Jacob Weiner

List of Publications by Year
in descending order

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138 papers	14,224 citations	28274 55 h-index	20358 116 g-index
144 all docs	144 docs citations	144 times ranked	11381 citing authors

#	Article	IF	Citations
1	Pattern-Oriented Modeling of Agent-Based Complex Systems: Lessons from Ecology. Science, 2005, 310, 987-991.	12.6	1,685
2	Asymmetric competition in plant populations. Trends in Ecology and Evolution, 1990, 5, 360-364.	8.7	1,026
3	Mechanisms determining the degree of size asymmetry in competition among plants. Oecologia, 1998, 113, 447-455.	2.0	840
4	Allocation, plasticity and allometry in plants. Perspectives in Plant Ecology, Evolution and Systematics, 2004, 6, 207-215.	2.7	669
5	Size Variability and Competition in Plant Monocultures. Oikos, 1986, 47, 211.	2.7	615
6	Are invasive plant species better competitors than native plant species? - evidence from pair-wise experiments. Oikos, 2004, 105, 229-238.	2.7	489
7	The meaning and measurement of size hierarchies in plant populations. Oecologia, 1984, 61, 334-336.	2.0	463
8	Size Hierarchies in Experimental Populations of Annual Plants. Ecology, 1985, 66, 743-752.	3.2	392
9	The effect of nutrient availability on biomass allocation patterns in 27 species of herbaceous plants. Perspectives in Plant Ecology, Evolution and Systematics, 2000, 3, 115-127.	2.7	323
10	The allometry of reproduction within plant populations. Journal of Ecology, 2009, 97, 1220-1233.	4.0	245
11	DESCRIBING INEQUALITY IN PLANT SIZE OR FECUNDITY. Ecology, 2000, 81, 1139-1142.	3.2	228
12	Suppression of weeds by spring wheat Triticum aestivum increases with crop density and spatial uniformity. Journal of Applied Ecology, 2001, 38, 784-790.	4.0	227
13	The Effects of Density, Spatial Pattern, and Competitive Symmetry on Size Variation in Simulated Plant Populations. American Naturalist, 2001, 158, 438-450.	2.1	223
14	Neighbourhood Interference Amongst Pinus Rigida Individuals. Journal of Ecology, 1984, 72, 183.	4.0	217
15	Bootstrapping the Gini Coefficient of Inequality. Ecology, 1987, 68, 1548-1551.	3.2	216
16	How Competition for Light and Nutrients Affects Size Variability in Ipomoea Tricolor Populations. Ecology, 1986, 67, 1425-1427.	3.2	205
17	Competition and Allometry in Three Species of Annual Plants. Ecology, 1992, 73, 648-656.	3.2	201
18	A Neighborhood Model of Annual-Plant Interference. Ecology, 1982, 63, 1237-1241.	3.2	192

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19	Feeding the world: genetically modified crops versus agricultural biodiversity. Agronomy for Sustainable Development, 2013, 33, 651-662.	5.3	168
20	Growth and mortality of individual plants as a function of ?available area?. Oecologia, 1984, 62, 57-60.	2.0	155
21	Evolutionary Agroecology: the potential for cooperative, high density, weedâ€suppressing cereals. Evolutionary Applications, 2010, 3, 473-479.	3.1	149
22	How Important are Environmental Maternal Effects in Plants? A Study with Centaurea Maculosa. Journal of Ecology, 1997, 85, 133.	4.0	143
23	The nature of tree growth and the "age-related decline in forest productivity". Oikos, 2001, 94, 374-376.	2.7	141
24	Plant allelochemical interference or soil chemical ecology?. Perspectives in Plant Ecology, Evolution and Systematics, 2001, 4, 3-12.	2.7	140
25	Balance between facilitation and resource competition determines biomassâ€“density relationships in plant populations. Ecology Letters, 2008, 11, 1189-1197.	6.4	133
26	On the Practice of Ecology. Journal of Ecology, 1995, 83, 153.	4.0	130
27	Growth Variation in a Naturally Established Population of Pinus Sylvestris. Ecology, 1994, 75, 660-670.	3.2	128
28	Including competitive asymmetry in measures of local interference in plant populations. Oecologia, 1989, 80, 349-355.	2.0	127
29	On the Analysis of Size-Dependent Reproductive Output in Plants. Functional Ecology, 1992, 6, 308.	3.6	126
30	Size asymmetry of resource competition and the structure of plant communities. Journal of Ecology, 2016, 104, 899-910.	4.0	122
31	Constant Final Yield. Annual Review of Ecology, Evolution, and Systematics, 2010, 41, 173-192.	8.3	121
32	Root and shoot competition: a metaâ€analysis. Journal of Ecology, 2013, 101, 1298-1312.	4.0	119
33	Size-dependent reproductive output in agricultural weeds. Canadian Journal of Botany, 1991, 69, 442-446.	1.1	114
34	Competition and Growth Form in a Woodland Annual. Journal of Ecology, 1990, 78, 459.	4.0	110
35	Size dependency of sexual reproduction and of clonal growth in two perennial plants. Canadian Journal of Botany, 1995, 73, 1831-1837.	1.1	109
36	Symmetry of Below-Ground Competition between Kochia scoparia Individuals. Oikos, 1997, 79, 85.	2.7	104

