

Eric J Warrant

List of Publications by Year in descending order

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Version: 2024-02-01

125
papers

7,603
citations

53660

45
h-index

66788

78
g-index

140
all docs

140
docs citations

140
times ranked

4360
citing authors

#	ARTICLE	IF	CITATIONS
1	Flight-induced compass representation in the monarch butterfly heading network. <i>Current Biology</i> , 2022, 32, 338-349.e5.	1.8	42
2	It's all about seeing and hearing: the Editors' and Readers' Choice Awards 2022. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2022, , 1.	0.7	1
3	Mike Land: a personal remembrance. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2022, 208, 345-347.	0.7	0
4	Potential for identification of wild night-flying moths by remote infrared microscopy. <i>Journal of the Royal Society Interface</i> , 2022, 19, .	1.5	8
5	How Dung Beetles Steer Straight. <i>Annual Review of Entomology</i> , 2021, 66, 243-256.	5.7	24
6	Wing damage affects flight kinematics but not flower tracking performance in hummingbird hawkmoths. <i>Journal of Experimental Biology</i> , 2021, 224, .	0.8	11
7	Moths are strongly attracted to ultraviolet and blue radiation. <i>Insect Conservation and Diversity</i> , 2021, 14, 188-198.	1.4	25
8	Heading variations resolve the heading-direction ambiguity in vertical-beam radar observations of insect migration. <i>International Journal of Remote Sensing</i> , 2021, 42, 3873-3898.	1.3	0
9	Nocturnal Bees as Crop Pollinators. <i>Agronomy</i> , 2021, 11, 1014.	1.3	8
10	A Guide for Using Flight Simulators to Study the Sensory Basis of Long-Distance Migration in Insects. <i>Frontiers in Behavioral Neuroscience</i> , 2021, 15, 678936.	1.0	7
11	Unravelling the enigma of bird magnetoreception. <i>Nature</i> , 2021, 594, 497-498.	13.7	8
12	Editorial. <i>Arthropod Structure and Development</i> , 2021, 63, 101073.	0.8	0
13	Dorsal landmark navigation in a Neotropical nocturnal bee. <i>Current Biology</i> , 2021, 31, 3601-3605.e3.	1.8	5
14	A unified platform to manage, share, and archive morphological and functional data in insect neuroscience. <i>ELife</i> , 2021, 10, .	2.8	21
15	Australian Bogong moths <i>Agrotis infusa</i> (Lepidoptera: Noctuidae), 1951–2020: decline and crash. <i>Austral Entomology</i> , 2021, 60, 66-81.	0.8	25
16	A new, fluorescence-based method for visualizing the pseudopupil and assessing optical acuity in the dark compound eyes of honeybees and other insects. <i>Scientific Reports</i> , 2021, 11, 21267.	1.6	2
17	Animal navigation: a noisy magnetic sense?. <i>Journal of Experimental Biology</i> , 2020, 223, .	0.8	20
18	Cover Image, Volume 528, Issue 11. <i>Journal of Comparative Neurology</i> , 2020, 528, C4.	0.9	0

