Owain Rhys Edwards

List of Publications by Year
in descending order

99 papers	6,763 citations	117453 34 h-index	71532 76 g-index
102 all docs	102 docs citations	102 times ranked	8761 citing authors

#	Article	IF	Citations
1	Uncovering the novel characteristics of Asian honey bee, Apis cerana, by whole genome sequencing. BMC Genomics, 2015, 16, 1.	1.2	1,445
2	Genome Sequence of the Pea Aphid Acyrthosiphon pisum. PLoS Biology, 2010, 8, e1000313.	2.6	913
3	The i5K Initiative: Advancing Arthropod Genomics for Knowledge, Human Health, Agriculture, and the Environment. Journal of Heredity, 2013, 104, 595-600.	1.0	358
4	Safeguarding gene drive experiments in the laboratory. Science, 2015, 349, 927-929.	6.0	254
5	Genomic innovations, transcriptional plasticity and gene loss underlying the evolution and divergence of two highly polyphagous and invasive Helicoverpa pest species. BMC Biology, 2017, 15, 63.	1.7	238
6	Predicted Effector Molecules in the Salivary Secretome of the Pea Aphid (<i>Acyrthosiphon pisum</i>): A Dual Transcriptomic/Proteomic Approach. Journal of Proteome Research, 2011, 10, 1505-1518.	1.8	219
7	Aphid Resistance in Medicago truncatula Involves Antixenosis and Phloem-Specific, Inducible Antibiosis, and Maps to a Single Locus Flanked by NBS-LRR Resistance Gene Analogs. Plant Physiology, 2005, 137, 1445-1455.	2.3	205
8	Is CRISPR-based gene drive a biocontrol silver bullet or global conservation threat?. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10565-10567.	3.3	183
9	Is host-specificity of weed biological control agents likely to evolve rapidly following establishment?. Ecology Letters, 2002, 5, 590-596.	3.0	142
10	Involvement of the Octadecanoid Pathway in Bluegreen Aphid Resistance in Medicago truncatula. Molecular Plant-Microbe Interactions, 2007, 20, 82-93.	1.4	141
11	Heat-evolved microalgal symbionts increase coral bleaching tolerance. Science Advances, 2020, 6, eaba2498.	4.7	129
12	A functional DNA methylation system in the pea aphid, <i>Acyrthosiphon pisum</i>. Insect Molecular Biology, 2010, 19, 215-228.	1.0	123
13	Armet is an effector protein mediating aphidâ€plant interactions. FASEB Journal, 2015, 29, 2032-2045.	0.2	96
14	Bioinformatic prediction, deep sequencing of microRNAs and expression analysis during phenotypic plasticity in the pea aphid, Acyrthosiphon pisum. BMC Genomics, 2010, 11, 281.	1.2	95
15	Characterization of Pea Aphid Resistance in <i>Medicago truncatula</i> Â Â Â. Plant Physiology, 2008, 146, 996-1009.	2.3	87
16	Resistance to insect pests: What do legumes have to offer?. Euphytica, 2006, 147, 273-285.	0.6	86
17	Genetic Biocontrol for Invasive Species. Frontiers in Bioengineering and Biotechnology, 2020, 8, 452.	2.0	78
18	Insecticide resistance and implications for future aphid management in Australian grains and pastures: a review. Australian Journal of Experimental Agriculture, 2008, 48, 1523.	1.0	76

