

Robert M May

List of Publications by Year in descending order

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167
papers

46,670
citations

9786

73
h-index

5988

160
g-index

182
all docs

182
docs citations

182
times ranked

27505
citing authors

#	ARTICLE	IF	CITATIONS
1	Simple mathematical models with very complicated dynamics. <i>Nature</i> , 1976, 261, 459-467.	27.8	5,794
2	Evolutionary games and spatial chaos. <i>Nature</i> , 1992, 359, 826-829.	27.8	3,483
3	Population biology of infectious diseases: Part I. <i>Nature</i> , 1979, 280, 361-367.	27.8	2,499
4	Will a Large Complex System be Stable?. <i>Nature</i> , 1972, 238, 413-414.	27.8	2,271
5	Habitat destruction and the extinction debt. <i>Nature</i> , 1994, 371, 65-66.	27.8	2,236
6	Nonlinear forecasting as a way of distinguishing chaos from measurement error in time series. <i>Nature</i> , 1990, 344, 734-741.	27.8	1,649
7	Regulation and Stability of Host-Parasite Population Interactions: I. Regulatory Processes. <i>Journal of Animal Ecology</i> , 1978, 47, 219.	2.8	1,412
8	Thresholds and breakpoints in ecosystems with a multiplicity of stable states. <i>Nature</i> , 1977, 269, 471-477.	27.8	1,410
9	Dispersal in stable habitats. <i>Nature</i> , 1977, 269, 578-581.	27.8	1,187
10	Bifurcations and Dynamic Complexity in Simple Ecological Models. <i>American Naturalist</i> , 1976, 110, 573-599.	2.1	1,135
11	Systemic risk in banking ecosystems. <i>Nature</i> , 2011, 469, 351-355.	27.8	1,090
12	Population biology of infectious diseases: Part II. <i>Nature</i> , 1979, 280, 455-461.	27.8	994
13	Nonlinear Aspects of Competition Between Three Species. <i>SIAM Journal on Applied Mathematics</i> , 1975, 29, 243-253.	1.8	916
14	Transmission dynamics of HIV infection. <i>Nature</i> , 1987, 326, 137-142.	27.8	707
15	Ecology for bankers. <i>Nature</i> , 2008, 451, 893-894.	27.8	651
16	Vaccination and herd immunity to infectious diseases. <i>Nature</i> , 1985, 318, 323-329.	27.8	617
17	Infection dynamics on scale-free networks. <i>Physical Review E</i> , 2001, 64, 066112.	2.1	603
18	THE SPATIAL DILEMMAS OF EVOLUTION. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1993, 03, 35-78.	1.7	573

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19	EPIDEMIOLOGY: How Viruses Spread Among Computers and People. <i>Science</i> , 2001, 292, 1316-1317.	12.6	558
20	Why fishing magnifies fluctuations in fish abundance. <i>Nature</i> , 2008, 452, 835-839.	27.8	548
21	Management of Multispecies Fisheries. <i>Science</i> , 1979, 205, 267-277.	12.6	515
22	Regulation and Stability of Host-Parasite Population Interactions: II. Destabilizing Processes. <i>Journal of Animal Ecology</i> , 1978, 47, 249.	2.8	510
23	Fishing elevates variability in the abundance of exploited species. <i>Nature</i> , 2006, 443, 859-862.	27.8	493
24	Helminth Infections of Humans: Mathematical Models, Population Dynamics, and Control. <i>Advances in Parasitology</i> , 1985, 24, 1-101.	3.2	487
25	Can We Name Earth's Species Before They Go Extinct?. <i>Science</i> , 2013, 339, 413-416.	12.6	479
26	Dynamics of Metapopulations: Habitat Destruction and Competitive Coexistence. <i>Journal of Animal Ecology</i> , 1992, 61, 37.	2.8	442
27	Subnets of scale-free networks are not scale-free: Sampling properties of networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 4221-4224.	7.1	436
28	Population dynamics of fox rabies in Europe. <i>Nature</i> , 1981, 289, 765-771.	27.8	434
29	Host-Parasitoid Systems in Patchy Environments: A Phenomenological Model. <i>Journal of Animal Ecology</i> , 1978, 47, 833.	2.8	419
30	Evolutionarily stable dispersal strategies. <i>Journal of Theoretical Biology</i> , 1980, 82, 205-230.	1.7	415
31	Biological populations obeying difference equations: Stable points, stable cycles, and chaos. <i>Journal of Theoretical Biology</i> , 1975, 51, 511-524.	1.7	414
32	Taxonomy as destiny. <i>Nature</i> , 1990, 347, 129-130.	27.8	405
33	Applications of fractals in ecology. <i>Trends in Ecology and Evolution</i> , 1990, 5, 79-86.	8.7	385
34	Uses and Abuses of Mathematics in Biology. <i>Science</i> , 2004, 303, 790-793.	12.6	351
35	Antigenic oscillations and shifting immunodominance in HIV-1 infections. <i>Nature</i> , 1995, 375, 606-611.	27.8	342
36	Epidemiological parameters of HIV transmission. <i>Nature</i> , 1988, 333, 514-519.	27.8	340

