Richard O Prum

List of Publications by Year
in descending order

130 papers	24,713 citations	30070 54 h-index	16183 124 g-index
138 all docs	138 docs citations	138 times ranked	40258 citing authors

#	Article	IF	Citations
1	Structural absorption by barbule microstructures of super black bird of paradise feathers. Nature Communications, 2018, 9, 1.	12.8	12,629
2	A comprehensive phylogeny of birds (Aves) using targeted next-generation DNA sequencing. Nature, 2015, 526, 569-573.	27.8	1,341
3	A comprehensive phylogeny of birds (Aves) using targeted next-generation DNA sequencing. Nature, 2016, 534, S7-S8.	27.8	872
4	The biology of color. Science, 2017, 357, .	12.6	509
5	Structure, function, and self-assembly of single network gyroid (I 4 ₁ 32) photonic crystals in butterfly wing scales. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11676-11681.	7.1	428
6	Evolution of Avian Plumage Color in a Tetrahedral Color Space: A Phylogenetic Analysis of New World Buntings. American Naturalist, 2008, 171, 755-776.	2.1	371
7	Biomimetic Isotropic Nanostructures for Structural Coloration. Advanced Materials, 2010, 22, 2939-2944.	21.0	345
8	Coherent light scattering by blue feather barbs. Nature, 1998, 396, 28-29.	27.8	332
9	PATTERNS AND PROCESSES OF DIVERSIFICATION: SPECIATION AND HISTORICAL CONGRUENCE IN SOME NEOTROPICAL BIRDS. Evolution; International Journal of Organic Evolution, 1988, 42, 603-620.	2.3	276
10	Development and evolutionary origin of feathers. , 1999, 285, 291-306.		267
11	The Evolutionary Origin And Diversification Of Feathers. Quarterly Review of Biology, 2002, 77, 261-295.	0.1	263
12	Structural colouration of avian skin: convergent evolution of coherently scattering dermal collagen arrays. Journal of Experimental Biology, 2003, 206, 2409-2429.	1.7	228
13	How Noniridescent Colors Are Generated by Quasiâ€ordered Structures of Bird Feathers. Advanced Materials, 2010, 22, 2871-2880.	21.0	228
14	Plumage Color Patterns of an Extinct Dinosaur. Science, 2010, 327, 1369-1372.	12.6	224
15	Self-assembly of amorphous biophotonic nanostructures by phase separation. Soft Matter, 2009, 5, 1792.	2.7	222
16	Phylogenetic Analysis of the Evolution of Display Behavior in the Neotropical Manakins (Aves:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142	1.1	217
17	How colorful are birds? Evolution of the avian plumage color gamut. Behavioral Ecology, 2011, 22, 1042-1052.	2.2	195
18	Anatomically diverse butterfly scales all produce structural colours by coherent scattering. Journal of Experimental Biology, 2006, 209, 748-765.	1.7	192

