Joel G Kingsolver

List of Publications by Year
in descending order

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		25034	30087
135	11,400	57	103
papers	citations	h-index	g-index

162	162	162	9290
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Evolution of thermal sensitivity of ectotherm performance. Trends in Ecology and Evolution, 1989, 4, 131-135.	8.7	1,027
2	Evolution of Resistance to High Temperature in Ectotherms. American Naturalist, 1993, 142, S21-S46.	2.1	420
3	Complex Life Cycles and the Responses of Insects to Climate Change. Integrative and Comparative Biology, 2011, 51, 719-732.	2.0	399
4	BIOPHYSICS, PHYSIOLOGICAL ECOLOGY, AND CLIMATE CHANGE: Does Mechanism Matter?. Annual Review of Physiology, 2005, 67, 177-201.	13.1	380
5	The Wellâ€Temperatured Biologist. American Naturalist, 2009, 174, 755-768.	2.1	353
6	Heat stress and the fitness consequences of climate change for terrestrial ectotherms. Functional Ecology, 2013, 27, 1415-1423.	3.6	325
7	Empirical perspectives on species borders: from traditional biogeography to global change. Oikos, 2005, 108, 58-75.	2.7	299
8	INDIVIDUAL-LEVEL SELECTION AS A CAUSE OF COPE'S RULE OF PHYLETIC SIZE INCREASE. Evolution; International Journal of Organic Evolution, 2004, 58, 1608-1612.	2.3	286
9	Precipitation drives global variation in natural selection. Science, 2017, 355, 959-962.	12.6	267
10	Evolutionary Analyses of Morphological and Physiological Plasticity in Thermally Variable Environments. American Zoologist, 1998, 38, 545-560.	0.7	251
11	Synthetic analyses of phenotypic selection in natural populations: lessons, limitations and future directions. Evolutionary Ecology, 2012, 26, 1101-1118.	1.2	234
12	Phenotypic Selection in Natural Populations: What Limits Directional Selection?. American Naturalist, 2011, 177, 346-357.	2.1	227
13	Path analyses of selection. Trends in Ecology and Evolution, 1991, 6, 276-280.	8.7	214
14	Patterns and Power of Phenotypic Selection in Nature. BioScience, 2007, 57, 561-572.	4.9	209
15	Thermoregulation and Flight in Colias Butterflies: Elevational Patterns and Mechanistic Limitations. Ecology, 1983, 64, 534-545.	3.2	197
16	Thermoregulatory Strategies in Colias Butterflies: Thermal Stress and the Limits to Adaptation in Temporally Varying Environments. American Naturalist, 1983, 121, 32-55.	2.1	189
17	Functional and Phylogenetic Approaches to Forecasting Species' Responses to Climate Change. Annual Review of Ecology, Evolution, and Systematics, 2012, 43, 205-226.	8.3	181
18	Weather and the Population Dynamics of Insects: Integrating Physiological and Population Ecology. Physiological Zoology, 1989, 62, 314-334.	1.5	170

