

Richard Karban

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147
papers

9,476
citations

48
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95
g-index

154
ext. papers

10,453
ext. citations

5.5
avg, IF

6.64
L-index

#	Paper	IF	Citations
147	Induced Responses to Herbivory 1997 ,		1514
146	Explaining evolution of plant communication by airborne signals. <i>Trends in Ecology and Evolution</i> , 2010 , 25, 137-44	10.9	391
145	Communication between plants: induced resistance in wild tobacco plants following clipping of neighboring sagebrush. <i>Oecologia</i> , 2000 , 125, 66-71	2.9	331
144	The ecology and evolution of induced resistance against herbivores. <i>Functional Ecology</i> , 2011 , 25, 339-347	7.6	289
143	Exogenous jasmonates simulate insect wounding in tomato plants (<i>Lycopersicon esculentum</i>) in the laboratory and field. <i>Journal of Chemical Ecology</i> , 1996 , 22, 1767-81	2.7	282
142	Herbivore Offense. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2002 , 33, 641-664		253
141	The ecosystem and evolutionary contexts of allelopathy. <i>Trends in Ecology and Evolution</i> , 2011 , 26, 655-662	10.9	234
140	Damage-induced resistance in sagebrush: volatiles are key to intra- and interplant communication. <i>Ecology</i> , 2006 , 87, 922-30	4.6	233
139	Breakdown of an ant-plant mutualism follows the loss of large herbivores from an African savanna. <i>Science</i> , 2008 , 319, 192-5	33.3	211
138	Plant behaviour and communication. <i>Ecology Letters</i> , 2008 , 11, 727-39	10	202
137	Jasmonate-mediated induced plant resistance affects a community of herbivores. <i>Ecological Entomology</i> , 2001 , 26, 312-324	2.1	202
136	Induced plant responses and information content about risk of herbivory. <i>Trends in Ecology and Evolution</i> , 1999 , 14, 443-447	10.9	185
135	Volatile communication between plants that affects herbivory: a meta-analysis. <i>Ecology Letters</i> , 2014 , 17, 44-52	10	182
134	Cross-talk between jasmonate and salicylate plant defense pathways: effects on several plant parasites. <i>Oecologia</i> , 2002 , 131, 227-235	2.9	175
133	Damage to sagebrush attracts predators but this does not reduce herbivory. <i>Entomologia Experimentalis Et Applicata</i> , 2007 , 125, 71-80	2.1	166
132	Self-recognition affects plant communication and defense. <i>Ecology Letters</i> , 2009 , 12, 502-6	10	151
131	THE BENEFITS OF INDUCED DEFENSES AGAINST HERBIVORES. <i>Ecology</i> , 1997 , 78, 1351-1355	4.6	148

