Sergio Rasmann

List of Publications by Year
in descending order

128 papers	8,094 citations	46984 47 h-index	54882 84 g-index
151 all docs	151 docs citations	151 times ranked	8197 citing authors

#	Article	IF	Citations
1	Eight key rules for successful dataâ€dependent acquisition in mass spectrometryâ€based metabolomics. Mass Spectrometry Reviews, 2023, 42, 131-143.	2.8	42
2	<scp>DNA</scp>â€based networks reveal the ecological determinants of plantâ€"herbivore interactions along environmental gradients. Molecular Ecology, 2023, 32, 6436-6448.	2.0	2
3	The effect of communityâ€wide phytochemical diversity on herbivory reverses from low to high elevation. Journal of Ecology, 2022, 110, 46-56.	1.9	10
4	Relative contribution of high and low elevation soil microbes and nematodes to ecosystem functioning. Functional Ecology, 2022, 36, 974-986.	1.7	5
5	Test of communication between potato plants in response to herbivory by the Colorado potato beetle. Agricultural and Forest Entomology, 2022, 24, 212-218.	0.7	7
6	Functional Traits 2.0: The power of the metabolome for ecology. Journal of Ecology, 2022, 110, 4-20.	1.9	42
7	The effect of climate change on invasive crop pests across biomes. Current Opinion in Insect Science, 2022, 50, 100895.	2.2	32
8	As above so below: Recent and future advances in plantâ€mediated aboveâ€and belowground interactions. American Journal of Botany, 2022, 109, 672-675.	0.8	4
9	Belowground plant inputs exert higher metabolic activities and carbon use efficiency of soil nematodes than aboveground inputs. Geoderma, 2022, 420, 115883.	2.3	9
10	Arbuscular mycorrhizal fungi prevent the negative effect of drought and modulate the growthâ€defence tradeâ€off in tomato plants. , 2022, 1, 177-190.		11
11	The effect of rootâ€associated microbes on plant growth and chemical defence traits across two contrasted elevations. Journal of Ecology, 2021, 109, 38-50.	1.9	4
12	Ecological convergence of secondary phytochemicals along elevational gradients. New Phytologist, 2021, 229, 1755-1767.	3.5	11
13	Apparent inhibition of induced plant volatiles by a fungal pathogen prevents airborne communication between potato plants. Plant, Cell and Environment, 2021, 44, 1192-1201.	2.8	14
14	Elevational gradients in constitutive and induced oak defences based on individual traits and their correlated expression patterns. Oikos, 2021, 130, 396-407.	1.2	9
15	The structure of plantâ€"herbivore interaction networks varies along elevational gradients in the European Alps. Journal of Biogeography, 2021, 48, 465-476.	1.4	15
16	Combining phytochemicals and multitrophic interactions to control forest insect pests. Current Opinion in Insect Science, 2021, 44, 101-106.	2.2	5
17	Spatial and temporal heterogeneity in pollinator communities maintains withinâ€species floral odour variation. Oikos, 2021, 130, 1487-1499.	1.2	12
18	Downregulation of the photosynthetic machinery and carbon storage signaling pathways mediate La_2O_3 nanoparticle toxicity on radish taproot formation. Journal of Hazardous Materials, 2021, 411, 124971.	6.5	23

