Charles Godfray

List of Publications by Citations

151 papers	23,803 citations	62 h-index	154 g-index
170 ext. papers	28,257 ext. citations	9.3 avg, IF	7.13 L-index

#	Paper	IF	Citations
151	Food security: the challenge of feeding 9 billion people. *Science*, **2010**, 327, 812-8	33.3	6629
150	Parasitoids **1994**,		2019
149	Agriculture. Sustainable intensification in agriculture: premises and policies. *Science*, **2013**, 341, 33-4	33.3	957
148	Options for keeping the food system within environmental limits. *Nature*, **2018**, 562, 519-525	50.4	925
147	Analysis and valuation of the health and climate change cobenefits of dietary change. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 4146-51	11.5	528
146	Food security and sustainable intensification. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2014**, 369, 20120273	5.8	515
145	Meat consumption, health, and the environment. *Science*, **2018**, 361,	33.3	461
144	Identification of 100 fundamental ecological questions. *Journal of Ecology*, **2013**, 101, 58-67	6	445
143	Challenges for taxonomy. *Nature*, **2002**, 417, 17-9	50.4	399
142	The dominant Anopheles vectors of human malaria in Africa, Europe and the Middle East: occurrence data, distribution maps and bionomic précis. *Parasites and Vectors*, **2010**, 3, 117	4	375
141	The identification of 100 ecological questions of high policy relevance in the UK. *Journal of Applied Ecology*, **2006**, 43, 617-627	5.8	351
140	The future of the global food system. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2010**, 365, 2769-77	5.8	342
139	Sex increases the efficacy of natural selection in experimental yeast populations. *Nature*, **2005**, 434, 636-40	50.4	328
138	Chaos in Ecology: Is Mother Nature a Strange Attractor?. *Annual Review of Ecology, Evolution, and Systematics*, **1993**, 24, 1-33		322
137	Managing nitrogen to restore water quality in China. *Nature*, **2019**, 567, 516-520	50.4	314
136	The top 100 questions of importance to the future of global agriculture. *International Journal of Agricultural Sustainability*, **2010**, 8, 219-236	2.2	305
135	Nexus approaches to global sustainable development. *Nature Sustainability*, **2018**, 1, 466-476	22.1	260

134	Brief history of agricultural systems modeling. *Agricultural Systems*, **2017**, 155, 240-254	6.1	256
133	A restatement of the natural science evidence base concerning neonicotinoid insecticides and insect pollinators. *Proceedings of the Royal Society B: Biological Sciences*, **2014**, 281,	4.4	253
132	Global assessment of agricultural system redesign for sustainable intensification. *Nature Sustainability*, **2018**, 1, 441-446	22.1	250
131	Wolbachia stimulates immune gene expression and inhibits plasmodium development in Anopheles gambiae. *PLoS Pathogens*, **2010**, 6, e1001143	7.6	229
130	Global and regional health effects of future food production under climate change: a modelling study. *Lancet, The*, **2016**, 387, 1937-46	40	210
129	Apparent competition, quantitative food webs, and the structure of phytophagous insect communities. *Annual Review of Entomology*, **2006**, 51, 187-208	21.8	208
128	Experimental evidence for apparent competition in a tropical forest food web. *Nature*, **2004**, 428, 310-3	50.4	208
127	Linking the bacterial community in pea aphids with host-plant use and natural enemy resistance. *Ecological Entomology*, **2004**, 29, 60-65	2.1	207
126	Unrelated facultative endosymbionts protect aphids against a fungal pathogen. *Ecology Letters*, **2013**, 16, 214-8	10	202
125	Ecology. Biodiversity conservation and the Millennium Development Goals. *Science*, **2009**, 325, 1502-3	33.3	193
124	Toward a new generation of agricultural system data, models, and knowledge products: State of agricultural systems science. *Agricultural Systems*, **2017**, 155, 269-288	6.1	188
123	Insect symbionts as hidden players in insect-plant interactions. *Trends in Ecology and Evolution*, **2012**, 27, 705-11	10.9	188
122	The population genetics of using homing endonuclease genes in vector and pest management. *Genetics*, **2008**, 179, 2013-26	4	188
121	Horizontally transmitted symbionts and host colonization of ecological niches. *Current Biology*, **2013**, 23, 1713-7	6.3	186
120	Population genetic structure and secondary symbionts in host-associated populations of the pea aphid complex. *Evolution; International Journal of Organic Evolution*, **2012**, 66, 375-90	3.8	169
119	Requirements for effective malaria control with homing endonuclease genes. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, E874-80	11.5	148
118	Impact of genetic manipulation on the fitness of Anopheles stephensi mosquitoes. *Science*, **2003**, 299, 1225-7	33.3	147
117	CLONAL VARIATION AND COVARIATION IN APHID RESISTANCE TO PARASITOIDS AND A PATHOGEN. *Evolution; International Journal of Organic Evolution*, **2001**, 55, 1805-1814	3.8	133

