

Jacob Weiner

List of Publications by Citations

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140
papers

11,151
citations

50
h-index

104
g-index

144
ext. papers

12,359
ext. citations

4.6
avg, IF

6.55
L-index

#	Paper	IF	Citations
140	Pattern-oriented modeling of agent-based complex systems: lessons from ecology. <i>Science</i> , 2005 , 310, 987-91	33.3	1406
139	Asymmetric competition in plant populations. <i>Trends in Ecology and Evolution</i> , 1990 , 5, 360-4	10.9	858
138	Mechanisms determining the degree of size asymmetry in competition among plants. <i>Oecologia</i> , 1998 , 113, 447-455	2.9	713
137	Allocation, plasticity and allometry in plants. <i>Perspectives in Plant Ecology, Evolution and Systematics</i> , 2004 , 6, 207-215	3	519
136	Size Variability and Competition in Plant Monocultures. <i>Oikos</i> , 1986 , 47, 211	4	431
135	Are invasive plant species better competitors than native plant species? Evidence from pair-wise experiments. <i>Oikos</i> , 2004 , 105, 229-238	4	410
134	The meaning and measurement of size hierarchies in plant populations. <i>Oecologia</i> , 1984 , 61, 334-336	2.9	385
133	Size Hierarchies in Experimental Populations of Annual Plants. <i>Ecology</i> , 1985 , 66, 743-752	4.6	290
132	The effect of nutrient availability on biomass allocation patterns in 27 species of herbaceous plants. <i>Perspectives in Plant Ecology, Evolution and Systematics</i> , 2000 , 3, 115-127	3	266
131	The allometry of reproduction within plant populations. <i>Journal of Ecology</i> , 2009 , 97, 1220-1233	6	207
130	The effects of density, spatial pattern, and competitive symmetry on size variation in simulated plant populations. <i>American Naturalist</i> , 2001 , 158, 438-50	3.7	194
129	DESCRIBING INEQUALITY IN PLANT SIZE OR FECUNDITY. <i>Ecology</i> , 2000 , 81, 1139-1142	4.6	181
128	Suppression of weeds by spring wheat <i>Triticum aestivum</i> increases with crop density and spatial uniformity. <i>Journal of Applied Ecology</i> , 2001 , 38, 784-790	5.8	179
127	Bootstrapping the Gini Coefficient of Inequality. <i>Ecology</i> , 1987 , 68, 1548-1551	4.6	162
126	Competition and Allometry in Three Species of Annual Plants. <i>Ecology</i> , 1992 , 73, 648-656	4.6	160
125	Neighbourhood Interference Amongst <i>Pinus Rigida</i> Individuals. <i>Journal of Ecology</i> , 1984 , 72, 183	6	159
124	A Neighborhood Model of Annual-Plant Interference. <i>Ecology</i> , 1982 , 63, 1237-1241	4.6	145