#	Article	IF	Citations
19	Nanosilicon enhances maize resistance against oriental armyworm (Mythimna separata) by activating the biosynthesis of chemical defenses. Science of the Total Environment, 2021, 778, 146378.	3.9	28
20	Reconciling trait based perspectives along a traitâ€integration continuum. Ecology, 2021, 102, e03472.	1.5	12
21	The functional role and diversity of soil nematodes are stronger at high elevation in the lesser Himalayan Mountain ranges. Ecology and Evolution, 2021, 11, 13793-13804.	0.8	10
22	Spatial and evolutionary predictability of phytochemical diversity. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	63
23	Dose-dependent effects of CeO₂ nanomaterials on tomato plant chemistry and insect herbivore resistance. Environmental Science: Nano, 2021, 8, 3577-3589.	2.2	10
24	Plant physical and chemical traits associated with herbivory in situ and under a warming treatment. Journal of Ecology, 2020, 108, 733-749.	1.9	23
25	Contrasting responses of above- and below-ground herbivore communities along elevation. Oecologia, 2020, 194, 515-528.	0.9	8
26	Novel trophic interactions under climate change promote alpine plant coexistence. Science, 2020, 370, 1469-1473.	6.0	51
27	Bioturbation by endogeic earthworms facilitates entomopathogenic nematode movement toward herbivore-damaged maize roots. Scientific Reports, 2020, 10, 21316.	1.6	5
28	To bee or not to bee: The â€˜raison d'Ãªtreâ€™ of toxic secondary compounds in the pollen of Boraginaceae. Functional Ecology, 2020, 34, 1345-1357.	1.7	12
29	Out of scale out of place: Black rhino forage preference across the hierarchical organization of the savanna ecosystem. Conservation Science and Practice, 2020, 2, e191.	0.9	3
30	A global database of soil nematode abundance and functional group composition. Scientific Data, 2020, 7, 103.	2.4	46
31	Tritrophic interactions follow phylogenetic escalation and climatic adaptation. Scientific Reports, 2020, 10, 2074.	1.6	7
32	Variation in Below-to Aboveground Systemic Induction of Glucosinolates Mediates Plant Fitness Consequences under Herbivore Attack. Journal of Chemical Ecology, 2020, 46, 317-329.	0.9	6
33	Ontogenetic consistency in oak defence syndromes. Journal of Ecology, 2020, 108, 1822-1834.	1.9	15
34	Modulation of above-belowground plant-herbivore interactions by entomopathogenic nematodes. Applied Soil Ecology, 2020, 148, 103479.	2.1	3
35	Soil nematode abundance and functional group composition at a global scale. Nature, 2019, 572, 194-198.	13.7	635
36	Plant adaptation to different climates shapes the strengths of chemically mediated tritrophic interactions. Functional Ecology, 2019, 33, 1893-1903.	1.7	12

#	Article	IF	Citations
37	Triâ€trophic interactions: bridging species, communities and ecosystems. Ecology Letters, 2019, 22, 2151-2167.	3.0	77
38	The effect of biochar amendment on N-cycling genes in soils: A meta-analysis. Science of the Total Environment, 2019, 696, 133984.	3.9	85
39	The symbiotic bacteria <i>Alcaligenes faecalis</i> of the entomopathogenic nematodes <i>Oscheius</i> spp. exhibit potential biocontrol of plantâ€•and entomopathogenic fungi. Microbial Biotechnology, 2019, 12, 459-471.	2.0	28
40	Variable effects on growth and defense traits for plant ecotypic differentiation and phenotypic plasticity along elevation gradients. Ecology and Evolution, 2019, 9, 3740-3755.	0.8	32
41	Correlated Induction of Phytohormones and Glucosinolates Shapes Insect Herbivore Resistance of Cardamine Species Along Elevational Gradients. Journal of Chemical Ecology, 2019, 45, 638-648.	0.9	5
42	Mycorrhizal Fungi Enhance Resistance to Herbivores in Tomato Plants with Reduced Jasmonic Acid Production. Agronomy, 2019, 9, 131.	1.3	24
43	Specificity of Plant-Plant Communication for Baccharis salicifolia Sexes but Not Genotypes. Bulletin of the Ecological Society of America, 2019, 100, e01481.	0.2	0
44	Parallel increases in insect herbivory and defenses with increasing elevation for both saplings and adult trees of oak (<i>Quercus</i>) species. American Journal of Botany, 2019, 106, 1558-1565.	0.8	13
45	Deicing Salt Pollution Affects the Foliar Traits and Arthropods' Biodiversity of Lime Trees in Riga's Street Greeneries. Frontiers in Ecology and Evolution, 2019, 7, .	1.1	9
46	Inducibility of chemical defences in young oak trees is stronger in species with high elevational ranges. Tree Physiology, 2019, 39, 606-614.	1.4	15
47	Evolutionary dynamics of specialisation in herbivorous stick insects. Ecology Letters, 2019, 22, 354-364.	3.0	8
48	Contribution of different predator guilds to tritrophic interactions along ecological clines. Current Opinion in Insect Science, 2019, 32, 104-109.	2.2	9
49	Environmental gradients and the evolution of triâ€trophic interactions. Ecology Letters, 2019, 22, 292-301.	3.0	21
50	Earthworms suppress thrips attack on tomato plants by concomitantly modulating soil properties and plant chemistry. Soil Biology and Biochemistry, 2019, 130, 23-32.	4.2	18
51	Growthâ€competitionâ€herbivore resistance tradeâ€offs and the responses of alpine plant communities to climate change. Functional Ecology, 2018, 32, 1693-1703.	1.7	24
52	The unfolding of plant growth formâ€defence syndromes along elevation gradients. Ecology Letters, 2018, 21, 609-618.	3.0	67
53	Herbivore specificity and the chemical basis of plantâ€"plant communication in <i><scp>B</scp>accharis salicifolia</i> (<scp>A</scp>steraceae). New Phytologist, 2018, 220, 703-713.	3.5	48
54	Lioptilodes friasi (Lepidoptera: Pterophoridae) Niche Breadth in the Chilean Mediterranean Matorral Biome: Trophic and Altitudinal Dimensions. Neotropical Entomology, 2018, 47, 62-68.	0.5	6

