

Brent D Opell

List of Publications by Year in descending order

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72
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citations

257450

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#	ARTICLE	IF	CITATIONS
1	TESTING ADAPTIVE RADIATION AND KEY INNOVATION HYPOTHESES IN SPIDERS. <i>Evolution; International Journal of Organic Evolution</i> , 1998, 52, 403-414.	2.3	134
2	van der Waals and hygroscopic forces of adhesion generated by spider capture threads. <i>Journal of Experimental Biology</i> , 2003, 206, 3905-3911.	1.7	80
3	Adhesive recruitment by the viscous capture threads of araneoid orb-weaving spiders. <i>Journal of Experimental Biology</i> , 2007, 210, 553-560.	1.7	79
4	Testing Adaptive Radiation and Key Innovation Hypotheses in Spiders. <i>Evolution; International Journal of Organic Evolution</i> , 1998, 52, 403.	2.3	65
5	Evolution of adhesive mechanisms in cribellar spider prey capture thread: evidence for van der Waals and hygroscopic forces. <i>Biological Journal of the Linnean Society</i> , 2002, 77, 1-8.	1.6	65
6	The role of granules within viscous capture threads of orb-weaving spiders. <i>Journal of Experimental Biology</i> , 2010, 213, 339-346.	1.7	59
7	Spiders Tune Glue Viscosity to Maximize Adhesion. <i>ACS Nano</i> , 2015, 9, 11472-11478.	14.6	58
8	The material cost and stickiness of capture threads and the evolution of orb-weaving spiders. <i>Biological Journal of the Linnean Society</i> , 1997, 62, 443-458.	1.6	56
9	Humidity affects the extensibility of an orb-weaving spider's viscous thread droplets. <i>Journal of Experimental Biology</i> , 2011, 214, 2988-2993.	1.7	55
10	Phylogeny and taxonomy of the genera of south-western North American Euctenizinae trapdoor spiders and their relatives (Araneae: Mygalomorphae, Cyrtaucheniidae). <i>Zoological Journal of the Linnean Society</i> , 2002, 136, 487-534.	2.3	48
11	The adhesive delivery system of viscous capture threads spun by orb-weaving spiders. <i>Journal of Experimental Biology</i> , 2009, 212, 3026-3034.	1.7	45
12	Capture thread extensibility of orb-weaving spiders: testing punctuated and associative explanations of character evolution. <i>Biological Journal of the Linnean Society</i> , 2000, 70, 107-120.	1.6	40
13	Environmental response and adaptation of glycoprotein glue within the droplets of viscous prey capture threads from araneoid spider orb-webs. <i>Journal of Experimental Biology</i> , 2013, 216, 3023-34.	1.7	40
14	Factors governing the stickiness of cribellar prey capture threads in the spider family Uloboridae. <i>Journal of Morphology</i> , 1994, 221, 111-119.	1.2	39
15	Changes in spinning anatomy and thread stickiness associated with the origin of orb-weaving spiders. <i>Biological Journal of the Linnean Society</i> , 1999, 68, 593-612.	1.6	39
16	The effect of insect surface features on the adhesion of viscous capture threads spun by orb-weaving spiders. <i>Journal of Experimental Biology</i> , 2007, 210, 2352-2360.	1.7	38
17	Adhesive efficiency of spider prey capture threads. <i>Zoology</i> , 2009, 112, 16-26.	1.2	37
18	Temperature mediates the effect of humidity on the viscoelasticity of glycoprotein glue within the droplets of an orb-weaving spider's prey capture threads. <i>Journal of Experimental Biology</i> , 2014, 217, 1563-9.	1.7	32

