Karl J Niklas

List of Publications by Citations

204 papers	9,576 citations	46 h-index	93 g-index
211 ext. papers	11,266 ext. citations	5.4 avg, IF	6.77 L-index

#	Paper	IF	Citations
204	Biomass allocation to leaves, stems and roots: meta-analyses of interspecific variation and environmental control. *New Phytologist*, **2012**, 193, 30-50	9.8	1490
203	Global allocation rules for patterns of biomass partitioning in seed plants. *Science*, **2002**, 295, 1517-20	33.3	496
202	Invariant scaling relations across tree-dominated communities. *Nature*, **2001**, 410, 655-60	50.4	490
201	A reevaluation of the key factors that influence tomato fruit softening and integrity. *Plant Physiology*, **2007**, 144, 1012-28	6.6	274
200	The evolution and functional significance of leaf shape in the angiosperms. *Functional Plant Biology*, **2011**, 38, 535-552	2.7	266
199	The aerodynamics of wind pollination. *Botanical Review, The*, **1985**, 51, 328-386	3.8	222
198	Plant allometry: is there a grand unifying theory?. *Biological Reviews*, **2004**, 79, 871-89	13.5	218
197	Patterns in vascular land plant diversification. *Nature*, **1983**, 303, 614-616	50.4	210
196	A mechanical perspective on foliage leaf form and function. *New Phytologist*, **1999**, 143, 19-31	9.8	207
195	Thermodynamic and metabolic effects on the scaling of production and population energy use. *Ecology Letters*, **2003**, 6, 990-995	10	193
194	Nitrogen/phosphorus leaf stoichiometry and the scaling of plant growth. *Ecology Letters*, **2005**, 8, 636-642	10	179
193	Growth and hydraulic (not mechanical) constraints govern the scaling of tree height and mass. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 15661-3	11.5	173
192	On the vegetative biomass partitioning of seed plant leaves, stems, and roots. *American Naturalist*, **2002**, 159, 482-97	3.7	153
191	The modern theory of biological evolution: an expanded synthesis. *Die Naturwissenschaften*, **2004**, 91, 255-76	2	148
190	"Diminishing returns" in the scaling of functional leaf traits across and within species groups. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 8891-6	11.5	143
189	Evidence of a general 2/3-power law of scaling leaf nitrogen to phosphorus among major plant groups and biomes. *Proceedings of the Royal Society B: Biological Sciences*, **2010**, 277, 877-83	4.4	131
188	Testing the metabolic theory of ecology. *Ecology Letters*, **2012**, 15, 1465-74	10	124

187	Darwin's second 'abominable mystery': Why are there so many angiosperm species?. *American Journal of Botany*, **2009**, 96, 366-81	2.7	122
186	Plant allometry, leaf nitrogen and phosphorus stoichiometry, and interspecific trends in annual growth rates. *Annals of Botany*, **2006**, 97, 155-63	4.1	122
185	The evolution of the land plant life cycle. *New Phytologist*, **2010**, 185, 27-41	9.8	118
184	Canonical rules for plant organ biomass partitioning and annual allocation. *American Journal of Botany*, **2002**, 89, 812-9	2.7	110
183	Biological scaling: does the exception prove the rule?. *Nature*, **2007**, 445, E9-10; discussion E10-1	50.4	103
182	The origins of multicellular organisms. *Evolution & Development*, **2013**, 15, 41-52	2.6	101
181	Tree size frequency distributions, plant density, age and community disturbance. *Ecology Letters*, **2003**, 6, 405-411	10	101
180	Modelling below- and above-ground biomass for non-woody and woody plants. *Annals of Botany*, **2005**, 95, 315-21	4.1	97
179	Worldwide correlations of mechanical properties and green wood density. *American Journal of Botany*, **2010**, 97, 1587-94	2.7	95
178	The evolutionary-developmental origins of multicellularity. *American Journal of Botany*, **2014**, 101, 6-25	2.7	89
177	Plant Physics **2012**,		85
176	A phyletic perspective on the allometry of plant biomass-partitioning patterns and functionally equivalent organ-categories. *New Phytologist*, **2006**, 171, 27-40	9.8	82
175	Above- and below-ground biomass relationships across 1534 forested communities. *Annals of Botany*, **2007**, 99, 95-102	4.1	79
174	Historical roots and current status of plant physiology. *Plant Signaling and Behavior*, **2019**, 14, 1552058	2.5	78
173	A morphometric analysis of the phloem-unloading pathway in developing tobacco leaves. *Planta*, **1988**, 176, 307-18	4.7	75
172	The metabolic theory of ecology: prospects and challenges for plant biology. *New Phytologist*, **2010**, 188, 696-710	9.8	72
171	Maximum plant height and the biophysical factors that limit it. *Tree Physiology*, **2007**, 27, 433-40	4.2	72
170	Rethinking gene regulatory networks in light of alternative splicing, intrinsically disordered protein domains, and post-translational modifications. *Frontiers in Cell and Developmental Biology*, **2015**, 3, 8	5.7	71

