William C Ratcliff

List of Publications by Year
in descending order

42 papers	1,968 citations	361045 20 h-index	288905 40 g-index
46 all docs	46 docs citations	46 times ranked	1595 citing authors

#	Article	IF	Citations
1	Experimental evolution of multicellularity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1595-1600.	3.3	427
2	An oscillating tragedy of the commons in replicator dynamics with game-environment feedback. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7518-E7525.	3.3	168
3	Experimental evolution of an alternating uni- and multicellular life cycle in Chlamydomonas reinhardtii. Nature Communications, 2013, 4, 2742.	5.8	146
4	Origins of multicellular evolvability in snowflake yeast. Nature Communications, 2015, 6, 6102.	5.8	133
5	Poly-3-hydroxybutyrate (PHB) supports survival and reproduction in starving rhizobia. FEMS Microbiology Ecology, 2008, 65, 391-399.	1.3	123
6	De novo origins of multicellularity in response to predation. Scientific Reports, 2019, 9, 2328.	1.6	107
7	Individual-Level Bet Hedging in the Bacterium Sinorhizobium meliloti. Current Biology, 2010, 20, 1740-1744.	1.8	77
8	Drivers of Spatial Structure in Social Microbial Communities. Current Biology, 2019, 29, R545-R550.	1.8	56
9	Ratcheting the evolution of multicellularity. Science, 2014, 346, 426-427.	6.0	52
10	Cellular packing, mechanical stressÂand the evolution of multicellularity. Nature Physics, 2018, 14, 286-290.	6.5	48
11	TEMPO AND MODE OF MULTICELLULAR ADAPTATION IN EXPERIMENTALLY EVOLVEDSACCHAROMYCES CEREVISIAE. Evolution; International Journal of Organic Evolution, 2013, 67, 1573-1581.	1.1	45
12	Geometry Shapes Evolution of Early Multicellularity. PLoS Computational Biology, 2014, 10, e1003803.	1.5	45
13	Rhizobitoxine producers gain more poly-3-hydroxybutyrate in symbiosis than do competing rhizobia, but reduce plant growth. ISME Journal, 2009, 3, 870-872.	4.4	40
14	Singleâ€strain inoculation may create spurious correlations between legume fitness and rhizobial fitness. New Phytologist, 2013, 198, 4-6.	3.5	40
15	Division of Labor, Bet Hedging, and the Evolution of Mixed Biofilm Investment Strategies. MBio, 2017, 8, .	1.8	36
16	Topological constraints in early multicellularity favor reproductive division of labor. ELife, 2020, 9, .	2.8	34
17	Measuring the fitness of symbiotic rhizobia. Symbiosis, 2011, 55, 85-90.	1.2	33
18	Nascent life cycles and the emergence of higher-level individuality. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160420.	1.8	32

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19	Ecological Advantages and Evolutionary Limitations of Aggregative Multicellular Development. Current Biology, 2020, 30, 4155-4164.e6.	1.8	31
20	Oxygen suppression of macroscopic multicellularity. Nature Communications, 2021, 12, 2838.	5.8	30
21	Stabilizing multicellularity through ratcheting. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150444.	1.8	29
22	Selective drivers of simple multicellularity. Current Opinion in Microbiology, 2022, 67, 102141.	2.3	29
23	Evolution of Cellular Differentiation: From Hypotheses to Models. Trends in Ecology and Evolution, 2021, 36, 49-60.	4.2	26
24	Why have aggregative multicellular organisms stayed simple?. Current Genetics, 2021, 67, 871-876.	0.8	23
25	A Novel Laboratory Activity for Teaching about the Evolution of Multicellularity. American Biology Teacher, 2014, 76, 81-87.	0.1	15
26	Disentangling Direct and Indirect Fitness Effects of Microbial Dormancy. American Naturalist, 2013, 182, 147-156.	1.0	14
27	Geometry, packing, and evolutionary paths to increased multicellular size. Physical Review E, 2018, 97, 050401.	0.8	14
28	When Stress Predicts a Shrinking Gene Pool, Trading Early Reproduction for Longevity Can Increase Fitness, Even with Lower Fecundity. PLoS ONE, 2009, 4, e6055.	1.1	12
29	Experimental Evolution of Multicellular Complexity in Saccharomyces cerevisiae. BioScience, 2014, 64, 383-393.	2.2	12
30	Varied solutions to multicellularity: The biophysical and evolutionary consequences of diverse intercellular bonds. Biophysics Reviews, 2022, 3, .	1.0	11
31	Courting disaster: How diversification rate affects fitness under risk. Evolution; International Journal of Organic Evolution, 2015, 69, 126-135.	1.1	10
32	Apoptosis in snowflake yeast: novel trait, or side effect of toxic waste?. Journal of the Royal Society Interface, 2016, 13, 20160121.	1.5	9
33	Genetics of a de novo origin of undifferentiated multicellularity. Royal Society Open Science, 2018, 5, 180912.	1.1	9
34	Trait heritability in major transitions. BMC Biology, 2018, 16, 145.	1.7	9
35	Shortsighted Evolution Constrains the Efficacy of Long-Term Bet Hedging. American Naturalist, 2019, 193, 409-423.	1.0	9
36	Evolution of altruistic cooperation among nascent multicellular organisms. Evolution; International Journal of Organic Evolution, 2019, 73, 1012-1024.	1.1	7

#	Article	IF	Citations
37	The Consequences of Budding versus Binary Fission on Adaptation and Aging in Primitive Multicellularity. Genes, 2021, 12, 661.	1.0	7
38	Lichens and microbial syntrophies offer models for an interdependent route to multicellularity. Lichenologist, 2021, 53, 283-290.	0.5	6
39	Bacterial persistence and bet hedging in Sinorhizobium meliloti. Communicative and Integrative Biology, 2011, 4, 98-100.	0.6	4
40	Copper oxide nanoparticles promote the evolution of multicellularity in yeast. Nanotoxicology, 2019, 13, 597-605.	1.6	3
41	Experimental evolution is not just for model organisms. PLoS Biology, 2022, 20, e3001587.	2.6	3
42	Programmed cell death can increase the efficacy of microbial bet hedging. Scientific Reports, 2018, 8, 1120.	1.6	2