116	Developing global maps of the dominant anopheles vectors of human malaria. *PLoS Medicine*, **2010**, 7, e1000209	11.6	131
115	Mitigation potential and global health impacts from emissions pricing of food commodities. *Nature Climate Change*, **2017**, 7, 69-74	21.4	130
114	Structure of a diverse tropical forest insect–parasitoid community. *Journal of Animal Ecology*, **2002**, 71, 855-873	4.7	128
113	A restatement of recent advances in the natural science evidence base concerning neonicotinoid insecticides and insect pollinators. *Proceedings of the Royal Society B: Biological Sciences*, **2015**, 282, 20151821	4.4	119
112	Wolbachia variability and host effects on crossing type in Culex mosquitoes. *Nature*, **2005**, 436, 257-60	50.4	118
111	Species-Level Para- and Polyphyly in DNA Barcode Gene Trees: Strong Operational Bias in European Lepidoptera. *Systematic Biology*, **2016**, 65, 1024-1040	8.4	112
110	Genetic variation in the effect of a facultative symbiont on host-plant use by pea aphids. *Oecologia*, **2007**, 153, 323-9	2.9	112
109	Impact of mosquito gene drive on malaria elimination in a computational model with explicit spatial and temporal dynamics. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E255-E264	11.5	109
108	Population differentiation and genetic variation in performance on eight hosts in the pea aphid complex. *Evolution; International Journal of Organic Evolution*, **2008**, 62, 2508-24	3.8	102
107	Insect life history and the evolution of bacterial mutualism. *Ecology Letters*, **2015**, 18, 516-25	10	101
106	POPULATION DIFFERENTIATION AND GENETIC VARIATION IN HOST CHOICE AMONG PEA APHIDS FROM EIGHT HOST PLANT GENERA. *Evolution; International Journal of Organic Evolution*, **2006**, 60, 1574-1584	3.8	100
105	Vectorial capacity and vector control: reconsidering sensitivity to parameters for malaria elimination. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, **2016**, 110, 107-17	2	96
104	Decoupling the direct and indirect effects of nitrogen deposition on ecosystem function. *Ecology Letters*, **2006**, 9, 1015-24	10	93
103	Genetic patterns in European geometrid moths revealed by the Barcode Index Number (BIN) system. *PLoS ONE*, **2013**, 8, e84518	3.7	93
102	A restatement of the natural science evidence base relevant to the control of bovine tuberculosis in Great Britain. *Proceedings of the Royal Society B: Biological Sciences*, **2013**, 280, 20131634	4.4	91
101	Spermless males elicit large-scale female responses to mating in the malaria mosquito Anopheles gambiae. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 13677-81	11.5	83
100	Population dynamic models of the spread of Wolbachia. *American Naturalist*, **2011**, 177, 323-33	3.7	81
99	Indirect interactions in aphid–parasitoid communities. *Researches on Population Ecology*, **1999**, 41, 93-106		80

