Mark C Mescher

List of Publications by Year
in descending order

85 papers	5,484 citations	126907 33 h-index	85541 71 g-index
86 all docs	86 docs citations	86 times ranked	4718 citing authors

#	Article	IF	Citations
1	Caterpillar-induced nocturnal plant volatiles repel conspecific females. Nature, 2001, 410, 577-580.	27.8	842
2	Deceptive chemical signals induced by a plant virus attract insect vectors to inferior hosts. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3600-3605.	7.1	471
3	Plant Defense Priming against Herbivores: Getting Ready for a Different Battle. Plant Physiology, 2008, 146, 818-824.	4.8	425
4	Within-plant signalling via volatiles overcomes vascular constraints on systemic signalling and primes responses against herbivores. Ecology Letters, 2007, 10, 490-498.	6.4	333
5	Transmission mechanisms shape pathogen effects on hostâ€“vector interactions: evidence from plant viruses. Functional Ecology, 2012, 26, 1162-1175.	3.6	329
6	Volatile Chemical Cues Guide Host Location and Host Selection by Parasitic Plants. Science, 2006, 313, 1964-1967.	12.6	299
7	Priming defense genes and metabolites in hybrid poplar by the green leaf volatile <i>cis</i>â€3â€hexenyl acetate. New Phytologist, 2008, 180, 722-734.	7.3	243
8	Jasmonateâ€•and salicylateâ€mediated plant defense responses to insect herbivores, pathogens and parasitic plants. Pest Management Science, 2009, 65, 497-503.	3.4	187
9	Malaria-induced changes in host odors enhance mosquito attraction. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11079-11084.	7.1	137
10	Induction of Plant Volatiles by Herbivores with Different Feeding Habits and the Effects of Induced Defenses on Host-Plant Selection by Thrips. Journal of Chemical Ecology, 2007, 33, 997-1012.	1.8	112
11	Effects of pathogens on sensory-mediated interactions between plants and insect vectors. Current Opinion in Plant Biology, 2016, 32, 53-61.	7.1	88
12	Exposure of <i>Solidago altissima</i> plants to volatile emissions of an insect antagonist () Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td Sciences of the United States of America, 2013, 110, 199-204.	7.1	77
13	Inbreeding alters volatile signalling phenotypes and influences triâ€trophic interactions in horsenettle (<i>Solanum carolinense</i> L.). Ecology Letters, 2012, 15, 301-309.	6.4	74
14	Parasitism by <i>Cuscuta pentagona</i> sequentially induces JA and SA defence pathways in tomato. Plant, Cell and Environment, 2010, 33, 290-303.	5.7	67
15	Non-glandular trichomes of<i>Solanum carolinense</i>deter feeding by<i>Manduca sexta</i>caterpillars and cause damage to the gut peritrophic matrix. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20162323.	2.6	64
16	Identification of an insect-produced olfactory cue that primes plant defenses. Nature Communications, 2017, 8, 337.	12.8	60
17	Leaf trichomes affect caterpillar feeding in an instar-specific manner. Communicative and Integrative Biology, 2018, 11, 1-6.	1.4	59
18	Role of plant sensory perception in plant-animal interactions. Journal of Experimental Botany, 2015, 66, 425-433.	4.8	58

