J Emmett Duffy

List of Publications by Year
in descending order

148 papers	30,534 citations	13865 67 h-index	9589 142 g-index
157 all docs	157 docs citations	157 times ranked	29328 citing authors

#	Article	IF	Citations
1	Biodiversity loss and its impact on humanity. Nature, 2012, 486, 59-67.	27.8	4,969
2	Impacts of Biodiversity Loss on Ocean Ecosystem Services. Science, 2006, 314, 787-790.	12.6	3,422
3	Climate Change Impacts on Marine Ecosystems. Annual Review of Marine Science, 2012, 4, 11-37.	11.6	2,117
4	A global synthesis reveals biodiversity loss as a major driver of ecosystem change. Nature, 2012, 486, 105-108.	27.8	1,750
5	Effects of biodiversity on the functioning of trophic groups and ecosystems. Nature, 2006, 443, 989-992.	27.8	1,516
6	The functional role of biodiversity in ecosystems: incorporating trophic complexity. Ecology Letters, 2007, 10, 522-538.	6.4	808
7	The Functions of Biological Diversity in an Age of Extinction. Science, 2012, 336, 1401-1406.	12.6	644
8	Investigating the relationship between biodiversity and ecosystem multifunctionality: challenges and solutions. Methods in Ecology and Evolution, 2014, 5, 111-124.	5.2	533
9	Biodiversity and ecosystem function: the consumer connection. Oikos, 2002, 99, 201-219.	2.7	515
10	Biodiversity enhances ecosystem multifunctionality across trophic levels and habitats. Nature Communications, 2015, 6, 6936.	12.8	515
11	Linking the influence and dependence of people on biodiversity across scales. Nature, 2017, 546, 65-72.	27.8	474
12	Biodiversity effects in the wild are common and as strong as key drivers of productivity. Nature, 2017, 549, 261-264.	27.8	466
13	Integrating abundance and functional traits reveals new global hotspots of fish diversity. Nature, 2013, 501, 539-542.	27.8	445
14	Biodiversity loss, trophic skew and ecosystem functioning. Ecology Letters, 2003, 6, 680-687.	6.4	438
15	Guiding ecological principles for marine spatial planning. Marine Policy, 2010, 34, 955-966.	3.2	435
16	Why biodiversity is important to the functioning of realâ€world ecosystems. Frontiers in Ecology and the Environment, 2009, 7, 437-444.	4.0	394
17	Global patterns in the impact of marine herbivores on benthic primary producers. Ecology Letters, 2012, 15, 912-922.	6.4	350
18	Understanding the Effects of Marine Biodiversity on Communities and Ecosystems. Annual Review of Ecology, Evolution, and Systematics, 2007, 38, 739-766.	8.3	349

