James H Brown

List of Publications by Year
in descending order

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90 papers	27,671 citations	43973 48 h-index	51492 86 g-index
96 all docs	96 docs citations	96 times ranked	25530 citing authors

#	Article	IF	Citations
1	TOWARD A METABOLIC THEORY OF ECOLOGY. Ecology, 2004, 85, 1771-1789.	1.5	5,745
2	A General Model for the Origin of Allometric Scaling Laws in Biology. Science, 1997, 276, 122-126.	6.0	4,069
3	Effects of Size and Temperature on Metabolic Rate. Science, 2001, 293, 2248-2251.	6.0	2,927
4	On the Relationship between Abundance and Distribution of Species. American Naturalist, 1984, 124, 255-279.	1.0	2,647
5	The Fourth Dimension of Life: Fractal Geometry and Allometric Scaling of Organisms. Science, 1999, 284, 1677-1679.	6.0	1,459
6	THE GEOGRAPHIC RANGE: Size, Shape, Boundaries, and Internal Structure. Annual Review of Ecology, Evolution, and Systematics, 1996, 27, 597-623.	6.7	1,097
7	Effects of size and temperature on developmental time. Nature, 2002, 417, 70-73.	13.7	798
8	Why are there so many species in the tropics?. Journal of Biogeography, 2014, 41, 8-22.	1.4	608
9	Allometric scaling of production and life-history variation in vascular plants. Nature, 1999, 401, 907-911.	13.7	570
10	Control of a Desert-Grassland Transition by a Keystone Rodent Guild. Science, 1990, 250, 1705-1707.	6.0	546
11	Two Decades of Homage to Santa Rosalia: Toward a General Theory of Diversity. American Zoologist, 1981, 21, 877-888.	0.7	424
12	Temperature mediates continental-scale diversity of microbes in forest soils. Nature Communications, 2016, 7, 12083.	5.8	419
13	Evolution of Species Assemblages: Effects of Energetic Constraints and Species Dynamics on the Diversification of the North American Avifauna. American Naturalist, 1987, 130, 1-17.	1.0	370
14	Shifts in metabolic scaling, production, and efficiency across major evolutionary transitions of life. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12941-12945.	3.3	341
15	Body size, ecological dominance and Cope's rule. Nature, 1986, 324, 248-250.	13.7	324
16	The fractal nature of nature: power laws, ecological complexity and biodiversity. Philosophical Transactions of the Royal Society B: Biological Sciences, 2002, 357, 619-626.	1.8	320
17	Regulation of diversity: maintenance of species richness in changing environments. Oecologia, 2001, 126, 321-332.	0.9	273
18	Two-phase increase in the maximum size of life over 3.5 billion years reflects biological innovation and environmental opportunity. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 24-27.	3.3	260

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19	Ecological roles and conservation challenges of social, burrowing, herbivorous mammals in the world's grasslands. Frontiers in Ecology and the Environment, 2012, 10, 477-486.	1.9	247
20	Thermodynamic and metabolic effects on the scaling of production and population energy use. Ecology Letters, 2003, 6, 990-995.	3.0	215
21	Global Patterns of Mammalian Diversity, Endemism, and Endangerment. Conservation Biology, 1995, 9, 559-568.	2.4	198
22	Invasion of North American drainages by alien fish species. Freshwater Biology, 1999, 42, 387-399.	1.2	186
23	Ecological food webs: High-quality data facilitate theoretical unification. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 1467-1468.	3.3	184
24	THE MICRO AND MACRO IN BODY SIZE EVOLUTION. Evolution; International Journal of Organic Evolution, 1992, 46, 939-953.	1.1	178
25	An Essay on Some Topics Concerning Invasive Species. Austral Ecology, 2004, 29, 530-536.	0.7	149
26	Life-history evolution under a production constraint. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17595-17599.	3.3	134
27	Timescale of Perennial Grass Recovery in Desertified Arid Grasslands Following Livestock Removal. Conservation Biology, 2002, 16, 995-1002.	2.4	131
28	Effects of kangaroo rat exclusion on vegetation structure and plant species diversity in the Chihuahuan Desert. Oecologia, 1993, 95, 520-524.	0.9	130
29	The macroecology of infectious diseases: a new perspective on globalâ€scale drivers of pathogen distributions and impacts. Ecology Letters, 2016, 19, 1159-1171.	3.0	126
30	Metabolic theory predicts whole-ecosystem properties. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2617-2622.	3.3	117
31	CONSTRAINTS OF SEED SIZE ON PLANT DISTRIBUTION AND ABUNDANCE. Ecology, 2000, 81, 2149-2155.	1.5	112
32	The island rule and a research agenda for studying ecogeographical patterns. Journal of Biogeography, 2006, 33, 1503-1510.	1.4	111
33	Livestock Grazing and Conservation on Southwestern Rangelands. Conservation Biology, 1995, 9, 1644-1647.	2.4	94
34	Community Organization in Hummingbirds: Relationships between Morphology and Ecology. Auk, 1985, 102, 251-269.	0.7	93
35	Delayed Compensation for Missing Keystone Species by Colonization. Science, 2001, 292, 101-104.	6.0	89
36	Energetic determinants of abundance in winter landbird communities. Ecology Letters, 2004, 7, 532-537.	3.0	84