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19	OBSOLETE: Light and Visual Environments. , 2020, , .		0
20	Retinal Ganglion Cell Topography and Spatial Resolving Power in Echolocating and Non-Echolocating Bats. <i>Brain, Behavior and Evolution</i> , 2020, 95, 58-68.	0.9	3
21	Bogong Moths Are Well Camouflaged by Effectively Decolourized Wing Scales. <i>Frontiers in Physiology</i> , 2020, 11, 95.	1.3	6
22	Insect Target Classes Discerned from Entomological Radar Data. <i>Remote Sensing</i> , 2020, 12, 673.	1.8	8
23	The brain of a nocturnal migratory insect, the Australian Bogong moth. <i>Journal of Comparative Neurology</i> , 2020, 528, 1942-1963.	0.9	31
24	Spatial orientation based on multiple visual cues in non-migratory monarch butterflies. <i>Journal of Experimental Biology</i> , 2020, 223, .	0.8	20
25	Light and Visual Environments. , 2020, , 4-30.		5
26	Desert Navigator: The Journey of an Ant. By Rüdiger Wehner. Belknap Press. Cambridge (Massachusetts): Harvard University Press. \$59.95. vii + 392 p.; ill.; index. ISBN: 9780674045880. 2020.. <i>Quarterly Review of Biology</i> , 2020, 95, 327-328.	0.0	0
27	Animal Signals: Dirty Dancing in the Dark?. <i>Current Biology</i> , 2019, 29, R834-R836.	1.8	0
28	Retinal oxygen supply shaped the functional evolution of the vertebrate eye. <i>ELife</i> , 2019, 8, .	2.8	19
29	Auditory opportunity and visual constraint enabled the evolution of echolocation in bats. <i>Nature Communications</i> , 2018, 9, 98.	5.8	57
30	Visual Optics: Remarkable Image-Forming Mirrors in Scallop Eyes. <i>Current Biology</i> , 2018, 28, R262-R264.	1.8	3
31	Evidence for a southward autumn migration of nocturnal noctuid moths in central Europe. <i>Journal of Experimental Biology</i> , 2018, 221, .	0.8	37
32	The Earth's Magnetic Field and Visual Landmarks Steer Migratory Flight Behavior in the Nocturnal Australian Bogong Moth. <i>Current Biology</i> , 2018, 28, 2160-2166.e5.	1.8	94
33	Neuroarchitecture of the dung beetle central complex. <i>Journal of Comparative Neurology</i> , 2018, 526, 2612-2630.	0.9	47
34	Consequences of evolutionary transitions in changing photic environments. <i>Austral Entomology</i> , 2017, 56, 23-46.	0.8	52
35	Vision in dim light: highlights and challenges. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017, 372, 20160062.	1.8	31
36	The remarkable visual capacities of nocturnal insects: vision at the limits with small eyes and tiny brains. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017, 372, 20160063.	1.8	77

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37	Higher-order neural processing tunes motion neurons to visual ecology in three species of hawkmoths. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20170880.	1.2	25
38	Visual Tracking: Hot Pursuit with Tiny Eyes. <i>Current Biology</i> , 2017, 27, R234-R237.	1.8	1
39	An Anatomically Constrained Model for Path Integration in the Bee Brain. <i>Current Biology</i> , 2017, 27, 3069-3085.e11.	1.8	290
40	Oilbirds. <i>Current Biology</i> , 2017, 27, R1145-R1147.	1.8	4
41	Resolving the Trade-off Between Visual Sensitivity and Spatial Acuity—Lessons from Hawkmoths. <i>Integrative and Comparative Biology</i> , 2017, 57, 1093-1103.	0.9	14
42	Comparison of Navigation-Related Brain Regions in Migratory versus Non-Migratory Noctuid Moths. <i>Frontiers in Behavioral Neuroscience</i> , 2017, 11, 158.	1.0	26
43	Visual Adaptations for Mate Detection in the Male Carpenter Bee <i>Xylocopa tenuiscapa</i> . <i>PLoS ONE</i> , 2017, 12, e0168452.	1.1	23
44	The Australian Bogong Moth <i>Agrotis infusa</i> : A Long-Distance Nocturnal Navigator. <i>Frontiers in Behavioral Neuroscience</i> , 2016, 10, 77.	1.0	80
45	Bumblebees Perform Well-Controlled Landings in Dim Light. <i>Frontiers in Behavioral Neuroscience</i> , 2016, 10, 174.	1.0	12
46	Differential investment in visual and olfactory brain areas reflects behavioural choices in hawk moths. <i>Scientific Reports</i> , 2016, 6, 26041.	1.6	72
47	Bogong moths. <i>Current Biology</i> , 2016, 26, R263-R265.	1.8	5
48	Visual Navigation in Nocturnal Insects. <i>Physiology</i> , 2016, 31, 182-192.	1.6	60
49	Superior visual performance in nocturnal insects: neural principles and bio-inspired technologies. <i>Proceedings of SPIE</i> , 2016, , .	0.8	2
50	The Dual Function of Orchid Bee Ocelli as Revealed by X-Ray Microtomography. <i>Current Biology</i> , 2016, 26, 1319-1324.	1.8	53
51	Adaptations for nocturnal and diurnal vision in the hawkmoth lamina. <i>Journal of Comparative Neurology</i> , 2016, 524, 160-175.	0.9	58
52	Sensory matched filters. <i>Current Biology</i> , 2016, 26, R976-R980.	1.8	33
53	Flight control and landing precision in the nocturnal bee <i>Megalopta</i> is robust to large changes in light intensity. <i>Frontiers in Physiology</i> , 2015, 6, 305.	1.3	22
54	Visual tracking in the dead of night. <i>Science</i> , 2015, 348, 1212-1213.	6.0	2

