

CURRICULUM VITAE

The Johns Hopkins University School of Medicine



Gabriel S. Bever

March 1, 2021

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

- 2021 – present Associate Professor, Center for Functional Anatomy & Evolution, Johns Hopkins University School of Medicine
- 2021 – present Associate Professor (Joint Appointment), Department of Earth & Planetary Sciences, Johns Hopkins University
- 2018 – present Research Associate, Department of Earth Sciences, Denver Museum of Nature & Science, Denver, CO
- 2014 – present Honorary Senior Research Fellow, Evolutionary Studies Institute, University of the Witwatersrand, Johannesburg, South Africa
- 2011 – present Research Associate, Division of Paleontology, American Museum of Natural History, New York, NY

Personal Data

Business Address 1830 East Monument Street
Center for Functional Anatomy & Evolution

Building and Room 1830 Building, Rm. 307a,b
Baltimore, MD 21205

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Fax: 410-614-9030

E-mail: gbever1@jhmi.edu

Education and Training

Undergraduate

1992 – 1996 BS, Biology, Pittsburg State University, Pittsburg, KS

Doctoral/Graduate

1998 – 2000 MS, Geological Sciences, Fort Hays State University, Hays, KS

2001 – 2006 PhD, Paleobiology, University of Texas at Austin, Austin, TX

Postdoctoral

2007 – 2008 Lerner-Gray Research Fellow, Division of Paleontology, American Museum of Natural History, New York, NY

2009 – 2010 Interdepartmental Research Fellow, Dept. Geology & Geophysics and Dept. Ecology & Evolutionary Biology, Yale University, New Haven, CT

Professional Experience

2016 – present Assistant Professor, Center for Functional Anatomy & Evolution, Johns Hopkins University School of Medicine

2017 – present Assistant Professor (Joint Appointment), Department of Earth & Planetary Sciences, Johns Hopkins University

2011 – 2016 Assistant Professor, Department of Anatomy, New York Institute of Technology, Old Westbury, NY.

PUBLICATIONS:

Original Research [OR]

1. **Bever GS.** A new record of *Bassariscus ogallalae* (Carnivora: Procyonidae) from the Ogallala Group (Miocene) of Ellis County, Kansas, with comments on variation within *Bassariscus*. Southwestern Naturalist 2003; 48(2): 249-256.
2. **Bever GS,** Rowe T, Ekdale EG, Macrini TE, Colbert MW, Balanoff AM. Comment on “Independent origins of middle ear bones in monotremes and therians” (I). Science. 2005; 309: 1492a.
3. **Bever GS,** Bell CJ, Maisano JA. The ossified braincase and cephalic osteoderms of the Chinese crocodile lizard, *Shinisaurus crocodilurus* (Squamata: Anguimorpha). Palaeontologia Electronica. 2005; 8(1): 1-36.

4. **Bever GS.** Morphometric variation in the cranium and dentition of *Canis latrans* and *Canis lepophagus* (Carnivora: Canidae) and its implications for the identification of isolated fossil specimens. Southwestern Naturalist. 2005; 50: 42-56.
5. **Bever GS.** Variation in the ilium of North American *Bufo* (Lissamphibia; Anura) and its implications for the species-level identification of fragmentary anuran fossils. Journal of Vertebrate Paleontology. 2005; 25: 548-560.
6. Bell CJ, **Bever GS.** Description and significance of the *Microtus* (Rodentia: Arvicolinae) from the type Irvington Fauna, Alameda County, California. Journal of Vertebrate Paleontology. 2006; 26: 371-380.
7. **Bever GS.** Comparative postnatal growth in the skull of the extant North American turtle *Pseudemys texana* (Cryptodira: Emydidae). Acta Zoologica-Stockholm. 2008; 89: 107-131.
8. Liggett GA., **Bever GS.** The Sternberg Elephant Quarry near Pendennis, Lane County, Kansas: the forgotten mammoth site. In G. H. Farley, and J. R. Choate (editors), *Unlocking the Unknown: Papers Honoring Dr. Richard J. Zakrzewski*. Fort Hays Studies, Special Issue. 2008; 1: 131-143.
9. **Bever GS,** Macrini TE, Jass CN. A natural endocranial cast of a fossil proboscidean with comments on elephant endocranial evolution and the scientific value of 'no data' specimens. In G. H. Farley, and J. R. Choate (editors), *Unlocking the Unknown: Papers Honoring Dr. Richard J. Zakrzewski*. Fort Hays Studies, Special Issue. 2008; 1: 11-22.
10. **Bever GS.** The postnatal skull of the extant turtle *Pseudemys texana* (Cryptodira: Emydidae) with comments on the study of discrete intraspecific variation. Journal of Morphology. 2009; 270: 97-128.
11. Norell MA, Makovicky PJ, **Bever GS,** Balanoff AM, Clark JM, Barsbold R, Rowe T. A review of the Mongolian Cretaceous dinosaur *Saurornithoides* (Troodontidae: Theropoda). American Museum Novitates. 2009; 3654: 1-63. [contributed significantly to all aspects of study]
12. **Bever GS,** Norell MA. The perinate skull of *Byronosaurus* (Troodontidae) with observations on the cranial ontogeny of paravian theropods. American Museum Novitates. 2009; 3657: 1-51.
13. Brusatte SL, Carr TD, Erickson GM, **Bever GS,** Norell MA. A long-snouted, multihorned tyrannosaurid from the Late Cretaceous of Mongolia. Proceedings of the National Academy of Sciences, USA. 2009; 106: 17261-17266. [provided, analyzed, and interpreted a subset of the data; helped write manuscript]
14. Bhullar B-AS, **Bever GS.** An archosaur-like laterosphenoid in early turtles (Reptilia: Pantestudines). Breviora of the Museum of Comparative Zoology at Harvard. 2009; 518: 1-11.
15. **Bever GS.** Postnatal ontogeny of the skull in the extant North American turtle *Sternotherus odoratus* (Cryptodira: Kinosternidae). Bulletin of the American Museum of Natural History. 2009; 330: 1-97.
16. **Bever GS,** Zakrzewski RJ. A new species of the Miocene leptarctine *Leptarctus* (Carnivora: Mustelidae) from the Early Hemphillian of Kansas. In L. B. Albright III (editor), *Papers on Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne*. Museum of Northern Arizona Bulletin. 2009; 65: 465-481.
17. Balanoff AM, **Bever GS,** Ikejiri T. Endocranial morphology of *Apatosaurus* (Dinosauria: Sauropoda) based on computed tomography of a previously undescribed braincase with comments on variation and evolution in sauropod neuroanatomy. American Museum Novitates. 2010; 3677: 1-29. [contributed significantly to all aspects of study, including procuring the award that paid for the work]
18. Bell CJ, Gauthier JA, **Bever GS.** Covert biases, circularity, and apomorphies: A critical look at the North American Quaternary herpetofaunal stability hypothesis. Quaternary International. 2010; 217: 30-36.
19. Lyson TR, **Bever GS,** Bhullar B-AS, Joyce WG, Joyce, Gauthier JA. Transitional fossils and the origin of turtles. Biology Letters. 2010; 23: 830-833. [contributed significantly to all aspects of the project; one of the ten most downloaded articles from Biology Letters in 2010]
20. Brusatte SL, Norell MA, Carr TD, Erickson GM, Hutchinson JR, Balanoff AM, **Bever GS,** Choiniere JN, Makovicky PJ, Xu X. Tyrannosaur paleobiology: New research on ancient exemplar organisms. Science. 2010; 329: 1481-1485. [provided, analyzed, and interpreted a subset of the data; helped write manuscript]
21. Zakrzewski RJ, **Bever GS.** Arvicolini (Rodentia) from the Irvingtonian of north-central Kansas, USA. Palaeontologia Electronica. 2011; 14(3); 37A: 1-18.
22. Gauthier JA, Nesbitt SJ, Schachner E, **Bever GS,** Joyce WG. The bipedal stem crocodylian *Poposaurus gracilis*: Inferring function in fossils and innovation in archosaur locomotion. Bulletin of the Peabody Museum of Natural History at Yale. 2011; 52: 107-126. [contributed to data analysis and interpretation; helped write manuscript]