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19	Variation in Continuous Reaction Norms: Quantifying Directions of Biological Interest. American Naturalist, 2005, 166, 277-289.	2.1	159
20	Climate Warming, Resource Availability, and the Metabolic Meltdown of Ectotherms. American Naturalist, 2019, 194, E140-E150.	2.1	156
21	Beyond Thermal Performance Curves: Modeling Time-Dependent Effects of Thermal Stress on Ectotherm Growth Rates. American Naturalist, 2016, 187, 283-294.	2.1	140
22	Fluctuating temperatures and ectotherm growth: distinguishing non-linear and time-dependent effects. Journal of Experimental Biology, 2015, 218, 2218-25.	1.7	132
23	Ecological Significance of Flight Activity in Colias Butterflies: Implications for Reproductive Strategy and Population Structure. Ecology, 1983, 64, 546-551.	3.2	130
24	Environmental Dependence of Thermal Reaction Norms: Host Plant Quality Can Reverse the Temperatureâ€•Size Rule. American Naturalist, 2010, 175, 1-10.	2.1	128
25	FITNESS CONSEQUENCES OF SEASONAL POLYPHENISM IN WESTERN WHITE BUTTERFLIES. Evolution; International Journal of Organic Evolution, 1995, 49, 942-954.	2.3	119
26	Seasonal Polyphenism in Wing-Melanin Pattern and Thermoregulatory Adaptation in Pieris Butterflies. American Naturalist, 1991, 137, 816-830.	2.1	117
27	Variation, selection and evolution of function-valued traits. Genetica, 2001, 112/113, 87-104.	1.1	117
28	Evolutionary Change in Continuous Reaction Norms. American Naturalist, 2014, 183, 453-467.	2.1	114
29	Quantifying thermal extremes and biological variation to predict evolutionary responses to changing climate. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160147.	4.0	113
30	Hotter Is Better and Broader: Thermal Sensitivity of Fitness in a Population of Bacteriophages. American Naturalist, 2009, 173, 419-430.	2.1	112
31	Plants Versus Animals: Do They Deal with Stress in Different Ways?. Integrative and Comparative Biology, 2002, 42, 415-423.	2.0	110
32	EVOLUTION IN A CONSTANT ENVIRONMENT: THERMAL FLUCTUATIONS AND THERMAL SENSITIVITY OF LABORATORY AND FIELD POPULATIONS OF<i>MANDUCA SEXTA</i>. Evolution; International Journal of Organic Evolution, 2009, 63, 537-541.	2.3	110
33	Mosquito Host Choice and the Epidemiology of Malaria. American Naturalist, 1987, 130, 811-827.	2.1	107
34	Mechanical determinants of nectar feeding strategy in hummingbirds: energetics, tongue morphology, and licking behavior. Oecologia, 1983, 60, 214-226.	2.0	105
35	Plasticity of Size and Growth in Fluctuating Thermal Environments: Comparing Reaction Norms and Performance Curves. Integrative and Comparative Biology, 2004, 44, 450-460.	2.0	100
36	EVOLUTION AND COADAPTATION OF THERMOREGULATORY BEHAVIOR AND WING PIGMENTATION PATTERN IN PIERID BUTTERFLIES. Evolution; International Journal of Organic Evolution, 1987, 41, 472-490.	2.3	98

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37	Environmental Variation and Selection on Performance Curves. Integrative and Comparative Biology, 2003, 43, 470-477.	2.0	96
38	Introduction: The Evolution of Morphology, Performance, and Fitness. Integrative and Comparative Biology, 2003, 43, 361-366.	2.0	91
39	FITNESS CONSEQUENCES OF CHOOSY OVIPOSITION FOR A TIME-LIMITED BUTTERFLY. Ecology, 2006, 87, 395-408.	3.2	90
40	Thermal and Hydric Aspects of Environmental Heterogeneity in the Pitcher Plant Mosquito. Ecological Monographs, 1979, 49, 357-376.	5.4	88
41	Feeding, Growth, and the Thermal Environment of Cabbage White Caterpillars,Pieris rapaeL.. Physiological and Biochemical Zoology, 2000, 73, 621-628.	1.5	88
42	Rapid population divergence in thermal reaction norms for an invading species: breaking the temperature?size rule. Journal of Evolutionary Biology, 2007, 20, 892-900.	1.7	88
43	QUANTITATIVE GENETICS OF CONTINUOUS REACTION NORMS: THERMAL SENSITIVITY OF CATERPILLAR GROWTH RATES. Evolution; International Journal of Organic Evolution, 2004, 58, 1521-1529.	2.3	87
44	Erroneous Arrhenius: Modified Arrhenius Model Best Explains the Temperature Dependence of Ectotherm Fitness. American Naturalist, 2010, 176, 227-233.	2.1	86
45	VIABILITY SELECTION ON SEASONALLY POLYPHENIC TRAITS: WING MELANIN PATTERN IN WESTERN WHITE BUTTERFLIES. Evolution; International Journal of Organic Evolution, 1995, 49, 932-941.	2.3	81
46	The Genetic Basis of Thermal Reaction Norm Evolution in Lab and Natural Phage Populations. PLoS Biology, 2006, 4, e201.	5.6	81
47	Big dams and salmon evolution: changes in thermal regimes and their potential evolutionary consequences. Evolutionary Applications, 2008, 1, 286-299.	3.1	81
48	Variation in universal temperature dependence of biological rates. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10377-10378.	7.1	71
49	Thermoregulation and the determinants of heat transfer in Colias butterflies. Oecologia, 1982, 53, 27-33.	2.0	69
50	Feeding strategy and the mechanics of blood sucking in insects. Journal of Theoretical Biology, 1983, 105, 661-677.	1.7	69
51	Thermoregulatory significance of wing melanization in Pieris butterflies (Lepidoptera: Pieridae): physics, posture, and pattern. Oecologia, 1985, 66, 546-553.	2.0	68
52	Stage-specific effects of temperature and dietary protein on growth and survival of Manduca sexta caterpillars. Physiological Entomology, 2000, 25, 35-40.	1.5	68
53	Thermal ecology of Pieris butterflies (Lepidoptera: Pieridae): a new mechanism of behavioral thermoregulation. Oecologia, 1985, 66, 540-545.	2.0	64
54	Variation in growth and instar number in field and laboratory Manduca sexta. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 977-981.	2.6	63

