

Richard E Michod

List of Publications by Year in descending order

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Version: 2024-02-01

104
papers

6,273
citations

66234

42
h-index

71532

76
g-index

108
all docs

108
docs citations

108
times ranked

3481
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling persistence in hydrological time series using fractional differencing. <i>Water Resources Research</i> , 1984, 20, 1898-1908.	1.7	518
2	Inclusive fitness theory and eusociality. <i>Nature</i> , 2011, 471, E1-E4.	13.7	339
3	The Theory of Kin Selection. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 1982, 13, 23-55.	6.7	311
4	Evolution of Life Histories in Response to Age-Specific Mortality Factors. <i>American Naturalist</i> , 1979, 113, 531-550.	1.0	298
5	Evolution of individuality during the transition from unicellular to multicellular life. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 8613-8618.	3.3	286
6	Triassic origin and early radiation of multicellular volvocine algae. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 3254-3258.	3.3	224
7	Coefficients of relatedness in sociobiology. <i>Nature</i> , 1980, 288, 694-697.	13.7	208
8	Genetic damage, mutation, and the evolution of sex. <i>Science</i> , 1985, 229, 1277-1281.	6.0	197
9	Cooperation and conflict in the evolution of multicellularity. <i>Heredity</i> , 2001, 86, 1-7.	1.2	192
10	EVOLUTION OF COMPLEXITY IN THE VOLVOCINE ALGAE: TRANSITIONS IN INDIVIDUALITY THROUGH DARWIN'S EYE. <i>Evolution; International Journal of Organic Evolution</i> , 2008, 62, 436-451.	1.1	160
11	On the Reorganization of Fitness During Evolutionary Transitions in Individuality. <i>Integrative and Comparative Biology</i> , 2003, 43, 64-73.	0.9	144
12	The <i>Gonium pectorale</i> genome demonstrates co-option of cell cycle regulation during the evolution of multicellularity. <i>Nature Communications</i> , 2016, 7, 11370.	5.8	125
13	Life-history evolution and the origin of multicellularity. <i>Journal of Theoretical Biology</i> , 2006, 239, 257-272.	0.8	116
14	Cooperation and Conflict in the Evolution of Individuality. I. Multilevel Selection of the Organism. <i>American Naturalist</i> , 1997, 149, 607-645.	1.0	109
15	Adaptive value of sex in microbial pathogens. <i>Infection, Genetics and Evolution</i> , 2008, 8, 267-285.	1.0	106
16	Evolution of Sexual Reproduction: Importance of DNA Repair, Complementation, and Variation. <i>American Naturalist</i> , 1981, 117, 537-549.	1.0	104
17	Cooperation and conflict in the evolution of individuality. II. Conflict mediation. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 1996, 263, 813-822.	1.2	102
18	On the transfer of fitness from the cell to the multicellular organism. <i>Biology and Philosophy</i> , 2006, 20, 967-987.	0.7	101