123	How Competition for Light and Nutrients Affects Size Variability in Ipomoea Tricolor Populations. <i>Ecology</i> , 1986 , 67, 1425-1427	4.6	144
122	Feeding the world: genetically modified crops versus agricultural biodiversity. <i>Agronomy for Sustainable Development</i> , 2013 , 33, 651-662	6.8	132
121	Growth and mortality of individual plants as a function of "available area". <i>Oecologia</i> , 1984 , 62, 57-60	2.9	128
120	Evolutionary Agroecology: the potential for cooperative, high density, weed-suppressing cereals. <i>Evolutionary Applications</i> , 2010 , 3, 473-9	4.8	121
119	The nature of tree growth and the age-related decline in forest productivity. <i>Oikos</i> , 2001 , 94, 374-376	4	121
118	Balance between facilitation and resource competition determines biomass-density relationships in plant populations. <i>Ecology Letters</i> , 2008 , 11, 1189-1197	10	114
117	How Important are Environmental Maternal Effects in Plants? A Study with <i>Centaurea Maculosa</i> . <i>Journal of Ecology</i> , 1997 , 85, 133	6	107
116	Plant allelochemical interference or soil chemical ecology?. <i>Perspectives in Plant Ecology, Evolution and Systematics</i> , 2001 , 4, 3-12	3	106
115	Growth Variation in a Naturally Established Population of <i>Pinus Sylvestris</i> . <i>Ecology</i> , 1994 , 75, 660-670	4.6	104
114	Size-dependent reproductive output in agricultural weeds. <i>Canadian Journal of Botany</i> , 1991 , 69, 442-446		101
113	Including competitive asymmetry in measures of local interference in plant populations. <i>Oecologia</i> , 1989 , 80, 349-355	2.9	100
112	Root and shoot competition: a meta-analysis. <i>Journal of Ecology</i> , 2013 , 101, 1298-1312	6	97
111	On the Analysis of Size-Dependent Reproductive Output in Plants. <i>Functional Ecology</i> , 1992 , 6, 308	5.6	94
110	Size dependency of sexual reproduction and of clonal growth in two perennial plants. <i>Canadian Journal of Botany</i> , 1995 , 73, 1831-1837		92
109	On the Practice of Ecology. <i>Journal of Ecology</i> , 1995 , 83, 153	6	91
108	Size asymmetry of resource competition and the structure of plant communities. <i>Journal of Ecology</i> , 2016 , 104, 899-910	6	88
107	Constant Final Yield. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2010 , 41, 173-192	13.5	87
106	Symmetry of Below-Ground Competition between <i>Kochia scoparia</i> Individuals. <i>Oikos</i> , 1997 , 79, 85	4	84

105	Increased density and spatial uniformity increase weed suppression by spring wheat. <i>Weed Research</i> , 2005 , 45, 316-321	1.9	82
104	A Neighborhood View of Interactions among Individual Plants 2000 , 11-27		76
103	Size-asymmetric competition and size-asymmetric growth in a spatially explicit zone-of-influence model of plant competition. <i>Ecological Research</i> , 2006 , 21, 707-712	1.9	75
102	Competition and Growth Form in a Woodland Annual. <i>Journal of Ecology</i> , 1990 , 78, 459	6	75
101	Crop Density, Sowing Pattern, and Nitrogen Fertilization Effects on Weed Suppression and Yield In Spring Wheat. <i>Weed Science</i> , 2008 , 56, 97-102	2	71
100	Does climate directly influence NPP globally?. <i>Global Change Biology</i> , 2016 , 22, 12-24	11.4	66
99	Size symmetry of competition alters biomass-density relationships. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2002 , 269, 2191-5	4.4	60
98	Competition and Allometry in <i>Kochia scoparia</i> . <i>Annals of Botany</i> , 1994 , 73, 263-271	4.1	60
97	PLASTIC RELATIONSHIPS BETWEEN REPRODUCTIVE AND VEGETATIVE MASS IN SOLIDAGO ALTISSIMA. <i>Evolution; International Journal of Organic Evolution</i> , 1993 , 47, 61-74	3.8	59
96	Dispersal and neighborhood effects in an annual plant competition model. <i>Ecological Modelling</i> , 1981 , 13, 131-147	3	58
95	Positive interactions can increase size inequality in plant populations. <i>Journal of Ecology</i> , 2009 , 97, 1401-1407	4.07	57
94	Above- and below-ground competition between intercropped winter wheat <i>Triticum aestivum</i> and white clover <i>Trifolium repens</i> . <i>Journal of Applied Ecology</i> , 2006 , 43, 237-245	5.8	56
93	Influence of sowing density and spatial pattern of spring wheat (<i>Triticum aestivum</i>) on the suppression of different weed species. <i>Weed Biology and Management</i> , 2006 , 6, 165-173	1.4	55
92	Local Density Variation may Mimic Effects of Asymmetric Competition on Plant Size Variability. <i>Ecology</i> , 1989 , 70, 1188-1191	4.6	53
91	Effects of CO ₂ elevation and irrigation regimes on leaf gas exchange, plant water relations, and water use efficiency of two tomato cultivars. <i>Agricultural Water Management</i> , 2016 , 169, 26-33	5.9	50
90	Plastic Relationships between Reproductive and Vegetative Mass in <i>Solidago altissima</i> . <i>Evolution; International Journal of Organic Evolution</i> , 1993 , 47, 61	3.8	50
89	Competitive dynamics in two- and three-component intercrops. <i>Journal of Applied Ecology</i> , 2007 , 44, 545-551	5.8	49
88	Using our agrobiodiversity: plant-based solutions to feed the world. <i>Agronomy for Sustainable Development</i> , 2015 , 35, 1217-1235	6.8	45