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19	Structural colouration of mammalian skin: convergent evolution of coherently scattering dermal collagen arrays. Journal of Experimental Biology, 2004, 207, 2157-2172.	1.7	181
20	THE LANDE-KIRKPATRICK MECHANISM IS THE NULL MODEL OF EVOLUTION BY INTERSEXUAL SELECTION: IMPLICATIONS FOR MEANING, HONESTY, AND DESIGN IN INTERSEXUAL SIGNALS. Evolution; International Journal of Organic Evolution, 2010, 64, 3085-3100.	2.3	178
21	Branched integumental structures in Sinornithosaurus and the origin of feathers. Nature, 2001, 410, 200-204.	27.8	172
22	Phylogenetic Analysis of the Nest Architecture of Neotropical Ovenbirds (Furnariidae). Auk, 1999, 116, 891-911.	1.4	167
23	The colour of fossil feathers. Biology Letters, 2008, 4, 522-525.	2.3	167
24	Coevolution of Male and Female Genital Morphology in Waterfowl. PLoS ONE, 2007, 2, e418.	2.5	166
25	Two-dimensional Fourier analysis of the spongy medullary keratin of structurally coloured feather barbs. Proceedings of the Royal Society B: Biological Sciences, 1999, 266, 13-22.	2.6	157
26	Molecular evidence for an activator-inhibitor mechanism in development of embryonic feather branching. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11734-11739.	7.1	144
27	Patterns and Processes of Diversification: Speciation and Historical Congruence in Some Neotropical Birds. Evolution; International Journal of Organic Evolution, 1988, 42, 603.	2.3	133
28	Shh-Bmp2 signaling module and the evolutionary origin and diversification of feathers. The Journal of Experimental Zoology, 2002, 294, 160-176.	1.4	132
29	Aesthetic evolution by mate choice: Darwin'sreallydangerous idea. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 2253-2265.	4.0	128
30	Structure and optical function of amorphous photonic nanostructures from avian feather barbs: a comparative small angle X-ray scattering (SAXS) analysis of 230 bird species. Journal of the Royal Society Interface, 2012, 9, 2563-2580.	3.4	127
31	Phylogenetic Tests of Alternative Intersexual Selection Mechanisms: Trait Macroevolution in a Polygynous Clade (Aves: Pipridae). American Naturalist, 1997, 149, 668-692.	2.1	124
32	Sexual selection and the evolution of mechanical sound production in manakins (Aves: Pipridae). Animal Behaviour, 1998, 55, 977-994.	1.9	103
33	Development of colour-producing Î²-keratin nanostructures in avian feather barbs. Journal of the Royal Society Interface, 2009, 6, S253-65.	3.4	103
34	Explosive eversion and functional morphology of the duck penis supports sexual conflict in waterfowl genitalia. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 1309-1314.	2.6	102
35	A Fourier Tool for the Analysis of Coherent Light Scattering by Bio-Optical Nanostructures. Integrative and Comparative Biology, 2003, 43, 591-602.	2.0	100
36	Structural coloration in a fossil feather. Biology Letters, 2010, 6, 128-131.	2.3	100

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37	High-speed video analysis of wing-snapping in two manakin clades(Pipridae: Aves). Journal of Experimental Biology, 2003, 206, 3693-3706.	1.7	97
38	Blue integumentary structural colours in dragonflies (Odonata) are not produced by incoherent Tyndall scattering. Journal of Experimental Biology, 2004, 207, 3999-4009.	1.7	97
39	Theory of the growth and evolution of feather shape. The Journal of Experimental Zoology, 2001, 291, 30-57.	1.4	91
40	Mechanisms and Evidence of Genital Coevolution: The Roles of Natural Selection, Mate Choice, and Sexual Conflict. Cold Spring Harbor Perspectives in Biology, 2015, 7, a017749.	5.5	90
41	Anatomy, Physics, and Evolution of Structural Colors. , 2006, , 295-353.		82
42	Structural Diversity of Arthropod Biophotonic Nanostructures Spans Amphiphilic Phase-Space. Nano Letters, 2015, 15, 3735-3742.	9.1	80
43	Genetic evidence supports song learning in the threeâ€wattled bellbirdProcnias tricarunculata(Cotingidae). Molecular Ecology, 2007, 16, 3689-3702.	3.9	77
44	Reactionâ€“diffusion models of within-feather pigmentation patterning. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 781-792.	2.6	76
45	Evolution of the morphological innovations of feathers. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2005, 304B, 570-579.	1.3	74
46	PHYLOGENETIC ANALYSIS OF THE EVOLUTION OF ALTERNATIVE SOCIAL BEHAVIOR IN THE MANAKINS (AVES:) Tj ETQq0 0 0 rgBT /Overlo	2.3	74
47	3D imaging spectroscopy for measuring hyperspectral patterns on solid objects. ACM Transactions on Graphics, 2012, 31, 1-11.	7.2	70
48	Pervasive Correlated Evolution in Gene Expression Shapes Cell and Tissue Type Transcriptomes. Genome Biology and Evolution, 2018, 10, 538-552.	2.5	70
49	Higher-level phylogeny and morphological evolution of tyrant flycatchers, cotingas, manakins, and their allies (Aves: Tyrannida). Molecular Phylogenetics and Evolution, 2006, 40, 471-483.	2.7	69
50	Barb geometry of asymmetrical feathers reveals a transitional morphology in the evolution of avian flight. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20142864.	2.6	69
51	Short-range order and near-field effects on optical scattering and structural coloration. Optics Express, 2011, 19, 8208.	3.4	65
52	Aeroelastic Flutter Produces Hummingbird Feather Songs. Science, 2011, 333, 1430-1433.	12.6	63
53	Why Ornithologists Should Care About The Theropod Origin of Birds. Auk, 2002, 119, 1-17.	1.4	60
54	A hierarchical model of plumage: Morphology, development, and evolution. The Journal of Experimental Zoology, 2003, 298B, 73-90.	1.4	60

