Andrew B Barron

List of Publications by Year
in descending order

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116 papers	5,488 citations	71102 41 h-index	98798 67 g-index
125 all docs	125 docs citations	125 times ranked	4520 citing authors

#	Article	IF	Citations
1	Rapid behavioral maturation accelerates failure of stressed honey bee colonies. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3427-3432.	7.1	220
2	The Life and Death of Hopkins' Host-Selection Principle. Journal of Insect Behavior, 2001, 14, 725-737.	0.7	212
3	What insects can tell us about the origins of consciousness. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4900-4908.	7.1	208
4	A Quantitative Model of Honey Bee Colony Population Dynamics. PLoS ONE, 2011, 6, e18491.	2.5	204
5	Why Bees Are So Vulnerable to Environmental Stressors. Trends in Ecology and Evolution, 2017, 32, 268-278.	8.7	177
6	Worker reproduction in honey-bees (Apis) and the anarchic syndrome: a review. Behavioral Ecology and Sociobiology, 2001, 50, 199-208.	1.4	153
7	Octopamine modulates honey bee dance behavior. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 1703-1707.	7.1	139
8	Genital Evolution: Why Are Females Still Understudied?. PLoS Biology, 2014, 12, e1001851.	5.6	136
9	The Roles of Dopamine and Related Compounds in Reward-Seeking Behavior Across Animal Phyla. Frontiers in Behavioral Neuroscience, 2010, 4, 163.	2.0	132
10	A systems approach to animal communication. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20152889.	2.6	130
11	Modelling Food and Population Dynamics in Honey Bee Colonies. PLoS ONE, 2013, 8, e59084.	2.5	129
12	General Stress Responses in the Honey Bee. Insects, 2012, 3, 1271-1298.	2.2	122
13	A Role for Octopamine in Honey Bee Division of Labor. Brain, Behavior and Evolution, 2002, 60, 350-359.	1.7	119
14	A horizon scan of future threats and opportunities for pollinators and pollination. PeerJ, 2016, 4, e2249.	2.0	115
15	Honey bees selectively avoid difficult choices. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 19155-19159.	7.1	113
16	Neural Mechanisms of Reward in Insects. Annual Review of Entomology, 2013, 58, 543-562.	11.8	108
17	Anaesthetising Drosophila for behavioural studies. Journal of Insect Physiology, 2000, 46, 439-442.	2.0	98
18	Worker policing and worker reproduction in Apis cerana. Behavioral Ecology and Sociobiology, 2001, 50, 371-377.	1.4	94

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19	Dynamic modelling of honey bee (Apis mellifera) colony growth and failure. Ecological Modelling, 2013, 265, 158-169.	2.5	88
20	Comparing injection, feeding and topical application methods for treatment of honeybees with octopamine. Journal of Insect Physiology, 2007, 53, 187-194.	2.0	86
21	Effect of age, behaviour and social environment on honey bee brain plasticity. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2009, 195, 733-740.	1.6	84
22	Invertebrate learning and cognition: relating phenomena to neural substrate. Wiley Interdisciplinary Reviews: Cognitive Science, 2013, 4, 561-582.	2.8	84
23	Traces of a Neonicotinoid Induce Precocious Foraging and Reduce Foraging Performance in Honey Bees. Environmental Science & Technology, 2019, 53, 8252-8261.	10.0	82
24	Death of the bee hive: understanding the failure of an insect society. Current Opinion in Insect Science, 2015, 10, 45-50.	4.4	74
25	Vertical Lobes of the Mushroom Bodies Are Essential for View-Based Navigation in Australian Myrmecia Ants. Current Biology, 2020, 30, 3432-3437.e3.	3.9	72
26	Worker policing in the bee Apis florea. Behavioral Ecology and Sociobiology, 2001, 49, 509-513.	1.4	70
27	Embracing multiple definitions of learning. Trends in Neurosciences, 2015, 38, 405-407.	8.6	70
28	The frontiers of insect cognition. Current Opinion in Behavioral Sciences, 2017, 16, 111-118.	3.9	70
29	Preimaginal conditioning in Drosophila revisited. Animal Behaviour, 1999, 58, 621-628.	1.9	66
30	Effects of cocaine on honey bee dance behaviour. Journal of Experimental Biology, 2009, 212, 163-168.	1.7	64
31	Negative impact of manganese on honeybee foraging. Biology Letters, 2015, 11, 20140989.	2.3	63
32	Selective modulation of task performance by octopamine in honey bee (Apis mellifera) division of labour. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2005, 191, 659-668.	1.6	55
33	Starving honey bee (Apis mellifera) larvae signal pheromonally to worker bees. Scientific Reports, 2016, 6, 22359.	3.3	53
34	Epigenomics and the concept of degeneracy in biological systems. Briefings in Functional Genomics, 2014, 13, 191-202.	2.7	52
35	Learning, gustatory responsiveness and tyramine differences across nurse and forager honeybees. Journal of Experimental Biology, 2017, 220, 1443-1450.	1.7	51
36	Cooperative defence operates by social modulation of biogenic amine levels in the honey bee brain. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20172653.	2.6	51

