Robert M May

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

129 papers	37,632 citations	72 h-index	182 g-index
182 ext. papers	41,997 ext. citations	26 avg, IF	7.53 L-index

#	Paper	IF	Citations
129	Simple mathematical models with very complicated dynamics. *Nature*, **1976**, 261, 459-67	50.4	4604
128	Evolutionary games and spatial chaos. *Nature*, **1992**, 359, 826-829	50.4	2767
127	Population biology of infectious diseases: Part I. *Nature*, **1979**, 280, 361-7	50.4	2001
126	Habitat destruction and the extinction debt. *Nature*, **1994**, 371, 65-66	50.4	1905
125	Will a large complex system be stable?. *Nature*, **1972**, 238, 413-4	50.4	1662
124	Nonlinear forecasting as a way of distinguishing chaos from measurement error in time series. *Nature*, **1990**, 344, 734-41	50.4	1320
123	Thresholds and breakpoints in ecosystems with a multiplicity of stable states. *Nature*, **1977**, 269, 471-477	50.4	1121
122	Regulation and Stability of Host-Parasite Population Interactions: I. Regulatory Processes. *Journal of Animal Ecology*, **1978**, 47, 219	4.7	1103
121	Dispersal in stable habitats. *Nature*, **1977**, 269, 578-581	50.4	1041
120	Bifurcations and Dynamic Complexity in Simple Ecological Models. *American Naturalist*, **1976**, 110, 573-599	3.7	928
119	Population biology of infectious diseases: Part II. *Nature*, **1979**, 280, 455-61	50.4	893
118	Systemic risk in banking ecosystems. *Nature*, **2011**, 469, 351-5	50.4	812
117	Nonlinear Aspects of Competition Between Three Species. *SIAM Journal on Applied Mathematics*, **1975**, 29, 243-253	1.8	749
116	Transmission dynamics of HIV infection. *Nature*, **1987**, 326, 137-42	50.4	598
115	Infection dynamics on scale-free networks. *Physical Review E*, **2001**, 64, 066112	2.4	522
114	Vaccination and herd immunity to infectious diseases. *Nature*, **1985**, 318, 323-9	50.4	475
113	Why fishing magnifies fluctuations in fish abundance. *Nature*, **2008**, 452, 835-9	50.4	464

112	THE SPATIAL DILEMMAS OF EVOLUTION. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **1993**, 03, 35-78	2	460
111	Epidemiology. How viruses spread among computers and people. *Science*, **2001**, 292, 1316-7	33.3	442
110	Fishing elevates variability in the abundance of exploited species. *Nature*, **2006**, 443, 859-62	50.4	415
109	Management of multispecies fisheries. *Science*, **1979**, 205, 267-77	33.3	403
108	Helminth infections of humans: mathematical models, population dynamics, and control. *Advances in Parasitology*, **1985**, 24, 1-101	3.2	401
107	Regulation and Stability of Host-Parasite Population Interactions: II. Destabilizing Processes. *Journal of Animal Ecology*, **1978**, 47, 249	4.7	393
106	Can we name Earth's species before they go extinct?. *Science*, **2013**, 339, 413-6	33.3	381
105	Population dynamics of fox rabies in Europe. *Nature*, **1981**, 289, 765-71	50.4	371
104	Subnets of scale-free networks are not scale-free: sampling properties of networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 4221-4	11.5	359
103	Evolutionarily stable dispersal strategies. *Journal of Theoretical Biology*, **1980**, 82, 205-30	2.3	352
102	Dynamics of Metapopulations: Habitat Destruction and Competitive Coexistence. *Journal of Animal Ecology*, **1992**, 61, 37	4.7	345
101	Biological populations obeying difference equations: stable points, stable cycles, and chaos. *Journal of Theoretical Biology*, **1975**, 51, 511-24	2.3	337
100	Applications of fractals in ecology. *Trends in Ecology and Evolution*, **1990**, 5, 79-86	10.9	315
99	Host-Parasitoid Systems in Patchy Environments: A Phenomenological Model. *Journal of Animal Ecology*, **1978**, 47, 833	4.7	300
98	Species coexistence and self-organizing spatial dynamics. *Nature*, **1994**, 370, 290-292	50.4	299
97	Antigenic oscillations and shifting immunodominance in HIV-1 infections. *Nature*, **1995**, 375, 606-11	50.4	293
96	Epidemiological parameters of HIV transmission. *Nature*, **1988**, 333, 514-9	50.4	287
95	Uses and abuses of mathematics in biology. *Science*, **2004**, 303, 790-3	33.3	280