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19	Biodiversity and the functioning of seagrass ecosystems. Marine Ecology - Progress Series, 2006, 311, 233-250.	1.9	336
20	Biodiversity, productivity and stability in real food webs. Trends in Ecology and Evolution, 2003, 18, 628-632.	8.7	324
21	STRONG IMPACTS OF GRAZING AMPHIPODS ON THE ORGANIZATION OF A BENTHIC COMMUNITY. Ecological Monographs, 2000, 70, 237-263.	5.4	313
22	Chemical Defense Against Different Marine Herbivores: Are Amphipods Insect Equivalents?. Ecology, 1987, 68, 1567-1580.	3.2	301
23	BioTIME: A database of biodiversity time series for the Anthropocene. Global Ecology and Biogeography, 2018, 27, 760-786.	5.8	289
24	Food and Shelter as Determinants of Food Choice by an Herbivorous Marine Amphipod. Ecology, 1991, 72, 1286-1298.	3.2	279
25	Grazer diversity effects on ecosystem functioning in seagrass beds. Ecology Letters, 2003, 6, 637-645.	6.4	276
26	Essential ocean variables for global sustained observations of biodiversity and ecosystem changes. Global Change Biology, 2018, 24, 2416-2433.	9.5	272
27	Eusociality in a coral-reef shrimp. Nature, 1996, 381, 512-514.	27.8	250
28	Herbivore Resistance to Seaweed Chemical Defense: The Roles of Mobility and Predation Risk. Ecology, 1994, 75, 1304-1319.	3.2	242
29	Ecosystem consequences of diversity depend on food chain length in estuarine vegetation. Ecology Letters, 2005, 8, 301-309.	6.4	239
30	GRAZER DIVERSITY, FUNCTIONAL REDUNDANCY, AND PRODUCTIVITY IN SEAGRASS BEDS: AN EXPERIMENTAL TEST. Ecology, 2001, 82, 2417-2434.	3.2	222
31	Marine biodiversity and ecosystem functioning: what's known and what's next?. Oikos, 2015, 124, 252-265.	2.7	195
32	Biodiversity mediates topâ€“down control in eelgrass ecosystems: a global comparativeâ€experimental approach. Ecology Letters, 2015, 18, 696-705.	6.4	188
33	Amphipods on seaweeds: partners or pests?. Oecologia, 1990, 83, 267-276.	2.0	187
34	Diversity has stronger topâ€down than bottomâ€up effects on decomposition. Ecology, 2009, 90, 1073-1083.	3.2	187
35	Effects of macroalgal species identity and richness on primary production in benthic marine communities. Ecology Letters, 2005, 8, 1165-1174.	6.4	178
36	Biodiversity enhances reef fish biomass and resistance to climate change. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6230-6235.	7.1	178

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37	Coral reef ecosystem functioning: eight core processes and the role of biodiversity. Frontiers in Ecology and the Environment, 2019, 17, 445-454.	4.0	175
38	Seaweed Adaptations to Herbivory. BioScience, 1990, 40, 368-375.	4.9	158
39	Diversity and dispersal interactively affect predictability of ecosystem function. Nature, 2006, 441, 1139-1143.	27.8	153
40	Molecular and morphological evolution of the amphipod radiation of Lake Baikal. Molecular Phylogenetics and Evolution, 2005, 35, 323-343.	2.7	150
41	Advancing Marine Biological Observations and Data Requirements of the Complementary Essential Ocean Variables (EOVs) and Essential Biodiversity Variables (EBVs) Frameworks. Frontiers in Marine Science, 2018, 5, .	2.5	148
42	Prey nutritional quality and the effectiveness of chemical defenses against tropical reef fishes. Oecologia, 1992, 90, 333-339.	2.0	147
43	Plant species diversity and composition: experimental effects on marine epifaunal assemblages. Marine Ecology - Progress Series, 2001, 224, 55-67.	1.9	142
44	Host-Plant Specialization Decreases Predation on a Marine Amphipod: An Herbivore in Plant's Clothing. Ecology, 1990, 71, 733-743.	3.2	141
45	Biodiversity and human well-being: an essential link for sustainable development. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20162091.	2.6	137
46	Blue Carbon Storage Capacity of Temperate Eelgrass (<scp>Zostera marina</scp>) Meadows. Global Biogeochemical Cycles, 2018, 32, 1457-1475.	4.9	130
47	Species-specific impacts of grazing amphipods in an eelgrass-bed community. Marine Ecology - Progress Series, 2001, 223, 201-211.	1.9	126
48	Biodiversity in a changing climate: a synthesis of current and projected trends in the US. Frontiers in Ecology and the Environment, 2013, 11, 465-473.	4.0	125
49	Toward a Coordinated Global Observing System for Seagrasses and Marine Macroalgae. Frontiers in Marine Science, 2019, 6, .	2.5	123
50	Seaweed-herbivore-predator interactions: host-plant specialization reduces predation on small herbivores. Oecologia, 1989, 81, 418-427.	2.0	122
51	Why biodiversity is important to oceanography: potential roles of genetic, species, and trophic diversity in pelagic ecosystem processes. Marine Ecology - Progress Series, 2006, 311, 179-189.	1.9	119
52	MULTIPLE ORIGINS OF EUSOCIALITY AMONG SPONGE-DWELLING SHRIMPS (SYNALPHEUS). Evolution; International Journal of Organic Evolution, 2000, 54, 503-516.	2.3	112
53	A general biodiversityâ€“function relationship is mediated by trophic level. Oikos, 2017, 126, 18-31.	2.7	112
54	Temporal shifts in topâ€down vs. bottomâ€up control of epiphytic algae in a seagrass ecosystem. Ecology, 2013, 94, 510-520.	3.2	111

