Mark Westoby

List of Publications by Year
in descending order

149 papers	46,691 citations	7568 77 h-index	8167 148 g-index
153 all docs	153 docs citations	153 times ranked	28931 citing authors

#	Article	IF	Citations
1	Trait ecology of startup plants. New Phytologist, 2022, 235, 842-847.	7.3	11
2	AnimalTraits - a curated animal trait database for body mass, metabolic rate and brain size. Scientific Data, 2022, 9, .	5.3	15
3	Leaf manganese concentrations as a tool to assess belowground plant functioning in phosphorus-impoverished environments. Plant and Soil, 2021, 461, 43-61.	3.7	52
4	Effects of plant hydraulic traits on the flammability of live fine canopy fuels. Functional Ecology, 2021, 35, 835-846.	3.6	12
5	Aerobic bacteria and archaea tend to have larger and more versatile genomes. Oikos, 2021, 130, 501-511.	2.7	19
6	Motivating data contributions via a distinct career currency. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20202830.	2.6	6
7	Cell size, genome size, and maximum growth rate are nearâ€independent dimensions of ecological variation across bacteria and archaea. Ecology and Evolution, 2021, 11, 3956-3976.	1.9	43
8	The conservative lowâ€phosphorus niche in Proteaceae. Plant and Soil, 2021, 462, 89-93.	3.7	1
9	Trait dimensions in bacteria and archaea compared to vascular plants. Ecology Letters, 2021, 24, 1487-1504.	6.4	21
10	Disentangling direct and indirect effects of island area on plant functional trait distributions. Journal of Biogeography, 2021, 48, 2098-2110.	3.0	10
11	A roadmap to plant functional island biogeography. Biological Reviews, 2021, 96, 2851-2870.	10.4	37
12	Emergent Shapes of Trait-Based Competition Functions from Resource-Based Models: A Gaussian Is Not Normal in Plant Communities. American Naturalist, 2021, 198, 253-267.	2.1	7
13	AusTraits, a curated plant trait database for the Australian flora. Scientific Data, 2021, 8, 254.	5.3	73
14	Strategic traits of bacteria and archaea vary widely within substrate-use groups. FEMS Microbiology Ecology, 2021, 97, .	2.7	8
15	Functional recovery of secondary tropical forests. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	34
16	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
17	The maleness of larger angiosperm flowers. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10921-10926.	7.1	22
18	A synthesis of bacterial and archaeal phenotypic trait data. Scientific Data, 2020, 7, 170.	5.3	59

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19	Parenchyma Abundance in Wood of Evergreen Trees Varies Independently of Nutrients. Frontiers in Plant Science, 2020, 11, 86.	3.6	15
20	Open Science principles for accelerating trait-based science across the Tree of Life. Nature Ecology and Evolution, 2020, 4, 294-303.	7.8	144
21	Plant performance response to eight different types of symbiosis. New Phytologist, 2019, 222, 526-542.	7.3	26
22	Wet and dry tropical forests show opposite successional pathways in wood density but converge over time. Nature Ecology and Evolution, 2019, 3, 928-934.	7.8	120
23	The links between leaf hydraulic vulnerability to drought and key aspects of leaf venation and xylem anatomy among 26 Australian woody angiosperms from contrasting climates. Annals of Botany, 2018, 122, 59-67.	2.9	25
24	Vessel scaling in evergreen angiosperm leaves conforms with Murray's law and areaâ€filling assumptions: implications for plant size, leaf size and cold tolerance. New Phytologist, 2018, 218, 1360-1370.	7.3	50
25	Branch Thinning and the Large-Scale, Self-Similar Structure of Trees. American Naturalist, 2018, 192, E37-E47.	2.1	7
26	Costs of acquiring phosphorus by vascular land plants: patterns and implications for plant coexistence. New Phytologist, 2018, 217, 1420-1427.	7.3	154
27	Habitat filtering determines the functional niche occupancy of plant communities worldwide. Journal of Ecology, 2018, 106, 1001-1009.	4.0	66
28	Shoot growth of woody trees and shrubs is predicted by maximum plant height and associated traits. Functional Ecology, 2018, 32, 247-259.	3.6	29
29	Partitioning mortality into growth-dependent and growth-independent hazards across 203 tropical tree species. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12459-12464.	7.1	25
30	Investment in reproduction for 14 iteroparous perennials is large and associated with other lifeâ€history and functional traits. Journal of Ecology, 2018, 106, 1338-1348.	4.0	8
31	Multitrait successional forest dynamics enable diverse competitive coexistence. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2719-E2728.	7.1	98
32	Physiological and structural tradeoffs underlying the leaf economics spectrum. New Phytologist, 2017, 214, 1447-1463.	7.3	412
33	Teamwork, Soft Skills, and Research Training. Trends in Ecology and Evolution, 2017, 32, 81-84.	8.7	29
34	Global climatic drivers of leaf size. Science, 2017, 357, 917-921.	12.6	580
35	How Species Boundaries Are Determined: A Response to Alexander et al.. Trends in Ecology and Evolution, 2017, 32, 7-8.	8.7	7
36	Weak tradeoff between xylem safety and xylemâ€specific hydraulic efficiency across the world's woody plant species. New Phytologist, 2016, 209, 123-136.	7.3	466