23. Young RL, **Bever GS**, Wang Z, Wagner GP. Identity of the avian wing digits: Problems resolved and unsolved. Developmental Dynamics. 2011; 240: 1042-1053. [contributed data; helped analyze and interpret data, helped write manuscript]
24. **Bever GS**, Gauthier JA, Wagner GP. Finding the frame shift: Digit loss, developmental variability, and the origin of the avian hand. Evolution & Development. 2011; 13: 269-279.
25. **Bever GS**, Brusatte SL, Balanoff AM, Norell MA. Variation, variability, and the origin of the avian endocranium: Insights from the anatomy of *Alioramus altai* (Tyrannosauria: Theropoda). PLoS ONE. 2011; 6(8): e23393 (1-10).
26. Bhullar B-AS, M-Lobon J, Racimo F, **Bever GS**, Norell MA, Rowe TB, Abzhanov A. Birds have paedomorphic dinosaur skulls. Nature. 2012; 487: 223-226. [contributed to data analysis and interpretation; helped write manuscript]
27. **Bever GS**, Brusatte SL, Carr TD, Xu X, Balanoff AM, Norell MA. The braincase anatomy of the Late Cretaceous dinosaur *Alioramus* (Theropoda: Tyrannosauroidae). Bulletin of the American Museum of Natural History. 2013; 810: 1-72.
28. Lyson TR, **Bever GS**, Scheyer TM, Hsiang AY, Gauthier JA. Evolutionary origin of the turtle shell. Current Biology. 2013; 23: 1-7. [contributed significantly to all aspects of project]
29. Lyson TR, Bhullar BAS, **Bever GS**, Joyce WG, de Queiroz K, Abzhanov A, Gauthier JA. Homology of the enigmatic nuchal bone reveals novel reorganization of the shoulder girdle in the evolution of the turtle shell. Evolution & Development. 2013; 15(5): 317-325. [contributed to data analysis and interpretation; helped write manuscript] [cover art]
30. Balanoff AM, **Bever GS**, Rowe TB, Norell MA. Evolutionary origin of the avian brain. Nature. 2013; 501: 93-96. [contributed significantly to all aspects of project]
31. Lyson TR, Schachner ER, Botha-Brink J, Scheyer TM, Lambertz M, **Bever GS**, Rubidge B, de Queiroz K. Origin of the novel ventilatory apparatus of turtles. Nature Communications. 2014; 5 (1): 1-11. [contributed to data analysis and interpretation; helped write manuscript]
32. Dyke G, Vremir M, Brusatte S, **Bever GS**, Buffetaut E, Chapman S, Csiki-Sava Z, Kellner A, Martin E, Naish D, Norell M, Osi A, Pinheiro F, Prondvai E, Rabi M, Rodrigues T, Steel L, Tong H, Nova BV, Witton MV. *Thalassodromeus sebesensis* – a new name for an old turtle. Comment on “*Thalassodromeus sebesensis*, an out of place and out of time Gondwanan tapejarid pterosaur”, Grellet-Tinner and Codrea. Gondwana Research. 2014; 27: 1680-1682. [contributed to data interpretation; helped write manuscript]
33. Balanoff AM, **Bever GS**, Norell MA. Reconsidering the avian nature of the oviraptorosaur brain (Dinosauria: Theropoda). PLoS ONE. 2014; 9(12): e113559. [contributed significantly to all aspects of project]
34. Liu J, **Bever GS**. The last diadectomorph sheds light on Late Paleozoic tetrapod biogeography. Biology Letters. 2015; 11: 20150100.
35. Hill RV, D’Emic M, **Bever GS**, Norell MA. A complex hyobranchial apparatus in a Cretaceous dinosaur and the antiquity of the paraglossalia of birds. Zoological Journal of the Linnean Society. 2015; 175(4): 892-909. [helped formulate and design the study; contributed to data analysis and interpretation; helped write manuscript]
36. **Bever GS**, Lyson TR, Field DJ, Bhullar B-AS. Evolutionary origin of the turtle skull. Nature. 2015; 525: 239-242.
37. Chen J, **Bever GS**, Yi H, Norell MA. New digging frog from the late Paleocene of Mongolia uncovers a deep history of spadefoot (Pelobatoidea) evolution in Asia. Scientific Reports. 2016; 6 (19209): 1-7. [helped formulate and design the study; contributed to data analysis and interpretation; helped write manuscript]
38. **Bever GS**, Lyson TR, Field DJ, Bhullar B-AS. The amniote temporal roof and the diapsid origin of the turtle skull. Zoology. 2016; 119: 471-473.
39. Bhullar BAS, M Hanson, M Fabbri, A Pritchard, **Bever GS**, Hoffman E. How to make a bird skull: major transitions in the evolution of the avian cranium. Integrative and Comparative Biology. 2016; 56(3): 389-403. [contributed to data analysis and interpretation; helped write manuscript]
40. Lyson TR, Scheyer TM, Rubidge B, de Queiroz K, Schachner ER, Smith R, Botha-Brink J., **Bever GS**. Fossorial origin of the turtle shell. Current Biology. 2016; 26: 1887-1894.
41. Fabbri M, Koch NM, Pritchard AC, Hanson M, Hoffman E, **Bever GS**, Balanoff AM, Morris ZS, Field DJ, Camacho J, Rowe TB, Norell MA, Smith RM, Abzhanov A, Bhullar B-AS. The skull roof tracks the regions of the brain evolutionarily and ontogenetically in the deep history of Archosauria. Nature Ecology & Evolution.