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55	Phylogenetic evidence for an ancient rapid radiation of Caribbean sponge-dwelling snapping shrimps (Synalpheus). Molecular Phylogenetics and Evolution, 2004, 30, 563-581.	2.7	105
56	A brown-world cascade in the dung decomposer food web of an alpine meadow: effects of predator interactions and warming. Ecological Monographs, 2011, 81, 313-328.	5.4	103
57	Host-associated microbiomes drive structure and function of marine ecosystems. PLoS Biology, 2019, 17, e3000533.	5.6	103
58	Partitioning the effects of algal species identity and richness on benthic marine primary production. Oikos, 2006, 115, 170-178.	2.7	100
59	Envisioning a Marine Biodiversity Observation Network. BioScience, 2013, 63, 350-361.	4.9	96
60	Multitrophic functional diversity predicts ecosystem functioning in experimental assemblages of estuarine consumers. Ecology, 2015, 96, 2973-2983.	3.2	96
61	Securing ocean benefits for society in the face of climate change. Marine Policy, 2013, 40, 154-159.	3.2	91
62	Species boundaries, specialization, and the radiation of sponge-dwelling alpheid shrimp. Biological Journal of the Linnean Society, 1996, 58, 307-324.	1.6	82
63	Specialist herbivores reduce their susceptibility to predation by feeding on the chemically defended seaweed Avrainvillea longicaulis. Limnology and Oceanography, 1990, 35, 1734-1743.	3.1	79
64	Kin structure, ecology and the evolution of social organization in shrimp: a comparative analysis. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 575-584.	2.6	79
65	Physiological effects of diet mixing on consumer fitness: a metaâ€analysis. Ecology, 2013, 94, 565-572.	3.2	79
66	Herbivore and predator diversity interactively affect ecosystem properties in an experimental marine community. Ecology Letters, 2008, 11, 598-608.	6.4	74
67	Latitude, temperature, and habitat complexity predict predation pressure in eelgrass beds across the Northern Hemisphere. Ecology, 2018, 99, 29-35.	3.2	70
68	RESOURCEâ€ASSOCIATED POPULATION SUBDIVISION IN A SYMBIOTIC CORALâ€REEF SHRIMP. Evolution; International Journal of Organic Evolution, 1996, 50, 360-373.	2.3	69
69	Effects of sponge secondary metabolites in different diets on feeding by three groups of consumers. Journal of Experimental Marine Biology and Ecology, 1994, 180, 137-149.	1.5	66
70	Biodiversity, host specificity, and dominance by eusocial species among sponge-dwelling alpheid shrimp on the Belize Barrier Reef. Diversity and Distributions, 2006, 12, 165-178.	4.1	66
71	Assessing National Biodiversity Trends for Rocky and Coral Reefs through the Integration of Citizen Science and Scientific Monitoring Programs. BioScience, 2017, 67, 134-146.	4.9	64
72	Chemical defense in the seaweed Ochtodes secundiramea (Montagne) Howe (Rhodophyta): effects of its monoterpenoid components upon diverse coral-reef herbivores. Journal of Experimental Marine Biology and Ecology, 1988, 114, 249-260.	1.5	61

