

Stephen P Ellner

List of Publications by Year in descending order

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126
papers

12,611
citations

26610

56
h-index

26591

107
g-index

134
all docs

134
docs citations

134
times ranked

9596
citing authors

#	ARTICLE	IF	CITATIONS
1	Rapid evolution drives ecological dynamics in a predator–prey system. <i>Nature</i> , 2003, 424, 303-306.	13.7	897
2	Rapid evolution and the convergence of ecological and evolutionary time. <i>Ecology Letters</i> , 2005, 8, 1114-1127.	3.0	802
3	SIZE-SPECIFIC SENSITIVITY: APPLYING A NEW STRUCTURED POPULATION MODEL. <i>Ecology</i> , 2000, 81, 694-708.	1.5	574
4	Integral Projection Models for Species with Complex Demography. <i>American Naturalist</i> , 2006, 167, 410-428.	1.0	482
5	Cholera Dynamics and El Nino-Southern Oscillation. <i>Science</i> , 2000, 289, 1766-1769.	6.0	446
6	Chaos in a Noisy World: New Methods and Evidence from Time-Series Analysis. <i>American Naturalist</i> , 1995, 145, 343-375.	1.0	434
7	Crossing the Hopf Bifurcation in a Live Predator-Prey System. <i>Science</i> , 2000, 290, 1358-1360.	6.0	366
8	Role of Overlapping Generations in Maintaining Genetic Variation in a Fluctuating Environment. <i>American Naturalist</i> , 1994, 143, 403-417.	1.0	357
9	Chaos in a long-term experiment with a plankton community. <i>Nature</i> , 2008, 451, 822-825.	13.7	343
10	WHY DO POPULATIONS CYCLE? A SYNTHESIS OF STATISTICAL AND MECHANISTIC MODELING APPROACHES. <i>Ecology</i> , 1999, 80, 1789-1805.	1.5	300
11	Coexistence of perennial plants: an embarrassment of niches. <i>Ecology Letters</i> , 2010, 13, 1019-1029.	3.0	230
12	Does rapid evolution matter? Measuring the rate of contemporary evolution and its impacts on ecological dynamics. <i>Ecology Letters</i> , 2011, 14, 603-614.	3.0	229
13	Stochastic matrix models for conservation and management: a comparative review of methods. <i>Ecology Letters</i> , 2001, 4, 244-266.	3.0	224
14	SCALING UP ANIMAL MOVEMENTS IN HETEROGENEOUS LANDSCAPES: THE IMPORTANCE OF BEHAVIOR. <i>Ecology</i> , 2002, 83, 2240-2247.	1.5	223
15	Reduction of adaptive genetic diversity radically alters eco–evolutionary community dynamics. <i>Ecology Letters</i> , 2010, 13, 989-997.	3.0	218
16	Cryptic Population Dynamics: Rapid Evolution Masks Trophic Interactions. <i>PLoS Biology</i> , 2007, 5, e235.	2.6	200
17	Habitat structure and population persistence in an experimental community. <i>Nature</i> , 2001, 412, 538-543.	13.7	187
18	WHEN IS IT MEANINGFUL TO ESTIMATE AN EXTINCTION PROBABILITY?. <i>Ecology</i> , 2000, 81, 2040-2047.	1.5	184