2017; 1(10): 1543-1550. [contributed data; contributed to data interpretation and analysis; helped write manuscript]

42. **Bever GS**, Norell MA. 2017. A new rhynchocephalian (Reptilia: Lepidosauria) from the Upper Jurassic of Solnhofen (Bavaria) and the origin of the marine Pleurosauridae. *Royal Society Open Science*. 2017; 4(11) 170570.
43. Pei R, Norell MA, Barta DE, **Bever GS**, Pittman M, Xu X. Osteology of a new late Cretaceous troodontid specimen from Ukhaa Tolgod, Ömnögovi Aimag, Mongolia. *American Museum Novitates*. 2017; 3889: 1-47.
44. Pritchard AC, Gauthier JA, Hanson M, **Bever GS**, Bhullar B-AS. A tiny Triassic saurian from Connecticut and the early evolution of the diapsid feeding apparatus. *Nature Communications*. 2018; 9(1): 1-10. [contributed data; contributed to data interpretation; helped write manuscript]
45. Liu J, **Bever GS**. Tetrapod fauna of the Upper Permian Naobaogou Formation of China: A new species of *Elginia* (Parareptilia: Pareiasauria). *Papers in Palaeontology*. 2018; 4(2): 197-209.
46. Balanoff AM, Norell MA, **Hogan AVC**, **Bever GS**. Endocranial anatomy of oviraptorosaur dinosaurs and the increasingly complex, deep history of the avian brain. *Brain, Behavior & Evolution*. 2018; 91: 125-135.
47. Ksepka DT, Balanoff AM, Smith NA, **Bever GS**, Bhullar B-AS, Bourdon E, Braun EL, Burleigh JG, Clarke JA, Colbert MW, Corfield JR, Degrange FJ, De Pietri VL, Early CM, Field DJ, Gignac PM, Gold MEL, Kimball RT, Kawabe S, Lefebvre L, Marugán-Lobón J, Mongle CS, Morhardt A, Norell MA, Ridgely RC, Scolfield RP, Tambussi CP, Torres CR, van Tuinen M, Walsh SA, Watanabe A, Witmer LM, Wright AK, Zanno LE, Jarvis ED, Smaers JB. Tempo and pattern of avian brain size evolution. *Current Biology*. 2020; 30: 1-11. [contributed data; contributed to data interpretation; helped write manuscript] [cover art]
48. **Hogan AVC**, Watanabe A, Balanoff AM, **Bever GS**. Morphogenesis and growth of the olfactory apparatus in chick: implications for avian evolution. *Journal of Anatomy*. 2020; 237(2): 225-240. [cover art]
49. Jia J, Gao K-Q, Jiang J-P, **Bever GS**, Xiong R, Wei G. Comparative osteology of the hynobiid complex *Lina-Protolynobius-Pseudohynobius* (Amphibia, Urodela): I. Cranial Anatomy of *Pseudohynobius*. *Journal of Anatomy*. [early view: doi.org/10.1111/joa.13311.]
50. Wang Q, Hernández-Ochoa EO, Viswanathan MC, Blum ID, Do DC, Granger JM, Murphy KR, Wei, A-C, Aja S, Liu N, Antonescu, Florea LD, Talbot Jr CC, Mohr D, Wagner KR, Regot S, Lovering RM, Gao P, Wu MN, Cammarato A, Schneider MF, **Bever GS**, Anderson ME. A critical performance/disease trade-off acquired at the dawn of vertebrate evolution. [In Revision at *Nature Communications*]. [specified as contributing to the conception and design of the work, drafting and substantively revising the MS (with WQ and MA)]

Review Articles [RA]

1. Balanoff AM, **Bever GS**, Colbert CW, Clarke JA, Field DJ, Gignac PM, Ksepka DT, Ridgely R, Smith NA, Torres C, Walsh S, Witmer L. Best practices for digitally constructing endocranial casts: examples from birds and their dinosaurian relatives. *Journal of Anatomy*. 2015; 229(2): 173-190. [specified as contributing equally as first author; corresponding author]
2. Balanoff AM, **Bever GS**. The role of endocasts in the study of brain evolution. In Kass J, ed. *Evolution of Nervous Systems*, 2nd edition; pp. 223-241. 2016; Elsevier Press, London. [specified as contributing equally as first author; corresponding author]
3. Lyson TR, **Bever GS**. Evolutionary origin of the turtle body plan. *Annual Review of Ecology, Evolution, and Systematics*. 2020; 51: 143-166. [specified as contributing equally; corresponding author]
4. Balanoff AM, **Bever GS**. The role of endocasts in the study of brain evolution. In Kass J, ed. *Evolutionary Neuroscience*, 2nd edition; pp. xxx-yyy. 2020; Elsevier Press, London. [specified as contributing equally; corresponding author]

Book Chapters [BC]

1. Joyce WG, **Bever GS**. Cheloniidae – Seesschildkröten. In Fritz U, ed. *Handbuch der Reptilien und Amphibien Europas*, Band 3/IIIB: Schildkröten (Testudines) II; pp. 13-24. 2005; AULA-Verlag, Wiebelsheim.
2. **Bever GS**, Joyce WG. 2005. Dermochelyidae – Lederschildkröten. In Fritz U, ed. *Handbuch der Reptilien und Amphibien Europas*, Band 3/IIIB: Schildkröten (Testudines) II; pp. 235-248. 2005; AULA-Verlag, Wiebelsheim.

Essays [ED]

1. **Bever GS.** Swimming out from an evolutionary shadow. *Laboratory News* (UK). 2016; January: 22–24. [invited essay]
2. **Bever GS,** Bell CJ. J. Stuart Thomson and the Anatomy of the Tortoise; pp. v-viii, reprinted edition of J. Stuart Thomson (1932) *Anatomy of the Tortoise*. 2006. Bibliomania, Salt Lake City, Utah. pp. 2006. [invited essay]

Media Releases or Interviews [MR]

- 2012 Featured in cover-story article “[Ancient fossils reveal their secrets](#)” Fall 2012 edition of *Pittsburg State University Alumni Magazine*.
- 2015 Interviewed for press release based on OR 30, which was picked up by more than 150 media outlets including [BBC News](#), [NBC News](#), [Los Angeles Times](#), [National Geographic](#), [Christian Science Monitor](#), and [Spiegel](#).
- 2015 Interviewed by Reuters reporter Will Dunham for a press release on OR 36. The release was picked up by over 200 media outlets, including [NBC News](#), [Yahoo News](#), [Der Spiegel](#), [Science News](#), and [Daily Mail](#).
- 2015 Interviewed by reporter from *Newsday* for article titled “[Turtles 260 million years ago.](#)”
- 2015 Interviewed by writer Mary Caperton Morton for *Earth Magazine* article “[Unshelled ancestor fills big gap in turtle family tree.](#)”
- 2015 Wrote and recorded an invited piece discussing OR36 for Public Radio’s [Academic Minute](#)
- 2017 Interviewed for JHMI [press release](#) based on OR 42, which was picked up by numerous media outlets including [Science Daily](#), [Science Connected](#), [Futurity](#), [Lab Manager](#), and the [International Business Times](#). JHMI [HUB](#) coverage of OR 42.
- 2017 Interviewed by Sid Perkins for news article on OR 42 in [Science](#).
- 2019 Research featured in TED-Ed talk “[How turtle shells evolved...twice.](#)”
- 2019 Research on turtle origins focus of a display at the Smithsonian Institution National Museum of Natural History.
- 2019 Collaborative work highlighted in the BBC’s *David Attenborough’s Natural Curiosities* in the episode *Incredible Shells*.
- 2020 Example of news coverage for OR47 on bird brain evolution: [CNN](#).

