

ZHE-XI LUO: Abbreviated Curriculum Vitae

Department of Organismal Biology
The University of Chicago
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I. Academic & Museum Appointments

- Since 2012 Professor
Department of Organismal Biology and Anatomy & the College
Committee on Evolutionary Biology
The University of Chicago
- Since 2012 Research Associate
Field Museum of Natural History
- 2004 - Jan 2012 Associate Director of Research and Collections
Carnegie Museum of Natural History
- 2007 - 2008 Acting Co-Director
Carnegie Museum of Natural History
- 1996-2012 Curator (2003 – 2012)
Associate Curator (1999-2002)
Assistant Curator (1996-1999)
Section of Vertebrate Paleontology
Carnegie Museum of Natural History
- 1996-2012 Adjunct Professor (2005 – 2012)
Adjunct Associate Professor (2000-2005)
Adjunct Assistant Professor (1996-99)
Departments of Biological Sciences & Geological and Planetary Sciences
University of Pittsburgh
- 1991-1996 Assistant Professor
Department of Biology & Grice Marine Biological Laboratory
College of Charleston, South Carolina

II. Education & Training

- 1989-1991 Postdoctoral Fellow
Museum of Comparative Zoology
Harvard University - Adviser: Prof. (emeritus) A. W. Crompton
- Ph.D. 1989 University of California at Berkeley, Paleontology
- 1983-1988 Museum of Paleontology & Department of Paleontology
University of California at Berkeley - Adviser: Prof. (emeritus): W. A. Clemens
- B.S. 1982 **Nanjing University, Nanjing, China**, Geology & Paleontology

III. Honors, Awards & Fellowships

- Humboldt-Forschungspreis** (Alexander von Humboldt-Stiftung)
Humboldt Award for Senior Scientists, Humboldt Foundation, Germany, 2007
- Outstanding Overseas Chinese Young Scientist Award**
Earth Sciences Division, National Natural Science Foundation of China, 2004
- CAREER Award**, National Science Foundation, USA, 1996
- Outstanding Graduate Student Instructor Award**, UC, Berkeley, 1988
- Anne Alexander Fellowship**, Museum of Paleontology, UC, Berkeley, 1984-85

IV. Museum Administrative Experience

January 2007 Acting Co-Director
- March 2008 Carnegie Museum of Natural History

2004-2012 Associate Director of Research & Collections
Carnegie Museum of Natural History

V. Museum Curator Experience (partial list)

Tour leader
China's Ancient Silk Road (2002 and 2010)
Travel with Carnegie Museums of Pittsburgh Guests and Supporters

Curatorial Participation in Exhibit Development (1996-2008)
Dinosaurs In Their Time Exhibition, Carnegie Museum of Natural History

International Collaboration on Exhibition
Extinction of Dinosaurs and Rise of Mammals (2008)
Fukui Prefectural Dinosaur Museum, Fukui, JAPAN

Project Coordinator and Curator
China's Feathered Dinosaurs Exhibit (1998)
Carnegie Museum of Natural History

Co-organizer of the Earth Explorers Evening Lecture Series (2002)
Carnegie Museum of Natural History

NSF-Principal Investigator and Co-convener
The US-China Workshop on Geology and Paleontology: Critical Transitions in History of Life
(2005, Washington, DC; 2006, Beijing, China)

Curatorial responsibilities: Accumulating and maintenance of collection of fossil vertebrates; supervising preparation laboratory staff; receiving extramural scientific visitors to Carnegie Museum; providing loans of research materials for extramural researchers; field paleontological expeditions; providing consultation for other museums on exhibits.

VI. Public Outreach and Science Education (partial list):

1997-2012: More than 50 popular public scientific lectures as a museum curator and paleontologist, for non-scientific audience on the topics of Mesozoic mammal evolution, fossil cetaceans, and field exploration for Mesozoic vertebrates.

- National Geographic Magazine, Cover feature of the April 2003 issue ("Rise of Mammals")
- NHK (Japan National Broadcasting Corporation)
Mammals vs. Dinosaurs – Secrets of Mammalian Survival (2007)
- NHK (Japan National Broadcasting Corporation)
Evolution of Mammals (2010 Scientific TV program in two episodes)

1997-2012: over 400 interviews with international, national and local press and news media organizations regarding scientific discoveries of early mammals, Carnegie Museum's new exhibit *Dinosaurs In Their Time*, on various museum affairs, on the major new discoveries of early mammal fossils, on behalf of the Carnegie Museum of Natural History.