98	The debate over sustainable intensification. *Food Security*, **2015**, 7, 199-208	6.7	78
97	Strategies for introducing Wolbachia to reduce transmission of mosquito-borne diseases. *PLoS Neglected Tropical Diseases*, **2011**, 5, e1024	4.8	76
96	The web and the structure of taxonomy. *Systematic Biology*, **2007**, 56, 943-55	8.4	74
95	The Sabah Biodiversity Experiment: a long-term test of the role of tree diversity in restoring tropical forest structure and functioning. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2011**, 366, 3303-15	5.8	73
94	A collaboratively-derived science-policy research agenda. *PLoS ONE*, **2012**, 7, e31824	3.7	73
93	The diversity and fitness effects of infection with facultative endosymbionts in the grain aphid, Sitobion avenae. *Oecologia*, **2013**, 173, 985-96	2.9	68
92	Towards a new generation of agricultural system data, models and knowledge products: Design and improvement. *Agricultural Systems*, **2017**, 155, 255-268	6.1	67
91	Stochastic spread of Wolbachia. *Proceedings of the Royal Society B: Biological Sciences*, **2008**, 275, 2769-76	4.4	67
90	Lessons from agriculture for the sustainable management of malaria vectors. *PLoS Medicine*, **2012**, 9, e1001262	11.6	63
89	Modelling the spatial spread of a homing endonuclease gene in a mosquito population. *Journal of Applied Ecology*, **2013**, 50, 1216-1225	5.8	62
88	Ecology. Food and biodiversity. *Science*, **2011**, 333, 1231-2	33.3	62
87	Evidence for specificity in symbiont-conferred protection against parasitoids. *Proceedings of the Royal Society B: Biological Sciences*, **2015**, 282,	4.4	61
86	Costs of counterdefenses to host resistance in a parasitoid of Drosophila. *Evolution; International Journal of Organic Evolution*, **2001**, 55, 1815-21	3.8	59
85	Symbionts protect aphids from parasitic wasps by attenuating herbivore-induced plant volatiles. *Nature Communications*, **2017**, 8, 1860	17.4	58
84	Insect symbionts in food webs. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2016**, 371,	5.8	57
83	Clonal variation and covariation in aphid resistance to parasitoids and a pathogen. *Evolution; International Journal of Organic Evolution*, **2001**, 55, 1805-14	3.8	55
82	Modelling the global economic consequences of a major African swine fever outbreak in China. *Nature Food*, **2020**, 1, 221-228	14.4	54
81	What do molecular methods bring to host-parasitoid food webs?. *Trends in Parasitology*, **2015**, 31, 30-5	6.4	52