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37	Crop Density, Sowing Pattern, and Nitrogen Fertilization Effects on Weed Suppression and Yield In Spring Wheat. Weed Science, 2008, 56, 97-102.	1.5	98
38	Does climate directly influence <scp>NPP</scp> globally?. Global Change Biology, 2016, 22, 12-24.	9.5	98
39	A Neighborhood View of Interactions among Individual Plants. , 2000, , 11-27.		96
40	Increased density and spatial uniformity increase weed suppression by spring wheat. Weed Research, 2005, 45, 316-321.	1.7	94
41	Size-asymmetric competition and size-asymmetric growth in a spatially explicit zone-of-influence model of plant competition. Ecological Research, 2006, 21, 707-712.	1.5	93
42	Effects of CO 2 elevation and irrigation regimes on leaf gas exchange, plant water relations, and water use efficiency of two tomato cultivars. Agricultural Water Management, 2016, 169, 26-33.	5.6	89
43	PLASTIC RELATIONSHIPS BETWEEN REPRODUCTIVE AND VEGETATIVE MASS IN SOLIDAGO ALTISSIMA. Evolution; International Journal of Organic Evolution, 1993, 47, 61-74.	2.3	84
44	Local Density Variation may Mimic Effects of Asymmetric Competition on Plant Size Variability. Ecology, 1989, 70, 1188-1191.	3.2	70
45	Competition and Allometry in Kochia scoparia. Annals of Botany, 1994, 73, 263-271.	2.9	70
46	Above- and below-ground competition between intercropped winter wheat Triticum aestivum and white clover Trifolium repens. Journal of Applied Ecology, 2006, 43, 237-245.	4.0	68
47	Competitive effect is a linear function of neighbour biomass in experimental populations of Kochia scoparia. Journal of Ecology, 2006, 94, 305-309.	4.0	68
48	Positive interactions can increase size inequality in plant populations. Journal of Ecology, 2009, 97, 1401-1407.	4.0	68
49	Influence of sowing density and spatial pattern of spring wheat (Triticum aestivum) on the suppression of different weed species. Weed Biology and Management, 2006, 6, 165-173.	1.4	67
50	Competitive dynamics in two- and three-component intercrops. Journal of Applied Ecology, 2007, 44, 545-551.	4.0	66
51	Dispersal and neighborhood effects in an annual plant competition model. Ecological Modelling, 1981, 13, 131-147.	2.5	65
52	Size symmetry of competition alters biomassâ€“density relationships. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 2191-2195.	2.6	65
53	Evolutionary agroecology: individual fitness and population yield in wheat (Triticum aestivum). Ecology, 2017, 98, 2261-2266.	3.2	65
54	Ecological intensification of rice production through rice-fish co-culture. Journal of Cleaner Production, 2019, 234, 1002-1012.	9.3	63

