

Ryan M. Bebej

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EDUCATION AND PROFESSIONAL POSITIONS

- 2012– Calvin University (formerly Calvin College, Grand Rapids, MI)
Associate Professor of Biology (2019–)
Assistant Professor of Biology (2012–2019)
- 2011–2012 Olivet Nazarene University (Bourbonnais, IL)
Assistant Professor of Biological Sciences
- 2005–2011 University of Michigan (Ann Arbor, MI)
Ph.D., Ecology and Evolutionary Biology (EEB)
Advisors: Dr. Philip D. Gingerich, Dr. Philip Myers
- 2001–2005 Calvin College (Grand Rapids, MI)
B.S., Biology (with honors)
Advisors: Dr. David P. Warners, Dr. Ralph F. Stearley

RESEARCH INTERESTS

Evolution of aquatic mammals
Aquatic locomotion and evolution of swimming mode
Evolutionary transitions between aquatic and terrestrial environments
Evolution and paleontology of mammals
Comparative anatomy and functional morphology
Relationship between science and Christian faith
Evolutionary theodicy

AWARDS AND FELLOWSHIPS

- 2023 American Scientific Affiliation Fellow
- 2023 Princeton (Illinois) High School Academic and Career Hall of Fame
- 2022–2023 Calvin University Joseph C. Stevens Research Fellowship (one-course teaching reduction)
- 2019–2022 Creation Project Regional Discussion Fellowship (funded by the Henry Center at Trinity International University; \$750 annual stipend)
- 2019–2020 Calvin University Advising and Mentoring Award (\$500 honorarium)
- 2018–2019 Scholarship and Christianity in Oxford (SCIO) visiting scholar in science and religion
- 2018–2019 Calvin College Research Fellowship (two-course teaching reduction)
- 2017 Calvin College Professor of the Year (presented by K4L: Student Alumni Association)
- 2016–2017 Calvin College Joseph C. Stevens Research Fellowship (one-course teaching reduction)
- 2014–2015 Participant in Equipping the Next Generation of Christian Evolutionary Biologists and Paleobiologists: A Seminar for Early Career Scientists (funded by the BioLogos Foundation's Evolution and Christian Faith grant program; \$500 annual stipend)
- 2014–2015 Calvin College Diekema Research Fellowship (one-course teaching reduction)
- 2011 Ermine Cowles Case Student Award for Outstanding Scholarship and Attainment in Research (awarded by the University of Michigan Museum of Paleontology; \$200 honorarium)

- 2009 Peter Olaus Okkelberg Award (awarded by the University of Michigan Museum of Zoology; \$600 for research expenses)
- 2009 Rackham Outstanding Graduate Student Instructor Award (awarded by the Rackham Graduate School at the University of Michigan; \$1000 award)
- 2007–2010 Center for Faith and Scholarship Graduate Fellow (\$500 annual stipend)
- 2006–2011 Au Sable Institute Graduate Fellow (\$200 annually for books)
- 2005 Bernard J. Ten Broek Excellence in Biological Research Award (awarded by Calvin College Biology Department)

GRANTS AND SCHOLARSHIPS

- 2023 Calvin University School of STEM funding for student researcher (\$5000 from the Bernard Klammer Biology Research Fund for Caedmon Morgret)
- 2023 Calvin University Beverly Klooster Biology Department Endowment (\$2000 for research expenses)
- 2019 Calvin College Supplemental Travel Fund (\$1200 for travel to 2019 Bridging the Two Cultures of Science and the Humanities II seminar)
- 2019 Calvin College Supplemental Travel Fund (\$700 for travel to 2019 Bridging the Two Cultures of Science and the Humanities II colloquium)
- 2018 Scholarship and Christianity in Oxford (SCIO) Interdisciplinary Seminars in Science and Religion: Bridging the Two Cultures of Science and the Humanities II (£11,500 for research expenses, research assistants, and a science and religion club)
- 2018 Calvin College Supplemental Travel Fund (\$900 for travel to 2018 Bridging the Two Cultures of Science and the Humanities II seminar)
- 2017 Calvin College Science Division funding for student researcher (\$4000 from the Jansma Family Research Fund in the Sciences for Aaron Pemberton)
- 2016 Calvin College Science Division funding for student researcher (\$3900 from the Jansma Family Research Fund in the Sciences for Alexandra Kuipers)
- 2015 Calvin College Science Division funding for student researcher (\$3900 for Alexandra Kuipers)
- 2015 Calvin College Alumni Association Faculty Research Grant (\$2000 for research expenses)
- 2014 Calvin College Supplemental Travel Fund (\$1500 for travel to 2014 Society of Vertebrate Paleontology annual meeting)
- 2014 Calvin College Science Division funding for student researcher (\$3800 from the William H. and Celia I. Dornbush DeVries Family Student Research Fellowship for Josiah Valk)
- 2014 Calvin College Science Division student travel grant (\$110 for Melissa Braun to travel to 2014 Michigan Academy of Science, Arts, and Letters annual meeting)
- 2013 Calvin College Science Division funding for student researcher (\$3700 from the Jansma Family Research Fund in the Sciences for Melissa Braun)
- 2013 Calvin College Alumni Association Faculty Research Grant (\$1800 for research expenses)
- 2009 University of Michigan EEB Research Allowance (\$100 for research expenses)
- 2009 University of Michigan EEB Travel Grant (\$100 for travel to 2009 Society of Vertebrate Paleontology annual meeting)
- 2009 University of Michigan Rackham Travel Grant (\$850 for travel to 2009 Society of Vertebrate Paleontology annual meeting)
- 2008 University of Michigan EEB Travel Grant (\$100 for travel to 2008 Society of Vertebrate Paleontology annual meeting)

- 2008 University of Michigan Rackham Travel Grant (\$600 for travel to 2008 Society of Vertebrate Paleontology annual meeting)
- 2007 University of Michigan EEB Research Allowance (\$100 for research expenses)
- 2007 University of Michigan EEB Travel Grant (\$100 for travel to 2007 Society of Vertebrate Paleontology annual meeting)
- 2007 University of Michigan Rackham Travel Grant (\$500 for travel to 2007 Society of Vertebrate Paleontology annual meeting)
- 2007 Society of Vertebrate Paleontology Student Member Travel Grant (\$300 for travel to 2007 Society of Vertebrate Paleontology annual meeting)
- 2006 University of Michigan EEB Block Grant (\$650 for research expenses)
- 2006 American Scientific Affiliation Student Scholarship (\$100 for registration for 2006 American Scientific Affiliation annual meeting)
- 2006 University of Michigan EEB Research Allowance (\$100 for research expenses)
- 2003–2005 John and Lillian Van Oosten Science Scholarship (2-time recipient; awarded by Calvin College Biology Department)
- 2001–2005 Calvin College Presidential Scholarship (4-time recipient)

