

# David Mouillot

## List of Publications by Year in descending order

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Version: 2024-02-01

109  
papers

18,961  
citations

28190

55  
h-index

28224

105  
g-index

113  
all docs

113  
docs citations

113  
times ranked

18484  
citing authors

#	ARTICLE	IF	CITATIONS
1	NEW MULTIDIMENSIONAL FUNCTIONAL DIVERSITY INDICES FOR A MULTIFACETED FRAMEWORK IN FUNCTIONAL ECOLOGY. <i>Ecology</i> , 2008, 89, 2290-2301.	1.5	2,318
2	Functional richness, functional evenness and functional divergence: the primary components of functional diversity. <i>Oikos</i> , 2005, 111, 112-118.	1.2	1,475
3	The Biodiversity of the Mediterranean Sea: Estimates, Patterns, and Threats. <i>PLoS ONE</i> , 2010, 5, e11842.	1.1	1,439
4	A functional approach reveals community responses to disturbances. <i>Trends in Ecology and Evolution</i> , 2013, 28, 167-177.	4.2	1,341
5	Functional diversity measures: an overview of their redundancy and their ability to discriminate community assembly rules. <i>Functional Ecology</i> , 2010, 24, 867-876.	1.7	1,105
6	Spatial mismatch and congruence between taxonomic, phylogenetic and functional diversity: the need for integrative conservation strategies in a changing world. <i>Ecology Letters</i> , 2010, 13, 1030-1040.	3.0	721
7	Rare Species Support Vulnerable Functions in High-Diversity Ecosystems. <i>PLoS Biology</i> , 2013, 11, e1001569.	2.6	654
8	Predicting climate-driven regime shifts versus rebound potential in coral reefs. <i>Nature</i> , 2015, 518, 94-97.	13.7	607
9	Defining and measuring ecological specialization. <i>Journal of Applied Ecology</i> , 2010, 47, 15-25.	1.9	568
10	Contrasting changes in taxonomic vs. functional diversity of tropical fish communities after habitat degradation. <i>Ecological Applications</i> , 2010, 20, 1512-1522.	1.8	452
11	Functional over-redundancy and high functional vulnerability in global fish faunas on tropical reefs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 13757-13762.	3.3	391
12	Protecting the global ocean for biodiversity, food and climate. <i>Nature</i> , 2021, 592, 397-402.	13.7	359
13	Functional Structure of Biological Communities Predicts Ecosystem Multifunctionality. <i>PLoS ONE</i> , 2011, 6, e17476.	1.1	348
14	A guide for using functional diversity indices to reveal changes in assembly processes along ecological gradients. <i>Journal of Vegetation Science</i> , 2013, 24, 794-806.	1.1	316
15	Rare species contribute disproportionately to the functional structure of species assemblages. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20160084.	1.2	277
16	Functional ecology of fish: current approaches and future challenges. <i>Aquatic Sciences</i> , 2017, 79, 783-801.	0.6	270
17	Host specificity in phylogenetic and geographic space. <i>Trends in Parasitology</i> , 2011, 27, 355-361.	1.5	267
18	Functional Rarity: The Ecology of Outliers. <i>Trends in Ecology and Evolution</i> , 2017, 32, 356-367.	4.2	258

