

# Malcolm Burrows

## List of Publications by Year in descending order

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93  
papers

4,521  
citations

109321

35  
h-index

123424

61  
g-index

97  
all docs

97  
docs citations

97  
times ranked

2047  
citing authors

#	ARTICLE	IF	CITATIONS
1	Serotonin Mediates Behavioral Gregarization Underlying Swarm Formation in Desert Locusts. <i>Science</i> , 2009, 323, 627-630.	12.6	338
2	Neural mechanisms underlying behavior in the locust <i>Schistocerca gregaria</i> I. Physiology of identified motoneurons in the metathoracic ganglion. <i>Journal of Neurobiology</i> , 1973, 4, 3-41.	3.6	245
3	Frog hopper insects leap to new heights. <i>Nature</i> , 2003, 424, 509-509.	27.8	200
4	Neural mechanisms underlying behavior in the locust <i>Schistocerca gregaria</i> III. Topography of limb motoneurons in the metathoracic ganglion. <i>Journal of Neurobiology</i> , 1973, 4, 167-186.	3.6	168
5	Mechanosensory-induced behavioural gregarization in the desert locust <i>Schistocerca gregaria</i> . <i>Journal of Experimental Biology</i> , 2003, 206, 3991-4002.	1.7	155
6	Resilin and chitinous cuticle form a composite structure for energy storage in jumping by frog hopper insects. <i>BMC Biology</i> , 2008, 6, 41.	3.8	131
7	Jumping performance of frog hopper insects. <i>Journal of Experimental Biology</i> , 2006, 209, 4607-4621.	1.7	122
8	Substantial changes in central nervous system neurotransmitters and neuromodulators accompany phase change in the locust. <i>Journal of Experimental Biology</i> , 2004, 207, 3603-3617.	1.7	118
9	Biomechanics of jumping in the flea. <i>Journal of Experimental Biology</i> , 2011, 214, 836-847.	1.7	111
10	Jumping and kicking in bush crickets. <i>Journal of Experimental Biology</i> , 2003, 206, 1035-1049.	1.7	103
11	Local circuits for the control of leg movements in an insect. <i>Trends in Neurosciences</i> , 1992, 15, 226-232.	8.6	100
12	Interacting Gears Synchronize Propulsive Leg Movements in a Jumping Insect. <i>Science</i> , 2013, 341, 1254-1256.	12.6	98
13	The Mechanism of Rapid Running in the Ghost Crab, <i>Ocypode Ceratophthalma</i> . <i>Journal of Experimental Biology</i> , 1973, 58, 327-349.	1.7	93
14	Physiological and morphological properties of the metathoracic common inhibitory neuron of the locust. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1973, 82, 59-78.	1.6	92
15	The kinematics and neural control of high-speed kicking movements in the locust. <i>Journal of Experimental Biology</i> , 2001, 204, 3471-3481.	1.7	73
16	The morphology of an elevator and a depressor motoneuron of the hindwing of a locust. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1973, 83, 165-178.	1.6	72
17	Morphology and action of the hind leg joints controlling jumping in frog hopper insects. <i>Journal of Experimental Biology</i> , 2006, 209, 4622-4637.	1.7	69
18	The role of delayed excitation in the co-ordination of some metathoracic flight motoneurons of a locust. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1973, 83, 135-164.	1.6	64

