Stephen P Ellner

List of Publications by Citations

125 papers	9,896 citations	53 h-index	99 g-index
134 ext. papers	11,433 ext. citations	6.5 avg, IF	6.39 L-index

#	Paper	IF	Citations
125	Rapid evolution drives ecological dynamics in a predator-prey system. *Nature*, **2003**, 424, 303-6	50.4	748
124	Rapid evolution and the convergence of ecological and evolutionary time. *Ecology Letters*, **2005**, 8, 1114-1127	10	651
123	SIZE-SPECIFIC SENSITIVITY: APPLYING A NEW STRUCTURED POPULATION MODEL. *Ecology*, **2000**, 81, 694-708	4.6	440
122	Cholera dynamics and El Niño-Southern Oscillation. *Science*, **2000**, 289, 1766-9	33.3	392
121	Integral projection models for species with complex demography. *American Naturalist*, **2006**, 167, 410-28	3.7	384
120	Chaos in a Noisy World: New Methods and Evidence from Time-Series Analysis. *American Naturalist*, **1995**, 145, 343-375	3.7	373
119	Role of Overlapping Generations in Maintaining Genetic Variation in a Fluctuating Environment. *American Naturalist*, **1994**, 143, 403-417	3.7	311
118	Crossing the hopf bifurcation in a live predator-prey system. *Science*, **2000**, 290, 1358-60	33.3	289
117	Chaos in a long-term experiment with a plankton community. *Nature*, **2008**, 451, 822-5	50.4	255
116	WHY DO POPULATIONS CYCLE? A SYNTHESIS OF STATISTICAL AND MECHANISTIC MODELING APPROACHES. *Ecology*, **1999**, 80, 1789-1805	4.6	242
115	Stochastic matrix models for conservation and management: a comparative review of methods. *Ecology Letters*, **2001**, 4, 244-266	10	196
114	SCALING UP ANIMAL MOVEMENTS IN HETEROGENEOUS LANDSCAPES: THE IMPORTANCE OF BEHAVIOR. *Ecology*, **2002**, 83, 2240-2247	4.6	195
113	Does rapid evolution matter? Measuring the rate of contemporary evolution and its impacts on ecological dynamics. *Ecology Letters*, **2011**, 14, 603-14	10	184
112	Coexistence of perennial plants: an embarrassment of niches. *Ecology Letters*, **2010**, 13, 1019-29	10	174
111	Cryptic population dynamics: rapid evolution masks trophic interactions. *PLoS Biology*, **2007**, 5, e235	9.7	169
110	Habitat structure and population persistence in an experimental community. *Nature*, **2001**, 412, 538-43	50.4	168
109	Reduction of adaptive genetic diversity radically alters eco-evolutionary community dynamics. *Ecology Letters*, **2010**, 13, 989-97	10	162