94	Extinction and the loss of evolutionary history. *Science*, **1997**, 278, 692-4	33.3	262
93	Time-Delay Versus Stability in Population Models with Two and Three Trophic Levels. *Ecology*, **1973**, 54, 315-325	4.6	261
92	The maintenance of strain structure in populations of recombining infectious agents. *Nature Medicine*, **1996**, 2, 437-42	50.5	241
91	Stability in Randomly Fluctuating Versus Deterministic Environments. *American Naturalist*, **1973**, 107, 621-650	3.7	236
90	Spatial heterogeneity in epidemic models. *Journal of Theoretical Biology*, **1996**, 179, 1-11	2.3	232
89	Population dynamics of human helminth infections: control by chemotherapy. *Nature*, **1982**, 297, 557-63	50.4	227
88	Network structure and the biology of populations. *Trends in Ecology and Evolution*, **2006**, 21, 394-9	10.9	215
87	MORE SPATIAL GAMES. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **1994**, 04, 33-56	2	209
86	Networks of sexual contacts. *Aids*, **1989**, 3, 807-818	3.5	206
85	Anti-viral drug treatment: dynamics of resistance in free virus and infected cell populations. *Journal of Theoretical Biology*, **1997**, 184, 203-17	2.3	203
84	Spatial heterogeneity and the design of immunization programs. *Mathematical Biosciences*, **1984**, 72, 83-111	3.9	182
83	Togetherness among Schistosomes: its effects on the dynamics of the infection. *Mathematical Biosciences*, **1977**, 35, 301-343	3.9	176
82	The Search for Patterns in the Balance of Nature: Advances and Retreats. *Ecology*, **1986**, 67, 1115-1126	4.6	174
81	Systemic risk: the dynamics of model banking systems. *Journal of the Royal Society Interface*, **2010**, 7, 823-38	4.1	172
80	Exploiting natural populations in an uncertain world. *Mathematical Biosciences*, **1978**, 42, 219-252	3.9	170
79	On the theory of niche overlap. *Theoretical Population Biology*, **1974**, 5, 297-332	1.2	150
78	Stability in multispecies community models. *Mathematical Biosciences*, **1971**, 12, 59-79	3.9	147
77	Long-term biological consequences of nuclear war. *Science*, **1983**, 222, 1293-300	33.3	134

76	The Dynamics of Multiparasitoid-Host Interactions. *American Naturalist*, **1981**, 117, 234-261	3.7	133
75	PHYLOGENIES WITHOUT FOSSILS. *Evolution; International Journal of Organic Evolution*, **1994**, 48, 523-529	3.8	126
74	A note on difference-delay equations. *Theoretical Population Biology*, **1976**, 9, 178-87	1.2	119
73	Infectious disease dynamics: What characterizes a successful invader?. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2001**, 356, 901-10	5.8	114
72	Tracking and forecasting ecosystem interactions in real time. *Proceedings of the Royal Society B: Biological Sciences*, **2016**, 283,	4.4	106
71	The price of complexity in financial networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 10031-6	11.5	99
70	Conservation and Disease. *Conservation Biology*, **1988**, 2, 28-30	6	93
69	Individual versus systemic risk and the Regulator's Dilemma. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 12647-52	11.5	90
68	On Relationships Among Various Types of Population Models. *American Naturalist*, **1973**, 107, 46-57	3.7	90
67	Some mathematical remarks on the paradox of voting. *Systems Research and Behavioral Science*, **1971**, 16, 143-151		87
66	Spatial, temporal, and genetic heterogeneity in host populations and the design of immunization programmes. *Mathematical Medicine and Biology*, **1984**, 1, 233-66	1.3	84
65	Size and complexity in model financial systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 18338-43	11.5	77
64	Ecology. Tropical arthropod species, more or less?. *Science*, **2010**, 329, 41-2	33.3	75
63	BIFURCATIONS AND DYNAMIC COMPLEXITY IN ECOLOGICAL SYSTEMS*. *Annals of the New York Academy of Sciences*, **1979**, 316, 517-529	6.5	64
62	Possible demographic consequences of HIV/AIDS epidemics. I. assuming HIV infection always leads to AIDS. *Mathematical Biosciences*, **1988**, 90, 475-505	3.9	61
61	Consequences of helminth aggregation for the dynamics of schistosomiasis. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, **1978**, 72, 262-73	2	60
60	Time delays are not necessarily destabilizing. *Mathematical Biosciences*, **1975**, 27, 109-117	3.9	58
59	Ecological science and tomorrow's world. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2010**, 365, 41-7	5.8	56

