Lloyd S Peck

List of Publications by Year
in descending order

135 papers	9,574 citations	31976 53 h-index	42399 92 g-index
141 all docs	141 docs citations	141 times ranked	7143 citing authors

#	Article	IF	Citations
1	Climate change and the marine ecosystem of the western Antarctic Peninsula. Philosophical Transactions of the Royal Society B: Biological Sciences, 2007, 362, 149-166.	4.0	343
2	Extreme sensitivity of biological function to temperature in Antarctic marine species. Functional Ecology, 2004, 18, 625-630.	3.6	332
3	Animal temperature limits and ecological relevance: effects of size, activity and rates of change. Functional Ecology, 2009, 23, 248-256.	3.6	311
4	Thermal limits and adaptation in marine Antarctic ectotherms: an integrative view. Philosophical Transactions of the Royal Society B: Biological Sciences, 2007, 362, 2233-2258.	4.0	304
5	Macrophysiology: A Conceptual Reunification. American Naturalist, 2009, 174, 595-612.	2.1	298
6	The spatial structure of Antarctic biodiversity. Ecological Monographs, 2014, 84, 203-244.	5.4	286
7	Environmental constraints on life histories in Antarctic ecosystems: tempos, timings and predictability. Biological Reviews, 2006, 81, 75.	10.4	278
8	Polar gigantism dictated by oxygen availability. Nature, 1999, 399, 114-115.	27.8	272
9	Climate Change and Invasibility of the Antarctic Benthos. Annual Review of Ecology, Evolution, and Systematics, 2007, 38, 129-154.	8.3	248
10	Antarctic environmental change and biological responses. Science Advances, 2019, 5, eaaz0888.	10.3	215
11	Ecophysiology of Antarctic marine ectotherms: limits to life. Polar Biology, 2002, 25, 31-40.	1.2	193
12	Polar research: Six priorities for Antarctic science. Nature, 2014, 512, 23-25.	27.8	189
13	Acclimation and thermal tolerance in Antarctic marine ectotherms. Journal of Experimental Biology, 2014, 217, 16-22.	1.7	187
14	Upper Temperature Limits of Tropical Marine Ectotherms: Global Warming Implications. PLoS ONE, 2011, 6, e29340.	2.5	176
15	Insights into shell deposition in the Antarctic bivalve Laternula elliptica: gene discovery in the mantle transcriptome using 454 pyrosequencing. BMC Genomics, 2010, 11, 362.	2.8	160
16	Adult acclimation to combined temperature and p<scp>H</scp> stressors significantly enhances reproductive outcomes compared to shortâ€term exposures. Journal of Animal Ecology, 2015, 84, 773-784.	2.8	159
17	Metabolic Demand, Oxygen Supply, and Critical Temperatures in the Antarctic BivalveLaternula elliptica. Physiological and Biochemical Zoology, 2002, 75, 123-133.	1.5	144
18	HSP70 heat shock proteins and environmental stress in Antarctic marine organisms: A mini-review. Marine Genomics, 2009, 2, 11-18.	1.1	144