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19	Detoxifying enzyme complements and host use phenotypes in 160 insect species. Current Opinion in Insect Science, 2019, 31, 131-138.	2.2	75
20	Core commitments for field trials of gene drive organisms. Science, 2020, 370, 1417-1419.	6.0	67
21	A single gene, AIN, in Medicago truncatula mediates a hypersensitive response to both bluegreen aphid and pea aphid, but confers resistance only to bluegreen aphid. Journal of Experimental Botany, 2009, 60, 4115-4127.	2.4	65
22	Agricultural production: assessment of the potential use ofÂCas9-mediated gene drive systems for agricultural pest control. Journal of Responsible Innovation, 2018, 5, S98-S120.	2.3	64
23	Expansion of the miRNA Pathway in the Hemipteran Insect Acyrthosiphon pisum. Molecular Biology and Evolution, 2010, 27, 979-987.	3.5	56
24	Polymorphism in Two Parasitoids Detected Using Random Amplified Polymorphic DNA Polymerase Chain Reaction. Biological Control, 1993, 3, 243-257.	1.4	55
25	Genetic variation and founder effects in the parasitoid wasp, Diaeretiella rapae (Mâ€™intosh) (Hymenoptera: Braconidae: Aphidiidae), affecting its potential as a biological control agent. Molecular Ecology, 2003, 12, 3303-3311.	2.0	54
26	Interspecific and intraspecific variation in the performance of three pest aphid species on five grain legume hosts. Entomologia Experimentalis Et Applicata, 2001, 100, 21-30.	0.7	52
27	Independent action and contrasting phenotypes of resistance genes against spotted alfalfa aphid and bluegreen aphid in Medicago truncatula. New Phytologist, 2007, 173, 630-640.	3.5	52
28	Locally Fixed Alleles: A method to localize gene drive to island populations. Scientific Reports, 2019, 9, 15821.	1.6	52
29	Escalating insecticide resistance in Australian grain pests: contributing factors, industry trends and management opportunities. Pest Management Science, 2019, 75, 1494-1506.	1.7	52
30	Discovery of metabolic resistance to neonicotinoids in green peach aphids (<i>Myzus persicae</i>) in Australia. Pest Management Science, 2017, 73, 1611-1617.	1.7	44
31	High Levels of Resistance to Carbamate and Pyrethroid Chemicals Widespread in Australian <I>Myzus persicae</I> (Hemiptera: Aphididae) Populations. Journal of Economic Entomology, 2014, 107, 1626-1638.	0.8	43
32	The mitochondrial genome of the Russian wheat aphid Diuraphis noxia: Large repetitive sequences between trnE and trnF in aphids. Gene, 2014, 533, 253-260.	1.0	40
33	Expansion of Genes Encoding piRNA-Associated Argonaute Proteins in the Pea Aphid: Diversification of Expression Profiles in Different Plastic Morphs. PLoS ONE, 2011, 6, e28051.	1.1	38
34	Identification of potential early regulators of aphid resistance in <i>Medicago truncatula</i> via transcription factor expression profiling. New Phytologist, 2010, 186, 980-994.	3.5	36
35	Identification of distinct quantitative trait loci associated with defence against the closely related aphids Acyrthosiphon pisum and A. kondoi in Medicago truncatula. Journal of Experimental Botany, 2012, 63, 3913-3922.	2.4	36
36	Russian wheat aphids (<i>Diuraphis noxia</i>) in China: native range expansion or recent introduction?. Molecular Ecology, 2012, 21, 2130-2144.	2.0	34

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37	Characterization of resistance to multiple aphid species (Hemiptera: Aphididae) inMedicago truncatula. Bulletin of Entomological Research, 2007, 97, 41-48.	0.5	32
38	Electronically monitored cowpea aphid feeding behavior on resistant and susceptible lupins. Entomologia Experimentalis Et Applicata, 2001, 98, 259-269.	0.7	31
39	A genomic approach to identify and monitor a novel pyrethroid resistance mutation in the redlegged earth mite, Halotydeus destructor. Pesticide Biochemistry and Physiology, 2018, 144, 83-90.	1.6	31
40	Ecology of diamondback moth in Australian canola: landscape perspectives and the implications for management. Australian Journal of Experimental Agriculture, 2008, 48, 1494.	1.0	30
41	Polymorphisms in salivaryâ€gland transcripts of Russian wheat aphid biotypes 1 and 2. Insect Science, 2012, 19, 429-440.	1.5	30
42	<i>Papaya ringspot virus</i> Populations From East Timorese and Northern Australian Cucurbit Crops: Biological and Molecular Properties, and Absence of Genetic Connectivity. Plant Disease, 2017, 101, 985-993.	0.7	30
43	A multiâ€genome analysis approach enables tracking of the invasion of a single <scp>R</scp>ussian wheat aphid (<i><scp>D</scp>iuraphis noxia</i>) clone throughout the <scp>N</scp>ew <scp>W</scp>orld. Molecular Ecology, 2014, 23, 1940-1951.	2.0	29
44	Discovery and characterisation of field resistance to organophosphorus chemicals in a major mite pest, <i>Halotydeus destructor</i>. Pest Management Science, 2017, 73, 1719-1724.	1.7	28
45	Global Phylogenetics of <I>Diuraphis noxia</I> (Hemiptera: Aphididae), an Invasive Aphid Species: Evidence for Multiple Invasions Into North America. Journal of Economic Entomology, 2010, 103, 958-965.	0.8	26
46	Two independent resistance genes in the<i>Medicago truncatula</i>cultivar Jester confer resistance to two different aphid species of the genus<i>Acyrthosiphon</i>. Plant Signaling and Behavior, 2009, 4, 328-331.	1.2	25
47	Using superparasitism by a stem borer parasitoid to infer a host refuge. Ecological Entomology, 1999, 24, 7-12.	1.1	24
48	The role of alkaloids in conferring aphid resistance in yellow lupin (Lupinus luteus L.). Crop and Pasture Science, 2012, 63, 444.	0.7	24
49	<i>Zucchini yellow mosaic virus</i> Populations from East Timorese and Northern Australian Cucurbit Crops: Molecular Properties, Genetic Connectivity, and Biosecurity Implications. Plant Disease, 2017, 101, 1236-1245.	0.7	24
50	Biology of Ageniaspis citricola (Hymenoptera: Encyrtidae), a Parasitoid of the Leafminer Phyllocnistis dtrella (Lepidoptera: Gracillariidae). Annals of the Entomological Society of America, 1998, 91, 654-660.	1.3	23
51	Metagenomic Analysis of Cucumber RNA from East Timor Reveals an <i>Aphid lethal paralysis virus</i> Genome. Genome Announcements, 2017, 5, .	0.8	23
52	Evaluating pasture legumes for resistance to aphids. Australian Journal of Experimental Agriculture, 2003, 43, 1345.	1.0	22
53	Random Amplified Polymorphic DNA Markers to Monitor Laboratory-Selected, Pesticide-Resistant Trioxys pallidus (Hymenoptera: Aphidiidae) after Release into Three California Walnut Orchards. Environmental Entomology, 1995, 24, 487-496.	0.7	20
54	Phloem Alkaloid Tolerance Allows Feeding on Resistant Lupinus angustifolius by the Aphid Myzus persicae. Journal of Chemical Ecology, 2006, 32, 1965-1976.	0.9	19