169	Biomechanics and anatomy of Lycopersicon esculentum fruit peels and enzyme-treated samples. *American Journal of Botany*, **2004**, 91, 352-60	2.7	63
168	The Cell Walls that Bind the Tree of Life. *BioScience*, **2004**, 54, 831	5.7	62
167	N, P, and C stoichiometry of Eranthis hyemalis (Ranunculaceae) and the allometry of plant growth. *American Journal of Botany*, **2005**, 92, 1256-63	2.7	61
166	The evolutionary development of plant body plans. *Functional Plant Biology*, **2009**, 36, 682-695	2.7	55
165	Global leaf nitrogen and phosphorus stoichiometry and their scaling exponent. *National Science Review*, **2018**, 5, 728-739	10.8	52
164	Insights into plant size-density relationships from models and agricultural crops. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 8600-5	11.5	52
163	THE ROLE OF PHYLLOTACTIC PATTERN AS A "DEVELOPMENTAL CONSTRAINT" ON THE INTERCEPTION OF LIGHT BY LEAF SURFACES. *Evolution; International Journal of Organic Evolution*, **1988**, 42, 1-16	3.8	52
162	COMPUTER MODELS OF EARLY LAND PLANT EVOLUTION. *Annual Review of Earth and Planetary Sciences*, **2004**, 32, 47-66	15.3	48
161	Cell division and turgor-driven stem elongation in juvenile plants: a synthesis. *Plant Science*, **2013**, 207, 45-56	5.3	47
160	Biomass partitioning and leaf N,P - stoichiometry: comparisons between tree and herbaceous current-year shoots. *Plant, Cell and Environment*, **2006**, 29, 2030-42	8.4	47
159	The influence of gravity and wind on land plant evolution. *Review of Palaeobotany and Palynology*, **1998**, 102, 1-14	1.7	46
158	THE ELASTIC MODULI AND MECHANICS OF POPULUS TREMULOIDES (SALICACEAE) PETIOLES IN BENDING AND TORSION. *American Journal of Botany*, **1991**, 78, 989-996	2.7	46
157	A comparison between the record height-to-stem diameter allometries of Pachycaulis and Leptocaulis species. *Annals of Botany*, **2006**, 97, 79-83	4.1	42
156	The evolution of hydrophobic cell wall biopolymers: from algae to angiosperms. *Journal of Experimental Botany*, **2017**, 68, 5261-5269	7	41
155	The role of the epidermis as a stiffening agent in Tulipa (Liliaceae) stems. *American Journal of Botany*, **1997**, 84, 735-744	2.7	41
154	The Role of Phyllotatic Pattern as a "Developmental Constraint" On the Interception of Light by Leaf Surfaces. *Evolution; International Journal of Organic Evolution*, **1988**, 42, 1	3.8	41
153	Petiole mechanics, light interception by Lamina, and "Economy in Design". *Oecologia*, **1992**, 90, 518-526	2.9	38
152	Evolutionary plant physiology: Charles Darwin's forgotten synthesis. *Die Naturwissenschaften*, **2009**, 96, 1339-54	2	36