Other Media [OM]

Faculty website: <https://www.hopkinsmedicine.org/fae/gsb.html>

Google Scholar page: <https://scholar.google.com/citations?user=tdhZVy0AAAAJ&hl=en>

FUNDING

EXTRAMURAL Funding

Research Extramural Funding

Current

1/15/20 – 1/14/23 Integrative Approaches to the Turtle Body Plan: Evolutionary Origins of Structural Complexity in an Enigmatic Lineage
NSF-DEB-1947025
National Science Foundation: Environmental Biology
\$539,111 [JHU \$368,914]
Role: PI, 25%

Previous

4/1/15 – 3/31/18 Unraveling the Deep History of Avian Neurological Complexity: Implications for the Origins of Flight and Organization of the Modern Avian Brain
NSF-DEB-1457181
National Science Foundation, Environmental Biology
\$521,296
PI: Balanoff AB
Role: Co-PI, 20%

8/1/16 – 7/30/19 Fossil Tetrapods of the Naobaogou Formation (Permian), Inner Mongolia, China.
National Science Foundation of China (NSFC)
\$129,000 (0.82 million Yuan)
PI: Liu J
Role: Foreign Collaborator, 10%

4/1/14 – 3/31/17 How Development and Behavior Interact to Change Skull Form: Exploring and Sharing Evolutionary Insights from the Fossil Record of Cetaceans (Whales, Dolphins, and Porpoises).
NSF-EAR-12-608
National Science Foundation, Earth Sciences
\$276,680
PI: Geisler J
Role: Senior Personnel, 5%

Pending

None

INTRAMURAL Funding

Research Intramural Funding

Current

1/1/16 – 12/31/20 Early Evolution of the Modern Small-bodied Tetrapod Fauna: Late Jurassic Vertebrates of the Fruita Paleontological Area, Morrison Formation, Fruita, CO
American Museum of Natural History, Frick Fund
\$75,000
Role: PI, 10%

CLINICAL ACTIVITIES

None

EDUCATIONAL ACTIVITIES

Educational Focus

Keywords: comparative methods, developmental biology, embryology, evolutionary theory, functional/clinical anatomy of the head & neck, history and philosophy of science, phylogenetic systematics

My educational efforts in the medical school focus on the development, embryology, and functional/clinical anatomy of the human body. This includes both lecture-based content delivery and facilitating dissection-based active learning for medical students, biomedical graduate students, and Art-as-Applied-to-Medicine students. I also instruct both graduate and undergraduate students in the history, philosophy, theory, and practice of comparative biology, and maintain an open-door policy for helping students and colleagues in my areas of expertise. My approach is guided by pedagogical theory, such as Bloom's taxonomy, but my goal is always to encourage and inspire students to challenge themselves.

Teaching

Classroom instruction

Regional

1998 – 1999 Laboratory instructor for the following courses: Geology Field Camp, Historical Geology, Introduction to Geology, Invertebrate Paleontology, Physical Geology; Fort Hays State University, Hays, KS
2001 – 2006 Laboratory instructor for the following courses: Age of Dinosaurs, Age of Mammals, Comparative Vertebrate Anatomy, Morphology of the Vertebrate Skeleton, Plate Tectonics and Earth History; University of Texas at Austin, Austin, TX
2009 Course Director, Instructor, secondary educators, The Transition from Dinosaurs to Birds, American Museum of Natural History, New York, NY; on-line course that used fossil record to teach fundamentals of scientific methods and inferences
2011 – 2015 Lecturer / Laboratory Instructor, 1st year medical curriculum, Human Clinical Anatomy, New York Institute of Technology, College of Osteopathic Medicine, Old Westbury, NY
2011 – 2015 Course Director/Lecturer/Laboratory Instructor, 1st year physical therapy students, Human Clinical Anatomy, New York Institute of Technology, School of Allied Health, Old Westbury, NY
2016 – present Lecturer / Laboratory Instructor, 1st year medical curriculum, Scientific Foundations of Medicine – Human Anatomy, Johns Hopkins University School of Medicine (every year)
2017 – present Course Director and Lecturer, graduate course, Evolutionary Theory and Comparative Methods [ME:130.746], Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine (every other year)
2017 – present Lecturer / Laboratory Instructor, Human Anatomy – A Summer Course for Undergraduates and Graduates, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine (every year).

- 2018 – present Course Director and Lecturer, upper-level undergraduate and graduate course, Evolution and Development of the Vertebrates [AS.270.310.01], Department of Earth & Planetary Sciences, The Johns Hopkins University (Spring, every other year).
- 2019 – present Course Director and Learning Facilitator, graduate course, Introduction to Histology, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine (each Fall).

National

- 2009 Course Director, Instructor, secondary educators, The Transition from Dinosaurs to Birds, American Museum of Natural History, New York, NY; on-line course that used fossil record to teach fundamentals of scientific methods and inferences

International

None

Clinical instruction

None

CME instruction

None

Workshops /seminars

None

Mentoring

Pre-doctoral Advisees /Mentees

- 2017 – 2020 Michael Carter, B.A. Honors, Behavioral Biology, The Johns Hopkins University; primary thesis advisor
- 2017 – 2019 Anthony Harper, B.S., M.S., Ph.D., Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine; primary advisor
- 2018 – 2019 Catherine Llera, 3rd year Ph.D. Candidate, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine; research rotation advisor
- 2016 – present Aneila Hogan, B.A., 4th year Ph.D. Candidate, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine; primary advisor; shared publications: OR46, 48
- 2018 – present Yi-Chieh Huang, B.S., 2nd year Ph.D. Candidate, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine; primary advisor
- 2019 – present Jacob Wilson, B.S., M.S., 1st year Ph.D. Student, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine; primary advisor

Post-doctoral Advisees /Mentees

- 2015 – 2017 Elizabeth Ferrer, Ph.D., American Museum of Natural History, New York, NY; co-advisor.