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55	Incursion preparedness: anticipating the arrival of an economically important plant pathogen <i>Xylella fastidiosa</i> Wells (Proteobacteria: Xanthomonadaceae) and the insect vector <i>Homalodisca vitripennis</i> (Germar) (Hemiptera: Cicadellidae) in Australia. Australian Journal of Entomology, 2012, 51, 209-220.	1.1	19
56	First Complete Genome Sequence of Pepper vein yellows virus from Australia. Genome Announcements, 2016, 4, .	0.8	18
57	Extracellular endonucleases in the midgut of Myzus persicae may limit the efficacy of orally delivered RNAi. Scientific Reports, 2019, 9, 11898.	1.6	18
58	Oviposition Behavior of Monochamus carolinensis (Coleoptera: Cerambycidae) Infested with the Pinewood Nematode. Annals of the Entomological Society of America, 1991, 84, 319-323.	1.3	17
59	Aphids do not avoid resistance in Australian lupin (Lupinus angustifolius, L. luteus) varieties. Bulletin of Entomological Research, 2003, 93, 403-411.	0.5	17
60	<i>Sweet potato feathery mottle virus</i> and <i>Sweet potato virus C</i> from East Timorese and Australian Sweetpotato: Biological and Molecular Properties, and Biosecurity Implications. Plant Disease, 2018, 102, 589-599.	0.7	17
61	Differential inter- and intra-specific defense induction in Lupinus by Myzus persicae feeding. Entomologia Experimentalis Et Applicata, 2005, 117, 155-163.	0.7	16
62	Complete Genome Sequences of the Carlavirus Sweet potato chlorotic fleck virus from East Timor and Australia. Genome Announcements, 2016, 4, .	0.8	16
63	Genome-wide patterns of differentiation over space and time in the Queensland fruit fly. Scientific Reports, 2020, 10, 10788.	1.6	16
64	Deep Sequencing Reveals the Complete Genome Sequence of Sweet potato virus G from East Timor. Genome Announcements, 2016, 4, .	0.8	15
65	First Complete Squash leaf curl China virus Genomic Segment DNA-A Sequence from East Timor. Genome Announcements, 2017, 5, .	0.8	15
66	Adaptive responses of freeâ€living and symbiotic microalgae to simulated future ocean conditions. Global Change Biology, 2021, 27, 1737-1754.	4.2	15
67	Learnings from over a decade of increasing pesticide resistance in the redlegged earth mite, <i>Halotydeus destructor</i> (Tucker). Pest Management Science, 2021, 77, 3013-3024.	1.7	15
68	Host plant resistance in grain crops and prospects for invertebrate pest management in Australia: an overview. Australian Journal of Experimental Agriculture, 2008, 48, 1543.	1.0	15
69	Monitoring Laboratory and Field Biotypes of the Walnut Aphid Parasite, Trioxys pallidus, in Population Cages Using RAPD-PCR. Biocontrol Science and Technology, 1995, 5, 313-328.	0.5	14
70	Title is missing!. Experimental and Applied Acarology, 1998, 22, 101-109.	0.7	14
71	Complete Genome Sequences of the Potyvirus Sweet potato virus 2 from East Timor and Australia. Genome Announcements, 2016, 4, .	0.8	14
72	OfftargetFinder: a web tool for species-specific RNAi design. Bioinformatics, 2016, 32, 1232-1234.	1.8	14