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19	Environmental DNA illuminates the dark diversity of sharks. <i>Science Advances</i> , 2018, 4, eaap9661.	4.7	222
20	Beyond taxonomic diversity patterns: how do $\hat{1}$ , $\hat{1}^2$ and $\hat{1}^3$ components of bird functional and phylogenetic diversity respond to environmental gradients across France?. <i>Global Ecology and Biogeography</i> , 2011, 20, 893-903.	2.7	193
21	Inferring food web structure from predator-prey body size relationships. <i>Methods in Ecology and Evolution</i> , 2013, 4, 1083-1090.	2.2	185
22	Gravity of human impacts mediates coral reef conservation gains. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6116-E6125.	3.3	185
23	Global Biogeography of Reef Fishes: A Hierarchical Quantitative Delineation of Regions. <i>PLoS ONE</i> , 2013, 8, e81847.	1.1	181
24	The multidimensionality of the niche reveals functional diversity changes in benthic marine biotas across geological time. <i>Ecology Letters</i> , 2011, 14, 561-568.	3.0	177
25	Quantifying Phylogenetic Beta Diversity: Distinguishing between "True" Turnover of Lineages and Phylogenetic Diversity Gradients. <i>PLoS ONE</i> , 2012, 7, e42760.	1.1	169
26	Disentangling the pathways of land use impacts on the functional structure of fish assemblages in Amazon streams. <i>Ecography</i> , 2018, 41, 219-232.	2.1	166
27	Quaternary coral reef refugia preserved fish diversity. <i>Science</i> , 2014, 344, 1016-1019.	6.0	148
28	Prioritizing phylogenetic diversity captures functional diversity unreliably. <i>Nature Communications</i> , 2018, 9, 2888.	5.8	144
29	Towards a consensus for calculating dendrogram-based functional diversity indices. <i>Oikos</i> , 2008, 117, 794-800.	1.2	143
30	Plate tectonics drive tropical reef biodiversity dynamics. <i>Nature Communications</i> , 2016, 7, 11461.	5.8	136
31	Low Functional $\hat{1}^2$ -Diversity Despite High Taxonomic $\hat{1}^2$ -Diversity among Tropical Estuarine Fish Communities. <i>PLoS ONE</i> , 2012, 7, e40679.	1.1	126
32	Environmental DNA reveals tropical shark diversity in contrasting levels of anthropogenic impact. <i>Scientific Reports</i> , 2017, 7, 16886.	1.6	126
33	Protected and Threatened Components of Fish Biodiversity in the Mediterranean Sea. <i>Current Biology</i> , 2011, 21, 1044-1050.	1.8	125
34	Low Connectivity between Mediterranean Marine Protected Areas: A Biophysical Modeling Approach for the Dusky Grouper <i>Epinephelus marginatus</i> . <i>PLoS ONE</i> , 2013, 8, e68564.	1.1	117
35	Multifaceted diversity-area relationships reveal global hotspots of mammalian species, trait and lineage diversity. <i>Global Ecology and Biogeography</i> , 2014, 23, 836-847.	2.7	110
36	Projected climate change and the changing biogeography of coastal Mediterranean fishes. <i>Journal of Biogeography</i> , 2013, 40, 534-547.	1.4	104

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37	Meeting fisheries, ecosystem function, and biodiversity goals in a human-dominated world. <i>Science</i> , 2020, 368, 307-311.	6.0	99
38	Combining projected changes in species richness and composition reveals climate change impacts on coastal Mediterranean fish assemblages. <i>Global Change Biology</i> , 2012, 18, 2995-3003.	4.2	98
39	Forecasted coral reef decline in marine biodiversity hotspots under climate change. <i>Global Change Biology</i> , 2015, 21, 2479-2487.	4.2	97
40	How accessible are coral reefs to people? A global assessment based on travel time. <i>Ecology Letters</i> , 2016, 19, 351-360.	3.0	97
41	Global determinants of freshwater and marine fish genetic diversity. <i>Nature Communications</i> , 2020, 11, 692.	5.8	97
42	Asynchrony of taxonomic, functional and phylogenetic diversity in birds. <i>Global Ecology and Biogeography</i> , 2014, 23, 780-788.	2.7	91
43	Selecting statistical models and variable combinations for optimal classification using otolith microchemistry. , 2011, 21, 1352-1364.		89
44	Biodiversity in the Anthropocene: prospects and policy. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20162094.	1.2	82
45	Global mismatch between species richness and vulnerability of reef fish assemblages. <i>Ecology Letters</i> , 2014, 17, 1101-1110.	3.0	78
46	Let more big fish sink: Fisheries prevent blue carbon sequestrationâ€™half in unprofitable areas. <i>Science Advances</i> , 2020, 6, .	4.7	77
47	mFD: an R package to compute and illustrate the multiple facets of functional diversity. <i>Ecography</i> , 2022, 2022, .	2.1	77
48	Assembly rules of ectoparasite communities across scales: combining patterns of abiotic factors, host composition, geographic space, phylogeny and traits. <i>Ecography</i> , 2015, 38, 184-197.	2.1	76
49	Additive effects of climate change on connectivity between marine protected areas and larval supply to fished areas. <i>Diversity and Distributions</i> , 2015, 21, 139-150.	1.9	71
50	Marine reserves lag behind wilderness in the conservation of key functional roles. <i>Nature Communications</i> , 2016, 7, 12000.	5.8	71
51	Conserving the functional and phylogenetic trees of life of European tetrapods. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2015, 370, 20140005.	1.8	70
52	Environmental heterogeneity among lakes promotes hyperâ€™diversity across phytoplankton communities. <i>Freshwater Biology</i> , 2016, 61, 633-645.	1.2	70
53	Trait structure and redundancy determine sensitivity to disturbance in marine fish communities. <i>Global Change Biology</i> , 2019, 25, 3424-3437.	4.2	68
54	Spatial mismatch of phylogenetic diversity across three vertebrate groups and protected areas in Europe. <i>Diversity and Distributions</i> , 2014, 20, 674-685.	1.9	67