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37	Weak coordination among petiole, leaf, vein, and gasâ€exchange traits across Australian angiosperm species and its possible implications. Ecology and Evolution, 2016, 6, 267-278.	1.9	23
38	On research priorities to advance understanding of the safetyâ€“efficiency tradeoff in xylem. New Phytologist, 2016, 211, 1156-1158.	7.3	21
39	On the link between functional traits and growth rate: metaâ€analysis shows effects change with plant size, as predicted. Journal of Ecology, 2016, 104, 1488-1503.	4.0	132
40	plant: A package for modelling forest trait ecology and evolution. Methods in Ecology and Evolution, 2016, 7, 136-146.	5.2	26
41	Plant functional traits have globally consistent effects on competition. Nature, 2016, 529, 204-207.	27.8	655
42	The global spectrum of plant form and function. Nature, 2016, 529, 167-171.	27.8	2,022
43	Leaf mechanical resistance in plant trait databases: comparing the results of two common measurement methods. Annals of Botany, 2016, 117, 209-214.	2.9	7
44	Evolutionary divergence of leaf width and its correlates. American Journal of Botany, 2015, 102, 367-378.	1.7	26
45	Bark ecology of twigs vs. main stems: functional traits across eighty-five species of angiosperms. Oecologia, 2015, 178, 1033-1043.	2.0	44
46	Broad Anatomical Variation within a Narrow Wood Density Rangeâ€”A Study of Twig Wood across 69 Australian Angiosperms. PLoS ONE, 2015, 10, e0124892.	2.5	56
47	Functional distinctiveness of major plant lineages. Journal of Ecology, 2014, 102, 345-356.	4.0	108
48	Whole-plant capacitance, embolism resistance and slow transpiration rates all contribute to longer desiccation times in woody angiosperms from arid and wet habitats. Tree Physiology, 2014, 34, 275-284.	3.1	49
49	Three keys to the radiation of angiosperms into freezing environments. Nature, 2014, 506, 89-92.	27.8	1,284
50	Bark functional ecology: evidence for tradeoffs, functional coordination, and environment producing bark diversity. New Phytologist, 2014, 201, 486-497.	7.3	159
51	DNA technology and evolution of the Central Dogma. Trends in Ecology and Evolution, 2014, 29, 1-2.	8.7	33
52	Leaf hydraulic vulnerability to drought is linked to site water availability across a broad range of species and climates. Annals of Botany, 2014, 114, 435-440.	2.9	64
53	Fibre wall and lumen fractions drive wood density variation across 24 Australian angiosperms. AoB PLANTS, 2013, 5, .	2.3	121
54	Anatomical basis of variation in mesophyll resistance in eastern Australian sclerophylls: news of a long and winding path. Journal of Experimental Botany, 2012, 63, 5105-5119.	4.8	143