130	Defended Fortresses or Moving Targets? Another Model of Inducible Defenses Inspired by Military Metaphors. <i>American Naturalist</i> , 1994 , 144, 813-832	3.7	148
129	Fine-scale adaptation of herbivorous thrips to individual host plants. <i>Nature</i> , 1989 , 340, 60-61	50.4	137
128	Variability in plant nutrients reduces insect herbivore performance. <i>Nature</i> , 2016 , 539, 425-427	50.4	127
127	Effects of Herbivores on Growth and Reproduction of their Perennial Host, <i>Erigeron Glaucus</i> . <i>Ecology</i> , 1993 , 74, 39-46	4.6	124
126	Kin recognition affects plant communication and defence. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2013 , 280, 20123062	4.4	119
125	Herbivore damage to sagebrush induces resistance in wild tobacco: evidence for eavesdropping between plants. <i>Oikos</i> , 2003 , 100, 325-332	4	119
124	Domatia mediate plantarthropod mutualism. <i>Nature</i> , 1997 , 387, 562-563	50.4	103
123	DIRECT AND INDIRECT EFFECTS OF ALKALOIDS ON PLANT FITNESS VIA HERBIVORY AND POLLINATION. <i>Ecology</i> , 2001 , 82, 2032-2044	4.6	96
122	THE FITNESS CONSEQUENCES OF INTERSPECIFIC EAVESDROPPING BETWEEN PLANTS. <i>Ecology</i> , 2002 , 83, 1209-1213	4.6	94
121	Increased Reproductive Success at High Densities and Predator Satiation For Periodical Cicadas. <i>Ecology</i> , 1982 , 63, 321-328	4.6	90
120	Consequences of variation in flowering phenology for seed head herbivory and reproductive success in <i>Erigeron glaucus</i> (Compositae). <i>Oecologia</i> , 1992 , 89, 588-595	2.9	87
119	Abundance of phytoseiid mites on <i>Vitis</i> species: effects of leaf hairs, domatia, prey abundance and plant phylogeny. <i>Experimental and Applied Acarology</i> , 1995 , 19, 189-197	2.1	86
118	How leaf domatia and induced plant resistance affect herbivores, natural enemies and plant performance. <i>Oikos</i> , 2000 , 89, 70-80	4	82
117	Plant Sensing and Communication 2015 ,		82
116	Interspecific Competition Between Folivorous Insects on <i>Erigeron Glaucus</i> . <i>Ecology</i> , 1986 , 67, 1063-1072	4.6	73
115	Communication between sagebrush and wild tobacco in the field. <i>Biochemical Systematics and Ecology</i> , 2001 , 29, 995-1005	1.4	72
114	TACHINID PARASITOIDS AFFECT HOST PLANT CHOICE BY CATERPILLARS TO INCREASE CATERPILLAR SURVIVAL. <i>Ecology</i> , 1997 , 78, 603-611	4.6	71
113	Effects of an early-season folivorous moth on the success of a later-season species, mediated by a change in the quality of the shared host, <i>Lupinus arboreus</i> Sims. <i>Oecologia</i> , 1986 , 69, 354-359	2.9	70

112	Deciphering the language of plant communication: volatile chemotypes of sagebrush. <i>New Phytologist</i> , 2014 , 204, 380-5	9.8	69
111	Acquired immunity to herbivory and allelopathy caused by airborne plant emissions. <i>Phytochemistry</i> , 2010 , 71, 1642-9	4	68
110	Predicting novel herbivore-plant interactions. <i>Oikos</i> , 2013 , 122, 1554-1564	4	66
109	Costs and Benefits of Induced Resistance and Plant Density for a Native Shrub, <i>Gossypium Thurberi</i> . <i>Ecology</i> , 1993 , 74, 9-19	4.6	65
108	Neighbourhood affects a plant's risk of herbivory and subsequent success. <i>Ecological Entomology</i> , 1997 , 22, 433-439	2.1	62
107	Evolution of prolonged development: a life table analysis for periodical cicadas. <i>American Naturalist</i> , 1997 , 150, 446-61	3.7	59
106	PLANT PHASE CHANGE AND RESISTANCE TO HERBIVORY. <i>Ecology</i> , 1999 , 80, 510-517	4.6	58
105	Specificity of constitutive and induced resistance: pigment glands influence mites and caterpillars on cotton plants. <i>Entomologia Experimentalis Et Applicata</i> , 2000 , 96, 39-49	2.1	57
104	Periodical cicada nymphs impose periodical oak tree wood accumulation. <i>Nature</i> , 1980 , 287, 326-327	50.4	56
103	Community Organization of <i>Erigeron Glaucus</i> Folivores: Effects of Competition, Predation, and Host Plant. <i>Ecology</i> , 1989 , 70, 1028-1039	4.6	55
102	Plant age, communication, and resistance to herbivores: young sagebrush plants are better emitters and receivers. <i>Oecologia</i> , 2006 , 149, 214-20	2.9	54
101	Jasmonic acid induced resistance in grapevines to a root and leaf feeder. <i>Journal of Economic Entomology</i> , 2000 , 93, 840-5	2.2	54
100	A phylogenetic reconstruction of constitutive and induced resistance in <i>Gossypium</i> . <i>American Naturalist</i> , 1997 , 149, 1139-46	3.7	53
99	RELAXATION OF INDUCED INDIRECT DEFENSES OF ACACIAS FOLLOWING EXCLUSION OF MAMMALIAN HERBIVORES. <i>Ecology</i> , 2004 , 85, 609-614	4.6	47
98	Induced defense in <i>Nicotiana attenuata</i> (Solanaceae) fruit and flowers. <i>Oecologia</i> , 2006 , 146, 566-71	2.9	46
97	THE SPECIFICITY OF EAVESDROPPING ON SAGEBRUSH BY OTHER PLANTS. <i>Ecology</i> , 2004 , 85, 1846-1852	4.6	45
96	Induced Resistance and Susceptibility to Herbivory: Plant Memory and Altered Plant Development. <i>Ecology</i> , 1995 , 76, 1220-1225	4.6	44
95	Experimental clipping of sagebrush inhibits seed germination of neighbours. <i>Ecology Letters</i> , 2007 , 10, 791-7	10	43