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37	Honey bees increase their foraging performance and frequency of pollen trips through experience. Scientific Reports, 2019, 9, 6778.	3.3	51
38	Pheromonal control: reconciling physiological mechanism with signalling theory. Biological Reviews, 2015, 90, 542-559.	10.4	49
39	Epigenetics and the evolution of instincts. Science, 2017, 356, 26-27.	12.6	48
40	Current permissible levels of metal pollutants harm terrestrial invertebrates. Science of the Total Environment, 2021, 779, 146398.	8.0	48
41	Making a queen: an epigenetic analysis of the robustness of the honeybee (<i><scp>A</scp>pis) Tj ETQq1 1 0.784314 rgBT /Overlock	3.9	46
42	A Hybrid Compact Neural Architecture for Visual Place Recognition. IEEE Robotics and Automation Letters, 2020, 5, 993-1000.	5.1	46
43	A computational model of the integration of landmarks and motion in the insect central complex. PLoS ONE, 2017, 12, e0172325.	2.5	45
44	Inter-individual variability in the foraging behaviour of traplining bumblebees. Scientific Reports, 2017, 7, 4561.	3.3	43
45	Using within-day hive weight changes to measure environmental effects on honey bee colonies. PLoS ONE, 2018, 13, e0197589.	2.5	43
46	Age- and behaviour-related changes in the expression of biogenic amine receptor genes in the antennae of honey bees (Apis mellifera). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2012, 198, 753-761.	1.6	42
47	The Value of Artificial Stimuli in Behavioral Research: Making the Case for Egg Rejection Studies in Avian Brood Parasitism. Ethology, 2015, 121, 521-528.	1.1	42
48	Division of labor in the honey bee (Apis mellifera): the role of tyramine Î²-hydroxylase. Journal of Experimental Biology, 2006, 209, 2774-2784.	1.7	41
49	Differences in the phototaxis of pollen and nectar foraging honey bees are related to their octopamine brain titers. Frontiers in Physiology, 2014, 5, 116.	2.8	41
50	The evolution of honey bee dance communication: a mechanistic perspective. Journal of Experimental Biology, 2017, 220, 4339-4346.	1.7	41
51	Long-term dynamics of honey bee colonies following exposure to chemical stress. Science of the Total Environment, 2019, 677, 660-670.	8.0	39
52	Assessment of flight activity and homing ability in Asian and European honey bee species, Apis cerana and Apis mellifera, measured with radio frequency tags. Apidologie, 2013, 44, 38-51.	2.0	38
53	Invertebrate Models in Addiction Research. Brain, Behavior and Evolution, 2013, 82, 153-165.	1.7	37
54	Relationship between brain plasticity, learning and foraging performance in honey bees. PLoS ONE, 2018, 13, e0196749.	2.5	35