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55	Nitrogen:phosphorous supply ratio and allometry in five alpine plant species. Ecology and Evolution, 2016, 6, 8881-8892.	1.9	61
56	Growth, Death and Size Distribution Change in an Impatiens Pallida Population. Journal of Ecology, 1989, 77, 524.	4.0	59
57	How Important are Crop Spatial Pattern and Density for Weed Suppression by Spring Wheat?. Weed Science, 2012, 60, 501-509.	1.5	59
58	Using our agrobiodiversity: plant-based solutions to feed the world. Agronomy for Sustainable Development, 2015, 35, 1217-1235.	5.3	58
59	Applying plant ecological knowledge to increase agricultural sustainability. Journal of Ecology, 2017, 105, 865-870.	4.0	56
60	Plastic Relationships between Reproductive and Vegetative Mass in Solidago altissima. Evolution; International Journal of Organic Evolution, 1993, 47, 61.	2.3	54
61	Width of clover strips and wheat rows influence grain yield in winter wheat/white clover intercropping. Field Crops Research, 2006, 95, 280-290.	5.1	53
62	Ecology â€“ the science of agriculture in the 21st century. Journal of Agricultural Science, 2003, 141, 371-377.	1.3	52
63	Modelling individual growth and competition in plant populations: growth curves of Chenopodium album at two densities. Journal of Ecology, 2002, 90, 666-671.	4.0	51
64	Evolutionary agroecology: Trends in root architecture during wheat breeding. Evolutionary Applications, 2019, 12, 733-743.	3.1	50
65	Effects of competitive asymmetry on a local density model of plant interference. Journal of Theoretical Biology, 1991, 149, 165-179.	1.7	48
66	Effects of density and spatial pattern of winter wheat on suppression of different weed species. Weed Science, 2005, 53, 690-694.	1.5	48
67	The influence of Triticum aestivum density, sowing pattern and nitrogen fertilization on leaf area index and its spatial variation. Basic and Applied Ecology, 2007, 8, 252-257.	2.7	48
68	Effects of density and sowing pattern on weed suppression and grain yield in three varieties of maize under high weed pressure. Weed Research, 2014, 54, 467-474.	1.7	47
69	Effects of positive interactions, size symmetry of competition and abiotic stress on self-thinning in simulated plant populations. Annals of Botany, 2010, 106, 647-652.	2.9	44
70	Allometric analysis of the effects of density on reproductive allocation and Harvest Index in 6 varieties of wheat (Triticum). Field Crops Research, 2013, 144, 162-166.	5.1	44
71	Growth trajectories and interspecific competitive dynamics in wheat/maize and barley/maize intercropping. Plant and Soil, 2015, 397, 227-238.	3.7	42
72	Looking in the Wrong Direction for Higher-Yielding Crop Genotypes. Trends in Plant Science, 2019, 24, 927-933.	8.8	41

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73	Mechanical control of clover improves nitrogen supply and growth of wheat in winter wheat/white clover intercropping. European Journal of Agronomy, 2006, 24, 149-155.	4.1	38
74	Modeling of Discontinuous Relationships in Biology with Censored Regression. American Naturalist, 1994, 143, 494-507.	2.1	36
75	Increasing plant diversity with border crops reduces insecticide use and increases crop yield in urban agriculture. ELife, 2018, 7, .	6.0	35
76	A coupled map lattice model of the growth of plant monocultures. Ecological Modelling, 1996, 84, 81-90.	2.5	34
77	Modeling the growth of individuals in crowded plant populations. Journal of Plant Ecology, 2008, 1, 111-116.	2.3	34
78	Is reproductive allocation in Senecio vulgaris plastic?. Botany, 2009, 87, 475-481.	1.0	34
79	Experience of inundation or drought alters the responses of plants to subsequent water conditions. Journal of Ecology, 2017, 105, 176-187.	4.0	33
80	Reproductive allometry in Pedicularis species changes with elevation. Journal of Ecology, 2012, 100, 452-458.	4.0	32
81	SIZE VARIABILITY AND SELFâ€THINNING IN WILDâ€RICE (ZIZANIA AQUATICA). American Journal of Botany, 1988, 75, 445-448.	1.7	31
82	It's About Time: A Critique of Macroecological Inferences Concerning Plant Competition. Trends in Ecology and Evolution, 2017, 32, 86-87.	8.7	31
83	Initial density affects biomassâ€“density and allometric relationships in selfâ€thinning populations of <scp>F</scp>agopyrum esculentum. Journal of Ecology, 2013, 101, 475-483.	4.0	29
84	Following the growth of individuals in crowded plant populations. Trends in Ecology and Evolution, 1995, 10, 389-390.	8.7	28
85	Arbuscular mycorrhizal fungi alter plant allometry and biomassâ€“density relationships. Annals of Botany, 2011, 107, 407-413.	2.9	28
86	Effects of nitrogen and water addition on trace element stoichiometry in five grassland species. Journal of Plant Research, 2017, 130, 659-668.	2.4	28
87	Reducing shade avoidance responses in a cereal crop. AoB PLANTS, 2017, 9, plx039.	2.3	27
88	Larger Triticum aestivum plants do not preempt nutrient-rich patches in a glasshouse experiment. Plant Ecology, 2003, 169, 85-92.	1.6	26
89	Quantifying size-asymmetric growth among individual beech trees. Canadian Journal of Forest Research, 2006, 36, 418-425.	1.7	26
90	Shoot competition, root competition and reproductive allocation in <scp>C</scp>henopodium acuminatum. Journal of Ecology, 2014, 102, 1688-1696.	4.0	26