#	Article	IF	Citations
19	Plantâ€“rhizobia mutualism influences aphid abundance on soybean. Plant and Soil, 2009, 323, 187-196.	3.7	57
20	Constitutive and herbivoreâ€induced structural defenses are compromised by inbreeding in <i>Solanum carolinense</i> (Solanaceae). American Journal of Botany, 2013, 100, 1014-1021.	1.7	56
21	Volatile biomarkers of symptomatic and asymptomatic malaria infection in humans. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5780-5785.	7.1	55
22	<i>Tomato yellow leaf curl virus</i> differentially influences plant defence responses to a vector and a nonâ€vector herbivore. Plant, Cell and Environment, 2016, 39, 597-607.	5.7	53
23	Parasitism by <i>Cuscuta pentagona</i> Attenuates Host Plant Defenses against Insect Herbivores. Plant Physiology, 2008, 146, 987-995.	4.8	50
24	Plant Dependence on Rhizobia for Nitrogen Influences Induced Plant Defenses and Herbivore Performance. International Journal of Molecular Sciences, 2014, 15, 1466-1480.	4.1	50
25	Effects of single and mixed infections of <i>Bean pod mottle virus</i> and <i>Soybean mosaic virus</i> on hostâ€plant chemistry and hostâ€“vector interactions. Functional Ecology, 2016, 30, 1648-1659.	3.6	50
26	Network motifs involving both competition and facilitation predict biodiversity in alpine plant communities. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	47
27	Inbreeding in horsenettle (<i>Solanum carolinense</i>) alters night-time volatile emissions that guide oviposition by <i>Manduca sexta</i> moths. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20130020.	2.6	44
28	Virus infection influences host plant interactions with nonâ€vector herbivores and predators. Functional Ecology, 2015, 29, 662-673.	3.6	43
29	Whitefly aggregation on tomato is mediated by feedingâ€induced changes in plant metabolites that influence the behaviour and performance of conspecifics. Functional Ecology, 2018, 32, 1180-1193.	3.6	43
30	Inbreeding effects on blossom volatiles in <i>Cucurbita pepo</i> subsp. <i>texana</i> (Cucurbitaceae). American Journal of Botany, 2006, 93, 1768-1774.	1.7	41
31	Infection of host plants by Cucumber mosaic virus increases the susceptibility of Myzus persicae aphids to the parasitoid Aphidius colemani. Scientific Reports, 2015, 5, 10963.	3.3	39
32	Glucosinolates from Host Plants Influence Growth of the Parasitic Plant <i>Cuscuta gronovii</i> and Its Susceptibility to Aphid Feeding. Plant Physiology, 2016, 172, 181-197.	4.8	38
33	Inbreeding Depression in Solanum carolinense (Solanaceae) under Field Conditions and Implications for Mating System Evolution. PLoS ONE, 2011, 6, e28459.	2.5	36
34	Variation in growth and defence traits among plant populations at different elevations: Implications for adaptation to climate change. Journal of Ecology, 2019, 107, 2478-2492.	4.0	36
35	The volatile emission of Eurosta solidaginis primes herbivore-induced volatile production in Solidago altissima and does not directly deter insect feeding. BMC Plant Biology, 2014, 14, 173.	3.6	35
36	Herbivore-induced plant volatiles in natural and agricultural ecosystems: open questions and future prospects. Current Opinion in Insect Science, 2015, 9, 1-6.	4.4	35

