Alexander Wacker

List of Publications by Year
in descending order

81 papers	2,855 citations	136950 32 h-index	189892 50 g-index
84 all docs	84 docs citations	84 times ranked	2449 citing authors

#	Article	IF	Citations
1	Production, distribution, and abundance of long-chain omega-3 polyunsaturated fatty acids: a fundamental dichotomy between freshwater and terrestrial ecosystems. Environmental Reviews, 2015, 23, 414-424.	4.5	186
2	POLYUNSATURATED FATTY ACIDS: EVIDENCE FOR NON-SUBSTITUTABLE BIOCHEMICAL RESOURCES INDAPHNIA GALEATA. Ecology, 2001, 82, 2507-2520.	3.2	151
3	Allocation of essential lipids in Daphnia magna during exposure to poor food quality. Functional Ecology, 2007, 21, 738-747.	3.6	132
4	Life history consequences of sterol availability in the aquatic keystone species Daphnia. Oecologia, 2005, 144, 362-372.	2.0	116
5	Colimitation of a freshwater herbivore by sterols and polyunsaturated fatty acids. Proceedings of the Royal Society B: Biological Sciences, 2009, 276, 1805-1814.	2.6	114
6	A fundamental dichotomy in long-chain polyunsaturated fatty acid abundance between and within marine and terrestrial ecosystems. Environmental Reviews, 2017, 25, 163-174.	4.5	101
7	Multiple resource limitation theory applied to herbivorous consumers: Liebigâ€™s minimum rule vs. interactive coâ€limitation. Ecology Letters, 2012, 15, 142-150.	6.4	88
8	Interactions between limiting nutrients: Consequences for somatic and population growth of Daphnia magna. Limnology and Oceanography, 2010, 55, 2597-2607.	3.1	80
9	Elemental and fatty acid composition of snow algae in Arctic habitats. Frontiers in Microbiology, 2012, 3, 380.	3.5	74
10	Nutritional indicators and their uses in ecology. Ecology Letters, 2013, 16, 535-544.	6.4	74
11	Food quality effects of unsaturated fatty acids on larvae of the zebra mussel Dreissena polymorpha. Limnology and Oceanography, 2002, 47, 1242-1248.	3.1	72
12	Bridging factorial and gradient concepts of resource coâ€limitation: towards a general framework applied to consumers. Ecology Letters, 2016, 19, 201-215.	6.4	65
13	SPECIESâ€SPECIFIC VARIATION IN FATTY ACID CONCENTRATIONS OF FOUR PHYTOPLANKTON SPECIES: DOES PHOSPHORUS SUPPLY INFLUENCE THE EFFECT OF LIGHT INTENSITY OR TEMPERATURE?¹. Journal of Phycology, 2012, 48, 64-73.	2.3	61
14	Food quality controls reproduction of the zebra mussel (Dreissena polymorpha). Oecologia, 2003, 135, 332-338.	2.0	59
15	Dietary lipid quality affects temperature-mediated reaction norms of a freshwater key herbivore. Oecologia, 2012, 168, 901-912.	2.0	59
16	Simultaneous Effects of Light Intensity and Phosphorus Supply on the Sterol Content of Phytoplankton. PLoS ONE, 2010, 5, e15828.	2.5	54
17	Temperature affects the limitation of Daphnia magna by eicosapentaenoic acid, and the fatty acid composition of body tissue and eggs. Freshwater Biology, 2012, 57, 497-508.	2.4	54
18	Effects of temperature and dietary sterol availability on growth and cholesterol allocation of the aquatic keystone speciesDaphnia. Journal of Experimental Biology, 2009, 212, 3051-3059.	1.7	52

