Troy Day

List of Publications by Year in descending order

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143 papers	11,765 citations	25034 57 h-index	32842 100 g-index
148 all docs	148 docs citations	148 times ranked	10726 citing authors

#	Article	IF	Citations
1	Nongenetic Inheritance and Its Evolutionary Implications. Annual Review of Ecology, Evolution, and Systematics, 2009, 40, 103-125.	8.3	524
2	Population structure attributable to reproductive time: isolation by time and adaptation by time. Molecular Ecology, 2005, 14, 901-916.	3.9	349
3	Inclusive fitness theory and eusociality. Nature, 2011, 471, E1-E4.	27.8	339
4	Modelling strategies for controlling SARS outbreaks. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 2223-2232.	2.6	304
5	Linking within- and between-host dynamics in the evolutionary epidemiology of infectious diseases. Trends in Ecology and Evolution, 2008, 23, 511-517.	8.7	303
6	The implications of nongenetic inheritance for evolution in changing environments. Evolutionary Applications, 2012, 5, 192-201.	3.1	291
7	Evolution of cooperation in a finite homogeneous graph. Nature, 2007, 447, 469-472.	27.8	281
8	Developmental Thresholds and the Evolution of Reaction Norms for Age and Size at Lifeâ€History Transitions. American Naturalist, 2002, 159, 338-350.	2.1	275
9	A Unified Approach to the Evolutionary Consequences of Genetic and Nongenetic Inheritance. American Naturalist, 2011, 178, E18-E36.	2.1	264
10	The adaptive evolution of virulence: a review of theoretical predictions and empirical tests. Parasitology, 2016, 143, 915-930.	1.5	252
11	The origins and potential future of SARS-CoV-2 variants of concern in the evolving COVID-19 pandemic. Current Biology, 2021, 31, R918-R929.	3.9	246
12	The evolution of drug resistance and the curious orthodoxy of aggressive chemotherapy. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10871-10877.	7.1	237
13	ANTAGONISTIC PLEIOTROPY, MORTALITY SOURCE INTERACTIONS, AND THE EVOLUTIONARY THEORY OF SENESCENCE. Evolution; International Journal of Organic Evolution, 2003, 57, 1478-1488.	2.3	230
14	Evolutionary principles and their practical application. Evolutionary Applications, 2011, 4, 159-183.	3.1	230
15	Intralocus Sexual Conflict Can Drive the Evolution of Genomic Imprinting. Genetics, 2004, 167, 1537-1546.	2.9	220
16	A General Theory for the Evolutionary Dynamics of Virulence. American Naturalist, 2004, 163, E40-E63.	2.1	210
17	Hostâ€“parasite coevolution and patterns of adaptation across time and space. Journal of Evolutionary Biology, 2008, 21, 1861-1866.	1.7	210
18	THE EVOLUTION OF STATIC ALLOMETRY IN SEXUALLY SELECTED TRAITS. Evolution; International Journal of Organic Evolution, 2003, 57, 2450-2458.	2.3	208

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19	The shaping of senescence in the wild. Trends in Ecology and Evolution, 2006, 21, 458-463.	8.7	207
20	Optimal Size and Number of Propagules: Allowance for Discrete Stages and Effects of Maternal Size on Reproductive Output and Offspring Fitness. American Naturalist, 2001, 157, 387-407.	2.1	181
21	Von Bertalanffy's Growth Equation Should Not Be Used to Model Age and Size at Maturity. American Naturalist, 1997, 149, 381-393.	2.1	179
22	On the evolutionary epidemiology of SARS-CoV-2. Current Biology, 2020, 30, R849-R857.	3.9	160
23	A COMPARISON OF TWO STICKLEBACKS. Evolution; International Journal of Organic Evolution, 1994, 48, 1723-1734.	2.3	149
24	The Coevolution of Virulence: Tolerance in Perspective. PLoS Pathogens, 2010, 6, e1001006.	4.7	149
25	Optimal control of epidemics with limited resources. Journal of Mathematical Biology, 2011, 62, 423-451.	1.9	147
26	On the evolution of virulence and the relationship between various measures of mortality. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 1317-1323.	2.6	145
27	Applying populationâ€genetic models in theoretical evolutionary epidemiology. Ecology Letters, 2007, 10, 876-888.	6.4	138
28	Sexual conflict and indirect benefits. Journal of Evolutionary Biology, 2003, 16, 1055-1060.	1.7	136
29	PARASITE TRANSMISSION MODES AND THE EVOLUTION OF VIRULENCE. Evolution; International Journal of Organic Evolution, 2001, 55, 2389-2400.	2.3	129
30	When Is Quarantine a Useful Control Strategy for Emerging Infectious Diseases?. American Journal of Epidemiology, 2006, 163, 479-485.	3.4	127
31	Disentangling the interaction among host resources, the immune system and pathogens. Ecology Letters, 2014, 17, 284-293.	6.4	126
32	Virulence evolution and the timing of disease life-history events. Trends in Ecology and Evolution, 2003, 18, 113-118.	8.7	125
33	The effect of behavioural and morphological plasticity on foraging efficiency in the threespine stickleback (Gasterosteus sp.). Oecologia, 1996, 108, 380-388.	2.0	121
34	Does High-Dose Antimicrobial Chemotherapy Prevent the Evolution of Resistance?. PLoS Computational Biology, 2016, 12, e1004689.	3.2	115
35	Next-generation tools for evolutionary invasion analyses. Journal of the Royal Society Interface, 2010, 7, 561-571.	3.4	113
36	Inferring the causes of the three waves of the 1918 influenza pandemic in England and Wales. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20131345.	2.6	109