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91	Plant Interactions Alter the Predictions of Metabolic Scaling Theory. PLoS ONE, 2013, 8, e57612.	2.5	26
92	Effect of local competition on resprouting ofArbutus unedoafter clipping. Journal of Vegetation Science, 1994, 5, 145-152.	2.2	25
93	Effects of Intra- and Interspecific Plant Density on Rhizosphere Bacterial Communities. Frontiers in Microbiology, 2020, 11, 1045.	3.5	25
94	Growth and Variability in Crowded and Uncrowded Populations of Dwarf Marigolds (Tagetes patula). Annals of Botany, 1990, 65, 513-524.	2.9	24
95	Competition, Herbivory and Plant Size Variability: Hypochaeris radicata Grazed by Snails (Helix) Tj ETQq1 1 0.784314 rgBT /Overlock 10	3.6	24
96	The Effects of Plant Density, Species Proportion and Potassium-Phosphorus Fertilization on Interference Between Trifolium Incarnatum and Lolium Multiflorum with Limited Nitrogen Supply. Journal of Ecology, 1980, 68, 969.	4.0	22
97	Yield components, reproductive allometry and the tradeoff between grain yield and yield stability in dryland spring wheat. Field Crops Research, 2020, 257, 107930.	5.1	22
98	Fine root responses to temporal nutrient heterogeneity and competition in seedlings of two tree species with different rooting strategies. Ecology and Evolution, 2018, 8, 3367-3375.	1.9	21
99	Root proliferation in response to neighbouring roots in wheat (Triticum aestivum). Basic and Applied Ecology, 2019, 39, 10-14.	2.7	20
100	Size Variability and Self-Thinning in Wild-Rice (Zizania aquatica). American Journal of Botany, 1988, 75, 445.	1.7	17
101	Latitudinal pattern of flowering synchrony in an invasive wind-pollinated plant. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20181072.	2.6	16
102	Size structure of populations within populations: leaf number and size in crowded and uncrowded Impatiens pallida individuals. Oecologia, 1991, 85, 327-331.	2.0	15
103	Plant Size Variation and Vertebrate Herbivory: Winter Wheat Grazed by Rabbits. Journal of Applied Ecology, 1991, 28, 154.	4.0	15
104	The allometry of reproductive allocation in a Chloris virgata population in response to simulated atmospheric nitrogen deposition. Basic and Applied Ecology, 2016, 17, 388-395.	2.7	15
105	Modeling the growth of individuals in plant populations: local density variation in a strand population of Xanthium strumarium (Asteraceae). American Journal of Botany, 1998, 85, 1638-1645.	1.7	14
106	Variation in Local Density Results in a Positive Correlation between Plant Neighbor Sizes. American Naturalist, 2009, 173, 705-708.	2.1	13
107	Contrasts between wholeâ€plant and local nutrient levels determine root growth and death in Ailanthus altissima (Simaroubaceae). American Journal of Botany, 2014, 101, 812-819.	1.7	13
108	Describing the spatial pattern of crop plants with special reference to cropâ€“weed competition studies. Field Crops Research, 2006, 96, 207-215.	5.1	12