151	Plant biomechanics: an overview and prospectus. *American Journal of Botany*, **2006**, 93, 1369-78	2.7	36
150	Computing factors of safety against wind-induced tree stem damage. *Journal of Experimental Botany*, **2000**, 51, 797-806	7	36
149	Evidence for a Strong Correlation Between Transcription Factor Protein Disorder and Organismic Complexity. *Genome Biology and Evolution*, **2017**, 9, 1248-1265	3.9	33
148	Predicting the allometry of leaf surface area and dry mass. *American Journal of Botany*, **2009**, 96, 531-6	2.7	33
147	Evidence for "diminishing returns" from the scaling of stem diameter and specific leaf area. *American Journal of Botany*, **2008**, 95, 549-57	2.7	33
146	Metabolic Scaling and the Evolutionary Dynamics of Plant Size, Form, and Diversity: Toward a Synthesis of Ecology, Evolution, and Paleontology. *International Journal of Plant Sciences*, **2007**, 168, 729-749	2.6	33
145	Evolutionary trends in safety factors against wind-induced stem failure. *American Journal of Botany*, **2001**, 88, 1266-1278	2.7	33
144	Ontogenetic shift in the scaling of dark respiration with whole-plant mass in seven shrub species. *Functional Ecology*, **2010**, 24, 502-512	5.6	32
143	Size-dependent species richness: trends within plant communities and across latitude. *Ecology Letters*, **2003**, 6, 631-636	10	32
142	A general review of the biomechanics of root anchorage. *Journal of Experimental Botany*, **2019**, 70, 3439-3451	7	30
141	The evolutionary origins of cell type diversification and the role of intrinsically disordered proteins. *Journal of Experimental Botany*, **2018**, 69, 1437-1446	7	29
140	Allometric theory and the mechanical stability of large trees: proof and conjecture. *American Journal of Botany*, **2006**, 93, 824-8	2.7	29
139	Dynamical patterning modules in plant development and evolution. *International Journal of Developmental Biology*, **2012**, 56, 661-74	1.9	28
138	Macroevolution via secondary endosymbiosis: a Neo-Goldschmidtian view of unicellular hopeful monsters and Darwin's primordial intermediate form. *Theory in Biosciences*, **2008**, 127, 277-89	1.3	28
137	The biomechanics of Pachycereus pringlei root systems. *American Journal of Botany*, **2002**, 89, 12-21	2.7	28
136	A REEVALUATION OF THE ZOSTEROPHYLLOPHYTINA WITH COMMENTS ON THE ORIGIN OF LYCOPODS. *American Journal of Botany*, **1990**, 77, 274-283	2.7	28
135	Apparent Changes in the Diversity of Fossil Plants **1980**, 1-89		27
134	A REEVALUATION OF THE ZOSTEROPHYLLOPHYTINA WITH COMMENTS ON THE ORIGIN OF LYCOPODS **1990**, 77, 274		26

133	The evo-devo of multinucleate cells, tissues, and organisms, and an alternative route to multicellularity. *Evolution & Development*, **2013**, 15, 466-74	2.6	25
132	BIOMECHANICS OF PSILOTUM NUDUM AND SOME EARLY PALEOZOIC VASCULAR SPOROPHYTES. *American Journal of Botany*, **1990**, 77, 590-606	2.7	25
131	Size-dependent variations in plant growth rates and the ¾-power rule **1994**, 81, 134		25
130	Functional adaptation and phenotypic plasticity at the cellular and whole plant level. *Journal of Biosciences*, **2009**, 34, 613-20	2.3	24
129	The scaling of the hydraulic architecture in poplar leaves. *New Phytologist*, **2017**, 214, 145-157	9.8	23
128	Sensitivity of growth and biomass allocation patterns to increasing nitrogen: a comparison between ephemerals and annuals in the Gurbantunggut Desert, north-western China. *Annals of Botany*, **2014**, 113, 501-11	4.1	23
127	The allometry of saguaro height **1994**, 81, 1161		23
126	Size-dependent leaf area ratio in plant twigs: implication for leaf size optimization. *Annals of Botany*, **2010**, 105, 71-7	4.1	22
125	Plant Evolution **2016**,		22
124	Lamina shape does not correlate with lamina surface area: An analysis based on the simplified Gielis equation. *Global Ecology and Conservation*, **2019**, 19, e00666	2.8	21
123	Leaf shape influences the scaling of leaf dry mass vs. area: a test case using bamboos. *Annals of Forest Science*, **2020**, 77, 1	3.1	21
122	"Diminishing returns" in the scaling of leaf area vs. dry mass in Wuyi Mountain bamboos, Southeast China. *American Journal of Botany*, **2017**, 104, 993-998	2.7	21
121	FLEXURAL STIFFNESS ALLOMETRIES OF ANGIOSPERM AND FERN PETIOLES AND RACHISES: EVIDENCE FOR BIOMECHANICAL CONVERGENCE. *Evolution; International Journal of Organic Evolution*, **1991**, 45, 734-750	3.8	21
120	Nondestructive estimation of leaf area for 15 species of vines with different leaf shapes. *American Journal of Botany*, **2020**, 107, 1481-1490	2.7	21
119	Identifying Morphological and Mechanical Traits Associated with Stem Lodging in Bioenergy Sorghum (Sorghum bicolor). *Bioenergy Research*, **2017**, 10, 635-647	3.1	20
118	Phloem networks in leaves. *Current Opinion in Plant Biology*, **2018**, 43, 29-35	9.9	20
117	The Bio-Logic and machinery of plant morphogenesis. *American Journal of Botany*, **2003**, 90, 515-25	2.7	20
116	Biophysical effects on plant competition and coexistence. *Functional Ecology*, **2013**, 27, 854-864	5.6	19