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19	Transitions in individuality. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 1997, 264, 853-857.	1.2	98
20	Multicellularity and the functional interdependence of motility and molecular transport. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 1353-1358.	3.3	91
21	The group covariance effect and fitness trade-offs during evolutionary transitions in individuality. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 9113-9117.	3.3	91
22	Sex as a response to oxidative stress: a twofold increase in cellular reactive oxygen species activates sex genes. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2004, 271, 1591-1596.	1.2	80
23	Population Biology of the First Replicators: On the Origin of the Genotype, Phenotype and Organism. <i>American Zoologist</i> , 1983, 23, 5-14.	0.7	78
24	The Evolutionary Origin of an Altruistic Gene. <i>Molecular Biology and Evolution</i> , 2006, 23, 1460-1464.	3.5	74
25	Origin of sex. <i>Journal of Theoretical Biology</i> , 1984, 110, 323-351.	0.8	73
26	The Molecular Basis of the Evolution of Sex. <i>Advances in Genetics</i> , 1987, 24, 323-370.	0.8	73
27	EVOLUTION OF INTERACTIONS IN FAMILY-STRUCTURED POPULATIONS: MIXED MATING MODELS. <i>Genetics</i> , 1980, 96, 275-296.	1.2	71
28	A Hydrodynamics Approach to the Evolution of Multicellularity: Flagellar Motility and Germ Soma Differentiation in Volvoclean Green Algae. <i>American Naturalist</i> , 2006, 167, 537-554.	1.0	70
29	Evolution of the Individual. <i>American Naturalist</i> , 1997, 150, S5-S21.	1.0	68
30	Mutation, Multilevel Selection, and the Evolution of Propagule Size during the Origin of Multicellularity. <i>American Naturalist</i> , 2001, 158, 638-654.	1.0	66
31	Programmed Cell Death and Complexity in Microbial Systems. <i>Current Biology</i> , 2016, 26, R587-R593.	1.8	66
32	Evolution of social behavior by reciprocation. <i>Journal of Theoretical Biology</i> , 1982, 99, 319-339.	0.8	65
33	Cooperation and conflict during evolutionary transitions in individuality. <i>Journal of Evolutionary Biology</i> , 2006, 19, 1406-1409.	0.8	61
34	How an Organism Dies Affects the Fitness of Its Neighbors. <i>American Naturalist</i> , 2011, 177, 224-232.	1.0	61
35	The Evolution of Cooperation in Spatially Heterogeneous Populations. <i>American Naturalist</i> , 1996, 147, 692-717.	1.0	60
36	Sex as a response to oxidative stress: the effect of antioxidants on sexual induction in a facultatively sexual lineage. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2003, 270, S136-9.	1.2	57

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37	Genetical aspects of kin selection: Effects of inbreeding. <i>Journal of Theoretical Biology</i> , 1979, 81, 223-233.	0.8	52
38	Organelle Genome Complexity Scales Positively with Organism Size in Volvocine Green Algae. <i>Molecular Biology and Evolution</i> , 2013, 30, 793-797.	3.5	52
39	Cooperation and conflict in the evolution of individuality. <i>BioSystems</i> , 2003, 69, 95-114.	0.9	48
40	On Calculating Demographic Parameters from Age Frequency Data. <i>Ecology</i> , 1980, 61, 265-269.	1.5	44
41	Inclusive fitness in evolution. <i>Nature</i> , 2011, 471, E6-E8.	13.7	44
42	The Darwinian Dynamic. <i>Quarterly Review of Biology</i> , 1983, 58, 185-207.	0.0	43
43	The 4-Celled <i>Tetrabaena socialis</i> Nuclear Genome Reveals the Essential Components for Genetic Control of Cell Number at the Origin of Multicellularity in the Volvocine Lineage. <i>Molecular Biology and Evolution</i> , 2018, 35, 855-870.	3.5	43
44	Chromosomal and allozymic diagnosis of three species of <i>Drosophila</i> . <i>Journal of Heredity</i> , 1977, 68, 71-74.	1.0	40
45	Sex and the emergence of species. <i>Journal of Theoretical Biology</i> , 1985, 117, 665-690.	0.8	40
46	Repeated evolution and reversibility of self-fertilization in the volvocine green algae*. <i>Evolution; International Journal of Organic Evolution</i> , 2018, 72, 386-398.	1.1	39
47	On the Evolution of Reliable Indicators of Fitness. <i>American Naturalist</i> , 1990, 135, 788-808.	1.0	36
48	Invading wave of cooperation in a spatial iterated prisoner's dilemma. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 1995, 259, 77-83.	1.2	36
49	Adaptive Topography in Family-Structured Models of Kin Selection. <i>Science</i> , 1980, 210, 667-669.	6.0	35
50	Programmed death in a unicellular organism has species-specific fitness effects. <i>Biology Letters</i> , 2014, 10, 20131088.	1.0	34
51	Positive Heuristics in Evolutionary Biology. <i>British Journal for the Philosophy of Science</i> , 1981, 32, 1-36.	1.4	32
52	EVOLUTION OF DEVELOPMENTAL PROGRAMS IN <i>VOLVOX</i> (CHLOROPHYTA). <i>Journal of Phycology</i> , 2010, 46, 316-324.	1.0	32
53	Group Selection and Group Adaptation During a Major Evolutionary Transition: Insights from the Evolution of Multicellularity in the Volvocine Algae. <i>Biological Theory</i> , 2014, 9, 452-469.	0.8	32
54	Measures of Genetic Relationship and the Concept of Inclusive Fitness. <i>American Naturalist</i> , 1979, 114, 637-647.	1.0	31