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19	Rapid behavioural gregarization in the desert locust, <i>Schistocerca gregaria</i> entails synchronous changes in both activity and attraction to conspecifics. <i>Journal of Insect Physiology</i> , 2014, 65, 9-26.	2.0	61
20	Locusts use a composite of resilin and hard cuticle as an energy store for jumping and kicking. <i>Journal of Experimental Biology</i> , 2012, 215, 3501-12.	1.7	60
21	Jumping performance of planthoppers (Hemiptera, Issidae). <i>Journal of Experimental Biology</i> , 2009, 212, 2844-2855.	1.7	56
22	Neural mechanisms underlying behavior in the locust <i>Schistocerca gregaria</i> . II. Integrative activity in metathoracic neurons. <i>Journal of Neurobiology</i> , 1973, 4, 43-67.	3.6	55
23	A Population of ascending intersegmental interneurons in the locust with mechanosensory inputs from a hind leg. <i>Journal of Comparative Neurology</i> , 1988, 275, 1-12.	1.6	53
24	Locusts Use the Same Basic Motor Pattern in Swimming as In Jumping and Kicking. <i>Journal of Experimental Biology</i> , 1978, 75, 81-93.	1.7	51
25	Jumping and kicking in the false stick insect <i>Prosarthria teretrirostris</i> : kinematics and motor control. <i>Journal of Experimental Biology</i> , 2002, 205, 1519-1530.	1.7	50
26	Correlation between the receptive fields of locust interneurons, their dendritic morphology, and the central projections of mechanosensory neurons. <i>Journal of Comparative Neurology</i> , 1993, 329, 412-426.	1.6	49
27	Kinematics of jumping in leafhopper insects (Hemiptera, Auchenorrhyncha, Cicadellidae). <i>Journal of Experimental Biology</i> , 2007, 210, 3579-3589.	1.7	48
28	Neuromuscular physiology of the strike mechanism of the mantis shrimp, <i>Hemisquilla</i> . <i>The Journal of Experimental Zoology</i> , 1972, 179, 379-393.	1.4	45
29	The effect of leg length on jumping performance of short- and long-legged leafhopper insects. <i>Journal of Experimental Biology</i> , 2008, 211, 1317-1325.	1.7	44
30	Jumping mechanisms and performance of pygmy mole crickets (Orthoptera, Tridactylidae). <i>Journal of Experimental Biology</i> , 2010, 213, 2386-2398.	1.7	44
31	The kinematics and neural control of high-speed kicking movements in the locust. <i>Journal of Experimental Biology</i> , 2001, 204, 3471-81.	1.7	44
32	Projection patterns of posterior dorsal unpaired median neurons of the locust subesophageal ganglion. <i>Journal of Comparative Neurology</i> , 2004, 478, 164-175.	1.6	41
33	Neural Control and Coordination of Jumping in Froghopper Insects. <i>Journal of Neurophysiology</i> , 2007, 97, 320-330.	1.8	41
34	Nitric oxide synthase in the thoracic ganglia of the locust: Distribution in the neuropiles and morphology of neurones. , 1998, 395, 217-230.		39
35	Jumping mechanisms and performance of snow fleas (Mecoptera, Boreidae). <i>Journal of Experimental Biology</i> , 2011, 214, 2362-2374.	1.7	39
36	Sensory afferents and motor neurons as targets for nitric oxide in the locust. <i>Journal of Comparative Neurology</i> , 2000, 422, 521-532.	1.6	38