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37	The ecology of lizard reproductive output. Global Ecology and Biogeography, 2012, 21, 592-602.	2.7	84
38	Metabolic asymmetry and the global diversity of marine predators. Science, 2019, 363, .	6.0	81
39	Human domination of the biosphere: Rapid discharge of the earth-space battery foretells the future of humankind. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9511-9517.	3.3	80
40	Metabolic heat production and thermal conductance are mass-independent adaptations to thermal environment in birds and mammals. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15934-15939.	3.3	77
41	Summer Rainfall and Winter Sparrow Densities: A Test of the Food Limitation Hypothesis. Auk, 1982, 99, 123-129.	0.7	76
42	Biogeographic patterns of soil diazotrophic communities across six forests in the North America. Molecular Ecology, 2016, 25, 2937-2948.	2.0	76
43	Equal fitness paradigm explained by a trade-off between generation time and energy production rate. Nature Ecology and Evolution, 2018, 2, 262-268.	3.4	75
44	Constraints on dispersal and the evolution of the avifauna of the Northern Hemisphere. Evolutionary Ecology, 1998, 12, 767-783.	0.5	72
45	Native fishes, exotic mammals, and the conservation of desert springs. Frontiers in Ecology and the Environment, 2007, 5, 549-553.	1.9	71
46	Abundance and distribution of desert annuals: are spatial and temporal patterns related?. Journal of Ecology, 2000, 88, 551-560.	1.9	58
47	Allometry of human fertility and energy use. Ecology Letters, 2003, 6, 295-300.	3.0	56
48	Toward a metabolic theory of life history. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26653-26661.	3.3	54
49	Independent Discovery of the Equilibrium Theory of Island Biogeography. Ecology, 1989, 70, 1954-1957.	1.5	50
50	Temporal fluctuations and experimental effects in desert plant communities. Oecologia, 1996, 107, 568-577.	0.9	50
51	Macroecology meets macroeconomics: Resource scarcity and global sustainability. Ecological Engineering, 2014, 65, 24-32.	1.6	49
52	RESPONSE TO FORUM COMMENTARY ON â€œTOWARD A METABOLIC THEORY OF ECOLOGYâ€• Ecology, 2004, 85, 1818-1821.	1.5	47
53	HOMEOSTASIS AND COMPENSATION: THE ROLE OF SPECIES AND RESOURCES IN ECOSYSTEM STABILITY. Ecology, 2001, 82, 2118-2132.	1.5	46
54	Interactions between winter and summer annuals in the Chihuahuan Desert. Oecologia, 1997, 111, 123-128.	0.9	45

