

Elizabeth Brainerd

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

3,620
citations

147801

31
h-index

155660

55
g-index

101
all docs

101
docs citations

101
times ranked

2439
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Relaxed Feeding Constraints Facilitate the Evolution of Mouthbrooding in Neotropical Cichlids. <i>American Naturalist</i> , 2022, 199, E197-E210. | 2.1 | 5 |
| 2 | Modular lung ventilation in <i>Boa constrictor</i> . <i>Journal of Experimental Biology</i> , 2022, 225, . | 1.7 | 3 |
| 3 | A new conceptual framework for the musculoskeletal biomechanics and physiology of ray-finned fishes. <i>Journal of Experimental Biology</i> , 2022, 225, . | 1.7 | 7 |
| 4 | Royal knifefish generate powerful suction feeding through large neurocranial elevation and high epaxial muscle power. <i>Journal of Experimental Biology</i> , 2022, 225, . | 1.7 | 4 |
| 5 | A biomechanical paradox in fish: swimming and suction feeding produce orthogonal strain gradients in the axial musculature. <i>Scientific Reports</i> , 2021, 11, 10334. | 3.3 | 6 |
| 6 | Gastrocnemius Muscle Structural and Functional Changes Associated with Domestication in the Turkey. <i>Animals</i> , 2021, 11, 1850. | 2.3 | 0 |
| 7 | Motor control in the epaxial musculature of bluegill sunfish in feeding and locomotion. <i>Journal of Experimental Biology</i> , 2021, 224, . | 1.7 | 7 |
| 8 | An XROMM Study of Food Transport and Swallowing in Channel Catfish. <i>Integrative Organismal Biology</i> , 2020, 2, obaa018. | 1.8 | 10 |
| 9 | Bifunctional Role of the Sternohyoideus Muscle During Suction Feeding in Striped Surfperch, <i>Embiotoca lateralis</i> . <i>Integrative Organismal Biology</i> , 2020, 2, obaa021. | 1.8 | 8 |
| 10 | Fishes can use axial muscles as anchors or motors for powerful suction feeding. <i>Journal of Experimental Biology</i> , 2020, 223, . | 1.7 | 22 |
| 11 | Locomotor rib kinematics in two species of lizards and a new hypothesis for the evolution of aspiration breathing in amniotes. <i>Scientific Reports</i> , 2020, 10, 7739. | 3.3 | 10 |
| 12 | Reply to: Jaw roll and jaw yaw in early mammals. <i>Nature</i> , 2020, 582, E9-E12. | 27.8 | 6 |
| 13 | Dual function of epaxial musculature for swimming and suction feeding in largemouth bass. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20192631. | 2.6 | 14 |
| 14 | Multiple Degrees of Freedom in the Fish Skull and Their Relation to Hydraulic Transport of Prey in Channel Catfish. <i>Integrative Organismal Biology</i> , 2020, 2, obaa031. | 1.8 | 5 |
| 15 | Three-dimensional movements of the pectoral fin during yaw turns in the Pacific spiny dogfish, <i>Squalus suckleyi</i> . <i>Biology Open</i> , 2019, 8, . | 1.2 | 10 |
| 16 | Eye Movements in Frogs and Salamanders—Testing the Palatal Buccal Pump Hypothesis. <i>Integrative Organismal Biology</i> , 2019, 1, obz011. | 1.8 | 4 |
| 17 | Intra-oropharyngeal food transport and swallowing in white-spotted bamboo sharks. <i>Journal of Experimental Biology</i> , 2019, 222, . | 1.7 | 9 |
| 18 | The Multi-Scale, Three-Dimensional Nature of Skeletal Muscle Contraction. <i>Physiology</i> , 2019, 34, 402-408. | 3.1 | 34 |