TEACHING EXPERIENCE

- 2012– Calvin University
 - Biology 123: Living Systems: Concepts and Connections, lectures and labs (2 semesters)
 - Biology 161: Cellular and Genetic Systems, labs (1 semester)
 - Biology 205: Human Anatomy, lectures and labs (21 semesters, 10 summers)
 - Biology 206: Human Physiology, lectures and labs (5 semesters, 1 summer)
 - Biology 224: Cellular and Genetic Systems, labs (1 semester)
 - Biology 230: Physiological Systems, lectures (4 semesters)
 - Biology 295: Biology Seminar, organizer (1 semester)
 - Biology 323: Comparative Vertebrate Anatomy, lectures and labs (5 semesters)
 - Biology 385: Internship in Biology, supervision (13 semesters, 4 interims, 1 summer)
 - Biology 395: Perspectives in Biology, discussions (1 semester)
 - Biology 399: Undergraduate Research, supervision (3 interims)
 - Interdisciplinary W13/W23: Exploring German-Style Games/Adaptive Radiation of Board Games, lectures (2 interims)
 - Interdisciplinary W20: New Zealand: Ecology and Culture of the Maori Nation, lectures and supervision (1 interim)
 - Interdisciplinary W42: Ecological, Economic, and Environmental Issues in Ecuador and the Galápagos, lectures and supervision (1 interim)
 - Interdisciplinary 149: First-Year Seminar, lectures (6 semesters)
 - Interdisciplinary 150: DCM: Eugenics and Personal Genomics, lectures (3 interims)
 - Interdisciplinary 290: Cross-Cultural Engagement Independent Study, supervision (1 semester)
- 2011–2012 Olivet Nazarene University
 - Biology 125: Biology I, lectures and labs (2 semesters)
 - Biology 211: Medical Terminology, lectures (2 semesters)
 - Biology 246: Human Anatomy and Physiology I, lectures and labs (1 semester, 1 summer)
 - Biology 247: Human Anatomy and Physiology II, lectures and labs (1 summer)
 - Biology 455: Physiology, labs (1 semester)

- 2005–2011 University of Michigan (graduate student instructor)
 Biology 162: Introductory Biology, discussion sections and labs (with Dr. Marcus Ammerlaan: 3 semesters)
 Biology 173: Introductory Biology Laboratory, labs (with Dr. Marcus Ammerlaan: 1 semester, 2 summers)
 Biology 252: Chordate Anatomy and Phylogeny, labs (with Dr. William Fink and Dr. Ronald Nussbaum: 2 semesters)
 Ecology and Evolutionary Biology 451: Biology of Mammals, labs (with Dr. Philip Myers: 1 semester)
- 2003–2005 Calvin College (undergraduate teaching assistant)
 Biology 205: Human Anatomy, labs (with Dr. Adriana Ribeiro and Dr. Peter Tigchelaar: 2 semesters)
 Biology 323: Comparative Vertebrate Anatomy, labs (with Dr. Peter Tigchelaar: 2 semesters)

OTHER WORK AND RESEARCH EXPERIENCE

- 2009–2011 Museum assistant, University of Michigan Museum of Paleontology, under the supervision of Dr. Philip Gingerich
- 2009 Field assistant on University of Michigan-Egyptian Environmental Affairs Agency expedition in Wadi Al-Hitan, Egypt, under the supervision of Dr. Philip Gingerich and Dr. Iyad Zalmout (November 2, 2009–December 8, 2009)
- 2005–2011 Doctoral student research under the advising of Dr. Philip Gingerich on the evolution of Eocene archaeocete cetaceans
- 2004–2005 Independent research with Dr. Ralph Stearley documenting and investigating potential causes of vertebral asymmetry in the Ada Bible Church mastodon
- 2004 Research assistant for Dr. David Warners and Dr. Randall Van Dragt in conducting a botanical inventory of Vergennes Township (Kent County, Michigan)

PUBLICATIONS (*undergraduate co-author)

- 2023 **RM Bebej**. On Miller 2011: twenty-five ASA fellows and editors tell of PSCF articles that changed their lives. *Perspectives on Science and Christian Faith* 75: 111–112.
- 2022 KM Smith, AK Hastings, **RM Bebej**, MD Uhen. Biogeographic, stratigraphic, and environmental distribution of *Basilosaurus* (Mammalia, Cetacea) in North America with a review of the late Eocene shoreline in the southeastern coastal plain. *Journal of Paleontology* 96: 439–451. DOI: [10.1017/jpa.2021.90](https://doi.org/10.1017/jpa.2021.90)
- 2020 **RM Bebej**, C Curia. Book review: *Jesus Loves You and Evolution Is True: Why Youth Ministry Needs Science* by Sara Sybesma Tolsma and Jason Lief. *Perspectives on Science and Christian Faith* 72: 185–186.
- 2019 **RM Bebej**. Book review: *The Rhinoceros and the Megatherium: An Essay in Natural History* by Juan Pimentel. *Perspectives on Science and Christian Faith* 71: 57–58.
- 2018 **RM Bebej**. Book review: *The Rise of Marine Mammals: 50 Million Years of Evolution* by Annalisa Berta. *Perspectives on Science and Christian Faith* 70: 275–276.
- 2018 **RM Bebej**, KM Smith. Lumbar mobility in archaeocetes (Mammalia: Cetacea) and the evolution of aquatic locomotion in the earliest whales. *Zoological Journal of the Linnean Society* 182: 695–721. DOI: [10.1093/zoolinnean/zlx058](https://doi.org/10.1093/zoolinnean/zlx058)
- 2017 PD Gingerich, K Heissig, **RM Bebej**, W von Koenigswald. Astragali of Pakicetidae and other early-to-middle Eocene archaeocetes (Mammalia, Cetacea) of Pakistan: locomotion and