94	Physiological tolerance, climate change, and a northward range shift in the spittlebug, <i>Philaenus spumarius</i> . <i>Ecological Entomology</i> , 2004 , 29, 251-254	2.1	43
93	Heteroblasty in <i>Eucalyptus globulus</i> (Myricales: Myricaceae) Affects Ovipositional and Settling Preferences of <i>Ctenarytaina eucalypti</i> and <i>C. spatulata</i> (Homoptera: Psyllidae). <i>Environmental Entomology</i> , 2001 , 30, 1144-1149	2.1	43
92	Flight and dispersal of periodical cicadas. <i>Oecologia</i> , 1981 , 49, 385-390	2.9	42
91	Mechanisms of interspecific competition that result in successful control of Pacific mites following inoculations of Willamette mites on grapevines. <i>Oecologia</i> , 1995 , 103, 157-161	2.9	41
90	Host-Plant-Mediated Interactions between a Generalist Folivore and its Tachinid Parasitoid. <i>Journal of Animal Ecology</i> , 1993 , 62, 465	4.7	41
89	Interplant volatile signaling in willows: revisiting the original talking trees. <i>Oecologia</i> , 2013 , 172, 869-75	2.9	40
88	Insect herbivores selectively suppress the HPL branch of the oxylipin pathway in host plants. <i>Plant Journal</i> , 2013 , 73, 653-62	6.9	40
87	Negative effects of vertebrate herbivores on invertebrates in a coastal dune community. <i>Ecology</i> , 2008 , 89, 1972-80	4.6	40
86	Deciduous leaf drop reduces insect herbivory. <i>Oecologia</i> , 2007 , 153, 81-8	2.9	40
85	Induced resistance to herbivores and the information content of early season attack. <i>Oecologia</i> , 1996 , 107, 379-385	2.9	40
84	Crowding and a Plant's Ability to Defend Itself Against Herbivores and Diseases. <i>American Naturalist</i> , 1989 , 134, 749-760	3.7	38
83	Error management in plant allocation to herbivore defense. <i>Trends in Ecology and Evolution</i> , 2015 , 30, 441-5	10.9	36
82	Induced Resistance and Plant Density of a Native Shrub, <i>Gossypium thurberi</i> , Affect Its Herbivores. <i>Ecology</i> , 1993 , 74, 1-8	4.6	36
81	Diet mixing enhances the performance of a generalist caterpillar, <i>Platypreria virginalis</i> . <i>Ecological Entomology</i> , 2010 , 35, 92-99	2.1	35
80	Resistance against spider mites in cotton induced by mechanical abrasion. <i>Entomologia Experimentalis Et Applicata</i> , 1985 , 37, 137-141	2.1	34
79	Caterpillar Basking Behavior and Nonlethal Parasitism by Tachinid Flies. <i>Journal of Insect Behavior</i> , 1998 , 11, 713-723	1.1	32
78	Opposite Density Effects of Nymphal and Adult Mortality for Periodical Cicadas. <i>Ecology</i> , 1984 , 65, 1656-1661	4.6	30
77	Patchiness, Density, and Aggregative Behavior in Sympatric Allochronic Populations of 17-Year Cicadas. <i>Ecology</i> , 1981 , 62, 1525-1535	4.6	30