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19	Understanding and predicting physiological performance of organisms in fluctuating and multifactorial environments. Ecological Monographs, 2017, 87, 178-197.	5.4	51
20	Polyunsaturated Fatty Acids: Evidence for Non-Substitutable Biochemical Resources in Daphnia galeata. Ecology, 2001, 82, 2507.	3.2	49
21	Food quality controls egg quality of the zebra mussel Dreissena polymorpha: The role of fatty acids. Limnology and Oceanography, 2004, 49, 1794-1801.	3.1	49
22	Interactions between P-limitation and different C conditions on the fatty acid composition of an extremophile microalga. Extremophiles, 2011, 15, 597-609.	2.3	47
23	Biochemical nutrient requirements of the rotifer <scp>B</scp>rachionus calyciflorus: coâ€limitation by sterols and amino acids. Functional Ecology, 2012, 26, 1135-1143.	3.6	45
24	Temperatureâ€and cholesterolâ€induced changes in eicosapentaenoic acid limitation of Daphnia magna determined by a promising method to estimate growth saturation thresholds. Limnology and Oceanography, 2011, 56, 1273-1284.	3.1	44
25	Oligotrophication of a large, deep lake alters food quantity and quality constraints at the primary producerâ€“consumer interface. Oikos, 2012, 121, 1702-1712.	2.7	43
26	Light-Induced Changes in Fatty Acid Profiles of Specific Lipid Classes in Several Freshwater Phytoplankton Species. Frontiers in Plant Science, 2016, 7, 264.	3.6	43
27	Nitrate or ammonium: Influences of nitrogen source on the physiology of a green alga. Ecology and Evolution, 2019, 9, 1070-1082.	1.9	41
28	Growth Rate Hypothesis does not apply across colimiting conditions: cholesterol limitation affects phosphorus homoeostasis of an aquatic herbivore. Functional Ecology, 2011, 25, 1206-1214.	3.6	39
29	Thresholds for Sterol-Limited Growth of Daphnia magna: A Comparative Approach Using 10 Different Sterols. Journal of Chemical Ecology, 2014, 40, 1039-1050.	1.8	39
30	Strong influences of larval diet history on subsequent postâ€settlement growth in the freshwater molluscDreissena polymorpha. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 2113-2119.	2.6	37
31	Linking primary producer diversity and food quality effects on herbivores: A biochemical perspective. Scientific Reports, 2017, 7, 11035.	3.3	37
32	Seasonal changes in the accumulation of polyunsaturated fatty acids in zooplankton. Journal of Plankton Research, 2013, 35, 121-134.	1.8	36
33	Phytoplankton sterol contents vary with temperature, phosphorus and silicate supply: a study on three freshwater species. European Journal of Phycology, 2012, 47, 138-145.	2.0	32
34	The mode of nutrition of mixotrophic flagellates determines the food quality for their consumers. Functional Ecology, 2007, 21, 1092-1098.	3.6	31
35	Environmental concentrations of pharmaceuticals directly affect phytoplankton and effects propagate through trophic interactions. Ecotoxicology and Environmental Safety, 2018, 156, 271-278.	6.0	31
36	Carbon assimilation mode in mixotrophs and the fatty acid composition of their rotifer consumers. Freshwater Biology, 2009, 54, 2189-2199.	2.4	28

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37	Photosynthetic sensitivity of phytoplankton to commonly used pharmaceuticals and its dependence on cellular phosphorus status. Ecotoxicology, 2016, 25, 697-707.	2.4	25
38	Discrimination between freshwater and marine fish using fatty acids: ecological implications and future perspectives. Environmental Reviews, 2020, 28, 546-559.	4.5	25
39	Plantâ€“soil feedback effects altered by aboveground herbivory explain plant species abundance in the landscape. Ecology, 2020, 101, e03023.	3.2	24
40	Photosynthetic and fatty acid acclimation of four phytoplankton species in response to light intensity and phosphorus availability. European Journal of Phycology, 2015, 50, 288-300.	2.0	23
41	Covariance modulates the effect of joint temperature and food variance on ectotherm lifeâ€history traits. Ecology Letters, 2016, 19, 143-152.	6.4	22
42	Temperature-induced changes in body lipid composition affect vulnerability to oxidative stress in Daphnia magna. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2019, 232, 101-107.	1.6	22
43	Food quantityâ€“quality coâ€limitation: Interactive effects of dietary carbon and essential lipid supply on population growth of a freshwater rotifer. Freshwater Biology, 2019, 64, 903-912.	2.4	21
44	Settlement pattern of the zebra mussel, Dreissena polymorpha, as a function of depth in Lake Constance. Archiv FÃ¼r Hydrobiologie, 2003, 158, 289-301.	1.1	20
45	Measuring bacterial activity and community composition at high hydrostatic pressure using a novel experimental approach: a pilot study. FEMS Microbiology Ecology, 2015, 91, .	2.7	20
46	Planktotrons: A novel indoor mesocosm facility for aquatic biodiversity and food web research. Limnology and Oceanography: Methods, 2017, 15, 663-677.	2.0	20
47	Longevity of Daphnia and the attenuation of stress responses by melatonin. BMC Physiology, 2014, 14, 8.	3.6	19
48	Body size and food thresholds for zero growth in Dreissena polymorpha: a mechanism underlying intraspecific competition. Freshwater Biology, 2008, 53, 2356-2363.	2.4	17
49	Light causes selection among two phycoerythrin-rich Synechococcus isolates from Lake Constance. FEMS Microbiology Ecology, 1998, 25, 171-178.	2.7	16
50	High food quality of prey lowers its risk of extinction. Oikos, 2017, 126, 1501-1510.	2.7	16
51	The relative importance of plant-soil feedbacks for plant-species performance increases with decreasing intensity of herbivory. Oecologia, 2019, 190, 651-664.	2.0	16
52	Daphnia's dilemma of adjusting carbon budgets when facing limitations by food quantity and the essential organic compound cholesterol. Journal of Experimental Biology, 2013, 217, 1079-86.	1.7	15
53	Maternal diet of Daphnia magna affects offspring growth responses to supplementation with particular polyunsaturated fatty acids. Hydrobiologia, 2015, 755, 267-282.	2.0	15
54	One man's trash is another man's treasureâ€”the effect of bacteria on phytoplanktonâ€“zooplankton interactions in chemostat systems. Limnology and Oceanography: Methods, 2018, 16, 629-639.	2.0	14