- habitat in the initial stages of whale evolution. *Paläontologische Zeitschrift* 91: 601–627. DOI: [10.1007/s12542-017-0362-8](https://doi.org/10.1007/s12542-017-0362-8)
- 2017 **RM Bebej**. Book review: *Cetacean Paleobiology* by Felix G. Marx, Olivier Lambert, and Mark D. Uhen. *Perspectives on Science and Christian Faith* 69: 113–114.
- 2015 **RM Bebej**, IS Zalmout, AA Abed El-Aziz, MSM Antar, PD Gingerich. First remingtonocetid archaeocete (Mammalia, Cetacea) from the middle Eocene of Egypt with implications for locomotion and biogeography in early cetacean evolution. *Journal of Paleontology* 89: 882–893. DOI: [10.1017/jpa.2015.57](https://doi.org/10.1017/jpa.2015.57)
- 2013 **RM Bebej**. Book review: *Evolution and Belief: Confessions of a Religious Paleontologist* by Robert J. Asher. *Perspectives on Science and Christian Faith* 65: 56–58.
- 2012 **RM Bebej**, M ul-Haq, IS Zalmout, PD Gingerich. Morphology and function of the vertebral column in *Remingtonocetus domandaensis* (Mammalia, Cetacea) from the middle Eocene Domanda Formation of Pakistan. *Journal of Mammalian Evolution* 19: 77–104. DOI: [10.1007/s10914-011-9184-8](https://doi.org/10.1007/s10914-011-9184-8)
- 2011 **RM Bebej**. Functional morphology of the vertebral column in *Remingtonocetus* (Mammalia, Cetacea) and the evolution of aquatic locomotion in early archaeocetes. Ph.D. dissertation, University of Michigan, Department of Ecology and Evolutionary Biology.
- 2011 AR Wood, **RM Bebej**, CL Manz*, DL Begun, PD Gingerich. Postcranial functional morphology of *Hyracotherium* (Equidae, Perissodactyla) and locomotion in the earliest horses. *Journal of Mammalian Evolution* 18: 1–32. DOI: [10.1007/s10914-010-9145-7](https://doi.org/10.1007/s10914-010-9145-7)
- 2009 **RM Bebej**. Swimming mode inferred from skeletal proportions in the fossil pinnipeds *Enaliarctos* and *Allodesmus* (Mammalia, Carnivora). *Journal of Mammalian Evolution* 16: 77–97. DOI: [10.1007/s10914-008-9099-1](https://doi.org/10.1007/s10914-008-9099-1)
- 2005 RG Van Dragt, DP Warners, **RM Bebej***, J Timmer*. Natural areas inventory of Vergennes Township (Kent County, Michigan). Technical Report to the Open Space Citizens Committee, Vergennes Township, Kent County: 1–178.

ONLINE ARTICLES

- 2022 **RM Bebej**. Are dinosaurs extinct? Modern birds connect us to our ancient past. BioLogos Foundation. ([Link](#))
- 2022 **RM Bebej**. Evolutionary theodicies, humility, and hope. *Christian Scholar's Review*. ([Link](#))
- 2021 **RM Bebej**. A sea of gifts: caring for marine creatures. BioLogos Foundation. ([Link](#))
- 2020 **RM Bebej**. Defending the tale of the whale. BioLogos Foundation. ([Link](#))
- 2019 **RM Bebej**. Biological death: part of God's "good" creation? BioLogos Foundation. ([Link](#))
- 2018 **RM Bebej**. My favorite fossil: *Maiacetus inuus*. BioLogos Foundation. ([Link](#))
- 2018 **RM Bebej**. From young-earth creationist to whale evolution expert: my story. BioLogos Foundation. ([Link](#))
- 2017 **RM Bebej**. A whale of an argument. BioLogos Foundation. ([Link](#))
- 2016 **RM Bebej**. Celebrating 10 years of *The Language of God*. Think Christian. ([Link](#))
- 2016 **RM Bebej**. Scientists find evidence of fossilized dinosaur brains. BioLogos Foundation. ([Link](#))
- 2009 **RM Bebej**. My journey from opposing evolution to studying it. *An Evangelical Dialogue on Evolution*. ([Link](#))
- 2006 **RM Bebej**. *Inia geoffrensis*. University of Michigan Museum of Zoology, Animal Diversity Web. ([Link](#))

CONFERENCE PRESENTATIONS

(*undergraduate co-author)

- 2023 K Hegwood*, KM Smith, **RM Bebej**. Flexibility in the vertebral column of the ancient whale *Georgiacetus vogtlensis*. 72nd Annual Meeting of the Southeastern Section and 58th