87	Ecology [the science of agriculture in the 21st century. <i>Journal of Agricultural Science</i> , 2003 , 141, 371-377		45
86	Competitive effect is a linear function of neighbour biomass in experimental populations of <i>Kochia scoparia</i> . <i>Journal of Ecology</i> , 2006 , 94, 305-309	6	44
85	Evolutionary agroecology: individual fitness and population yield in wheat (<i>Triticum aestivum</i>). <i>Ecology</i> , 2017 , 98, 2261-2266	4.6	42
84	How Important are Crop Spatial Pattern and Density for Weed Suppression by Spring Wheat?. <i>Weed Science</i> , 2012 , 60, 501-509	2	40
83	Effects of density and spatial pattern of winter wheat on suppression of different weed species. <i>Weed Science</i> , 2005 , 53, 690-694	2	40
82	Modelling individual growth and competition in plant populations: growth curves of <i>Chenopodium album</i> at two densities. <i>Journal of Ecology</i> , 2002 , 90, 666-671	6	40
81	Effects of competitive asymmetry on a local density model of plant interference. <i>Journal of Theoretical Biology</i> , 1991 , 149, 165-79	2.3	40
80	Applying plant ecological knowledge to increase agricultural sustainability. <i>Journal of Ecology</i> , 2017 , 105, 865-870	6	39
79	Width of clover strips and wheat rows influence grain yield in winter wheat/white clover intercropping. <i>Field Crops Research</i> , 2006 , 95, 280-290	5.5	38
78	Effects of positive interactions, size symmetry of competition and abiotic stress on self-thinning in simulated plant populations. <i>Annals of Botany</i> , 2010 , 106, 647-52	4.1	37
77	Growth, Death and Size Distribution Change in an <i>Impatiens Pallida</i> Population. <i>Journal of Ecology</i> , 1989 , 77, 524	6	37
76	Nitrogen:phosphorous supply ratio and allometry in five alpine plant species. <i>Ecology and Evolution</i> , 2016 , 6, 8881-8892	2.8	37
75	Effects of density and sowing pattern on weed suppression and grain yield in three varieties of maize under high weed pressure. <i>Weed Research</i> , 2014 , 54, 467-474	1.9	35
74	Modeling of Discontinuous Relationships in Biology with Censored Regression. <i>American Naturalist</i> , 1994 , 143, 494-507	3.7	35
73	A coupled map lattice model of the growth of plant monocultures. <i>Ecological Modelling</i> , 1996 , 84, 81-90	3	34
72	The influence of <i>Triticum aestivum</i> density, sowing pattern and nitrogen fertilization on leaf area index and its spatial variation. <i>Basic and Applied Ecology</i> , 2007 , 8, 252-257	3.2	33
71	Allometric analysis of the effects of density on reproductive allocation and Harvest Index in 6 varieties of wheat (<i>Triticum</i>). <i>Field Crops Research</i> , 2013 , 144, 162-166	5.5	31
70	Reproductive allometry in <i>Pedicularis</i> species changes with elevation. <i>Journal of Ecology</i> , 2012 , 100, 452-458	29	