115	Assessing Scaling Relationships: Uses, Abuses, and Alternatives. *International Journal of Plant Sciences*, **2014**, 175, 754-763	2.6	19
114	The effect of twig architecture and seed number on seed size variation in subtropical woody species. *New Phytologist*, **2009**, 183, 1212-1221	9.8	19
113	Preferential states of longitudinal tension in the outer tissues of Taraxacum Officinale (Asteraceae) peduncles. *American Journal of Botany*, **1998**, 85, 1068-1081	2.7	19
112	Dynamical Patterning Modules, Biogeneric Materials, and the Evolution of Multicellular Plants. *Frontiers in Plant Science*, **2018**, 9, 871	6.2	19
111	The effects of domestication on the scaling of below- vs. aboveground biomass in four selected wheat (Triticum; Poaceae) genotypes. *American Journal of Botany*, **2012**, 99, 1112-7	2.7	18
110	Carica papaya (Caricaceae): a case study into the effects of domestication on plant vegetative growth and reproduction. *American Journal of Botany*, **2007**, 94, 999-1002	2.7	18
109	Chemotaxonomy of Some Paleozoic Vascular Plants. Part I: Chemical Compositions and Preliminary Cluster Analyses. *Brittonia*, **1976**, 28, 353	0.5	18
108	The scaling relationships of leaf biomass vs. leaf surface area of 12 bamboo species. *Global Ecology and Conservation*, **2019**, 20, e00793	2.8	17
107	The scaling of fine root nitrogen versus phosphorus in terrestrial plants: A global synthesis. *Functional Ecology*, **2019**, 33, 2081-2094	5.6	17
106	Did meiosis evolve before sex and the evolution of eukaryotic life cycles?. *BioEssays*, **2014**, 36, 1091-101	4.1	17
105	Biophysical and size-dependent perspectives on plant evolution. *Journal of Experimental Botany*, **2013**, 64, 4817-27	7	17
104	Modes of failure in tubular plant organs. *American Journal of Botany*, **2013**, 100, 332-6	2.7	17
103	Differences in the scaling of area and mass of Ginkgo biloba (Ginkgoaceae) leaves and their relevance to the study of specific leaf area. *American Journal of Botany*, **2011**, 98, 1381-6	2.7	17
102	Plant development, auxin, and the subsystem incompleteness theorem. *Frontiers in Plant Science*, **2012**, 3, 37	6.2	16
101	Size-dependent variations in plant growth rates and the ¾-power rule *American Journal of Botany*, **1994**, 81, 134-144	2.7	16
100	The hydraulic architecture of Ginkgo leaves. *American Journal of Botany*, **2017**, 104, 1285-1298	2.7	15
99	Organ-specific rates of cellular respiration in developing sunflower seedlings and their bearing on metabolic scaling theory. *Protoplasma*, **2012**, 249, 1049-57	3.4	15
98	On the mechanical properties of the rare endemic cactus Stenocereus eruca and the related species S. gummosus. *American Journal of Botany*, **2003**, 90, 663-74	2.7	15

