Richard E Michod

List of Publications by Year
in descending order

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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	Translating research on evolutionary transitions into the teaching of biological complexity. Evolution; International Journal of Organic Evolution, 2022, , .	1.1	1
2	Did Human Culture Emerge in a Cultural Evolutionary Transition in Individuality?. Biological Theory, 2021, 16, 213-236.	0.8	12
3	Characterization and Transformation of reg Cluster Genes in Volvox powersii Enable Investigation of Convergent Evolution of Cellular Differentiation in Volvox. Protist, 2021, 172, 125834.	0.6	1
4	Group and individual selection during evolutionary transitions in individuality: meanings and partitions. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190364.	1.8	19
5	Stress Responses Coâ€Opted for Specialized Cell Types During the Early Evolution of Multicellularity. BioEssays, 2020, 42, e2000029.	1.2	11
6	Cell Death in Evolutionary Transitions in Individuality. Yale Journal of Biology and Medicine, 2019, 92, 651-662.	0.2	7
7	The 4-Celled Tetrabaena socialis Nuclear Genome Reveals the Essential Components for Genetic Control of Cell Number at the Origin of Multicellularity in the Volvocine Lineage. Molecular Biology and Evolution, 2018, 35, 855-870.	3.5	43
8	Sex in microbial pathogens. Infection, Genetics and Evolution, 2018, 57, 8-25.	1.0	17
9	Repeated evolution and reversibility of selfâ€fertilization in the volvocine green algae*. Evolution; International Journal of Organic Evolution, 2018, 72, 386-398.	1.1	39
10	Multicellularity Drives the Evolution of Sexual Traits. American Naturalist, 2018, 192, E93-E105.	1.0	31
11	Genetic basis for soma is present in undifferentiated volvocine green algae. Journal of Evolutionary Biology, 2017, 30, 1205-1218.	0.8	26
12	Molecular trade-offs in RNA ligases affected the modular emergence of complex ribozymes at the origin of life. Royal Society Open Science, 2017, 4, 170376.	1.1	1
13	Generation time and fitness tradeoffs during the evolution of multicellularity. Journal of Theoretical Biology, 2017, 430, 92-102.	0.8	11
14	Models of cell division initiation in Chlamydomonas: A challenge to the consensus view. Journal of Theoretical Biology, 2017, 412, 186-197.	0.8	2
15	Evolution of Individuality: A Case Study in the Volvocine Green Algae. Philosophy Theory and Practice in Biology, 2017, 9, .	0.2	12
16	Programmed Cell Death and Complexity in Microbial Systems. Current Biology, 2016, 26, R587-R593.	1.8	66
17	The Gonium pectorale genome demonstrates co-option of cell cycle regulation during the evolution of multicellularity. Nature Communications, 2016, 7, 11370.	5.8	125
18	A Darwinian approach to the origin of life cycles with group properties. Theoretical Population Biology, 2015, 102, 76-84.	0.5	6

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19	A model for the origin of group reproduction during the evolutionary transition to multicellularity. Biology Letters, 2015, 11, 20150157.	1.0	22
20	Evolutionary Transitions in Individuality and Recent Models of Multicellularity. Advances in Marine Genomics, 2015, , 165-188.	1.2	15
21	Programmed death in a unicellular organism has species-specific fitness effects. Biology Letters, 2014, 10, 20131088.	1.0	34
22	Levels of selection and the formal Darwinism project. Biology and Philosophy, 2014, 29, 217-224.	0.7	3
23	Group Selection and Group Adaptation During a Major Evolutionary Transition: Insights from the Evolution of Multicellularity in the Volvocine Algae. Biological Theory, 2014, 9, 452-469.	0.8	32
24	EARLY EVOLUTION OF THE GENETIC BASIS FOR SOMA IN THE VOLVOCACEAE. Evolution; International Journal of Organic Evolution, 2014, 68, 2014-2025.	1.1	20
25	Fitness trade-offs and developmental constraints in the evolution of soma: an experimental study in a volvocine alga. Evolutionary Ecology Research, 2014, 16, 203-221.	2.0	4
26	Organelle Genome Complexity Scales Positively with Organism Size in Volvocine Green Algae. Molecular Biology and Evolution, 2013, 30, 793-797.	3.5	52
27	Distributions of reproductive and somatic cell numbers in diverse (Chlorophyta) species. Evolutionary Ecology Research, 2012, 14, 707-727.	2.0	14
28	Inclusive fitness theory and eusociality. Nature, 2011, 471, E1-E4.	13.7	339
29	Inclusive fitness in evolution. Nature, 2011, 471, E6-E8.	13.7	44
30	How an Organism Dies Affects the Fitness of Its Neighbors. American Naturalist, 2011, 177, 224-232.	1.0	61
31	Flagellar phenotypic plasticity in volvocalean algae correlates with PÃ©clet number. Journal of the Royal Society Interface, 2011, 8, 1409-1417.	1.5	13
32	Molecular mechanisms of life history trade-offs and the evolution of multicellular complexity in volvocalean green algae. , 2011, , 270-283.		2
33	Evolutionary Transitions in Individuality: Multicellularity and Sex. , 2011, , 169-198.		13
34	Philosophical foundations for the hierarchy of life. Biology and Philosophy, 2010, 25, 391-403.	0.7	11
35	EVOLUTION OF DEVELOPMENTAL PROGRAMS INVOLVOX(CHLOROPHYTA). Journal of Phycology, 2010, 46, 316-324.	1.0	32
36	GENOMICS IN THE LIGHT OF EVOLUTIONARY TRANSITIONS. Evolution; International Journal of Organic Evolution, 2010, 64, 1533-1540.	1.1	19

