Mark W Denny

List of Publications by Year
in descending order

95 papers	7,611 citations	71102 41 h-index	64796 79 g-index
99 all docs	99 docs citations	99 times ranked	6013 citing authors

#	Article	IF	Citations
1	Biology and the Mechanics of the Wave-Swept Environment. , 1988, , .		572
2	Mechanical Limits to Size in Waveâ€Swept Organisms. Ecological Monographs, 1985, 55, 69-102.	5.4	410
3	Discovery of Lignin in Seaweed Reveals Convergent Evolution of Cell-Wall Architecture. Current Biology, 2009, 19, 169-175.	3.9	371
4	Consequences of Surf-Zone Turbulence for Settlement and External Fertilization. American Naturalist, 1989, 134, 859-889.	2.1	344
5	The Largest, Smallest, Highest, Lowest, Longest, and Shortest: Extremes in Ecology. Ecology, 1993, 74, 1677-1692.	3.2	238
6	SETTLEMENT OF MARINE ORGANISMS IN FLOW. Annual Review of Ecology, Evolution, and Systematics, 1997, 28, 317-339.	6.7	235
7	Predicting Physical Disturbance: Mechanistic Approaches to the Study of Survivorship on Waveâ€Swept Shores. Ecological Monographs, 1995, 65, 371-418.	5.4	213
8	Mechanical Consequences of Size in Waveâ€Swept Algae. Ecological Monographs, 1994, 64, 287-313.	5.4	211
9	Pulsed delivery of subthermocline water to Conch Reef (Florida Keys) by internal tidal bores. Limnology and Oceanography, 1996, 41, 1490-1501.	3.1	210
10	Thermal variation, thermal extremes and the physiological performance of individuals. Journal of Experimental Biology, 2015, 218, 1956-1967.	1.7	196
11	Organismal climatology: analyzing environmental variability at scales relevant to physiological stress. Journal of Experimental Biology, 2010, 213, 995-1003.	1.7	185
12	Spreading the risk: Small-scale body temperature variation among intertidal organisms and its implications for species persistence. Journal of Experimental Marine Biology and Ecology, 2011, 400, 175-190.	1.5	176
13	Quantifying â€œwave exposureâ€: a simple device for recording maximum velocity and results of its use at several field sites. Journal of Experimental Marine Biology and Ecology, 1994, 181, 9-29.	1.5	172
14	The role of gastropod pedal mucus in locomotion. Nature, 1980, 285, 160-161.	27.8	161
15	The mechanics of wave-swept algae. Journal of Experimental Biology, 2002, 205, 1355-1362.	1.7	160
16	On the prediction of extreme ecological events. Ecological Monographs, 2009, 79, 397-421.	5.4	136
17	The fallacy of the average: on the ubiquity, utility and continuing novelty of Jensen's inequality. Journal of Experimental Biology, 2017, 220, 139-146.	1.7	132
18	QUANTIFYING SCALE IN ECOLOGY: LESSONS FROM AWAVE-SWEPT SHORE. Ecological Monographs, 2004, 74, 513-532.	5.4	117

