decline and Emerging Disease. American Scientist, 2004, 92, 138.	0.1	48
42	How do duration, frequency, and intensity of exogenous CORT elevation affect immune outcomes of stress?. General and Comparative Endocrinology, 2015, 222, 81-87.	0.8	47
43	Are the best dispersers the best colonizers? Seed mass, dispersal and establishment in Carduus thistles. Evolutionary Ecology, 2011, 25, 155-169.	0.5	46
44	Real-time decision-making during emergency disease outbreaks. PLoS Computational Biology, 2018, 14, e1006202.	1.5	46
45	Seed release by invasive thistles: the impact of plant and environmental factors. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 2457-2464.	1.2	44
46	An integrated approach to management in epidemiology and pest control. Ecology Letters, 2000, 3, 150-158.	3.0	43
47	Topology of plant-pollinator networks that are vulnerable to collapse from species extinction. Physical Review E, 2012, 86, 021924.	0.8	43
48	Essential information: Uncertainty and optimal control of Ebola outbreaks. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5659-5664.	3.3	43
49	The Effect of Egg Limitation on Stability in Insect Host-Parasitoid Population Models. Journal of Animal Ecology, 1996, 65, 743.	1.3	42
50	Seasonal life-history models for the integrated management of the invasive weed nodding thistle Carduus nutans in Australia. Journal of Applied Ecology, 2006, 43, 517-526.	1.9	40
51	Optimizing reproductive phenology in a two-resource world: a dynamic allocation model of plant growth predicts later reproduction in phosphorus-limited plants. Annals of Botany, 2011, 108, 391-404.	1.4	38
52	Movement, impacts and management of plant distributions in response to climate change: insights from invasions. Oikos, 2013, 122, 1265-1274.	1.2	36
53	The Composite Insect Trap: An Innovative Combination Trap for Biologically Diverse Sampling. PLoS ONE, 2011, 6, e21079.	1.1	36
54	Spatial Segregation of Congeneric Invaders in Central Pennsylvania, USA. Biological Invasions, 2006, 8, 509-521.	1.2	35

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55	Stacked Crop Rotations Exploit Weed-Weed Competition for Sustainable Weed Management. Weed Science, 2014, 62, 166-176.	0.8	35
56	Patterns of introduced species interactions affect multiple aspects of network structure in plantâ€"pollinator communities. Ecology, 2014, 95, 2953-2963.	1.5	34
57	Rapid changes in seed dispersal traits may modify plant responses to global change. AoB PLANTS, 2019, 11, plz020.	1.2	32
58	Warming Increases the Spread of an Invasive Thistle. PLoS ONE, 2011, 6, e21725.	1.1	32
59	Establishment and spread of founding populations of an invasive thistle: the role of competition and seed limitation. Biological Invasions, 2007, 9, 317-325.	1.2	31
60	Quantitative evolutionary patterns in bipartite networks: Vicariance, phylogenetic tracking or diffuse coâ€evolution?. Methods in Ecology and Evolution, 2018, 9, 761-772.	2.2	31
61	Bee community preference for an invasive thistle associated with higher pollen protein content. Oecologia, 2019, 190, 901-912.	0.9	31
62	A guide to calculating discrete-time invasion rates from data. , 2006, , 169-192.		30
63	A unifying gravity framework for dispersal. Theoretical Ecology, 2015, 8, 207-223.	0.4	30
64	Advancing an interdisciplinary framework to study seed dispersal ecology. AoB PLANTS, 2020, 12, plz048.	1.2	30
65	Pollinator floral provisioning by a plant invader: quantifying beneficial effects of detrimental species. Diversity and Distributions, 2016, 22, 189-198.	1.9	28
66	Prior adaptation, diversity, and introduction frequency mediate the positive relationship between propagule pressure and the initial success of founding populations. Biological Invasions, 2018, 20, 2451-2459.	1.2	28
67	Trade-Offs, Elasticities and the Comparative Method. Journal of Ecology, 1994, 82, 951.	1.9	27
68	Effect of patch size and plant density of Paterson"s curse (Echium plantagineum) on the oviposition of a specialist weevil, Mogulones larvatus. Oecologia, 2000, 124, 615-621.	0.9	27
69	Invasional interference due to similar interâ€and intraspecific competition between invaders may affect management. Ecological Applications, 2012, 22, 1413-1420.	1.8	27