#	ARTICLE	IF	CITATIONS
19	Around the World in Eight Million Years: Historical Biogeography and Evolution of the Spray Zone Spider Amaurobioides (Araneae: Anyphaenidae). PLoS ONE, 2016, 11, e0163740.	2.5	31
20	The contribution of axial fiber extensibility to the adhesion of viscous capture threads spun by orb-weaving spiders. Journal of Experimental Biology, 2008, 211, 2243-2251.	1.7	30
21	Tuning orb spider glycoprotein glue performance to habitat humidity. Journal of Experimental Biology, 2018, 221, .	1.7	29
22	Functional Similarities of Spider Webs with Diverse Architectures. American Naturalist, 1996, 148, 630-648.	2.1	27
23	The effects of capture spiral composition and orb-web orientation on prey interception. Zoology, 2006, 109, 339-345.	1.2	27
24	What forces are responsible for the stickiness of spider cribellar threads?. The Journal of Experimental Zoology, 1993, 265, 469-476.	1.4	26
25	Ontogenetic changes in cribellum spigot number and cribellar prey capture thread stickiness in the spider family Uloboridae. Journal of Morphology, 1995, 224, 47-56.	1.2	25
26	HOW SPIDER ANATOMY AND THREAD CONFIGURATION SHAPE THE STICKINESS OF CRIBELLAR PREY CAPTURE THREADS. Journal of Arachnology, 2002, 30, 10.	0.5	22
27	A re-evaluation of the formula to estimate the volume of orb web glue droplets. Journal of Arachnology, 2015, 43, 97-100.	0.5	22
28	Do static electric forces contribute to the stickiness of a spider's cribellar prey capture threads?. The Journal of Experimental Zoology, 1995, 273, 186-189.	1.4	21
29	Adhesive compatibility of cribellar and viscous prey capture threads and its implication for the evolution of orb-weaving spiders. Journal of Experimental Zoology, 2011, 315A, 376-384.	1.2	21
30	ESTIMATING THE STICKINESS OF INDIVIDUAL ADHESIVE CAPTURE THREADS IN SPIDER ORB WEBS. Journal of Arachnology, 2002, 30, 494-502.	0.5	20
31	Persistent stickiness of viscous capture threads produced by araneoid orb-weaving spiders. Journal of Experimental Zoology, 2008, 309A, 11-16.	1.2	20
32	Functional associations between the cribellum spinning plate and capture threads of Miagrammopes animotus (Araneida, Uloboridae). Zoomorphology, 1989, 108, 263-267.	0.8	17
33	Constraints on the adhesion of viscous threads spun by orb-weaving spiders: the tensile strength of glycoprotein glue exceeds its adhesion. Journal of Experimental Biology, 2011, 214, 2237-2241.	1.7	17
34	Systematics of the spider genera Mallos and Mexitlia (Araneae, Dictynidae). Zoological Journal of the Linnean Society, 1997, 119, 389-445.	2.3	16
35	THE FEATURES OF CAPTURE THREADS AND ORB-WEBS PRODUCED BY UNFED CYCLOSA TURBINATA (ARANEAE: ARANEIDAE). Journal of Arachnology, 2006, 34, 427-434.	0.5	16
36	Humidity-mediated changes in an orb spider's glycoprotein adhesive impact prey retention time. Journal of Experimental Biology, 2017, 220, 1313-1321.	1.7	16

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37	Disturbance behaviors in the spider <i>Uloborus glomosus</i> (Araneae, Uloboridae): possible predator avoidance strategies. <i>Canadian Journal of Zoology</i> , 1990, 68, 1090-1097.	1.0	15
38	EGG SAC RECOGNITION BY FEMALE MIAGRAMMOPES ANIMOTUS (ARANEAE, ULOBORIDAE). <i>Journal of Arachnology</i> , 2001, 29, 244-248.	0.5	15
39	The influence of web monitoring tactics on the tracheal systems of spiders in the family Uloboridae (Arachnida, Araneida). <i>Zoomorphology</i> , 1987, 107, 255-259.	0.8	14
40	The respiratory complementarity of spider book lung and tracheal systems. , 1998, 236, 57-64.		14
41	Cribellar Thread. , 2013, , 303-315.		14
42	Changes in web-monitoring forces associated with web reduction in the spider family Uloboridae. <i>Canadian Journal of Zoology</i> , 1987, 65, 1028-1034.	1.0	13
43	The relationship of book lung and tracheal systems in the spider family uloboridae. <i>Journal of Morphology</i> , 1990, 206, 211-216.	1.2	13
44	CRIBELLUM AND CALAMISTRUM ONTOGENY IN THE SPIDER FAMILY ULOBORIDAE: LINKING FUNCTIONALLY RELATED BUT SEPARATE SILK SPINNING FEATURES. <i>Journal of Arachnology</i> , 2001, 29, 220-226.	0.5	13
45	The impact of UVB radiation on the glycoprotein glue of orb-weaving spider capture thread. <i>Journal of Experimental Biology</i> , 2015, 218, 2675-2684.	1.7	13
46	Elastic modulus and toughness of orb spider glycoprotein glue. <i>PLoS ONE</i> , 2018, 13, e0196972.	2.5	13
47	Daily and seasonal changes in the stickiness of viscous capture threads in <i>Argiope aurantia</i> and <i>Argiope trifasciata</i> orb-webs. <i>Journal of Experimental Zoology</i> , 2009, 311A, 217-225.	1.2	11
48	Genetic relationships of Amaurobioides (Anyphaenidae) spiders from the southeastern coast of New Zealand. <i>Zootaxa</i> , 2007, 1425, .	0.5	10
49	The body size of the New Zealand orb-weaving spider <i>Waitkera waitakerensis</i> (Uloboridae) is directly related to temperature and affects fecundity. <i>Invertebrate Biology</i> , 2007, 126, 183-190.	0.9	10
50	Protein composition and associated material properties of cobweb spiders'™ gumfoot glue droplets. <i>Integrative and Comparative Biology</i> , 2021, 61, 1459-1480.	2.0	10
51	The stability of hygroscopic compounds in orb-web spider viscous thread. <i>Journal of Arachnology</i> , 2015, 43, 152-157.	0.5	9
52	Linking properties of an orb-weaving spider's capture thread glycoprotein adhesive and flagelliform fiber components to prey retention time. <i>Ecology and Evolution</i> , 2019, 9, 9841-9854.	1.9	9
53	Properties of orb weaving spider glycoprotein glue change during <i>Argiope trifasciata</i> web construction. <i>Scientific Reports</i> , 2019, 9, 20279.	3.3	9
54	Prey Capture Adhesives Produced by Orb-Weaving Spiders. <i>Biologically-inspired Systems</i> , 2014, , 203-217.	0.2	9