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19	Can Population Genetics Adapt to Rapid Evolution?. Trends in Genetics, 2016, 32, 408-418.	2.9	171
20	Data-driven Modelling of Structured Populations. Lecture Notes on Mathematical Modelling in the Life Sciences, 2016, , .	0.1	170
21	A practical guide to selecting models for exploration, inference, and prediction in ecology. Ecology, 2021, 102, e03336.	1.5	170
22	Evolutionary trade-off between defence against grazing and competitive ability in a simple unicellular alga, <i>Chlorella vulgaris</i> . Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 1947-1953.	1.2	168
23	Precision of Population Viability Analysis. Conservation Biology, 2002, 16, 258-261.	2.4	164
24	The functional genomics of an eco-evolutionary feedback loop: linking gene expression, trait evolution, and community dynamics. Ecology Letters, 2012, 15, 492-501.	3.0	159
25	Linking the continental migratory cycle of the monarch butterfly to understand its population decline. Oikos, 2016, 125, 1081-1091.	1.2	150
26	An expanded modern coexistence theory for empirical applications. Ecology Letters, 2019, 22, 3-18.	3.0	147
27	Integral projection models for populations in temporally varying environments. Ecological Monographs, 2009, 79, 575-594.	2.4	139
28	THE EVOLUTIONARILY STABLE PHENOTYPE DISTRIBUTION IN A RANDOM ENVIRONMENT. Evolution; International Journal of Organic Evolution, 1995, 49, 337-350.	1.1	136
29	Forecasting plant community impacts of climate variability and change: when do competitive interactions matter?. Journal of Ecology, 2012, 100, 478-487.	1.9	135
30	DYNAMICAL EFFECTS OF PLANT QUALITY AND PARASITISM ON POPULATION CYCLES OF LARCH BUDMOTH. Ecology, 2003, 84, 1207-1214.	1.5	130
31	Species fluctuations sustained by a cyclic succession at the edge of chaos. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6389-6394.	3.3	126
32	Estimating the Lyapunov Exponent of a Chaotic System with Nonparametric Regression. Journal of the American Statistical Association, 1992, 87, 682-695.	1.8	124
33	LIVING ON THE EDGE OF CHAOS: POPULATION DYNAMICS OF FENNOSCANDIAN VOLES. Ecology, 2000, 81, 3099-3116.	1.5	121
34	Evolution as a critical component of plankton dynamics. Proceedings of the Royal Society B: Biological Sciences, 2003, 270, 1015-1022.	1.2	121
35	Building integral projection models: a user's guide. Journal of Animal Ecology, 2014, 83, 528-545.	1.3	121
36	How Microbial Community Composition Regulates Coral Disease Development. PLoS Biology, 2010, 8, e1000345.	2.6	119

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37	Understanding Rapid Evolution in Predator-Prey Interactions Using the Theory of Fast-Slow Dynamical Systems. <i>American Naturalist</i> , 2010, 176, E109-E127.	1.0	112
38	Prey evolution on the time scale of predator-prey dynamics revealed by allele-specific quantitative PCR. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 10690-10695.	3.3	99
39	Pair Approximation for Lattice Models with Multiple Interaction Scales. <i>Journal of Theoretical Biology</i> , 2001, 210, 435-447.	0.8	94
40	A newly discovered role of evolution in previously published consumer-resource dynamics. <i>Ecology Letters</i> , 2014, 17, 915-923.	3.0	91
41	Evolution of size-dependent flowering in a variable environment: construction and analysis of a stochastic integral projection model. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2004, 271, 425-434.	1.2	90
42	Stochastic stable population growth in integral projection models: theory and application. <i>Journal of Mathematical Biology</i> , 2007, 54, 227-256.	0.8	90
43	Evolution of complex flowering strategies: an age- and size-structured integral projection model. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2003, 270, 1829-1838.	1.2	87
44	Predator-prey cycles in an aquatic microcosm: testing hypotheses of mechanism. <i>Journal of Animal Ecology</i> , 2002, 71, 802-815.	1.3	86
45	How to quantify the temporal storage effect using simulations instead of math. <i>Ecology Letters</i> , 2016, 19, 1333-1342.	3.0	80
46	Impacts of aspergillosis on sea fan coral demography: modeling a moving target. <i>Ecological Monographs</i> , 2011, 81, 123-139.	2.4	76
47	Effects of rapid prey evolution on predator-prey cycles. <i>Journal of Mathematical Biology</i> , 2007, 55, 541-573.	0.8	75
48	USING PVA FOR MANAGEMENT DESPITE UNCERTAINTY: EFFECTS OF HABITAT, HATCHERIES, AND HARVEST ON SALMON. <i>Ecology</i> , 2003, 84, 1359-1369.	1.5	73
49	Avoiding unintentional eviction from integral projection models. <i>Ecology</i> , 2012, 93, 2008-2014.	1.5	70
50	Disease dynamics in wild populations: modeling and estimation: a review. <i>Journal of Ornithology</i> , 2012, 152, 485-509.	0.5	70
51	Alternate plant life history strategies and coexistence in randomly varying environments. <i>Plant Ecology</i> , 1987, 69, 199-208.	1.2	68
52	EFFECTS OF SUCCESSIONAL DYNAMICS ON METAPOPOPULATION PERSISTENCE. <i>Ecology</i> , 2003, 84, 882-889.	1.5	68
53	Disease where you dine: plant species and floral traits associated with pathogen transmission in bumble bees. <i>Ecology</i> , 2018, 99, 2535-2545.	1.5	68
54	Patterns of Genetic Polymorphism Maintained by Fluctuating Selection with Overlapping Generations. <i>Theoretical Population Biology</i> , 1996, 50, 31-65.	0.5	67