70	Employing plant functional groups to advance seed dispersal ecology and conservation. AoB PLANTS, 2019, 11, plz006.	1.2	27
71	Interactions between frequency and size of disturbance affect competitive outcomes. Ecological Research, 2012, 27, 783-791.	0.7	25
72	Unrecognized impact of a biocontrol agent on the spread rate of an invasive thistle. Ecological Applications, 2014, 24, 1178-1187.	1.8	25

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73	Modeling for Management of Invasive Species: Musk Thistle (Carduus nutans) in New Zealand¹. Weed Technology, 2004, 18, 1338-1341.	0.4	24
74	How can we bring together empiricists and modellers in functional biodiversity research?. Basic and Applied Ecology, 2013, 14, 93-101.	1.2	24
75	Dispersal under duress: Can stress enhance the performance of a passively dispersed species?. Ecology, 2014, 95, 2694-2698.	1.5	23
76	Projecting the recovery of a longâ€lived deepâ€sea coral species after the Deepwater Horizon oil spill using stateâ€structured models. Journal of Applied Ecology, 2018, 55, 1812-1822.	1.9	23
77	Models for Improving the Targeting and Implementation of Biological Control of Weeds¹. Weed Technology, 2004, 18, 1578-1581.	0.4	22
78	Plantâ€“pollinator community network response to species invasion depends on both invader and community characteristics. Oikos, 2015, 124, 406-413.	1.2	22
79	Seed release in a changing climate: initiation of movement increases spread of an invasive species under simulated climate warming. Diversity and Distributions, 2016, 22, 708-716.	1.9	22
80	Projected resurgence of COVID-19 in the United States in Julyâ€"December 2021 resulting from the increased transmissibility of the Delta variant and faltering vaccination. ELife, 0, 11, .	2.8	22
81	Termite cohabitation: the relative effect of biotic and abiotic factors on mound biodiversity. Ecological Entomology, 2016, 41, 532-541.	1.1	21
82	Warming and shifting phenology accelerate an invasive plant life cycle. Ecology, 2021, 102, e03219.	1.5	21
83	Plant spatial arrangement affects projected invasion speeds of two invasive thistles. Oikos, 2010, 119, 1462-1468.	1.2	20
84	Integrating multiple disturbance aspects: management of an invasive thistle, Carduus nutans. Annals of Botany, 2012, 110, 1395-1401.	1.4	20
85	Timing of disturbance alters competitive outcomes and mechanisms of coexistence in an annual plant model. Theoretical Ecology, 2012, 5, 419-432.	0.4	20
86	Maternal warming affects early life stages of an invasive thistle. Plant Biology, 2012, 14, 783-788.	1.8	20
87	Challenges in estimation, uncertainty quantification and elicitation for pandemic modelling. Epidemics, 2022, 38, 100547.	1.5	20
88	Correlation between measles vaccine doses: implications for the maintenance of elimination. Epidemiology and Infection, 2018, 146, 468-475.	1.0	19
89	Beyond dose: Pulsed antibiotic treatment schedules can maintain individual benefit while reducing resistance. Scientific Reports, 2018, 8, 5866.	1.6	19
90	Disentangling the mechanisms underpinning disturbance-mediated invasion. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20192415.	1.2	19

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91	How disturbance history alters invasion success: biotic legacies and regime change. Ecology Letters, 2021, 24, 687-697.	3.0	19
92	Global versus local extinction in a network model of plantâ€“pollinator communities. Theoretical Ecology, 2013, 6, 495-503.	0.4	18
93	Restoration of plantâ€“pollinator interaction networks via species translocation. Theoretical Ecology, 2014, 7, 209-220.	0.4	17
94	Conservation of passively dispersed organisms in the context of habitat degradation and destruction. Journal of Applied Ecology, 2015, 52, 514-521.	1.9	17
95	Topological constraints on network control profiles. Scientific Reports, 2016, 5, 18693.	1.6	16
96	Experimental species introduction shapes network interactions in a plant-pollinator community. Biological Invasions, 2019, 21, 3505-3519.	1.2	16
97	Context matters: using reinforcement learning to develop human-readable, state-dependent outbreak response policies. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180277.	1.8	16
98	Microbes increase thermal sensitivity in the mosquito Aedes aegypti, with the potential to change disease distributions. PLoS Neglected Tropical Diseases, 2021, 15, e0009548.	1.3	16
