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	The worldwide leaf economics spectrum. Nature, 2004, 428, 821-827.	27.8	6,489
2	Rebuilding community ecology from functional traits. Trends in Ecology and Evolution, 2006, 21, 178-185.	8.7	3,525
3	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
4	The global spectrum of plant form and function. Nature, 2016, 529, 167-171.	27.8	2,022
5	Global convergence in the vulnerability of forests to drought. Nature, 2012, 491, 752-755.	27.8	1,944
6	Plant species traits are the predominant control on litter decomposition rates within biomes worldwide. Ecology Letters, 2008, 11, 1065-1071.	6.4	1,913
7	Bivariate lineâ€fitting methods for allometry. Biological Reviews, 2006, 81, 259-291.	10.4	1,870
8	Assessing the generality of global leaf trait relationships. New Phytologist, 2005, 166, 485-496.	7.3	1,704
9	A leaf-height-seed (LHS) plant ecology strategy scheme. , 1998, 199, 213-227.		1,534
10	Opportunistic Management for Rangelands Not at Equilibrium. Journal of Range Management, 1989, 42, 266.	0.3	1,450
11	Three keys to the radiation of angiosperms into freezing environments. Nature, 2014, 506, 89-92.	27.8	1,284
12	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
13	Land-plant ecology on the basis of functional traits. Trends in Ecology and Evolution, 2006, 21, 261-268.	8.7	808
14	Seedling survival and seed size: a synthesis of the literature. Journal of Ecology, 2004, 92, 372-383.	4.0	724
15	Modulation of leaf economic traits and trait relationships by climate. Global Ecology and Biogeography, 2005, 14, 411-421.	5.8	669
16	Plant functional traits have globally consistent effects on competition. Nature, 2016, 529, 204-207.	27.8	655
17	Global climatic drivers of leaf size. Science, 2017, 357, 917-921.	12.6	580
18	Plant height and evolutionary games. Trends in Ecology and Evolution, 2003, 18, 337-343.	8.7	552

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19	The Self-Thinning Rule. Advances in Ecological Research, 1984, , 167-225.	2.7	551
20	A Brief History of Seed Size. Science, 2005, 307, 576-580.	12.6	513
21	Comparative evolutionary ecology of seed size. Trends in Ecology and Evolution, 1992, 7, 368-372.	8.7	503
22	Seed size and plant strategy across the whole life cycle. Oikos, 2006, 113, 91-105.	2.7	501
23	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
24	Leaf size and angle vary widely across species: what consequences for light interception?. New Phytologist, 2003, 158, 509-525.	7.3	455
25	Global patterns of leaf mechanical properties. Ecology Letters, 2011, 14, 301-312.	6.4	418
26	Physiological and structural tradeoffs underlying the leaf economics spectrum. New Phytologist, 2017, 214, 1447-1463.	7.3	412
27	Shifts in trait-combinations along rainfall and phosphorus gradients. Journal of Ecology, 2000, 88, 964-977.	4.0	371
28	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
29	EVOLUTIONARY DIVERGENCES IN LEAF STRUCTURE AND CHEMISTRY, COMPARING RAINFALL AND SOIL NUTRIENT GRADIENTS. Ecological Monographs, 1999, 69, 569-588.	5.4	354
30	On Misinterpreting the `Phylogenetic Correction'. Journal of Ecology, 1995, 83, 531.	4.0	346
31	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
32	Global patterns in seed size. Global Ecology and Biogeography, 2007, 16, 109-116.	5.8	334
33	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
34	Leaves at low versus high rainfall: coordination of structure, lifespan and physiology. New Phytologist, 2002, 155, 403-416.	7.3	328
35	Relationships Among Ecologically Important Dimensions of Plant Trait Variation in Seven Neotropical Forests. Annals of Botany, 2007, 99, 1003-1015.	2.9	317
36	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

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37	Sprouting ability across diverse disturbances and vegetation types worldwide. Journal of Ecology, 2004, 92, 310-320.	4.0	277
38	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
39	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
40	What do seedlings die from and what are the implications for evolution of seed size?. Oikos, 2004, 106, 193-199.	2.7	254
41	Leastâ€Cost Input Mixtures of Water and Nitrogen for Photosynthesis. American Naturalist, 2003, 161, 98-111.	2.1	252
42	Correlates of Seed Size Variation: A Comparison Among Five Temperate Floras. Journal of Ecology, 1995, 83, 517.	4.0	249
43	Predicting Dispersal Spectra: A Minimal Set of Hypotheses Based on Plant Attributes. Journal of Ecology, 1994, 82, 933.	4.0	247
44	Seedlings from Large Seeds Tolerated Defoliation Better: A Test Using Phylogeneticaly Independent Contrasts. Ecology, 1993, 74, 1092-1100.	3.2	196
45	Seed mass and seed nutrient content as predictors of seed output variation between species. Oikos, 2001, 92, 479-490.	2.7	190
46	Seed Size and Phylogeny in Six Temperate Floras: Constraints, Niche Conservatism, and Adaptation. American Naturalist, 1995, 146, 349-364.	2.1	180
47	Interrelations among pressure-volume curve traits across species and water availability gradients. Physiologia Plantarum, 2006, 127, 423-433.	5.2	168
48	Game-Theoretical Evolution of Seed Mass in Multi-Species Ecological Models. Oikos, 1997, 78, 116.	2.7	166
49	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
50	Predicting plant speciesâ€™ responses to grazing. Journal of Applied Ecology, 2001, 38, 897-909.	4.0	159
51	Bark functional ecology: evidence for tradeoffs, functional coordination, and environment producing bark diversity. New Phytologist, 2014, 201, 486-497.	7.3	159
52	Alternative height strategies among 45 dicot rain forest species from tropical Queensland, Australia. Journal of Ecology, 2005, 93, 521-535.	4.0	154
53	Costs of acquiring phosphorus by vascular land plants: patterns and implications for plant coexistence. New Phytologist, 2018, 217, 1420-1427.	7.3	154
54	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