69	Mechanical control of clover improves nitrogen supply and growth of wheat in winter wheat/white clover intercropping. <i>European Journal of Agronomy</i> , 2006 , 24, 149-155	5	29
68	Modeling the growth of individuals in crowded plant populations. <i>Journal of Plant Ecology</i> , 2008 , 1, 111-116	1.16	28
67	Is reproductive allocation in <i>Senecio vulgaris</i> plastic?. <i>Botany</i> , 2009 , 87, 475-481	1.3	27
66	Increasing plant diversity with border crops reduces insecticide use and increases crop yield in urban agriculture. <i>ELife</i> , 2018 , 7,	8.9	27
65	Growth trajectories and interspecific competitive dynamics in wheat/maize and barley/maize intercropping. <i>Plant and Soil</i> , 2015 , 397, 227-238	4.2	26
64	Ecological intensification of rice production through rice-fish co-culture. <i>Journal of Cleaner Production</i> , 2019 , 234, 1002-1012	10.3	26
63	Following the growth of individuals in crowded plant populations. <i>Trends in Ecology and Evolution</i> , 1995 , 10, 389-90	10.9	26
62	It's About Time: A Critique of Macroecological Inferences Concerning Plant Competition. <i>Trends in Ecology and Evolution</i> , 2017 , 32, 86-87	10.9	24
61	Experience of inundation or drought alters the responses of plants to subsequent water conditions. <i>Journal of Ecology</i> , 2017 , 105, 176-187	6	24
60	Arbuscular mycorrhizal fungi alter plant allometry and biomass-density relationships. <i>Annals of Botany</i> , 2011 , 107, 407-13	4.1	24
59	Growth and Variability in Crowded and Uncrowded Populations of Dwarf Marigolds (<i>Tagetes patula</i>). <i>Annals of Botany</i> , 1990 , 65, 513-524	4.1	24
58	Initial density affects biomass density and allometric relationships in self-thinning populations of <i>Fagopyrum esculentum</i> . <i>Journal of Ecology</i> , 2013 , 101, 475-483	6	23
57	Effect of local competition on resprouting of <i>Arbutus unedo</i> after clipping. <i>Journal of Vegetation Science</i> , 1994 , 5, 145-152	3.1	23
56	Evolutionary agroecology: Trends in root architecture during wheat breeding. <i>Evolutionary Applications</i> , 2019 , 12, 733-743	4.8	23
55	Looking in the Wrong Direction for Higher-Yielding Crop Genotypes. <i>Trends in Plant Science</i> , 2019 , 24, 927-933	13.1	22
54	Plant interactions alter the predictions of metabolic scaling theory. <i>PLoS ONE</i> , 2013 , 8, e57612	3.7	22
53	Shoot competition, root competition and reproductive allocation in <i>Chenopodium acuminatum</i> . <i>Journal of Ecology</i> , 2014 , 102, 1688-1696	6	20
52	Quantifying size-asymmetric growth among individual beech trees. <i>Canadian Journal of Forest Research</i> , 2006 , 36, 418-425	1.9	20