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55	Setbacks to shoot growth are common in woody plants, so how are shoots of some species safer than others?. Ecology, 2012, 93, 1275-1282.	3.2	4
56	Exploring phosphate effects on leaf flammability using a physical chemistry model. International Journal of Wildland Fire, 2012, 21, 1042.	2.4	13
57	Global convergence in the vulnerability of forests to drought. Nature, 2012, 491, 752-755.	27.8	1,944
58	The importance of leaf cuticle for carbon economy and â€¨mechanical strength. New Phytologist, 2012, 196, 441-447.	7.3	43
59	Safety and streamlining of woody shoots in wind: an empirical study across 39 species in tropical Australia. New Phytologist, 2012, 193, 137-149.	7.3	41
60	Lifetime return on investment increases with leaf lifespan among 10 Australian woodland species. New Phytologist, 2012, 193, 409-419.	7.3	41
61	ACCESSORY COSTS OF SEED PRODUCTION AND THE EVOLUTION OF ANGIOSPERMS. Evolution; International Journal of Organic Evolution, 2012, 66, 200-210.	2.3	20
62	Stem xylem conductivity is key to plant water balance across Australian angiosperm species. Functional Ecology, 2012, 26, 343-352.	3.6	98
63	An evolutionary attractor model for sapwood cross section in relation to leaf area. Journal of Theoretical Biology, 2012, 303, 98-109.	1.7	10
64	States and transitions: The trajectory of an idea, 1970-2010. Israel Journal of Ecology and Evolution, 2011, 57, 17-22.	0.6	4
65	Global patterns of leaf mechanical properties. Ecology Letters, 2011, 14, 301-312.	6.4	418
66	Phylogenetic tests of community assembly across regional to continental scales in tropical and subtropical rain forests. Global Ecology and Biogeography, 2011, 20, 707-716.	5.8	95
67	Influence of four major plant traits on average height, leafâ€area cover, net primary productivity, and biomass density in singleâ€species forests: a theoretical investigation. Journal of Ecology, 2011, 99, 148-164.	4.0	109
68	The relationship between stem biomechanics and wood density is modified by rainfall in 32 Australian woody plant species. New Phytologist, 2010, 185, 493-501.	7.3	66
69	Plant functional traits in Australian subtropical rain forest: partitioning withinâ€community from crossâ€landscape variation. Journal of Ecology, 2010, 98, 517-525.	4.0	37
70	Angiosperm wood structure: Global patterns in vessel anatomy and their relation to wood density and potential conductivity. American Journal of Botany, 2010, 97, 207-215.	1.7	355
71	Costs of height gain in rainforest saplings: main-stem scaling, functional traits and strategy variation across 75 species. Annals of Botany, 2009, 104, 987-993.	2.9	24
72	Evolutionary coordination between offspring size at independence and adult size. Journal of Ecology, 2009, 97, 23-26.	4.0	5

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73	Controls on declining carbon balance with leaf age among 10 woody species in Australian woodland: do leaves have zero daily net carbon balances when they die?. New Phytologist, 2009, 183, 153-166.	7.3	82
74	Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecology Letters, 2008, 11, 1065-1071.	6.4	1,913
75	A General Model for the Scaling of Offspring Size and Adult Size. American Naturalist, 2008, 172, 299-317.	2.1	54
76	Fossil leaf economics quantified: calibration, Eocene case study, and implications. Paleobiology, 2007, 33, 574-589.	2.0	107
77	Relationships Among Ecologically Important Dimensions of Plant Trait Variation in Seven Neotropical Forests. Annals of Botany, 2007, 99, 1003-1015.	2.9	317
78	Global patterns in seed size. Global Ecology and Biogeography, 2007, 16, 109-116.	5.8	334
79	Rebuilding community ecology from functional traits. Trends in Ecology and Evolution, 2006, 21, 178-185.	8.7	3,525
80	Land-plant ecology on the basis of functional traits. Trends in Ecology and Evolution, 2006, 21, 261-268.	8.7	808
81	Bivariate lineâ€fitting methods for allometry. Biological Reviews, 2006, 81, 259-291.	10.4	1,870
82	Seed size and plant strategy across the whole life cycle. Oikos, 2006, 113, 91-105.	2.7	501
83	Interrelations among pressure-volume curve traits across species and water availability gradients. Physiologia Plantarum, 2006, 127, 423-433.	5.2	168
84	Cross-species patterns in the coordination between leaf and stem traits, and their implications for plant hydraulics. Physiologia Plantarum, 2006, 127, 445-456.	5.2	107
85	Scaling-up from leaf to canopy-aggregate properties in sclerophyll shrub species. Austral Ecology, 2006, 31, 310-316.	1.5	11
86	Irradiance, temperature and rainfall influence leaf dark respiration in woody plants: evidence from comparisons across 20 sites. New Phytologist, 2006, 169, 309-319.	7.3	150
87	Accessory costs of seed production. Oecologia, 2006, 150, 310-317.	2.0	30
88	Gradients of light availability and leaf traits with leaf age and canopy position in 28 Australian shrubs and trees. Functional Plant Biology, 2006, 33, 407.	2.1	74
89	Global patterns in seed size. Global Ecology and Biogeography, 2006, .	5.8	16
90	Assessing the generality of global leaf trait relationships. New Phytologist, 2005, 166, 485-496.	7.3	1,704