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|----|--|------|-----------|
| 19 | Functional Morphology of Vertebrate Feeding Systems: New Insights from XROMM and Fluoromicrometry. <i>Fascinating Life Sciences</i> , 2019, , 21-44. | 0.9 | 7 |
| 20 | Channel catfish use higher coordination to capture prey than to swallow. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2019, 286, 20190507. | 2.6 | 20 |
| 21 | Skeletal kinematics of the hyoid arch in the suction-feeding shark <i>Chiloscyllium plagiosum</i> . <i>Journal of Experimental Biology</i> , 2019, 222, . | 1.7 | 8 |
| 22 | Rib Motions Donâ€™t Completely Hinge on Joint Design: Costal Joint Anatomy and Ventilatory Kinematics in a Teiid Lizard, <i>Salvator merianae</i> . <i>Integrative Organismal Biology</i> , 2019, 1, oby004. | 1.8 | 6 |
| 23 | Rolling of the jaw is essential for mammalian chewing and tribosphenic molar function. <i>Nature</i> , 2019, 566, 528-532. | 27.8 | 53 |
| 24 | Pectoral and pelvic girdle rotations during walking and swimming in a semi-aquatic turtle: testing functional role and constraint. <i>Journal of Experimental Biology</i> , 2019, 222, . | 1.7 | 6 |
| 25 | Shearing overbite and asymmetrical jaw motions facilitate food breakdown in a freshwater stingray, <i>Potamotrygon motoro</i> . <i>Journal of Experimental Biology</i> , 2019, 222, . | 1.7 | 14 |
| 26 | XROMM kinematics of ventilation in wild turkeys (<i>Meleagris gallopavo</i>). <i>Journal of Experimental Biology</i> , 2019, 222, . | 1.7 | 6 |
| 27 | Patterns of musculoskeletal growth and dimensional changes associated with selection and developmental plasticity in domestic and wild strain turkeys. <i>Ecology and Evolution</i> , 2018, 8, 3229-3239. | 1.9 | 9 |
| 28 | Advancing quantitative techniques to improve understanding of the skeletal structure-function relationship. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2018, 15, 25. | 4.6 | 5 |
| 29 | Axial morphology and 3D neurocranial kinematics in suction-feeding fishes. <i>Biology Open</i> , 2018, 7, . | 1.2 | 17 |
| 30 | Breathing with floating ribs: XROMM analysis of lung ventilation in savannah monitor lizards. <i>Journal of Experimental Biology</i> , 2018, 221, . | 1.7 | 11 |
| 31 | Waddle and shuffle: Gait alterations associated with domestication in turkeys. <i>Journal of Experimental Biology</i> , 2018, 221, . | 1.7 | 8 |
| 32 | Bluegill sunfish use high power outputs from axial muscles to generate powerful suction-feeding strikes. <i>Journal of Experimental Biology</i> , 2018, 221, . | 1.7 | 27 |
| 33 | New Insights into Formâ€™Function Relationships of Feeding Systems from XROMM and Fluoromicrometry. <i>FASEB Journal</i> , 2018, 32, . | 0.5 | 0 |
| 34 | Heterochrony in the evolution of Trinidadian guppy offspring size: maturation along a uniform ontogenetic trajectory. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20171319. | 2.6 | 6 |
| 35 | Rib kinematics during lung ventilation in the American alligator (<i>Alligator mississippiensis</i>): an XROMM analysis. <i>Journal of Experimental Biology</i> , 2017, 220, 3181-3190. | 1.7 | 23 |
| 36 | Dual function of the pectoral girdle for feeding and locomotion in white-spotted bamboo sharks. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20170847. | 2.6 | 21 |