VII. Extramural Research Grants (Partial List)

- 2006-2012 National Science Foundation Grant (EF0629959)
Awarded to Zhe-Xi Luo & John R. Wible (co-PI's)
Carnegie Museum of Natural History (PI-institution)
Project title: ATOL (Assembly of Tree of Life): "Collaborative Research: Resolving Mammalian Phylogeny with Genomic and Morphological Approaches"
Team proposal with five PI institutions (five PI's and about 20 co-PIs): AMNH (the lead institution) (PI & PD – Michael J. Novacek), CMNH (PI institution), Stony Brook University (PI institution), Texas A & M University (PI institution), and University of California at Riverside (PI institution).
- 2005-2007 National Science Foundation Grant (EAR 0534155 – EAR0634718)
awarded to Zhe-Xi Luo (PI), Y. Jin, D. H. Erwin & S. A. Bowring (co-conveners)
Project Title: China-US Collaborative Research On Critical Transitions In History Of Life (workshops).
- 2004-2006 National Natural Science Foundation of China (NSFC) (Grant 40328004)
"Outstanding Overseas Chinese Young Scientist Award" to Zhe-Xi Luo (PI)
Project Title: Evolutionary studies of early mammals.
- 2003-2007 National Science Foundation Grant (DEB 0316558)
awarded to Zhe-Xi Luo (PI)
Project Title: New mammals of Early Cretaceous and Their Implications for Deep Mammalian Phylogeny.
- 2001-2002 National Geographic Society Grant (7042-01)
awarded to Zhe-Xi Luo (PI) & Hai-Lu You (co-PI).
Project Title: Fossil Vertebrates of the Lower Cretaceous in Gansu, Northwestern China.
- 1996-2001 National Science Foundation Grant (DEB 95-27892)
awarded to Zhe-Xi Luo (PI)
Project title: CAREER: A 3-D Graphic Study of the Skull Evolution in Early Mammals and Advanced Cynodonts.
- 1994-1998 National Science Foundation Grant (DEB 94-19898)
awarded to Zhe-Xi Luo (PI)
Project Title: Phylogenetic Analyses of the Cetacean Basal Cranium and Inner Ear, and Study of the Cetacean Relationships.
- 1994-96 National Geographic Society Grant (5338-94)
awarded to Zhe-Xi Luo (PI) & Xiao-Chun Wu (co-PI)
Project Title: Fossil Vertebrates of the Lower Lufeng Formation, Yunnan, China.
- 1994-95 NSF REU Summer Research Funding
(Through Medical University of South Carolina).
Project Title: Inner ear Structures of Ungulates and Whales.
- 1993 Bio-Engineering Alliance of South Carolina Grant (1993)
awarded to Zhen Zhang & Zhe-Xi Luo.
Project Title: 3-D Model of the Mammalian Cochlear Basilar membrane.
- 1989-1992 National Science Foundation Grant (DEB 8818098-DEB9020034)
awarded to A. W. Crompton (PI), Zhe-Xi Luo (Postdoctoral associate)
Project Title: The Cranial Structure of Chinese Liassic Mammals and Tritylodontids

VIII. Field Exploration in Paleontology and Geology

As Team Leader:

- 1997- 2002 Lower Cretaceous (Xinminbao Group), Gansu Province, China (with Hailu You)
- 1997 Cretaceous beds of Inner Mongolia, China
- 1988, 1994, 2000 Upper Triassic and Lower-Middle Jurassic Red Beds (Yipinglang Group, Lower and Upper Lufeng Formations) Yunnan Province, China
- 1995, 1999 Jurassic Beds (Zhenzhuchong and Shaximiao Formations) Sichuan Province, China
- 1999 Upper Cretaceous (Intertrappean Beds) and Lower Jurassic (Kota Formation) Andhra Pradesh, India.
- 1992- 1996 Tertiary marine and coastal deposits & cetacean faunas South Carolina, North Carolina, Maryland, and Virginia
Support: National Science Foundation; Faculty Grants from College of Charleston

In collaboration with other investigators:

- 2008 Cretaceous Winton Formation, Queensland, Australia (Dr. Steve Salisbury, Team leader, University of Queensland, Dr. Matthew Lamanna, Carnegie Museum).
- 2000 Paleocene-Eocene of Tibet, China (also reconnaissance of the Mesozoic and Pliocene) (K. C. Beard, team leader; D. Gebo, Z.-X. Luo, Y.-Q. Wang, J-W Guo and T. Qi team members)
- 1999 -2013 Early Cretaceous Yixian and Fuxin Formations of Liaoning Province, China (With Professor Qiang Ji of National Geological Museum of China, and Chinese Academy of Geological Sciences, Beijing)
- 1999 -2004 Late Jurassic Morrison Formation in Colorado, USA (with John R. Wible)