#	ARTICLE	IF	CITATIONS
55	Latitudinal variation in plant chemical defences drives latitudinal patterns of leaf herbivory. Ecography, 2018, 41, 1124-1134.	2.1	84
56	A global analysis of elevational gradients in leaf herbivory and its underlying drivers: Effects of plant growth form, leaf habit and climatic correlates. Journal of Ecology, 2018, 106, 413-421.	1.9	56
57	Elevational gradients in plant defences and insect herbivory: recent advances in the field and prospects for future research. Ecography, 2018, 41, 1485-1496.	2.1	97
58	Pleiotropic effect of the <i>Flowering Locus C</i> on plant resistance and defence against insect herbivores. Journal of Ecology, 2018, 106, 1244-1255.	1.9	11
59	Earthworms affect plant growth and resistance against herbivores: A metaâ€analysis. Functional Ecology, 2018, 32, 150-160.	1.7	52
60	Specificity of plantâ€“plant communication for <i>Baccharis salicifolia</i> sexes but not genotypes. Ecology, 2018, 99, 2731-2739.	1.5	17
61	Growing Research Networks on Mycorrhizae for Mutual Benefits. Trends in Plant Science, 2018, 23, 975-984.	4.3	51
62	Eco-evolutionary Factors Driving Plant-Mediated Aboveâ€“Belowground Invertebrate Interactions Along Elevation Gradients. Ecological Studies, 2018, , 223-245.	0.4	2
63	Root JA Induction Modifies Glucosinolate Profiles and Increases Subsequent Aboveground Resistance to Herbivore Attack in Cardamine hirsuta. Frontiers in Plant Science, 2018, 9, 1230.	1.7	13
64	Plant physical and chemical defence variation along elevation gradients: a functional trait-based approach. Oecologia, 2018, 187, 561-571.	0.9	35
65	The functional decoupling of processes in alpine ecosystems under climate change. Current Opinion in Insect Science, 2018, 29, 126-132.	2.2	13
66	Assessing the influence of biogeographical region and phylogenetic history on chemical defences and herbivory in Quercus species. Phytochemistry, 2018, 153, 64-73.	1.4	25
67	Community-level relaxation of plant defenses against herbivores at high elevation. Plant Ecology, 2017, 218, 291-304.	0.7	40
68	Root symbionts: Powerful drivers of plant aboveâ€•and belowground indirect defenses. Insect Science, 2017, 24, 947-960.	1.5	91
69	Communityâ€level plant palatability increases with elevation as insect herbivore abundance declines. Journal of Ecology, 2017, 105, 142-151.	1.9	69
70	Plantâ€“Insect Interactions in a Changing World. Advances in Botanical Research, 2017, 81, 289-332.	0.5	33
71	Biological Control beneath the Feet: A Review of Crop Protection against Insect Root Herbivores. Insects, 2016, 7, 70.	1.0	57
72	The Abundance, Diversity, and Metabolic Footprint of Soil Nematodes Is Highest in High Elevation Alpine Grasslands. Frontiers in Ecology and Evolution, 2016, 4, .	1.1	51