- Annual Meeting of the Northeastern Section of the Geological Society of America, Reston, VA (poster; March 18, 2023), and Georgia Southern Student Scholars Symposium, Statesboro, GA (poster; April 18, 2023). Published abstract: Geological Society of America Abstracts with Programs 55(2).
- 2022 **RM Bebej**. Introduction to “Disability, dignity, and the image of God” by L. Hardwick. BioLogos Faith and Science 2022, San Diego, CA (March 26, 2022).
- 2021 **RM Bebej**. Walking whales and theological travails: navigating difficult issues as a Christian paleontologist. Keynote address, Association of Lutheran College Faculties (ALCF) 85th Annual Conference, and Besch Biological Sciences Speaker Series, Concordia University Texas, Austin, TX (October 1, 2021).
- 2021 **RM Bebej**, HN Ervin*, LE Harjanto*, SE Stewart*. Theodicies red in tooth and claw: evaluating approaches to animal death and suffering before the Fall. American Scientific Affiliation Annual Meeting, virtual (July 31, 2021).
- 2021 **RM Bebej**. Remarkable tales of walking whales: the origin and early evolution of cetaceans. Keynote address, 19th Annual Erickson Conference, Seattle Pacific University, Seattle, WA (May 7, 2021).
- 2019 **RM Bebej**, J Lett, A Logemann, SP Rosenberg, M Watts. Panel presentation: discussion of *Mr. Darwin’s Tree*. Bridging the Two Cultures of Science and the Humanities Presidents’ Roundtable, St. John’s College, Oxford, UK (July 26, 2019).
- 2019 KM Smith, JH Geisler, **RM Bebej**, ML Brown*, KT Leverett*, D Patel. Locomotion and endocranial morphology of the ancient whale *Georgiacetus*: insights into the evolution of protocetids in North America. 68th Annual Meeting of the Southeastern Section of the Geological Society of America, Charleston, SC (March 29, 2019). Published abstract: Geological Society of America Abstracts with Programs 51(3).
- 2019 **RM Bebej**, SA Bodbyl Roels. Evolution 101. BioLogos Conference 2019, Baltimore, MD (March 28, 2019).
- 2019 **RM Bebej**, RC Bishop, MA Husbands, H Madueme, SP Rosenberg. Panel presentation: discussion of *Mr. Darwin’s Tree*. Bridging the Two Cultures of Science and the Humanities North American Colloquium, St. Petersburg, FL (February 16, 2019).
- 2019 **RM Bebej**, DF Chappell, BD Congdon, EI Smith, WM Struthers. Panel presentation: collaborative student and faculty research and its impact on teaching. Bridging the Two Cultures of Science and the Humanities North American Colloquium, St. Petersburg, FL (February 16, 2019).
- 2019 **RM Bebej**, DB Haarsma. Why engage with science at church? 2019 Calvin Symposium on Worship, Calvin College, Grand Rapids, MI (January 25–26, 2019).
- 2019 **RM Bebej**, DB Haarsma, SE Hoezee. Preaching, praying, singing, and the wonders of creation. 2019 Calvin Symposium on Worship, Calvin College, Grand Rapids, MI (January 24, 2019).
- 2017 AP Pemberton*, **RM Bebej**. Creating high quality three-dimensional models through photogrammetry. Calvin College Science Division Research Poster Fair, Grand Rapids, MI (poster; October 20, 2017), and West Michigan Regional Undergraduate Science Conference, Grand Rapids, MI (poster; November 4, 2017).
- 2017 AN Kuipers*, **RM Bebej**. The evolution of form and function in the hips and hind limbs of early cetaceans. Michigan Academy of Science, Arts, and Letters Annual Meetings, Kalamazoo, MI (March 10, 2017). Published abstract: Michigan Academician 45(1): 231.
- 2016 AN Kuipers*, **RM Bebej**. Hind limb form and function in terrestrial and semi-aquatic mammals: insights into locomotor evolution in early cetaceans. Calvin College Science Division Research Poster Fair, Grand Rapids, MI (poster; October 21, 2016), and West Michigan Regional Undergraduate Science Conference, Grand Rapids, MI (poster; November 5, 2016).

- 2016 **RM Bebej**, KM Smith. Assessment of lumbar mobility in archaeocetes (Mammalia, Cetacea): insights into the evolution of aquatic locomotion in the earliest whales. 76th Annual Meeting of the Society of Vertebrate Paleontology, Salt Lake City, UT (October 26, 2016). Published abstract: Journal of Vertebrate Paleontology, Program and Abstracts, 2016: 94.
- 2016 KM Smith, KT Leverett*, **RM Bebej**. Insights into the locomotor mode of the ancient whale *Georgiacetus* based on vertebral morphology. 65th Annual Meeting of the Southeastern Section of the Geological Society of America, Columbia, SC (April 1, 2016). Published abstract: Geological Society of America Abstracts with Programs 48(3).
- 2015 AN Kuipers*, **RM Bebej**. Evaluating change in hip and hind limb form and function to assess evolution of swimming mode in early cetaceans. Calvin College Science Division Research Poster Fair, Grand Rapids, MI (poster; October 23, 2015), and West Michigan Regional Undergraduate Science Conference, Grand Rapids, MI (poster; November 21, 2015).
- 2015 **RM Bebej**. Exploring evolution: the intersection of faith and science. Christian Educators Association Convention, South Bend, IN (October 23, 2015).
- 2015 **RM Bebej**. The tale of the whale: an ideal case study for introducing the evidence for evolution. BioLogos Evolution and Christian Faith Conference, Grand Rapids, MI (July 1, 2015).
- 2014 JA Valk*, **RM Bebej**. Interpretation of tail function in fossil cetaceans through multivariate analyses of caudal vertebrae in modern mammals. Calvin College Science Division Research Poster Fair, Grand Rapids, MI (poster; October 17, 2014), and West Michigan Regional Undergraduate Science Conference, Grand Rapids, MI (poster; November 15, 2014).
- 2014 **RM Bebej**, MA Braun*, JA Valk*. Anatomy and function of the tail in the protocetid archaeocete *Maiacetus inuus* (Mammalia, Cetacea): insights into the evolution of tail-powered swimming in early cetaceans. 74th Annual Meeting of the Society of Vertebrate Paleontology, Berlin, Germany (November 5, 2014). Published abstract: Journal of Vertebrate Paleontology, Program and Abstracts, 2014: 87.
- 2014 KT Leverett*, KM Smith, **RM Bebej**. Locomotion and behavior of the ancient whale *Georgiacetus*. Geological Society of America Annual Meeting, Vancouver, Canada (poster; October 21, 2014). Published abstract: Geological Society of America Abstracts with Programs 46(6): 546.
- 2014 MA Braun*, **RM Bebej**. Tail anatomy of the protocetid archaeocete *Maiacetus inuus* (Mammalia, Cetacea): insights into the evolution of aquatic locomotion in early whales. Michigan Academy of Science, Arts, and Letters Annual Meetings, Rochester, MI (February 28, 2014). Published abstract: Michigan Academician 43(1-2): 177.
- 2014 KM Smith, AK Hastings, **RM Bebej**, MD Uhen. Temporal and paleoenvironmental distribution of *Basilosaurus* (Mammalia: Cetacea) in the southeastern United States: new evidence from the Eocene of southwest Georgia. 10th North American Paleontological Convention, Gainesville, Florida (February 18, 2014). Published abstract: Paleontological Society Special Publication 13: 165–166.
- 2013 MA Braun*, **RM Bebej**. A whale of a tale: origins of tail-powered swimming in early cetaceans. Calvin College Science Division Research Poster Fair, Grand Rapids, MI (poster; October 18, 2013).
- 2013 KM Smith, AK Hastings, **RM Bebej**. Evolution, dispersal, and habitat preference of *Basilosaurus* (Mammalia: Cetacea) in the southeastern United States: new evidence from the Eocene of southwest Georgia. 62nd Annual Meeting of the Southeastern Section of the Geological Society of America, San Juan, Puerto Rico (March 21, 2013). Published abstract: Geological Society of America Abstracts with Programs 45(2): 26, 55.