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19	Marine invertebrate skeleton size varies with latitude, temperature and carbonate saturation: implications for global change and ocean acidification. Global Change Biology, 2012, 18, 3026-3038.	9.5	131
20	Early Larval Development of the Sydney Rock OysterSaccostrea glomerataUnder Near-Future Predictions of CO₂-Driven Ocean Acidification. Journal of Shellfish Research, 2009, 28, 431-437.	0.9	129
21	Poor acclimation capacities in Antarctic marine ectotherms. Marine Biology, 2010, 157, 2051-2059.	1.5	122
22	Links between the structure of an Antarctic shallow-water community and ice-scour frequency. Oecologia, 2004, 141, 121-129.	2.0	118
23	A Cold Limit to Adaptation in the Sea. Trends in Ecology and Evolution, 2016, 31, 13-26.	8.7	116
24	Temperature and basal metabolism in two Antarctic marine herbivores. Journal of Experimental Marine Biology and Ecology, 1989, 127, 1-12.	1.5	113
25	Antarctic marine molluscs do have an HSP70 heat shock response. Cell Stress and Chaperones, 2008, 13, 39-49.	2.9	112
26	Organisms and responses to environmental change. Marine Genomics, 2011, 4, 237-243.	1.1	112
27	Hyperoxia alleviates thermal stress in the Antarctic bivalve, Laternula elliptica: evidence for oxygen limited thermal tolerance. Polar Biology, 2006, 29, 688-693.	1.2	106
28	Growth and metabolism in the Antarctic brachiopod Liothyrella uva. Philosophical Transactions of the Royal Society B: Biological Sciences, 1997, 352, 851-858.	4.0	103
29	Variability and change in the west Antarctic Peninsula marine system: Research priorities and opportunities. Progress in Oceanography, 2019, 173, 208-237.	3.2	102
30	Amphipod crustacean size spectra: new insights in the relationship between size and oxygen. Oikos, 2004, 106, 167-175.	2.7	101
31	Antarctic Marine Biodiversity: Adaptations, Environments and Responses to Change. , 2018, , 105-236.		99
32	Predatory behaviour and metabolic costs in the Antarctic muricid gastropod Trophon longstaffi. Polar Biology, 2003, 26, 208-217.	1.2	93
33	Warming by 1Â°C Drives Species and Assemblage Level Responses in Antarcticaâ€™s Marine Shallows. Current Biology, 2017, 27, 2698-2705.e3.	3.9	91
34	The HSP70 heat shock response in the Antarctic fish Harpagifer antarcticus. Polar Biology, 2007, 31, 171-180.	1.2	87
35	Antarctica: The final frontier for marine biological invasions. Global Change Biology, 2019, 25, 2221-2241.	9.5	87
36	Hypoxia impacts large adults first: consequences in a warming world. Global Change Biology, 2013, 19, 2251-2263.	9.5	86

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37	Triggers of the HSP70 stress response: environmental responses and laboratory manipulation in an Antarctic marine invertebrate (Nacella concinna). Cell Stress and Chaperones, 2009, 14, 649-660.	2.9	85
38	Lack of acclimation in Ophionotus victoriae: brittle stars are not fish. Polar Biology, 2009, 32, 399-402.	1.2	84
39	Lack of an HSP70 heat shock response in two Antarctic marine invertebrates. Polar Biology, 2008, 31, 1059-1065.	1.2	83
40	Biodiversity in marine invertebrate responses to acute warming revealed by a comparative multiâ€omics approach. Global Change Biology, 2017, 23, 318-330.	9.5	80
41	Mitochondrial function and critical temperature in the Antarctic bivalve, Laternula elliptica. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 1999, 124, 179-189.	1.8	79
42	Life in the intertidal: Cellular responses, methylation and epigenetics. Functional Ecology, 2018, 32, 1982-1994.	3.6	79
43	The myth of metabolic cold adaptation: oxygen consumption in stenothermal Antarctic bivalves. Geological Society Special Publication, 2000, 177, 441-450.	1.3	78
44	Remote sensing reveals Antarctic green snow algae as important terrestrial carbon sink. Nature Communications, 2020, 11, 2527.	12.8	75
45	Limitation of size by hypoxia in the fruit flyDrosophila melanogaster. Journal of Experimental Zoology Part A, Comparative Experimental Biology, 2005, 303A, 968-975.	1.3	72
46	Prospects for surviving climate change in Antarctic aquatic species. , 2005, 2, 9.		67
47	Deciphering mollusc shell production: the roles of genetic mechanisms through to ecology, aquaculture and biomimetics. Biological Reviews, 2020, 95, 1812-1837.	10.4	63
48	Geographical variation in thermal tolerance within Southern Ocean marine ectotherms. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2009, 153, 154-161.	1.8	60
49	Ocean acidification does not impact shell growth or repair of the Antarctic brachiopod Liothyrella uva (Broderip, 1833). Journal of Experimental Marine Biology and Ecology, 2015, 462, 29-35.	1.5	60
50	Blue mussel shell shape plasticity and natural environments: a quantitative approach. Scientific Reports, 2018, 8, 2865.	3.3	60
51	Snow algae communities in Antarctica: metabolic and taxonomic composition. New Phytologist, 2019, 222, 1242-1255.	7.3	60
52	Juveniles Are More Resistant to Warming than Adults in 4 Species of Antarctic Marine Invertebrates. PLoS ONE, 2013, 8, e66033.	2.5	59
53	Two methods for the assessment of the oxygen content of small volumes of seawater. Journal of Experimental Marine Biology and Ecology, 1990, 141, 53-62.	1.5	57
54	The effects of temperature on walking and righting in temperate and Antarctic crustaceans. Polar Biology, 2006, 29, 978-987.	1.2	57