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55	Multicellularity Drives the Evolution of Sexual Traits. <i>American Naturalist</i> , 2018, 192, E93-E105.	1.0	31
56	Deleterious Mutations and Selection for Sex in Finite Diploid Populations. <i>Genetics</i> , 2010, 184, 1095-1112.	1.2	30
57	The Evolutionary Role of Recombinational Repair and Sex. <i>International Review of Cytology</i> , 1985, 96, 1-28.	6.2	29
58	Genetic basis for soma is present in undifferentiated volvocine green algae. <i>Journal of Evolutionary Biology</i> , 2017, 30, 1205-1218.	0.8	26
59	Origin of Sex for Error Repair I. Sex, Diploidy, and Haploidy. <i>Theoretical Population Biology</i> , 1995, 47, 18-55.	0.5	24
60	Exact versus heuristic models of kin selection. <i>Journal of Theoretical Biology</i> , 1982, 97, 699-713.	0.8	22
61	<i><i>VOLVOX BARBERI</i></i> , THE FASTEST SWIMMER OF THE VOLVOCALES (CHLOROPHYCEAE) ¹ . <i>Journal of Phycology</i> , 2008, 44, 1395-1398.	1.0	22
62	A model for the origin of group reproduction during the evolutionary transition to multicellularity. <i>Biology Letters</i> , 2015, 11, 20150157.	1.0	22
63	Genetic Error, Sex, and Diploidy. <i>Journal of Heredity</i> , 1993, 84, 360-371.	1.0	20
64	EARLY EVOLUTION OF THE GENETIC BASIS FOR SOMA IN THE VOLVOCAEAE. <i>Evolution; International Journal of Organic Evolution</i> , 2014, 68, 2014-2025.	1.1	20
65	DNA repair and the evolution of transformation IV. DNA damage increases transformation. <i>Journal of Evolutionary Biology</i> , 1994, 7, 147-175.	0.8	19
66	GENOMICS IN THE LIGHT OF EVOLUTIONARY TRANSITIONS. <i>Evolution; International Journal of Organic Evolution</i> , 2010, 64, 1533-1540.	1.1	19
67	Group and individual selection during evolutionary transitions in individuality: meanings and partitions. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020, 375, 20190364.	1.8	19
68	The effect of the reproductive system on mutation load. <i>Theoretical Population Biology</i> , 1988, 33, 243-265.	0.5	18
69	Sex in microbial pathogens. <i>Infection, Genetics and Evolution</i> , 2018, 57, 8-25.	1.0	17
70	On the relation of family structured models and inclusive fitness models for kin selection. <i>Journal of Theoretical Biology</i> , 1981, 88, 743-754.	0.8	16
71	Fitness and evolutionary explanation. <i>Biology and Philosophy</i> , 1991, 6, 1-22.	0.7	16
72	Evolutionary Transitions in Individuality and Recent Models of Multicellularity. <i>Advances in Marine Genomics</i> , 2015, , 165-188.	1.2	15

