Robert K Colwell

List of Publications by Year
in descending order

98 papers	31,340 citations	23500 58 h-index	34900 98 g-index
104 all docs	104 docs citations	104 times ranked	32480 citing authors

#	Article	IF	Citations
1	Quantifying biodiversity: procedures and pitfalls in the measurement and comparison of species richness. Ecology Letters, 2001, 4, 379-391.	3.0	4,953
2	Microbial biogeography: putting microorganisms on the map. Nature Reviews Microbiology, 2006, 4, 102-112.	13.6	2,434
3	Rarefaction and extrapolation with Hill numbers: a framework for sampling and estimation in species diversity studies. Ecological Monographs, 2014, 84, 45-67.	2.4	2,397
4	Biodiversity redistribution under climate change: Impacts on ecosystems and human well-being. Science, 2017, 355, .	6.0	2,026
5	A new statistical approach for assessing similarity of species composition with incidence and abundance data. Ecology Letters, 2004, 8, 148-159.	3.0	1,470
6	INTERPOLATING, EXTRAPOLATING, AND COMPARING INCIDENCE-BASED SPECIES ACCUMULATION CURVES. Ecology, 2004, 85, 2717-2727.	1.5	1,366
7	On the Measurement of Niche Breadth and Overlap. Ecology, 1971, 52, 567-576.	1.5	1,144
8	Global Warming, Elevational Range Shifts, and Lowland Biotic Attrition in the Wet Tropics. Science, 2008, 322, 258-261.	6.0	1,045
9	Thermal-safety margins and the necessity of thermoregulatory behavior across latitude and elevation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5610-5615.	3.3	906
10	Nonbiological Gradients in Species Richness and a Spurious Rapoport Effect. American Naturalist, 1994, 144, 570-595.	1.0	562
11	The Planned Introduction of Genetically Engineered Organisms: Ecological Considerations and Recommendations. Ecology, 1989, 70, 298-315.	1.5	537
12	Hutchinson's duality: The once and future niche. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 19651-19658.	3.3	534
13	Species Coextinctions and the Biodiversity Crisis. Science, 2004, 305, 1632-1634.	6.0	505
14	Humboldtâ€™s enigma: What causes global patterns of mountain biodiversity?. Science, 2019, 365, 1108-1113.	6.0	505
15	Predictability, Constancy, and Contingency of Periodic Phenomena. Ecology, 1974, 55, 1148-1153.	1.5	496
16	The Midâ€Domain Effect and Species Richness Patterns:What Have We Learned So Far?. American Naturalist, 2004, 163, E1-E23.	1.0	484
17	Abundance-Based Similarity Indices and Their Estimation When There Are Unseen Species in Samples. Biometrics, 2006, 62, 361-371.	0.8	474
18	THE ANT FAUNA OF A TROPICAL RAIN FOREST: ESTIMATING SPECIES RICHNESS THREE DIFFERENT WAYS. Ecology, 2002, 83, 689-702.	1.5	456

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19	Sufficient sampling for asymptotic minimum species richness estimators. Ecology, 2009, 90, 1125-1133.	1.5	420
20	The sixth mass coextinction: are most endangered species parasites and mutualists?. Proceedings of the Royal Society B: Biological Sciences, 2009, 276, 3037-3045.	1.2	420
21	Building mountain biodiversity: Geological and evolutionary processes. Science, 2019, 365, 1114-1119.	6.0	415
22	Species Loss and Aboveground Carbon Storage in a Tropical Forest. Science, 2005, 310, 1029-1031.	6.0	390
23	Community Organization Among Neotropical Nectar-Feeding Birds. American Zoologist, 1978, 18, 779-795.	0.7	357
24	An estimate of the number of tropical tree species. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7472-7477.	3.3	335
25	The coincidence of rarity and richness and the potential signature of history in centres of endemism. Ecology Letters, 2004, 7, 1180-1191.	3.0	304
26	Patterns and causes of species richness: a general simulation model for macroecology. Ecology Letters, 2009, 12, 873-886.	3.0	286
27	Predicting continental-scale patterns of bird species richness with spatially explicit models. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 165-174.	1.2	271
28	Modeling the ecology and evolution of biodiversity: Biogeographical cradles, museums, and graves. Science, 2018, 361, .	6.0	260
29	Group selection is implicated in the evolution of female-biased sex ratios. Nature, 1981, 290, 401-404.	13.7	241
30	BIODIVERSITY ASSESSMENT USING STRUCTURED INVENTORY: CAPTURING THE ANT FAUNA OF A TROPICAL RAIN FOREST. , 1997, 7, 1263-1277.		239
31	Vascular epiphyte distribution patterns: explaining the mid-elevation richness peak. Journal of Ecology, 2006, 94, 144-156.	1.9	223
32	A COMPARISON OF TAXON CO-OCCURRENCE PATTERNS FOR MACRO- AND MICROORGANISMS. Ecology, 2007, 88, 1345-1353.	1.5	223
33	Assessing the threat to montane biodiversity from discordant shifts in temperature and precipitation in a changing climate. Ecology Letters, 2011, 14, 1236-1245.	3.0	214
34	EstimateS turns 20: statistical estimation of species richness and shared species from samples, with nonâ€parametric extrapolation. Ecography, 2014, 37, 609-613.	2.1	207
35	Defining and observing stages of climate-mediated range shifts in marine systems. Global Environmental Change, 2014, 26, 27-38.	3.6	207
36	Coextinction and Persistence of Dependent Species in a Changing World. Annual Review of Ecology, Evolution, and Systematics, 2012, 43, 183-203.	3.8	204