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91	Modulation of leaf economic traits and trait relationships by climate. Global Ecology and Biogeography, 2005, 14, 411-421.	5.8	669
92	Alternative height strategies among 45 dicot rain forest species from tropical Queensland, Australia. Journal of Ecology, 2005, 93, 521-535.	4.0	154
93	Tradeoffs between height growth rate, stem persistence and maximum height among plant species in a post-fire succession. Oikos, 2005, 111, 57-66.	2.7	77
94	Response to Comment on "A Brief History of Seed Size". Science, 2005, 310, 783.2-783.	12.6	19
95	The Relationship Between Nuclear DNA Content and Leaf Strategy in Seed Plants. Annals of Botany, 2005, 96, 1321-1330.	2.9	37
96	Factors that shape seed mass evolution. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10540-10544.	7.1	280
97	A Brief History of Seed Size. Science, 2005, 307, 576-580.	12.6	513
98	Does a latitudinal gradient in seedling survival favour larger seeds in the tropics?. Ecology Letters, 2004, 7, 911-914.	6.4	24
99	Simple traits do not predict grazing response in Australian dry shrublands and woodlands. Journal of Applied Ecology, 2004, 41, 22-31.	4.0	103
100	Sprouting ability across diverse disturbances and vegetation types worldwide. Journal of Ecology, 2004, 92, 310-320.	4.0	277
101	Small-seeded species produce more seeds per square metre of canopy per year, but not per individual per lifetime. Journal of Ecology, 2004, 92, 384-396.	4.0	269
102	Seedling survival and seed size: a synthesis of the literature. Journal of Ecology, 2004, 92, 372-383.	4.0	724
103	What do seedlings die from and what are the implications for evolution of seed size?. Oikos, 2004, 106, 193-199.	2.7	254
104	Sprouting by semi-arid plants: testing a dichotomy and predictive traits. Oikos, 2004, 107, 72-89.	2.7	84
105	Funding the bud bank: a review of the costs of buds. Oikos, 2004, 106, 200-208.	2.7	134
106	The worldwide leaf economics spectrum. Nature, 2004, 428, 821-827.	27.8	6,489
107	Seed mass and seedling establishment after fire in Ku-ring-gai Chase National Park, Sydney, Australia. Austral Ecology, 2004, 29, 383-390.	1.5	25
108	The leaf size â€“ twig size spectrum and its relationship to other important spectra of variation among species. Oecologia, 2003, 135, 621-628.	2.0	166

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109	Seed size and survival in the soil in arid Australia. Austral Ecology, 2003, 28, 575-585.	1.5	58
110	Leaf size and angle vary widely across species: what consequences for light interception?. New Phytologist, 2003, 158, 509-525.	7.3	455
111	Plant height and evolutionary games. Trends in Ecology and Evolution, 2003, 18, 337-343.	8.7	552
112	Leastâ€Cost Input Mixtures of Water and Nitrogen for Photosynthesis. American Naturalist, 2003, 161, 98-111.	2.1	252
113	Plant Ecological Strategies: Some Leading Dimensions of Variation Between Species. Annual Review of Ecology, Evolution, and Systematics, 2002, 33, 125-159.	6.7	2,309
114	Convergence towards higher leaf mass per area in dry and nutrientâ€poor habitats has different consequences for leaf life span. Journal of Ecology, 2002, 90, 534-543.	4.0	334
115	Leaves at low versus high rainfall: coordination of structure, lifespan and physiology. New Phytologist, 2002, 155, 403-416.	7.3	328
116	Understanding seedling growth relationships through specific leaf area and leaf nitrogen concentration: generalisations across growth forms and growth irradiance. Oecologia, 2001, 127, 21-29.	2.0	89
117	Predicting plant speciesâ€™ responses to grazing. Journal of Applied Ecology, 2001, 38, 897-909.	4.0	159
118	Seed mass and seed nutrient content as predictors of seed output variation between species. Oikos, 2001, 92, 479-490.	2.7	190
119	Shifts in trait-combinations along rainfall and phosphorus gradients. Journal of Ecology, 2000, 88, 964-977.	4.0	371
120	Do small leaves expand faster than large leaves, and do shorter expansion times reduce herbivore damage?. Oikos, 2000, 90, 517-524.	2.7	117
121	The Time Value of Leaf Area. American Naturalist, 2000, 155, 649-656.	2.1	103
122	Seed Mass and the Evolution of Earlyâ€Seedling Etiolation. American Naturalist, 1999, 154, 469-480.	2.1	28
123	Differences in seedling growth behaviour among species: trait correlations across species, and trait shifts along nutrient compared to rainfall gradients. Journal of Ecology, 1999, 87, 85-97.	4.0	273
124	EVOLUTIONARY DIVERGENCES IN LEAF STRUCTURE AND CHEMISTRY, COMPARING RAINFALL AND SOIL NUTRIENT GRADIENTS. Ecological Monographs, 1999, 69, 569-588.	5.4	354
125	Evolutionary Divergences in Leaf Structure and Chemistry, Comparing Rainfall and Soil Nutrient Gradients. Ecological Monographs, 1999, 69, 569.	5.4	14
126	A leaf-height-seed (LHS) plant ecology strategy scheme. , 1998, 199, 213-227.		1,534