51	Larger <i>Triticum aestivum</i> plants do not preempt nutrient-rich patches in a glasshouse experiment. <i>Plant Ecology</i> , 2003 , 169, 85-92	1.7	18
50	Effects of nitrogen and water addition on trace element stoichiometry in five grassland species. <i>Journal of Plant Research</i> , 2017 , 130, 659-668	2.6	17
49	Competition, Herbivory and Plant Size Variability: <i>Hypochaeris radicata</i> Grazed by Snails (<i>Helix aspersa</i>). <i>Functional Ecology</i> , 1993 , 7, 47	5.6	17
48	SIZE VARIABILITY AND SELF-THINNING IN WILD-RICE (<i>ZIZANIA AQUATICA</i>). <i>American Journal of Botany</i> , 1988 , 75, 445-448	2.7	17
47	SIZE VARIABILITY AND SELF-THINNING IN WILD-RICE (<i>ZIZANIA AQUATICA</i>). <i>American Journal of Botany</i> , 1988 , 75, 445	2.7	16
46	Size structure of populations within populations: leaf number and size in crowded and uncrowded <i>Impatiens pallida</i> individuals. <i>Oecologia</i> , 1991 , 85, 327-331	2.9	15
45	The Effects of Plant Density, Species Proportion and Potassium-Phosphorus Fertilization on Interference Between <i>Trifolium incarnatum</i> and <i>Lolium multiflorum</i> with Limited Nitrogen Supply. <i>Journal of Ecology</i> , 1980 , 68, 969	6	15
44	Fine root responses to temporal nutrient heterogeneity and competition in seedlings of two tree species with different rooting strategies. <i>Ecology and Evolution</i> , 2018 , 8, 3367-3375	2.8	14
43	Reducing shade avoidance responses in a cereal crop. <i>AoB PLANTS</i> , 2017 , 9, plx039	2.9	14
42	Modeling the growth of individuals in plant populations: local density variation in a strand population of <i>Xanthium strumarium</i> (Asteraceae). <i>American Journal of Botany</i> , 1998 , 85, 1638-1645	2.7	14
41	Describing the spatial pattern of crop plants with special reference to crop-weed competition studies. <i>Field Crops Research</i> , 2006 , 96, 207-215	5.5	12
40	Effects of Intra- and Interspecific Plant Density on Rhizosphere Bacterial Communities. <i>Frontiers in Microbiology</i> , 2020 , 11, 1045	5.7	11
39	Variation in local density results in a positive correlation between plant neighbor sizes. <i>American Naturalist</i> , 2009 , 173, 705-8	3.7	11
38	The allometry of reproductive allocation in a <i>Chloris virgata</i> population in response to simulated atmospheric nitrogen deposition. <i>Basic and Applied Ecology</i> , 2016 , 17, 388-395	3.2	10
37	Latitudinal pattern of flowering synchrony in an invasive wind-pollinated plant. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018 , 285,	4.4	10
36	Yield components, reproductive allometry and the tradeoff between grain yield and yield stability in dryland spring wheat. <i>Field Crops Research</i> , 2020 , 257, 107930	5.5	10
35	Modelling the effect of size-asymmetric competition on size inequality: Simple models with two plants. <i>Ecological Modelling</i> , 2017 , 343, 101-108	3	9
34	Multispecies co-culture promotes ecological intensification of vegetable production. <i>Journal of Cleaner Production</i> , 2020 , 257, 120851	10.3	8

33	Contrasts between whole-plant and local nutrient levels determine root growth and death in <i>Ailanthus altissima</i> (Simaroubaceae). <i>American Journal of Botany</i> , 2014 , 101, 812-9	2.7	8
32	Plant Size Variation and Vertebrate Herbivory: Winter Wheat Grazed by Rabbits. <i>Journal of Applied Ecology</i> , 1991 , 28, 154	5.8	8
31	Root proliferation in response to neighbouring roots in wheat (<i>Triticum aestivum</i>). <i>Basic and Applied Ecology</i> , 2019 , 39, 10-14	3.2	7
30	The effects of salt stress and arbuscular mycorrhiza on plant neighbour effects and self-thinning. <i>Basic and Applied Ecology</i> , 2012 , 13, 673-680	3.2	7
29	Variation in the degree of specialization can maintain local diversity in model communities. <i>Theoretical Ecology</i> , 2012 , 5, 161-166	1.6	7
28	Size-symmetric competition in a shade-tolerant invasive plant. <i>Journal of Systematics and Evolution</i> , 2013 , 51, 318-325	2.9	7
27	Effects of <i>Rosmarinus officinalis</i> neighbors on resprouting of <i>Erica multiflora</i> individuals. <i>Plant Ecology</i> , 1998 , 136, 167-173	1.7	7
26	Convergence of community composition during secondary succession on Zokor rodent mounds on the Tibetan Plateau. <i>Journal of Plant Ecology</i> , 2018 , 11, 453-464	1.7	6
25	CropWeed Competition 2015 , 1-9		6
24	Problems in Predicting the Ecological Effects of Elevated CO2 1996 , 431-441		6
23	Species traits and shoot-root biomass allocation in 20 dry-grassland species. <i>Journal of Plant Ecology</i> , 2016 , rtw143	1.7	6
22	Size-asymmetric root competition in deep, nutrient-poor soil. <i>Journal of Plant Ecology</i> , 2019 , 12, 78-88	1.7	6
21	YieldDensity relationships of above- and belowground organs in <i>Allium cepa</i> var. <i>aggregatum</i> populations. <i>Plant Ecology</i> , 2016 , 217, 913-922	1.7	5
20	Copper tolerant <i>Elsholtzia splendens</i> facilitates <i>Commelina communis</i> on a copper mine spoil. <i>Plant and Soil</i> , 2015 , 397, 201-211	4.2	5
19	Effect of reductive soil disinfestation on the chemical and microbial characteristics of rhizosphere soils associated with <i>Salvia miltiorrhiza</i> production in three cropping systems. <i>Applied Soil Ecology</i> , 2021 , 160, 103865	5	5
18	The Effects of Soil Drying on the Growth of a Dominant Peatland Species, <i>Carex lasiocarpa</i> . <i>Wetlands</i> , 2017 , 37, 1135-1143	1.7	4
17	Effects of distance to crop rows and to conspecific neighbours on the size of <i>Brassica napus</i> and <i>Veronica persica</i> weeds. <i>Basic and Applied Ecology</i> , 2004 , 5, 35-41	3.2	4
16	Crop spatial uniformity, yield and weed suppression. <i>Advances in Agronomy</i> , 2020 , 161, 117-178	7.7	3