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37	Older males signal more reliably. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 2291-2299.	2.6	102
38	Questioning species realities. Conservation Genetics, 2000, 1, 67-76.	1.5	100
39	Escalation, Retreat, and Female Indifference as Alternative Outcomes of Sexually Antagonistic Coevolution. American Naturalist, 2005, 165, S5-S18.	2.1	100
40	A Comparison of Two Sticklebacks. Evolution; International Journal of Organic Evolution, 1994, 48, 1723.	2.3	96
41	The evolutionary epidemiology of vaccination. Journal of the Royal Society Interface, 2007, 4, 803-817.	3.4	96
42	Competition and the Effect of Spatial Resource Heterogeneity on Evolutionary Diversification. American Naturalist, 2000, 155, 790-803.	2.1	94
43	Sperm Competition and the Evolution of Ejaculate Composition. American Naturalist, 2007, 169, E158-E172.	2.1	94
44	Detecting sexual conflict and sexually antagonistic coevolution. Philosophical Transactions of the Royal Society B: Biological Sciences, 2006, 361, 277-285.	4.0	92
45	Competitive and Facilitative Evolutionary Diversification. BioScience, 2004, 54, 101.	4.9	90
46	Evolution of parasite virulence when host responses cause disease. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 2685-2692.	2.6	84
47	SEXUAL SELECTION AND THE EVOLUTION OF COSTLY FEMALE PREFERENCES: SPATIAL EFFECTS. Evolution; International Journal of Organic Evolution, 2000, 54, 715-730.	2.3	83
48	Is selection relevant in the evolutionary emergence of drug resistance?. Trends in Microbiology, 2015, 23, 126-133.	7.7	83
49	Virulence evolution via host exploitation and toxin production in spore-producing pathogens. Ecology Letters, 2002, 5, 471-476.	6.4	82
50	Aggressive Chemotherapy and the Selection of Drug Resistant Pathogens. PLoS Pathogens, 2013, 9, e1003578.	4.7	81
51	The path of least resistance: aggressive or moderate treatment?. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140566.	2.6	79
52	THE ROLE OF SIZE-SPECIFIC PREDATION IN THE EVOLUTION AND DIVERSIFICATION OF PREY LIFE HISTORIES. Evolution; International Journal of Organic Evolution, 2002, 56, 877-887.	2.3	78
53	Evolution in structured populations: beyond the kin versus group debate. Trends in Ecology and Evolution, 2011, 26, 193-201.	8.7	71
54	From inclusive fitness to fixation probability in homogeneous structured populations. Journal of Theoretical Biology, 2007, 249, 101-110.	1.7	69