99	Quantifying the Value of Perfect Information in Emergency Vaccination Campaigns. PLoS Computational Biology, 2017, 13, e1005318.	1.5	16
100	Tolerance of two invasive thistles to repeated disturbance. Ecological Research, 2011, 26, 575-581.	0.7	15
101	Coexistence patterns of two invasive thistle species, Carduus nutans and C. acanthoides, at three spatial scales. Biological Invasions, 2012, 14, 151-164.	1.2	15
102	Concurrent assessment of epidemiological and operational uncertainties for optimal outbreak control: Ebola as a case study. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190774.	1.2	15
103	An Adaptive Decision Framework for the Conservation of a Threatened Plant. Journal of Fish and Wildlife Management, 2011, 2, 247-261.	0.4	15
104	Detection of population trends in threatened coho salmon (<i>Oncorhynchus kisutch</i>). Canadian Journal of Fisheries and Aquatic Sciences, 2001, 58, 375-385.	0.7	12
105	Applications of particle image velocimetry for seed release studies. Ecology, 2010, 91, 2485-2492.	1.5	12
106	Watch your time step: trapping and tracking dispersal in autocorrelated environments. Methods in Ecology and Evolution, 2011, 2, 407-415.	2.2	12
107	More bang for the land manager's buck: disturbance autocorrelation can be used to achieve management objectives at no additional cost. Journal of Applied Ecology, 2012, 49, 1020-1027.	1.9	12
108	Water loss from flower heads predicts seed release in two invasive thistles. Plant Ecology and Diversity, 2012, 5, 57-65.	1.0	12

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109	Correlations in the degeneracy of structurally controllable topologies for networks. Scientific Reports, 2017, 7, 46251.	1.6	12
110	Optimal vaccine schedules to maintain measles elimination with a two-dose routine policy. Epidemiology and Infection, 2017, 145, 227-235.	1.0	12
111	How the Wood Moves. Science, 2007, 315, 1231-1232.	6.0	11
112	Seedling emergence and early survival of Carduus spp. in three habitats with press and pulse disturbances1. Journal of the Torrey Botanical Society, 2010, 137, 287-296.	0.1	11
113	Comment on â€œControl profiles of complex networksâ€. Science, 2014, 346, 561-561.	6.0	11
114	Roots of the Invasive Species Carduus nutans L. and C. acanthoides L. Produce Large Amounts of Aplotaxene, a Possible Allelochemical. Journal of Chemical Ecology, 2014, 40, 276-284.	0.9	11
115	The effects of maternal immunity and age structure on population immunity to measles. Theoretical Ecology, 2015, 8, 261-271.	0.4	11
116	Competition between similar invasive species: modeling invasional interference across a landscape. Population Ecology, 2017, 59, 79-88.	0.7	11
117	Warming Increases Pollen Lipid Concentration in an Invasive Thistle, with Minor Effects on the Associated Floral-Visitor Community. Insects, 2020, 11, 20.	1.0	11
118	Uncertainty and the management of epidemics. Nature Methods, 2020, 17, 867-868.	9.0	11
119	The business of biodiversity. Australian Zoologist, 1999, 31, 3-5.	0.6	10
120	Influence of density dependence on the detection of trends in unobserved life-history stages. Journal of Zoology, 2006, 269, 442-450.	0.8	9
121	The influence of multi-stage predation on population growth and the distribution of the pond-breeding salamander, Ambystoma jeffersonianum. Canadian Journal of Zoology, 2006, 84, 449-458.	0.4	9
122	Shipment and storage effects on the terminal velocity of seeds. Ecological Research, 2010, 25, 83-92.	0.7	9
123	Decreased structural defence of an invasive thistle under warming. Plant Biology, 2012, 14, 249-252.	1.8	9
124	Measles outbreak response decision-making under uncertainty: a retrospective analysis. Journal of the Royal Society Interface, 2018, 15, 20170575.	1.5	9
125	Strategic testing approaches for targeted disease monitoring can be used to inform pandemic decision-making. PLoS Biology, 2021, 19, e3001307.	2.6	9
126	Effects of Interspecific Competition on Early Life History of the Invasive ThistlesCarduus nutansandC. acanthoides. Northeastern Naturalist, 2011, 18, 197-206.	0.1	8

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127	Warming leads to divergent responses but similarly improved performance of two invasive thistles. Population Ecology, 2012, 54, 583-589.	0.7	8
