

# Brian Douglas Metscher

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

65  
papers

2,299  
citations

24  
h-index

47  
g-index

75  
ext. papers

2,784  
ext. citations

3.6  
avg, IF

5.76  
L-index

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 65 | Ultrastructural studies of developing egg tooth in grass snake <i>Natrix natrix</i> (Squamata, Serpentes) embryos, supported by X-ray microtomography analysis. <i>Zoology</i> , <b>2021</b> , 146, 125913   | 1.7  |           |
| 64 | A simple nuclear contrast staining method for microCT-based 3D histology using lead(II) acetate. <i>Journal of Anatomy</i> , <b>2021</b> , 238, 1036-1041  | 2.9  | 2         |
| 63 | Embryology of the naso-palatal complex in Gekkota based on detailed 3D analysis in <i>Lepidodactylus lugubris</i> and <i>Eublepharis macularius</i> . <i>Journal of Anatomy</i> , <b>2021</b> , 238, 249-287   | 2.9  | 2         |
| 62 | Secondary ossification center induces and protects growth plate structure. <i>ELife</i> , <b>2020</b> , 9,   | 8.9  | 11        |
| 61 | Evolutionary trajectories of tooth histology patterns in modern sharks (Chondrichthyes, Elasmobranchii). <i>Journal of Anatomy</i> , <b>2020</b> , 236, 753-771  | 2.9  | 15        |
| 60 | Development of the squamate naso-palatal complex: detailed 3D analysis of the vomeronasal organ and nasal cavity in the brown anole (Squamata: Iguania). <i>Frontiers in Zoology</i> , <b>2020</b> , 17, 28  | 2.8  | 1         |
| 59 | Dental cell type atlas reveals stem and differentiated cell types in mouse and human teeth. <i>Nature Communications</i> , <b>2020</b> , 11, 4816  | 17.4 | 42        |
| 58 | Do all geckos hatch in the same way? Histological and 3D studies of egg tooth morphogenesis in the geckos <i>Eublepharis macularius</i> Blyth 1854 and <i>Lepidodactylus lugubris</i> Duméril & Bibron 1836. <i>Journal of Morphology</i> , <b>2020</b> , 281, 1313-1327 | 1.6  | 1         |
| 57 | Delivery of Iron Oxide Nanoparticles into Primordial Germ Cells in Sturgeon. <i>Biomolecules</i> , <b>2019</b> , 9,  | 5.9  | 3         |
| 56 | Hard and soft X-ray imaging to resolve human ovarian cortical structures. <i>Journal of Synchrotron Radiation</i> , <b>2019</b> , 26, 1322-1329  | 2.4  | 4         |
| 55 | Micro-computed tomography for natural history specimens: a handbook of best practice protocols. <i>European Journal of Taxonomy</i> , <b>2019</b> ,  | 1.7  | 9         |
| 54 | Bichir external gills arise via heterochronic shift that accelerates hyoid arch development. <i>ELife</i> , <b>2019</b> , 8,   | 8.9  | 9         |
| 53 | Internal head morphology of minor workers and soldiers in the hyperdiverse ant genus <i>Pheidole</i> . <i>Canadian Journal of Zoology</i> , <b>2018</b> , 96, 383-392  | 1.5  | 5         |
| 52 | X-ray micro-computed tomography of postmortem brain tissue using potassium dichromate as a contrast agent. <i>Archives Italiennes De Biologie</i> , <b>2018</b> , 156, 48-53   | 1.1  | 1         |
| 51 | Laboratory-based X-ray NanoCT Explores Morphology of a Zebrafish Embryo. <i>Microscopy and Microanalysis</i> , <b>2018</b> , 24, 184-185   | 0.5  | 2         |
| 50 | New avatars for Myriapods: Complete 3D morphology of type specimens transcends conventional species description (Myriapoda, Chilopoda). <i>PLoS ONE</i> , <b>2018</b> , 13, e0200158   | 3.7  | 7         |
| 49 | Microscopic dual-energy CT (microDECT): a flexible tool for multichannel ex vivo 3D imaging of biological specimens. <i>Journal of Microscopy</i> , <b>2017</b> , 267, 3-26  | 1.9  | 22        |