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55	Importance of individual and environmental variation for invasive species spread: a spatial integral projection model. <i>Ecology</i> , 2011, 92, 86-97.	1.5	67
56	Speed of invasion in lattice population models: pair-edge approximation. <i>Journal of Mathematical Biology</i> , 1998, 36, 469-484.	0.8	66
57	Evolutionary demography of long-lived monocarpic perennials: a time-lagged integral projection model. <i>Journal of Ecology</i> , 2008, 96, 821-832.	1.9	62
58	Temporally variable dispersal and demography can accelerate the spread of invading species. <i>Theoretical Population Biology</i> , 2012, 82, 283-298.	0.5	62
59	FITTING POPULATION DYNAMIC MODELS TO TIME-SERIES DATA BY GRADIENT MATCHING. <i>Ecology</i> , 2002, 83, 2256-2270.	1.5	60
60	Linking demography with drivers: climate and competition. <i>Methods in Ecology and Evolution</i> , 2016, 7, 171-183.	2.2	60
61	QUANTITATIVE GENETIC VARIANCE MAINTAINED BY FLUCTUATING SELECTION WITH OVERLAPPING GENERATIONS: VARIANCE COMPONENTS AND COVARIANCES. <i>Evolution; International Journal of Organic Evolution</i> , 1997, 51, 682-696.	1.1	58
62	POPULATION CYCLES IN THE PINE LOOPER MOTH: DYNAMICAL TESTS OF MECHANISTIC HYPOTHESES. <i>Ecological Monographs</i> , 2005, 75, 259-276.	2.4	56
63	Rapid prey evolution and the dynamics of two-predator food webs. <i>Theoretical Ecology</i> , 2011, 4, 133-152.	0.4	56
64	Rapid evolution: from genes to communities, and back again?. <i>Functional Ecology</i> , 2013, 27, 1087-1099.	1.7	56
65	Phenotypic Variation in a Zooplankton Egg Bank. <i>Ecology</i> , 1996, 77, 2382-2392.	1.5	55
66	Parameterizing state-space models for infectious disease dynamics by generalized profiling: measles in Ontario. <i>Journal of the Royal Society Interface</i> , 2011, 8, 961-974.	1.5	50
67	Consumer-resource dynamics is an eco-evolutionary process in a natural plankton community. <i>Nature Ecology and Evolution</i> , 2019, 3, 1351-1358.	3.4	43
68	Inferring mechanism from time-series data: Delay-differential equations. <i>Physica D: Nonlinear Phenomena</i> , 1997, 110, 182-194.	1.3	42
69	THE ROLES OF FLUCTUATING SELECTION AND LONG-TERM DIAPAUSE IN MICROEVOLUTION OF DIAPAUSE TIMING IN A FRESHWATER COPEPOD. <i>Evolution; International Journal of Organic Evolution</i> , 1999, 53, 111-122.	1.1	42
70	The economic benefit of time-varying surveillance effort for invasive species management. <i>Journal of Applied Ecology</i> , 2016, 53, 712-721.	1.9	42
71	Commentary on Holmes et al. (2007): resolving the debate on when extinction risk is predictable. <i>Ecology Letters</i> , 2008, 11, E1-E5.	3.0	41
72	LINKING ECOLOGICAL PATTERNS TO ENVIRONMENTAL FORCING VIA NONLINEAR TIME SERIES MODELS. <i>Ecology</i> , 2000, 81, 2767-2780.	1.5	40