IX. Experience in University Teaching (Partial List)

Natural History of Medicine (elective course) By curators at the Carnegie Museum for medical graduate students of University Pittsburgh School of Medicine (one of the four co-instructors)

Evolutionary Biology (co-instructor: University of Pittsburgh)

Vertebrate Comparative Anatomy (College of Charleston)

Gross Human Anatomy (College of Charleston)

General Biology (College of Charleston)

X. Academic & Professional Services (partial list):

Member of the Editorial Board (2010 – Present)

Proceedings of the Royal Society (London) – Biological Sciences (Series B)

Panel Member of National Science Foundation (US)

The 2012 External Advisory Committee (Chair)
High-Resolution Computed Tomography Laboratory (UTCT)
University of Texas at Austin

Co-Chair of Host Committee
The 70th Annual Meeting of Society of Vertebrate Paleontology
Pittsburgh, PA (Hosted by Carnegie Museum of Natural History)

The MacArthur Foundation (Chicago, USA)

Invited external reviewers (Multiple reviews)
Ministry of Science and Technology, The Government of China

Member of the 2009 International Review Committee
Institute of Zoology (Beijing)
(convened by the Administration of Chinese Academy of Sciences)

Member of International Committee of 2004 Institutional Review
The Nanjing Institute of Geology and Palaeontology
(convened by Administration of Chinese Academy of Sciences)

Member of Editorial Board (2005 to present)
Geological Journal of Chinese Universities (Nanjing University, China)

Member of Editorial Board (2005 to present)
PalaeoWorld
(Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences)
(Published by Elsevier, Netherlands)

Member of the Lazendorf PaleoArt Committee (2004-2008)
Society of Vertebrate Paleontology

Member of Editorial Board (2003 to present)
Journal of Mammalian Evolution (Springer, Netherlands)

Associate Editor and Editor (2001- 2009)
Journal of Vertebrate Paleontology

Member-at-Large & Executive Committee (1998-2001)
Society of Vertebrate Paleontology (Elected 1998)

Member of Editorial Board (1997 to present)
Vertebrata PalAsiatica
(Institute of Vertebrate Paleontology & Paleoanthropology, Chinese Academy of Sciences)

Chairman of Graduate Admission Committee (1994-1996)
Marine Biology Graduate Program, College of Charleston, South Carolina

Member of Faculty Research and Development Committee (1992-1994), College of Charleston

Various museum and administrative committees (more than 50 during 1996-2012)
Carnegie Museum of Natural History

XI. External Reviewers for Publications and Granting Agencies (Partial list)

High-Impact Journals

Nature (UK)
Science (USA)
Proceedings of National Academy of Sciences (USA)

Major Research Journals

Acta Palaeontologica Polonica (Poland)
BMC – Evolutionary Biology (USA)
Cladistics (USA)
Comptus Rendus (PalEvol) (France)
Evolutionary Biology
Evolutionary Development (UK)
Geology (USA)
Italian Journal of Zoology (Italy)
Journal of Anatomy (UK)
Journal of Mammalogy (USA)
Journal of Mammalian Evolution (USA)
Journal of Morphology (USA)
Journal of Paleontology (USA)
Journal of Vertebrate Paleontology (USA)
Lethaia (Sweden)
Molecular Phylogenetics and Evolution
Nature-Communications (UK)
Naturwissenschaften (Germany)
Palaeoecology, Paleoclimatology, Paleobiogeography (Netherlands)
Paläontologische Zeitschrift (Germany)
Palaeontology (UK)
Paleobiology (USA)
PLoS-Biology (USA)
PLoS-One (USA)
Proceedings of Royal Society of London (UK)
Progress In Natural Science (National Natural Science Foundation) (China)
Systematic Biology (USA)
TREE - Trends in Ecology & Evolution (UK)
Zoological Journal of Linnean Society (UK)

Specialty Research Journals

American Museum Novitates (USA)
American Museum of Natural History Bulletin (USA)
Ameghiana (Argentina)
Aquatic Mammals (USA)
Bulletin of Museum of Comparative Zoology (Harvard University) (USA)
Geodiversitas - Bulletin National Muséum d'Histoire Naturelle, Paris (France)
Geologica Belgica (Belgium)
PaleoBios (UC Berkeley) (USA)
Palaeontologica Electronica (palaeo-electronica.org)
Palaeobiodiversity & Palaeoenvironments (Senckenbergische Naturforschende Gesellschaft) (Germany);
Palaeontologia Africana (South Africa)
PaleoVertebrata Sinica (China)
Vertebrata PalAsiatica (Chinese Academy of Sciences, China)
Revista Brasileira De Paleontologia (Brazil)
Smithsonian Contributions to Zoology (Washington, DC, USA)

Zoological Research (Kunming Institute of Zoology, Chinese Academy of Sciences) (China).