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73	Field experimental evidence that grazers mediate transition between microalgal and seagrass dominance. Limnology and Oceanography, 2014, 59, 1053-1064.	3.1	61
74	Abundance and local-scale processes contribute to multi-phyla gradients in global marine diversity. Science Advances, 2017, 3, e1700419.	10.3	61
75	Seasonal and interannual change in a Chesapeake Bay eelgrass community: Insights into biotic and abiotic control of community structure. Limnology and Oceanography, 2010, 55, 1499-1520.	3.1	58
76	RELATIVE AND INTERACTIVE EFFECTS OF PLANT AND GRAZER RICHNESS IN A BENTHIC MARINE COMMUNITY. Ecology, 2008, 89, 2518-2528.	3.2	56
77	Marine protected areas enhance coral reef functioning by promoting fish biodiversity. Conservation Letters, 2019, 12, e12638.	5.7	56
78	The Central Role of Grazing in Seagrass Ecology. , 0, , 463-501.		55
79	A review of the spongeâ€dwelling snapping shrimp from Carrie Bow Cay, Belize, with description of Zuzalpheus, new genus, and six new species (Crustacea: Decapoda: Alpheidae). Zootaxa, 2007, 1602, 1-89.	0.5	54
80	Coordinated group response to nest intruders in social shrimp. Biology Letters, 2005, 1, 49-52.	2.3	53
81	Bioacoustic measurements complement visual biodiversity surveys: preliminary evidence from four shallow marine habitats. Marine Ecology - Progress Series, 2017, 575, 207-215.	1.9	53
82	Linking Capacity Development to GOOS Monitoring Networks to Achieve Sustained Ocean Observation. Frontiers in Marine Science, 2018, 5, .	2.5	49
83	Grazer diversity affects resistance to multiple stressors in an experimental seagrass ecosystem. Oikos, 2010, 119, 1625-1635.	2.7	44
84	Consumer diversity mediates invasion dynamics at multiple trophic levels. Oikos, 2006, 113, 515-529.	2.7	43
85	Biodiversity and food web structure influence shortâ€term accumulation of sediment organic matter in an experimental seagrass system. Limnology and Oceanography, 2007, 52, 590-602.	3.1	42
86	Squidpops: A Simple Tool to Crowdsource a Global Map of Marine Predation Intensity. PLoS ONE, 2015, 10, e0142994.	2.5	42
87	Nutrient Enrichment and Food Web Composition Affect Ecosystem Metabolism in an Experimental Seagrass Habitat. PLoS ONE, 2009, 4, e7473.	2.5	38
88	Food chain length and omnivory determine the stability of a marine subtidal food web. Journal of Animal Ecology, 2011, 80, 586-594.	2.8	38
89	Evolutionary transitions towards eusociality in snapping shrimps. Nature Ecology and Evolution, 2017, 1, 96.	7.8	38
90	Colony Structure of the Social Snapping Shrimp Synalpheus filidigitus in Belize. Journal of Crustacean Biology, 1999, 19, 283.	0.8	37

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91	Effects of biodiversity on the functioning of ecosystems: a summary of 164 experimental manipulations of species richness. Ecology, 2009, 90, 854-854.	3.2	36
92	Predator control of marine communities increases with temperature across 115 degrees of latitude. Science, 2022, 376, 1215-1219.	12.6	36
93	Sponge host characteristics shape the community structure of their shrimp associates. Marine Ecology - Progress Series, 2010, 407, 1-12.	1.9	35
94	Food Web Structure in a Chesapeake Bay Eelgrass Bed as Determined through Gut Contents and 13C and 15N Isotope Analysis. Estuaries and Coasts, 2011, 34, 701-711.	2.2	33
95	Amphipods Are Not All Created Equal: A Reply to Bell. Ecology, 1991, 72, 354-358.	3.2	32
96	Biofuels: Algae. Science, 2009, 326, 1345-1345.	12.6	32
97	Ecology and Evolution of Eusociality in Sponge-Dwelling Shrimp. , 2007, , 387-410.		32
98	Herbivore community determines the magnitude and mechanism of nutrient effects on subtropical and tropical seagrasses. Journal of Ecology, 2018, 106, 401-412.	4.0	31
99	Synalpheus regalis, New Species, a Sponge-Dwelling Shrimp from the Belize Barrier Reef, with Comments on Host Specificity in Synalpheus. Journal of Crustacean Biology, 1996, 16, 564.	0.8	30
100	Top-down and bottom-up controls on sediment organic matter composition in an experimental seagrass ecosystem. Limnology and Oceanography, 2007, 52, 2595-2607.	3.1	30
101	Multi-Locus Phylogeny of Sponge-Dwelling Snapping Shrimp (Caridea: Alpheidae: Synalpheus) Supports Morphology-Based Species Concepts. Journal of Crustacean Biology, 2011, 31, 352-360.	0.8	30
102	Climate drives the geography of marine consumption by changing predator communities. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 28160-28166.	7.1	29
103	The Central Role of Grazing in Seagrass Ecology. , 2007, , 463-501.		29
104	Resource-Associated Population Subdivision in a Symbiotic Coral-Reef Shrimp. Evolution; International Journal of Organic Evolution, 1996, 50, 360.	2.3	27
105	A Response to Scientific and Societal Needs for Marine Biological Observations. Frontiers in Marine Science, 2019, 6, .	2.5	26
106	Marine dock pilings foster diverse, native cryptobenthic fish assemblages across bioregions. Ecology and Evolution, 2017, 7, 7069-7079.	1.9	22
107	The sponge-dwelling snapping shrimps (Crustacea, Decapoda, Alpheidae, Synalpheus) of Discovery Bay, Jamaica, with descriptions of four new species. Zootaxa, 2009, 2199, 1-57.	0.5	22
108	BIODIVERSITY MEDIATES PRODUCTIVITY THROUGH DIFFERENT MECHANISMS AT ADJACENT TROPHIC LEVELS. Ecology, 2007, 88, 2821-2829.	3.2	21