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127	Game-Theoretical Evolution of Seed Mass in Multi-Species Ecological Models. Oikos, 1997, 78, 116.	2.7	166
128	Population Dynamics in Sessile Organisms: Some General Results from Three Seemingly Different Theory-Lineages. Oikos, 1997, 80, 588.	2.7	28
129	What does â€˜ecologyâ€™ mean?. Trends in Ecology and Evolution, 1997, 12, 166.	8.7	11
130	Larger seeds in tropical floras: consistent patterns independent of growth form and dispersal mode. Journal of Biogeography, 1997, 24, 205-211.	3.0	87
131	Components of variation in seedling potential relative growth rate: phylogenetically independent contrasts. Oecologia, 1996, 105, 281-285.	2.0	59
132	Seedling Longevity under Deep Shade in Relation to Seed Size. Journal of Ecology, 1996, 84, 681.	4.0	129
133	Seed Size and Phylogeny in Six Temperate Floras: Constraints, Niche Conservatism, and Adaptation. American Naturalist, 1995, 146, 349-364.	2.1	180
134	Correlates of Seed Size Variation: A Comparison Among Five Temperate Floras. Journal of Ecology, 1995, 83, 517.	4.0	249
135	On Misinterpreting the `Phylogenetic Correction'. Journal of Ecology, 1995, 83, 531.	4.0	346
136	Predicting Dispersal Spectra: A Minimal Set of Hypotheses Based on Plant Attributes. Journal of Ecology, 1994, 82, 933.	4.0	247
137	The Role of Seed Size in Seedling Establishment in Dry Soil Conditions -- Experimental Evidence from Semi-Arid Species. Journal of Ecology, 1994, 82, 249.	4.0	328
138	Hypotheses on Seed Size: Tests Using the Semiarid Flora of Western New South Wales, Australia. American Naturalist, 1994, 143, 890-906.	2.1	93
139	Seedlings from Large Seeds Tolerated Defoliation Better: A Test Using Phylogeneticaly Independent Contrasts. Ecology, 1993, 74, 1092-1100.	3.2	196
140	Comparative evolutionary ecology of seed size. Trends in Ecology and Evolution, 1992, 7, 368-372.	8.7	503
141	Classifying Plants into Groups on the Basis of Associations of Individual Traits–Evidence from Australian Semi-Arid Woodlands. Journal of Ecology, 1992, 80, 417.	4.0	152
142	Seed size, pollination costs and angiosperm success. Evolutionary Ecology, 1991, 5, 231-247.	1.2	52
143	Seed Size and Plant Growth Form as Factors in Dispersal Spectra. Ecology, 1990, 71, 1307-1315.	3.2	104
144	Removal Rates of Seeds Adapted for Dispersal by Ants. Ecology, 1990, 71, 138-148.	3.2	108

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145	Opportunistic Management for Rangelands Not at Equilibrium. Journal of Range Management, 1989, 42, 266.	0.3	1,450
146	Ecology: How different are Australian ecosystems and ecologists?. Nature, 1985, 313, 10-10.	27.8	1
147	The Self-Thinning Rule. Advances in Ecological Research, 1984, , 167-225.	2.7	551
148	Species richness in vascular vegetation of the West Head, New South Wales. Austral Ecology, 1983, 8, 163-168.	1.5	25
149	Field experiments on mechanisms influencing species boundary movement under climate change. Plant and Soil, 0, , 1.	3.7	1