#	ARTICLE	IF	CITATIONS
37	Bumble bees damage plant leaves and accelerate flower production when pollen is scarce. Science, 2020, 368, 881-884.	12.6	35
38	Inbreeding in horsenettle influences herbivore resistance. Ecological Entomology, 2009, 34, 513-519.	2.2	34
39	Horizontal Gene Acquisitions, Mobile Element Proliferation, and Genome Decay in the Host-Restricted Plant Pathogen<i>Erwinia Tracheiphila</i>. Genome Biology and Evolution, 2016, 8, 649-664.	2.5	34
40	Plant volatiles induced by herbivore eggs prime defences and mediate shifts in the reproductive strategy of receiving plants. Ecology Letters, 2020, 23, 1097-1106.	6.4	34
41	Inbreeding, herbivory, and the transcriptome of <i>Solanum carolinense</i>. Entomologia Experimentalis Et Applicata, 2012, 144, 134-144.	1.4	33
42	Implications of bioactive solute transfer from hosts to parasitic plants. Current Opinion in Plant Biology, 2013, 16, 464-472.	7.1	33
43	Plant spines deter herbivory by restricting caterpillar movement. Biology Letters, 2017, 13, 20170176.	2.3	33
44	Sorghum 3-Deoxyanthocyanidin Flavonoids Confer Resistance against Corn Leaf Aphid. Journal of Chemical Ecology, 2019, 45, 502-514.	1.8	32
45	A key floral scent component (Î²â€•transâ€•bergamotene) drives pollinator preferences independently of pollen rewards in seep monkeyflower. Functional Ecology, 2019, 33, 218-228.	3.6	31
46	Enhanced heat tolerance of viral-infected aphids leads to niche expansion and reduced interspecific competition. Nature Communications, 2020, 11, 1184.	12.8	31
47	Effects of malaria infection on mosquito olfaction and behavior: extrapolating data to the field. Current Opinion in Insect Science, 2017, 20, 7-12.	4.4	30
48	Plant inbreeding and prior herbivory influence the attraction of caterpillars (<i>Manduca sexta</i>) to odors of the host plant <i>Solanum carolinense</i> (Solanaceae). American Journal of Botany, 2014, 101, 376-380.	1.7	26
49	Handheld Lasers Allow Efficient Detection of Fluorescent Marked Organisms in the Field. PLoS ONE, 2015, 10, e0129175.	2.5	22
50	Communicative interactions involving plants: information, evolution, and ecology. Current Opinion in Plant Biology, 2016, 32, 69-76.	7.1	22
51	Costs of plant defense priming: exposure to volatile cues from a specialist herbivore increases short-term growth but reduces rhizome production in tall goldenrod (Solidago altissima). BMC Plant Biology, 2019, 19, 209.	3.6	17
52	Transgenerational impacts of herbivory and inbreeding on reproductive output in <i>Solanum carolinense</i>. American Journal of Botany, 2020, 107, 286-297.	1.7	17
53	Plant Host Finding by Parasitic Plants. Plant Signaling and Behavior, 2006, 1, 284-286.	2.4	16
54	A petiole-galling insect herbivore decelerates leaf lamina litter decomposition rates. Functional Ecology, 2012, 26, 628-636.	3.6	14

#	Article	IF	Citations
55	Draft Genome Sequence of Erwinia tracheiphila, an Economically Important Bacterial Pathogen of Cucurbits. Genome Announcements, 2015, 3, .	0.8	14
56	A plant virus (BYDV) promotes trophic facilitation in aphids on wheat. Scientific Reports, 2018, 8, 11709.	3.3	14
57	Targeted predation of extrafloral nectaries by insects despite localized chemical defences. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20151835.	2.6	13
58	Mechanical defenses of plant extrafloral nectaries against herbivory. Communicative and Integrative Biology, 2016, 9, e1178431.	1.4	13
59	Manipulation of light spectral quality disrupts host location and attachment by parasitic plants in the genus <i>Cuscuta</i>. Journal of Applied Ecology, 2016, 53, 794-803.	4.0	13
60	The volatile emission of a specialist herbivore alters patterns of plant defence, growth and flower production in a field population of goldenrod. Functional Ecology, 2017, 31, 1062-1070.	3.6	13
61	Divergent behavioural responses of gypsy moth (Lymantria dispar) caterpillars from three different subspecies to potential host trees. Scientific Reports, 2019, 9, 8953.	3.3	13
62	Combined effects of mutualistic rhizobacteria counteract virus-induced suppression of indirect plant defences in soya bean. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190211.	2.6	13
63	Inbreeding in Solanum carolinense alters floral attractants and rewards and adversely affects pollinator visitation. American Journal of Botany, 2021, 108, 74-82.	1.7	13
64	Exploring the Effects of Plant Odors, from Tree Species of Differing Host Quality, on the Response of Lymantria disparÂMales to Female Sex Pheromones. Journal of Chemical Ecology, 2017, 43, 243-253.	1.8	12
65	Divergence in Glucosinolate Profiles between High- and Low-Elevation Populations of Arabidopsis halleri Correspond to Variation in Field Herbivory and Herbivore Behavioral Preferences. International Journal of Molecular Sciences, 2019, 20, 174.	4.1	11
66	A plant parasite uses light cues to detect differences in<scp>hostâ€plant</scp>proximity and architecture. Plant, Cell and Environment, 2021, 44, 1142-1150.	5.7	11
67	Aphids harbouring different endosymbionts exhibit differences in cuticular hydrocarbon profiles that can be recognized by ant mutualists. Scientific Reports, 2021, 11, 19559.	3.3	11
68	Comparing the Expression of Olfaction-Related Genes in Gypsy Moth (Lymantria dispar) Adult Females and Larvae from One Flightless and Two Flight-Capable Populations. Frontiers in Ecology and Evolution, 2017, 5, .	2.2	10
69	Herbivory and inbreeding affect growth, reproduction, and resistance in the rhizomatous offshoots of Solanum carolinense (Solanaceae). Evolutionary Ecology, 2019, 33, 499-520.	1.2	10
70	Can we use human odors to diagnose malaria?. Future Microbiology, 2019, 14, 5-9.	2.0	10
71	Effects of Root-Colonizing Fluorescent Pseudomonas Strains on Arabidopsis Resistance to a Pathogen and an Herbivore. Applied and Environmental Microbiology, 2021, 87, e0283120.	3.1	10
72	A unique volatile signature distinguishes malaria infection from other conditions that cause similar symptoms. Scientific Reports, 2021, 11, 13928.	3.3	8