- 2012 **RM Bebej**, IS Zalmout, AA Abed El-Aziz, MSM Antar, PD Gingerich. First evidence of Remingtonocetidae (Mammalia, Cetacea) outside Indo-Pakistan: new genus from the early middle Eocene of Egypt. 72nd Annual Meeting of the Society of Vertebrate Paleontology, Raleigh, NC (October 17, 2012). Published abstract: Journal of Vertebrate Paleontology, SVP Program and Abstracts, 2012: 62.
- 2009 **RM Bebej**. Possible sexual dimorphism in Remingtonocetidae (Mammalia, Cetacea, Archaeoceti) from the Domanda Formation of Pakistan. 69th Annual Meeting of the Society of Vertebrate Paleontology and 57th Symposium of Vertebrate Palaeontology and Comparative Anatomy, Bristol, UK (poster; September 26, 2009). Published abstract: Journal of Vertebrate Paleontology 29(3 supp.): 60A.
- 2009 CL Manz, **RM Bebej**, PD Gingerich. Multivariate analysis and morphological description of the cervical column of *Maiacetus inuus*: implications for head and neck movement in a protocetid cetacean from Pakistan. 69th Annual Meeting of the Society of Vertebrate Paleontology and 57th Symposium of Vertebrate Palaeontology and Comparative Anatomy, Bristol, UK (poster; September 26, 2009). Published abstract: Journal of Vertebrate Paleontology 29(3 supp.): 142A.
- 2008 **RM Bebej**. Lumbar spine of *Remingtonocetus* (Mammalia, Cetacea, Archaeoceti) and implications for aquatic locomotion. 68th Annual Meeting of the Society of Vertebrate Paleontology, Cleveland, OH (poster; October 18, 2008). Published abstract: Journal of Vertebrate Paleontology 28(3 supp.): 49A.
- 2008 AR Wood, **RM Bebej**, CL Manz, PD Gingerich. New insights into the locomotory capabilities of the early Eocene equid *Hyracotherium*. 68th Annual Meeting of the Society of Vertebrate Paleontology, Cleveland, OH (October 18, 2008). Published abstract: Journal of Vertebrate Paleontology 28(3 supp.): 162A.
- 2008 **RM Bebej**. Inferring swimming mode from skeletal proportions in early pinnipeds (Mammalia, Carnivora). Early Career Scientists Symposium, University of Michigan, Ann Arbor, MI (poster; March 15, 2008).
- 2007 **RM Bebej**, M ul-Haq, IS Zalmout, PD Gingerich. Functional interpretation of the neck in Eocene *Remingtonocetus* from Pakistan (Mammalia, Cetacea, Archaeoceti). 67th Annual Meeting of the Society of Vertebrate Paleontology, Austin, TX (October 20, 2007). Published abstract: Journal of Vertebrate Paleontology 27(3 supp.): 45A.
- 2005 **RM Bebej**, RF Stearley. Deformation in the spine of the Ada Bible Church mastodon. Michigan Academy of Science, Arts, and Letters Annual Meetings, Ypsilanti, MI (March 4, 2005). Published abstract: Michigan Academician 36(4): 62.

INVITED PRESENTATIONS (*undergraduate co-presenter)

- 2023 Sensational science day: fossils and faith. Presented at Hudsonville Christian Middle School, Hudsonville, MI (April 21, 2023).
- 2023 Walking whales and theological travails: the journey of a Christian paleontologist. Presented in the Samford University Core Texts Lecture Series, Homewood, AL (March 15, 2023).
- 2023 Remarkable tales of walking whales: the origin and early evolution of cetaceans. Presented in the South Nazarene University Division of Science and Mathematics Seminar, Bethany, OK (March 3, 2023).
- 2023 Walking whales: an introduction to evolution. Guest lecture presented to the Origins class at Southern Nazarene University, Bethany, OK (March 3, 2023).
- 2023 Discussion of *Fire from Heaven: Michael Faraday and the Dawn of the Electrical Age*. Moderator of panel discussion featuring LD Haarsma, A Leegwater, MD Lundberg, M Watts, and LM Westrate. Calvin University, Grand Rapids, MI (February 23, 2023).

- 2022 Fossils and faith: my journey as a Christian paleontologist. Guest lecture presented to the FLIGHT Homeschool Cooperative, Midland, MI (December 12, 2022).
- 2022 Teaching sensitive topics. Presented on a panel with SL Hoeksema, MD Lundberg, C Mesick, and MJ Watson to the DeVries Postdoctoral Teaching Fellows at Calvin University, Grand Rapids, MI (September 20, 2022).
- 2022 The origin and early evolution of cetaceans. Guest lecture presented to the Historical Geology class at Grand Rapids Community College, Grand Rapids, MI (April 19, 2022).
- 2022 The origin and early evolution of cetaceans. Guest lecture presented to the Paleontology class at Calvin University, Grand Rapids, MI (April 7, 2022).
- 2021 When did sin begin? Presented on a panel with L Haarsma, D Harlow, and N Toly at Calvin University, Grand Rapids, MI (November 22, 2021).
- 2021 Picture a scientist. Presented on a panel with D Chappell, J Curry, S Haan, and J VanAntwerp at a joint event of the West Michigan American Scientific Affiliation and Christian Women in Science, Grand Rapids, MI (November 13, 2021).
- 2021 My vocational journey studying the evolution of marine mammals. Guest lectures presented to Human Anatomy and Physiology I, Human Anatomy and Physiology II, and Cellular and Molecular Biology classes at Concordia University Texas, Austin, TX (October 1, 2021).
- 2021 Uniquely unique: biology. Interview with JB Stump and C Hoogerwerf for the BioLogos Foundation's Language of God podcast. Also featuring P Sethupathy, CM Wall-Scheffler, and R Branco (July 29, 2021).
- 2021 Defending the tale of the whale: responding to critics of evolution. Presented in the Scientific Inquiry and the Common Good honors class at Calvin University, Grand Rapids, MI (March 19, 2021).
- 2020 HyFlex teaching. Presented on a panel with LC Krautscheid and L Payne, Biola University, La Miranda, CA (December 7, 2020).
- 2020 Teaching with constraints and uncertainty: faculty share recent experiences. Presented and served as moderator on a panel with J Holberg, K Vander Linden, D van Dijk, and J Westra at the Fall Conference for Faculty and Staff, Calvin University, Grand Rapids, MI (August 24, 2020).
- 2020 It's all in the hips: vestiges of a whale's ancient history. Presented on a panel with MA Benton, SM Koenig, PW Moe, and A Stigora for the Whale Skeleton Articulation Project: Knowing Whales, Seattle Pacific University, Seattle, WA (August 19, 2020).
- 2020 A whale of a tale: the evolution of swimming mode in early semiaquatic cetaceans. Presented in the Hope College Biology Seminar, Holland, MI (February 21, 2020).
- 2020 My vocational journey studying the evolution of marine mammals. Guest lecture presented in an evolutionary biology class at Hope College, Holland, MI (February 21, 2020).
- 2019 Fossils and faith: my journey as a Christian paleontologist. Presented to the Young at Heart group at Fairway Christian Reformed Church, Jenison, MI (October 6, 2019).
- 2019 Whales, tales, and travails: exploring the intersection of science and faith. Presented at Brookfield Christian Reformed Church, Brookfield, WI (September 29, 2019).
- 2019 Discussion of *Mr. Darwin's Tree*. Moderator of panel discussion featuring DL Dornbos Jr, LD Haarsma, DC Harlow, and WH Katerberg. Calvin University, Grand Rapids, MI (September 21, 2019).
- 2019 Fossils: a window to God's creation. Interview with C Hoogerwerf for the BioLogos Foundation's Language of God podcast. Also featuring RF Stearley and CM Wall-Scheffler (September 12, 2019).
- 2019 Cool creation. Interview with N. Mulder and J.B. Stump for the BioLogos Foundation's Language of God podcast. Also featuring R. Lindroth, J. Schloss, P. Sethupathy, and K. Vosburg (June 20, 2019).