76	An air transfer experiment confirms the role of volatile cues in communication between plants. <i>American Naturalist</i> , 2010 , 176, 381-4	3.7	26
75	Associational resistance for mule ears with sagebrush neighbors. <i>Plant Ecology</i> , 2007 , 191, 295-303	1.7	26
74	Seasonality of herbivory and communication between individuals of sagebrush. <i>Arthropod-Plant Interactions</i> , 2008 , 2, 87-92	2.2	26
73	Indirect effects of the mosquitofish <i>Gambusia affinis</i> on the mosquito <i>Culex tarsalis</i> . <i>Limnology and Oceanography</i> , 1990 , 35, 767-771	4.8	26
72	Arctiid larvae survive attack by a tachinid parasitoid and produce viable offspring. <i>Ecological Entomology</i> , 1990 , 15, 361-362	2.1	26
71	Sexual Selection, Body Size and Sex-related Mortality in the Cicada <i>Magicada cassini</i> . <i>American Midland Naturalist</i> , 1983 , 109, 324	0.7	26
70	The ecology and evolution of induced responses to herbivory and how plants perceive risk. <i>Ecological Entomology</i> , 2020 , 45, 1-9	2.1	26
69	Jasmonic Acid: A Vaccine Against Leafminers (Diptera: Agromyzidae) in Celery. <i>Environmental Entomology</i> , 2003 , 32, 1196-1202	2.1	25
68	Genotypic Variation in Constitutive and Induced Resistance in Grapes against Spider Mite (Acari: Tetranychidae) Herbivores. <i>Environmental Entomology</i> , 1998 , 27, 297-304	2.1	25
67	Are Defenses of Wild Radish Populations Well Matched with Variability and Predictability of Herbivory?. <i>Evolutionary Ecology</i> , 2004 , 18, 283-301	1.8	24
66	Behavioural response of spider mites (<i>Tetranychus urticae</i>) to induced resistance of cotton plants. <i>Ecological Entomology</i> , 1986 , 11, 181-188	2.1	24
65	Induced Resistance in Wild Tobacco with Clipped Sagebrush Neighbors: The Role of Herbivore Behavior 2001 , 14, 147-156		23
64	Induced resistance in rice against insects. <i>Bulletin of Entomological Research</i> , 2007 , 97, 327-35	1.7	21
63	Population dynamics of an Arctiid caterpillar-tachinid parasitoid system using state-space models. <i>Journal of Animal Ecology</i> , 2010 , 79, 650-61	4.7	20
62	Induced resistance against spider mites in cotton: Field verification. <i>Entomologia Experimentalis Et Applicata</i> , 1986 , 42, 239-242	2.1	20
61	Complex consequences of herbivory and interplant cues in three annual plants. <i>PLoS ONE</i> , 2012 , 7, e38105	1.7	19
60	Geographic dialects in volatile communication between sagebrush individuals. <i>Ecology</i> , 2016 , 97, 2917-2924	1.7	19
59	Predation and associational refuge drive ontogenetic niche shifts in an arctiid caterpillar. <i>Ecology</i> , 2015 , 96, 80-9	4.6	18