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37	NADPH diaphorase histochemistry in the thoracic ganglia of locusts, crickets, and cockroaches: Species differences and the impact of fixation. , 1999, 410, 387-397.		37
38	Energy storage and synchronisation of hind leg movements during jumping in planthopper insects (Hemiptera, Issidae). Journal of Experimental Biology, 2010, 213, 469-478.	1.7	37
39	Microarray-Based Transcriptomic Analysis of Differences between Long-Term Gregarious and Solitary Desert Locusts. PLoS ONE, 2011, 6, e28110.	2.5	36
40	Jumping behaviour in a Gondwanan relict insect (Hemiptera: Coleorrhyncha: Peloridiidae). Journal of Experimental Biology, 2007, 210, 3311-3318.	1.7	35
41	Anatomy of the hind legs and actions of their muscles during jumping in leafhopper insects. Journal of Experimental Biology, 2007, 210, 3590-3600.	1.7	34
42	Spatiotemporal Receptive Field Properties of a Looming-Sensitive Neuron in Solitary and Gregarious Phases of the Desert Locust. Journal of Neurophysiology, 2010, 103, 779-792.	1.8	33
43	Compensatory Plasticity at an Identified Synapse Tunes a Visuomotor Pathway. Journal of Neuroscience, 2007, 27, 4621-4633.	3.6	32
44	Epigenetic remodelling of brain, body and behaviour during phase change in locusts. Neural Systems & Circuits, 2011, 1, 11.	1.8	30
45	Jumping strategies and performance in shore bugs (Hemiptera, Heteroptera, Saldidae). Journal of Experimental Biology, 2009, 212, 106-115.	1.7	29
46	Pygmy mole crickets jump from water. Current Biology, 2012, 22, R990-R991.	3.9	26
47	Distribution of acetylcholine receptors in the central nervous system of adult locusts. Journal of Comparative Neurology, 1993, 334, 47-58.	1.6	25
48	Processing of tactile information in neuronal networks controlling leg movements of the Locust. Journal of Insect Physiology, 1997, 43, 107-123.	2.0	25
49	Fine structure of muscles controlling the strike of the mantis shrimp, Hemisquilla. The Journal of Experimental Zoology, 1972, 179, 395-415.	1.4	24
50	Jumping mechanisms in jumping plant lice (Hemiptera, Sternorrhyncha, Psyllidae). Journal of Experimental Biology, 2012, 215, 3612-21.	1.7	24
51	Interneurons Co-Ordinating the Ventilatory Movements of the Thoracic Spiracles in the Locust. Journal of Experimental Biology, 1982, 97, 385-400.	1.7	24
52	Jumping and kicking in the false stick insect Prosarthria teretrirostris: kinematics and motor control. Journal of Experimental Biology, 2002, 205, 1519-30.	1.7	24
53	Jumping in a winged stick insect. Journal of Experimental Biology, 2002, 205, 2399-2412.	1.7	23
54	Mantises Exchange Angular Momentum between Three Rotating Body Parts to Jump Precisely to Targets. Current Biology, 2015, 25, 786-789.	3.9	22

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55	HOW FLEAS JUMP. <i>Journal of Experimental Biology</i> , 2009, 212, 2881-2883.	1.7	21
56	Jumping mechanisms of treehopper insects (Hemiptera, Auchenorrhyncha, Membracidae). <i>Journal of Experimental Biology</i> , 2013, 216, 788-99.	1.7	21
57	Three dimensional reconstruction of energy stores for jumping in planthoppers and froghoppers from confocal laser scanning microscopy. <i>ELife</i> , 2017, 6, .	6.0	21
58	Jumping mechanisms in lacewings (Neuroptera, Chrysopidae and Hemerobiidae). <i>Journal of Experimental Biology</i> , 2014, 217, 4252-61.	1.7	20
59	A single muscle moves a crustacean limb joint rhythmically by acting against a spring containing resilin. <i>BMC Biology</i> , 2009, 7, 27.	3.8	19
60	Jumping mechanisms and strategies in moths (Lepidoptera). <i>Journal of Experimental Biology</i> , 2015, 218, 1655-66.	1.7	19
61	Antibody Labelling of Resilin in Energy Stores for Jumping in Plant Sucking Insects. <i>PLoS ONE</i> , 2011, 6, e28456.	2.5	19
62	Development and deposition of resilin in energy stores for locust jumping. <i>Journal of Experimental Biology</i> , 2016, 219, 2449-57.	1.7	18
63	The morphology and physiology of some walking leg motor neurones in a scorpion. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1980, 140, 31-42.	1.6	17
64	Jumping without slipping: leafhoppers (Hemiptera: Cicadellidae) possess special tarsal structures for jumping from smooth surfaces. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170022.	3.4	17
65	A cockroach that jumps. <i>Biology Letters</i> , 2012, 8, 390-392.	2.3	16
66	Jumping from the surface of water by the long-legged fly <i>Hydrophorus</i> (Diptera). <i>Tj ETQq0 0 0 rgBT /Overlock_10 Tf 50 302 Td (Dol</i>	1.7	16
67	The Physiology and Morphology of Median Nerve Motor Neurones in the Thoracic Ganglia of the Locust. <i>Journal of Experimental Biology</i> , 1982, 96, 325-341.	1.7	15
68	Jumping in a wingless stick insect, <i>Timema chumash</i> (Phasmatodea, Timematodea, Timematidae). <i>Journal of Experimental Biology</i> , 2008, 211, 1021-1028.	1.7	14
69	Jumping mechanisms in dictyopharid planthoppers ( <i>Hemiptera, Dicytyopharidae</i> ). <i>Journal of Experimental Biology</i> , 2014, 217, 402-13.	1.7	14
70	Jumping mechanisms in adult caddis flies (Insecta, Trichoptera). <i>Journal of Experimental Biology</i> , 2015, 218, 2764-2774.	1.7	14
71	Increased muscular volume and cuticular specialisations enhance jump velocity in solitary compared with gregarious desert locusts, <i>Schistocerca gregaria</i> . <i>Journal of Experimental Biology</i> , 2016, 219, 635-648.	1.7	14
72	Jumping mechanisms in flatid planthoppers (Hemiptera, Flatidae). <i>Journal of Experimental Biology</i> , 2014, 217, 2590-600.	1.7	13