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37	Species coexistence and self-organizing spatial dynamics. <i>Nature</i> , 1994, 370, 290-292.	27.8	334
38	Time-Delay Versus Stability in Population Models with Two and Three Trophic Levels. <i>Ecology</i> , 1973, 54, 315-325.	3.2	332
39	Extinction and the Loss of Evolutionary History. <i>Science</i> , 1997, 278, 692-694.	12.6	302
40	Stability in Randomly Fluctuating Versus Deterministic Environments. <i>American Naturalist</i> , 1973, 107, 621-650.	2.1	293
41	The maintenance of strain structure in populations of recombining infectious agents. <i>Nature Medicine</i> , 1996, 2, 437-442.	30.7	276
42	Spatial Heterogeneity in Epidemic Models. <i>Journal of Theoretical Biology</i> , 1996, 179, 1-11.	1.7	269
43	Network structure and the biology of populations. <i>Trends in Ecology and Evolution</i> , 2006, 21, 394-399.	8.7	268
44	Networks of sexual contacts. <i>Aids</i> , 1989, 3, 807-818.	2.2	257
45	Population dynamics of human helminth infections: control by chemotherapy. <i>Nature</i> , 1982, 297, 557-563.	27.8	256
46	MORE SPATIAL GAMES. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1994, 04, 33-56.	1.7	249
47	Anti-viral Drug Treatment: Dynamics of Resistance in Free Virus and Infected Cell Populations. <i>Journal of Theoretical Biology</i> , 1997, 184, 203-217.	1.7	239
48	The Search for Patterns in the Balance of Nature: Advances and Retreats. <i>Ecology</i> , 1986, 67, 1115-1126.	3.2	236
49	Taxonomy of taxonomists. <i>Nature</i> , 1992, 356, 281-282.	27.8	232
50	Spatial heterogeneity and the design of immunization programs. <i>Mathematical Biosciences</i> , 1984, 72, 83-111.	1.9	217
51	Systemic risk: the dynamics of model banking systems. <i>Journal of the Royal Society Interface</i> , 2010, 7, 823-838.	3.4	214
52	Togetherness among Schistosomes: its effects on the dynamics of the infection. <i>Mathematical Biosciences</i> , 1977, 35, 301-343.	1.9	198
53	Stability in multispecies community models. <i>Mathematical Biosciences</i> , 1971, 12, 59-79.	1.9	196
54	Exploiting natural populations in an uncertain world. <i>Mathematical Biosciences</i> , 1978, 42, 219-252.	1.9	192