108	WHEN IS IT MEANINGFUL TO ESTIMATE AN EXTINCTION PROBABILITY?. *Ecology*, **2000**, 81, 2040-2047	4.6	152
107	Precision of Population Viability Analysis. *Conservation Biology*, **2002**, 16, 258-261	6	146
106	Evolutionary trade-off between defence against grazing and competitive ability in a simple unicellular alga, Chlorella vulgaris. *Proceedings of the Royal Society B: Biological Sciences*, **2004**, 271, 1947-53	4.4	141
105	THE EVOLUTIONARILY STABLE PHENOTYPE DISTRIBUTION IN A RANDOM ENVIRONMENT. *Evolution; International Journal of Organic Evolution*, **1995**, 49, 337-350	3.8	125
104	The functional genomics of an eco-evolutionary feedback loop: linking gene expression, trait evolution, and community dynamics. *Ecology Letters*, **2012**, 15, 492-501	10	120
103	Integral projection models for populations in temporally varying environments. *Ecological Monographs*, **2009**, 79, 575-594	9	118
102	DYNAMICAL EFFECTS OF PLANT QUALITY AND PARASITISM ON POPULATION CYCLES OF LARCH BUDMOTH. *Ecology*, **2003**, 84, 1207-1214	4.6	115
101	Can Population Genetics Adapt to Rapid Evolution?. *Trends in Genetics*, **2016**, 32, 408-418	8.5	108
100	Evolution as a critical component of plankton dynamics. *Proceedings of the Royal Society B: Biological Sciences*, **2003**, 270, 1015-22	4.4	107
99	Forecasting plant community impacts of climate variability and change: when do competitive interactions matter?. *Journal of Ecology*, **2012**, 100, 478-487	6	105
98	Data-driven Modelling of Structured Populations. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**,	0.3	100
97	LIVING ON THE EDGE OF CHAOS: POPULATION DYNAMICS OF FENNOSCANDIAN VOLES. *Ecology*, **2000**, 81, 3099-3116	4.6	98
96	Estimating the Lyapunov Exponent of a Chaotic System with Nonparametric Regression. *Journal of the American Statistical Association*, **1992**, 87, 682-695	2.8	97
95	Linking the continental migratory cycle of the monarch butterfly to understand its population decline. *Oikos*, **2016**, 125, 1081-1091	4	92
94	How microbial community composition regulates coral disease development. *PLoS Biology*, **2010**, 8, e1000345	9.7	85
93	Prey evolution on the time scale of predator-prey dynamics revealed by allele-specific quantitative PCR. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 10690-5	11.5	84
92	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, 6389-94	11.5	81
91	Dynamic Models in Biology **2006**,		81

90	Understanding rapid evolution in predator-prey interactions using the theory of fast-slow dynamical systems. *American Naturalist*, **2010**, 176, E109-27	3.7	80
89	Stochastic stable population growth in integral projection models: theory and application. *Journal of Mathematical Biology*, **2007**, 54, 227-56	2	79
88	Building integral projection models: a user's guide. *Journal of Animal Ecology*, **2014**, 83, 528-45	4.7	78
87	Evolution of complex flowering strategies: an age- and size-structured integral projection model. *Proceedings of the Royal Society B: Biological Sciences*, **2003**, 270, 1829-38	4.4	78
86	Evolution of size-dependent flowering in a variable environment: construction and analysis of a stochastic integral projection model. *Proceedings of the Royal Society B: Biological Sciences*, **2004**, 271, 425-34	4.4	76
85	Pair approximation for lattice models with multiple interaction scales. *Journal of Theoretical Biology* , **2001**, 210, 435-47	2.3	75
84	Predator-prey cycles in an aquatic microcosm: testing hypotheses of mechanism. *Journal of Animal Ecology*, **2002**, 71, 802-815	4.7	71
83	An expanded modern coexistence theory for empirical applications. *Ecology Letters*, **2019**, 22, 3-18	10	70
82	A newly discovered role of evolution in previously published consumer-resource dynamics. *Ecology Letters*, **2014**, 17, 915-23	10	67
81	Impacts of aspergillosis on sea fan coral demography: modeling a moving target. *Ecological Monographs*, **2011**, 81, 123-139	9	64
80	USING PVA FOR MANAGEMENT DESPITE UNCERTAINTY: EFFECTS OF HABITAT, HATCHERIES, AND HARVEST ON SALMON. *Ecology*, **2003**, 84, 1359-1369	4.6	64
79	Alternate plant life history strategies and coexistence in randomly varying environments. *Plant Ecology*, **1987**, 69, 199-208		63
78	Effects of rapid prey evolution on predator-prey cycles. *Journal of Mathematical Biology*, **2007**, 55, 541-73	2	62
77	EFFECTS OF SUCCESSIONAL DYNAMICS ON METAPOPULATION PERSISTENCE. *Ecology*, **2003**, 84, 882-889	4.6	62
76	Patterns of genetic polymorphism maintained by fluctuating selection with overlapping generations. *Theoretical Population Biology*, **1996**, 50, 31-65	1.2	62
75	Disease dynamics in wild populations: modeling and estimation: a review. *Journal of Ornithology*, **2012**, 152, 485-509	1.5	61
74	QUANTITATIVE GENETIC VARIANCE MAINTAINED BY FLUCTUATING SELECTION WITH OVERLAPPING GENERATIONS: VARIANCE COMPONENTS AND COVARIANCES. *Evolution; International Journal of Organic Evolution*, **1997**, 51, 682-696	3.8	56
73	Speed of invasion in lattice population models: pair-edge approximation. *Journal of Mathematical Biology*, **1998**, 36, 469-484	2	54