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55	Feeding in the frequency domain: coarserâ€grained environments increase consumer sensitivity to resource variability, covariance and phase. Ecology Letters, 2019, 22, 1104-1114.	6.4	14
56	Melatonin synthesis follows a daily cycle in Daphnia. Journal of Plankton Research, 2015, 37, 636-644.	1.8	13
57	Diet quality determines lipase gene expression and lipase/esterase activity in Daphnia pulex. Biology Open, 2017, 6, 210-216.	1.2	13
58	Phytoplankton Community Responses to Interactions Between Light Intensity, Light Variations, and Phosphorus Supply. Frontiers in Environmental Science, 2020, 8, .	3.3	12
59	Effects of protein and calcium concentrations of artificial diets on the growth and survival of the land snailArianta arbustorum. Invertebrate Reproduction and Development, 2004, 46, 47-53.	0.8	11
60	Interspecific competition in phytoplankton drives the availability of essential mineral and biochemical nutrients. Ecology, 2015, 96, 2467-2477.	3.2	11
61	Fitness response variation within and among consumer species can be co-mediated by food quantity and biochemical quality. Scientific Reports, 2019, 9, 16126.	3.3	11
62	Constraints by oxygen and food quality on carbon pathway regulation: a co-limitation study with an aquatic key herbivore. Ecology, 2014, 95, 3068-3079.	3.2	9
63	Ecophysiological strategies for growth under varying light and organic carbon supply in two species of green microalgae differing in their motility. Phytochemistry, 2017, 144, 43-51.	2.9	9
64	Sex-Specific Differences in Essential Lipid Requirements of Daphnia magna. Frontiers in Ecology and Evolution, 2018, 6, .	2.2	9
65	Lipids in the food of a terrestrial snail. Invertebrate Reproduction and Development, 2005, 47, 205-212.	0.8	8
66	Changes in the competitive abilities of two rotifers feeding on mixotrophic flagellates. Journal of Plankton Research, 2010, 32, 1727-1731.	1.8	8
67	Inter- and intraspecific differences in rotifer fatty acid composition during acclimation to low-quality food. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190644.	4.0	8
68	Use of ciliate and phytoplankton taxonomic composition for the estimation of eicosapentaenoic acid concentration in lakes. Freshwater Biology, 2012, 57, 1385-1398.	2.4	7
69	The neonate nutrition hypothesis: early feeding affects the body stoichiometry of <scp>D</scp>aphnia offspring. Freshwater Biology, 2013, 58, 2333-2344.	2.4	6
70	Acclimation to dietary shifts impacts the carbon budgets of Daphnia magna. Journal of Plankton Research, 2014, 36, 848-858.	1.8	5
71	Geographic clines in Daphnia magnaâ€™s circadian clock gene expression: Local adaptation to photoperiod. Zoology, 2021, 144, 125856.	1.2	5
72	Field studies on breeding sites of Culicoides Latreille (Diptera: Ceratopogonidae) in agriculturally used and natural habitats. Scientific Reports, 2021, 11, 10007.	3.3	5

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73	Crustaceans in a changing world. Zoology, 2021, 146, 125921.	1.2	5
74	Ecological impacts of photosynthetic light harvesting in changing aquatic environments: A systematic literature map. Ecology and Evolution, 2022, 12, e8753.	1.9	5
75	Evaluating the relevance of species sorting and physiological plasticity of phytoplankton communities grown in a multifactor environment. Freshwater Biology, 2021, 66, 1992-2003.	2.4	4
76	A comment on â€œVariability in plant nutrients reduces insect herbivore performanceâ€• Rethinking Ecology, 0, 4, 79-87.	0.0	4
77	More Light Please: Daphnia Benefit From Light Pollution by Increased Tolerance Toward Cyanobacterial Chymotrypsin Inhibitors. Frontiers in Ecology and Evolution, 2022, 10, .	2.2	4
78	A sterol-mediated gleanerâ€“opportunist trade-off underlies the evolution of grazer resistance to cyanobacteria. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, 20220178.	2.6	3
79	Impact of parasitic mite infection on a terrestrial snail. Invertebrate Reproduction and Development, 2008, 51, 69-75.	0.8	1
80	Thermal Fluctuations Yield Sex-Specific Differences of Ingestion Rates of the Littoral Mysid Neomysis integer. Frontiers in Marine Science, 0, 9, .	2.5	1
81	Phenotypic Diversity and Plasticity of Photoresponse Across an Environmentally Contrasting Family of Phytoflagellates. Frontiers in Plant Science, 2021, 12, 707541.	3.6	0