58	Copulation dynamics. Out for the sperm count. *Nature*, **1989**, 337, 508-9	50.4	56
57	NONLINEAR PHENOMENA IN ECOLOGY AND EPIDEMIOLOGY*. *Annals of the New York Academy of Sciences*, **1980**, 357, 267-281	6.5	56
56	Dynamical aspects of host-parasite associations: Crofton's model revisited. *Parasitology*, **1977**, 75, 259-276	2.7	56
55	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, 3253-6	11.5	55
54	Regulation of Populations with Nonoverlapping Generations by Microparasites: A Purely Chaotic System. *American Naturalist*, **1985**, 125, 573-584	3.7	55
53	Why worry about how many species and their loss?. *PLoS Biology*, **2011**, 9, e1001130	9.7	45
52	Uncertainties in extinction rates. *Nature*, **1994**, 368, 105-105	50.4	45
51	AIDS pathogenesis. *Aids*, **1993**, 7, S3-S18	3.5	42
50	Fundamental ecology is fundamental. *Trends in Ecology and Evolution*, **2015**, 30, 9-16	10.9	41
49	Ecosystem Patterns in Randomly Fluctuating Environments **1974**, 1-50		36
48	Simple mathematical models with very complicated dynamics **2004**, 85-93		36
47	Tomorrow's taxonomy: collecting new species in the field will remain the rate-limiting step. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2004**, 359, 733-4	5.8	35
46	Magnetic Properties of Charged Ideal Quantum Gases in n Dimensions. *Journal of Mathematical Physics*, **1965**, 6, 1462-1468	1.2	34
45	Combined inequality in wealth and risk leads to disaster in the climate change game. *Climatic Change*, **2013**, 120, 815-830	4.5	33
44	Synchronicity, chaos and population cycles: spatial coherence in an uncertain world. *Trends in Ecology and Evolution*, **1999**, 14, 417-418	10.9	33
43	Endemic infections in growing populations. *Mathematical Biosciences*, **1985**, 77, 141-156	3.9	33
42	Necessity and Chance: deterministic chaos in ecology and evolution. *Bulletin of the American Mathematical Society*, **1995**, 32, 291-309	1.3	29
41	Food-web assembly and collapse: mathematical models and implications for conservation. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2009**, 364, 1643-6	5.8	28

