Simone Hoffmann

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Education

2016 **Ph.D. Anatomical Sciences**, Stony Brook University
Dissertation: "Late Cretaceous mammals from Madagascar and their implications for the systematics of Mesozoic Mammaliaformes"

2013 **M.S. Biomedical Sciences**, Stony Brook University

2010 **Diplom (M.S.) Geology** *"mit Auszeichnung"* (*Summa Cum Laude*), Rheinische-Friedrich-Wilhelms Universität Bonn, Germany

2006 **Vordiplom (B.S.) Geology**, Rheinische-Friedrich-Wilhelms Universität Bonn, Germany

Professional Appointments

2016–Present Assistant Professor – Department of Anatomy, NYITCOM

2010–2016 Research Assistant – Department of Anatomical Sciences, Stony Brook University

2011–2015 Graduate Teaching Assistant – Human Gross Anatomy (HBA 521, HBA 531), Department of Anatomical Sciences, Stony Brook University

2013–2015 Course Director – Women in the Laboratory, Rocks Fossils and the Biology of Ancient Life (WSE 187), Stony Brook University

2006–2010 Research Assistant – Rheinische-Friedrich-Wilhelms Universität Bonn, Germany

2007–2010 Museum Educator – Goldfuß-Museum, Bonn, Germany

2008–2009 Student Teaching Assistant – Rheinische-Friedrich-Wilhelms Universität Bonn, Germany

2008–2009 Student Assistant – Exhibit Design, Goldfuß-Museum, Bonn, Germany

Publications

2018 Yohe LR*, **Hoffmann S***, Curtis A. Vomeronasal and olfactory structures in bats revealed by diceCT clarify genetic evidence of function. Frontiers in

Neuroanatomy. *equal author contribution

2017 Krause DW, **Hoffmann S**, Werning S. First postcranial remain of Multituberculata (Allotheria) from Gondwana. Cretaceous Research 80:91–100.

2014 Krause DW, **Hoffmann S**, Wible JR, Kirk EC, Schultz JA, Koenigswald Wv, Groenke JR, Rossie JB, O'Connor PM, Seiffert ER, Dumont ER, Holloway WL, Rogers RR, Rahantarisoa LJ, Kemp AD, Andriamialison H. First cranial remains of a gondwanatherian mammal reveal remarkable mosaicism. Nature 515:512–517.

2014 Krause DW, Wible JR, **Hoffmann S**, O'Connor PM, Groenke JR, Holloway WL, Rossie JB. Craniofacial morphology of *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar; pp. 14–109 in Krause DW (ed.) *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar. Society of Vertebrate Paleontology Memoir 14. Journal of Vertebrate Paleontology 34(6, Supplement).

2014 **Hoffmann S**, O'Connor PM, Kirk EC, Wible JR, Krause DW. Endocranial and inner ear morphology of *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar; pp. 110–137 in Krause DW (ed.) *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar. Society of Vertebrate Paleontology Memoir 14. Journal of Vertebrate Paleontology 34(6, Supplement).

2014 Kirk EC, **Hoffmann S**, Kemp AD, Krause DW, O'Connor PM. Sensory anatomy and sensory ecology of *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar; pp. 203–222 in Krause DW (ed.), *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar. Society of Vertebrate Paleontology Memoir 14. Journal of Vertebrate Paleontology 34(6, Supplement).

2012 Varela AN, Poire DG, Martin T, Gerdes A, Goin FJ, Gelfo JN, **Hoffmann S**. U-Pb zircon constraints on the age of the Cretaceous Mata Amarilla Formation, southern Patagonia, Argentina: its relationship with the evolution of the Austral basin. Andean Geology 39:359–379.

Presentations

Invited Talks

2018 Adelphi University, NY, Bio 288 Honors Colloquium

2017 Denver Museum of Nature and Science

2016 Adelphi University, NY, Bio 288 Honors Colloquium

2015 Institute for Vertebrate Paleontology and Paleoanthropology, Beijing, China

Plattform

2017 Yohe LR, Rosenthal H, **Hoffmann S**, Dávalos LM. Birth-death dynamics reveal

how phylogeny and ecology shape the evolution of mammalian vomerolfaction. Integrative & Comparative Biology 57:E452.