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37	A novel statistical method for classifying habitat generalists and specialists. Ecology, 2011, 92, 1332-1343.	1.5	203
38	Organization of Contiguous Communities of Amphibians and Reptiles in Thailand. Ecological Monographs, 1977, 47, 229-253.	2.4	192
39	Quantifying temporal change in biodiversity: challenges and opportunities. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20121931.	1.2	178
40	The role of environment and mid-domain effect on moth species richness along a tropical elevational gradient. Global Ecology and Biogeography, 2007, 16, 205-219.	2.7	168
41	Managing consequences of climateâ€driven species redistribution requires integration of ecology, conservation and social science. Biological Reviews, 2018, 93, 284-305.	4.7	154
42	Species Richness and Evolutionary Niche Dynamics: A Spatial Patternâ€"Oriented Simulation Experiment. American Naturalist, 2007, 170, 602-616.	1.0	147
43	Competition and Coexistence in a Simple Tropical Community. American Naturalist, 1973, 107, 737-760.	1.0	141
44	Quantifying sample completeness and comparing diversities among assemblages. Ecological Research, 2020, 35, 292-314.	0.7	141
45	Beta diversity: synthesis and a guide for the perplexed. Ecography, 2010, 33, 1-1.	2.1	140
46	Elevation and the Morphology, Flight Energetics, and Foraging Ecology of Tropical Hummingbirds. American Naturalist, 1979, 113, 481-497.	1.0	119
47	Process, Mechanism, and Modeling in Macroecology. Trends in Ecology and Evolution, 2017, 32, 835-844.	4.2	119
48	ESTIMATION OF SPECIES RICHNESS: MIXTURE MODELS, THE ROLE OF RARE SPECIES, AND INFERENTIAL CHALLENGES. Ecology, 2005, 86, 1143-1153.	1.5	116
49	Estimating the Species Accumulation Curve Using Mixtures. Biometrics, 2005, 61, 433-441.	0.8	111
50	Species richness and distribution of ferns along an elevational gradient in Costa Rica. American Journal of Botany, 2006, 93, 73-83.	0.8	109
51	Correlates of extinction proneness in tropical angiosperms. Diversity and Distributions, 2008, 14, 1-10.	1.9	106
52	Seasonal and daily climate variation have opposite effects on species elevational range size. Science, 2016, 351, 1437-1439.	6.0	97
53	Vulnerability and Resilience of Tropical Forest Species to Landâ€Use Change. Conservation Biology, 2009, 23, 1438-1447.	2.4	90
54	Density compensation, species composition, and richness of ants on a neotropical elevational gradient. Ecosphere, 2011, 2, art29.	1.0	89

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55	Explaining the species richness of birds along a subtropical elevational gradient in the Hengduan Mountains. Journal of Biogeography, 2013, 40, 2310-2323.	1.4	83
56	Elevational species richness gradients in a hyperdiverse insect taxon: a global metaâ€study on geometrid moths. Global Ecology and Biogeography, 2017, 26, 412-424.	2.7	83
57	A stochastic, evolutionary model for range shifts and richness on tropical elevational gradients under Quaternary glacial cycles. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 3695-3707.	1.8	77
58	Midpoint attractors and species richness: Modelling the interaction between environmental drivers and geometric constraints. Ecology Letters, 2016, 19, 1009-1022.	3.0	75
59	Unveiling the speciesâ€rank abundance distribution by generalizing the Goodâ€Turing sample coverage theory. Ecology, 2015, 96, 1189-1201.	1.5	70
60	Toward a Mechanistic Understanding of Linguistic Diversity. BioScience, 2013, 63, 524-535.	2.2	62
61	Turning Up the Heat on a Hotspot: DNA Barcodes Reveal 80% More Species of Geometrid Moths along an Andean Elevational Gradient. PLoS ONE, 2016, 11, e0150327.	1.1	61
62	RangeModel: tools for exploring and assessing geometric constraints on species richness (the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462	2.1	54
63	Competition for the Nectar of Centropogon valerii by the Hummingbird Colibri thalassinus and the Flower-Piercer Diglossa plumbea, and Its Evolutionary Implications. Condor, 1974, 76, 447.	0.7	48
64	Mobile hotspots and refugia of avian diversity in the mountains of southâ€west China under past and contemporary global climate change. Journal of Biogeography, 2017, 44, 615-626.	1.4	48
65	The river domain: why are there more species halfway up the river?. Ecography, 2006, 29, 251-259.	2.1	46
66	Estimating the Richness of a Population When the Maximum Number of Classes Is Fixed: A Nonparametric Solution to an Archaeological Problem. PLoS ONE, 2012, 7, e34179.	1.1	46
67	Statistical Analysis of Paradigmatic Class Richness Supports Greater Paleoindian Projectile-Point Diversity in the Southeast. American Antiquity, 2016, 81, 174-192.	0.6	44
68	Ecological and biogeographic null hypotheses for comparing rarefaction curves. Ecological Monographs, 2015, 85, 437-455.	2.4	42
69	Elevational Patterns of Diversity and Abundance of Eusocial Paper Wasps (Vespidae) in Costa Rica. Biotropica, 2009, 41, 338-346.	0.8	41
70	How Ants Drop Out: Ant Abundance on Tropical Mountains. PLoS ONE, 2014, 9, e104030.	1.1	41
71	Moth body size increases with elevation along a complete tropical elevational gradient for two hyperdiverse clades. Ecography, 2019, 42, 632-642.	2.1	40
72	THE INFLUENCE OF BAND SUM AREA, DOMAIN EXTENT, AND RANGE SIZES ON THE LATITUDINAL MID-DOMAIN EFFECT. Ecology, 2005, 86, 235-244.	1.5	36