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73	Estimating the Lyapunov Exponent of a Chaotic System With Nonparametric Regression. <i>Journal of the American Statistical Association</i> , 1992, 87, 682.	1.8	37
74	Evolving integral projection models: evolutionary demography meets eco-evolutionary dynamics. <i>Methods in Ecology and Evolution</i> , 2016, 7, 157-170.	2.2	36
75	The Roles of Fluctuating Selection and Long-Term Diapause in Microevolution of Diapause Timing in a Freshwater Copepod. <i>Evolution; International Journal of Organic Evolution</i> , 1999, 53, 111.	1.1	35
76	Within-Host Disease Ecology in the Sea Fan <i>Gorgonia ventalina</i> : Modeling the Spatial Immunodynamics of a Coral-Pathogen Interaction. <i>American Naturalist</i> , 2007, 170, E143-E161.	1.0	34
77	Environmental fluctuations and the maintenance of genetic diversity in age or stage-structured populations. <i>Bulletin of Mathematical Biology</i> , 1996, 58, 103-127.	0.9	33
78	Variable cost of prey defense and coevolution in predator-prey systems. <i>Ecological Monographs</i> , 2012, 82, 491-504.	2.4	33
79	Informed herbivore movement and interplant communication determine the effects of induced resistance in an individual-based model. <i>Journal of Animal Ecology</i> , 2015, 84, 1273-1285.	1.3	33
80	STATE-DEPENDENT ENERGY ALLOCATION IN VARIABLE ENVIRONMENTS: LIFE HISTORY EVOLUTION OF A ROTIFER. <i>Ecology</i> , 2002, 83, 2181-2193.	1.5	31
81	Statistical modelling of annual variation for inference on stochastic population dynamics using Integral Projection Models. <i>Methods in Ecology and Evolution</i> , 2015, 6, 1007-1017.	2.2	31
82	Spatiotemporally Heterogeneous Population Dynamics of Gut Bacteria Inferred from Fecal Time Series Data. <i>MBio</i> , 2018, 9, .	1.8	29
83	Evolutionary tradeoff and equilibrium in an aquatic predator-prey system. <i>Bulletin of Mathematical Biology</i> , 2004, 66, 1547-1573.	0.9	28
84	A SPATIALLY EXPLICIT STOCHASTIC MODEL DEMONSTRATES THE FEASIBILITY OF WRIGHT'S SHIFTING BALANCE THEORY. <i>Evolution; International Journal of Organic Evolution</i> , 1998, 52, 1834-1839.	1.1	27
85	Designing an effective trap cropping strategy: the effects of attraction, retention and plant spatial distribution. <i>Journal of Applied Ecology</i> , 2012, 49, 715-722.	1.9	26
86	Pair-edge approximation for heterogeneous lattice population models. <i>Theoretical Population Biology</i> , 2003, 64, 271-280.	0.5	24
87	Antagonistic coevolution between quantitative and Mendelian traits. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20152926.	1.2	24
88	Eco-Evolutionary Dynamics in a Three-Species Food Web with Intraguild Predation. <i>Advances in Ecological Research</i> , 2014, 50, 41-73.	1.4	22
89	Size-by-environment interactions: a neglected dimension of species' responses to environmental variation. <i>Ecology Letters</i> , 2018, 21, 1757-1770.	3.0	21
90	Infectious disease in consumer populations: dynamic consequences of resource-mediated transmission and infectiousness. <i>Theoretical Ecology</i> , 2014, 7, 163-179.	0.4	20