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55	On the theory of niche overlap. <i>Theoretical Population Biology</i> , 1974, 5, 297-332.	1.1	188
56	Tracking and forecasting ecosystem interactions in real time. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20152258.	2.6	185
57	The Dynamics of Multiparasitoid-Host Interactions. <i>American Naturalist</i> , 1981, 117, 234-261.	2.1	185
58	Long-term biological consequences of nuclear war. <i>Science</i> , 1983, 222, 1293-1300.	12.6	176
59	More evolution of cooperation. <i>Nature</i> , 1987, 327, 15-17.	27.8	147
60	PHYLOGENIES WITHOUT FOSSILS. <i>Evolution; International Journal of Organic Evolution</i> , 1994, 48, 523-529.	2.3	141
61	The price of complexity in financial networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10031-10036.	7.1	141
62	Infectious disease dynamics: what characterizes a successful invader?. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2001, 356, 901-910.	4.0	137
63	A note on difference-delay equations. <i>Theoretical Population Biology</i> , 1976, 9, 178-187.	1.1	136
64	Individual versus systemic risk and the Regulator's Dilemma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 12647-12652.	7.1	125
65	On Relationships Among Various Types of Population Models. <i>American Naturalist</i> , 1973, 107, 46-57.	2.1	111
66	Conservation and Disease. <i>Conservation Biology</i> , 1988, 2, 28-30.	4.7	110
67	Size and complexity in model financial systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 18338-18343.	7.1	104
68	Spatial, Temporal, and Genetic Heterogeneity in Host Populations And the Design of Immunization Programmes. <i>Mathematical Medicine and Biology</i> , 1984, 1, 233-266.	1.2	100
69	Some mathematical remarks on the paradox of voting. <i>Systems Research and Behavioral Science</i> , 1971, 16, 143-151.	0.2	99
70	A fondness for fungi. <i>Nature</i> , 1991, 352, 475-476.	27.8	96
71	Bottoms up for the oceans. <i>Nature</i> , 1992, 357, 278-279.	27.8	95
72	Tropical Arthropod Species, More or Less?. <i>Science</i> , 2010, 329, 41-42.	12.6	94

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73	Dynamical evidence for causality between galactic cosmic rays and interannual variation in global temperature. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3253-3256.	7.1	80
74	Out for the sperm count. Nature, 1989, 337, 508-509.	27.8	75
75	Possible demographic consequences of HIV/AIDS epidemics. I. assuming HIV infection always leads to AIDS. Mathematical Biosciences, 1988, 90, 475-505.	1.9	73
76	BIFURCATIONS AND DYNAMIC COMPLEXITY IN ECOLOGICAL SYSTEMS*. Annals of the New York Academy of Sciences, 1979, 316, 517-529.	3.8	71
77	Time delays are not necessarily destabilizing. Mathematical Biosciences, 1975, 27, 109-117.	1.9	69
78	Ecology: The structure of food webs. Nature, 1983, 301, 566-568.	27.8	68
79	Regulation of Populations with Nonoverlapping Generations by Microparasites: A Purely Chaotic System. American Naturalist, 1985, 125, 573-584.	2.1	68
80	Dynamical aspects of host-parasite associations: Crofton's model revisited. Parasitology, 1977, 75, 259-276.	1.5	67
81	Consequences of helminth aggregation for the dynamics of schistosomiasis. Transactions of the Royal Society of Tropical Medicine and Hygiene, 1978, 72, 262-273.	1.8	67
82	Ecological science and tomorrow's world. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 41-47.	4.0	67
83	NONLINEAR PHENOMENA IN ECOLOGY AND EPIDEMIOLOGY*. Annals of the New York Academy of Sciences, 1980, 357, 267-281.	3.8	66
84	Why Worry about How Many Species and Their Loss?. PLoS Biology, 2011, 9, e1001130.	5.6	66
85	Simple mathematical models with very complicated dynamics. , 2004, , 85-93.		66
86	Ecosystem Patterns in Randomly Fluctuating Environments. , 1974, , 1-50.		62
87	Uncertainties in extinction rates. Nature, 1994, 368, 105-105.	27.8	61
88	Fundamental ecology is fundamental. Trends in Ecology and Evolution, 2015, 30, 9-16.	8.7	61
89	Combined inequality in wealth and risk leads to disaster in the climate change game. Climatic Change, 2013, 120, 815-830.	3.6	56
90	Predators that switch. Nature, 1977, 269, 103-104.	27.8	54