40	John Snow's legacy: epidemiology without borders. *Lancet, The*, **2013**, 381, 1302-11	40	26
39	Are exploited fish populations stable?. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, E1224-5; author reply E1226	11.5	26
38	Stability in ecosystems: some comments **1975**, 161-168		26
37	Parasites, people and policy: infectious diseases and the Millennium Development Goals. *Trends in Ecology and Evolution*, **2007**, 22, 497-503	10.9	25
36	Observations on related ecological exponents. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 6931-3	11.5	23
35	Period doubling and the onset of turbulence: An analytic estimate of the Feigenbaum ratio. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1980**, 78, 1-3	2.3	23
34	Networks and webs in ecosystems and financial systems. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20120376	3	22
33	The Role of Theory in Ecology. *American Zoologist*, **1981**, 21, 903-910		21
32	Robustness of cooperation. *Nature*, **1996**, 379, 126-126	50.4	20
31	Ecological science and the management of protected areas. *Biodiversity and Conservation*, **1994**, 3, 437-448	3.4	20
30	Response to comments on "Can we name Earth's species before they go extinct?". *Science*, **2013**, 341, 237	33.3	18
29	Population Biology of Microparasitic Infections. *Biomathematics*, **1986**, 405-442		17
28	Disease and the abundance and distribution of bird populations: a summary. *Ibis*, **2008**, 137, S85-S86	1.9	15
27	Nonlinearities and complex behavior in simple ecological and epidemiological models. *Annals of the New York Academy of Sciences*, **1987**, 504, 1-15	6.5	14
26	Chaos and the dynamics of biological populations. *Nuclear Physics, Section B, Proceedings Supplements*, **1987**, 2, 225-245		14
25	Complex dynamical behaviour in the interaction between HIV and the immune system **1989**, 335-349		14
24	22. The Population Biology of Host-Parasite and Host-Parasitoid Associations **1989**, 319-347		13
23	Why should we be concerned about loss of biodiversity. *Comptes Rendus - Biologies*, **2011**, 334, 346-50	1.4	12

22	A New Method for Deuteron Stripping Calculations (II). *Nature*, **1965**, 207, 1348-1349	50.4	11
21	Marine species richness. *Nature*, **1993**, 361, 598-598	50.4	9
20	Ecological Aspects of Disease and Human Populations. *American Zoologist*, **1985**, 25, 441-450		9
19	Infectious disease: can we avert a lethal flu pandemic?. *Current Biology*, **2005**, 15, R922-4	6.3	6
18	The co-evolutionary dynamics of viruses and their hosts **1995**, 192-212		6
17	Reply to Luo et al.: Robustness of causal effects of galactic cosmic rays on interannual variation in global temperature. *Proceedings of the National Academy of Sciences of the United States of America* , **2015**, 112, E4640-1	11.5	5
16	Science as organized scepticism. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 4685-9	3	5
15	Spatial Chaos and its Role in Ecology and Evolution. *Lecture Notes in Biomathematics*, **1994**, 326-344		5
14	Raising Europeâ€™s game. *Nature*, **2004**, 430, 831-2	50.4	4
13	Comments on the Sustainable Biosphere Initiative. *Conservation Biology*, **1991**, 5, 548-549	6	3
12	Density-dependent populations. *Nature*, **1992**, 356, 391-392	50.4	3
11	The Transmission Dynamics of Human Immunodeficiency Virus (HIV). *Biomathematics*, **1989**, 263-311		3
10	Spatial games and evolution of cooperation. *Lecture Notes in Computer Science*, **1995**, 747-759	0.9	3
9	Back to the fundamentals: a reply to Barot et al. *Trends in Ecology and Evolution*, **2015**, 30, 370-1	10.9	2
8	High table tales. *Nature*, **1989**, 341, 695-695	50.4	1
7	Q&A: extinctions and the impact of Homo sapiens. *BMC Biology*, **2012**, 10, 106	7.3	
6	The rise and fall and rise of tuberculosis. *Nature Medicine*, **1995**, 1, 752	50.5	
5	Reprints of books previously reviewed in science. *Science*, **1983**, 221, 544	33.3	

List of Publications

4	Explaining "Linguistic Features" of Noncoding DNA. *Science*, **1996**, 271, 14-15	33.3
3	Explaining "Linguistic Features" of Noncoding DNA. *Science*, **1996**, 271, 14-15	33.3
2	NOTES ON SOME TOPICS IN THEORETICAL ECOLOGY, IN RELATION TO THE MANAGEMENT OF LOCALLY ABUNDANT POPULATIONS OF MAMMALS **1981**, 205-216	
1	The Dynamics of Predator-Prey and Resource-Harvester Systems431-457	