Thesis committees

- 2016 Hong-yu Yi, Ph.D., The snake inner ear: indicators for fossil locomotion from a comparative dataset of modern species, Columbia University, external committee member
- 2017 Jianye Chen, Ph.D., Evolution and biogeography of frogs and salamanders, inferred from fossils, morphology and molecules, Columbia University, external committee member
- Current Catherine Llera, Ph.D. candidate, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine, second reader / committee member

Educational Program Building / Leadership

- 2015 Course Director, Form and Function in the Genotype and Phenotype, flagship course within a curriculum submitted to the State of New York as part of a certification proposal for a new DO/PhD degree at the New York Institute of Technology.
- 2020 – 2021 Co-Director, Master's Program in Anatomy Education, Center for Functional Anatomy & Evolution, The Johns Hopkins School of Medicine.

RESEARCH ACTIVITIES

Research Focus

Keywords: body-plan construction, evolutionary theory, evolution of development, phylogenetic systematics, sensory evolution, structural biology

My research integrates data from numerous sources – including anatomy, embryology, developmental genetics, phylogenomics, and the fossil record – to better understand major transitions in the vertebrate body plan and the origin of functional complexes in vertebrate morphology. I am particularly interested in how the evolution of developmental networks impacts the variability of phenotypes, and what influence these dynamics have on our perception of evolutionary patterns. Informing such problems is essential for integrating the fossil record into a modern systems biology. A combined phylogenetic and experimental approach allows my students and I to tackle a diversity of evolutionary and basic science questions.

Research Program Building/Leadership

None

Research Demonstration Activities

None

Inventions, Patents, Copyrights

None

Technology Transfer Activities

None

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

None

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

- | | |
|----------------|---|
| 2011 – 2014 | Member, Academic Technologies Advisory Committee, New York Institute of Technology |
| 2014 – 2016 | Member, Student Progress Committee, New York Institute of Technology |
| 2014 – 2016 | Member, Research Oversight Committee, New York Institute of Technology |
| 2015 – 2016 | Member, Selection Committee, Academic Scholars Program, New York Institute of Technology |
| 2015 – 2016 | Chairman, Search Committee for Assistant/Associate Professor of Anatomy, New York Institute of Technology |
| 2017 – present | Member, Graduate Admissions Committee, Center for Functional Anatomy & Evolution |
| 2020 | Facilitator, Ethics Small Group, Johns Hopkins University School of Medicine |
| 2020 – 2021 | Co-Director, Master's in Anatomy Education Program, Center for Functional Anatomy & Evolution |

Editorial Activities

Editorial Board appointments

- | | |
|----------------|--|
| 2017 – present | Associate Editor, Journal of Vertebrate Paleontology |
| 2018 | Guest Editor, ELife |

Journal peer review activities

- | | |
|----------------|---|
| 2007 – present | Acta Zoologica-Stockholm, Bibliotheca Herpetologica, Biological Reviews, Brain Behavior & Evolution, Bulletin of the Peabody Museum of Natural History, Contributions to Zoology, Current Biology, ELife, Herpetological Review, International Journal of Developmental Neuroscience, Journal of Experimental Zoology (Molecular and Developmental Evolution), Journal of Anatomy, Journal of Mammalogy, Journal of Morphology, Journal of Vertebrate Paleontology, Nature, Nature Communications, Neues für Geologie und Paläontologie (Abhandlungen), Northwest Science, Palaeontology, PeerJ, PLoS ONE, Science, Scientific Reports, Zoomorphology |
|----------------|---|

Other peer review activities *[non medico-legal]*

- | | |
|-----------|--|
| 2016-2019 | Grant Reviewer; National Science Foundation, Division of Environmental Biology |
| 2017 | Book Proposal Reviewer; Taylor & Francis Press. |
| 2020 | External Evaluator; research and professional activity of research-oriented institutes of the Czech Academy of Sciences for the period of 2015-2019 [invited by the Czech Academy of Sciences] |

Advisory Committees, Review Groups/Study Sections

None

Professional Societies

- 1996 – present Member, Society of Vertebrate Paleontology
2008 – present Member, Society for Integrative and Comparative Biology
2010 – present Member, American Association for Anatomy

Conference Organizer

Regional

- 2012 – 2013 Planning Committee, Northeast Regional Symposium on Evolutionary Vertebrate Morphology, New York Institute of Technology, Old Westbury, NY.

Session Chair

National

- 2008 Session Moderator, 68th Annual Meeting of the Society of Vertebrate Paleontology, Cleveland, OH
2013 Session Moderator, 73rd Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA

International

- 2014 Session Moderator, 74th Annual Meeting of the Society of Vertebrate Paleontology, Berlin, Germany
2016 Organizer and Chair, Special Symposium – Evolution, Development, and Integration of the Vertebrate Brain and Skull, International Congress of Vertebrate Morphology, Washington, D.C.

Consultantships

- 2009 National Geographic Society, content consultant for documentary on dinosaurian origin of birds

RECOGNITION

Awards, Honors

- 1999 Kansas Geological Association, Student Presentation Award
1999 Eugene Dehner Award, for student presentation at Kansas Academy of Sciences Annual Meeting
2001 – 2002 Arno P. Wendler Professional Development Award, University of Texas at Austin
2002 – 2003 Ronald K DeFord Field Scholarship, Dept. Geological Sciences, University of Texas at Austin
2002 Brundrett Endowed Presidential Scholarship, University of Texas at Austin
2003 Jurassic Foundation Research Award, project title: “Endocranial morphology of *Apatosaurus* (Dinosauria: Sauropoda)”
2003 Phi Beta Kappa, Epsilon Chapter, University of Texas at Austin
2004 ConocoPhillips Professional Development Award in Earth Science
2004 Texas Academy of Science, research award, project title: “Cranial osteology of the Eocene pond turtle *Echmatemys* and the early history of crown Testudinoidea.”
2004 Brett Stearns Award for Herpetological Research, California Academy of Sciences, San Francisco, CA, project title: “Skeletal variation in *Emys marmorata*”
2005 Outstanding Graduate Student, Dept. Geological Sciences, University of Texas at Austin (awarded annually to one student from a dept. of approximately 200 graduate students)
2011 – present Research Associate, Division of Paleontology, American Museum of Natural History, New York, NY
2014 – present Honorary Senior Research Fellow, Evolutionary Studies Institute, University of the Witwatersrand, Johannesburg, South Africa
2014 Kenneth K. Bateman Outstanding Alumnus, Pittsburg State University, Pittsburg, KS (elected honor awarded to <1% of alumni)
2018 – present Research Associate, Department of Earth Sciences, Denver Museum of Nature & Science, Denver, CO

Invited Talks

JHMI (4)

- 2016 “Origin and Early Evolution of Phenotypes: New Perspectives from Deep Time”, invited seminar, Center for Functional Anatomy & Evolution, The Johns Hopkins University School of Medicine.
2017 “Evolving Variation: New Perspectives on Fossils and the Origin of Biological Form”, invited seminar, Department of Earth & Planetary Sciences, The Johns Hopkins University.
2018 “Biostratigraphy and Biochronology”, invited course lecture, Department of Earth & Planetary Sciences, The Johns Hopkins University.
2019 “Biotic Invasions of the Land”, invited course lecture, Department of Earth & Planetary Sciences, The Johns Hopkins University.