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55	Photoreceptor Evolution: Ancient "Cones" Turn Out to Be Rods. <i>Current Biology</i> , 2015, 25, R148-R151.	1.8	4
56	Effect of light intensity on flight control and temporal properties of photoreceptors in bumblebees. <i>Journal of Experimental Biology</i> , 2015, 218, 1339-46.	0.8	47
57	The energetic cost of vision and the evolution of eyeless Mexican cavefish. <i>Science Advances</i> , 2015, 1, e1500363.	4.7	181
58	Neural coding underlying the cue preference for celestial orientation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 11395-11400.	3.3	166
59	Large variation among photoreceptors as the basis of visual flexibility in the common backswimmer. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014, 281, 20141177.	1.2	17
60	The Remarkable Visual Abilities of Nocturnal Insects: Neural Principles and Bioinspired Night-Vision Algorithms. <i>Proceedings of the IEEE</i> , 2014, 102, 1411-1426.	16.4	20
61	Eyeless Mexican Cavefish Save Energy by Eliminating the Circadian Rhythm in Metabolism. <i>PLoS ONE</i> , 2014, 9, e107877.	1.1	108
62	Vision and the light environment. <i>Current Biology</i> , 2013, 23, R990-R994.	1.8	62
63	Dung Beetles Use the Milky Way for Orientation. <i>Current Biology</i> , 2013, 23, 298-300.	1.8	178
64	Dung beetles ignore landmarks for straight-line orientation. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2013, 199, 17-23.	0.7	38
65	Are harbour seals (<i>Phoca vitulina</i>) able to perceive and use polarised light?. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2013, 199, 509-519.	0.7	7
66	Dung beetles use their dung ball as a mobile thermal refuge. <i>Current Biology</i> , 2012, 22, R863-R864.	1.8	28
67	A Unique Advantage for Giant Eyes in Giant Squid. <i>Current Biology</i> , 2012, 22, 683-688.	1.8	85
68	The Dung Beetle Dance: An Orientation Behaviour?. <i>PLoS ONE</i> , 2012, 7, e30211.	1.1	42
69	Nocturnal Homing: Learning Walks in a Wandering Spider?. <i>PLoS ONE</i> , 2012, 7, e49263.	1.1	18
70	Computational models for spatiotemporal filtering strategies in insect motion vision at low light levels. , 2011, , .		4
71	Vision and Visual Navigation in Nocturnal Insects. <i>Annual Review of Entomology</i> , 2011, 56, 239-254.	5.7	169
72	Spectral sensitivity of a colour changing spider. <i>Journal of Insect Physiology</i> , 2011, 57, 508-513.	0.9	17