80	Invasion sequence affects predator-prey dynamics in a multi-species interaction. *Nature*, **2000**, 405, 448-50	50.4	52
79	Modelling the potential of genetic control of malaria mosquitoes at national scale. *BMC Biology*, **2019**, 17, 26	7.3	48
78	How driving endonuclease genes can be used to combat pests and disease vectors. *BMC Biology*, **2017**, 15, 81	7.3	48
77	A restatement of the natural science evidence base concerning the health effects of low-level ionizing radiation. *Proceedings of the Royal Society B: Biological Sciences*, **2017**, 284,	4.4	47
76	Field experiments testing for apparent competition between primary parasitoids mediated by secondary parasitoids. *Journal of Animal Ecology*, **2001**, 70, 301-309	4.7	47
75	Requirements for Driving Antipathogen Effector Genes into Populations of Disease Vectors by Homing. *Genetics*, **2017**, 205, 1587-1596	4	46
74	STABLE COEXISTENCE IN INSECT COMMUNITIES DUE TO DENSITY- AND TRAIT-MEDIATED INDIRECT EFFECTS. *Ecology*, **2005**, 86, 3182-3189	4.6	46
73	Health-motivated taxes on red and processed meat: A modelling study on optimal tax levels and associated health impacts. *PLoS ONE*, **2018**, 13, e0204139	3.7	45
72	Larval density dependence in Anopheles gambiae s.s., the major African vector of malaria. *Journal of Animal Ecology*, **2013**, 82, 166-74	4.7	43
71	Genotype specificity among hosts, pathogens, and beneficial microbes influences the strength of symbiont-mediated protection. *Evolution; International Journal of Organic Evolution*, **2017**, 71, 1222-1231	3.8	42
70	MOLECULAR MARKERS INDICATE RARE SEX IN A PREDOMINANTLY ASEXUAL PARASITOID WASP. *Evolution; International Journal of Organic Evolution*, **1999**, 53, 1189-1199	3.8	42
69	Defensive insect symbiont leads to cascading extinctions and community collapse. *Ecology Letters*, **2016**, 19, 789-99	10	41
68	Engaging with the water sector for public health benefits: waterborne pathogens and diseases in developed countries. *Bulletin of the World Health Organization*, **2010**, 88, 873-5	8.2	39
67	Quantitative food webs of dipteran leafminers and their parasitoids in Argentina. *Ecological Research*, **2001**, 16, 925-939	1.9	39
66	Symbionts modify interactions between insects and natural enemies in the field. *Journal of Animal Ecology*, **2016**, 85, 1605-1612	4.7	38
65	Consequences of symbiont co-infections for insect host phenotypes. *Journal of Animal Ecology*, **2018**, 87, 478-488	4.7	36
64	Mosquito ecology and control of malaria. *Journal of Animal Ecology*, **2013**, 82, 15-25	4.7	36
63	Modelling the spread of Wolbachia in spatially heterogeneous environments. *Journal of the Royal Society Interface*, **2012**, 9, 3045-54	4.1	36

62	Population differentiation and genetic variation in host choice among pea aphids from eight host plant genera. *Evolution; International Journal of Organic Evolution*, **2006**, 60, 1574-84	3.8	36
61	Food system consequences of a fungal disease epidemic in a major crop. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2016**, 371,	5.8	35
60	Predicting Wolbachia invasion dynamics in Aedes aegypti populations using models of density-dependent demographic traits. *BMC Biology*, **2016**, 14, 96	7.3	34
59	Food for thought. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 19845-6	11.5	34
58	Evolution of host resistance and parasitoid counter-resistance. *Advances in Parasitology*, **2009**, 70, 257-80	3.2	34
57	Application of the lumped age-class technique to studying the dynamics of malaria-mosquito-human interactions. *Malaria Journal*, **2007**, 6, 98	3.6	31
56	Host Plant Determines the Population Size of an Obligate Symbiont (Buchnera aphidicola) in Aphids. *Applied and Environmental Microbiology*, **2016**, 82, 2336-2346	4.8	30
55	Frequency-dependent advantages of plasmid carriage by Pseudomonas in homogeneous and spatially structured environments. *ISME Journal*, **2007**, 1, 92-5	11.9	30
54	Avoidance of intraguild predation leads to a long-term positive trait-mediated indirect effect in an insect community. *Oecologia*, **2014**, 174, 943-52	2.9	28
53	Modelling the suppression of a malaria vector using a CRISPR-Cas9 gene drive to reduce female fertility. *BMC Biology*, **2020**, 18, 98	7.3	28
52	The value of biodiversity for the functioning of tropical forests: insurance effects during the first decade of the Sabah biodiversity experiment. *Proceedings of the Royal Society B: Biological Sciences*, **2016**, 283,	4.4	26
51	Horizontal transfer of facultative endosymbionts is limited by host relatedness. *Evolution; International Journal of Organic Evolution*, **2015**, 69, 2757-66	3.8	25
50	Resistance to a fungal pathogen and host plant specialization in the pea aphid. *Ecology Letters*, **2003**, 6, 111-118	10	25
49	Adult vector control, mosquito ecology and malaria transmission. *International Health*, **2015**, 7, 121-9	2.4	24
48	Quantifying the relative importance of niches and neutrality for coexistence in a model microbial system. *Functional Ecology*, **2009**, 23, 1139-1147	5.6	24
47	Functional genomics of the evolution of increased resistance to parasitism in Drosophila. *Molecular Ecology*, **2011**, 20, 932-49	5.7	23
46	Comparative morphology of the venom gland and reservoir in opiine and alysiine braconid wasps (Insecta, Hymenoptera, Braconidae). *Zoologica Scripta*, **1997**, 26, 23-50	2.5	23
45	EVOLUTIONARY CHANGE IN PARASITOID RESISTANCE UNDER CROWDED CONDITIONS IN DROSOPHILA MELANOGASTER. *Evolution; International Journal of Organic Evolution*, **2005**, 59, 1292-1299	3.8	23