National (14)

- 2006 “Variation in the Vertebrate Skeleton and its Paleontological Implications”, Technical Sessions Seminar Series, Department of Geological Sciences, University of Texas at Austin.
- 2010 “Variation, Variability, and the Origin of the Avian Hand”, invited seminar, Frontiers in Paleontology and Geomicrobiology Symposium, Yale University.
- 2010 “Hot wings and turtle soup: Integrative approaches to complex problems in vertebrate anatomy”, invited seminar, Department of Anatomy, New York Institute of Technology.
- 2010 “Evolving Variability and the Paradox of Avian Digit Identity”, invited seminar, Department of Geology & Geophysics, Yale University.
- 2013 “On the Trail of Major Evolutionary Transitions”, invited seminar, Department of Biology, Pittsburg State University.
- 2013 “Evolutionary Origins of the Avian Body Plan: New Investigations in the Dinosaur-Bird Transition”, invited seminar, Department of Biology, Millersville University, Millersville, PA
- 2014 “Deep History of the Amniote Skull and the Origin of Turtles”, invited seminar, Department of Biology Millersville University, Millersville, PA
- 2015 “Chasing the Origins of Amniote Structural Diversity”, invited Keynote Address, Annual Meeting of the Kansas Academy of Sciences, Pittsburg, KS.
- 2015 “Homoplasy, Variability, and the Early Evolution of Phenotypes: Perspectives from Deep Time”, invited seminar, Paleobiology Seminar Series Department of Anatomical Sciences, Stony Brook University School of Medicine.
- 2017 “New Rhynchocephalian (Reptilia: Lepidosauria) from the Upper Jurassic of Solnhofen (Bavaria) and the Origin of the Marine Pleurosauridae”, invited symposium speaker, Last Days of Pangaea, Bruce Museum, Greenwich, CT.
- 2018 “Evolutionary Novelty and the Fossil Record: The Challenge and Promise of Complex Patterns in Deep Time”, invited seminar, Department of Earth Sciences, Denver Museum of Science & Nature, Denver, Colorado.
- 2018 “Early History of Phenotypes: Fossils, Variability, Frustrations, and Opportunities”, invited seminar, Department of Biology, George Washington University, Washington, DC.
- 2020 “Temporal Fenestrae and the Radiation of Amniotes”, invited seminar, Department of Earth Sciences, Denver Museum of Science & Nature, Denver, Colorado.
- Sched. “Ontogeny and Phylogeny of the Avian Adductor Musculature and its Implications for the Cranial Morphology of an Encephalized Lineage”, invited symposium speaker. Special Symposium, American Association of Anatomists 2021 Annual Meeting.

International (4)

- 2012 “Conserved variability and the fossil record: Implications for evolutionary patterns and problems in deep time”, invited symposium speaker, 4e Colloque Cuvier sur la paléontologie des vertébrés. Musée de Cuvier, Montébeliard, France.
- 2013 “Paleontology and the evolution of anatomical form”, invited seminar, Kaunas Technological University, Kaunas, Lithuania.
- 2013 “*Ennotosaurus africanus* and the evolutionary origin of the turtle skull”, invited symposium speaker, International Congress on Vertebrate Morphology, Barcelona, Spain.
- 2016 “Science Along the Stem: New Perspectives from Deep Time on the Origin and Early Evolution of Phenotypes”, invited Plenary Speaker, 109th Annual Meeting of the German Zoological Society, Kiel, Germany.

OTHER PROFESSIONAL ACCOMPLISHMENTS

Paleontological Fieldwork

- 1997-2000 Sternberg Museum of Natural History fieldwork to collect vertebrate fossils from the Cretaceous, Miocene, and Pleistocene of Colorado, Kansas, Nebraska, Oklahoma, and South Dakota.
- 2004 University of Texas at Austin fieldwork to collect Miocene vertebrate fossils, Black Rock Desert, Nevada.
- 2005 University of Texas at Austin fieldwork to collect Late Triassic vertebrate fossils, Chinle Formation, Arizona.
- 2007 Joint expedition of the American Museum of Natural History, Field Museum of Natural History, and Peking University to collect Cretaceous vertebrate fossils from the southern Gobi Desert, Gansu Province, China
- 2008 – 2009 Joint expedition of the American Museum of Natural History and the Mongolian Academy of Sciences to collect Cretaceous vertebrate fossils from the northern Gobi Desert, Mongolia
- 2011 – 2013 Expedition of the Evolutionary Studies Institute, University of the Witwatersrand to collect Permian vertebrate fossils in the Karoo Basin, South Africa

- 2011 – 2019 Organized and led field crews to collect Late Jurassic small-bodied tetrapods from the Morrison Formation of western Colorado and eastern Utah
- 2014 Collaborative field work with Universidad Autonoma de Madrid to collect Early Cretaceous vertebrate fossils at Las Hoyas, Spain

Posters (17)