97	Comparisons among biomass allocation and spatial distribution patterns of some vine, pteridophyte, and gymnosperm shoots **1994**, 81, 1416		15
96	Isometric scaling of above- and below-ground biomass at the individual and community levels in the understorey of a sub-tropical forest. *Annals of Botany*, **2015**, 115, 303-13	4.1	14
95	The number of cell types, information content, and the evolution of complex multicellularity. *Acta Societatis Botanicorum Poloniae*, **2014**, 83, 337-347	1.5	14
94	THE ELASTIC MODULI AND MECHANICS OF POPULUS TREMULOIDES (SALICACEAE) PETIOLES IN BENDING AND TORSION **1991**, 78, 989		14
93	Comparison of the Scaling Relationships of Leaf Biomass versus Surface Area between Spring and Summer for Two Deciduous Tree Species. *Forests*, **2020**, 11, 1010	2.8	14
92	Leaf Bilateral Symmetry and the Scaling of the Perimeter vs. the Surface Area in 15 Vine Species. *Forests*, **2020**, 11, 246	2.8	13
91	Ontogenetic changes in the numbers of short- vs. long-shoots account for decreasing specific leaf area in Acer rubrum (Aceraceae) as trees increase in size. *American Journal of Botany*, **2010**, 97, 27-37	2.7	13
90	Emergent properties of plants competing in silico for space and light: Seeing the tree from the forest. *American Journal of Botany*, **2009**, 96, 1430-44	2.7	13
89	Voigt and Reuss Models for Predicting Changes in Young's Modulus of Dehydrating Plant Organs. *Annals of Botany*, **1992**, 70, 347-355	4.1	13
88	Effects of biotic and abiotic factors on forest biomass fractions. *National Science Review*, **2021**, 8, nwab025	15.8	13
87	A phyletic perspective on cell growth. *Cold Spring Harbor Perspectives in Biology*, **2015**, 7,	10.2	12
86	Amphimixis and the individual in evolving populations: does Weismann's Doctrine apply to all, most or a few organisms?. *Die Naturwissenschaften*, **2014**, 101, 357-72	2	12
85	A theoretical framework for whole-plant carbon assimilation efficiency based on metabolic scaling theory: a test case using Picea seedlings. *Tree Physiology*, **2015**, 35, 599-607	4.2	12
84	Leaf traits and relationships differ with season as well as among species groupings in a managed Southeastern China forest landscape. *Plant Ecology*, **2012**, 213, 1489-1502	1.7	12
83	Mechanical properties of wood disproportionately increase with increasing density. *American Journal of Botany*, **2012**, 99, 169-70	2.7	12
82	Reexamination of a canonical model for plant organ biomass partitioning. *American Journal of Botany*, **2003**, 90, 250-4	2.7	12
81	Aerodynamics of Ephedra trifurca. *Journal of Mathematical Biology*, **1986**, 24, 1-24	2	12
80	Life history strategies drive size-dependent biomass allocation patterns of dryland ephemerals and shrubs. *Ecosphere*, **2019**, 10, e02709	3.1	11