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55	Sustaining Rare Marine Microorganisms: Macroorganisms As Repositories and Dispersal Agents of Microbial Diversity. <i>Frontiers in Microbiology</i> , 2017, 8, 947.	1.5	66
56	Global vulnerability of marine mammals to global warming. <i>Scientific Reports</i> , 2020, 10, 548.	1.6	63
57	The dimensionality and structure of species trait spaces. <i>Ecology Letters</i> , 2021, 24, 1988-2009.	3.0	63
58	Global distribution and conservation status of ecologically rare mammal and bird species. <i>Nature Communications</i> , 2020, 11, 5071.	5.8	61
59	Escaping the perfect storm of simultaneous climate change impacts on agriculture and marine fisheries. <i>Science Advances</i> , 2019, 5, eaaw9976.	4.7	60
60	Representing taxonomic, phylogenetic and functional diversity: new challenges for Mediterranean marine protected areas. <i>Diversity and Distributions</i> , 2015, 21, 175-187.	1.9	57
61	Isolation drives taxonomic and functional nestedness in tropical reef fish faunas. <i>Ecography</i> , 2017, 40, 425-435.	2.1	54
62	Remote reefs and seamounts are the last refuges for marine predators across the Indo-Pacific. <i>PLoS Biology</i> , 2019, 17, e3000366.	2.6	53
63	Trait similarity in reef fish faunas across the world's oceans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	50
64	A Phylogenetic Perspective on the Evolution of Mediterranean Teleost Fishes. <i>PLoS ONE</i> , 2012, 7, e36443.	1.1	50
65	Reef accessibility impairs the protection of sharks. <i>Journal of Applied Ecology</i> , 2018, 55, 673-683.	1.9	46
66	Extending networks of protected areas to optimize connectivity and population growth rate. <i>Ecography</i> , 2015, 38, 273-282.	2.1	43
67	Fish communities diverge in species but converge in traits over three decades of warming. <i>Global Change Biology</i> , 2019, 25, 3972-3984.	4.2	41
68	A Climate-Driven Functional Inversion of Connected Marine Ecosystems. <i>Current Biology</i> , 2018, 28, 3654-3660.e3.	1.8	39
69	Conservation physiology across scales: insights from the marine realm. , 2014, 2, cou024-cou024.		37
70	Functional reorganization of marine fish nurseries under climate warming. <i>Global Change Biology</i> , 2019, 25, 660-674.	4.2	37
71	Unexpected high vulnerability of functions in wilderness areas: evidence from coral reef fishes. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20160128.	1.2	35
72	Functional rarity of coral reef fishes at the global scale: Hotspots and challenges for conservation. <i>Biological Conservation</i> , 2018, 226, 288-299.	1.9	35