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55	Different Roles for Honey Bee Mushroom Bodies and Central Complex in Visual Learning of Colored Lights in an Aversive Conditioning Assay. Frontiers in Behavioral Neuroscience, 2017, 11, 98.	2.0	34
56	Abstract concept learning in a simple neural network inspired by the insect brain. PLoS Computational Biology, 2018, 14, e1006435.	3.2	33
57	The development of honey bee colonies assessed using a new semi-automated brood counting method: CombCount. PLoS ONE, 2018, 13, e0205816.	2.5	30
58	Metal pollutants have additive negative effects on honey bee cognition. Journal of Experimental Biology, 2021, 224, .	1.7	30
59	Experience during early adulthood shapes the learning capacities and the number of synaptic boutons in the mushroom bodies of honey bees (Apis mellifera). Learning and Memory, 2017, 24, 557-562.	1.3	29
60	Decision-making and action selection in insects: inspiration from vertebrate-based theories. Frontiers in Behavioral Neuroscience, 2015, 9, 216.	2.0	28
61	The Effects of Fat Body Tyramine Level on Gustatory Responsiveness of Honeybees (Apis mellifera) Differ between Behavioral Castes. Frontiers in Systems Neuroscience, 2017, 11, 55.	2.5	26
62	Effect of honey bee queen mating condition on worker ovary activation. Insectes Sociaux, 2013, 60, 123-133.	1.2	25
63	The utility of behavioral models and modules in molecular analyses of social behavior. Genes, Brain and Behavior, 2008, 7, 257-265.	2.2	24
64	Altruistic Behavior by Egg-Laying Worker Honeybees. Current Biology, 2013, 23, 1574-1578.	3.9	24
65	Effects of the juvenile hormone analogue methoprene on rate of behavioural development, foraging performance and navigation in honey bees (Apis mellifera). Journal of Experimental Biology, 2015, 218, 1715-24.	1.7	24
66	Chronic exposure to trace lead impairs honey bee learning. Ecotoxicology and Environmental Safety, 2021, 212, 112008.	6.0	24
67	A Maternal Effect on Queen Production in Honeybees. Current Biology, 2019, 29, 2208-2213.e3.	3.9	22
68	Insect Reward Systems. Advances in Insect Physiology, 2015, 48, 189-226.	2.7	21
69	Accelerated behavioural development changes fine-scale search behaviour and spatial memory in honey bees (Apis melliferaL). Journal of Experimental Biology, 2015, 219, 412-8.	1.7	21
70	Prosociality and a Sociosexual Hypothesis for the Evolution of Same-Sex Attraction in Humans. Frontiers in Psychology, 2019, 10, 2955.	2.1	21
71	The miticide thymol in combination with trace levels of the neonicotinoid imidacloprid reduces visual learning performance in honey bees (Apis mellifera). Apidologie, 2020, 51, 499-509.	2.0	21
72	Measuring the cost of worker reproduction in honeybees: work tempo in an "anarchic" line. Apidologie, 2004, 35, 83-88.	2.0	21

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73	Cocaine Tolerance in Honey Bees. PLoS ONE, 2013, 8, e64920.	2.5	20
74	Effects of thymol on European honey bee hygienic behaviour. Apidologie, 2019, 50, 141-152.	2.0	19
75	Peak shift in honey bee olfactory learning. Animal Cognition, 2014, 17, 1177-1186.	1.8	18
76	Let's talk about sex. Nature, 2012, 488, 151-152.	27.8	17
77	Current progress in understanding the functions of the insect central complex. Current Opinion in Insect Science, 2015, 12, 11-18.	4.4	17
78	Stress decreases pollen foraging performance in honeybees. Journal of Experimental Biology, 2018, 221, .	1.7	17
79	A comparison of honeybee (Apis mellifera) queen, worker and drone larvae by RNAâ€Seq. Insect Science, 2019, 26, 499-509.	3.0	17
80	A Comparison of Digital Gene Expression Profiling and Methyl DNA Immunoprecipitation as Methods for Gene Discovery in Honeybee (Apis mellifera) Behavioural Genomic Analyses. PLoS ONE, 2013, 8, e73628.	2.5	16
81	Behavioural induction in Drosophila: timing and specificity. Entomologia Experimentalis Et Applicata, 2000, 94, 159-171.	1.4	15
82	Biogenic amine modulation of honey bee sociability and nestmate affiliation. PLoS ONE, 2018, 13, e0205686.	2.5	15
83	Non-numerical strategies used by bees to solve numerical cognition tasks. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20202711.	2.6	15
84	Cocaine affects foraging behaviour and biogenic amine modulated behavioural reflexes in honey bees. PeerJ, 2014, 2, e662.	2.0	15
85	Optic flow informs distance but not profitability for honeybees. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 1241-1245.	2.6	12
86	Physiology of reproductive worker honey bees (Apis mellifera): insights for the development of the worker caste. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2016, 202, 147-158.	1.6	11
87	Effects of late miticide treatments on foraging and colony productivity of European honey bees (Apis) Tj ETQq1 1 0.784314 rgBT /Ove	2.0	11
88	Honey bee (Apis mellifera) sociability and nestmate affiliation is dependent on the social environment experienced post-eclosion. Journal of Experimental Biology, 2018, 221, .	1.7	10
89	Pesticide dosing must be guided by ecological principles. Nature Ecology and Evolution, 2020, 4, 1575-1577.	7.8	10
90	A model of resource partitioning between foraging bees based on learning. PLoS Computational Biology, 2021, 17, e1009260.	3.2	10