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55	EXPERIMENTAL ANALYSES OF WING SIZE, FLIGHT, AND SURVIVAL IN THE WESTERN WHITE BUTTERFLY. Evolution; International Journal of Organic Evolution, 1999, 53, 1479-1490.	2.3	61
56	What Are the Environmental Determinants of Phenotypic Selection? A Meta-analysis of Experimental Studies. American Naturalist, 2017, 190, 363-376.	2.1	60
57	Fitness Consequences of Seasonal Polyphenism in Western White Butterflies. Evolution; International Journal of Organic Evolution, 1995, 49, 942.	2.3	59
58	Evolution of plasticity and adaptive responses to climate change along climate gradients. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20170386.	2.6	59
59	Experimental Manipulation of Wing Pigment Pattern and Survival in Western White Butterflies. American Naturalist, 1996, 147, 296-306.	2.1	57
60	The demographic impacts of shifts in climate means and extremes on alpine butterflies. Functional Ecology, 2012, 26, 969-977.	3.6	57
61	Thermal physiological ecology of Colias butterflies in flight. Oecologia, 1986, 69, 161-170.	2.0	55
62	Migration, local adaptation and the evolution of plasticity. Trends in Ecology and Evolution, 2002, 17, 540-541.	8.7	55
63	Host plant quality, selection history and trade-offs shape the immune responses of<i>Manduca sexta</i>. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 289-297.	2.6	55
64	Mechanistic Constraints and Optimality Models: Thermoregulatory Strategies in Colias Butterflies. Ecology, 1984, 65, 1835-1839.	3.2	54
65	DEVELOPMENT, FUNCTION, AND THE QUANTITATIVE GENETICS OF WING MELANIN PATTERN IN<i>PIERIS</i>BUTTERFLIES. Evolution; International Journal of Organic Evolution, 1991, 45, 1480-1492.	2.3	54
66	Wing melanin pattern mediates species recognition in Pieris occidentalis. Animal Behaviour, 1992, 43, 89-94.	1.9	54
67	Effects of weight loading on flight performance and survival of palatable Neotropical Anartia fatima butterflies. Biological Journal of the Linnean Society, 2000, 70, 707-725.	1.6	53
68	Ectotherm Thermal Stress and Specialization Across Altitude and Latitude. Integrative and Comparative Biology, 2013, 53, 571-581.	2.0	52
69	Thermoregulation, Flight, and the Evolution of Wing Pattern in Pierid Butterflies: The Topography of Adaptive Landscapes. American Zoologist, 1988, 28, 899-912.	0.7	51
70	Ontogenetic variation in thermal sensitivity shapes insect ecological responses to climate change. Current Opinion in Insect Science, 2020, 41, 17-24.	4.4	51
71	ESTIMATING SELECTION ON QUANTITATIVE TRAITS USING CAPTUREâ€RECAPTURE DATA. Evolution; International Journal of Organic Evolution, 1995, 49, 384-388.	2.3	50
72	Geographic differences and microevolutionary changes in thermal sensitivity of butterfly larvae in response to climate. Functional Ecology, 2014, 28, 982-989.	3.6	49