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109	Copper tolerant Elsholtzia splendens facilitates Commelina communis on a copper mine spoil. Plant and Soil, 2015, 397, 201-211.	3.7	12
110	Effect of reductive soil disinfestation on the chemical and microbial characteristics of rhizosphere soils associated with Salvia miltiorrhiza production in three cropping systems. Applied Soil Ecology, 2021, 160, 103865.	4.3	12
111	Modelling the effect of size-asymmetric competition on size inequality: Simple models with two plants. Ecological Modelling, 2017, 343, 101-108.	2.5	11
112	The effects of salt stress and arbuscular mycorrhiza on plant neighbour effects and self-thinning. Basic and Applied Ecology, 2012, 13, 673-680.	2.7	10
113	Species traits and shoot-root biomass allocation in 20 dry-grassland species. Journal of Plant Ecology, 0, , rtw143.	2.3	10
114	Size-asymmetric root competition in deep, nutrient-poor soil. Journal of Plant Ecology, 2019, 12, 78-88.	2.3	10
115	Multispecies co-culture promotes ecological intensification of vegetable production. Journal of Cleaner Production, 2020, 257, 120851.	9.3	10
116	Variation in the degree of specialization can maintain local diversity in model communities. Theoretical Ecology, 2012, 5, 161-166.	1.0	9
117	Sizeâ€symmetric competition in a shadeâ€tolerant invasive plant. Journal of Systematics and Evolution, 2013, 51, 318-325.	3.1	9
118	Problems in Predicting the Ecological Effects of Elevated CO2. , 1996, , 431-441.		9
119	Convergence of community composition during secondary succession on Zokor rodent mounds on the Tibetan Plateau. Journal of Plant Ecology, 2018, 11, 453-464.	2.3	8
120	Crop spatial uniformity, yield and weed suppression. Advances in Agronomy, 2020, 161, 117-178.	5.2	8
121	Differences in Weed Suppression between Two Modern and Two Old Wheat Cultivars at Different Sowing Densities. Agronomy, 2021, 11, 253.	3.0	8
122	Allometry and Yield Stability of Cereals. Frontiers in Plant Science, 2021, 12, 681490.	3.6	8
123	Effects of Rosmarinus officinalis neighbors on resprouting of Erica multiflora individuals. Plant Ecology, 1998, 136, 167-173.	1.6	7
124	Yieldâ€“density relationships of above- and belowground organs in Allium cepa var. aggregatum populations. Plant Ecology, 2016, 217, 913-922.	1.6	7
125	The need for alternative plant species interaction models. Journal of Plant Ecology, 2021, 14, 771-780.	2.3	7
126	Human total fertility rate affected by ambient temperatures in both the present and previous generations. International Journal of Biometeorology, 2021, 65, 1837-1848.	3.0	7

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127	On Self-Criticism in Ecology. Oikos, 1999, 85, 373.	2.7	6
128	The Effects of Soil Drying on the Growth of a Dominant Peatland Species, Carex lasiocarpa. Wetlands, 2017, 37, 1135-1143.	1.5	6
129	Increasing local biodiversity in urban environments: Community development in semi-natural species-rich forb vegetation. Landscape and Urban Planning, 2019, 184, 23-31.	7.5	6
130	Effects of distance to crop rows and to conspecific neighbours on the size of Brassica napus and Veronica persica weeds. Basic and Applied Ecology, 2004, 5, 35-41.	2.7	5
131	Individual variability and mortality required for constant final yield in simulated plant populations. Theoretical Ecology, 2014, 7, 263-271.	1.0	4
132	Salt tolerance and stress level affect plant biomassâ€“density relationships and neighbor effects. Acta Oecologica, 2014, 58, 1-4.	1.1	4
133	Spatial analysis of root hemiparasitic shrubs and their hosts: a search for spatial signatures of above- and below-ground interactions. Plant Ecology, 2017, 218, 185-196.	1.6	4
134	The interaction between N and P addition on grassland soil acid buffering capacity is regulated by precipitation. Soil Science and Plant Nutrition, 2021, 67, 222-232.	1.9	4
135	Does weed suppression by high crop density depend on crop spatial pattern and soil water availability?. Basic and Applied Ecology, 2022, 61, 20-29.	2.7	4
136	Is colourful self-sustaining forb vegetation mere fantasy?. Urban Forestry and Urban Greening, 2016, 15, 75-79.	5.3	3
137	Biomass Allocation Responses to Root Interactions in Wheat Cultivars Support Predictions of Crop Evolutionary Ecology Theory. Frontiers in Plant Science, 2022, 13, 858636.	3.6	3
138	Case study: The effect of wheat density and cultivar on growth and reproduction of burr medic () Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	1.4	2