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55	The limits of sexual conflict in the narrow sense: new insights from waterfowl biology. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 2324-2338.	4.0	60
56	Courting Bird Sings with Stridulating Wing Feathers. Science, 2005, 309, 736-736.	12.6	59
57	How colorful are fruits? Limited color diversity in fleshy fruits on local and global scales. New Phytologist, 2013, 198, 617-629.	7.3	57
58	Interspecific social dominance mimicry in birds. Zoological Journal of the Linnean Society, 2014, 172, 910-941.	2.3	54
59	Monophyly and Phylogeny of the Schiffornis Group (Tyrannoidea). Condor, 1989, 91, 444.	1.6	51
60	Variation in carotenoidâ€“protein interaction in bird feathers produces novel plumage coloration. Journal of the Royal Society Interface, 2012, 9, 3338-3350.	3.4	51
61	Phylogenetic Analysis of the Evolution of Alternative Social Behavior in the Manakins (Aves: Pipridae). Evolution; International Journal of Organic Evolution, 1994, 48, 1657.	2.3	48
62	COHERENT SCATTERING OF ULTRAVIOLET LIGHT BY AVIAN FEATHER BARBS. Auk, 2003, 120, 163.	1.4	48
63	Phylogeny and Evolutionary History of Old World Suboscine Birds (Aves: Eurylaimides). American Museum Novitates, 2006, 3544, 1.	0.6	48
64	Colour-producing Î²-keratin nanofibres in blue penguin (Eudyptula minor) feathers. Biology Letters, 2011, 7, 543-546.	2.3	48
65	Electron tomography, three-dimensional Fourier analysis and colour prediction of a three-dimensional amorphous biophotonic nanostructure. Journal of the Royal Society Interface, 2009, 6, S213-20.	3.4	46
66	Diversity, physiology, and evolution of avian plumage carotenoids and the role of carotenoidâ€“protein interactions in plumage color appearance. Archives of Biochemistry and Biophysics, 2015, 572, 201-212.	3.0	46
67	Molecular diversity, metabolic transformation, and evolution of carotenoid feather pigments in cotingas (Aves: Cotingidae). Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2012, 182, 1095-1116.	1.5	44
68	Which Came First, the Feather or the Bird?. Scientific American, 2003, 288, 84-93.	1.0	40
69	Double scattering of light from Biophotonic Nanostructures with short-range order. Optics Express, 2010, 18, 11942.	3.4	39
70	Structural color production by constructive reflection from ordered collagen arrays in a bird (Philepitta castanea: Eurylaimidae). Journal of Morphology, 1994, 222, 61-72.	1.2	36
71	A comprehensive multilocus phylogeny of the Neotropical cotingas (Cotingidae, Aves) with a comparative evolutionary analysis of breeding system and plumage dimorphism and a revised phylogenetic classification. Molecular Phylogenetics and Evolution, 2014, 81, 120-136.	2.7	35
72	Complex coevolution of wing, tail, and vocal sounds of courting male bee hummingbirds. Evolution; International Journal of Organic Evolution, 2018, 72, 630-646.	2.3	35