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19	The role of temperature and desiccation stress in limiting the localâ€scale distribution of the owl limpet, <i>Lottia gigantea</i>. Functional Ecology, 2009, 23, 756-767.	3.6	115
20	Diatom sinkings speeds: Improved predictions and insight from a modified Stokes' law. Limnology and Oceanography, 2010, 55, 2513-2525.	3.1	111
21	Lift as a mechanism of patch initiation in mussel beds. Journal of Experimental Marine Biology and Ecology, 1987, 113, 231-245.	1.5	109
22	The mechanics of wave-swept algae. Journal of Experimental Biology, 2002, 205, 1355-62.	1.7	108
23	Natural intrusions of hypoxic, low pH water into nearshore marine environments on the California coast. Continental Shelf Research, 2012, 45, 108-115.	1.8	107
24	Surviving hydrodynamic forces in a wave-swept environment: Consequences of morphology in the feather boa kelp, Egregia menziesii (Turner). Journal of Experimental Marine Biology and Ecology, 1995, 190, 109-133.	1.5	103
25	The menace of momentum: Dynamic forces on flexible organisms. Limnology and Oceanography, 1998, 43, 955-968.	3.1	101
26	Predicting wave exposure in the rocky intertidal zone: Do bigger waves always lead tolarger forces?. Limnology and Oceanography, 2003, 48, 1338-1345.	3.1	98
27	Hot limpets: predicting body temperature in a conductance-mediated thermal system. Journal of Experimental Biology, 2006, 209, 2409-2419.	1.7	95
28	Wave forces on intertidal organisms: A case study1. Limnology and Oceanography, 1985, 30, 1171-1187.	3.1	93
29	Thermal stress on intertidal limpets: long-term hindcasts and lethal limits. Journal of Experimental Biology, 2006, 209, 2420-2431.	1.7	85
30	Marine Ecomechanics. Annual Review of Marine Science, 2010, 2, 89-114.	11.6	83
31	Thermal stress and morphological adaptations in limpets. Functional Ecology, 2009, 23, 292-301.	3.6	72
32	Long-term, high frequency in situ measurements of intertidal mussel bed temperatures using biomimetic sensors. Scientific Data, 2016, 3, 160087.	5.3	69
33	Confronting the physiological bottleneck: A challenge from ecomechanics. Integrative and Comparative Biology, 2009, 49, 197-201.	2.0	68
34	Fracture mechanics and the survival of wave-swept macroalgae. Journal of Experimental Marine Biology and Ecology, 1989, 127, 211-228.	1.5	67
35	Limits to running speed in dogs, horses and humans. Journal of Experimental Biology, 2008, 211, 3836-3849.	1.7	67
36	Importance of Behavior and Morphological Traits for Controlling Body Temperature in Littorinid Snails. Biological Bulletin, 2011, 220, 209-223.	1.8	67

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37	Ocean waves, nearshore ecology, and natural selection. Aquatic Ecology, 2006, 40, 439-461.	1.5	66
38	Modulation of wave forces on kelp canopies by alongshore currents. Limnology and Oceanography, 2003, 48, 860-871.	3.1	57
39	Life in the maelstrom: The biomechanics of wave-swept rocky shores. Trends in Ecology and Evolution, 1987, 2, 61-66.	8.7	54
40	Flow Forces on Seaweeds: Field Evidence for Roles of Wave Impingement and Organism Inertia. Biological Bulletin, 2008, 215, 295-308.	1.8	50
41	Scaling Up in Ecology: Mechanistic Approaches. Annual Review of Ecology, Evolution, and Systematics, 2012, 43, 1-22.	8.3	50
42	Jet propulsion in the cold: mechanics of swimming in the Antarctic scallop Adamussium colbecki. Journal of Experimental Biology, 2006, 209, 4503-4514.	1.7	47
43	Biophysics, environmental stochasticity, and the evolution of thermal safety margins in intertidal limpets. Journal of Experimental Biology, 2012, 215, 934-947.	1.7	43
44	Revised Estimates of the Effects of Turbulence on Fertilization in the Purple Sea Urchin, Strongylocentrotus purpuratus. Biological Bulletin, 2002, 203, 275-277.	1.8	40
45	To break a coralline: mechanical constraints on the size and survival of a wave-swept seaweed. Journal of Experimental Biology, 2008, 211, 3433-3441.	1.7	40
46	Death by small forces: a fracture and fatigue analysis of wave-swept macroalgae. Journal of Experimental Biology, 2007, 210, 2231-2243.	1.7	36
47	Anchor Ice and Benthic Disturbance in Shallow Antarctic Waters: Interspecific Variation in Initiation and Propagation of Ice Crystals. Biological Bulletin, 2011, 221, 155-163.	1.8	35
48	DESICCATION PROTECTION AND DISRUPTION: A TRADEâ€OFF FOR AN INTERTIDAL MARINE ALGA¹. Journal of Phycology, 2008, 44, 1164-1170.	2.3	34
49	Currents and turbulence within a kelp forest (<i>Macrocystis pyrifera</i>): Insights from a dynamically scaled laboratory model. Limnology and Oceanography, 2010, 55, 1145-1158.	3.1	34
50	Interaction of waves and currents with kelp forests (Macrocystis pyrifera): Insights from a dynamically scaled laboratory model. Limnology and Oceanography, 2013, 58, 790-802.	3.1	34
51	A limpet shell shape that reduces drag: laboratory demonstration of a hydrodynamic mechanism and an exploration of its effectiveness in nature. Canadian Journal of Zoology, 1989, 67, 2098-2106.	1.0	33
52	Techniques for predicting the lifetimes of wave-swept macroalgae: a primer on fracture mechanics and crack growth. Journal of Experimental Biology, 2007, 210, 2213-2230.	1.7	31
53	A series of unfortunate events: characterizing the contingent nature of physiological extremes using long-term environmental records. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20192333.	2.6	31
54	To bend a coralline: effect of joint morphology on flexibility and stress amplification in an articulated calcified seaweed. Journal of Experimental Biology, 2008, 211, 3421-3432.	1.7	29