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73	Insect Development, Thermal Plasticity and Fitness Implications in Changing, Seasonal Environments. Integrative and Comparative Biology, 2017, 57, 988-998.	2.0	49
74	Phenotypic clines, energy balances and ecological responses to climate change. Journal of Animal Ecology, 2014, 83, 41-50.	2.8	48
75	Elevational differences in developmental plasticity determine phenological responses of grasshoppers to recent climate warming. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20150441.	2.6	48
76	Climate variability slows evolutionary responses of <i>Colias</i> butterflies to recent climate change. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20142470.	2.6	47
77	Mechanical determinants of nectar-feeding energetics in butterflies: muscle mechanics, feeding geometry, and functional equivalence. Oecologia, 1989, 79, 66-75.	2.0	46
78	The analysis and interpretation of critical temperatures. Journal of Experimental Biology, 2018, 221, .	1.7	46
79	DISSECTING CORRELATED CHARACTERS: ADAPTIVE ASPECTS OF PHENOTYPIC COVARIATION IN MELANIZATION PATTERN OF <i>PIERIS</i> BUTTERFLIES. Evolution; International Journal of Organic Evolution, 1987, 41, 491-503.	2.3	44
80	Viability Selection on Seasonally Polyphenic Traits: Wing Melanin Pattern in Western White Butterflies. Evolution; International Journal of Organic Evolution, 1995, 49, 932.	2.3	44
81	Fitness consequences of host plant choice: a field experiment. Oikos, 2010, 119, 542-550.	2.7	43
82	Evolutionary Divergence in Thermal Sensitivity and Diapause of Field and Laboratory Populations of Manduca sexta. Physiological and Biochemical Zoology, 2007, 80, 473-479.	1.5	40
83	Direct and indirect phenotypic selection on developmental trajectories in Manduca sexta. Functional Ecology, 2012, 26, 598-607.	3.6	37
84	Evolution of Thermal Sensitivity in Changing and Variable Climates. Annual Review of Ecology, Evolution, and Systematics, 2021, 52, 563-586.	8.3	37
85	No evidence that warmer temperatures are associated with selection for smaller body sizes. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20191332.	2.6	35
86	Using museum specimens to track morphological shifts through climate change. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20170404.	4.0	35
87	Variation and Evolution of Function-Valued Traits. Annual Review of Ecology, Evolution, and Systematics, 2018, 49, 139-164.	8.3	34
88	Science Incubators: Synthesis Centers and Their Role in the Research Ecosystem. PLoS Biology, 2013, 11, e1001468.	5.6	32
89	Plasticity of upper thermal limits to acute and chronic temperature variation in <i>Manduca sexta</i> larvae. Journal of Experimental Biology, 2016, 219, 1290-4.	1.7	32
90	New Frontiers for Organismal Biology. BioScience, 2013, 63, 464-471.	4.9	30

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91	Relating Environmental Variation to Selection on Reaction Norms: An Experimental Test. American Naturalist, 2007, 169, 163-174.	2.1	29
92	Geographic divergence in upper thermal limits across insect life stages: does behavior matter?. Oecologia, 2016, 181, 107-114.	2.0	26
93	How do phenology, plasticity, and evolution determine the fitness consequences of climate change for montane butterflies?. Evolutionary Applications, 2018, 11, 1231-1244.	3.1	26
94	Butterfly Engineering. Scientific American, 1985, 253, 106-113.	1.0	23
95	Red-wing blackbird reproductive behaviour and the palatability, flight performance, and morphology of temperate pierid butterflies (Colias, Pieris, and Pontia). Biological Journal of the Linnean Society, 1998, 64, 41-55.	1.6	23
96	Differing thermal sensitivities in a hostâ€“parasitoid interaction: High, fluctuating developmental temperatures produce dead wasps and giant caterpillars. Functional Ecology, 2021, 35, 675-685.	3.6	23
97	The Interaction of Xyleborus ferrugineus (Coleoptera: Scolytidae) Behavior and Initial Reproduction in Relation to Its Symbiotic Fungi1. Annals of the Entomological Society of America, 1977, 70, 1-4.	2.5	22
98	Evolutionary divergence of field and laboratory populations of <i>Manduca sexta</i> in response to hostâ€plant quality. Ecological Entomology, 2010, 35, 166-174.	2.2	22
99	Environmental variability shapes evolution, plasticity and biogeographic responses to climate change. Global Ecology and Biogeography, 2019, 28, 1456-1468.	5.8	21
100	An integrated analysis of phenotypic selection on insect body size and development time. Evolution; International Journal of Organic Evolution, 2015, 69, 2525-2532.	2.3	19
101	Morphological and physiological determinants of local adaptation to climate in Rocky Mountain butterflies. , 2016, 4, cow035.		19
102	Host plant adaptation and the evolution of thermal reaction norms. Oecologia, 2012, 169, 353-360.	2.0	18
103	Competing beetles attract egg laying in a hawkmoth. Current Biology, 2022, 32, 861-869.e8.	3.9	17
104	Genetic Variation, Simplicity, and Evolutionary Constraints for Function-Valued Traits. American Naturalist, 2015, 185, E166-E181.	2.1	15
105	The effect of environmental uncertainty on morphological design and fluid balance in Sarracenia purpurea L.. Oecologia, 1981, 48, 364-370.	2.0	14
106	Variation, selection and evolution of function-valued traits. Contemporary Issues in Genetics and Evolution, 2001, , 87-104.	0.9	14
107	Historical changes in thermoregulatory traits of alpine butterflies reveal complex ecological and evolutionary responses to recent climate change. Climate Change Responses, 2016, 3, .	2.6	13
108	Rearing temperature and parasitoid load determine host and parasitoid performance in <i>Manduca sexta</i> and <i>Cotesia congregata</i>. Ecological Entomology, 2020, 45, 79-89.	2.2	13