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|----|--|-----|-----------|
| 37 | Morphological and functional maturity of the oral jaws covary with offspring size in Trinidadian guppies. <i>Scientific Reports</i> , 2017, 7, 5771. | 3.3 | 7 |
| 38 | The opercular mouth-opening mechanism of largemouth bass functions as a 3D four-bar linkage with three degrees of freedom. <i>Journal of Experimental Biology</i> , 2017, 220, 4612-4623. | 1.7 | 25 |
| 39 | Data Management Rubric for Video Data in Organismal Biology. <i>Integrative and Comparative Biology</i> , 2017, 57, 33-47. | 2.0 | 35 |
| 40 | Modeling the physiology of the aquatic temnospondyl <i>Archegosaurus decheni</i> from the early Permian of Germany. <i>Fossil Record</i> , 2017, 20, 105-127. | 1.4 | 7 |
| 41 | Effects of neonatal size on maturity and escape performance in the Trinidadian guppy. <i>Functional Ecology</i> , 2016, 30, 943-952. | 3.6 | 15 |
| 42 | Fluoromicrometry: A Method for Measuring Muscle Length Dynamics with Biplanar Videofluoroscopy. <i>Journal of Experimental Zoology</i> , 2016, 325, 399-408. | 1.2 | 37 |
| 43 | Validation of XMLab software for marker-based XROMM. <i>Journal of Experimental Biology</i> , 2016, 219, 3701-3711. | 1.7 | 155 |
| 44 | Pelvic girdle mobility of cryptodire and pleurodire turtles during walking and swimming. <i>Journal of Experimental Biology</i> , 2016, 219, 2650-8. | 1.7 | 22 |
| 45 | Forelimb Kinematics of Rats Using XROMM, with Implications for Small Eutherians and Their Fossil Relatives. <i>PLoS ONE</i> , 2016, 11, e0149377. | 2.5 | 28 |
| 46 | Functional morphology of durophagy in black carp, <i>Mylopharyngodon piceus</i> . <i>Journal of Morphology</i> , 2015, 276, 1422-1432. | 1.2 | 13 |
| 47 | Reevaluating Musculoskeletal Linkages in Suction-Feeding Fishes with X-Ray Reconstruction of Moving Morphology (XROMM). <i>Integrative and Comparative Biology</i> , 2015, 55, 36-47. | 2.0 | 32 |
| 48 | XROMM analysis of tooth occlusion and temporomandibular joint kinematics during feeding in juvenile miniature pigs. <i>Journal of Experimental Biology</i> , 2015, 218, 2573-84. | 1.7 | 59 |
| 49 | Swimming muscles power suction feeding in largemouth bass. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 8690-8695. | 7.1 | 153 |
| 50 | XROMM analysis of rib kinematics during lung ventilation in the green iguana, <i>Iguana iguana</i> . <i>Journal of Experimental Biology</i> , 2015, 219, 404-11. | 1.7 | 26 |
| 51 | Convergence in morphology and masticatory function between the pharyngeal jaws of grass carp, <i>Ctenopharyngodon idella</i> , and oral jaws of amniote herbivores. <i>Journal of Experimental Biology</i> , 2014, 217, 1925-32. | 1.7 | 29 |
| 52 | Importance of mechanics and kinematics in determining the stiffness contribution of the vertebral column during body-caudal-fin swimming in fishes. <i>Zoology</i> , 2014, 117, 28-35. | 1.2 | 17 |
| 53 | Role of axial muscles in powering mouth expansion during suction feeding in Largemouth Bass. <i>Journal of Experimental Biology</i> , 2013, 217, 1333-45. | 1.7 | 66 |
| 54 | Bite force is limited by the force-length relationship of skeletal muscle in black carp, <i>Mylopharyngodon piceus</i> . <i>Biology Letters</i> , 2013, 9, 20121181. | 2.3 | 43 |