2016 **Hoffmann S**. Inner ear morphology in gondwanatherian mammals and implications for ear evolution in mammaliaformes. The 11th International Congress of Vertebrate Morphology, Betheseda, MD.

2016 Yohe, LR, Curtis AA, Rosenthal H, **Hoffmann S**, Martin K, Davalos-Alvarez LM. The curious case of the vomeronasal organ in bats: genetics asks questions only anatomy can answer. The 11th International Congress of Vertebrate Morphology, Bethseda, MD.

2016 Yohe LR, **Hoffmann S**. Vomeronasal structures revealed by diceCT: Genetics asks questions only anatomy can answer. SICB Division of Vertebrate Morphology and Division of Comparative Biomechanics, Boston, MA

2015 **Hoffmann S**, Krause DW, Kirk EC. Inner ear morphology in a new Late Cretaceous Malagasy mammal indicates convergence in cochlear evolution. Journal of Vertebrate Paleontology, Program with Abstracts:144–145.

2014 **Hoffmann S**, Krause DW, Wible JR, Seiffert ER. New insights from the first cranial remains of a gondwanatherian: implications for mammaliaform phylogeny. Journal of Vertebrate Paleontology, Program with Abstracts:148.

2013 **Hoffmann S**, O'Connor PM, Krause DW. First endocranial reconstruction of a gondwanatherian mammal. Journal of Vertebrate Paleontology, Program with Abstracts:143.

2012 Krause DW, **Hoffmann S**, Groenke JR. The first cranial remains of a gondwanatherian mammal. Journal of Vertebrate Paleontology, Program with Abstracts:123.

Poster

2018 Shahid R, Gill PG, **Hoffmann S**. Inner ear morphology in the basal-most mammaliaform *Morganucodon*. Annual Meeting American Association of Anatomist, San Diego, CA.

2018 Shahid R, Gill PG, **Hoffmann S**. Variation in inner ear morphology of early mammaliaforms. Society for Integrative & Comparative Biology, San Francisco, CA.

2018 Zaransky S, Gibilisco M, Watanabe A, **Hoffmann S**. Postnatal ontogeny of inner ear morphology in chicken and alligator Society for Integrative & Comparative Biology, San Francisco, CA.

2017 **Hoffmann S**, Krause DW, Hu Y. First postcranial skeleton of a gondwanatherian Mammal:Reconstructing Posture and Locomotion. Integrative & Comparative Biology 57:E72.

2017 Krause DW, **Hoffmann S**, Werning S. 2017. First postcranial remains of multituberculates (Allotheria, Mammalia) from Gondwana. Journal of Vertebrate Paleontology, Program and Abstracts, 2017, 144.

2017 Yohe LR, **Hoffmann S**, Dávalos LM. Genetic function of *Trpc2* predicts accessory

olfactory bulb form in bat vomeronasal evolution. Proceedings of the Annual Meeting of Evolution, Portland, OR P110.

2016 **Hoffmann S**, Krause DW, Hu Y. The first postcranial remains of a gondwanatherian mammal. Journal of Vertebrate Paleontology, Program with Abstracts:155.

2016 Krause DW, Hu Y, **Hoffmann S**, Groenke JR, Schultz JA, Koenigswald Wv. The bizzare dental morphology of a new gondwanatheroan mammal from the Late Cretaceous of Madagascar. Journal of Vertebrate Paleontology, Program with Abstracts:169.

2013 Krause DW, **Hoffmann S**, Nestler JH. The first associated upper dentition of a gondwanatherian mammal. Journal of Vertebrate Paleontology, Program with Abstracts:156–157.

2011 **Hoffmann S**, Martin T. Revised phylogeny of Pholidota: implications for Ferae. Journal of Vertebrate Paleontology 31(1 Suppl.):126–127A.