- 2019 Exploring evolution: the intersection of faith and science. Presented at the Calvin College Heritage Class Reunion, Grand Rapids, MI (June 14, 2019).
- 2019 We need you—are you ready for that? Presented at the Calvin College Honors Convocation, Grand Rapids, MI (May 17, 2019).
- 2019 Evolutionary creation and the problem of animal death and suffering before the Fall. Presented with HN Ervin* and SE Stewart* in the Calvin College Christian Perspectives in Science seminar, Grand Rapids, MI (April 26, 2019).
- 2019 Faith and science: how are they compatible? Presented with GD Griffin at Hope College, Holland, MI (February 28, 2019).
- 2019 Perspectives of a Christian paleontologist. Presented at Science, Faith, and the Church: An Evening with Philip Yancey, hosted by the BioLogos Foundation at the Country Club of Orlando, Orlando, FL (January 9, 2019).
- 2018 Science and worship. Presented with DB Haarsma at the Calvin Institute of Christian Worship staff meeting, Calvin College, Grand Rapids, MI (October 8, 2018).
- 2018 Science and scripture: reading Genesis in the age of science. Presented to an adult education class at Fairway Christian Reformed Church, Jenison, MI (October 7, 2018).
- 2018 Physiology of hearing and equilibrium. Guest lecture presented to the Human Physiology class at Calvin College, Grand Rapids, MI (September 28, 2018).
- 2018 The integration of faith and science. Presented to a catechism class at Fairway Christian Reformed Church, Jenison, MI (March 11, 2018).
- 2018 Cardiovascular system. Guest lecture presented to the Human Biology class at Calvin College, Grand Rapids, MI (February 13, 2018).
- 2017 Faculty's role in the recruitment process. Interview with E Olsen of Helix Education for the Enrollment Growth University podcast (December 11, 2017).
- 2017 Perspectives of a Christian paleontologist. Presented at Science, Faith, and the Church: An Evening with Philip Yancey, hosted by the BioLogos Foundation and Cascade Fellowship Christian Reformed Church, Grand Rapids, MI (October 9, 2017).
- 2017 Swimming (and walking) with whales: the origin and evolution of Cetacea. Guest lecture presented to the honors section of the Ecological and Evolutionary Systems class at Calvin College, Grand Rapids, MI (September 29, 2017).
- 2017 Whales, tales, and travails: my journey to becoming a Christian paleontologist. Presented to an adult Bible fellowship class at Rockford Baptist Church, Rockford, MI (August 6, 2017).
- 2017 The remarkable tale of the whale: fossils, DNA, isotopes, and the many facets of cetacean evolution. Presented in the Calvin College Christian Perspectives in Science seminar, Grand Rapids, MI (April 28, 2017).
- 2017 The origin and evolution of cetaceans. Guest lecture presented to the Paleontology class at Calvin College, Grand Rapids, MI (April 28, 2017).
- 2017 Perspectives of a Reformed paleontologist. Presented to an adult education iStudy class at Ivanrest Church, Grandville, MI. Session 1: My journey and research of walking whales (February 5, 2017); Session 2: Are science and faith in conflict? A spectrum of positions on origins (February 12, 2017).
- 2017 The anatomy of snakes. Presented to a preschool class at Hudsonville Christian School, Hudsonville, MI (January 31, 2017).
- 2017 The integration of faith and science. Presented to a catechism class at Fairway Christian Reformed Church, Jenison, MI (January 29, 2017).
- 2016 Swimming (and walking) with whales: the origin and evolution of Cetacea. Presented in the Alma College Biology Department seminar, Alma, MI (October 20, 2016).
- 2016 Exploring evolution: the intersection of faith and science. Presented at Hudsonville Christian School's Teacher Development Workshop, Hudsonville, MI (February 9, 2016).