72	Evolutionary demography of long-lived monocarpic perennials: a time-lagged integral projection model. *Journal of Ecology*, **2008**, 96, 821-832	6	51
71	FITTING POPULATION DYNAMIC MODELS TO TIME-SERIES DATA BY GRADIENT MATCHING. *Ecology*, **2002**, 83, 2256-2270	4.6	49
70	Importance of individual and environmental variation for invasive species spread: a spatial integral projection model. *Ecology*, **2011**, 92, 86-97	4.6	47
69	Disease where you dine: plant species and floral traits associated with pathogen transmission in bumble bees. *Ecology*, **2018**, 99, 2535-2545	4.6	46
68	Rapid evolution: from genes to communities, and back again?. *Functional Ecology*, **2013**, 27, 1087-1099	5.6	46
67	Avoiding unintentional eviction from integral projection models. *Ecology*, **2012**, 93, 2008-14	4.6	46
66	Rapid prey evolution and the dynamics of two-predator food webs. *Theoretical Ecology*, **2011**, 4, 133-152	1.6	45
65	How to quantify the temporal storage effect using simulations instead of math. *Ecology Letters*, **2016**, 19, 1333-1342	10	45
64	Temporally variable dispersal and demography can accelerate the spread of invading species. *Theoretical Population Biology*, **2012**, 82, 283-98	1.2	44
63	POPULATION CYCLES IN THE PINE LOOPER MOTH: DYNAMICAL TESTS OF MECHANISTIC HYPOTHESES. *Ecological Monographs*, **2005**, 75, 259-276	9	44
62	Phenotypic Variation in a Zooplankton Egg Bank. *Ecology*, **1996**, 77, 2382-2392	4.6	43
61	Parameterizing state-space models for infectious disease dynamics by generalized profiling: measles in Ontario. *Journal of the Royal Society Interface*, **2011**, 8, 961-74	4.1	41
60	Linking demography with drivers: climate and competition. *Methods in Ecology and Evolution*, **2016**, 7, 171-183	7.7	40
59	Inferring mechanism from time-series data: Delay-differential equations. *Physica D: Nonlinear Phenomena*, **1997**, 110, 182-194	3.3	38
58	Commentary on Holmes et al. (2007): resolving the debate on when extinction risk is predictable. *Ecology Letters*, **2008**, 11, E1-5	10	37
57	Estimating the Lyapunov Exponent of a Chaotic System with Nonparametric Regression		36
56	The economic benefit of time-varying surveillance effort for invasive species management. *Journal of Applied Ecology*, **2016**, 53, 712-721	5.8	34
55	The Roles of Fluctuating Selection and Long-Term Diapause in Microevolution of Diapause Timing in a Freshwater Copepod. *Evolution; International Journal of Organic Evolution*, **1999**, 53, 111	3.8	32