2009 **Hoffmann S**, Martin T, Storch G, Rummel M. Skeletal reconstruction of a Miocene pangolin from southern Germany. Journal of Vertebrate Paleontology 29(3 Suppl.):115A.

2009 **Hoffmann S**, Martin T, Storch G, Rummel M. Neue Skelettfunde des miozänen Schuppentieres *Necromanis franconica*. Terra Nostra 2009:53.

Awards, Honors, and Fellowhips

Research Grants ($83,480)

2015–2017 $16,080 – The National Science Foundation, Project co-PI, Dissertation Research: New Cretaceous mammals from Gondwana and their implications for the systematics of Mesozoic Mammaliaformes (DEB 1501497), PI Seiffert

2014–2015 $2,000 – Society for Integrative and Comparative Biology, Fellowship of Graduate Student Travel

2013–2014 $1,000 – Sigma Xi, Grants-in-Aid of Research

2013–2016 $1,400 –Stony Brook University, Graduate Student Organization RAP funding

2010–2015 $63,000 – Turkana Basin Institute, Graduate Fellowship

Awards ($4,480)

2016 President's Award for Excellence in Teaching by a Graduate Student, Stony Brook University ($1,000)

2016 Distinguished Travel Award, Graduate Student Organization, Stony Brook University ($1,280)

2015 Taylor & Francis Award for Best Student Article in the Journal of Vertebrate Paleontology ($700)

2014 Norman Creel Prize for Outstanding Student Research in Anatomical Sciences ($1,000)

2009 Poster Prize, Annual Meeting of the Paläontologische Gesellschaft ($500)

Teaching Experience

New York Institute of Technology

2017–Present Academic Medicine Scholars Anatomy Practicum (MMPU 820) – Course Director– Semester long, dissection-based human anatomy for 16 D.O./M.S. students. Included laboratory instruction, guidance of scholars (taught 1 time)

2017–Present Advanced Concepts in Neuromusculoskeletal Sciences (MMNM 719) – Guest Instructor for discussion-based seminar "Peer Review System" for 16 D.O./M.S. students. Course director: M Mihlbachler, K Amsler, (taught 2 times)

2017 Lecturer for NYITCOM STEP Program. Developed prosection based anatomy course as part of the STEP curriculum

2016–Present Gross Anatomy, Foundations of Osteopathic Medicine – Instructor, Point Person – Semester long, dissection-based human anatomy for ~440 medical students. Included lectures, laboratory instruction, preparation and grading of written and practical examinations (taught 2 times). Teaching Evaluations: 2016: 4/4, 2017:3.92/4

Stony Brook University

2013–2015 Gross Anatomy of Head, Neck and Trunk (HBA 521) – Graduate Teaching Assistant – Semester long, dissection-based human anatomy for 40–44 dental students (DDS). Included lectures, laboratory instruction, preparation and grading of written and practical examinations (taught 3 times). Course director: DW Krause. Teaching Evaluation: 2013: 4.8/5, 2014: 4.76/5, 2015: 4.98/5

2011–2012 The Body, Medical Gross Anatomy (HBA 531) – Graduate Teaching Assistant – Semester long, dissection-based human anatomy for 125 medical students (MD, MD-PhD). Included laboratory instruction, preparation of practical exams, and grading of written exams taught twice. Course director: JT Stern. Teaching Evaluation: 2011: 4.6/5, 2012: 4.8/5

2013–2015 Women in the Laboratory: Rocks, Fossils, and the Biology of Ancient Life (WSE 187) – Course director – Month long introductory course for 9–12 undergraduate women in science and engineering (WSE). Included complete design of course, lectures, laboratory, and grading (taught three times). Course director: S Hoffmann, M Borths, N Thompson

University Bonn, Germany

2009 Dentition of Mammals – Teaching Assistant – Semester long course for ~20 undergraduate and Masters degree students in Geology and Paleontology. Included laboratory instruction and grading of exams. Course director: T Martin

2008 Osteology of Mammals – Teaching Assistant – Semester long course for ~20 undergraduate and Masters degree students in Geology and Paleontology, included laboratory instruction and grading of exams. Course director: T Martin

Mentoring

Graduate Students

2017–Present Ramza Shahid, 3rd year D.O./M.S. student in the Academic Medicine Scholars Program at NYITCOM, "Variation in inner ear morphology in early mammals"

Presented: Shahid R, Gill PG, **Hoffmann S**. 2018. Variation in inner ear morphology of early mammaliaforms. Society for Integrative & Comparative Biology, San Francisco, CA.