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91	A dip into the deep seas. <i>Nature</i> , 1993, 365, 609-610.	27.8	52
92	AIDS pathogenesis. <i>Aids</i> , 1993, 7, S3-S18.	2.2	47
93	Tomorrow's taxonomy: collecting new species in the field will remain the rateâ€“limiting step. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2004, 359, 733-734.	4.0	47
94	Problems in leaving the ark. <i>Nature</i> , 1987, 326, 245-246.	27.8	41
95	Detecting density dependence in imaginary worlds. <i>Nature</i> , 1989, 338, 16-17.	27.8	40
96	The cheetah controversy. <i>Nature</i> , 1995, 374, 309-310.	27.8	40
97	Necessity and chance: deterministic chaos in ecology and evolution. <i>Bulletin of the American Mathematical Society</i> , 1995, 32, 291-308.	1.5	39
98	Synchronicity, chaos and population cycles: spatial coherence in an uncertain world. <i>Trends in Ecology and Evolution</i> , 1999, 14, 417-418.	8.7	39
99	Are exploited fish populations stable?. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, E1224-5; author reply E1226.	7.1	37
100	Magnetic Properties of Charged Ideal Quantum Gases in n Dimensions. <i>Journal of Mathematical Physics</i> , 1965, 6, 1462-1468.	1.1	36
101	Endemic infections in growing populations. <i>Mathematical Biosciences</i> , 1985, 77, 141-156.	1.9	35
102	John Snow's legacy: epidemiology without borders. <i>Lancet</i> , The, 2013, 381, 1302-1311.	13.7	34
103	Food-web assembly and collapse: mathematical models and implications for conservation. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2009, 364, 1643-1646.	4.0	33
104	The Role of Theory in Ecology. <i>American Zoologist</i> , 1981, 21, 903-910.	0.7	32
105	Crash tests for real. <i>Nature</i> , 1999, 398, 371-372.	27.8	31
106	Resisting resistance. <i>Nature</i> , 1993, 361, 593-594.	27.8	30
107	Observations on related ecological exponents. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 6931-6933.	7.1	30
108	Nonlinearities and Complex Behavior in Simple Ecological and Epidemiological Models. <i>Annals of the New York Academy of Sciences</i> , 1987, 504, 1-15.	3.8	28

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109	Period doubling and the onset of turbulence: An analytic estimate of the Feigenbaum ratio. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1980, 78, 1-3.	2.1	27
110	The species alias problem. <i>Nature</i> , 1995, 378, 447-448.	27.8	26
111	Parasites, people and policy: infectious diseases and the Millennium Development Goals. <i>Trends in Ecology and Evolution</i> , 2007, 22, 497-503.	8.7	26
112	Population biology: Evolution of pesticide resistance. <i>Nature</i> , 1985, 315, 12-13.	27.8	25
113	Hypercycles spring to life. <i>Nature</i> , 1991, 353, 607-608.	27.8	24
114	Robustness of cooperation. <i>Nature</i> , 1996, 379, 126-126.	27.8	24
115	Networks and webs in ecosystems and financial systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013, 371, 20120376.	3.4	24
116	Population Biology of Microparasitic Infections. <i>Biomathematics</i> , 1986, , 405-442.	0.7	24
117	HIV infection in heterosexuals. <i>Nature</i> , 1988, 331, 655-656.	27.8	23
118	Ecological science and the management of protected areas. <i>Biodiversity and Conservation</i> , 1994, 3, 437-448.	2.6	22
119	The economics of extinction. <i>Nature</i> , 1994, 372, 42-43.	27.8	22
120	Response to Comments on "Can We Name Earth's Species Before They Go Extinct?". <i>Science</i> , 2013, 341, 237-237.	12.6	22
121	22. The Population Biology of Host-Parasite and Host-Parasitoid Associations. , 1989, , 319-347.		21
122	Disease and the abundance and distribution of bird populations: a summary. <i>Ibis</i> , 1995, 137, S85.	1.9	20
123	Why should we be concerned about loss of biodiversity. <i>Comptes Rendus - Biologies</i> , 2011, 334, 346-350.	0.2	18
124	Complex dynamical behaviour in the interaction between HIV and the immune system. , 1989, , 335-349.		18
125	Chaos and the dynamics of biological populations. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 1987, 2, 225-245.	0.4	16
126	Endangered species: The fate of the California condor. <i>Nature</i> , 1986, 319, 16-16.	27.8	15