- 2000 Ikejiri T, **Bever GS**. Variation in *Camarasaurus* (Dinosauria, Sauropoda) from the Morrison Formation of central Wyoming. 132nd Annual Meeting of the Kansas Academy of Science, Hutchinson.
- 2001 **Bever GS**. Craniodental variation in *Canis latrans* and *Canis lepophagus*: what can we do with fragmentary specimens? J. Vertebr. Paleontol. 21(suppl. to 3): 34A.
- 2002 Ruez DR, **Bever GS**, Jass CN. Holocene mammal fauna from Eagle Cave, Val Verde County, Texas. 105th Annual Meeting of the Texas Academy of Science, Laredo.
- 2004 Bell CJ, **Bever GS**. *Microtus* from the Irvington fauna, Alameda County, California. J. Vertebr. Paleontol. 24(suppl. to 3): 38A.
- 2005 Balanoff AM, Ikejiri T, **Bever GS**. Endocranial morphology of diplodocid sauropods. J. Vertebr. Paleontol. 25(suppl. to 3): 33A.
- 2005 Zakrzewski RJ, **Bever GS**. Microtids from the Fiene local fauna (Irvingtonian) of Smith County, Kansas. J. Vertebr. Paleontol. 25(suppl. to 3): 133A.
- 2005 **Bever GS**. *Echmatemyx* and the evolution of the braincase in testudinoid turtles. J. Vertebr. Paleontol. 25(suppl. to 3): 37A.
- 2007 Norell MA, **Bever GS**. The braincase of *Gallimimus bullatus* (Coelurosauria: Ornithomimidae). J. Vertebr. Paleontol. 27(suppl. to 3): 124B.
- 2008 Liggett G, **Bever GS**. The forgotten mammoth site: The Sternberg Elephant Quarry in Lane County, Kansas. J. Vertebr. Paleontol. 28 (suppl. to 3): 106A.
- 2014 Liu J, Li X-W, **Bever GS**, Xu L, Jia S-H. The Jiyuan tetrapod fauna of the Upper Permian of China. 74th Society of Vertebrate Paleontology Annual Meeting, Berlin, Germany.
- 2018 Liu J, **Bever GS**. First complete skull of a pareiasaur from China: phylogenetic and taxonomic implications. 78th Annual Meeting of the Society of Vertebrate Paleontology, Albuquerque, NM.
- 2018 Hogan AVC, Watanabe A, Balanoff A, **Bever GS**. Evolutionary patterns in the olfactory system of developing chick. 78th Annual Meeting of the Society of Vertebrate Paleontology, Albuquerque, NM.
- 2018 Wang Q, Hernandez-Ochoa E, Viswanathan M, Luczak E, Wu Y, Granger J, Yang J, Lovering R, Cammarato A, Schneider M, **Bever GS**, Anderson ME. An integrative look at vertebrate origins. 78th Annual Meeting of the Society of Vertebrate Paleontology, Albuquerque, NM.
- 2018 Hogan AVC, Watanabe A, Balanoff A, **Bever GS**. Differential growth in the telencephalon of developing chick: The olfactory bulb in ontogeny and phylogeny. FASEB J. 32(1).
- 2019 Wang Q, Hernandez-Ochoa E, Viswanathan M, Luczak E, Wu Y, Granger J, Yang J, Lovering R, Cammarato A, Schneider M, **Bever GS**, Anderson ME. A critical role for oxidative regulation of CaMKII in the origin of vertebrates. Integr. Comp. Biol. 59: E296-E296.
- 2019 Carter ME, Hogan AVC, Balanoff A, **Bever GS**. Functional correlates of floccular size in Pan-Aves. Integr. Comp. Biol. 59: E285-E285.
- 2020 Hogan, AVC, Balanoff AB, **Bever GS**. 2020. Developmental and evolutionary scaling in the olfactory system of birds. Integr. Comp. Biol. 60: E185-E185.

Oral/Podium Presentations (40)

- 1999 **Bever GS**, Zakrzewski RJ, Levin RL. “New late Pleistocene local fauna from Smith County, Kansas.” 131st Annual Meeting of the Kansas Academy of Science, Manhattan.
- 1999 **Bever GS**, Zakrzewski RJ, Levin RL. “New late Pleistocene local fauna from north-central Kansas.” J. Vertebr. Paleontol. 19(suppl. to 3): 32A.
- 2000 Liggett GL, **Bever GS**. “The Pratt mammoth excavation.” 132nd Annual Meeting of the Kansas Academy of Science, Hutchinson. [presented by Liggett]
- 2000 Liggett GL, **Bever GS**. “Have we rediscovered the Sternberg Elephant Quarry?” 132nd Annual Meeting of the Kansas Academy of Science, Hutchinson. [presented by Liggett]
- 2002 **Bever GS**. “Variation in the anuran ilium and its implications for species-level identification of fragmentary fossil specimens.” J. Vertebr. Paleontol. 22(suppl. to number 3): 36A.
- 2003 **Bever GS**, Balanoff AM. “Digital preparation of an emydid turtle from the Miocene (Clarendonian) of Nebraska with a review of the fossil hinged emydid of Kansas and Nebraska.” 135th Annual Meeting of the Kansas Academy of Science Meeting, Pittsburg.

- 2003 **Bever GS**, Bell CJ, Hutchison JH. "Fossil hinged emydines of North America: reading the record." 63rd Annual Meeting of the Society of Vertebrate Paleontology, St. Paul, MN; J. Vertebr. Paleontol. 23(suppl. to 3):34A.
- 2004 **Bever GS**. "Variation, diversity, and the identification of isolated fossil elements: warnings from the ilium of North American *Bufo*. Wilks Award Session Speaker, 51st Annual Meeting of the Southwestern Association of Naturalists, San Antonio, Texas.
- 2004 **Bever GS**. "Variation in the skull of extant turtles: implications for the fossil record." 64th Annual Meeting of the Society of Vertebrate Paleontology, Denver, CO; J. Vertebr. Paleontol. 24 (suppl. to 3):38–39A.
- 2007 **Bever GS**. "Variation, variability, and probability in assessing the evolutionary history of fossil vertebrates based on discrete skeletal characters." Romer Prize Session Speaker, 67th Annual Meeting of the Society of Vertebrate Paleontology, Austin, TX; J. Vertebr. Paleontol. 27(suppl. to 3):48A.
- 2008 Bhullar B-AS, Scanferla CA, **Bever GS**, Smith KT. "A nearly complete macrostomatan snake from the Eocene of Texas." 68th Annual Meeting of the Society of Vertebrate Paleontology, Cleveland, OH; J. Vertebr. Paleontol. 28(suppl. to 3):52B. [presented by Bhullar]
- 2008 Balanoff AM, **Bever GS**, Rowe T, Norell MA. "The endocranial morphology of oviraptorosaurs and a reinterpretation of their encephalization quotients." 68th Annual Meeting of the Society of Vertebrate Paleontology, Cleveland, OH; J. Vertebr. Paleontol. 28 (suppl. to 3): 47A. [presented by Balanoff]
- 2008 **Bever GS**, Norell MA. "Neonate troodontid skulls from the Upper Cretaceous of Mongolia with observations on the cranial ontogeny of paravian theropods." 68th Annual Meeting of the Society of Vertebrate Paleontology, Cleveland, OH; J. Vertebr. Paleontol. 28 (suppl. to 3):52B.
- 2009 Norell MA, Brusatte SL, Carr TD, **Bever GS**, Erickson GM. "A remarkable long-snouted multi-horned tyrannosaurid from the Late Cretaceous of Mongolia." 69th Annual Meeting of the Society of Vertebrate Paleontology and 57th Symposium of Vertebrate Paleontology and Comparative Anatomy, Bristol, England; J. Vertebr. Paleontol. 29 (suppl. to 3):124B. [presented by Brusatte]
- 2009 Bhullar B-AS, Pauly G, Scanferla CA, **Bever GS**, Smith KT. The first fossil sunbeam snake and the antiquity of modern snake clades. 69th Annual Meeting of the Society of Vertebrate Paleontology and 57th Symposium of Vertebrate Paleontology and Comparative Anatomy, Bristol, England; J. Vertebr. Paleontol. 29(suppl. to 3):63A. [presented by Bhullar]
- 2009 **Bever GS**, Brusatte SL, Carr TD, Norell MA. "The braincase of a new tyrannosaurid from the Late Cretaceous of Mongolia." 69th Annual Meeting of the Society of Vertebrate Paleontology and 57th Symposium of Vertebrate Paleontology and Comparative Anatomy, Bristol, England; J. Vertebr. Paleontol. 29(suppl. to 3): 52B.
- 2010 Lyson TR, Bhullar B-AS, **Bever GS**, Joyce WG, Gauthier JA. Vertical split of the turtle shoulder girdle pushes the limits of muscular scaffold homology." 9th International Congress on Vertebrate Morphology, Punta del Este, Uruguay. [presented by Lyson]
- 2010 Lyson TR, Bhullar B-AS, **Bever GS**, Joyce WG, Gauthier JA. Vertical split of the turtle shoulder girdle pushes the limits of muscular scaffold homology." 70th Annual Meeting of the Society of Vertebrate Paleontology, Pittsburgh, PA; J. Vertebr. Paleontol. 30(suppl. to 3):108A. [presented by Lyson]
- 2011 Bhullar B-AS, **Bever GS**, Merck JW, Lyson T, Gauthier JA. "Uniting microevolution and macroevolution in deep time: the zone of variability in Archosauromorpha." 71st Annual Meeting of the Society of Vertebrate Paleontology, Las Vegas, NV; J. Vertebr. Paleontol. 31(suppl. to number 3): 38A.
- 2012 **Bever GS**. "The quadratomaxillary ligament: implications for cranial fenestration in reptiles." Northeast Regional Symposium on Evolutionary Vertebrate Morphology, New York Institute of Technology, College of Osteopathic Medicine, Old Westbury, NY.
- 2012 Lyson TR, **Bever GS**, Scheyer TM, Hsiang AY, Gauthier JA. "Evolutionary developmental model for the origin of the turtle shell." Biennial Conference of the Palaeontological Society of Southern Africa, Cape Town, South Africa. [presented by Lyson]
- 2012 Lyson TR, **Bever GS**, Scheyer TM, Hsiang AY, Gauthier JA. "Evolutionary developmental model for the origin of the turtle shell." 7th World Congress of Herpetology, Vancouver, Canada. [presented by Lyson]
- 2012 Lyson TR, **Bever GS**, Scheyer TM, Hsiang AY, Gauthier JA. "Evolutionary developmental model for the origin of the turtle shell." Symposium on Turtle Evolution, Tübingen, Germany. [presented by Lyson]
- 2012 Balanoff AB, **Bever GS**, Rowe T, Norell MA. "The origin of the avian brain based on a volumetric analysis of endocranial evolution in Coelurosauria." 72nd Annual Meeting of the Society of Vertebrate Paleontology, Raleigh, NC; J. Vertebr. Paleontol. 32(suppl. to 3):35A.
- 2012 **Bever GS**, Lyson TR, Bhullar B-AS. "The quadratomaxillary ligament and its implications for the evolution of cranial fenestration in reptiles." 72nd Annual Meeting of the Society of Vertebrate Paleontology, Raleigh, NC; J. Vertebr. Paleontol. 32(suppl. to 3): 36A.
- 2013 Chen J, **Bever GS**, Yi H, Norell MA. "Spade for digging? A study of the fossil spadefoot toads of Asia." Northeast Regional Symposium Northeast Regional Symposium on Evolutionary Vertebrate Morphology, New York Institute of Technology, College of Osteopathic Medicine, Old Westbury, NY. [presented by Chen]