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55	Physiological plasticity, long term resistance or acclimation to temperature, in the Antarctic bivalve, Laternula elliptica. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2012, 162, 16-21.	1.8	57
56	Summer metabolism and seasonal changes in biochemical composition of the Antarctic brachiopod Liothyrella uva (Broderip, 1833). Journal of Experimental Marine Biology and Ecology, 1987, 114, 85-97.	1.5	56
57	Very slow development in two Antarctic bivalve molluscs, the infaunal clam Laternula elliptica and the scallop Adamussium colbecki. Marine Biology, 2007, 150, 1191-1197.	1.5	55
58	Iceberg Scour and Shell Damage in the Antarctic Bivalve Laternula elliptica. PLoS ONE, 2012, 7, e46341.	2.5	53
59	Lack of coherence in the warming responses of marine crustaceans. Functional Ecology, 2014, 28, 895-903.	3.6	53
60	Antarctic ecosystems in transition â€“ life between stresses and opportunities. Biological Reviews, 2021, 96, 798-821.	10.4	53
61	Biomineralization plasticity and environmental heterogeneity predict geographical resilience patterns of foundation species to future change. Global Change Biology, 2019, 25, 4179-4193.	9.5	52
62	Long-term effects of altered pH and temperature on the feeding energetics of the Antarctic sea urchin,Sterechinus neumayeri. Biodiversity, 2016, 17, 34-45.	1.1	51
63	Revealing higher than expected meiofaunal diversity in Antarctic sediments: a metabarcoding approach. Scientific Reports, 2017, 7, 6094.	3.3	51
64	Transcriptional response to heat stress in the Antarctic bivalve Laternula elliptica. Journal of Experimental Marine Biology and Ecology, 2010, 391, 65-72.	1.5	50
65	Bomb signals in old Antarctic brachiopods. Nature, 1996, 380, 207-208.	27.8	49
66	Experimental influence of pH on the early life-stages of sea urchins II: increasing parental exposure times gives rise to different responses. Invertebrate Reproduction and Development, 2014, 58, 161-175.	0.8	49
67	Feeding, metabolism and growth in the Antarctic limpet, Nacella concinna (Strebel 1908). Marine Biology, 2001, 138, 553-560.	1.5	48
68	Seasonal variation in the diversity and abundance of pelagic larvae of Antarctic marine invertebrates. Marine Biology, 2009, 156, 2033-2047.	1.5	48
69	Latitudinal trends in shell production cost from the tropics to the poles. Science Advances, 2017, 3, e1701362.	10.3	48
70	Patterns of shell repair in articulate brachiopods indicate size constitutes a refuge from predation. Marine Biology, 2009, 156, 1993-2000.	1.5	47
71	Hypoxia tolerance associated with activity reduction is a key adaptation for Laternula elliptica seasonal energetics. Oecologia, 2007, 153, 29-36.	2.0	46
72	Strong Population Genetic Structure in a Broadcast-Spawning Antarctic Marine Invertebrate. Journal of Heredity, 2011, 102, 55-66.	2.4	45