54	LINKING ECOLOGICAL PATTERNS TO ENVIRONMENTAL FORCING VIA NONLINEAR TIME SERIES MODELS. *Ecology*, **2000**, 81, 2767-2780	4.6	31
53	THE ROLES OF FLUCTUATING SELECTION AND LONG-TERM DIAPAUSE IN MICROEVOLUTION OF DIAPAUSE TIMING IN A FRESHWATER COPEPOD. *Evolution; International Journal of Organic Evolution*, **1999**, 53, 111-122	3.8	31
52	Within-host disease ecology in the sea fan Gorgonia ventalina: modeling the spatial immunodynamics of a coral-pathogen interaction. *American Naturalist*, **2007**, 170, E143-61	3.7	30
51	Environmental fluctuations and the maintenance of genetic diversity in age or stage-structured populations. *Bulletin of Mathematical Biology*, **1996**, 58, 103-27	2.1	28
50	Evolving integral projection models: evolutionary demography meets eco-evolutionary dynamics. *Methods in Ecology and Evolution*, **2016**, 7, 157-170	7.7	28
49	Evolutionary tradeoff and equilibrium in an aquatic predator-prey system. *Bulletin of Mathematical Biology*, **2004**, 66, 1547-73	2.1	26
48	STATE-DEPENDENT ENERGY ALLOCATION IN VARIABLE ENVIRONMENTS: LIFE HISTORY EVOLUTION OF A ROTIFER. *Ecology*, **2002**, 83, 2181-2193	4.6	26
47	Spatiotemporally Heterogeneous Population Dynamics of Gut Bacteria Inferred from Fecal Time Series Data. *MBio*, **2018**, 9,	7.8	25
46	Variable cost of prey defense and coevolution in predator-prey systems. *Ecological Monographs*, **2012**, 82, 491-504	9	25
45	A practical guide to selecting models for exploration, inference, and prediction in ecology. *Ecology*, **2021**, 102, e03336	4.6	24
44	Statistical modelling of annual variation for inference on stochastic population dynamics using Integral Projection Models. *Methods in Ecology and Evolution*, **2015**, 6, 1007-1017	7.7	22
43	Consumer-resource dynamics is an eco-evolutionary process in a natural plankton community. *Nature Ecology and Evolution*, **2019**, 3, 1351-1358	12.3	22
42	Pair-edge approximation for heterogeneous lattice population models. *Theoretical Population Biology*, **2003**, 64, 271-80	1.2	22
41	Informed herbivore movement and interplant communication determine the effects of induced resistance in an individual-based model. *Journal of Animal Ecology*, **2015**, 84, 1273-85	4.7	20
40	Eco-Evolutionary Dynamics in a Three-Species Food Web with Intraguild Predation. *Advances in Ecological Research*, **2014**, 50, 41-73	4.6	20
39	A SPATIALLY EXPLICIT STOCHASTIC MODEL DEMONSTRATES THE FEASIBILITY OF WRIGHTS SHIFTING BALANCE THEORY. *Evolution; International Journal of Organic Evolution*, **1998**, 52, 1834-1839	3.8	20
38	Detecting collective behaviour in animal relocation data, with application to migrating caribou. *Methods in Ecology and Evolution*, **2016**, 7, 30-41	7.7	17
37	Antagonistic coevolution between quantitative and Mendelian traits. *Proceedings of the Royal Society B: Biological Sciences*, **2016**, 283, 20152926	4.4	17