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91	Neuropharmacological Manipulation of Restrained and Free-flying Honey Bees, Apis mellifera. Journal of Visualized Experiments, 2016, , .	0.3	9
92	Cocaine Directly Impairs Memory Extinction and Alters Brain DNA Methylation Dynamics in Honey Bees. Frontiers in Physiology, 2018, 9, 79.	2.8	9
93	Traces of a neonicotinoid pesticide stimulate different honey bee colony activities, but do not increase colony size or longevity. Ecotoxicology and Environmental Safety, 2022, 231, 113202.	6.0	9
94	Honey bees cannot sense harmful concentrations of metal pollutants in food. Chemosphere, 2022, 297, 134089.	8.2	9
95	Extent and complexity of RNA processing in honey bee queen and worker caste development. IScience, 2022, 25, 104301.	4.1	9
96	Pre-exposure affects the olfactory response of Drosophila melanogaster to menthol. Entomologia Experimentalis Et Applicata, 1999, 90, 175-181.	1.4	8
97	Behavior and molecular physiology of nurses of worker and queen larvae in honey bees (Apis) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.9	8
98	Honeybees solve a multi-comparison ranking task by probability matching. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20201525.	2.6	8
99	Evaluating the foraging performance of individual honey bees in different environments with automated field <scp>RFID</scp> systems. Ecosphere, 2022, 13, .	2.2	8
100	How experimental neuroscientists can fix the hard problem of consciousness. Neuroscience of Consciousness, 2020, 2020, niaa009.	2.6	7
101	EchoVPR: Echo State Networks for Visual Place Recognition. IEEE Robotics and Automation Letters, 2022, 7, 4520-4527.	5.1	7
102	Transcriptomic, Morphological, and Developmental Comparison of Adult Honey Bee Queens (<i>Apis) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 2020, 113, 2581-2587.	1.8	6
103	Why Do Hives Die? Using Mathematics to Solve the Problem of Honey Bee Colony Collapse. Mathematics for Industry, 2017, , 35-50.	0.4	6
104	The best of both worlds: Dual systems of reasoning in animals and AI. Cognition, 2022, 225, 105118.	2.2	6
105	The capping pheromones and putative biosynthetic pathways in worker and drone larvae of honey bees Apis mellifera. Apidologie, 2019, 50, 793-803.	2.0	5
106	The involvement of a floral scent in plant-honeybee interaction. Die Naturwissenschaften, 2022, 109, .	1.6	5
107	Transgenerational accumulation of methylome changes discovered in commercially reared honey bee (Apis mellifera) queens. Insect Biochemistry and Molecular Biology, 2020, 127, 103476.	2.7	4
108	Plenty of sex, but no sexuality in biology undergraduate curricula. BioEssays, 2011, 33, 899-902.	2.5	3

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109	Effects of commercial queen rearing methods on queen fecundity and genome methylation. Apidologie, 2021, 52, 282-291.	2.0	3
110	Non-additive gene interactions underpin molecular and phenotypic responses in honey bee larvae exposed to imidacloprid and thymol. Science of the Total Environment, 2022, 814, 152614.	8.0	3
111	Neurogenomic and Neurochemical Dissection of Honey Bee Dance Communication. , 2012, , 323-339.		2
112	The effects of brood ester pheromone on foraging behaviour and colony growth in apicultural settings. Apidologie, 2014, 45, 529-536.	2.0	2
113	Reply to Adamo, Key et al., and Schilling and Cruse: Crawling around the hard problem of consciousness. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E3814-E3815.	7.1	2
114	Response to Luotoâ€™s (2020) â€œDid Prosociality Drive the Evolution of Homosexuality?â€• Archives of Sexual Behavior, 2020, 49, 2245-2246.	1.9	2
115	Did Prosociality Drive the Evolution of Homosexuality? Response to Luoto (2021). Archives of Sexual Behavior, 2021, 50, 2781-2783.	1.9	1
116	Vertical Lobes of the Mushroom Bodies are Essential for View-Based Navigation in Australian Bull Ants. SSRN Electronic Journal, 0, , .	0.4	1