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|----|---|-----|-----------|
| 55 | X-ray motion analysis of the vertebral column during the startle response in striped bass, <i>Morone saxatilis</i> . <i>Journal of Experimental Biology</i> , 2013, 216, 2833-2842. | 1.7 | 22 |
| 56 | Regional variation in the mechanical properties of the vertebral column during lateral bending in <i>Morone saxatilis</i> . <i>Journal of the Royal Society Interface</i> , 2012, 9, 2667-2679. | 3.4 | 10 |
| 57 | Flexibility in starting posture drives flexibility in kinematic behavior of the kinethmoid-mediated premaxillary protrusion mechanism in a cyprinid fish, <i>Cyprinus carpio</i> . <i>Journal of Experimental Biology</i> , 2012, 215, 2262-2272. | 1.7 | 42 |
| 58 | Regional variation in morphology of vertebral centra and intervertebral joints in striped bass, <i>Morone saxatilis</i> . <i>Journal of Morphology</i> , 2012, 273, 441-452. | 1.2 | 25 |
| 59 | Kinematics of the quadrate bone during feeding in mallard ducks. <i>Journal of Experimental Biology</i> , 2011, 214, 2036-2046. | 1.7 | 53 |
| 60 | Static and Dynamic Error of a Biplanar Videoradiography System Using Marker-Based and Markerless Tracking Techniques. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 121002. | 1.3 | 98 |
| 61 | X-ray reconstruction of moving morphology (XROMM): precision, accuracy and applications in comparative biomechanics research. <i>Journal of Experimental Zoology</i> , 2010, 313A, 262-279. | 1.2 | 310 |
| 62 | Lung ventilation during treadmill locomotion in a semi-aquatic turtle, <i>Trachemys scripta</i> . <i>Journal of Experimental Zoology</i> , 2009, 311A, 551-562. | 1.2 | 12 |
| 63 | Variable gearing in pennate muscles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 1745-1750. | 7.1 | 295 |
| 64 | Architectural gear ratio and muscle fiber strain homogeneity in segmented musculature. <i>Journal of Experimental Zoology</i> , 2007, 307A, 145-155. | 1.2 | 26 |
| 65 | Functional morphology and evolution of aspiration breathing in tetrapods. <i>Respiratory Physiology and Neurobiology</i> , 2006, 154, 73-88. | 1.6 | 65 |
| 66 | Muscle fiber angle, segment bulging and architectural gear ratio in segmented musculature. <i>Journal of Experimental Biology</i> , 2005, 208, 3249-3261. | 1.7 | 90 |
| 67 | Mechanics of Respiratory Pumps. <i>Fish Physiology</i> , 2005, 23, 1-28. | 0.8 | 16 |
| 68 | Contribution of eye retraction to swallowing performance in the northern leopard frog, <i>Rana pipiens</i> . <i>Journal of Experimental Biology</i> , 2004, 207, 1361-1368. | 1.7 | 32 |
| 69 | How snakes eat snakes: the biomechanical challenges of ophiophagy for the California kingsnake, <i>Lampropeltis getula californiae</i> (Serpentes: Colubridae). <i>Zoology</i> , 2004, 107, 191-200. | 1.2 | 27 |
| 70 | Lung ventilation during treadmill locomotion in a terrestrial turtle, <i>Terrapene carolina</i> . <i>Journal of Experimental Biology</i> , 2003, 206, 3391-3404. | 1.7 | 38 |
| 71 | Morphology and mechanics of myosepta in a swimming salamander (<i>Siren lacertina</i>). <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2002, 133, 967-978. | 1.8 | 32 |
| 72 | Post-cranial prey transport mechanisms in the black pinesnake, <i>Pituophis melanoleucus lodingi</i> : an x-ray videographic study. <i>Zoology</i> , 2002, 105, 153-164. | 1.2 | 16 |