- 2015 So you're teaching DCM. Presented on a panel moderated by SM Felch at the Fall Conference, Calvin College, Grand Rapids, MI (August 27, 2015).
- 2015 The origin and evolution of cetaceans. Guest lecture presented to the Paleontology class at Calvin College, Grand Rapids, MI (May 1, 2015).
- 2015 Walking with whales: the origin and evolution of cetaceans. Presented in the plenary session of the KBS K-12 Partnership Workshop, Kellogg Biological Station (Michigan State University), Hickory Corners, MI (April 15, 2015).
- 2014 Preparing for graduate school in the science. Presented with BR Berglund in a discussion with Honors Program students, Calvin College, Grand Rapids, MI (November 17, 2014).
- 2014 Perspectives of a Reformed paleontologist. Presented to an adult education class at Fairway Christian Reformed Church, Jenison, MI. Session 1: My journey (September 14, 2014); Session 2: The intersection of science and faith (September 21, 2014); Session 3: Final thoughts (September 28, 2014).
- 2014 Evolution of locomotion in the earliest cetaceans (whales, dolphins, and porpoises). Presented to the Calvin College Alumni Association board, Grand Rapids, MI (May 22, 2014).
- 2013 What I wish I'd known my first year at Calvin. Presented on a panel with NE Westbrook and RR Williams in the New Faculty Orientation, Calvin College, Grand Rapids, MI (August 20, 2013).
- 2013 Fossil evidence for the evolution of the earliest whales. Presented in the Calvin College Geology, Geography, and Environmental Studies Department seminar, Grand Rapids, MI (April 26, 2013).
- 2013 Preparing for graduate school in biology. Presented on a panel with JT Wertz and AM Wilstermann in the Calvin College Biology Department seminar, Grand Rapids, MI (March 15, 2013).
- 2012 An evolutionary case study: The origin of whales. Guest lecture presented to the General Biology class at Olivet Nazarene University, Bourbonnais, IL (February 27, 2012).
- 2012 Vertebral function and the evolution of aquatic locomotion in the earliest whales. Presented in the Calvin College Biology Department seminar, Grand Rapids, MI (February 17, 2012).
- 2011 An evolutionary case study: The origin of whales. Guest lecture presented to the General Biology class at Olivet Nazarene University, Bourbonnais, IL (October 19, 2011).
- 2011 Functional Morphology of the Vertebral Column in *Remingtonocetus* (Mammalia, Cetacea) and the Evolution of Aquatic Locomotion in Early Archaeocetes. Ph.D. defense at the University of Michigan, Ann Arbor, MI (April 21, 2011).
- 2010 An evolutionary case study: The origin of whales. Guest lecture presented to the Biology I class at Olivet Nazarene University, Bourbonnais, IL (December 8, 2010).
- 2010 The origin of whales: The most peculiar and aberrant of mammals. Guest lecture presented to the Introduction to Animal Diversity class at the University of Michigan, Ann Arbor, MI (November 10, 2010).
- 2010 Getting started: GSIs teaching undergraduates. Presented at the University of Michigan Center for Research on Learning and Teaching Graduate Student Instructor Teaching Orientation, Ann Arbor, MI (August 30, 2010).
- 2010 Mobility vs. stability: A multivariate analysis of lumbar proportions. Presented in the University of Michigan Paleontology Seminar, Ann Arbor, MI (February 26, 2010).
- 2009 Getting started: GSIs teaching undergraduates. Presented at the University of Michigan Center for Research on Learning and Teaching Graduate Student Instructor Teaching Orientation, Ann Arbor, MI (August 31, 2009).
- 2009 Evolution of swimming mode in seals and sea lions. Presented in the Calvin College Biology Department seminar, Grand Rapids, MI (May 8, 2009).

- 2009 Order Cetacea. Guest lecture presented to the Biology of Mammals class at the University of Michigan, Ann Arbor, MI (February 19, 2009).
- 2008 The origin and early evolution of cetaceans. Presented to a visiting paleontology class from Calvin College at the University of Michigan Museum of Paleontology, Ann Arbor, MI (April 19, 2008).
- 2008 Swimming with seals and sea lions: Locomotor evolution in pinnipeds based on revised interpretations of fossil taxa. Presented in the University of Michigan Paleontology Seminar, Ann Arbor, MI (April 4, 2008).
- 2008 The fossil record of early whales and their adaptation to life in water. Presented in a meeting of ScATs, a science and theology discussion group, Ann Arbor, MI (February 21, 2008).
- 2008 Evidence for evolution: The origin of whales. Presented to an adult education class at Ann Arbor Christian Reformed Church, Ann Arbor, MI (February 10, 2008).
- 2008 The origin and evolution of cetaceans. Presented to a visiting evolutionary biology class from Calvin College at the University of Michigan Museum of Paleontology, Ann Arbor, MI (January 18, 2008).
- 2008 Extinctions and endangered species. Guest lecture presented to the environmental ethics class at the Au Sable Institute of Environmental Studies, Mancelona, MI (January 15, 2008).
- 2008 Speciation and extinction patterns. Guest lecture presented to the environmental ethics class at the Au Sable Institute of Environmental Studies, Mancelona, MI (January 14, 2008).
- 2007 Taking a dip in the Tethys: The evolution of swimming in Eocene Cetacea. Presented in the University of Michigan Paleontology Seminar, Ann Arbor, MI (March 23, 2007).
- 2006 Postcranial remains of the Remingtonocetidae (Mammalia, Cetacea) and their implications for the early evolution of whales. Presented in the University of Michigan EEB Lunch Seminar, Ann Arbor, MI (November 7, 2006).
- 2006 A review of the middle Eocene family Remingtonocetidae (Mammalia, Cetacea). Presented in the University of Michigan Paleontology Seminar, Ann Arbor, MI (April 14, 2006).
- 2005 Spinal asymmetry in the Ada Bible Church mastodon. Presented in the Calvin College Geography, Geology, and Environmental Studies Department seminar, Grand Rapids, MI.
- 2004 Botanical inventory of Vergennes Township. Presented with J Timmer in the Calvin College Biology Department seminar, Grand Rapids, MI.