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55	Forecasting Epidemiological and Evolutionary Dynamics of Infectious Diseases. Trends in Ecology and Evolution, 2016, 31, 776-788.	8.7	66
56	Understanding and Predicting Strainâ€Specific Patterns of Pathogenesis in the Rodent MalariaPlasmodium chabaudi. American Naturalist, 2008, 172, E214-E238.	2.1	65
57	EVOLUTIONARY EPIDEMIOLOGY AND THE DYNAMICS OF ADAPTATION. Evolution; International Journal of Organic Evolution, 2009, 63, 826-838.	2.3	65
58	Resource limitation prevents the emergence of drug resistance by intensifying within-host competition. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13774-13779.	7.1	65
59	Detecting sexually antagonistic coevolution with population crosses. Proceedings of the Royal Society B: Biological Sciences, 2003, 270, 2009-2016.	2.6	62
60	Evidences of parasite evolution after vaccination. Vaccine, 2008, 26, C4-C7.	3.8	55
61	BRIDGING SCALES IN THE EVOLUTION OF INFECTIOUS DISEASE LIFE HISTORIES: THEORY. Evolution; International Journal of Organic Evolution, 2011, 65, 3448-3461.	2.3	55
62	Nongenetic inheritance and multigenerational plasticity in the nematode C. elegans. ELife, 2020, 9, .	6.0	55
63	THE EVOLUTION OF SPERM-ALLOCATION STRATEGIES AND THE DEGREE OF SPERM COMPETITION. Evolution; International Journal of Organic Evolution, 2005, 59, 492-499.	2.3	54
64	Risk factors for the evolutionary emergence of pathogens. Journal of the Royal Society Interface, 2010, 7, 1455-1474.	3.4	54
65	On the evolution of reproductive restraint in malaria. Proceedings of the Royal Society B: Biological Sciences, 2008, 275, 1217-1224.	2.6	53
66	Unifying Genetic and Game Theoretic Models of Kin Selection for Continuous Traits. Journal of Theoretical Biology, 1998, 194, 391-407.	1.7	52
67	Interactions between sources of mortality and the evolution of parasite virulence. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 2331-2337.	2.6	52
68	A CONSIDERATION OF PATTERNS OF VIRULENCE ARISING FROM HOST-PARASITE COEVOLUTION. Evolution; International Journal of Organic Evolution, 2003, 57, 671-676.	2.3	52
69	Evolutionary stability under the replicator and the gradient dynamics. Evolutionary Ecology, 1997, 11, 579-590.	1.2	51
70	Host mortality, predation and the evolution of parasite virulence. Ecology Letters, 2003, 6, 310-315.	6.4	51
71	Perfect reciprocity is the only evolutionarily stable strategy in the continuous iterated prisoner's dilemma. Journal of Theoretical Biology, 2007, 247, 11-22.	1.7	48
72	Insights from Priceâ€™s equation into evolutionary epidemiology. DIMACS Series in Discrete Mathematics and Theoretical Computer Science, 2006, , 23-43.	0.0	48

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73	Population structure inhibits evolutionary diversification under competition for resources. Genetica, 2001, 112/113, 71-86.	1.1	46
74	The effect of disease life history on the evolutionary emergence of novel pathogens. Proceedings of the Royal Society B: Biological Sciences, 2005, 272, 1949-1956.	2.6	45
75	The Evolution of Virulence in Vector-Borne and Directly Transmitted Parasites. Theoretical Population Biology, 2002, 62, 199-213.	1.1	44
76	Stability in negotiation games and the emergence of cooperation. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 669-674.	2.6	43
77	Factors Affecting the Evolution of Bleaching Resistance in Corals. American Naturalist, 2008, 171, E72-E88.	2.1	42
78	A theoretical examination of the relative importance of evolution management and drug development for managing resistance. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141861.	2.6	42
79	Mechanistic modelling of the three waves of the 1918 influenza pandemic. Theoretical Ecology, 2011, 4, 283-288.	1.0	41
80	Evolution of hosts paying manifold costs of defence. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20150065.	2.6	41
81	BRIDGING SCALES IN THE EVOLUTION OF INFECTIOUS DISEASE LIFE HISTORIES: APPLICATION. Evolution; International Journal of Organic Evolution, 2011, 65, 3298-3310.	2.3	40
82	Nongenetic inheritance and the evolution of costly female preference. Journal of Evolutionary Biology, 2013, 26, 76-87.	1.7	39
83	THE EVOLUTIONARY EPIDEMIOLOGY OF MULTILOCUS DRUG RESISTANCE. Evolution; International Journal of Organic Evolution, 2012, 66, 1582-1597.	2.3	35
84	Interpreting phenotypic antibiotic tolerance and persister cells as evolution via epigenetic inheritance. Molecular Ecology, 2016, 25, 1869-1882.	3.9	35
85	Modelling malaria pathogenesis. Cellular Microbiology, 2008, 10, 1947-1955.	2.1	30
86	The industrialization of farming may be driving virulence evolution. Evolutionary Applications, 2017, 10, 189-198.	3.1	30
87	The evolutionary consequences of plasticity in hostâ€“pathogen interactions. Theoretical Population Biology, 2006, 69, 323-331.	1.1	29
88	Could the human papillomavirus vaccines drive virulence evolution?. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20141069.	2.6	29
89	What can Invasion Analyses Tell us about Evolution under Stochasticity in Finite Populations?. Selection, 2002, 2, 2-15.	0.8	29
90	Starvation reveals the cause of infection-induced castration and gigantism. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141087.	2.6	28