2018–Present Arjun Vidyasgar, 1st year D.O. at NYITCOM, "Modeling blood flow to the cochlea in early mammals."

2017–Present Sydney Zaransky, 2st year D.O. at NYITCOM, "Ontogeny of inner ear morphology"

Presented: Zaransky S, Gibilisco M, Watanabe A, **Hoffmann S**. Postnatal ontogeny of inner ear morphology in chicken and alligator Society for Integrative & Comparative Biology, San Francisco, CA.

2017–Present Monica Gibilisco, 2st year D.O. at NYITCOM, "Ontogeny of inner ear morphology"

Presented: Zaransky S, Gibilisco M, Watanabe A, **Hoffmann S**. Postnatal ontogeny of inner ear morphology in chicken and alligator Society for Integrative & Comparative Biology, San Francisco, CA.

2017–Present Rachel Gecelter, 2st year D.O. at NYITCOM, "Bone histology in early mammals"

Undergraduate Students

2015 Arooba Amjad (undergraduate student, Biology, Stony Brook University), research assistant for 1 semester

High School Students

2017–Present Lucretia Smith, NYITCOM STEP student, "Blood supply to the inner ear in early mammals"

2017–Present Latifa,Fakhry, NYITCOM STEP student, "Blood supply to the inner ear in early mammals"

2015–2017 Hannah Rosenthal (Smithtown West High School), "Genetics and morphology of the vomeronasal organ", co-advised by L Yoho (PhD student, Ecology and Evolution, Stony Brook).

Presented Project: Long Island Science and Engineering Fair 2016 (3rd place Animal Research)
Yohe LR, Rosenthal H, **Hoffmann S**, Dávalos LM. 2017. Birth-death dynamics reveal how phylogeny and ecology shape the evolution of mammalian vomerolfaction. Integrative & Comparative Biology 57:E452;
Yohe, LR, Curtis AA, Rosenthal H*, **Hoffmann S**, Martin K, Davalos-Alvarez LM. The curious case of the vomeronasal organ in bats: genetics asks questions

only anatomy can answer. The 11th International Congress of Vertebrate Morphology, Bethseda, MD.

2013–2015 Samantha DeRosa (Smithtown West High School), "Mammalian Olfaction: Examining morphological and genetic factors in an evolutionary context", co-advised by L Yoho (PhD, Ecology and Evolution, Stony Brook). Her research was submitted to Siemens Competition, Intel Science Talent Search, and LISEF.

Presented Project: Long Island Science and Engineering Fair 2015 (3rd place Animal Research).