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109	Uncertainty in geographical estimates of performance and fitness. Methods in Ecology and Evolution, 2018, 9, 1996-2008.	5.2	11
110	Responses of<i>Manduca sexta</i>larvae to heat waves. Journal of Experimental Biology, 2021, 224, .	1.7	11
111	Growth, stress, and acclimation responses to fluctuating temperatures in field and domesticated populations of <i>Manduca sexta</i>. Ecology and Evolution, 2020, 10, 13980-13989.	1.9	10
112	External morphology ofXyleborus ferrugineus (Fabr.) (Coleoptera: Scolytidae). I. Head and prothorax of adult males and females. Journal of Morphology, 1977, 154, 147-156.	1.2	8
113	Selective factors in the evolution of insect wings: response to KukalovÃ¡-Peck. Canadian Journal of Zoology, 1989, 67, 785-787.	1.0	8
114	Growth, developmental and stress responses of larvae of the clouded sulphur butterfly <i><scp>C</scp>olias eriphyle</i> to repeated exposure to high, subâ€lethal temperatures. Physiological Entomology, 2015, 40, 189-195.	1.5	8
115	Compensating for climate changeâ€“induced cueâ€environment mismatches: evidence for contemporary evolution of a photoperiodic reaction norm in <i>Colias</i> butterflies. Ecology Letters, 2020, 23, 1129-1136.	6.4	8
116	Developmental timing of extreme temperature events (heat waves) disrupts hostâ€“parasitoid interactions. Ecology and Evolution, 2022, 12, e8618.	1.9	8
117	The ghost of temperature past: interactive effects of previous and current thermal conditions on gene expression in Manduca sexta. Journal of Experimental Biology, 2020, 223, .	1.7	7
118	THE INTERACTION OF THE FEMALE AMBROSIA BEETLE, <i>XYLEBORUS FERRUGINEUS</i> (COLEOPTERA:) Tj ETQq0 0 0 rgBT /Overlock Experimentalis Et Applicata, 1977, 21, 9-13.	1.4	6
119	Visualizing genetic constraints. Annals of Applied Statistics, 2013, 7, .	1.1	5
120	Biogeography and phenology of oviposition preference and larval performance of Pieris virginiensis butterflies on native and invasive host plants. Biological Invasions, 2018, 20, 413-422.	2.4	4
121	Morphology and development rates of males and females of Xyleborus ferrugineus (Fabr.) (Coleoptera) Tj ETQq1 1 0.784314 rgBT /Ov	0.4	3
122	Errors in metaâ€analyses of selection. Journal of Evolutionary Biology, 2016, 29, 1905-1906.	1.7	3
123	Response to Comment on â€œPrecipitation drives global variation in natural selectionâ€. Science, 2018, 359, .	12.6	2
124	Some New Directions for Animal Ecological Physiology- Five Views: Evolutionary Physiology: Where's the Ecology?. Ecology, 1988, 69, 1645-1645.	3.2	1
125	Monitoring ecological change. Trends in Ecology and Evolution, 1992, 7, 354-355.	8.7	1
126	Functional and Evolutionary Biology of Insect Flight. BioScience, 2001, 51, 156.	4.9	1

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127	A Stochastic Model for Predicting Age and Mass at Maturity of Insects. American Naturalist, 2020, 196, 227-240.	2.1	1
128	Insect Thermoregulation Bernard Heinrich. BioScience, 1981, 31, 776-776.	4.9	0
129	Calow, P. (ed.). 1987. Evolutionary Physiological Ecology. Cambridge University Press, $ 34.50; f 22.50.. Journal of Evolutionary Biology, 1988, 1, 371-371.	1.7	0
130	The carnivorous plants. Trends in Ecology and Evolution, 1989, 4, 308-309.	8.7	0
131	Biomechanical Acclimation: Flying Cold. Current Biology, 2008, 18, R876.	3.9	0
132	The â€œIfâ€¦, Thenâ€•of EvolutionWhy Evolution Is True. Jerry A. Coyne . Penguin (Viking), 2009. 304 pp., illus. $27.95 (ISBN 9780670020539 cloth).. BioScience, 2009, 59, 907-908.	4.9	0
133	DARWIN IN THE TWENTY-FIRST CENTURY1. Evolution; International Journal of Organic Evolution, 2011, 65, 2130-2132.	2.3	0
134	III.7. Responses to Selection: Natural Populations. , 2013, , 238-246.		0
135	Connecting extreme climatic events to changes in ecological interactions. Functional Ecology, 2021, 35, 1382-1384.	3.6	0