58	Leaf drop affects herbivory in oaks. <i>Oecologia</i> , 2013 , 173, 925-32	2.9	18
57	Non-trophic effects of litter reduce ant predation and determine caterpillar survival and distribution. <i>Oikos</i> , 2013 , 122, 1362-1370	4	18
56	Facilitation of tiger moths by outbreaking tussock moths that share the same host plants. <i>Journal of Animal Ecology</i> , 2012 , 81, 1095-102	4.7	17
55	Long-term demographic consequences of eavesdropping for sagebrush. <i>Journal of Ecology</i> , 2012 , 100, 932-938	6	17
54	Prolonged Development in Cicadas. <i>Proceedings in Life Sciences</i> , 1986 , 222-235		17
53	A comparison of plants and animals in their responses to risk of consumption. <i>Current Opinion in Plant Biology</i> , 2016 , 32, 1-8	9.9	16
52	Neighbors affect resistance to herbivory--a new mechanism. <i>New Phytologist</i> , 2010 , 186, 564-6	9.8	16
51	Vascular Systemic Induced Resistance For <i>Artemisia cana</i> and Volatile Communication for <i>Artemisia douglasiana</i> . <i>American Midland Naturalist</i> , 2008 , 159, 468-477	0.7	15
50	Host Characteristics, Sampling Intensity, and Species Richness of Lepidoptera Larvae on Broad-Leaved Tress in Southern Ontario. <i>Ecology</i> , 1983 , 64, 636-641	4.6	15
49	Chewing sandpaper: grit, plant apparency, and plant defense in sand-entrapping plants. <i>Ecology</i> , 2016 , 97, 826-33	4.6	14
48	Effects of local density on fecundity and mating speed for periodical cicadas. <i>Oecologia</i> , 1981 , 51, 260-264	6.9	14
47	As temperature increases, predator attack rate is more important to survival than a smaller window of prey vulnerability. <i>Ecology</i> , 2018 , 99, 1584-1590	4.6	13
46	Long-term habitat selection and chronic root herbivory: explaining the relationship between periodical cicada density and tree growth. <i>American Naturalist</i> , 2009 , 173, 105-12	3.7	13
45	Leaf drop in evergreen <i>Ceanothus velutinus</i> as a means of reducing herbivory. <i>Ecology</i> , 2008 , 89, 2446-52	4.6	13
44	The importance of host plant limitation for caterpillars of an arctiid moth (<i>Platyrepia virginalis</i>) varies spatially. <i>Ecology</i> , 2012 , 93, 2216-26	4.6	12
43	Plant communication ¶why should plants emit volatile cues?. <i>Journal of Plant Interactions</i> , 2011 , 6, 81-84	3.8	12
42	Wet years have more caterpillars: interacting roles of plant litter and predation by ants. <i>Ecology</i> , 2017 , 98, 2370-2378	4.6	11
41	A judgment and decision-making model for plant behavior. <i>Ecology</i> , 2018 , 99, 1909-1919	4.6	11

40	Transient habitats limit development time for periodical cicadas. <i>Ecology</i> , 2014 , 95, 3-8	4.6	11
39	Effects of genetic structure of <i>Lupinus arboreus</i> and previous herbivory on <i>Platyrepia virginalis</i> caterpillars. <i>Oecologia</i> , 1999 , 120, 268-273	2.9	11
38	Precipitation affects plant communication and defense. <i>Ecology</i> , 2017 , 98, 1693-1699	4.6	10
37	Caterpillars escape predation in habitat and thermal refuges. <i>Ecological Entomology</i> , 2015 , 40, 725-731	2.1	10
36	Volatile communication among sagebrush branches affects herbivory: timing of active cues. <i>Arthropod-Plant Interactions</i> , 2009 , 3, 99-104	2.2	9
35	Airborne signals of communication in sagebrush: a pharmacological approach. <i>Plant Signaling and Behavior</i> , 2015 , 10, e1095416	2.5	8
34	Testing predictions of movement behaviour in a hilltopping moth. <i>Animal Behaviour</i> , 2017 , 133, 161-168	2.8	7
33	Decline of meadow spittlebugs, a previously abundant insect, along the California coast. <i>Ecology</i> , 2018 , 99, 2614-2616	4.6	7
32	Effects of trichomes on the behavior and distribution of <i>Platyrepia virginalis</i> caterpillars. <i>Entomologia Experimentalis Et Applicata</i> , 2014 , 151, 144-151	2.1	7
31	Identity recognition and plant behavior. <i>Plant Signaling and Behavior</i> , 2010 , 5, 854-5	2.5	7
30	Clonal growth of sagebrush (<i>Artemisia tridentata</i>) (Asteraceae) and its relationship to volatile communication. <i>Plant Species Biology</i> , 2012 , 27, 69-76	1.3	6
29	Do plant-plant signals mediate herbivory consistently in multiple taxa and ecological contexts?. <i>Journal of Plant Interactions</i> , 2013 , 8, 203-206	3.8	6
28	Effect of genetic relatedness on volatile communication of sagebrush (<i>Artemisia tridentata</i>). <i>Journal of Plant Interactions</i> , 2011 , 6, 193-193	3.8	6
27	Advances in the Evolution and Ecology of 13- and 17-Year Periodical Cicadas. <i>Annual Review of Entomology</i> , 2021 ,	21.8	6
26	Seasonal variation of responses to herbivory and volatile communication in sagebrush (<i>Artemisia tridentata</i>) (Asteraceae). <i>Journal of Plant Research</i> , 2016 , 129, 659-666	2.6	6
25	Entrapped sand as a plant defence: effects on herbivore performance and preference. <i>Ecological Entomology</i> , 2018 , 43, 154-161	2.1	6
24	Plant communication increases heterogeneity in plant phenotypes and herbivore movement. <i>Functional Ecology</i> , 2017 , 31, 990-991	5.6	5
23	Tradeoff between resistance induced by volatile communication and over-topping vertical growth. <i>Plant Signaling and Behavior</i> , 2017 , 12, e1309491	2.5	5