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37	Deleterious Mutations and Selection for Sex in Finite Diploid Populations. Genetics, 2010, 184, 1095-1112.	1.2	30
38	Triassic origin and early radiation of multicellular volvocine algae. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3254-3258.	3.3	224
39	Adaptive value of sex in microbial pathogens. Infection, Genetics and Evolution, 2008, 8, 267-285.	1.0	106
40	EVOLUTION OF COMPLEXITY IN THE VOLVOCINE ALGAE: TRANSITIONS IN INDIVIDUALITY THROUGH DARWIN'S EYE. Evolution; International Journal of Organic Evolution, 2008, 62, 436-451.	1.1	160
41	VOLVOX BARBERI, THE FASTEST SWIMMER OF THE VOLVOCALES (CHLOROPHYCEAE)¹. Journal of Phycology, 2008, 44, 1395-1398.	1.0	22
42	Evolution of individuality during the transition from unicellular to multicellular life. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8613-8618.	3.3	286
43	Cooperation and conflict during evolutionary transitions in individuality. Journal of Evolutionary Biology, 2006, 19, 1406-1409.	0.8	61
44	Life-history evolution and the origin of multicellularity. Journal of Theoretical Biology, 2006, 239, 257-272.	0.8	116
45	On the transfer of fitness from the cell to the multicellular organism. Biology and Philosophy, 2006, 20, 967-987.	0.7	101
46	A Hydrodynamics Approach to the Evolution of Multicellularity: Flagellar Motility and Germâ€Soma Differentiation in Volvocalean Green Algae. American Naturalist, 2006, 167, 537-554.	1.0	70
47	The Evolutionary Origin of an Altruistic Gene. Molecular Biology and Evolution, 2006, 23, 1460-1464.	3.5	74
48	Multicellularity and the functional interdependence of motility and molecular transport. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1353-1358.	3.3	91
49	The group covariance effect and fitness trade-offs during evolutionary transitions in individuality. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9113-9117.	3.3	91
50	John Maynard Smith. Annual Review of Genetics, 2005, 39, 1-8.	3.2	3
51	Sex as a response to oxidative stress: a twofold increase in cellular reactive oxygen species activates sex genes. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 1591-1596.	1.2	80
52	Cooperation and conflict in the evolution of individuality. BioSystems, 2003, 69, 95-114.	0.9	48
53	On the Reorganization of Fitness During Evolutionary Transitions in Individuality. Integrative and Comparative Biology, 2003, 43, 64-73.	0.9	144
54	Sex as a response to oxidative stress: the effect of antioxidants on sexual induction in a facultatively sexual lineage. Proceedings of the Royal Society B: Biological Sciences, 2003, 270, S136-9.	1.2	57

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55	Cooperation and conflict in the evolution of multicellularity. Heredity, 2001, 86, 1-7.	1.2	192
56	Mutation, Multilevel Selection, and the Evolution of Propagule Size during the Origin of Multicellularity. American Naturalist, 2001, 158, 638-654.	1.0	66
57	Some Aspects of Reproductive Mode and Origin of Multicellularity. Selection, 2001, 1, 97-110.	0.8	11
58	Origin of Sex for Error Repair. Theoretical Population Biology, 1998, 53, 60-74.	0.5	9
59	WhatGoodIsSex?. The Sciences, 1997, 37, 42-46.	0.1	1
60	Evolution of the Individual. American Naturalist, 1997, 150, S5-S21.	1.0	68
61	Cooperation and Conflict in the Evolution of Individuality. I. Multilevel Selection of the Organism. American Naturalist, 1997, 149, 607-645.	1.0	109
62	Transitions in individuality. Proceedings of the Royal Society B: Biological Sciences, 1997, 264, 853-857.	1.2	98
63	Cooperation and conflict in the evolution of individuality. II. Conflict mediation. Proceedings of the Royal Society B: Biological Sciences, 1996, 263, 813-822.	1.2	102
64	The Evolution of Cooperation in Spatially Heterogeneous Populations. American Naturalist, 1996, 147, 692-717.	1.0	60
65	Origin of Sex for Error Repair I. Sex, Diploidy, and Haploidy. Theoretical Population Biology, 1995, 47, 18-55.	0.5	24
66	Origin of Sex for Error Repair II. Rarity and Extreme Environments. Theoretical Population Biology, 1995, 47, 56-81.	0.5	8
67	Invading wave of cooperation in a spatial iterated prisonerâ€™s dilemma. Proceedings of the Royal Society B: Biological Sciences, 1995, 259, 77-83.	1.2	36
68	DNA repair and the evolution of transformation IV. DNA damage increases transformation. Journal of Evolutionary Biology, 1994, 7, 147-175.	0.8	19
69	A Science of Fitness: Ecological Genetics . Leslie A. Real, Ed. Princeton University Press, Princeton, NJ, 1994. xvi, 238 pp., illus. $49.50 or Â£40; paper, $24.95 or Â£18.50.. Science, 1994, 266, 468-470.	6.0	0
70	Genetic Error, Sex, and Diploidy. Journal of Heredity, 1993, 84, 360-371.	1.0	20
71	Masking of Mutations and the Evolution of Sex. American Naturalist, 1992, 139, 706-734.	1.0	5
72	Fitness and evolutionary explanation. Biology and Philosophy, 1991, 6, 1-22.	0.7	16