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73	Actions of motor neurons and leg muscles in jumping by planthopper insects (hemiptera, issidae). Journal of Comparative Neurology, 2010, 518, 1349-1369.	1.6	12
74	Motor neurone responses during a postural reflex in solitary and gregarious desert locusts. Journal of Insect Physiology, 2010, 56, 902-910.	2.0	12
75	How the Locust Dries Itself. Journal of Experimental Biology, 1978, 75, 95-100.	1.7	12
76	The Neuroanatomy of Nitric Oxideâ€Cyclic GMP Signaling in the Locust: Functional Implications for Sensory Systems. American Zoologist, 2001, 41, 321-331.	0.7	11
77	Rapid swimming and escape movements in the aquatic larvae and pupae of the phantom midge <i>Chaoborus</i> (Diptera, Chaoboridae). Journal of Experimental Biology, 2014, 217, 2468-79.	1.7	10
78	Jumping performance of flea hoppers and other mirid bugs (Hemiptera, Miridae). Journal of Experimental Biology, 2017, 220, 1606-1617.	1.7	10
79	Neurons controlling jumping in froghopper insects. Journal of Comparative Neurology, 2008, 507, 1065-1075.	1.6	8
80	Take-off mechanisms in parasitoid wasps. Journal of Experimental Biology, 2017, 220, 3812-3825.	1.7	7
81	Effectiveness and efficiency of two distinct mechanisms for take-off in a derbid planthopper insect. Journal of Experimental Biology, 2019, 222, .	1.7	7
82	Jumping in a winged stick insect. Journal of Experimental Biology, 2002, 205, 2399-412.	1.7	7
83	Jumping mechanisms in gum treehopper insects ( <i>Hemiptera</i> , <i>Eurymelinae</i> ). Journal of Experimental Biology, 2013, 216, 2682-90.	1.7	6
84	Localisation of Even-skipped in the mature CNS of the locust, <i>Schistocerca gregaria</i> . Cell and Tissue Research, 2003, 313, 237-244.	2.9	4
85	Proprioceptors monitoring forces in a locust hind leg during kicking form negative feedback loops with flexor tibiae motor neurons. Journal of Experimental Biology, 2003, 206, 759-769.	1.7	4
86	Slowly contracting muscles power the rapid jumping of planthopper insects (Hemiptera, Issidae). Cell and Tissue Research, 2014, 355, 213-222.	2.9	4
87	Jumping and take-off in a winged scorpion fly (Mecoptera, <i>Panorpa communis</i> ). Journal of Experimental Biology, 2019, 222, .	1.7	4
88	Jumping in lantern bugs (Hemiptera, Fulgoridae). Journal of Experimental Biology, 2021, 224, .	1.7	4
89	Do enlarged hind legs of male thick-legged flower beetles contribute to take-off or mating?. Journal of Experimental Biology, 2020, 223, .	1.7	3
90	Sensory afferents and motor neurons as targets for nitric oxide in the locust. Journal of Comparative Neurology, 2000, 422, 521-532.	1.6	2

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91	How biomechanics influence animal movements. <i>Current Biology</i> , 2019, 29, R186-R187.	3.9	1
92	Elucidating the complex organization of neural micro-domains in the locust <i>Schistocerca gregaria</i> using dMRI. <i>Scientific Reports</i> , 2021, 11, 3418.	3.3	1
93	Obituary Memories of Bob Boutilier in Cambridge. <i>Journal of Experimental Biology</i> , 2004, 207, 1052-1052.	1.7	0