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| 48 | Open data and digital morphology. <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2017</b> , 284,  | 4.4  | 73 |
| 47 | Clidicostigus gen. nov., the first Mesozoic genus of Mastigini (Coleoptera: Staphylinidae: Scydmaeninae) from Cenomanian Burmese amber. <i>Cretaceous Research</i> , <b>2017</b> , 72, 110-116   | 1.8  | 16 |
| 46 | Pre-oral gut contributes to facial structures in non-teleost fishes. <i>Nature</i> , <b>2017</b> , 547, 209-212  | 50.4 | 17 |
| 45 | Dispersal of thermophilic beetles across the intercontinental Arctic forest belt during the early Eocene. <i>Scientific Reports</i> , <b>2017</b> , 7, 12972   | 4.9  | 22 |
| 44 | Wallaceochromis gen. nov, a new chromidotilapiine cichlid genus (Pisces: Perciformes) from West Africa. <i>Zootaxa</i> , <b>2016</b> , 4144, 124-30  | 0.5  |    |
| 43 | An ancient dental gene set governs development and continuous regeneration of teeth in sharks. <i>Developmental Biology</i> , <b>2016</b> , 415, 347-370   | 3.1  | 60 |
| 42 | Sox2+ progenitors in sharks link taste development with the evolution of regenerative teeth from denticles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 14769-14774    | 11.5 | 40 |
| 41 | Shifts of sensory modalities in early life history stage estuarine fishes (Sciaenidae) from the Chesapeake Bay using X-ray micro computed tomography. <i>Environmental Biology of Fishes</i> , <b>2016</b> , 99, 361-375               | 1.6  | 11 |
| 40 | Testing hypotheses of bat baculum function with 3D models derived from microCT. <i>Journal of Anatomy</i> , <b>2015</b> , 226, 229-35  | 2.9  | 29 |
| 39 | Correlative 3D-imaging of Pipistrellus penis micromorphology: Validating quantitative microCT images with undecalcified serial ground section histomorphology. <i>Journal of Morphology</i> , <b>2015</b> , 276, 695-706               | 1.6  | 19 |
| 38 | Unusual pharyngeal dentition in the African Chedrin fishes (Teleostei: Cyprinidae): Significance for phylogeny and character evolution. <i>Zoologischer Anzeiger</i> , <b>2015</b> , 255, 85-102                                       | 1.1  | 5  |
| 37 | The Developmental Pattern of the Musculature Associated with the Mandibular and Hyoid Arches in the Longnose Gar, <i>Lepisosteus osseus</i> (Actinopterygii, Ginglymodi, Lepisosteiformes). <i>Copeia</i> , <b>2015</b> , 103, 920-932 | 1.1  | 13 |
| 36 | Past climate change on Sky Islands drives novelty in a core developmental gene network and its phenotype. <i>BMC Evolutionary Biology</i> , <b>2015</b> , 15, 183  | 3    | 27 |
| 35 | A New Dimension in Documenting New Species: High-Detail Imaging for Myriapod Taxonomy and First 3D Cyber-type of a New Millipede Species (Diplopoda, Julida, Julidae). <i>PLoS ONE</i> , <b>2015</b> , 10, e0135243                    | 3.7  | 47 |
| 34 | Heterochrony and early left-right asymmetry in the development of the cardiorespiratory system of snakes. <i>PLoS ONE</i> , <b>2015</b> , 10, e116416  | 3.7  | 9  |
| 33 | Development and evolution of dentition pattern and tooth order in the skates and rays (batoidea; chondrichthyes). <i>PLoS ONE</i> , <b>2015</b> , 10, e0122553   | 3.7  | 37 |
| 32 | The lateral mesodermal divide: an epigenetic model of the origin of paired fins. <i>Evolution &amp; Development</i> , <b>2014</b> , 16, 38-48  | 2.6  | 7  |
| 31 | Thumbs down: a molecular-morphogenetic approach to avian digit homology. <i>Journal of Experimental Zoology Part B: Molecular and Developmental Evolution</i> , <b>2014</b> , 322, 1-12  | 1.8  | 7  |

