Joel L Sachs

List of Publications by Year
in descending order

62 papers	5,295 citations	159585 30 h-index	144013 57 g-index
63 all docs	63 docs citations	63 times ranked	5314 citing authors

#	Article	IF	Citations
1	The Evolution of Cooperation. Quarterly Review of Biology, 2004, 79, 135-160.	0.1	885
2	Engineering Microbiomes to Improve Plant and Animal Health. Trends in Microbiology, 2015, 23, 606-617.	7.7	486
3	Microbially Mediated Plant Functional Traits. Annual Review of Ecology, Evolution, and Systematics, 2011, 42, 23-46.	8.3	447
4	Inclusive fitness theory and eusociality. Nature, 2011, 471, E1-E4.	27.8	339
5	Pathways to mutualism breakdown. Trends in Ecology and Evolution, 2006, 21, 585-592.	8.7	334
6	Evolutionary transitions in bacterial symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10800-10807.	7.1	284
7	An empirical test of partner choice mechanisms in a wild legumeâ€“rhizobium interaction. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 77-81.	2.6	180
8	Symbiotic nitrogen fixation by rhizobia â€" the roots of a success story. Current Opinion in Plant Biology, 2018, 44, 7-15.	7.1	172
9	A shift to parasitism in the jellyfish symbiont Symbiodinium microadriaticum. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 425-429.	2.6	136
10	Origins of cheating and loss of symbiosis in wildBradyrhizobium. Journal of Evolutionary Biology, 2010, 23, 1075-1089.	1.7	133
11	Cheaters must prosper: reconciling theoretical and empirical perspectives on cheating in mutualism. Ecology Letters, 2015, 18, 1270-1284.	6.4	126
12	New paradigms for the evolution of beneficial infections. Trends in Ecology and Evolution, 2011, 26, 202-209.	8.7	112
13	The Origins of Cooperative Bacterial Communities. MBio, 2012, 3, .	4.1	104
14	Host control over infection and proliferation of a cheater symbiont. Journal of Evolutionary Biology, 2010, 23, 1919-1927.	1.7	95
15	In Situ Phylogenetic Structure and Diversity of Wild Bradyrhizobium Communities. Applied and Environmental Microbiology, 2009, 75, 4727-4735.	3.1	93
16	Biological soil crust community types differ in key ecological functions. Soil Biology and Biochemistry, 2013, 65, 168-171.	8.8	87
17	Agriculture and the Disruption of Plantâ€“Microbial Symbiosis. Trends in Ecology and Evolution, 2020, 35, 426-439.	8.7	81
18	Legumes versus rhizobia: a model for ongoing conflict in symbiosis. New Phytologist, 2018, 219, 1199-1206.	7.3	80

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19	Mutualistic Co-evolution of Type III Effector Genes in Sinorhizobium fredii and Bradyrhizobium japonicum. PLoS Pathogens, 2013, 9, e1003204.	4.7	76
20	Experimental evolution of conflict mediation between genomes. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 390-395.	7.1	65
21	Cell autonomous sanctions in legumes target ineffective rhizobia in nodules with mixed infections. American Journal of Botany, 2017, 104, 1299-1312.	1.7	61
22	Evolutionary origins and diversification of proteobacterial mutualists. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20132146.	2.6	59
23	Efficiency of partner choice and sanctions inLotusis not altered by nitrogen fertilization. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20132587.	2.6	59
24	Nitrogen deposition decreases the benefits of symbiosis in a native legume. Plant and Soil, 2017, 414, 159-170.	3.7	57
25	Specialization-generalization trade-off in a Bradyrhizobium symbiosis with wild legume hosts. BMC Ecology, 2014, 14, 8.	3.0	53
26	Lotus hosts delimit the mutualismâ€“parasitism continuum of <scp>B</scp>radyrhizobium. Journal of Evolutionary Biology, 2015, 28, 447-456.	1.7	52
27	Symbiont genomics, our new tangled bank. Genomics, 2010, 95, 129-137.	2.9	48
28	Evolutionary Instability of Symbiotic Function in Bradyrhizobium japonicum. PLoS ONE, 2011, 6, e26370.	2.5	43
29	The origins of uncooperative rhizobia. Oikos, 2008, 117, 961-966.	2.7	42
30	Fitness variation among host species and the paradox of ineffective rhizobia. Journal of Evolutionary Biology, 2018, 31, 599-610.	1.7	37
31	Host investment into symbiosis varies among genotypes of the legume Acmispon strigosus, but host sanctions are uniform. New Phytologist, 2019, 221, 446-458.	7.3	36
32	Nonnodulating Bradyrhizobium spp. Modulate the Benefits of Legume-Rhizobium Mutualism. Applied and Environmental Microbiology, 2016, 82, 5259-5268.	3.1	29
33	Cooperation within and among species. Journal of Evolutionary Biology, 2006, 19, 1415-1418.	1.7	28
34	Resolving the first steps to multicellularity. Trends in Ecology and Evolution, 2008, 23, 245-248.	8.7	28
35	Epidemic Spread of Symbiotic and Non-Symbiotic Bradyrhizobium Genotypes Across California. Microbial Ecology, 2016, 71, 700-710.	2.8	27
36	Interspecific conflict and the evolution of ineffective rhizobia. Ecology Letters, 2019, 22, 914-924.	6.4	27