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91	A TIME COMMITMENT HYPOTHESIS FOR SIZE-DEPENDENT GENDER ALLOCATION. Evolution; International Journal of Organic Evolution, 1997, 51, 988-993.	2.3	27
92	Hamilton's rule meets the Hamiltonian: kin selection on dynamic characters. Proceedings of the Royal Society B: Biological Sciences, 1997, 264, 639-644.	2.6	26
93	Causes of Variation in Malaria Infection Dynamics: Insights from Theory and Data. American Naturalist, 2011, 178, E174-E188.	2.1	26
94	A Theoretical Investigation of the Evolution and Maintenance of Mirrorâ€image Flowers. American Naturalist, 2003, 161, 916-930.	2.1	24
95	POPULATION MIXING AND THE ADAPTIVE DIVERGENCE OF QUANTITATIVE TRAITS IN DISCRETE POPULATIONS: A THEORETICAL FRAMEWORK FOR EMPIRICAL TESTS. Evolution; International Journal of Organic Evolution, 2001, 55, 459-466.	2.3	23
96	Sexually transmitted infection and the evolution of serial monogamy. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141726.	2.6	23
97	A Generalization of Pontryagin's Maximum Principle for Dynamic Evolutionary Games among Relatives. Theoretical Population Biology, 2000, 57, 339-356.	1.1	22
98	Epidemiological and evolutionary consequences of targeted vaccination. Molecular Ecology, 2008, 17, 485-499.	3.9	22
99	Pathogen evolution in finite populations: slow and steady spreads the best. Journal of the Royal Society Interface, 2018, 15, 20180135.	3.4	22
100	Optimal antiviral treatment strategies and the effects of resistance. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 1082-1089.	2.6	21
101	The Price equation and evolutionary epidemiology. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190357.	4.0	20
102	The evolutionary emergence of pandemic influenza. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 2945-2953.	2.6	19
103	IMMUNE EVASION AND THE EVOLUTION OF MOLECULAR MIMICRY IN PARASITES. Evolution; International Journal of Organic Evolution, 2013, 67, n/a-n/a.	2.3	19
104	The Evolution of Temporal Patterns of Selfishness, Altruism, and Group Cohesion. American Naturalist, 1998, 152, 102-113.	2.1	18
105	MODELLING THE ECOLOGICAL CONTEXT OF EVOLUTIONARY CHANGE: DÃ‰JÃ€ VU OR SOMETHING NEW?. , 2005, , 273-309.		17
106	Managing Mareka€™s disease in the egg industry. Epidemics, 2019, 27, 52-58.	3.0	17
107	Computability, GÃ¶del's incompleteness theorem, and an inherent limit on the predictability of evolution. Journal of the Royal Society Interface, 2012, 9, 624-639.	3.4	16
108	Time-varying and state-dependent recovery rates in epidemiological models. Infectious Disease Modelling, 2017, 2, 419-430.	1.9	15