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73	Quantitative genetics of preference and performance on chickpeas in the noctuid moth, Helicoverpa armigera. Heredity, 2006, 96, 396-402.	1.2	13
74	First Complete Genome Sequence of Suakwa aphid-borne yellows virus from East Timor. Genome Announcements, 2016, 4, .	0.8	13
75	First Complete Genome Sequence of <i>Bean common mosaic necrosis virus</i> from East Timor. Genome Announcements, 2016, 4, .	0.8	13
76	An RNAi supplemented diet as a reverse genetics tool to control bluegreen aphid, a major pest of legumes. Scientific Reports, 2020, 10, 1604.	1.6	13
77	Analysis of an RNA-seq Strand-Specific Library from an East Timorese Cucumber Sample Reveals a Complete <i>Cucurbit aphid-borne yellows virus</i> Genome. Genome Announcements, 2017, 5, .	0.8	12
78	New Isolates of <i>Sweet potato feathery mottle virus</i> and <i>Sweet potato virus C</i>: Biological and Molecular Properties, and Recombination Analysis Based on Complete Genomes. Plant Disease, 2018, 102, 1899-1914.	0.7	11
79	Genetic Connectivity Between Papaya Ringspot Virus Genomes from Papua New Guinea and Northern Australia, and New Recombination Insights. Plant Disease, 2019, 103, 737-747.	0.7	11
80	Susceptibility of the bird cherryâ€oat aphid, <scp><i>Rhopalosiphum padi</i></scp> (Hemiptera:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.8	11
81	Climate stress resistance in male Queensland fruit fly varies among populations of diverse geographic origins and changes during domestication. BMC Genetics, 2020, 21, 135.	2.7	11
82	Arthropod diversity and the future of allâ€taxa inventories. Insect Conservation and Diversity, 2013, 6, 1-4.	1.4	10
83	Population growth rate and relative virulence of the two South African biotypes of Russian wheat aphid, Diuraphis noxia, and bird cherry-oat aphid, Rhopalosiphum padi, on resistant and non-resistant barley. Entomologia Experimentalis Et Applicata, 2011, 138, 12-20.	0.7	8
84	An insecticide baseline study of Australian broadacre aphids. Crop and Pasture Science, 2016, 67, 236.	0.7	8
85	Two Complete Genome Sequences of Squash mosaic virus from 20-Year-Old Cucurbit Leaf Samples from Australia. Genome Announcements, 2017, 5, .	0.8	8
86	Additive and epistatic interactions between AKR and AIN loci conferring bluegreen aphid resistance and hypersensitivity in Medicago truncatula. Journal of Experimental Botany, 2019, 70, 4887-4902.	2.4	8
87	Separating two tightly linked species-defining phenotypes in Bactrocera with hybrid recombinant analysis. BMC Genetics, 2020, 21, 132.	2.7	8
88	Tracing the origins of recent Queensland fruit fly incursions into South Australia, Tasmania and New Zealand. Biological Invasions, 2021, 23, 1117-1130.	1.2	8
89	A Roadmap for Whitefly Genomics Research: Lessons from Previous Insect Genome Projects. Journal of Integrative Agriculture, 2012, 11, 269-280.	1.7	7
90	First Complete Genome Sequence of Cucurbit aphid-borne yellows virus from Papua New Guinea. Genome Announcements, 2018, 6, .	0.8	7

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91	Intended consequences statement. Conservation Science and Practice, 2021, 3, e371.	0.9	6
92	<i>Zucchini yellow mosaic virus</i> Genomic Sequences from Papua New Guinea: Lack of Genetic Connectivity with Northern Australian or East Timorese Genomes, and New Recombination Findings. Plant Disease, 2019, 103, 1326-1336.	0.7	5
93	Fitness Costs Associated with Pyrethroid Resistance in <i>Halotydeus destructor</i> (Tucker) (Acari:) Tj ETQq1 1 0.784314 rgBT /Overlo 1270-1281.	0.8	4
94	Should we be worried about developing insecticide resistance in aphids?. Outlooks on Pest Management, 2003, 14, 104.	0.2	3
95	Russian wheat aphid biotype RWASA2 causes more vascular disruption than RWASA1 on resistant barley lines. South African Journal of Botany, 2011, 77, 755-766.	1.2	3
96	A genome-wide approach for uncovering evolutionary relationships of Australian Bactrocera species complexes (Diptera: Tephritidae). Invertebrate Systematics, 2019, , .	0.5	1
97	Aphid resistance to insecticides in grain crops in eastern Australia. Outlooks on Pest Management, 2006, 17, 126-127.	0.1	0
98	Editorial overview: Insect genomics â€” shifting the focus of genomics from the lab to the field. Current Opinion in Insect Science, 2016, 13, v-vi.	2.2	0
99	Insects Co-opt Host Genes to Overcome Plant Defences.. Faculty Reviews, 2022, 11, 10.	1.7	0