22	CHEMOTYPIC Variation in Volatiles and Herbivory for Sagebrush. <i>Journal of Chemical Ecology</i> , 2016 , 42, 829-840	2.7	5
21	Prolonged exposure is required for communication in sagebrush. <i>Arthropod-Plant Interactions</i> , 2012 , 6, 197-202	2.2	5
20	Plant age, seasonality, and plant communication in sagebrush. <i>Journal of Plant Interactions</i> , 2011 , 6, 85-88	3.8	5
19	Effects of a multi-year drought on a drought-adapted shrub, <i>Artemisia tridentata</i> . <i>Plant Ecology</i> , 2017 , 218, 547-554	1.7	4
18	Feeding and damage-induced volatile cues make beetles disperse and produce a more even distribution of damage for sagebrush. <i>Journal of Animal Ecology</i> , 2020 , 89, 2056-2062	4.7	4
17	Assessing plant-to-plant communication and induced resistance in sagebrush using the sagebrush specialist <i>Trirhabda pilosa</i> . <i>Arthropod-Plant Interactions</i> , 2020 , 14, 327-332	2.2	4
16	Induction of the sticky plant defense syndrome in wild tobacco. <i>Ecology</i> , 2019 , 100, e02746	4.6	3
15	Chewing and other cues induce grass spines that protect meristems. <i>Arthropod-Plant Interactions</i> , 2019 , 13, 541-550	2.2	3
14	Plant Communication. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2021 , 52,	13.5	3
13	The effects of pulsed fertilization and chronic herbivory by periodical cicadas on tree growth. <i>Ecology</i> , 2019 , 100, e02705	4.6	2
12	Proportional fitness loss and the timing of defensive investment: a cohesive framework across animals and plants. <i>Oecologia</i> , 2020 , 193, 273-283	2.9	2
11	Precipitation-dependent source-sink dynamics in a spatially-structured population of an outbreaking caterpillar. <i>Landscape Ecology</i> , 2019 , 34, 1131-1143	4.3	2
10	Individual-level differences in generalist caterpillar responses to a plant-plant cue. <i>Ecological Entomology</i> , 2015 , 40, 612-619	2.1	2
9	Lack of susceptibility of soil-inhabiting <i>Platyrepia virginalis</i> caterpillars, a native arctiid, to entomopathogenic nematodes in nature. <i>Entomologia Experimentalis Et Applicata</i> , 2011 , 140, 28-34	2.1	2
8	Loss of branches due to winter storms could favor deciduousness in oaks. <i>American Journal of Botany</i> , 2021 , 108, 2309-2314	2.7	2
7	Unidirectional grass hairs usher insects away from meristems. <i>Oecologia</i> , 2019 , 189, 711-718	2.9	1
6	Risk of herbivory negatively correlates with the diversity of volatile emissions involved in plant communication. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021 , 288, 20211790	4.4	0
5	Altered precipitation dynamics lead to a shift in herbivore dynamical regime. <i>Ecology Letters</i> , 2021 , 24, 1400-1407	10	0

4	Effects of experimental watering but not warming on herbivory vary across a gradient of precipitation. <i>Ecology and Evolution</i> , 2021 , 11, 2299-2306	2.8	o
3	Why cicadas (Hemiptera: Cicadidae) develop so slowly. <i>Biological Journal of the Linnean Society</i> , 2022 , 135, 291-298	1.9	o
2	Spatial and temporal refugia for an insect population declining due to climate change. <i>Ecosphere</i> , 2021 , 12, e03820	3.1	
1	Consistent individual variation in plant communication: do plants have personalities?. <i>Oecologia</i> , 2022 , 1	2.9	