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73	Accumulation curves of environmental DNA sequences predict coastal fish diversity in the coral triangle. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20200248.	1.2	35
74	Benchmarking bioinformatic tools for fast and accurate eDNA metabarcoding species identification. <i>Molecular Ecology Resources</i> , 2021, 21, 2565-2579.	2.2	35
75	The challenge of delineating biogeographical regions: nestedness matters for Indo-Pacific coral reef fishes. <i>Journal of Biogeography</i> , 2013, 40, 2228-2237.	1.4	32
76	Low-changing fruit™ for conservation of marine vertebrate species at risk in the Mediterranean Sea. <i>Global Ecology and Biogeography</i> , 2015, 24, 226-239.	2.7	30
77	Functional diversity and redundancy across fish gut, sediment and water bacterial communities. <i>Environmental Microbiology</i> , 2017, 19, 3268-3282.	1.8	30
78	A global database for metacommunity ecology, integrating species, traits, environment and space. <i>Scientific Data</i> , 2020, 7, 6.	2.4	28
79	Patterns and multi-scale drivers of phytoplankton species richness in temperate peri-urban lakes. <i>Science of the Total Environment</i> , 2016, 559, 74-83.	3.9	27
80	Reviewing the Ecosystem Services, Societal Goods, and Benefits of Marine Protected Areas. <i>Frontiers in Marine Science</i> , 2021, 8, .	1.2	27
81	Plant community impact on productivity: Trait diversity or key(stone) species effects?. <i>Ecology Letters</i> , 2022, 25, 913-925.	3.0	26
82	Biogeographic, historical and environmental influences on the taxonomic and functional structure of Atlantic reef fish assemblages. <i>Global Ecology and Biogeography</i> , 2013, 22, 1173-1182.	2.7	25
83	Functional Diversity Measures. , 2013, , 597-608.		25
84	Projected impacts of climate warming on the functional and phylogenetic components of coastal Mediterranean fish biodiversity. <i>Ecography</i> , 2015, 38, 681-689.	2.1	25
85	Isolation and no-entry marine reserves mitigate anthropogenic impacts on grey reef shark behavior. <i>Scientific Reports</i> , 2019, 9, 2897.	1.6	25
86	Use of environmental DNA in assessment of fish functional and phylogenetic diversity. <i>Conservation Biology</i> , 2021, 35, 1944-1956.	2.4	25
87	Ecological traits shape genetic diversity patterns across the Mediterranean Sea: a quantitative review on fishes. <i>Journal of Biogeography</i> , 2016, 43, 845-857.	1.4	22
88	Spatial graphs highlight how multi-generational dispersal shapes landscape genetic patterns. <i>Ecography</i> , 2020, 43, 1167-1179.	2.1	21
89	Historical and contemporary determinants of global phylogenetic structure in tropical reef fish faunas. <i>Ecography</i> , 2016, 39, 825-835.	2.1	20
90	Influence of the geography of speciation on current patterns of coral reef fish biodiversity across the Indo-Pacific. <i>Ecography</i> , 2018, 41, 1295-1306.	2.1	20

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91	A new method to control error rates in automated species identification with deep learning algorithms. <i>Scientific Reports</i> , 2020, 10, 10972.	1.6	18
92	Responses of coral reef fishes to past climate changes are related to life-history traits. <i>Ecology and Evolution</i> , 2017, 7, 1996-2005.	0.8	15
93	Response and Effect Traits of Coral Reef Fish. <i>Frontiers in Marine Science</i> , 2021, 8, .	1.2	15
94	Projecting the Impact of Regional Land-Use Change and Water Management Policies on Lake Water Quality: An Application to Periurban Lakes and Reservoirs. <i>PLoS ONE</i> , 2013, 8, e72227.	1.1	15
95	Low fuel cost and rising fish price threaten coral reef wilderness. <i>Conservation Letters</i> , 2020, 13, e12706.	2.8	14
96	Rebound in functional distinctiveness following warming and reduced fishing in the North Sea. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021, 288, 20201600.	1.2	14
97	Cross-ocean patterns and processes in fish biodiversity on coral reefs through the lens of eDNA metabarcoding. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2022, 289, 20220162.	1.2	14
98	Community-wide scan identifies fish species associated with coral reef services across the Indo-Pacific. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018, 285, 20181167.	1.2	13
99	Contrasted patterns in climate change risk for Mediterranean fisheries. <i>Global Change Biology</i> , 2021, 27, 5920-5933.	4.2	10
100	Global correlates of terrestrial and marine coverage by protected areas on islands. <i>Nature Communications</i> , 2020, 11, 4438.	5.8	8
101	The last hotspots of structural complexity as conservation targets in the Mesoamerican Coral Reef. <i>Biological Conservation</i> , 2021, 256, 109021.	1.9	8
102	Climate differently influences the genomic patterns of two sympatric marine fish species. <i>Journal of Animal Ecology</i> , 2022, 91, 1180-1195.	1.3	8
103	Genomic insights into the historical and contemporary demographics of the grey reef shark. <i>Heredity</i> , 2022, 128, 225-235.	1.2	8
104	Identifying barriers to gene flow and hierarchical conservation units from seascape genomics: a modelling framework applied to a marine predator. <i>Ecography</i> , 2022, 2022, .	2.1	7
105	Functionally distinct tree species support long-term productivity in extreme environments. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2022, 289, 20211694.	1.2	6
106	Linking key human-environment theories to inform the sustainability of coral reefs. <i>Current Biology</i> , 2022, 32, 2610-2620.e4.	1.8	5
107	Influence of historical changes in tropical reef habitat on the diversification of coral reef fishes. <i>Scientific Reports</i> , 2021, 11, 20731.	1.6	4
108	Interspecific differences in environmental response blur trait dynamics in classic statistical analyses. <i>Marine Biology</i> , 2019, 166, 1.	0.7	1

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109	Similar trait structure and vulnerability in pelagic fish faunas on two remote island systems. <i>Marine Biology</i> , 2022, 169, 1.	0.7	0