79	Plant biomechanics in the 21st century. *Journal of Experimental Botany*, **2019**, 70, 3435-3438	7	11
78	Leaping lizards landing on leaves: escape-induced jumps in the rainforest canopy challenge the adhesive limits of geckos. *Journal of the Royal Society Interface*, **2017**, 14,	4.1	11
77	Important foliar traits depend on species-grouping: analysis of a remnant temperate forest at the Keerqin Sandy Lands, China. *Plant and Soil*, **2011**, 340, 337-345	4.2	11
76	COMPUTER SIMULATIONS OF PLANT BIODIVERSITY IN STABLE AND UNSTABLE ENVIRONMENTS: A TEST OF THE NEUTRAL BIODIVERSITY THEORY. *Journal of Biological Systems*, **2011**, 19, 1-17	1.6	11
75	AERODYNAMICS OF EPHEDRA TRIFURCA: I. POLLEN GRAIN VELOCITY FIELDS AROUND STEMS BEARING OVULES **1986**, 73, 966		11
74	BIOMECHANICS OF PSILOTUM NUDUM AND SOME EARLY PALEOZOIC VASCULAR SPOROPHYTES **1990**, 77, 590		11
73	Global Data Analysis Shows That Soil Nutrient Levels Dominate Foliar Nutrient Resorption Efficiency in Herbaceous Species. *Frontiers in Plant Science*, **2018**, 9, 1431	6.2	11
72	Linking ecomechanical models and functional traits to understand phenotypic diversity. *Trends in Ecology and Evolution*, **2021**, 36, 860-873	10.9	11
71	A Biophysical Perspective on the Pollination Biology of Ephedra nevadensis and E. trifurca. *Botanical Review, The*, **2015**, 81, 28-41	3.8	10
70	Kleiber's Law: How the Fire of Life ignited debate, fueled theory, and neglected plants as model organisms. *Plant Signaling and Behavior*, **2015**, 10, e1036216	2.5	10
69	Interspecific differences in whole-plant respiration vs. biomass scaling relationships: a case study using evergreen conifer and angiosperm tree seedlings. *American Journal of Botany*, **2014**, 101, 617-23	2.7	10
68	Evolution of Cellular Differentiation: From Hypotheses to Models. *Trends in Ecology and Evolution*, **2021**, 36, 49-60	10.9	10
67	Boron and the evolutionary development of roots. *Plant Signaling and Behavior*, **2017**, 12, e1320631	2.5	9
66	The evolutionary ecology (evo-eco) of plant asexual reproduction. *Evolutionary Ecology*, **2017**, 31, 317-332	2.8	9
65	Patterns of diversity in leaves from canopies of Ginkgo biloba are revealed using Specific Leaf Area as a morphological character. *American Journal of Botany*, **2011**, 98, 1068-76	2.7	9
64	On the allometry of biomass partitioning and light harvesting for plants with leafless stems. *Journal of Theoretical Biology*, **2002**, 217, 47-52	2.3	9
63	The Aerodynamics of Pollen Capture in Two Sympatric Ephedra Species. *Evolution; International Journal of Organic Evolution*, **1987**, 41, 104	3.8	9
62	PHYSIOLOGICAL AND MORPHOLOGICAL MODIFICATIONS OF PLANTAGO MAJOR (PLANTAGINACEAE) IN RESPONSE TO LIGHT CONDITIONS **1989**, 76, 370		9

61	Evolutionary walks through a land plant morphospace		9
60	Water content quantitatively affects metabolic rates over the course of plant ontogeny. *New Phytologist*, **2020**, 228, 1524-1534	9.8	9
59	Haeckel's Biogenetic Law and the Land Plant Phylotypic Stage. *BioScience*, **2016**, 66, 510-519	5.7	9
58	On the Interpretation of the Normalization Constant in the Scaling Equation. *Frontiers in Ecology and Evolution*, **2019**, 6,	3.7	9
57	A Superellipse with Deformation and Its Application in Describing the Cross-Sectional Shapes of a Square Bamboo. *Symmetry*, **2020**, 12, 2073	2.7	8
56	Comparisons among biomass allocation and spatial distribution patterns of some vine, pteridophyte, and gymnosperm shoots. *American Journal of Botany*, **1994**, 81, 1416-1421	2.7	8
55	Julius Sachs (1868): The father of plant physiology. *American Journal of Botany*, **2018**, 105, 656-666	2.7	8
54	Stem Diameter (and Not Length) Limits Twig Leaf Biomass. *Frontiers in Plant Science*, **2019**, 10, 185	6.2	7
53	Climbing plants: attachment and the ascent for light. *Current Biology*, **2011**, 21, R199-201	6.3	7
52	Modeling fossil plant form-function relationships: a critique. *Paleobiology*, **2000**, 26, 289-304	2.6	7
51	The many roads to and from multicellularity. *Journal of Experimental Botany*, **2020**, 71, 3247-3253	7	7
50	The Evolution of Early Vascular Plant Complexity. *International Journal of Plant Sciences*, **2019**, 180, 800-810	2.10	6
49	Spatiotemporal distribution of essential elements through Populus leaf ontogeny. *Journal of Experimental Botany*, **2016**, 67, 2777-86	7	6
48	Metabolic scaling theory in plant biology and the three oxygen paradoxa of aerobic life. *Theory in Biosciences*, **2013**, 132, 277-88	1.3	6
47	Computer simulations support a core prediction of a contentious plant model. *American Journal of Botany*, **2012**, 99, 508-16	2.7	6
46	Carbon/nitrogen/phosphorus allometric relations across species. *Plant Ecophysiology*, **2008**, 9-30		6
45	EFFECTS OF TISSUE VOLUME AND LOCATION ON THE MECHANICAL CONSEQUENCES OF DEHYDRATION OF PETIOLES. *American Journal of Botany*, **1991**, 78, 361-369	2.7	6
44	AN ASSESSMENT OF CHEMICAL FEATURES FOR THE CLASSIFICATION OF PLANT FOSSILS. *Taxon*, **1979**, 28, 505-516	0.8	6