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73	Distributions of reproductive and somatic cell numbers in diverse (Chlorophyta) species. <i>Evolutionary Ecology Research</i> , 2012, 14, 707-727.	2.0	14
74	Flagellar phenotypic plasticity in volvoclean algae correlates with PÅ©clet number. <i>Journal of the Royal Society Interface</i> , 2011, 8, 1409-1417.	1.5	13
75	Evolutionary Transitions in Individuality: Multicellularity and Sex. , 2011, , 169-198.		13
76	Did Human Culture Emerge in a Cultural Evolutionary Transition in Individuality?. <i>Biological Theory</i> , 2021, 16, 213-236.	0.8	12
77	Evolution of Individuality: A Case Study in the Volvocine Green Algae. <i>Philosophy Theory and Practice in Biology</i> , 2017, 9, .	0.2	12
78	Darwinian Selection in the Brain. <i>Evolution; International Journal of Organic Evolution</i> , 1989, 43, 694.	1.1	11
79	Philosophical foundations for the hierarchy of life. <i>Biology and Philosophy</i> , 2010, 25, 391-403.	0.7	11
80	Generation time and fitness tradeoffs during the evolution of multicellularity. <i>Journal of Theoretical Biology</i> , 2017, 430, 92-102.	0.8	11
81	Stress Responses Coâ€Opted for Specialized Cell Types During the Early Evolution of Multicellularity. <i>BioEssays</i> , 2020, 42, e2000029.	1.2	11
82	Some Aspects of Reproductive Mode and Origin of Multicellularity. <i>Selection</i> , 2001, 1, 97-110.	0.8	11
83	Origin of Sex for Error Repair. <i>Theoretical Population Biology</i> , 1998, 53, 60-74.	0.5	9
84	On fitness and adaptedness and their role in evolutionary explanation. <i>Journal of the History of Biology</i> , 1986, 19, 289-302.	0.2	8
85	Origin of Sex for Error Repair II. Rarity and Extreme Environments. <i>Theoretical Population Biology</i> , 1995, 47, 56-81.	0.5	8
86	Cell Death in Evolutionary Transitions in Individuality. <i>Yale Journal of Biology and Medicine</i> , 2019, 92, 651-662.	0.2	7
87	WHAT'S LOVE GOT TO DO WITH IT?. <i>The Sciences</i> , 1989, 29, 22-29.	0.1	6
88	A Darwinian approach to the origin of life cycles with group properties. <i>Theoretical Population Biology</i> , 2015, 102, 76-84.	0.5	6
89	Modification of Genetic Constraints on Frequency-Dependent Selection. <i>American Naturalist</i> , 1990, 136, 406-427.	1.0	6
90	Masking of Mutations and the Evolution of Sex. <i>American Naturalist</i> , 1992, 139, 706-734.	1.0	5

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91	Fitness and Evolutionary Explanation: A Response. <i>Biology and Philosophy</i> , 1991, 6, 45-53.	0.7	4
92	Fitness trade-offs and developmental constraints in the evolution of soma: an experimental study in a volvocine alga. <i>Evolutionary Ecology Research</i> , 2014, 16, 203-221.	2.0	4
93	John Maynard Smith. <i>Annual Review of Genetics</i> , 2005, 39, 1-8.	3.2	3
94	Levels of selection and the formal Darwinism project. <i>Biology and Philosophy</i> , 2014, 29, 217-224.	0.7	3
95	Evolution of sex. <i>Trends in Ecology and Evolution</i> , 1990, 5, 30.	4.2	2
96	Models of cell division initiation in <i>Chlamydomonas</i> : A challenge to the consensus view. <i>Journal of Theoretical Biology</i> , 2017, 412, 186-197.	0.8	2
97	Molecular mechanisms of life history trade-offs and the evolution of multicellular complexity in volvoclean green algae. , 2011, , 270-283.		2
98	WhatGoodIsSex?. <i>The Sciences</i> , 1997, 37, 42-46.	0.1	1
99	Molecular trade-offs in RNA ligases affected the modular emergence of complex ribozymes at the origin of life. <i>Royal Society Open Science</i> , 2017, 4, 170376.	1.1	1
100	Characterization and Transformation of reg Cluster Genes in <i>Volvox powersii</i> Enable Investigation of Convergent Evolution of Cellular Differentiation in <i>Volvox</i> . <i>Protist</i> , 2021, 172, 125834.	0.6	1
101	Translating research on evolutionary transitions into the teaching of biological complexity. <i>Evolution; International Journal of Organic Evolution</i> , 2022, , .	1.1	1
102	<i>A Science of Fitness: Ecological Genetics</i> . Leslie A. Real, Ed. Princeton University Press, Princeton, NJ, 1994. xvi, 238 pp., illus. \$49.50 or £40; paper, \$24.95 or £18.50.. <i>Science</i> , 1994, 266, 468-470.	6.0	0
103	<i>Theory of Population Genetics and Evolutionary Ecology: An Introduction</i> .Jonathan Roughgarden. <i>Quarterly Review of Biology</i> , 1980, 55, 69-70.	0.0	0
104	<i>Molecular Theory of Evolution. Outline of a Physico-Chemical Theory of the Origin of Life</i> .Bernd-Olaf Koppers , Paul Woolley. <i>Quarterly Review of Biology</i> , 1984, 59, 171-172.	0.0	0