Field Experience

2017	Wyoming/Montana. Cretaceous Cloverly Formation With MD D'Emic.
2015	Mahajanga Basin, Madagascar. Prospecting for and excavation of Late Cretaceous vertebrate fossils. Director: DW Krause, JJW Sertich, PM O'Connor
2012	Mahajanga Basin, Madagascar. Prospecting for, excavation and screen-washing of Late Cretaceous vertebrate fossils. Director: DW Krause, JJW Sertich, PM O'Connor
2012	Fayum, Egypt. Excavation of Paleogene mammalian fossils. Director: ER Seiffert
2011	Bighorn Basin, Wyoming. Surface collection of Eocene mammalian fossils. Director: KD Rose
2010	Siberia, Russia. Excavation and screen-washing of Middle Jurassic vertebrate fossils. Director: T Martin, AO Averianov
2009	Turpan Basin, China. Excavation of Jurassic vertebrate fossils. Director: T Martin, O Wings
2009	Patagonia, Argentina. Excavation and screen-washing of Early Cretaceous vertebrate fossils. Director: T Martin, FJ Goin, JN Gelfo
2008	Messel, Germany. Excavation of Eocene vertebrate fossils. Director: Research Institute and Natural History Museum Senckenberg
2008	Frauenweiler, Germany. Excavation and screen-washing of Oligocene vertebrate fossils. Director: T Martin
2008	Turpan Basin, China. Geological mapping of Jurassic sediments in the Turpan Basin, NW China. Director: T Martin, O Wings
2007	Elba, Italy. Field course in marine biology and scientific diving. Director: M Langer, HYDRA Institute for Marine Biology
2007	Winterswijk, Netherlands. Excavation of Middle Triassic marine vertebrates. Director: O Dülfer, N Klein
2006	Lodève Basin, France. Geological mapping of Paleozoic to Mesozoic sediments. Director: M Valdivia-Manchego
2005	Vianden, Luxemburg. Geological mapping of Paleozoic to Cenozoic sediments. Director: M Valdivia-Manchego

Service

Professional

Peer reviewer for: *Science*, *Nature*, *Proceedings of the National Academy of Sciences, Fieldiana*, *Acta Palaeontologica Polonica*

2017–Present	NYIT College of Osteopathic Medicine Academic Senate Committes: Curriculum Inventory (Ad-hoc committe 2016), Nominations and Elections (2018)
2016–Present	Radiation and Chemical Safety Committe Member
2011–2015	Treasurer, Evolutionary Biology Discussion Group, Stony Brook University
2009	Student Assistant, 79th Meeting of the Paläontologische Gesellschaft, Bonn, Germany
2009	Student Assistant, 6th Bone Diagenesis Meeting, Bonn, Germany
2009	Student Assistant, 36th Annual Meeting of the Arbeitskreis Wirbeltiere, Bonn, Germany
2008	Student Assistant, International Workshop/10th Meeting of the Research Unit Sauropod Meeting, Bonn, Germany
2008	Student Assistant, Joint Congress: 12th International Palynological Congress (IPC-XII 2008) / 8th International Organisation of Palaeobotany Conference (IOPC-VIII 2008), Bonn, Germany
2005–2006	Student council member, Department of Geology, University of Bonn, Germany
2005–2006	Student representative, Earth Sciences Committee, University of Bonn, Germany

Public

2007–2010	Museum Educator, Goldfuß-Museum, University of Bonn, Germany
2009	Student Assistant, *Georally 2009*, Permian Sediments of Katzenstein near Bonn, Germany
2009	Student Intern, Exhibit Design, Research Institute and Natural History Museum Senckenberg, Germany
2009	Student Assistant, Exhibit Design: "Charles Darwin—Geologe auf Weltreise", Goldfuß-Museum, University of Bonn, Germany
2008	Student Assistant, *Georally 2008*, Devonian oil shales near Schloß Lerbach, Germany
2008	Student Assistant, Exhibit Design, "Devon im Rheinland—Planzen erobern das Land", Goldfuß Museum, University of Bonn, Germany
2007	Student Assistant, *Georally 2007*, 14,000 year old double burial near Oberkassel, Germany

Media Coverage

"First cranial remains of a gondwanatherian mammal reveal remarkable mosaicism":
New York Times, National Geographic, Science Magazine, United Press International, Reuters, The Guardian, The Examiner, National Science Foundation, ABC, CNS News, NBC News, Newsday, Science Daily, Buzzfeed, IFLScience, Yahoo, Discovery News, and more

"Endocranial and inner ear morphology of *Vintana sertichi* (Mammalia, Gondwanatheria) from the Late Cretaceous of Madagascar":
Science Daily, NRC Reader

Professional Memberships

Society of Vertebrate Paleontology (joined 2009)
Society for Integrative and Comparative Biology (joined 2013)
American Association of Anatomists (joined 2017)