128	Logistical constraints lead to an intermediate optimum in outbreak response vaccination. PLoS Computational Biology, 2018, 14, e1006161.	1.5	8
129	Synergistic interventions to control COVID-19: Mass testing and isolation mitigates reliance on distancing. PLoS Computational Biology, 2021, 17, e1009518.	1.5	8
130	Postâ€dispersal seed removal of <i>Carduus nutans</i> and <i>C. acanthoides</i> by insects and small mammals. Ecological Research, 2015, 30, 173-180.	0.7	7
131	Topâ€down network analysis characterizes hidden termiteâ€“termite interactions. Ecology and Evolution, 2016, 6, 6178-6188.	0.8	7
132	Pulse and Press Disturbances Have Different Effects on Transient Community Dynamics. American Naturalist, 2022, 200, 571-583.	1.0	7
133	Whole community invasions and the integration of novel ecosystems. PLoS Computational Biology, 2022, 18, e1010151.	1.5	7
134	Processes and Interactions in Macrofaunal Assemblages at Hydrothermal Vents: A Modeling Perspective. Geophysical Monograph Series, 0, , 259-274.	0.1	6
135	Anticipating future learning affects current control decisions: A comparison between passive and active adaptive management in an epidemiological setting. Journal of Theoretical Biology, 2020, 506, 110380.	0.8	6
136	Influence of Microsite Disturbance on the Establishment of Two Congeneric Invasive Thistles. PLoS ONE, 2012, 7, e45490.	1.1	6
137	Analysing how changes in the health status of healthcare workers affects epidemic outcomes. Epidemiology and Infection, 2021, 149, e42.	1.0	5
138	Causes of delayed outbreak responses and their impacts on epidemic spread. Journal of the Royal Society Interface, 2021, 18, 20200933.	1.5	5
139	Optimizing management of invasions in an uncertain world using dynamic spatial models. Ecological Applications, 2022, 32, e2628.	1.8	5
140	Covariation in abscission force and terminal velocity of windborne sibling seeds alters longâ€distance dispersal projections. Methods in Ecology and Evolution, 2015, 6, 593-599.	2.2	4
141	Motif profile dynamics and transient species in a Boolean model of mutualistic ecological communities. Journal of Complex Networks, 2016, 4, 127-139.	1.1	4
142	Deliberately increased network connectance in a plant-pollinator community experiment. Journal of Complex Networks, 0, , cnw024.	1.1	4
143	Political economy of renewable resource federalism. Ecological Applications, 2021, 31, e02276.	1.8	4
144	Disturbanceâ€mediated invasions are dependent on community resource abundance. Ecology, 2022, 103, e3728.	1.5	4

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145	Individually markâ€"mass releaseâ€"resight study elucidates effects of patch characteristics and distance on host patch location by an insect herbivore. Ecological Entomology, 2017, 42, 273-282.	1.1	2
146	Weighing the unknowns: Value of Information for biological and operational uncertainty in invasion management. Journal of Applied Ecology, 2021, 58, 1621-1630.	1.9	2
147	Duration and timing interactions of earlyâ€life stress and the potential for recovery. Ecosphere, 2021, 12, e03620.	1.0	2
148	Pest management in future climates: Warming reduces physical weed management effectiveness. Ecological Applications, 2022, 32, e2633.	1.8	2
149	Impacts of altered disturbance regimes on community structure and biodiversity mediated by fecundityâ€"tolerance interactions. Natural Resource Modelling, 2018, 31, .	0.8	1
150	Working smarter, not harder: objective-dependent management of an invasive thistle, Carduus nutans. Invasive Plant Science and Management, 2019, 12, 155-160.	0.5	1
151	Governance structure affects transboundary disease management under alternative objectives. BMC Public Health, 2021, 21, 1782.	1.2	1
152	Plant community associations of two invasive thistles. AoB PLANTS, 2015, 7, plv065.	1.2	0
153	Oviposition response of the biocontrol agent Rhinocyllus conicus to resource distribution in its invasive host, Carduus nutans. Biological Control, 2021, 152, 104369.	1.4	0
154	Roots of the Invasive Species Carduus nutans L. and C. acanthoides L. Produce the Phytotoxin Aplotaxene, a Possible Allelochemical. Planta Medica, 2013, 79, .	0.7	0
155	Aplotaxene, a possible allelochemical of thistle (Carduus sp). Planta Medica, 2014, 80, .	0.7	0