36	We Happy Few: Using Structured Population Models to Identify the Decisive Events in the Lives of Exceptional Individuals. *American Naturalist*, **2016**, 188, E28-45	3.7	16
35	Inferring Colonization Processes from Population Dynamics in Spatially Structured Predator-Prey Systems. *Ecology*, **2000**, 81, 3350	4.6	15
34	Infectious disease in consumer populations: dynamic consequences of resource-mediated transmission and infectiousness. *Theoretical Ecology*, **2014**, 7, 163-179	1.6	14
33	Size-by-environment interactions: a neglected dimension of speciesTresponses to environmental variation. *Ecology Letters*, **2018**, 21, 1757-1770	10	14
32	Human judgment vs. quantitative models for the management of ecological resources. *Ecological Applications*, **2016**, 26, 1553-1565	4.9	13
31	When does parameter drift decrease the uncertainty in extinction risk estimates?. *Ecology Letters*, **2003**, 6, 1039-1045	10	11
30	Reconstructing susceptible and recruitment dynamics from measles epidemic data. *Mathematical Population Studies*, **2000**, 8, 1-29	0.8	11
29	WHEN IS IT MEANINGFUL TO ESTIMATE AN EXTINCTION PROBABILITY? **2000**, 81, 2040		11
28	Weak interspecific interactions in a sagebrush steppe? Conflicting evidence from observations and experiments. *Ecology*, **2018**, 99, 1621-1632	4.6	9
27	Designing an effective trap cropping strategy: the effects of attraction, retention and plant spatial distribution. *Journal of Applied Ecology*, **2012**, 49, no-no	5.8	9
26	Rapid evolution with generation overlap: the double-edged effect of dormancy. *Theoretical Ecology* , **2019**, 12, 179-195	1.6	8
25	Why So Variable: Can Genetic Variance in Flowering Thresholds Be Maintained by Fluctuating Selection?. *American Naturalist*, **2019**, 194, E13-E29	3.7	7
24	SIZE-SPECIFIC SENSITIVITY: APPLYING A NEW STRUCTURED POPULATION MODEL **2000**, 81, 694		7
23	Time and Chance: Using Age Partitioning to Understand How Luck Drives Variation in Reproductive Success. *American Naturalist*, **2021**, 197, E110-E128	3.7	5
22	Comments on: Inference for Size Demography From Point Pattern Data Using Integral Projection Models. *Journal of Agricultural, Biological, and Environmental Statistics*, **2012**, 17, 682-689	1.9	4
21	Technical Comment on Pande et al. (2020): Why invasion analysis is important for understanding coexistence. *Ecology Letters*, **2020**, 23, 1721-1724	10	4
20	Host-pathogen immune feedbacks can explain widely divergent outcomes from similar infections. *Proceedings of the Royal Society B: Biological Sciences*, **2021**, 288, 20210786	4.4	4
19	INFERRING COLONIZATION PROCESSES FROM POPULATION DYNAMICS IN SPATIALLY STRUCTURED PREDATORPREY SYSTEMS. *Ecology*, **2000**, 81, 3350-3361	4.6	3

18	LINKING ECOLOGICAL PATTERNS TO ENVIRONMENTAL FORCING VIA NONLINEAR TIME SERIES MODELS **2000**, 81, 2767		3
17	LIVING ON THE EDGE OF CHAOS: POPULATION DYNAMICS OF FENNOSCANDIAN VOLES **2000**, 81, 3099		3
16	Alternate plant life history strategies and coexistence in randomly varying environments **1987**, 199-208		3
15	Host-pathogen Immune Feedbacks Can Explain Widely Divergent Outcomes from Similar Infections		3
14	Collective behaviour can stabilize ecosystems. *Nature Ecology and Evolution*, **2021**, 5, 1435-1440	12.3	3
13	Generation Time in Structured Populations. *American Naturalist*, **2018**, 192, 105-110	3.7	2
12	The Jensen effect and functional single index models: Estimating the ecological implications of nonlinear reaction norms. *Annals of Applied Statistics*, **2020**, 14,	2.1	1
11	Environmental Stochasticity. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 187-227	0.3	1
10	Spatial Models. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 229-254	0.3	1
9	Density Dependence. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 111-138	0.3	1
8	A critical comparison of integral projection and matrix projection models for demographic analysis: Comment.. *Ecology*, **2021**, e3605	4.6	0
7	Environmental fluctuations and the maintenance of genetic diversity in age or stage-structured populations. *Bulletin of Mathematical Biology*, **1996**, 58, 103-127	2.1	
6	Generalized Single Index Models and Jensen Effects on Reproduction and Survival. *Journal of Agricultural, Biological, and Environmental Statistics*, **2021**, 26, 492-512	1.9	
5	Simple Deterministic IPM. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 9-56	0.3	
4	Basic Analyses 1: Demographic Measures and Events in the Life Cycle. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 57-85	0.3	
3	Basic Analyses 2: Prospective Perturbation Analysis. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 87-109	0.3	
2	General Deterministic IPM. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 139-185	0.3	
1	Evolutionary Demography. *Lecture Notes on Mathematical Modelling in the Life Sciences*, **2016**, 255-282	0.3	