- 2013 Lyson TR, **Bever GS**, Scheyer TM, Hsiang AY, Gauthier JA. “The deep history of the turtle shell: integrating fossil and developmental data.” International Congress on Vertebrate Morphology. Barcelona, Spain. [presented by Lyson]
- 2013 Bhullar B-AS, Marugán-Lobón J, Racimo F, **Bever GS**, Rowe T, Norell MA, Abzhanov A. 2013. “Frontiers in the evolution and development of the reptilian skull.” International Congress on Vertebrate Morphology, Barcelona, Spain. [presented by Bhullar]
- 2013 Balanoff, AM, **Bever GS**, Norell MA. “The relationships of oviraptorosaurid dinosaurs and endocranial evolution along a morphologically bizarre lineage.” 73rd Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA. [presented by Balanoff]
- 2013 **Bever GS**, Lyson TR. “Cranial evolution and the origin of turtles: insights from *Eumotosaurus africanus*.” 73rd Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA.
- 2013 Balanoff AM, **Bever GS**, Norell MA. “The relationships of oviraptorosaurid dinosaurs and endocranial evolution along a morphologically bizarre lineage.” 73rd Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA. [presented by Balanoff]
- 2014 Lyson TR, Schachner ER, Botha-Brink J, Scheyer TM, Lambertz M, **Bever GS**, Rubidge B, de Queiroz K. “Origin of the novel ventilatory apparatus of turtles.” 74th Annual Meeting of the Society of Vertebrate Paleontology, Berlin, Germany. [presented by Lyson]
- 2014 **Bever GS**, Lyson TR, Bhullar B-AS. “Fossil evidence for a diapsid origin of the anapsid turtle skull.” 74th Annual Meeting of the Society of Vertebrate Paleontology, Berlin, Germany.
- 2015 **Bever GS**. “Conserved variability and the vertebrate fossil record: implications for evolutionary patterns and problems in deep time.” 75th Annual Meeting of the Society of Vertebrate Paleontology, Dallas, TX.
- 2016 **Bever GS**. “Evolution, development, and integration of the vertebrate brain and skull: Frontiers in neuroscience and paleontology.” International Congress on Vertebrate Morphology, Bethesda, MD.
- 2017 Ferrer E, Vaska P, Salerno M, Ouellette D, Wei S, **Bever GS**, Gignac P, Balanoff A. “Combination of diffusible iodine-based contrast-enhanced computed tomography with measuring biodistribution and kinetics of 18F-FDG in extant birds: implications on the evolution of the avian brain.” Tomography for Scientific Advancement Annual Conference, New York, NY. [presented by Ferrer]
- 2019 Llera CJ, **Bever GS**. Evolutionary ontogeny of the avian adductor musculature-endocranial relationship: Evidence from chick. FASEB J. 33:77.4-77.4. [presented by Llera, chosen as finalist for student prize]
- 2020 Hogan AVC, Balanoff AB, **Bever GS**. “Phylogenetic scaling of the olfactory apparatus in Crown Aves.” 80th Annual Meeting of the Society of Vertebrate Paleontology, Cincinnati, OH. [presented by Hogan]
- 2020 Huang, Y-C., **Bever GS**. “New triconodontid (Pan-Theria, Mammalia) from the Jurassic of North America and cranial-postcranial disparity in the body-size estimations of small-bodied mammals. 80th Annual Meeting of the Society of Vertebrate Paleontology, Cincinnati, OH. [presented by Huang]
- 2020 Wilson J, Wisniewski A, **Bever GS**. New insights into the neurocranium and inner ear of the Triassic early stem archosaur *Trilophosaurus*. 80th Annual Meeting of the Society of Vertebrate Paleontology, Cincinnati, OH. [presented by Wilson]