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55	Hydrodynamic forces and surface topography: Centimeter-scale spatial variation in wave forces. Limnology and Oceanography, 2008, 53, 579-588.	3.1	29
56	Impact of heating rate on cardiac thermal tolerance in the California mussel, <i>Mytilus californianus</i>. Journal of Experimental Biology, 2019, 222, .	1.7	28
57	Performance in a variable world: using Jensenâ€™s inequality to scale up from individuals to populations. , 2019, 7, coz053.		27
58	Preference Versus Performance: Body Temperature of the Intertidal Snail Chlorostoma funebralis. Biological Bulletin, 2011, 220, 107-117.	1.8	27
59	Failure by fatigue in the field: a model of fatigue breakage for the macroalga Mazzaella, with validation. Journal of Experimental Biology, 2011, 214, 1571-1585.	1.7	26
60	Molecular Biomechanics of Molluscan Mucous Secretions. , 1983, , 431-465.		25
61	Forces on intertidal organisms due to breaking ocean waves: Design and application of a telemetry system1. Limnology and Oceanography, 1982, 27, 178-183.	3.1	23
62	A simple device for recording the maximum force exerted on intertidal organisms1. Limnology and Oceanography, 1983, 28, 1269-1274.	3.1	23
63	Warm microhabitats drive both increased respiration and growth rates of intertidal consumers. Marine Ecology - Progress Series, 2015, 522, 127-143.	1.9	23
64	Indefatigable: an erect coralline alga is highly resistant to fatigue. Journal of Experimental Biology, 2013, 216, 3772-3780.	1.7	22
65	The importance of wave exposure on the structural integrity of rhodoliths. Journal of Experimental Marine Biology and Ecology, 2018, 503, 109-119.	1.5	19
66	The Intrigue of the Interface. Science, 2008, 320, 886-886.	12.6	18
67	A single heat-stress bout induces rapid and prolonged heat acclimation in the California mussel,<i>Mytilus californianus</i>. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20202561.	2.6	17
68	Mussels' acclimatization to high, variable temperatures is lost slowly upon transfer to benign conditions. Journal of Experimental Biology, 2020, 223, .	1.7	16
69	â€œInternal tide poolsâ€•prolong kelp forest hypoxic events. Limnology and Oceanography, 2017, 62, 2864-2878.	3.1	15
70	An inexpensive instrument for measuring wave exposure and water velocity. Limnology and Oceanography: Methods, 2011, 9, 204-214.	2.0	12
71	Life in an extreme environment: Characterizing wave-imposed forces in the rocky intertidal zone using high temporal resolution hydrodynamic measurements. Limnology and Oceanography, 2016, 61, 1750-1761.	3.1	11
72	Wave Dissipation by Bottom Friction on the Inner Shelf of a Rocky Shore. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015963.	2.6	11