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73	Nocturnal insects use optic flow for flight control. <i>Biology Letters</i> , 2011, 7, 499-501.	1.0	53
74	Ocellar adaptations for dim light vision in a nocturnal bee. <i>Journal of Experimental Biology</i> , 2011, 214, 1283-1293.	0.8	39
75	Hornets Can Fly at Night without Obvious Adaptations of Eyes and Ocelli. <i>PLoS ONE</i> , 2011, 6, e21892.	1.1	18
76	Bearing selection in ball-rolling dung beetles: is it constant?. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2010, 196, 801-806.	0.7	23
77	Polarisation Vision: Beetles See Circularly Polarised Light. <i>Current Biology</i> , 2010, 20, R610-R612.	1.8	21
78	Wide-field motion tuning in nocturnal hawkmoths. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2010, 277, 853-860.	1.2	53
79	Visual Orientation and Navigation in Nocturnal Arthropods. <i>Brain, Behavior and Evolution</i> , 2010, 75, 156-173.	0.9	39
80	Comparative visual function in four piscivorous fishes inhabiting Chesapeake Bay. <i>Journal of Experimental Biology</i> , 2010, 213, 1751-1761.	0.8	49
81	Resolution and sensitivity of the eyes of the Asian honeybees <i>Apis florea</i> , <i>Apis cerana</i> and <i>Apis dorsata</i> . <i>Journal of Experimental Biology</i> , 2009, 212, 2448-2453.	0.8	46
82	Mammalian Vision: Rods Are a Bargain. <i>Current Biology</i> , 2009, 19, R69-R71.	1.8	4
83	Lens optical properties in the eyes of large marine predatory teleosts. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2009, 195, 175-182.	0.7	24
84	Visual ecology of Indian carpenter bees II: adaptations of eyes and ocelli to nocturnal and diurnal lifestyles. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2009, 195, 571-583.	0.7	87
85	Visual ecology of Indian carpenter bees I: Light intensities and flight activity. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2008, 194, 97-107.	0.7	66
86	Visual Reliability and Information Rate in the Retina of a Nocturnal Bee. <i>Current Biology</i> , 2008, 18, 349-353.	1.8	74
87	Comparative visual function in five sciaenid fishes inhabiting Chesapeake Bay. <i>Journal of Experimental Biology</i> , 2008, 211, 3601-3612.	0.8	53
88	The optical sensitivity of compound eyes: theory and experiment compared. <i>Biology Letters</i> , 2008, 4, 745-747.	1.0	16
89	Seeing in the dark: vision and visual behaviour in nocturnal bees and wasps. <i>Journal of Experimental Biology</i> , 2008, 211, 1737-1746.	0.8	118
90	Visual sensitivity in the crepuscular owl butterfly <i>Caligo memnon</i> and the diurnal blue morpho <i>Morpho peleides</i> : a clue to explain the evolution of nocturnal apposition eyes?. <i>Journal of Experimental Biology</i> , 2008, 211, 844-851.	0.8	40

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91	Flight performance in night-flying sweat bees suffers at low light levels. <i>Journal of Experimental Biology</i> , 2007, 210, 4034-4042.	0.8	39
92	Visual Ecology: Hiding in the Dark. <i>Current Biology</i> , 2007, 17, R209-R211.	1.8	7
93	Nocturnal bees. <i>Current Biology</i> , 2007, 17, R991-R992.	1.8	10
94	Form vision in the insect dorsal ocelli: An anatomical and optical analysis of the dragonfly median ocellus. <i>Vision Research</i> , 2007, 47, 1394-1409.	0.7	36
95	Form vision in the insect dorsal ocelli: An anatomical and optical analysis of the Locust Ocelli. <i>Vision Research</i> , 2007, 47, 1382-1393.	0.7	29
96	Adaptive enhancement and noise reduction in very low light-level video. , 2007, , .		75
97	Anatomical and physiological evidence for polarisation vision in the nocturnal bee <i>Megalopta genalis</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2007, 193, 591-600.	0.7	38
98	Adaptations for vision in dim light: impulse responses and bumps in nocturnal spider photoreceptor cells (<i>Cupiennius salei</i> Keys). <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2007, 193, 1081-1087.	0.7	24
99	Light intensity limits foraging activity in nocturnal and crepuscular bees. <i>Behavioral Ecology</i> , 2006, 17, 63-72.	1.0	135
100	Crepuscular and nocturnal illumination and its effects on color perception by the nocturnal hawkmoth <i>Deilephila elpenor</i> . <i>Journal of Experimental Biology</i> , 2006, 209, 789-800.	0.8	202
101	Celestial polarization patterns during twilight. <i>Applied Optics</i> , 2006, 45, 5582.	2.1	88
102	A 'bright zone' in male hoverfly (<i>Eristalis tenax</i>) eyes and associated faster motion detection and increased contrast sensitivity. <i>Journal of Experimental Biology</i> , 2006, 209, 4339-4354.	0.8	122
103	Visual summation in night-flying sweat bees: A theoretical study. <i>Vision Research</i> , 2006, 46, 2298-2309.	0.7	68
104	Visual training improves underwater vision in children. <i>Vision Research</i> , 2006, 46, 3443-3450.	0.7	36
105	Ocellar optics in nocturnal and diurnal bees and wasps. <i>Arthropod Structure and Development</i> , 2006, 35, 293-305.	0.8	66
106	Warm Eyes Provide Superior Vision in Swordfishes. <i>Current Biology</i> , 2005, 15, 55-58.	1.8	172
107	A neural network to improve dim-light vision? Dendritic fields of first-order interneurons in the nocturnal bee <i>Megalopta genalis</i> . <i>Cell and Tissue Research</i> , 2005, 322, 313-320.	1.5	69
108	Lunar orientation in a beetle. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2004, 271, 361-365.	1.2	102