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55	Changes in visual fields associated with web reduction in the spider family uloboridae. Journal of Morphology, 1987, 192, 87-100.	1.2	8
56	Bergmann's size cline in New Zealand marine spray zone spiders (Araneae: Anyphaenidae: Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702 T	1.6	7
57	Phylogeography of Australian and New Zealand spray zone spiders (Anyphaenidae: Amaurobioidea): Moa's Ark loses a few more passengers. Biological Journal of the Linnean Society, 2016, 118, 959-969.	1.6	7
58	Orb weaver glycoprotein is a smart biological material, capable of repeated adhesion cycles. Die Naturwissenschaften, 2019, 106, 10.	1.6	7
59	Visual fields of orb web and single line web spiders of the family Uloboridae (Arachnida, Araneida). Zoomorphology, 1986, 106, 199-204.	0.8	6
60	The impact of UVA on the glycoprotein glue of orb-weaving spider capture thread from a diurnal and a nocturnal species (Araneae: Araneidae). Journal of Arachnology, 2016, 44, 401-404.	0.5	6
61	Humidity mediated performance and material properties of orb weaving spider adhesive droplets. Acta Biomaterialia, 2021, 131, 440-451.	8.3	6
62	Ocular changes accompanying eye loss in the spider family uloboridae. Journal of Morphology, 1988, 196, 119-126.	1.2	5
63	Influence of web-monitoring tactics on the density of mitochondria in leg muscles of the spider family uloboridae. Journal of Morphology, 1992, 213, 341-347.	1.2	5
64	MOLECULAR PHYLOGENETIC EVIDENCE FOR THE PARALLEL EVOLUTION OF ROCK ECOMORPHS IN THE NEW ZEALAND ORB-WEAVING SPIDER WAITKERA WAITAKERENSIS (FAMILY ULOBORIDAE). Journal of Arachnology, 2006, 34, 467-475.	0.5	5
65	Centers of mass and weight distribution in spiders of the family uloboridae. Journal of Morphology, 1989, 202, 351-359.	1.2	4
66	The material cost and stickiness of capture threads and the evolution of orb-weaving spiders. Biological Journal of the Linnean Society, 1997, 62, 443-458.	1.6	4
67	Correlated evolution between orb weaver glue droplets and supporting fibres maintains their distinct biomechanical roles in adhesion. Journal of Evolutionary Biology, 2022, 35, 879-890.	1.7	4
68	Changes in spinning anatomy and thread stickiness associated with the origin of orb-weaving spiders. Biological Journal of the Linnean Society, 1999, 68, 593-612.	1.6	2
69	Systematics of the spider genera Mallos and Mexitlia (Araneae, Dictynidae). Zoological Journal of the Linnean Society, 1997, 119, 389-445.	2.3	2
70	Water harvesting during orb web recycling. Journal of Arachnology, 2021, 48, .	0.5	1
71	Female Genitalia of "Hyptiotes cavatus" (Araneae: Uloboridae). BioScience, 1983, 33, 513.	4.9	0
72	Measuring the Mass of Small Arthropod Muscles. Psyche: Journal of Entomology, 1990, 97, 171-174.	0.9	0