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73	Rapid Range Expansion of a Marine Ectotherm Reveals the Demographic and Ecological Consequences of Short-Term Variability in Seawater Temperature and Dissolved Oxygen. American Naturalist, 2022, 199, 523-550.	2.1	11
74	Experimental determination of the hydrodynamic forces responsible for wave impact events. Journal of Experimental Marine Biology and Ecology, 2015, 469, 123-130.	1.5	10
75	The extraordinary joint material of an articulated coralline alga. II. Modeling the structural basis of its mechanical properties. Journal of Experimental Biology, 2016, 219, 1843-1850.	1.7	9
76	Grand Opportunities: Strategies for Addressing Grand Challenges in Organismal Animal Biology. Integrative and Comparative Biology, 2011, 51, 7-13.	2.0	8
77	The extraordinary joint material of an articulated coralline alga. I. Mechanical characterization of a key adaptation. Journal of Experimental Biology, 2016, 219, 1833-1842.	1.7	8
78	Survival in spatially variable thermal environments: Consequences of induced thermal defense. Integrative Zoology, 2018, 13, 392-410.	2.6	8
79	Sensory perception plays a larger role in foraging efficiency than heavy-tailed movement strategies. Ecological Modelling, 2019, 404, 69-82.	2.5	8
80	Wave-Energy Dissipation: Seaweeds and Marine Plants Are Ecosystem Engineers. Fluids, 2021, 6, 151.	1.7	8
81	Biophysics, bioenergetics and mechanistic approaches to ecology. Journal of Experimental Biology, 2012, 215, 871-871.	1.7	7
82	PISCO: Advances Made Through the Formation of a Large-Scale, Long-Term Consortium for Integrated Understanding of Coastal Ecosystem Dynamics. Oceanography, 2019, 32, 16-25.	1.0	7
83	Physiological Consequences of Oceanic Environmental Variation: Life from a Pelagic Organism's Perspective. Annual Review of Marine Science, 2022, 14, 25-48.	11.6	6
84	Bivalves rapidly repair shells damaged by fatigue and bolster strength. Journal of Experimental Biology, 2021, 224, .	1.7	6
85	The fine art of surfacing: Its efficacy in broadcast spawning. Journal of Theoretical Biology, 2012, 294, 40-47.	1.7	5
86	United We Fail: Group <i>versus</i> Individual Strength in the California Sea Mussel, <i>Mytilus californianus</i>. Biological Bulletin, 2014, 227, 61-67.	1.8	5
87	The limits of convergence in the collective behavior of competing marine taxa. Ecology and Evolution, 2022, 12, e8747.	1.9	5
88	Effects of heat acclimation on cardiac function in the intertidal mussel <i>Mytilus californianus</i>: can laboratory-based indices predict survival in the field?. Journal of Experimental Biology, 2022, 225, .	1.7	5
89	Mechanical fatigue fractures bivalve shells. Journal of Experimental Biology, 2020, 223, .	1.7	4
90	Establishing typical values for hemocyte mortality in individual California mussels, Mytilus californianus. Fish and Shellfish Immunology, 2020, 100, 70-79.	3.6	4

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91	Longâ€term mechanistic hindcasts predict the structure of experimentallyâ€warmed intertidal communities. Oikos, 2020, 129, 1645-1656.	2.7	4
92	Can the giant snake predict palaeoclimate?. Nature, 2009, 460, E3-E4.	27.8	3
93	Quantifying the top-down effects of grazers on a rocky shore: selective grazing and the potential for competition. Marine Ecology - Progress Series, 2016, 553, 49-66.	1.9	3
94	John Moffit Gosline, BA, PhD, FRSC (1943â€“2016). Journal of Experimental Biology, 2017, 220, 334-335.	1.7	0
95	Establishing typical values for hemocyte mortality in individual mussels (Mytilus californianus) using fluorescenceâ€activated cell sorting. FASEB Journal, 2020, 34, 1-1.	0.5	0