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73	Fitness and Evolutionary Explanation: A Response. Biology and Philosophy, 1991, 6, 45-53.	0.7	4
74	On the Evolution of Reliable Indicators of Fitness. American Naturalist, 1990, 135, 788-808.	1.0	36
75	Evolution of sex. Trends in Ecology and Evolution, 1990, 5, 30.	4.2	2
76	Modification of Genetic Constraints on Frequency-Dependent Selection. American Naturalist, 1990, 136, 406-427.	1.0	6
77	WHAT'S LOVE GOT TO DO WITH IT?. The Sciences, 1989, 29, 22-29.	0.1	6
78	Darwinian Selection in the Brain. Evolution; International Journal of Organic Evolution, 1989, 43, 694.	1.1	11
79	The effect of the reproductive system on mutation load. Theoretical Population Biology, 1988, 33, 243-265.	0.5	18
80	The Molecular Basis of the Evolution of Sex. Advances in Genetics, 1987, 24, 323-370.	0.8	73
81	On fitness and adaptedness and their role in evolutionary explanation. Journal of the History of Biology, 1986, 19, 289-302.	0.2	8
82	The Evolutionary Role of Recombinational Repair and Sex. International Review of Cytology, 1985, 96, 1-28.	6.2	29
83	Sex and the emergence of species. Journal of Theoretical Biology, 1985, 117, 665-690.	0.8	40
84	Genetic damage, mutation, and the evolution of sex. Science, 1985, 229, 1277-1281.	6.0	197
85	Origin of sex. Journal of Theoretical Biology, 1984, 110, 323-351.	0.8	73
86	Modeling persistence in hydrological time series using fractional differencing. Water Resources Research, 1984, 20, 1898-1908.	1.7	518
87	Molecular Theory of Evolution. Outline of a Physico-Chemical Theory of the Origin of Life.Bernd-Olaf Kuppers , Paul Woolley. Quarterly Review of Biology, 1984, 59, 171-172.	0.0	0
88	Population Biology of the First Replicators: On the Origin of the Genotype, Phenotype and Organism. American Zoologist, 1983, 23, 5-14.	0.7	78
89	The Darwinian Dynamic. Quarterly Review of Biology, 1983, 58, 185-207.	0.0	43
90	The Theory of Kin Selection. Annual Review of Ecology, Evolution, and Systematics, 1982, 13, 23-55.	6.7	311

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91	Evolution of social behavior by reciprocation. Journal of Theoretical Biology, 1982, 99, 319-339.	0.8	65
92	Exact versus heuristic models of kin selection. Journal of Theoretical Biology, 1982, 97, 699-713.	0.8	22
93	Evolution of Sexual Reproduction: Importance of DNA Repair, Complementation, and Variation. American Naturalist, 1981, 117, 537-549.	1.0	104
94	On the relation of family structured models and inclusive fitness models for kin selection. Journal of Theoretical Biology, 1981, 88, 743-754.	0.8	16
95	Positive Heuristics in Evolutionary Biology. British Journal for the Philosophy of Science, 1981, 32, 1-36.	1.4	32
96	Coefficients of relatedness in sociobiology. Nature, 1980, 288, 694-697.	13.7	208
97	Adaptive Topography in Family-Structured Models of Kin Selection. Science, 1980, 210, 667-669.	6.0	35
98	On Calculating Demographic Parameters from Age Frequency Data. Ecology, 1980, 61, 265-269.	1.5	44
99	EVOLUTION OF INTERACTIONS IN FAMILY-STRUCTURED POPULATIONS: MIXED MATING MODELS. Genetics, 1980, 96, 275-296.	1.2	71
100	Theory of Population Genetics and Evolutionary Ecology: An Introduction.Jonathan Roughgarden. Quarterly Review of Biology, 1980, 55, 69-70.	0.0	0
101	Genetical aspects of kin selection: Effects of inbreeding. Journal of Theoretical Biology, 1979, 81, 223-233.	0.8	52
102	Measures of Genetic Relationship and the Concept of Inclusive Fitness. American Naturalist, 1979, 114, 637-647.	1.0	31
103	Evolution of Life Histories in Response to Age-Specific Mortality Factors. American Naturalist, 1979, 113, 531-550.	1.0	298
104	Chromosomal and allozymic diagnosis of three species of Drosophila. Journal of Heredity, 1977, 68, 71-74.	1.0	40