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73	Independent evolutionary reductions of the phallus in basal birds. Journal of Avian Biology, 2008, 39, 487-492.	1.2	32
74	Nuclear Î²â€catenin localization supports homology of feathers, avian scutate scales, and alligator scales in early development. Evolution & Development, 2015, 17, 185-194.	2.0	31
75	Dinosaurs take to the air. Nature, 2003, 421, 323-324.	27.8	30
76	Coevolutionary aesthetics in human and biotic artworlds. Biology and Philosophy, 2013, 28, 811-832.	1.4	30
77	Structurally assisted super black in colourful peacock spiders. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190589.	2.6	30
78	A Preliminary Phylogenetic Hypothesis for the Cotingas (Cotingidae) Based on Mitochondrial DNA. Auk, 2000, 117, 236-241.	1.4	29
79	Domain morphology, boundaries, and topological defects in biophotonic gyroid nanostructures of butterfly wing scales. Science Advances, 2016, 2, e1600149.	10.3	29
80	A molecular phylogeny of the cotingas (Aves: Cotingidae). Molecular Phylogenetics and Evolution, 2007, 42, 25-37.	2.7	28
81	The Hairyâ€“Downy Game: A model of interspecific social dominance mimicry. Journal of Theoretical Biology, 2012, 313, 42-60.	1.7	27
82	Vibrational and electronic spectroscopy of the retro-carotenoid rhodoxanthin in avian plumage, solid-state films, and solution. Archives of Biochemistry and Biophysics, 2013, 539, 142-155.	3.0	27
83	Manakin display and visiting behaviour: a comparative test of sensory drive. Animal Behaviour, 2008, 75, 783-790.	1.9	26
84	Novel methoxy-carotenoids from the burgundy-colored plumage of the Pompadour Cotinga Xipholena punicea. Archives of Biochemistry and Biophysics, 2010, 504, 142-153.	3.0	26
85	Evolution of single gyroid photonic crystals in bird feathers. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	26
86	Aeroelastic flutter of feathers, flight, and the evolution of nonvocal communication in birds. Journal of Experimental Biology, 2015, 218, 3520-7.	1.7	25
87	Contribution of double scattering to structural coloration in quasiordered nanostructures of bird feathers. Physical Review E, 2010, 81, 051923.	2.1	23
88	Display Behavior and Natural History of the Yellow-Crowned Manakin (Heterocercus flavivertex:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1	1.6	22
89	The Role of Sexual Autonomy in Evolution by Mate Choice. History, Philosophy and Theory of the Life Sciences, 2015, , 237-262.	0.4	21
90	Exceptional three-dimensional preservation and coloration of an originally iridescent fossil feather from the Middle Eocene Messel Oil Shale. Palaontologische Zeitschrift, 2013, 87, 493-503.	1.6	20

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91	Hummingbird feather sounds are produced by aeroelastic flutter, not vortex-induced vibration. Journal of Experimental Biology, 2013, 216, 3395-403.	1.7	20
92	Fruit advertisement strategies in two Neotropical plantâ€“seed disperser markets. Evolutionary Ecology, 2015, 29, 489-509.	1.2	19
93	Convergent evolution of super black plumage near bright color in 15 bird families. Journal of Experimental Biology, 2019, 222, .	1.7	19
94	The evolution of black plumage from blue in Australian fairyâ€wrens (Maluridae): genetic and structural evidence. Journal of Avian Biology, 2010, 41, 505-514.	1.2	18
95	Carotenoids from the crimson and maroon plumages of Old World orioles (Oriolidae). Archives of Biochemistry and Biophysics, 2013, 539, 126-132.	3.0	18
96	Structural resonance and mode of flutter of hummingbird tail feathers. Journal of Experimental Biology, 2013, 216, 3404-13.	1.7	18
97	Longisquama Fossil and Feather Morphology. Science, 2001, 291, 1899c-1902.	12.6	18
98	Moulting tail feathers in a juvenile oviraptorisaur. Nature, 2010, 468, E1-E1.	27.8	16
99	Species Status of the White-Fronted Manakin, Lepidothrix serena (Pipridae), with Comments on Conservation Biology. Condor, 1994, 96, 692-702.	1.6	15
100	Nuclear magnetic resonance analysis of carotenoids from the burgundy plumage of the Pompadour Cotinga (Xipholena punicea). Archives of Biochemistry and Biophysics, 2013, 539, 133-141.	3.0	15
101	Smithornis broadbills produce loud wing song by aeroelastic flutter of medial primary wing feathers. Journal of Experimental Biology, 2016, 219, 1069-1075.	1.7	15
102	Who's Your Daddy?. Science, 2008, 322, 1799-1800.	12.6	14
103	Theoretical morphology and development of flight feather vane asymmetry with experimental tests in parrots. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2014, 322, 240-255.	1.3	14
104	Phylogenetic Relationships of the Cinnamon Tyrant, Neopipo cinnamomea, to the Tyrant Flycatchers (Tyrannidae). Condor, 1995, 97, 650-662.	1.6	13
105	ARE CURRENT CRITIQUES OF THE THEROPOD ORIGIN OF BIRDS SCIENCE? REBUTTAL TO FEDUCCIA (2002). Auk, 2003, 120, 550.	1.4	13
106	Evidence of phenotypic plasticity of penis morphology and delayed reproductive maturation in response to male competition in waterfowl. Auk, 2017, 134, 882-893.	1.4	13
107	Recent divergence and lack of shared phylogeographic history characterize the diversification of neotropical savanna birds. Journal of Biogeography, 2021, 48, 1124-1137.	3.0	13
108	Genomic phylogeography of the White-crowned Manakin Pseudopipra pipra (Aves: Pipridae) illuminates a continental-scale radiation out of the Andes. Molecular Phylogenetics and Evolution, 2021, 164, 107205.	2.7	12