44	The dynamics of disease in a metapopulation: The role of dispersal range. *Journal of Theoretical Biology*, **2017**, 418, 57-65	2.3	22
43	Identifying the science and technology dimensions of emerging public policy issues through horizon scanning. *PLoS ONE*, **2014**, 9, e96480	3.7	22
42	A positive trait-mediated indirect effect involving the natural enemies of competing herbivores. *Oecologia*, **2009**, 160, 195-205	2.9	19
41	Relative importance of fertiliser addition to plants and exclusion of predators for aphid growth in the field. *Oecologia*, **2005**, 143, 419-27	2.9	19
40	Establishment and maintenance of aphid endosymbionts after horizontal transfer is dependent on host genotype. *Biology Letters*, **2017**, 13,	3.6	18
39	The maintenance of intraspecific biodiversity: the interplay of selection on resource use and on natural enemy resistance in the pea aphid. *Ecological Research*, **2006**, 21, 9-16	1.9	18
38	A restatement of the natural science evidence base on the effects of endocrine disrupting chemicals on wildlife. *Proceedings of the Royal Society B: Biological Sciences*, **2019**, 286, 20182416	4.4	17
37	Resource competition and shared natural enemies in experimental insect communities. *Oecologia*, **2009**, 159, 627-35	2.9	17
36	Contrasting approaches to projecting long-run global food security. *Oxford Review of Economic Policy*, **2015**, 31, 26-44	6.3	15
35	The outcome of competition between two parasitoid species is influenced by a facultative symbiont of their aphid host. *Functional Ecology*, **2017**, 31, 927-933	5.6	15
34	Lack of phenotypic and evolutionary cross-resistance against parasitoids and pathogens in Drosophila melanogaster. *PLoS ONE*, **2012**, 7, e53002	3.7	15
33	Population growth rates: issues and an application. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2002**, 357, 1307-19	5.8	15
32	Hosts do not simply outsource pathogen resistance to protective symbionts. *Evolution; International Journal of Organic Evolution*, **2018**, 72, 1488	3.8	15
31	Host relatedness influences the composition of aphid microbiomes. *Environmental Microbiology Reports*, **2019**, 11, 808-816	3.7	14
30	Open questions: are the dynamics of ecological communities predictable?. *BMC Biology*, **2014**, 12, 22	7.3	14
29	The use of driving endonuclease genes to suppress mosquito vectors of malaria in temporally variable environments. *Malaria Journal*, **2018**, 17, 154	3.6	13
28	Predicting the spatial dynamics of Wolbachia infections in Aedes aegypti arbovirus vector populations in heterogeneous landscapes. *Journal of Applied Ecology*, **2019**, 56, 1674-1686	5.8	13
27	Infection of Drosophila melanogaster by Tubulinosema kingi: stage-specific susceptibility and within-host proliferation. *Journal of Invertebrate Pathology*, **2008**, 99, 239-41	2.6	13