#	Article	IF	Citations
73	Root signals that mediate mutualistic interactions in the rhizosphere. Current Opinion in Plant Biology, 2016, 32, 62-68.	3.5	112
74	Different rates of defense evolution and niche preferences in clonal and nonclonal milkweeds (<i>Asclepias</i> spp.). New Phytologist, 2016, 209, 1230-1239.	3.5	18
75	Test of biotic and abiotic correlates of latitudinal variation in defences in the perennial herb <i><scp>R</scp>uellia nudiflora</i>. Journal of Ecology, 2016, 104, 580-590.	1.9	48
76	The simultaneous inducibility of phytochemicals related to plant direct and indirect defences against herbivores is stronger at low elevation. Journal of Ecology, 2016, 104, 1116-1125.	1.9	72
77	Biotic and abiotic factors associated with altitudinal variation in plant traits and herbivory in a dominant oak species. American Journal of Botany, 2016, 103, 2070-2078.	0.8	63
78	New frontiers in belowground ecology for plant protection from root-feeding insects. Applied Soil Ecology, 2016, 108, 96-107.	2.1	49
79	Differential phenotypic and genetic expression of defence compounds in a plantâ€“herbivore interaction along elevation. Royal Society Open Science, 2016, 3, 160226.	1.1	14
80	Sequestration of plant secondary metabolites by insect herbivores: molecular mechanisms and ecological consequences. Current Opinion in Insect Science, 2016, 14, 8-11.	2.2	78
81	Editorial overview: Ecology: The studies of plantâ€“insect interaction â€” approaches spanning genes to ecosystems. Current Opinion in Insect Science, 2016, 14, v-vii.	2.2	1
82	Plant diversity effects on insect herbivores and their natural enemies: current thinking, recent findings, and future directions. Current Opinion in Insect Science, 2016, 14, 1-7.	2.2	138
83	Herbivore Diet Breadth and Host Plant Defense Mediate the Tri-Trophic Effects of Plant Toxins on Multiple Coccinellid Predators. PLoS ONE, 2016, 11, e0155716.	1.1	10
84	Growthâ€“defense tradeoffs for two major antiâ€herbivore traits of the common milkweed <i>Asclepias syriaca</i>. Oikos, 2015, 124, 1404-1415.	1.2	75
85	Mating frequency positively associates with fitness in <i>Ophraella communa</i>. Ecological Entomology, 2015, 40, 292-298.	1.1	3
86	Plant species variation in bottomâ€up effects across three trophic levels: a test of traits and mechanisms. Ecological Entomology, 2015, 40, 676-686.	1.1	14
87	Editorial: Above-belowground interactions involving plants, microbes and insects. Frontiers in Plant Science, 2015, 6, 318.	1.7	44
88	Cell Wall Maturation of Arabidopsis Trichomes Is Dependent on Exocyst Subunit EXO70H4 and Involves Callose Deposition Â. Plant Physiology, 2015, 168, 120-131.	2.3	84
89	A Path-Loss Model Incorporating Shadowing for THz Band Propagation in Vegetation. , 2015, , .		15
90	Root-Feeding Insects and Their Interactions with Organisms in the Rhizosphere. Annual Review of Entomology, 2015, 60, 517-535.	5.7	105

#	Article	IF	Citations
91	Trade-off between constitutive and inducible resistance against herbivores is only partially explained by gene expression and glucosinolate production. Journal of Experimental Botany, 2015, 66, 2527-2534.	2.4	42
92	Soil microbial inoculation increases corn yield and insect attack. Agronomy for Sustainable Development, 2015, 35, 1511-1519.	2.2	19
93	Effect of Photoperiod on Developmental Fitness in<i>Ophraella communa</i>(Coleoptera:) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	0.7	4
94	Fertilization with beneficial microorganisms decreases tomato defenses against insect pests. Agronomy for Sustainable Development, 2014, 34, 649-656.	2.2	54
95	Tradeâ€offs between constitutive and induced defences drive geographical and climatic clines in pine chemical defences. Ecology Letters, 2014, 17, 537-546.	3.0	187
96	Differential allocation and deployment of direct and indirect defences by <i>Vicia sepium</i> along elevation gradients. Journal of Ecology, 2014, 102, 930-938.	1.9	53
97	High elevation <i>Plantago lanceolata</i> plants are less resistant to herbivory than their low elevation conspecifics: is it just temperature?. Ecography, 2014, 37, 950-959.	2.1	105
98	Fineâ€tuning of defences and counterâ€defences in a specialised plantâ€“herbivore system. Ecological Entomology, 2014, 39, 382-390.	1.1	4
99	Climateâ€driven change in plantâ€“insect interactions along elevation gradients. Functional Ecology, 2014, 28, 46-54.	1.7	189
100	A Path-Loss Model Incorporating Shadowing for THz Band Propagation in Vegetation. , 2014, , .		1
101	Turnover of plant lineages shapes herbivore phylogenetic beta diversity along ecological gradients. Ecology Letters, 2013, 16, 600-608.	3.0	71
102	Identity and combinations of arbuscular mycorrhizal fungal isolates influence plant resistance and insect preference. Ecological Entomology, 2013, 38, 330-338.	1.1	42
103	Arbuscular mycorrhizal fungi alter above- and below-ground chemical defense expression differentially among Asclepias species. Frontiers in Plant Science, 2013, 4, 361.	1.7	35
104	Cold Temperatures Increase Cold Hardiness in the Next Generation Ophraella communa Beetles. PLoS ONE, 2013, 8, e74760.	1.1	19
105	Ecological role of transgenerational resistance against biotic threats. Plant Signaling and Behavior, 2012, 7, 447-449.	1.2	17
106	Herbivory in the Previous Generation Primes Plants for Enhanced Insect Resistance Â Â. Plant Physiology, 2012, 158, 854-863.	2.3	394
107	Arbuscular mycorrhizal fungi mediate belowâ€ground plantâ€“herbivore interactions: a phylogenetic study. Functional Ecology, 2012, 26, 1033-1042.	1.7	42
108	The importance of root-produced volatiles as foraging cues for entomopathogenic nematodes. Plant and Soil, 2012, 358, 51-60.	1.8	137