15	Salt tolerance and stress level affect plant biomass-density relationships and neighbor effects. <i>Acta Oecologica</i> , 2014 , 58, 1-4	1.7	3
14	Crop-Weed Competition 2007 ,		3
13	Differences in Weed Suppression between Two Modern and Two Old Wheat Cultivars at Different Sowing Densities. <i>Agronomy</i> , 2021 , 11, 253	3.6	3
12	Is colourful self-sustaining forb vegetation mere fantasy?. <i>Urban Forestry and Urban Greening</i> , 2016 , 15, 75-79	5.4	2
11	Individual variability and mortality required for constant final yield in simulated plant populations. <i>Theoretical Ecology</i> , 2014 , 7, 263-271	1.6	2
10	On Self-Criticism in Ecology. <i>Oikos</i> , 1999 , 85, 373	4	2
9	Spatial analysis of root hemiparasitic shrubs and their hosts: a search for spatial signatures of above- and below-ground interactions. <i>Plant Ecology</i> , 2017 , 218, 185-196	1.7	1
8	The need for alternative plant species interaction models. <i>Journal of Plant Ecology</i> , 2021 , 14, 771-780	1.7	1
7	The interaction between N and P addition on grassland soil acid buffering capacity is regulated by precipitation. <i>Soil Science and Plant Nutrition</i> , 2021 , 67, 222-232	1.6	1
6	Human total fertility rate affected by ambient temperatures in both the present and previous generations. <i>International Journal of Biometeorology</i> , 2021 , 65, 1837-1848	3.7	1
5	Increasing local biodiversity in urban environments: Community development in semi-natural species-rich forb vegetation. <i>Landscape and Urban Planning</i> , 2019 , 184, 23-31	7.7	0
4	Allometry and Yield Stability of Cereals. <i>Frontiers in Plant Science</i> , 2021 , 12, 681490	6.2	0
3	Biomass Allocation Responses to Root Interactions in Wheat Cultivars Support Predictions of Crop Evolutionary Ecology Theory.. <i>Frontiers in Plant Science</i> , 2022 , 13, 858636	6.2	0
2	Does weed suppression by high crop density depend on crop spatial pattern and soil water availability?. <i>Basic and Applied Ecology</i> , 2022 , 61, 20-29	3.2	0
1	Case study: The effect of wheat density and cultivar on growth and reproduction of burr medic (<i>Medicago polymorpha</i> L.), wheat growth, and yield. <i>Weed Biology and Management</i> , 2022 , 22, 3-12	1.4	0