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55	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
56	Open Science principles for accelerating trait-based science across the Tree of Life. Nature Ecology and Evolution, 2020, 4, 294-303.	7.8	144
57	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
58	Funding the bud bank: a review of the costs of buds. Oikos, 2004, 106, 200-208.	2.7	134
59	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
60	Seedling Longevity under Deep Shade in Relation to Seed Size. Journal of Ecology, 1996, 84, 681.	4.0	129
61	Fibre wall and lumen fractions drive wood density variation across 24 Australian angiosperms. AoB PLANTS, 2013, 5, .	2.3	121
62	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
63	Do small leaves expand faster than large leaves, and do shorter expansion times reduce herbivore damage?. Oikos, 2000, 90, 517-524.	2.7	117
64	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
65	Removal Rates of Seeds Adapted for Dispersal by Ants. Ecology, 1990, 71, 138-148.	3.2	108
66	Functional distinctiveness of major plant lineages. Journal of Ecology, 2014, 102, 345-356.	4.0	108
67	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
68	Fossil leaf economics quantified: calibration, Eocene case study, and implications. Paleobiology, 2007, 33, 574-589.	2.0	107
69	Seed Size and Plant Growth Form as Factors in Dispersal Spectra. Ecology, 1990, 71, 1307-1315.	3.2	104
70	The Time Value of Leaf Area. American Naturalist, 2000, 155, 649-656.	2.1	103
71	Simple traits do not predict grazing response in Australian dry shrublands and woodlands. Journal of Applied Ecology, 2004, 41, 22-31.	4.0	103
72	Stem xylem conductivity is key to plant water balance across Australian angiosperm species. Functional Ecology, 2012, 26, 343-352.	3.6	98

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73	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
74	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
75	Hypotheses on Seed Size: Tests Using the Semiarid Flora of Western New South Wales, Australia. American Naturalist, 1994, 143, 890-906.	2.1	93
76	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
77	Larger seeds in tropical floras: consistent patterns independent of growth form and dispersal mode. Journal of Biogeography, 1997, 24, 205-211.	3.0	87
78	Sprouting by semi-arid plants: testing a dichotomy and predictive traits. Oikos, 2004, 107, 72-89.	2.7	84
79	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
80	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
81	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
82	AusTraits, a curated plant trait database for the Australian flora. Scientific Data, 2021, 8, 254.	5.3	73
83	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
84	Habitat filtering determines the functional niche occupancy of plant communities worldwide. Journal of Ecology, 2018, 106, 1001-1009.	4.0	66
85	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
86	Components of variation in seedling potential relative growth rate: phylogenetically independent contrasts. Oecologia, 1996, 105, 281-285.	2.0	59
87	A synthesis of bacterial and archaeal phenotypic trait data. Scientific Data, 2020, 7, 170.	5.3	59
88	Seed size and survival in the soil in arid Australia. Austral Ecology, 2003, 28, 575-585.	1.5	58
89	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
90	A General Model for the Scaling of Offspring Size and Adult Size. American Naturalist, 2008, 172, 299-317.	2.1	54

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91	Seed size, pollination costs and angiosperm success. Evolutionary Ecology, 1991, 5, 231-247.	1.2	52
92	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
93	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
94	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
95	Bark ecology of twigs vs. main stems: functional traits across eighty-five species of angiosperms. Oecologia, 2015, 178, 1033-1043.	2.0	44
96	The importance of leaf cuticle for carbon economy and â€¨mechanical strength. New Phytologist, 2012, 196, 441-447.	7.3	43
97	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
98	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
99	Lifetime return on investment increases with leaf lifespan among 10 Australian woodland species. New Phytologist, 2012, 193, 409-419.	7.3	41
100	The Relationship Between Nuclear DNA Content and Leaf Strategy in Seed Plants. Annals of Botany, 2005, 96, 1321-1330.	2.9	37
101	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
102	A roadmap to plant functional island biogeography. Biological Reviews, 2021, 96, 2851-2870.	10.4	37
103	Functional recovery of secondary tropical forests. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	34
104	DNA technology and evolution of the Central Dogma. Trends in Ecology and Evolution, 2014, 29, 1-2.	8.7	33
105	Accessory costs of seed production. Oecologia, 2006, 150, 310-317.	2.0	30
106	Teamwork, Soft Skills, and Research Training. Trends in Ecology and Evolution, 2017, 32, 81-84.	8.7	29
107	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
108	Population Dynamics in Sessile Organisms: Some General Results from Three Seemingly Different Theory-Lineages. Oikos, 1997, 80, 588.	2.7	28