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55	Fundamental insights into ontogenetic growth from theory and fish. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13934-13939.	3.3	45
56	Rates of biotic interactions scale predictably with temperature despite variation. Oikos, 2014, 123, 1449-1456.	1.2	43
57	Individualistic responses of bird species to environmental change. Oecologia, 1995, 101, 478-486.	0.9	41
58	Catastrophic Decline of a Desert Rodent, Dipodomys spectabilis: Insights from a Long-Term Study. Journal of Mammalogy, 1995, 76, 428-436.	0.6	41
59	GAPS IN MAMMALIAN BODY SIZE DISTRIBUTIONS REEXAMINED. Ecology, 1999, 80, 2788-2792.	1.5	41
60	Assembly Rules and Competition in Desert Rodents. American Naturalist, 2002, 160, 815-818.	1.0	40
61	Longâ€term monitoring and experimental manipulation of a Chihuahuan Desert ecosystem near Portal, Arizona, USA. Ecology, 2009, 90, 1708-1708.	1.5	39
62	Longâ€term dynamics of winter and summer annual communities in the Chihuahuan Desert. Journal of Vegetation Science, 2002, 13, 575-584.	1.1	38
63	Universal rules of life: metabolic rates, biological times and the equal fitness paradigm. Ecology Letters, 2021, 24, 1262-1281.	3.0	38
64	Was a â€˜hyperdiseaseâ€™ responsible for the late Pleistocene megafaunal extinction?. Ecology Letters, 2004, 7, 859-868.	3.0	35
65	INTRA-GUILD COMPENSATION REGULATES SPECIES RICHNESS IN DESERT RODENTS. Ecology, 2005, 86, 567-573.	1.5	33
66	Redundant or complementary? Impact of a colonizing species on community structure and function. Oikos, 2010, 119, 1719-1726.	1.2	32
67	Patterns in the structure of Asian and North American desert small mammal communities. Journal of Biogeography, 1999, 26, 825-841.	1.4	31
68	Long-term monitoring and experimental manipulation of a Chihuahuan desert ecosystem near Portal, Arizona (1977-2013). Ecology, 2016, 97, 1082-1082.	1.5	25
69	A Method for Distinguishing Dispersal from Death in Mark-Recapture Studies. Journal of Mammalogy, 1987, 68, 656-665.	0.6	23
70	Energy use and the sustainability of intensifying food production. Nature Sustainability, 2020, 3, 257-259.	11.5	23
71	The Use of Torpor by Perognathus amplus in Relation to Resource Distribution. Journal of Mammalogy, 1979, 60, 550-555.	0.6	19
72	The Central Role of Energy in the Urban Transition: Global Challenges for Sustainability. BioPhysical Economics and Resource Quality, 2019, 4, 1.	2.4	19

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73	Interspecific pairwise relationships among body size, clutch size and latitude: deconstructing a macroecological triangle in birds. Journal of Biogeography, 2010, 37, 47-56.	1.4	16
74	Declining Country-Level Food Self-Sufficiency Suggests Future Food Insecurities. BioPhysical Economics and Resource Quality, 2019, 4, 1.	2.4	16
75	Why Marine Islands Are Farther Apart in the Tropics. American Naturalist, 2014, 183, 842-846.	1.0	14
76	Dynamics of fish in Australian desert springs: role of largeâ€mammal disturbance. Diversity and Distributions, 2007, 13, 789-798.	1.9	12
77	Response to Comments on â€œEnergy Uptake and Allocation During Ontogenyâ€. Science, 2009, 325, 1206-1206.	6.0	12
78	Energy and time determine scaling in biological and computer designs. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150446.	1.8	12
79	Response to Comment on "Global Biodiversity, Biochemical Kinetics, and the Energetic-Equivalence Rule". Science, 2003, 299, 346c-346.	6.0	11
80	The shark-tuna dichotomy: why tuna lay tiny eggs but sharks produce large offspring. Royal Society Open Science, 2018, 5, 180453.	1.1	11
81	INTRA-GUILD COMPENSATION REGULATES SPECIES RICHNESS IN DESERT RODENTS: REPLY. Ecology, 2006, 87, 2121-2125.	1.5	8
82	Historical and Cultural Perspectives on Grazing: Reply to Dudley. Conservation Biology, 1997, 11, 270-272.	2.4	5
83	How reliable is the biological time clock?. Nature, 2003, 424, 270-270.	13.7	5
84	Correspondence: Reply to â€˜Analytical flaws in a continental-scale forest soil microbial diversity studyâ€™. Nature Communications, 2017, 8, 15583.	5.8	4
85	Long-term dynamics of winter and summer annual communities in the Chihuahuan Desert. , 2002, 13, 575.		4
86	Body size, energy use and ecological dominance. Nature, 1987, 328, 118-118.	13.7	3
87	GAPS IN MAMMALIAN BODY SIZE DISTRIBUTIONS REEXAMINED. , 1999, 80, 2788.		3
88	The role of phylogeny in desert rodent community assembly. Journal of Animal Ecology, 2012, 81, 307-309.	1.3	2
89	The genesis of macroecology: In memory of Brian Maurer. Global Ecology and Biogeography, 2019, 28, 4-5.	2.7	2
90	The Changing Role of Women in North American Mammalogy. Journal of Mammalogy, 0, , .	0.6	1