#	Article	IF	Citations
73	Trade-offs between defenses against herbivores in goldenrod (Solidago altissima). Arthropod-Plant Interactions, 2019, 13, 279-287.	1.1	7
74	Inbreeding increases susceptibility to powdery mildew (<i>Oidium neolycopersici</i>) infestation in horsenettle (<i>Solanum carolinense</i>L). Plant Signaling and Behavior, 2012, 7, 803-806.	2.4	6
75	Editorial overview: Ecology: The chemical ecology of human disease transmission by mosquito vectors. Current Opinion in Insect Science, 2017, 20, v-vi.	4.4	6
76	Pass the ammunition. Nature, 2014, 510, 221-222.	27.8	5
77	Phytoplasma Infection of Cranberry Affects Development and Oviposition, but Not Host-Plant Selection, of the Insect Vector Limotettix vaccinii. Journal of Chemical Ecology, 2020, 46, 722-734.	1.8	5
78	Experimental evidence challenges the presumed defensive function of a â€œslow toxinâ€•in cycads. Scientific Reports, 2022, 12, 6013.	3.3	5
79	A sensory bias overrides learned preferences of bumblebees for honest signals in Mimulus guttatus. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20210161.	2.6	4
80	Giant polyploid epidermal cells and male pheromone production in the tephritid fruit fly Eurosta solidaginis (Diptera: Tephritidae). Journal of Insect Physiology, 2021, 130, 104210.	2.0	2
81	Transmission-enhancing effects of a plant virus depend on host association with beneficial bacteria. Arthropod-Plant Interactions, 2022, 16, 15-31.	1.1	2
82	Sensory coâ€evolution: The sex attractant of a gallâ€making fly primes plant defences, but female flies recognize resulting changes in hostâ€plant quality. Journal of Ecology, 2021, 109, 99-108.	4.0	1
83	Application of Plant Defense Elicitors Fails to Enhance Herbivore Resistance or Mitigate Phytoplasma Infection in Cranberries. Frontiers in Plant Science, 2021, 12, 700242.	3.6	1
84	Olfaction: Chemical Signposts along the Silk Road. Current Biology, 2009, 19, R491-R493.	3.9	0
85	Negative Effects of Rhizobacteria Association on Plant Recruitment of Generalist Predators. Plants, 2022, 11, 920.	3.5	0