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109	Structural color from solid-state polymerization-induced phase separation. Soft Matter, 2021, 17, 5772-5779.	2.7	12
110	Theory of the development of curved barbs and their effects on feather morphology. Journal of Morphology, 2016, 277, 995-1013.	1.2	10
111	Development and evolutionary origin of feathers. The Journal of Experimental Zoology, 1999, 285, 291-306.	1.4	10
112	Fourier Blues: Structural Coloration of Biological Tissues. Applied and Numerical Harmonic Analysis, 2013, , 401-421.	0.3	9
113	Mechanism of carotenoid coloration in the brightly colored plumages of broadbills (Eurylaimidae). Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2014, 184, 651-672.	1.5	9
114	Female resistance to sexual coercion can evolve to preserve the indirect benefits of mate choice. Journal of Evolutionary Biology, 2019, 32, 545-558.	1.7	9
115	Expanding the eggshell colour gamut: uroerythrin and bilirubin from tinamou (Tinamidae) eggshells. Scientific Reports, 2020, 10, 11264.	3.3	9
116	Mimicry Cycles, Traps, and Chains: The Coevolution of Toucan and Kiskadee Mimicry. American Naturalist, 2016, 187, 753-764.	2.1	8
117	A new genus for the Andean Green Pihas (Cotingidae). Ibis, 2001, 143, 307-309.	1.9	7
118	Constraint and Function in the Predefinitive Plumages of Manakins (Aves: Pipridae). Integrative and Comparative Biology, 2021, 61, 1363-1377.	2.0	4
119	Why Ornithologists Should Care about the Theropod Origin of Birds. Auk, 2002, 119, 1-17.	1.4	4
120	Coherent Scattering of Ultraviolet Light by Avian Feather Barbs. Auk, 2003, 120, 163-170.	1.4	4
121	Hummingbird plumage color diversity exceeds the known gamut of all other birds. Communications Biology, 2022, 5, .	4.4	4
122	Structural Color: How Noniridescent Colors Are Generated by Quasi-ordered Structures of Bird Feathers (Adv. Mater. 26-27/2010). Advanced Materials, 2010, 22, n/a-n/a.	21.0	3
123	Are Current Critiques of the Theropod Origin of Birds Science? Rebuttal to Feduccia (2002). Auk, 2003, 120, 550-561.	1.4	2
124	Coherent Scattering of Ultraviolet Light by Avian Feather Barbs. Auk, 2003, 120, 163-170.	1.4	2
125	Higher-Order Musical Temporal Structure in Bird Song. Frontiers in Psychology, 2021, 12, 629456.	2.1	1
126	Are Current Critiques of the Theropod Origin of Birds Science? Rebuttal to Feduccia (2002). Auk, 2003, 120, 550-561.	1.4	1

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127	Color Production by Isotropic Nanostructures with Short-range Order in Bird Feather Barbs. , 2013, , .		0
128	Visualization of color as birds see it. , 2013, , .		0
129	Study of Angle Dependent Reflection From a 3D Quasi-Ordered Photonic Crystal. , 2008, , .		0
130	Double Scattering of Light from Biophotonic Nanostructures with Short-Range Order. , 2010, , .		0