#	Article	IF	Citations
109	Shifts in species richness, herbivore specialization, and plant resistance along elevation gradients. Ecology and Evolution, 2012, 2, 1818-1825.	0.8	148
110	Ecology and Evolution of Soil Nematode Chemotaxis. Journal of Chemical Ecology, 2012, 38, 615-628.	0.9	118
111	Toxic cardenolides: chemical ecology and coevolution of specialized plantâ€“herbivore interactions. New Phytologist, 2012, 194, 28-45.	3.5	345
112	Cardenolides in nectar may be more than a consequence of allocation to other plant parts: a phylogenetic study of <i><scp>A</scp>sclepias</i>. Functional Ecology, 2012, 26, 1100-1110.	1.7	62
113	High hostâ€plant nitrogen content: a prerequisite for the evolution of antâ€“caterpillar mutualism?. Journal of Evolutionary Biology, 2012, 25, 1658-1666.	0.8	13
114	Evolution of Specialization: A Phylogenetic Study of Host Range in the Red Milkweed Beetle (<i>Tetraopes tetraophthalmus</i>). American Naturalist, 2011, 177, 728-737.	1.0	74
115	Latitudinal patterns in plant defense: evolution of cardenolides, their toxicity and induction following herbivory. Ecology Letters, 2011, 14, 476-483.	3.0	203
116	Predicting root defence against herbivores during succession. Functional Ecology, 2011, 25, 368-379.	1.7	66
117	Direct and indirect root defences of milkweed (<i>Asclepias syriaca</i>): trophic cascades, tradeâ€offs and novel methods for studying subterranean herbivory. Journal of Ecology, 2011, 99, 16-25.	1.9	116
118	The latitudinal herbivoryâ€defence hypothesis takes a detour on the map. New Phytologist, 2011, 191, 589-592.	3.5	62
119	Evidence for adaptive radiation from a phylogenetic study of plant defenses. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18067-18072.	3.3	135
120	Plant defense against herbivory: progress in identifying synergism, redundancy, and antagonism between resistance traits. Current Opinion in Plant Biology, 2009, 12, 473-478.	3.5	123
121	Induced Responses to Herbivory and Jasmonate in Three Milkweed Species. Journal of Chemical Ecology, 2009, 35, 1326-1334.	0.9	84
122	Cardenolides, induced responses, and interactions between aboveâ€and belowground herbivores of milkweed (<i>Asclepias</i> spp.). Ecology, 2009, 90, 2393-2404.	1.5	69
123	First insights into specificity of belowground tritrophic interactions. Oikos, 2008, 117, 362-369.	1.2	103
124	In Defense of Roots: A Research Agenda for Studying Plant Resistance to Belowground Herbivory. Plant Physiology, 2008, 146, 875-880.	2.3	134
125	Simultaneous feeding by aboveground and belowground herbivores attenuates plantâ€mediated attraction of their respective natural enemies. Ecology Letters, 2007, 10, 926-936.	3.0	182
126	Recruitment of entomopathogenic nematodes by insect-damaged maize roots. Nature, 2005, 434, 732-737.	13.7	1,099

#	Article	IF	Citations
127	The evolution of larval foraging behaviour in response to host plant variation in a leaf beetle. Oikos, 2005, 109, 503-512.	1.2	19
128	The Role of Root-Produced Volatile Secondary Metabolites in Mediating Soil Interactions. , 0, , .		26