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127	Marine species richness. <i>Nature</i> , 1993, 361, 598-598.	27.8	13
128	Living Latin binomials. <i>Nature</i> , 1987, 326, 642-643.	27.8	12
129	Parasite clones in the wild. <i>Nature</i> , 1990, 346, 109-110.	27.8	12
130	A New Method for Deuteron Stripping Calculations (II). <i>Nature</i> , 1965, 207, 1348-1349.	27.8	11
131	Ecological Aspects of Disease and Human Populations. <i>American Zoologist</i> , 1985, 25, 441-450.	0.7	11
132	The hen harrier and the grouse. <i>Nature</i> , 1997, 389, 330-331.	27.8	11
133	Science as organized scepticism. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 4685-4689.	3.4	11
134	Mathematical modelling: The cubic map in theory and practice. <i>Nature</i> , 1984, 311, 13-14.	27.8	9
135	An inordinate fondness for ants. <i>Nature</i> , 1989, 341, 386-387.	27.8	9
136	Spatial games and evolution of cooperation. <i>Lecture Notes in Computer Science</i> , 1995, , 747-759.	1.3	9
137	British birds by number. <i>Nature</i> , 2000, 404, 559-560.	27.8	8
138	The moorland owners' grouse. <i>Nature</i> , 1990, 343, 310-311.	27.8	7
139	Infectious Disease: Can We Avert a Lethal Flu Pandemic?. <i>Current Biology</i> , 2005, 15, R922-R924.	3.9	7
140	Conservation biology: A discipline with a time limit. <i>Nature</i> , 1985, 317, 111-112.	27.8	6
141	Comments on the Sustainable Biosphere Initiative. <i>Conservation Biology</i> , 1991, 5, 548-549.	4.7	6
142	Spatial Chaos and its Role in Ecology and Evolution. <i>Lecture Notes in Biomathematics</i> , 1994, , 326-344.	0.3	6
143	The co-evolutionary dynamics of viruses and their hosts. , 1995, , 192-212.		6
144	The voles of Hokkaido. <i>Nature</i> , 1998, 396, 409-410.	27.8	6

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145	Raising Europe's game. <i>Nature</i> , 2004, 430, 831-832.	27.8	6
146	Reply to Luo et al.: Robustness of causal effects of galactic cosmic rays on interannual variation in global temperature. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E4640-1.	7.1	6
147	Coexistence with insect pests. <i>Nature</i> , 1976, 264, 211-212.	27.8	5
148	Ecology: Competition in imaginary worlds. <i>Nature</i> , 1985, 314, 228-229.	27.8	5
149	Black-footed ferret update. <i>Nature</i> , 1989, 339, 104-104.	27.8	5
150	The Transmission Dynamics of Human Immunodeficiency Virus (HIV). <i>Biomathematics</i> , 1989, , 263-311.	0.7	5
151	Density-dependent populations. <i>Nature</i> , 1992, 356, 391-392.	27.8	4
152	Bacterial tick-tock. <i>Nature</i> , 1993, 365, 492-492.	27.8	4
153	Case studies of extinction. <i>Nature</i> , 1997, 385, 776-777.	27.8	3
154	Whaling: past, present and future. <i>Nature</i> , 1978, 276, 319-322.	27.8	2
155	The economics and management of commercial fisheries. <i>Nature</i> , 1980, 287, 675-676.	27.8	2
156	Back to the fundamentals: a reply to Barot et al.. <i>Trends in Ecology and Evolution</i> , 2015, 30, 370-371.	8.7	2
157	The Dynamics of Predatorâ€“Prey and Resourceâ€“Harvester Systems. , 0, , 431-457.		2
158	Ecology: Oceanic noise and fish stocks. <i>Nature</i> , 1984, 310, 190-190.	27.8	1
159	Tampering with territories. <i>Nature</i> , 1988, 335, 668-669.	27.8	1
160	High table tales. <i>Nature</i> , 1989, 341, 695-695.	27.8	1
161	NOTES ON SOME TOPICS IN THEORETICAL ECOLOGY, IN RELATION TO THE MANAGEMENT OF LOCALLY ABUNDANT POPULATIONS OF MAMMALS. , 1981, , 205-216.		1
162	Reprints of Books Previously Reviewed in Science. <i>Science</i> , 1983, 221, 544-544.	12.6	0

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163	The rise and fall and rise of tuberculosis. Nature Medicine, 1995, 1, 752-752.	30.7	0
164	Q&A: Extinctions and the impact of Homo sapiens. BMC Biology, 2012, 10, 106.	3.8	0
165	Explaining "Linguistic Features" of Noncoding DNA. Science, 1996, 271, 14-15.	12.6	0
166	Explaining "Linguistic Features" of Noncoding DNA. Science, 1996, 271, 14-15.	12.6	0
167	DYNAMICAL EVIDENCE FOR CAUSALITY BETWEEN GALACTIC COSMIC RAYS AND GLOBAL TEMPERATURE. , 2016, , .		0