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37	Metapopulation dominance and genomic-island acquisition ofBradyrhizobiumwith superior catabolic capabilities. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20160496.	2.6	24
38	Recurrent mutualism breakdown events in a legume rhizobia metapopulation. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20192549.	2.6	24
39	Symbiotic organs: the nexus of hostâ€“microbe evolution. Trends in Ecology and Evolution, 2022, 37, 599-610.	8.7	24
40	Polyploid plants obtain greater fitness benefits from a nutrient acquisition mutualism. New Phytologist, 2020, 227, 944-954.	7.3	22
41	The exploitation of mutualisms. , 2015, , 93-106.		21
42	Lotus japonicus alters in planta fitness of Mesorhizobium loti dependent on symbiotic nitrogen fixation. PLoS ONE, 2017, 12, e0185568.	2.5	20
43	RED-NECKED GREBES BECOME SEMICOLONIAL WHEN PRIME NESTING SUBSTRATE IS AVAILABLE. Condor, 2003, 105, 80.	1.6	14
44	The evolution of cooperative breeding; is there cheating?. Behavioural Processes, 2007, 76, 131-137.	1.1	14
45	Evolution of Coloniality in Birds: A Test of Hypotheses With the Red-Necked Grebe (Podiceps) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.4	13
46	The emergence of microbiome centres. Nature Microbiology, 2020, 5, 2-3.	13.3	13
47	Pangenome Evolution Reconciles Robustness and Instability of Rhizobial Symbiosis. MBio, 2022, 13, e0007422.	4.1	13
48	Red-Necked Grebes Become Semicolonial When Prime Nesting Substrate is Available. Condor, 2003, 105, 80-94.	1.6	12
49	EVOLUTION OF COLONIALITY IN BIRDS: A TEST OF HYPOTHESES WITH THE RED-NECKED GREBE (PODICEPS) Tj ETQq1 1 0.784314 rg	1.4	11
50	Native <scp>C</scp>alifornia soils are selective reservoirs for multidrugâ€resistant bacteria. Environmental Microbiology Reports, 2015, 7, 442-449.	2.4	11
51	Evolution of specialization in a plantâ€microbial mutualism is explained by the oscillation theory of speciation. Evolution; International Journal of Organic Evolution, 2021, 75, 1070-1086.	2.3	11
52	Wild legumes maintain beneficial soil rhizobia populations despite decades of nitrogen deposition. Oecologia, 2022, 198, 419.	2.0	11
53	Experimental evolution can enhance benefits of rhizobia to novel legume hosts. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20210812.	2.6	10
54	Dysregulation of hostâ€control causes interspecific conflict over host investment into symbiotic organs. Evolution; International Journal of Organic Evolution, 2021, 75, 1189-1200.	2.3	8

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55	Characterization of microsatellite loci for red-necked grebesPodiceps grisegena. Molecular Ecology, 1999, 8, 687-688.	3.9	6
56	Origins, Evolution, and Breakdown of Bacterial Symbiosis. , 2013, , 637-644.		5
57	No disruption of rhizobial symbiosis during early stages of cowpea domestication. Evolution; International Journal of Organic Evolution, 2022, 76, 496-511.	2.3	4
58	Dynamic Interactions Between Mega Symbiosis ICEs and Bacterial Chromosomes Maintain Genome Architecture. Genome Biology and Evolution, 2022, 14, .	2.5	2
59	Genetic and Cultural Evolution of Cooperation. Based on a workshop held in Berlin, Germany, 23â€“28 June 2002. Edited by PeterÂ Hammerstein. Published by MIT Press, Cambridge (Massachusetts), in cooperation with Dahlem University Press, Berlin, Germany. $45.00. xiv + 485 p; ill.; name and subject indexes. ISBN: 0â€“262â€“08326â€“4. 2003.. Quarterly Review of Biology, 2004, 79, 458-459.	0.1	0
60	The Biology of Civilisation: Understanding Human Culture as a Force in Nature. By StephenÂ Boyden. Sydney (Australia): University of New South Wales Press; distributed by University of Washington Press, Seattle (Washington). $22.50 (paper). xv + 189 p; ill.; index. ISBN: 0â€86840â€766â€6. 2004.. Quarterly Review of Biology, 2005, 80, 507-508.	0.1	0
61	Technoâ€Cultural Evolution: Cycles of Creation and Conflict. By WilliamÂMcDonaldÂ Wallace. Washington (DC): Potomac Books. $26.95. xxvi + 267 p; ill.; index. ISBN: 1â€“57488â€“966â€“4. 2006.. Quarterly Review of Biology, 2006, 81, 425-425.	0.1	0
62	The Origin and Evolution of Cultures. Evolution and Cognition. By Robert Boyd and , Peter J Richerson. Oxford and New York: Oxford University Press. $74.00 (hardcover); $35.00 (paper). viii + 456 p; ill.; author and subject indexes. ISBN: 0â€19â€516524â€1 (hc); 0â€19â€518145â€X (pb). 2005.. Quarterly Review of Biology, 2007, 82, 183-184.	0.1	0