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109	Patterns of seagrass community response to local shoreline development. Estuaries and Coasts, 2014, 37, 1549-1561.	2.2	21
110	Reproductive skew drives patterns of sexual dimorphism in sponge-dwelling snapping shrimps. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20150342.	2.6	20
111	Social Control of Reproduction and Breeding Monopolization in the Eusocial Snapping ShrimpSynalpheus elizabethae. American Naturalist, 2015, 186, 660-668.	2.1	19
112	Sociality in Shrimps. , 2017, , 224-250.		17
113	Natural experiments and long-term monitoring are critical to understand and predict marine hostâ€“microbe ecology and evolution. PLoS Biology, 2021, 19, e3001322.	5.6	17
114	Influence of sociality on allometric growth and morphological differentiation in sponge-dwelling alpheid shrimp. Biological Journal of the Linnean Society, 0, 94, 527-540.	1.6	16
115	Phylogenetic community ecology and the role of social dominance in spongeâ€dwelling shrimp. Ecology Letters, 2012, 15, 704-713.	6.4	16
116	Dimensions of biodiversity in Chesapeake Bay demersal fishes: patterns and drivers through space and time. Ecosphere, 2014, 5, 1-48.	2.2	16
117	Sponge-dwelling snapping shrimps of CuraÃ§ao, with descriptions of three new species . Zootaxa, 2010, 2372, 221-262.	0.5	16
118	Sponge-dwelling snapping shrimps (Alpheidae: Synalpheus) of Barbados, West Indies, with a description of a new eusocial species. Zootaxa, 2011, 2834, 1.	0.5	15
119	Two New Species of Sponge-Dwelling Snapping Shrimp from the Belizean Barrier Reef, with a Synopsis of the Synalpheus brooksi Species Complex. American Museum Novitates, 2006, 3543, 1-22.	0.6	14
120	Epifaunal invertebrates as predators of juvenile bay scallops (Argopecten irradians). Journal of Experimental Marine Biology and Ecology, 2014, 454, 18-25.	1.5	14
121	Ecological generalism facilitates the evolution of sociality in snapping shrimps. Ecology Letters, 2017, 20, 1516-1525.	6.4	13
122	Species richness and identity both determine the biomass of global reef fish communities. Nature Communications, 2021, 12, 6875.	12.8	12
123	Establishing the Foundation for the Global Observing System for Marine Life. Frontiers in Marine Science, 2021, 8, .	2.5	11
124	Disease surveillance by artificial intelligence links eelgrass wasting disease to ocean warming across latitudes. Limnology and Oceanography, 2022, 67, 1577-1589.	3.1	11
125	Joint effects of patch edges and habitat degradation on faunal predation risk in a widespread marine foundation species. Ecology, 2021, 102, e03316.	3.2	10
126	Grazer Diversity, Functional Redundancy, and Productivity in Seagrass Beds: An Experimental Test. Ecology, 2001, 82, 2417.	3.2	10