26	Modelling the persistence of mosquito vectors of malaria in Burkina Faso. *Malaria Journal*, **2018**, 17, 140	3.6	12
25	Grain aphid clones vary in frost resistance, but this trait is not influenced by facultative endosymbionts. *Ecological Entomology*, **2011**, 36, 790-793	2.1	12
24	The effect of a competitor on a model adaptive radiation. *Evolution; International Journal of Organic Evolution*, **2012**, 66, 1985-90	3.8	11
23	Intraspecific variation in symbiont density in an insect-microbe symbiosis. *Molecular Ecology*, **2021**, 30, 1559-1569	5.7	10
22	Quality, need, or hunger; begging the question. *Behavioral Ecology*, **2011**, 22, 1147-1148	2.3	9
21	Cascading effects of herbivore protective symbionts on hyperparasitoids. *Ecological Entomology*, **2017**, 42, 601-609	2.1	8
20	A web resource for the UKŦs long-term individual-based time-series (LITS) data. *Journal of Animal Ecology*, **2008**, 77, 612-5	4.7	8
19	The pea aphid genome. *Insect Molecular Biology*, **2010**, 19 Suppl 2, 1-4	3.4	7
18	Parasitoids. *Current Biology*, **2004**, 14, R456	6.3	7
17	Income, consumer preferences, and the future of livestock-derived food demand. *Global Environmental Change*, **2021**, 70, 102343	10.1	7
16	Do facultative symbionts affect fitness of pea aphids in the sexual generation?. *Entomologia Experimentalis Et Applicata*, **2018**, 166, 32-40	2.1	6
15	Investigating the effects of age-related spatial structuring on the transmission of a tick-borne virus in a colonially breeding host. *Ecology and Evolution*, **2017**, 7, 10930-10940	2.8	6
14	Comparative food web structure of larval macrolepidoptera and their parasitoids on two riparian tree species. *Ecological Research*, **2007**, 22, 756-766	1.9	6
13	Multiple phenotypes conferred by a single insect symbiont are independent. *Proceedings of the Royal Society B: Biological Sciences*, **2020**, 287, 20200562	4.4	6
12	Pragmatism and Rigour can Coexist in Taxonomy. *Evolutionary Biology*, **2008**, 35, 309-311	3	5
11	Four decades of parasitoid science. *Entomologia Experimentalis Et Applicata*, **2016**, 159, 135-146	2.1	5
10	Field experiments testing for apparent competition between primary parasitoids mediated by secondary parasitoids. *Journal of Animal Ecology*, **2001**, 70, 301-309	4.7	3
9	Intrinsic pre-zygotic reproductive isolation of distantly related pea aphid host races. *Biology Letters*, **2018**, 14,	3.6	3

8	An experimental test of whether the defensive phenotype of an aphid facultative symbiont can respond to selection within a host lineage. *PLoS ONE*, **2014**, 9, e111601	3.7	2
7	80 questions for UK biological security. *PLoS ONE*, **2021**, 16, e0241190	3.7	2
6	Ecology. Society, where none intrudes. *Science*, **2014**, 343, 1213-4	33.3	1
5	Parent-offspring conflict. *Current Biology*, **2005**, 15, R191	6.3	1
4	Intraspecific variation in symbiont density in an insect-microbe symbiosis		1
3	Lord Robert May (1936–2020). *Science*, **2020**, 368, 1189-1189	33.3	0
2	Thektogaster chrysis (Förster, 1861) added to the British list with first host records for it and other Miscogasterinae (Hymenoptera: Chalcidoidea: Pteromalidae). *Entomologist's Monthly Magazine*, **2022**, 158, 1-8	0.5	
1	Opius pulicariae Fischer (Hymenoptera: Braconidae: Opiinae) added to the British checklist. *Entomologist's Monthly Magazine*, **2022**, 158, 128-130	0.5	