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| 30 | MicroCT Imaging Reveals Morphometric Baculum Differences for Discriminating the Cryptic Species <i>Pipistrellus pipistrellus</i> and <i>P. pygmaeus</i> . <i>Acta Chiropterologica</i> , <b>2014</b> , 16, 157-168  | 1   | 12 |
| 29 | Are accessory hearing structures linked to inner ear morphology? Insights from 3D orientation patterns of ciliary bundles in three cichlid species. <i>Frontiers in Zoology</i> , <b>2014</b> , 11, 25  | 2.8 | 19 |
| 28 | One proboscis, two tasks: adaptations to blood-feeding and nectar-extracting in long-proboscid horse flies (Tabanidae, <i>Philoliche</i> ). <i>Arthropod Structure and Development</i> , <b>2014</b> , 43, 403-13   | 1.8 | 34 |
| 27 | Studying developmental variation with Geometric Morphometric Image Analysis (GMIA). <i>PLoS ONE</i> , <b>2014</b> , 9, e115076  | 3.7 | 17 |
| 26 | Volume analysis of heat-induced cracks in human molars: A preliminary study. <i>Journal of Forensic Dental Sciences</i> , <b>2014</b> , 6, 139-44   | 0.8 | 12 |
| 25 | A unique swim bladder-inner ear connection in a teleost fish revealed by a combined high-resolution microtomographic and three-dimensional histological study. <i>BMC Biology</i> , <b>2013</b> , 11, 75  | 7.3 | 30 |
| 24 | Micro-CT in cephalopod research: Investigating the internal anatomy of a sepiolid squid using a non-destructive technique with special focus on the ganglionic system. <i>Journal of Experimental Marine Biology and Ecology</i> , <b>2013</b> , 447, 140-148 | 2.1 | 26 |
| 23 | Time management and nectar flow: flower handling and suction feeding in long-proboscid flies (Nemestrinidae: <i>Prosoeca</i> ). <i>Die Naturwissenschaften</i> , <b>2013</b> , 100, 1083-93   | 2   | 20 |
| 22 | First record of an upper deciduous molar in <i>Desmanella</i> (Uropsilinae, Talpidae, Mammalia). <i>Geobios</i> , <b>2013</b> , 46, 503-510   | 1.5 | 2  |
| 21 | Functional morphology of the feeding apparatus and evolution of proboscis length in metalmark butterflies (Lepidoptera: Riodinidae). <i>Biological Journal of the Linnean Society</i> , <b>2013</b> , 110, 291-304  | 1.9 | 34 |
| 20 | Sensory epithelia of the fish inner ear in 3D: studied with high-resolution contrast enhanced microCT. <i>Frontiers in Zoology</i> , <b>2013</b> , 10, 63   | 2.8 | 24 |
| 19 | Quantitative Immunostaining: 3D X-ray Microscopy for Visualizing and Measuring Protein Distribution in Three Dimensions. <i>FASEB Journal</i> , <b>2013</b> , 27, 532.6   | 0.9 |    |
| 18 | Relationship between swim bladder morphology and hearing abilities--a case study on Asian and African cichlids. <i>PLoS ONE</i> , <b>2012</b> , 7, e42292   | 3.7 | 53 |
| 17 | X-ray microtomographic imaging of intact vertebrate embryos. <i>Cold Spring Harbor Protocols</i> , <b>2011</b> , 2011, 1462-71  | 1.2 | 35 |
| 16 | The function and phylogenetic implications of the tentorium in adult Neuroptera (Insecta). <i>Arthropod Structure and Development</i> , <b>2011</b> , 40, 571-82  | 1.8 | 37 |
| 15 | MicroCT for molecular imaging: quantitative visualization of complete three-dimensional distributions of gene products in embryonic limbs. <i>Developmental Dynamics</i> , <b>2011</b> , 240, 2301-8  | 2.9 | 39 |
| 14 | Structure and sensory physiology of the leg scolopidial organs in Mantophasmatodea and their role in vibrational communication. <i>Arthropod Structure and Development</i> , <b>2010</b> , 39, 230-41   | 1.8 | 40 |
| 13 | Histomorphology of the penis bone (Baculum) in the gray long-eared bat <i>Plecotus austriacus</i> (Chiroptera, Vespertilionidae). <i>Anatomical Record</i> , <b>2010</b> , 293, 1248-58   | 2.1 | 19 |

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| 12 | Showing their true colors: a practical approach to volume rendering from serial sections. <i>BMC Developmental Biology</i> , <b>2010</b> , 10, 41  | 3.1 | 27  |
| 11 | MicroCT for developmental biology: a versatile tool for high-contrast 3D imaging at histological resolutions. <i>Developmental Dynamics</i> , <b>2009</b> , 238, 632-40  | 2.9 | 416 |
| 10 | MicroCT for comparative morphology: simple staining methods allow high-contrast 3D imaging of diverse non-mineralized animal tissues. <i>BMC Physiology</i> , <b>2009</b> , 9, 11  | 0   | 642 |
| 9  | Postcards from The Wedge: review and commentary on Explore Evolution: The Arguments For and Against Neo-Darwinism by Steven C. Meyer et al.. <i>Evolution &amp; Development</i> , <b>2009</b> , 11, 124-125              | 2.6 | 1   |
| 8  | Expression of Hoxa-11 and Hoxa-13 in the pectoral fin of a basal ray-finned fish, <i>Polyodon spathula</i> : implications for the origin of tetrapod limbs. <i>Evolution &amp; Development</i> , <b>2005</b> , 7, 186-95 | 2.6 | 54  |
| 7  | Zebrafish in context: uses of a laboratory model in comparative studies. <i>Developmental Biology</i> , <b>1999</b> , 210, 1-14  | 3.1 | 87  |
| 6  | Homeobox genes in axolotl lateral line placodes and neuromasts. <i>Development Genes and Evolution</i> , <b>1997</b> , 207, 287-295  | 1.8 | 27  |
| 5  | Experimental considerations for 2-D acoustooptic spectrum analysis. <i>Applied Optics</i> , <b>1990</b> , 29, 5317-9   | 1.7 | 0   |
| 4  | Three-dimensional acousto-optic spectrum analysis. <i>Optics Letters</i> , <b>1990</b> , 15, 1245-6  | 3   | 2   |
| 3  | Photon detection with cooled avalanche photodiodes. <i>Applied Physics Letters</i> , <b>1987</b> , 51, 1493-1494   | 3.4 | 12  |
| 2  | A Simple Nuclear Contrast Staining Method for MicroCT-Based 3D Histology Using Lead(II) Acetate  |     | 1   |
| 1  | Secondary ossification center induces and protects growth plate structure  |     | 2   |