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127	A Scientific Synthesis of Marine Protected Areas in the United States: Status and Recommendations. Frontiers in Marine Science, 2022, 9, .	2.5	10
128	Decline and Local Extinction of Caribbean Eusocial Shrimp. PLoS ONE, 2013, 8, e54637.	2.5	9
129	The biogeography of community assembly: latitude and predation drive variation in community trait distribution in a guild of epifaunal crustaceans. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, 20211762.	2.6	9
130	Species boundaries, specialization, and the radiation of sponge-dwelling alpheid shrimp. Biological Journal of the Linnean Society, 1996, 58, 307-324.	1.6	8
131	Microsatellite development suggests evidence of polyploidy in the social spongeâ€dwelling snapping shrimp Zuzalpheus brooksi. Molecular Ecology Resources, 2008, 8, 890-894.	4.8	8
132	Formâ€“function relationships in a marine foundation species depend on scale: a shoot to global perspective from a distributed ecological experiment. Oikos, 2018, 127, 364-374.	2.7	7
133	Influence of environmental stressors and grazer immigration on ecosystem properties of an experimental eelgrass community. Journal of Experimental Marine Biology and Ecology, 2016, 480, 45-53.	1.5	6
134	Development of genomeâ€•and transcriptomeâ€derived microsatellites in related species of snapping shrimps with highly duplicated genomes. Molecular Ecology Resources, 2017, 17, e160-e173.	4.8	6
135	Role of food web interactions in promoting resilience to nutrient enrichment in a brackish water eelgrass (Zostera marina) ecosystem. Limnology and Oceanography, 2021, 66, 2810-2826.	3.1	6
136	The potential of trait-based approaches to contribute to marine conservation. Marine Policy, 2015, 51, 148-150.	3.2	5
137	Biodiversity effects: trends and exceptions â€“ a reply to Wardle and Jonsson. Frontiers in Ecology and the Environment, 2010, 8, 11-12.	4.0	4
138	Allometry of individual reproduction and defense in eusocial colonies: A comparative approach to trade-offs in social sponge-dwelling Synalpheus shrimps. PLoS ONE, 2018, 13, e0193305.	2.5	4
139	Patterns of Consumption Across a Caribbean Seascape: Roles of Habitat and Consumer Species Composition Through Time. Frontiers in Marine Science, 2021, 8, .	2.5	4
140	Correction of statistical miscalculation slightly alters conclusions about diversity effects for DouglassetÂal.(2008). Ecology Letters, 2008, 11, E9-E10.	6.4	3
141	Reefs need richness. Nature Ecology and Evolution, 2019, 3, 149-150.	7.8	3
142	The U.S. Ocean Biocode. Marine Technology Society Journal, 2021, 55, 140-141.	0.4	3
143	Marine Life 2030: Forecasting Changes to Ocean Biodiversity to Inform Decision-Making: A Critical Role for the Marine Biodiversity Observation Network (MBON). Marine Technology Society Journal, 2021, 55, 84-85.	0.4	3
144	Seagrass structural and elemental indicators reveal high nutrient availability within a tropical lagoon in Panama. PeerJ, 2021, 9, e11308.	2.0	3

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145	A doubling of stony coral cover on shallow forereefs at Carrie Bow Cay, Belize from 2014 to 2019. Scientific Reports, 2021, 11, 19185.	3.3	2
146	Marine Life 2030: Building Global Knowledge of Marine Life for Local Action in the Ocean Decade. Marine Technology Society Journal, 2022, 56, 112-113.	0.4	1
147	The Coral Reef Sentinels Program: A Mars Shot for Blue Planetary Health. Marine Technology Society Journal, 2021, 55, 118-119.	0.4	0
148	Sea changes: structure and functioning of emerging marine communities. , 2009, , 95-114.		0