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73	The distributions of morphologically specialized hummingbirds coincide with floral trait matching across an Andean elevational gradient. Biotropica, 2019, 51, 205-218.	0.8	35
74	Understanding historical and current patterns of species richness of babblers along a 5000â€m subtropical elevational gradient. Global Ecology and Biogeography, 2014, 23, 1167-1176.	2.7	34
75	Seen once or more than once: applying Goodâ€"Turing theory to estimate species richness using only unique observations and a species list. Methods in Ecology and Evolution, 2017, 8, 1221-1232.	2.2	31
76	Detection and Identification of Mammalian DNA from the Gut of Museum Specimens of Ticks. Journal of Medical Entomology, 1992, 29, 1049-1051.	0.9	29
77	Virtual Biodiversity Assessment Systems. BioScience, 2000, 50, 441.	2.2	29
78	Specimenâ€Based Modeling, Stopping Rules, and the Extinction of the Ivoryâ€Billed Woodpecker. Conservation Biology, 2012, 26, 47-56.	2.4	29
79	The Evolution of Ecology. American Zoologist, 1985, 25, 771-777.	0.7	23
80	Processâ€based modelling shows how climate and demography shape language diversity. Global Ecology and Biogeography, 2017, 26, 584-591.	2.7	22
81	Drivers of geographical patterns of North American language diversity. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190242.	1.2	18
82	Deciphering the enigma of undetected species, phylogenetic, and functional diversity based on Goodâ€Turing theory. Ecology, 2017, 98, 2914-2929.	1.5	17
83	Environment-induced changes in selective constraints on social learning during the peopling of the Americas. Scientific Reports, 2017, 7, 44431.	1.6	16
84	Species loss revisited. Nature, 2011, 473, 288-289.	13.7	15
85	A strong Madagascan rainforest MDE and no equatorward increase in species richness: re-analysis of ?The missing Madagascan mid-domain effect?, by Kerr J.T., Perring M. & Currie D.J. (Ecology Letters) Tj ETQq1 1 0.784314 rgBT /Overlock	3.0	14
86	Language and ethnobiological skills decline precipitously in Papua New Guinea, the worldâ€™s most linguistically diverse nation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	14
87	New Genus and Two New Species of Melicharini from Venezuela (Acari: Mesostigmata: Ascidae). Annals of the Entomological Society of America, 1995, 88, 284-293.	1.3	12
88	<i>Excelsotarsonemus kaliszewskii</i>, a new genus and new species from Costa Rica (Acari:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142	0.3	11
89	Proportional mixture of two rarefaction/extrapolation curves to forecast biodiversity changes under landscape transformation. Ecology Letters, 2019, 22, 1913-1922.	3.0	11
90	Distribution of megabenthic gastropods along environmental gradients: the mid-domain effect and beyond. Marine Ecology - Progress Series, 2008, 367, 193-202.	0.9	11

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91	Female-biased sex ratios (reply). Nature, 1982, 298, 495-496.	13.7	9
92	The arboreal ants of a Neotropical rain forest show high species density and comprise one third of the ant fauna. Biotropica, 2020, 52, 675-685.	0.8	9
93	Cellulose acetate electrophoretic techniques for the genetic analysis of individual ascid mites (Mesostigmata: Ascidae). International Journal of Acarology, 1992, 18, 97-105.	0.3	6
94	Spatial scale and the synchrony of ecological disruption. Nature, 2021, 599, E8-E10.	13.7	6
95	Mechanism, Process, and Causation in Ecological Models: A Reply to McGill and Potochnik. Trends in Ecology and Evolution, 2018, 33, 305-306.	4.2	2
96	Suffering Legions?. Science, 1972, 177, 210-210.	6.0	1
97	Resolution of Respect: Lawrence B. Slobodkin 1928â€“2009. Bulletin of the Ecological Society of America, 2011, 92, 19-32.	0.2	1
98	Response to Qian etÂal. (2017): Daily and seasonal climate variations are both critical in the evolution of speciesâ€™ elevational range size. Journal of Biogeography, 2018, 45, 2832-2836.	1.4	1