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73	Highâ€Energy Phosphate Metabolism during Exercise and Recovery in Temperate and Antarctic Scallops: An In Vivo 31Pâ€NMR Study. Physiological and Biochemical Zoology, 2003, 76, 622-633.	1.5	44
74	Genomics: applications to Antarctic ecosystems. Polar Biology, 2005, 28, 351-365.	1.2	44
75	Brachiopods and climate change. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2007, 98, 451-456.	0.3	44
76	Low heat shock thresholds in wild Antarctic inter-tidal limpets (Nacella concinna). Cell Stress and Chaperones, 2008, 13, 51-58.	2.9	44
77	No ocean acidification effects on shell growth and repair in the New Zealand brachiopod Calloria inconspicua (Sowerby, 1846). ICES Journal of Marine Science, 2016, 73, 920-926.	2.5	44
78	Acidification effects on biofouling communities: winners and losers. Global Change Biology, 2015, 21, 1907-1913.	9.5	43
79	Thermal plasticity of mitochondria: A latitudinal comparison between Southern Ocean molluscs. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2009, 152, 423-430.	1.8	40
80	Growth in the slow lane: protein metabolism in the Antarctic limpetNacella concinna(Strebel) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.7	37
81	Trace metals in the Antarctic soft-shelled clam Laternula elliptica : implications for metal pollution from Antarctic research stations. Polar Biology, 2001, 24, 808-817.	1.2	36
82	Movements and burrowing activity in the Antarctic bivalve molluscs Laternula elliptica and Yoldia eightsi. Polar Biology, 2004, 27, 357-367.	1.2	35
83	Multi-year observations on the gametogenic ecology of the Antarctic seastar Odontaster validus. Marine Biology, 2007, 153, 15-23.	1.5	35
84	Seasonal variation in the gametogenic ecology of the Antarctic scallop Adamussium colbecki. Polar Biology, 2003, 26, 727-733.	1.2	33
85	Thermal Reaction Norms and the Scale of Temperature Variation: Latitudinal Vulnerability of Intertidal Nacellid Limpets to Climate Change. PLoS ONE, 2012, 7, e52818.	2.5	29
86	Physiological flexibility: the key to success and survival for Antarctic fairy shrimps in highly fluctuating extreme environments. Freshwater Biology, 2004, 49, 1195-1205.	2.4	28
87	Low global sensitivity of metabolic rate to temperature in calcified marine invertebrates. Oecologia, 2014, 174, 45-54.	2.0	28
88	Thicker Shells Compensate Extensive Dissolution in Brachiopods under Future Ocean Acidification. Environmental Science & Technology, 2019, 53, 5016-5026.	10.0	28
89	Protein Synthesis, RNA Concentrations, Nitrogen Excretion, and Metabolism Vary Seasonally in the Antarctic Holothurian Heterocucumis steineni (Ludwig 1898). Physiological and Biochemical Zoology, 2004, 77, 556-569.	1.5	27
90	Characterisation of the mantle transcriptome and biomineralisation genes in the blunt-gaper clam, Mya truncata. Marine Genomics, 2016, 27, 47-55.	1.1	27

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91	Ship traffic connects Antarcticaâ€™s fragile coasts to worldwide ecosystems. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	27
92	A global horizon scan of issues impacting marine and coastal biodiversity conservation. Nature Ecology and Evolution, 2022, 6, 1262-1270.	7.8	27
93	Antarctic intertidal limpet ecophysiology: A winterâ€“summer comparison. Journal of Experimental Marine Biology and Ecology, 2011, 403, 39-45.	1.5	25
94	Adaptation of Proteins to the Cold in Antarctic Fish: A Role for Methionine?. Genome Biology and Evolution, 2019, 11, 220-231.	2.5	25
95	Antarctic ecosystem responses following iceâ€shelf collapse and iceberg calving: Science review and future research. Wiley Interdisciplinary Reviews: Climate Change, 2021, 12, .	8.1	25
96	Resilience in Greenland intertidal Mytilus: The hidden stress defense. Science of the Total Environment, 2021, 767, 144366.	8.0	25
97	DeVries: the Art of not freezing fish. Journal of Experimental Biology, 2015, 218, 2146-2147.	1.7	24
98	Spatial and temporal dynamics of Antarctic shallow soft-bottom benthic communities: ecological drivers under climate change. BMC Ecology, 2019, 19, 27.	3.0	23
99	Metabolic flexibility: the key to long-term evolutionary success in Bryozoa?. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, S18-21.	2.6	22
100	Invertebrate muscle performance at high latitude: swimming activity in the Antarctic scallop, Adamussium colbecki. Polar Biology, 2005, 28, 464-469.	1.2	21
101	Lack of long-term acclimation in Antarctic encrusting species suggests vulnerability to warming. Nature Communications, 2019, 10, 3383.	12.8	21
102	Legacy and Emerging Persistent Organic Pollutants in Antarctic Benthic Invertebrates near Rothera Point, Western Antarctic Peninsula. Environmental Science & Technology, 2020, 54, 2763-2771.	10.0	21
103	Sweepstake reproductive success and collective dispersal produce chaotic genetic patchiness in a broadcast spawner. Science Advances, 2021, 7, eabj4713.	10.3	21
104	Thermal dependency of burrowing in three species within the bivalve genus Laternula: a latitudinal comparison. Marine Biology, 2009, 156, 1977-1984.	1.5	19
105	Limpet feeding rate and the consistency of physiological response to temperature. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2014, 184, 563-570.	1.5	18
106	Very slow embryonic and larval development in the Antarctic limpet Nacella polaris. Polar Biology, 2016, 39, 2273-2280.	1.2	15
107	Reproductive ecology of the circumpolar Antarctic nemertean Parborlasia corrugatus: No evidence for inter-annual variation. Journal of Experimental Marine Biology and Ecology, 2011, 404, 98-107.	1.5	14
108	Variability among individuals is generated at the gene expression level. Ecology, 2015, 96, 2004-2014.	3.2	14