43	Taxing debate for taxonomists. *Science*, **2001**, 292, 2249-50	33.3	6
42	Stem and leaf growth rates define the leaf size vs. number trade-off. *AoB PLANTS*, **2019**, 11, plz063	2.9	6
41	Polarity, planes of cell division, and the evolution of plant multicellularity. *Protoplasma*, **2019**, 256, 585-599	3.4	6
40	The evolution of the plant genome-to-morphology auxin circuit. *Theory in Biosciences*, **2016**, 135, 175-86	1.3	5
39	Size-dependent variation in plant form. *Current Biology*, **2017**, 27, R900-R905	6.3	5
38	The Leaf Economics Spectrum Constrains Phenotypic Plasticity Across a Light Gradient. *Frontiers in Plant Science*, **2020**, 11, 735	6.2	4
37	A predictive nondestructive model for the covariation of tree height, diameter, and stem volume scaling relationships. *Scientific Reports*, **2016**, 6, 31008	4.9	4
36	Julius von Sachs' forgotten 1897-article: sexuality and gender in plants vs. humans. *Plant Signaling and Behavior*, **2018**, 13, e1489671	2.5	4
35	Deducing plant function from organic form: challenges and pitfalls47-82		4
34	Embryo morphology and seedling evolution103-129		4
33	On the economy and safety of hollow non-septate peduncles. *American Journal of Botany*, **2003**, 90, 356-63	2.7	4
32	"Diminishing returns" for leaves of five age-groups of Phyllostachys edulis culms. *American Journal of Botany*, **2021**, 108, 1662-1672	2.7	4
31	Influence of the physical dimension of leaf size measures on the goodness of fit for Taylor's power law using 101 bamboo taxa. *Global Ecology and Conservation*, **2019**, 19, e00657	2.8	3
30	Morphological (and not anatomical or reproductive) features define early vascular plant phylogenetic relationships. *American Journal of Botany*, **2020**, 107, 477-488	2.7	3
29	Tree Biomechanics with Special Reference to Tropical Trees. *Tree Physiology*, **2016**, 413-435		3
28	From Goethe's plant archetype via Haeckel's biogenetic law to plant evo-devo 2016. *Theory in Biosciences*, **2017**, 136, 49-57	1.3	3
27	Modeling Forest Self-assembly Dynamics Using Allometric and Physical First Principles. *BioScience*, **2011**, 61, 663-676	5.7	3
26	Sizing up life and death. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 15589-90	11.5	3

25	Variation in plant carbon, nitrogen and phosphorus contents across the drylands of China. *Functional Ecology*,	5.6	3
24	Allocation Strategies for Seed Nitrogen and Phosphorus in an Alpine Meadow Along an Altitudinal Gradient on the Tibetan Plateau. *Frontiers in Plant Science*, **2020**, 11, 614644	6.2	3
23	Global synthesis for the scaling of soil microbial nitrogen to phosphorus in terrestrial ecosystems. *Environmental Research Letters*, **2021**, 16, 044034	6.2	3
22	The Challenges of Inferring Organic Function from Structure and Its Emulation in Biomechanics and Biomimetics. *Biomimetics*, **2021**, 6,	3.7	3
21	An elliptical blade is not a true ellipse, but a superellipseEvidence from two Michelia species. *Journal of Forestry Research*,1	2	3
20	Historical revisionism and the inheritance theories of Darwin and Weismann. *Die Naturwissenschaften*, **2015**, 102, 27	2	2
19	Early Tracheophyte Phylogeny **2018**, 69-92		2
18	A macroecological analysis of SERA derived forest heights and implications for forest volume remote sensing. *PLoS ONE*, **2012**, 7, e33927	3.7	2
17	Thinking Outside the HOX. *Biological Theory*, **2006**, 1, 128-129	1.7	2
16	A whole-plant economics spectrum including bark functional traits for 59 subtropical woody plant species. *Journal of Ecology*,	6	2
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