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|----|---|------|-----------|
| 73 | Buccal oscillation and lung ventilation in a semi-aquatic turtle, <i>Platysternon megacephalum</i> . <i>Zoology</i> , 2001, 104, 143-152. | 1.2 | 17 |
| 74 | PATTERNS OF GENOME SIZE EVOLUTION IN TETRAODONTIFORM FISHES. <i>Evolution; International Journal of Organic Evolution</i> , 2001, 55, 2363-2368. | 2.3 | 43 |
| 75 | Caught in the crossflow. <i>Nature</i> , 2001, 412, 387-388. | 27.8 | 36 |
| 76 | PATTERNS OF GENOME SIZE EVOLUTION IN TETRAODONTIFORM FISHES. <i>Evolution; International Journal of Organic Evolution</i> , 2001, 55, 2363. | 2.3 | 4 |
| 77 | Twisting and Bending: The Functional Role of Salamander Lateral Hypaxial Musculature During Locomotion. <i>Journal of Experimental Biology</i> , 2001, 204, 1979-1989. | 1.7 | 47 |
| 78 | Morphology and Function of Lateral Hypaxial Musculature in Salamanders. <i>American Zoologist</i> , 2000, 40, 77-86. | 0.7 | 5 |
| 79 | Morphology and Function of Lateral Hypaxial Musculature in Salamanders ¹ . <i>American Zoologist</i> , 2000, 40, 77-86. | 0.7 | 9 |
| 80 | Mechanics of lung ventilation in a post-metamorphic salamander, <i>Ambystoma Tigrinum</i> . <i>Journal of Experimental Biology</i> , 2000, 203, 1081-92. | 1.7 | 10 |
| 81 | Confirmation of the Passive Exhalation Hypothesis for a Terrestrial Caecilian, <i>Dermophis mexicanus</i> . <i>Copeia</i> , 1999, 1999, 206. | 1.3 | 9 |
| 82 | Feeding by mandibular raking in a snake. <i>Nature</i> , 1999, 402, 369-370. | 27.8 | 37 |
| 83 | New perspectives on the evolution of lung ventilation mechanisms in vertebrates. <i>Experimental Biology Online</i> , 1999, 4, 1-28. | 1.0 | 57 |
| 84 | Morphological variation of hypaxial musculature in salamanders (Lissamphibia: Caudata). , 1999, 241, 153-164. | | 24 |
| 85 | Contribution of Gular Pumping to Lung Ventilation in Monitor Lizards. <i>Science</i> , 1999, 284, 1661-1663. | 12.6 | 106 |
| 86 | Sound production during feeding in Hippocampus seahorses (Syngnathidae). <i>Environmental Biology of Fishes</i> , 1998, 51, 221-229. | 1.0 | 49 |
| 87 | Stingray jaws strut their stuff. <i>Nature</i> , 1998, 395, 450-451. | 27.8 | 40 |
| 88 | Kinematics of aquatic and terrestrial prey capture in <i>Terrapene carolina</i> , with implications for the evolution of feeding in cryptodire turtles. , 1998, 281, 280-287. | | 62 |
| 89 | Vertebral Column Morphology, C-Start Curvature, and the Evolution of Mechanical Defenses in Tetraodontiform Fishes. <i>Copeia</i> , 1998, 1998, 971. | 1.3 | 111 |
| 90 | Mechanics of Lung Ventilation in a Large Aquatic Salamander, <i>Siren Lacertina</i> . <i>Journal of Experimental Biology</i> , 1998, 201, 673-682. | 1.7 | 29 |

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|-----|--|------|-----------|
| 91 | Mechanics of lung ventilation in a larval salamander <i>Ambystoma tigrinum</i> . <i>Journal of Experimental Biology</i> , 1998, 201, 2891-901. | 1.7 | 12 |
| 92 | Efficient fish not faint-hearted. <i>Nature</i> , 1997, 389, 229-230. | 27.8 | 5 |
| 93 | Functional Morphology of Pufferfish Inflation: Mechanism of the Buccal Pump. <i>Copeia</i> , 1995, 1995, 614. | 1.3 | 34 |
| 94 | The Evolution of Lung-Gill Bimodal Breathing and the Homology of Vertebrate Respiratory Pumps. <i>American Zoologist</i> , 1994, 34, 289-299. | 0.7 | 63 |
| 95 | Pufferfish inflation: Functional morphology of postcranial structures in <i>Diodon holocanthus</i> (Tetraodontiformes). <i>Journal of Morphology</i> , 1994, 220, 243-261. | 1.2 | 95 |
| 96 | Mechanical design of polypterid fish integument for energy storage during recoil aspiration. <i>Journal of Zoology</i> , 1994, 232, 7-19. | 1.7 | 22 |
| 97 | Lung ventilation in salamanders and the evolution of vertebrate air-breathing mechanisms. <i>Biological Journal of the Linnean Society</i> , 1993, 49, 163-183. | 1.6 | 59 |
| 98 | Convergence in the Feeding Mechanics of Ecomorphologically Similar Species in the Centrarchidae and Cichlidae. <i>Journal of Experimental Biology</i> , 1993, 176, 11-29. | 1.7 | 241 |
| 99 | Air Breathing and Suction Feeding Kinematics in the West African Lungfish, <i>Protopterus Annectens</i> . <i>Integrative and Comparative Biology</i> , 0, , . | 2.0 | 4 |
| 100 | Long-axis rotation of jaws of bamboo sharks (<i>Chiloscyllium plagiosum</i>) during suction feeding. <i>Integrative Organismal Biology</i> , 0, , . | 1.8 | 0 |