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109	Understanding and managing pathogen evolution: a way forward. Trends in Microbiology, 2003, 11, 206-207.	7.7	14
110	Information entropy as a measure of genetic diversity and evolvability in colonization. Molecular Ecology, 2015, 24, 2073-2083.	3.9	14
111	Density Dependence, Senescence, and Williamsâ€™ Hypothesis. Trends in Ecology and Evolution, 2020, 35, 300-302.	8.7	14
112	Disease eradication on large industrial farms. Journal of Mathematical Biology, 2016, 73, 885-902.	1.9	13
113	Fighting the Public Health Burden of AIDS With the Human Pegivirus. American Journal of Epidemiology, 2019, 188, 1586-1594.	3.4	13
114	Demystifying individual heterogeneity. Ecology Letters, 2021, 24, 2282-2297.	6.4	12
115	Why is HIV not vectorâ€borne?. Evolutionary Applications, 2008, 1, 17-27.	3.1	11
116	Working in a bubble: How can businesses reopen while limiting the risk of COVID-19 outbreaks?. Cmaj, 2020, 192, E1362-E1366.	2.0	11
117	The fitness of hybrids. Trends in Ecology and Evolution, 1995, 10, 288.	8.7	10
118	A CONSIDERATION OF PATTERNS OF VIRULENCE ARISING FROM HOST-PARASITE COEVOLUTION. Evolution; International Journal of Organic Evolution, 2003, 57, 671.	2.3	10
119	Cooperate with thy neighbour?. Nature, 2004, 428, 611-612.	27.8	10
120	The evolutionary consequences of vaccination. Vaccine, 2008, 26, C1-C3.	3.8	9
121	Female plasticity tends to reduce sexual conflict. Nature Ecology and Evolution, 2017, 1, 54.	7.8	9
122	THE EVOLUTION OF STATIC ALLOMETRY IN SEXUALLY SELECTED TRAITS. Evolution; International Journal of Organic Evolution, 2003, 57, 2450.	2.3	8
123	Pathogen evolution under host avoidance plasticity. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20151656.	2.6	8
124	Social evolution under demographic stochasticity. PLoS Computational Biology, 2019, 15, e1006739.	3.2	7
125	Evolutionary consequences of feedbacks between within-host competition and disease control. Evolution, Medicine and Public Health, 2020, 2020, 30-34.	2.5	7
126	The evolutionary advantage of haploid versus diploid microbes in nutrient-poor environments. Journal of Theoretical Biology, 2015, 383, 116-129.	1.7	6

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127	The economics of managing evolution. PLoS Biology, 2021, 19, e3001409.	5.6	6
128	The Role of Phenotypic Plasticity in Moderating Evolutionary Conflict. American Naturalist, 2018, 192, 230-240.	2.1	5
129	Chapter 12: Evolutionary Invasion Analysis. , 2007, , 454-566.		5
130	EDITORIAL: Editorial: evolutionary medicine special issue. Evolutionary Applications, 2009, 2, 7-10.	3.1	4
131	Why is sterility virulence most common in sexually transmitted infections? Examining the role of epidemiology. Evolution; International Journal of Organic Evolution, 2019, 73, 872-882.	2.3	4
132	Predicting Quarantine Failure Rates. Emerging Infectious Diseases, 2004, 10, 487-488.	4.3	3
133	THE ROLE OF SIZE-SPECIFIC PREDATION IN THE EVOLUTION AND DIVERSIFICATION OF PREY LIFE HISTORIES. Evolution; International Journal of Organic Evolution, 2002, 56, 877.	2.3	2
134	Modeling stochastic anomalies in an SIS system. Stochastic Analysis and Applications, 2017, 35, 27-39.	1.5	2
135	The evolution of ageâ€specific choosiness when mating. Journal of Evolutionary Biology, 2021, 34, 477-485.	1.7	2
136	Mathematical Techniques in the Evolutionary Epidemiology of Infectious Diseases. Series in Contemporary Applied Mathematics, 2009, , 136-149.	0.8	2
137	Population structure inhibits evolutionary diversification under competition for resources. Contemporary Issues in Genetics and Evolution, 2001, , 71-86.	0.9	2
138	Chapter 15: Analyzing Continuous Stochastic Modelsâ€“Diffusion in Time and Space. , 2007, , 649-691.		0
139	Chapter 11: Techniques for Analyzing Models with Periodic Behavior. , 2007, , 423-453.		0
140	REVOLUTIONARY INVASION ANALYSES. Evolution; International Journal of Organic Evolution, 2008, 62, 2709-2711.	2.3	0
141	To Age or Not to Age--What Is the Question?. Science of Aging Knowledge Environment: SAGE KE, 2004, 2004, pe10-pe10.	0.8	0
142	Poisson integral type quarantine in a stochastic SIR system. Mathematical Biosciences and Engineering, 2020, 17, 5534-5544.	1.9	0
143	The evolution of ageâ€specific choosiness and reproductive isolation in a model with overlapping generations. Evolution; International Journal of Organic Evolution, 2021, , .	2.3	0