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109	Molecular Responses to Thermal and Osmotic Stress in Arctic Intertidal Mussels (Mytilus edulis): The Limits of Resilience. Genes, 2022, 13, 155.	2.4	14
110	Burrowing in the Antarctic anemone, Halcampoides sp., from Signy Island, Antarctica. Journal of Experimental Marine Biology and Ecology, 2000, 252, 45-55.	1.5	13
111	Metabolic responses to temperature stress under elevated pCO2 in Crepidula fornicata. Journal of Molluscan Studies, 2015, 81, 238-246.	1.2	13
112	A century of coping with environmental and ecological changes via compensatory biomineralization in mussels. Global Change Biology, 2021, 27, 624-639.	9.5	13
113	Latitudinal patterns in intertidal ecosystem structure in West Greenland suggest resilience to climate change. Ecography, 2021, 44, 1156-1168.	4.5	13
114	Remote Sensing Phenology of Antarctic Green and Red Snow Algae Using WorldView Satellites. Frontiers in Plant Science, 2021, 12, 671981.	3.6	13
115	Quantifying susceptibility of marine invertebrate biocomposites to dissolution in reduced pH. Royal Society Open Science, 2019, 6, 190252.	2.4	12
116	Global gradients in intertidal species richness and functional groups. ELife, 2021, 10, .	6.0	12
117	Hierarchical Population Genetic Structure in a Direct Developing Antarctic Marine Invertebrate. PLoS ONE, 2013, 8, e63954.	2.5	10
118	Morphological variation in taxonomic characters of the Antarctic starfish Odontaster validus. Polar Biology, 2018, 41, 2159-2165.	1.2	10
119	Large within, and between, species differences in marine cellular responses: Unpredictability in a changing environment. Science of the Total Environment, 2021, 794, 148594.	8.0	10
120	A Light, Portable Apparatus for the Assessment of Invertebrate Heartbeat Rate. Journal of Experimental Biology, 1988, 136, 495-498.	1.7	10
121	The reproductive ecology of the Antarctic bivalve Aequiyoldia eightsii (Protobranchia: Sareptidae) follows neither Antarctic nor taxonomic patterns. Polar Biology, 2018, 41, 1693-1706.	1.2	9
122	Growth of the Antarctic octocoral Primnoella scotiae and predation by the anemone Dactylanthus antarcticus. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 92, 73-78.	1.4	8
123	Seasonality of oxygen consumption in five common Antarctic benthic marine invertebrates. Polar Biology, 2018, 41, 897-908.	1.2	8
124	Benthic Biodiversity, Carbon Storage and the Potential for Increasing Negative Feedbacks on Climate Change in Shallow Waters of the Antarctic Peninsula. Biology, 2022, 11, 320.	2.8	8
125	Life Beyond the Ice. , 2015, , 229-252.		7
126	Shell thickness of Nucella lapillus in the North Sea increased over the last 130 years despite ocean acidification. Communications Earth & Environment, 2022, 3, .	6.8	6

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127	Life in the freezer: protein metabolism in Antarctic fish. Royal Society Open Science, 2022, 9, 211272.	2.4	5
128	Juvenile morphology of the large Antarctic canopy-forming brown alga, Desmarestia menziesii J. Agardh. Polar Biology, 2019, 42, 2097-2103.	1.2	4
129	Multiyear trend in reproduction underpins interannual variation in gametogenic development of an Antarctic urchin. Scientific Reports, 2021, 11, 18868.	3.3	2
130	Understanding Adaptations and Responses to Change in Antarctica: Recent Physiological and Genomic Advances in Marine Environments. , 2012, , 157-182.		2
131	Evidence for Carbonate System Mediated Shape Shift in an Intertidal Predatory Gastropod. Frontiers in Marine Science, 0, 9, .	2.5	2
132	Response to van der Meer. Current Biology, 2017, 27, R1303-R1304.	3.9	1
133	Variable heat shock response in Antarctic biofouling serpulid worms. Cell Stress and Chaperones, 2021, 26, 945-954.	2.9	1
134	Life in the extreme environments of our planet under pressure. , 2020, , 151-183.		0
135	The ecophysiology of responding to change in polar marine benthos. , 2020, , 184-217.		0