PROFESSIONAL AFFILIATIONS

- 2016– BioLogos Voices
- 2008–2012 Society for Study of Mammalian Evolution
- 2006– Society of Vertebrate Paleontology
- 2006– American Scientific Affiliation (vice president of West Michigan chapter 2019–2024)

SERVICE AND OUTREACH ACTIVITIES

- Calvin University (2012–)
 - Biology Department Communication and Marketing Committee (2022–2023)
 - Biology Department Curriculum and Assessment Committee (2017–2020; secretary 2017–2020)
 - Biology Department Curriculum Committee (2012–2013, 2015–2017)
 - Biology Department Faculty-Undergraduate Networking Committee (2012–2017; chair 2015–2017)
 - Biology Department Faculty Workload Committee (chair 2020–2021)

Biology Department internship coordinator (2016–)
 Biology Department Prospective Student and Alumni Concerns Committee (2013–2015)
 Biology-neuroscience concentration advisor (2015–2018, 2020–)
 Calvin Academy of Lifelong Learning: Ottawa County Birding, assistant (2023)
 Calvin Discovery Day department host (2022: 2 occasions)
 Calvin LifeWork Internship and Research Task Force (2018)
 Christian Perspectives in Science Seminar Committee (2013–2016)
 Class of 2005 10-Year Reunion Planning Committee (2014–2015)
 Commencement greeter (2021: 1 occasion)
 Denominational Resources Ad Hoc Committee (2014–2016)
 Department representative at campus expo for new student orientation (2022)
 Devotional leader for board of trustees meeting (2018)
 Enhanced first-year advising pilot participant (2018–2021)
 Enrollment Management Committee (2017–2019)
 Faculty advisor for Science and Religion Forum (2018–2024)
 Faculty host at off-campus recruitment event (2018–2019: 2 occasions)
 Faculty senator (2021–2024)
 First-year seminar focus group participant (2018)
 Fridays at Calvin lunch host (2013–2020: 49 occasions)
 Moderator for student perspective panel for Health Science Friday (2014)
 NetVUE Faith and Vocation Development project (2015–2016)
 Off-Campus Programs Committee (2023–2027)
 Panelist for Calvin Connections admissions event (2020)
 Passport advisor for incoming freshmen (2013–2020: 13 occasions)
 Passport lunch host for incoming freshmen (2017–2018: 2 occasions)
 Pre-optometry advisor (2016–)
 Pre-veterinary advisor (2015–2021)
 Rhetoric Across the Curriculum Committee (2013–2017)
 School of Health Steering Committee (2021–2022)
 School of STEM Neuroscience Committee (2013–2018, 2020–)
 Science Writing Prize coordinator (2016–2017: 2 occasions)
 StreetFest mentor (2014–2021: 7 occasions)
 Tour guide for elementary school group from Bethel Community Education (2022)
 Tour guide for excursion learning tour on “Faith and Science in Academia” for participants
 at 3rd Biennial North American Regional Conference on Internationalizing Christian
 Higher Education, Calvin College, Grand Rapids, MI (2017)
 We-Haul volunteer (2013–2023: 7 occasions)

Olivet Nazarene University (2011–2012)
 Judge for the life science photo competition (2011)

University of Michigan (2005–2011)
 ‘Big sib’ to first year EEB graduate students (2008–2011)
 EEB curriculum committee (2008–2010)
 EEB evolutionary biology planning committee (2010)
 Evaluator of Calvin College biology professors up for tenure or promotion (2005–2007)
 Host for visiting undergraduate student that was seeking experience in fossil preparation
 techniques at the Museum of Paleontology (2008)
 Leader for discussion on evolution for adult education class at Ann Arbor Christian
 Reformed Church (2008)
 Leader for discussion on evolution for science/theology discussion group (2008)

Organizer of graduate student lunch with annual Case Lecture speaker (2008)
Practice teaching facilitator at the Center for Research on Learning and Teaching Graduate Student Instructor Teaching Orientation (2009–2011: 3 semesters)
Rackham Outstanding Graduate Student Instructor Award selection committee (2010)
Ruthven Museum tour guide for visiting undergraduate evolutionary biology/paleontology classes (2006–2008: 3 occasions)
Senior graduate student instructor observer that evaluated and provided feedback to first-time instructors (2007–2009: 6 semesters)
Table host for Science Café discussion on religion and science (2009)
Tour guide for behind-the-scenes tours of the Museum of Paleontology (2009)

Church and community (2005–)

AYSO assistant soccer coach, Hudsonville, MI (2017–2018: 2 seasons)
Discipleship ministry team, Fairway CRC (2017–2018)
Education ministry team, Fairway CRC (2016–2019; secretary 2016–2017, chair 2017–2018, co-chair 2018–2019)
Georgetown Little League assistant baseball coach, Jenison, MI (2021: 1 season)
Georgetown Upward basketball coach, Jenison, MI (2021–2022: 1 season)
Hudsonville Little League assistant baseball coach, Hudsonville, MI (2022: 1 season)
Nursery volunteer, Fairway CRC (2014–2019)
Sensory room host, Fairway CRC (2018–2020)
Sound technician, Fairway CRC (2014–2018)
Vacation Bible school volunteer, Fairway CRC (2016–2018)
Youth director interview team, Fairway CRC (2017)

Professional service (2005–)

Judge for Scarlett Middle School (Ann Arbor, MI) science fair (2007)
Manuscript reviewer/referee for *Acta Palaeontologica Polonica* (1), *Alabama Museum of Natural History Bulletin* (1), *Current Biology* (1), *Journal of Anatomy* (2), *Journal of Mammalian Evolution* (1), *Journal of Vertebrate Paleontology* (3), *Journal of Zoology* (2), *Marine Mammal Science* (1), *Palaeontological Virtual Congress* (1), *Palaeoworld* (2), *PeerJ* (2), *Perspectives on Science and Christian Faith* (1), and *Proceedings of the National Academy of Sciences of the United States of America* (1) (2005–)
Moderator for technical session IV at the 76th Annual Meeting of the Society of Vertebrate Paleontology (2016)
North American Paleontological Convention Organizing Committee (2022–2024)
Scientific consultant for *NOVA: The Mystery of the Walking Whale* (2023)

SKILLS AND PROFICIENCIES

Experience constructing, modifying, and animating 3D models of mammalian skeletal elements using Creaform Handyscan and NextEngine Desktop 3D scanners, Geomagic Studio, 3D Studio Max, RealityCapture, Visual-Safe MAD, and Amira (CT-scan data)
Experience with mechanical preparation, molding, and casting of mammalian fossil remains in the University of Michigan Museum of Paleontology Fossil Preparation Laboratory (Ann Arbor, MI)
Extensive research utilizing modern and fossil mammalian skeletal remains in the collections of the American Museum of Natural History (New York, NY), National Museum of Natural History (Washington, DC), Northeast Ohio Medical University (Rootstown, OH), and University of Michigan Museums of Zoology and Paleontology (Ann Arbor, MI)
Proficient with many software packages, including Microsoft Office, Endnote, Adobe Creative Cloud, and R