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109	Seed Mass and the Evolution of Earlyâ€Seedling Etiolation. American Naturalist, 1999, 154, 469-480.	2.1	28
110	Evolutionary divergence of leaf width and its correlates. American Journal of Botany, 2015, 102, 367-378.	1.7	26
111	plant: A package for modelling forest trait ecology and evolution. Methods in Ecology and Evolution, 2016, 7, 136-146.	5.2	26
112	Plant performance response to eight different types of symbiosis. New Phytologist, 2019, 222, 526-542.	7.3	26
113	Species richness in vascular vegetation of the West Head, New South Wales. Austral Ecology, 1983, 8, 163-168.	1.5	25
114	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
115	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
116	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
117	Does a latitudinal gradient in seedling survival favour larger seeds in the tropics?. Ecology Letters, 2004, 7, 911-914.	6.4	24
118	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
119	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
120	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
121	On research priorities to advance understanding of the safetyâ€“efficiency tradeoff in xylem. New Phytologist, 2016, 211, 1156-1158.	7.3	21
122	Trait dimensions in bacteria and archaea compared to vascular plants. Ecology Letters, 2021, 24, 1487-1504.	6.4	21
123	ACCESSORY COSTS OF SEED PRODUCTION AND THE EVOLUTION OF ANGIOSPERMS. Evolution; International Journal of Organic Evolution, 2012, 66, 200-210.	2.3	20
124	Response to Comment on "A Brief History of Seed Size". Science, 2005, 310, 783.2-783.	12.6	19
125	Aerobic bacteria and archaea tend to have larger and more versatile genomes. Oikos, 2021, 130, 501-511.	2.7	19
126	Global patterns in seed size. Global Ecology and Biogeography, 2006, .	5.8	16

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127	Parenchyma Abundance in Wood of Evergreen Trees Varies Independently of Nutrients. Frontiers in Plant Science, 2020, 11, 86.	3.6	15
128	AnimalTraits - a curated animal trait database for body mass, metabolic rate and brain size. Scientific Data, 2022, 9, .	5.3	15
129	Evolutionary Divergences in Leaf Structure and Chemistry, Comparing Rainfall and Soil Nutrient Gradients. Ecological Monographs, 1999, 69, 569.	5.4	14
130	Exploring phosphate effects on leaf flammability using a physical chemistry model. International Journal of Wildland Fire, 2012, 21, 1042.	2.4	13
131	Effects of plant hydraulic traits on the flammability of live fine canopy fuels. Functional Ecology, 2021, 35, 835-846.	3.6	12
132	What does â€˜ecologyâ€™ mean?. Trends in Ecology and Evolution, 1997, 12, 166.	8.7	11
133	Scaling-up from leaf to canopy-aggregate properties in sclerophyll shrub species. Austral Ecology, 2006, 31, 310-316.	1.5	11
134	Trait ecology of startup plants. New Phytologist, 2022, 235, 842-847.	7.3	11
135	An evolutionary attractor model for sapwood cross section in relation to leaf area. Journal of Theoretical Biology, 2012, 303, 98-109.	1.7	10
136	Disentangling direct and indirect effects of island area on plant functional trait distributions. Journal of Biogeography, 2021, 48, 2098-2110.	3.0	10
137	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
138	Strategic traits of bacteria and archaea vary widely within substrate-use groups. FEMS Microbiology Ecology, 2021, 97, .	2.7	8
139	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
140	How Species Boundaries Are Determined: A Response to Alexander et al.. Trends in Ecology and Evolution, 2017, 32, 7-8.	8.7	7
141	Branch Thinning and the Large-Scale, Self-Similar Structure of Trees. American Naturalist, 2018, 192, E37-E47.	2.1	7
142	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
143	Motivating data contributions via a distinct career currency. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20202830.	2.6	6
144	Evolutionary coordination between offspring size at independence and adult size. Journal of Ecology, 2009, 97, 23-26.	4.0	5

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145	States and transitions: The trajectory of an idea, 1970-2010. Israel Journal of Ecology and Evolution, 2011, 57, 17-22.	0.6	4
146	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
147	Ecology: How different are Australian ecosystems and ecologists?. Nature, 1985, 313, 10-10.	27.8	1
148	The conservative lowâ€phosphorus niche in Proteaceae. Plant and Soil, 2021, 462, 89-93.	3.7	1
149	Field experiments on mechanisms influencing species boundary movement under climate change. Plant and Soil, 0, , 1.	3.7	1