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91	We Happy Few: Using Structured Population Models to Identify the Decisive Events in the Lives of Exceptional Individuals. <i>American Naturalist</i> , 2016, 188, E28-E45.	1.0	20
92	Rapid evolution with generation overlap: the double-edged effect of dormancy. <i>Theoretical Ecology</i> , 2019, 12, 179-195.	0.4	19
93	Alternate plant life history strategies and coexistence in randomly varying environments. , 1987, , 199-208.		19
94	Detecting collective behaviour in animal relocation data, with application to migrating caribou. <i>Methods in Ecology and Evolution</i> , 2016, 7, 30-41.	2.2	18
95	Human judgment vs. quantitative models for the management of ecological resources. <i>Ecological Applications</i> , 2016, 26, 1553-1565.	1.8	18
96	Technical Comment on Pande <i>et al</i> . (2020): Why invasion analysis is important for understanding coexistence. <i>Ecology Letters</i> , 2020, 23, 1721-1724.	3.0	17
97	Inferring Colonization Processes from Population Dynamics in Spatially Structured Predator-Prey Systems. <i>Ecology</i> , 2000, 81, 3350.	1.5	16
98	Weak interspecific interactions in a sagebrush steppe? Conflicting evidence from observations and experiments. <i>Ecology</i> , 2018, 99, 1621-1632.	1.5	16
99	Hostâ€“pathogen immune feedbacks can explain widely divergent outcomes from similar infections. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021, 288, 20210786.	1.2	16
100	Reconstructing susceptible and recruitment dynamics from measles epidemic data. <i>Mathematical Population Studies</i> , 2000, 8, 1-29.	0.8	15
101	When does parameter drift decrease the uncertainty in extinction risk estimates?. <i>Ecology Letters</i> , 2003, 6, 1039-1045.	3.0	13
102	Time and Chance: Using Age Partitioning to Understand How Luck Drives Variation in Reproductive Success. <i>American Naturalist</i> , 2021, 197, E110-E128.	1.0	12
103	When Is It Meaningful to Estimate an Extinction Probability?. <i>Ecology</i> , 2000, 81, 2040.	1.5	11
104	Why So Variable: Can Genetic Variance in Flowering Thresholds Be Maintained by Fluctuating Selection?. <i>American Naturalist</i> , 2019, 194, E13-E29.	1.0	9
105	Collective behaviour can stabilize ecosystems. <i>Nature Ecology and Evolution</i> , 2021, 5, 1435-1440.	3.4	9
106	Size-Specific Sensitivity: Applying a New Structured Population Model. <i>Ecology</i> , 2000, 81, 694.	1.5	9
107	Living on the Edge of Chaos: Population Dynamics of Fennoscandian Voles. <i>Ecology</i> , 2000, 81, 3099.	1.5	8
108	INFERRING COLONIZATION PROCESSES FROM POPULATION DYNAMICS IN SPATIALLY STRUCTURED PREDATORâ€“PREY SYSTEMS. <i>Ecology</i> , 2000, 81, 3350-3361.	1.5	7

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109	Generation Time in Structured Populations. <i>American Naturalist</i> , 2018, 192, 105-110.	1.0	7
110	Toward a "modern coexistence theory" for the discrete and spatial. <i>Ecological Monographs</i> , 2022, 92, .	2.4	6
111	Comments on: Inference for Size Demography From Point Pattern Data Using Integral Projection Models. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2012, 17, 682-689.	0.7	5
112	Snared in an Evil Time: How Age-Dependent Environmental and Demographic Variability Contribute to Variance in Lifetime Outcomes. <i>American Naturalist</i> , 2022, 200, E124-E140.	1.0	5
113	Environmental fluctuations and the maintenance of genetic diversity in age or stage-structured populations. <i>Bulletin of Mathematical Biology</i> , 1996, 58, 103-127.	0.9	3
114	LINKING ECOLOGICAL PATTERNS TO ENVIRONMENTAL FORCING VIA NONLINEAR TIME SERIES MODELS. , 2000, 81, 2767.		3
115	Pathogen transport amplifies or dilutes disease transmission depending on the host dose-response relationship. <i>Ecology Letters</i> , 2022, 25, 453-465.	3.0	3
116	A critical comparison of integral projection and matrix projection models for demographic analysis: Comment. <i>Ecology</i> , 2022, 103, e3605.	1.5	2
117	Spatial Models. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 229-254.	0.1	1
118	Density Dependence. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 111-138.	0.1	1
119	The Jensen effect and functional single index models: Estimating the ecological implications of nonlinear reaction norms. <i>Annals of Applied Statistics</i> , 2020, 14, .	0.5	1
120	Simple Deterministic IPM. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 9-56.	0.1	0
121	Basic Analyses 1: Demographic Measures and Events in the Life Cycle. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 57-85.	0.1	0
122	Basic Analyses 2: Prospective Perturbation Analysis. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 87-109.	0.1	0
123	General Deterministic IPM. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 139-185.	0.1	0
124	Evolutionary Demography. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2016, , 255-282.	0.1	0
125	Special issue of theoretical ecology to honor Alan Hastings's 65th birthday. <i>Theoretical Ecology</i> , 2019, 12, 129-130.	0.4	0
126	Generalized Single Index Models and Jensen Effects on Reproduction and Survival. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2021, 26, 492-512.	0.7	0