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109	Nocturnal Vision and Landmark Orientation in a Tropical Halictid Bee. <i>Current Biology</i> , 2004, 14, 1309-1318.	1.8	189
110	Retinal and optical adaptations for nocturnal vision in the halictid bee <i>Megalopta genalis</i> . <i>Cell and Tissue Research</i> , 2004, 316, 377-390.	1.5	144
111	Neural organisation in the first optic ganglion of the nocturnal bee <i>Megalopta genalis</i> . <i>Cell and Tissue Research</i> , 2004, 318, 429-437.	1.5	72
112	Vision in the dimmest habitats on Earth. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2004, 190, 765-789.	0.7	255
113	Vision in the deep sea. <i>Biological Reviews</i> , 2004, 79, 671-712.	4.7	334
114	Visual cues used by ball-rolling dung beetles for orientation. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2003, 189, 411-418.	0.7	75
115	Superior Underwater Vision in a Human Population of Sea Gypsies. <i>Current Biology</i> , 2003, 13, 833-836.	1.8	101
116	Insect orientation to polarized moonlight. <i>Nature</i> , 2003, 424, 33-33.	13.7	252
117	Retinal specializations in the blue marlin: eyes designed for sensitivity to low light levels. <i>Marine and Freshwater Research</i> , 2003, 54, 333.	0.7	79
118	Colour Vision in Diurnal and Nocturnal Hawkmoths. <i>Integrative and Comparative Biology</i> , 2003, 43, 571-579.	0.9	102
119	Visual field structure in the Empress Leilia, <i>Asterocampa leilia</i> (Lepidoptera, Nymphalidae): dimensions and regional variation in acuity. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2002, 188, 1-12.	0.7	32
120	Scotopic colour vision in nocturnal hawkmoths. <i>Nature</i> , 2002, 419, 922-925.	13.7	214
121	Visual discrimination: Seeing the third quality of light. <i>Current Biology</i> , 1999, 9, R535-R537.	1.8	50
122	Seeing better at night: life style, eye design and the optimum strategy of spatial and temporal summation. <i>Vision Research</i> , 1999, 39, 1611-1630.	0.7	305
123	Absorption of white light in photoreceptors. <i>Vision Research</i> , 1998, 38, 195-207.	0.7	185
124	Strategies for retinal design in arthropod eyes of low F-number. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1991, 168, 499-512.	0.7	53
125	Changes of Acuity during Light and Dark Adaptation in the Dragonfly Compound Eye. <i>Zeitschrift Fur Naturforschung - Section C Journal of Biosciences</i> , 1990, 45, 137-142.	0.6	5