Publishing Agencies & Presses

Blackwell Publishing (Oxford, UK)
Cambridge University Press (UK)
Columbia University Press (New York)
Harper-Collins Academic (London)
The Indiana University Press (Bloomington, IN)
The Johns Hopkins University Press
Plenum Press (New York)
Princeton University Press
Springer-Verlag (New York and Hamburg)
Smithsonian Institution Press (Washington, DC)
The University of Chicago Press (Chicago)
University of California Press (Berkeley, CA)
World Scientific Publishings (New Jersey).

Funding Agencies

USA: National Science Foundation, USA (for six different panels); the U.S. Civilian Research and Development Foundation (CRDF); National Geographic Society (Research and Exploration Committee); The Paleontological Society; American Chemical Society (Petroleum Research Fund); The MacArthur Foundation (Chicago).

China: the National Science Foundation of China (NSFC, for three different programs); Ministry of Science and Technology, the Government of China

Europe: Deutsch Forschungsgemeinschaft (DFG) (Germany); Biotechnology and Biological Sciences Research Council (Genes and Development Committee) (UK), The Leverhulme Trust (UK); Research Council of Norway

Others: Council of Scientific and Industrial Research (CSIR) of India; National Research Foundation of South Africa

Institutional Funding Reviews: National Museum of Natural History, Smithsonian Institution, USA; Canadian Museum of Nature (Ottawa, Canada); South Carolina Bioengineering Council (US).

XIII. Publications (full length research papers excluding abstracts, book reviews, public commentaries and popular scientific articles)

Book

- 90) Kielan-Jaworowska, Z., R. L. Cifelli, and **Z.-X. Luo**. 2004. Mammals from the Age of Dinosaurs: Origins, Evolution, and Structure. Columbia University Press, New York. Pp. i-xv, 1-630; 239 figures.

Edited Volumes of Symposium Proceedings

- 89) Xu, X., **Luo, Z.-X.** and J.-Y. Rong (Guest Editors). 2010. Recent Advances in Chinese Palaeontology. Proceedings of Royal Society, Series B (Biological Sciences) 277 (1679): 161-344 (Print issue published on January 22, 2010, after online publications of the papers in this volume during 2009) (Special Issue on Paleontology of China, organized and edited by Xu, Luo and Rong, at the invitation of the Editorial Board of Proceedings of Royal Society)
- 88) Beard, K. C. and **Z.-X. Luo** (Editors). 2007. Mammalian Paleontology On A Global Stage: Papers In Honor of Mary R. Dawson. Bulletin of Carnegie Museum of Natural History 39: 1-234.
- 87) Polly, P. D., Springer, M. S. and **Z.X. Luo** (Editors). 2005. Journal of Mammalian Evolution – the Clemens Special Volume. Journal of Mammalian Evolution, Volume 12 (Issues 1/2 3/4): 1-552.

XVII. Publications (full length research papers excluding abstracts, reviews, invited commentaries and popular scientific articles)

2013 and In Press

- 86) **Z.-X. Luo** (accepted). Early evolution of the mammalian shoulder girdle. Pp.###-###. In: K. P. Dial, E. L. Brainerd & N. H. Shubin (eds.) Great Transformations: Major Events in the History of Vertebrate Life - Festschrift in Honor of Professor Farish A. Jenkins, Jr. The University of California Press.
- 85) Yuan, C.-X., Ji, Q., Meng, Q.-J. and **Z.-X. Luo**. 2013. Earliest evolution of multituberculate mammals revealed by a new Jurassic fossil. SCIENCE 341: 779-783.
- 84) Zhou, C.-F., Wu, S., Martin, T. and **Z.-X. Luo**. 2013. A Jurassic mammaliaform and the earliest mammalian evolutionary adaptations. NATURE 500: 163-168 (doi:10.1038/nature12429).
- 83) Ruf, I., **Z.-X. Luo**, and T. Martin. 2013. Re-investigation of the basicranium of *Haldanodon expectatus* (Docodonta, Mammaliaformes). Journal of Vertebrate Paleontology 33:382-400.
- 82) O'Leary, M. A., Bloch, J. I., Flynn, J. J., Gaudin, T. J., Giallombardo, A., Giannini, N. P., Goldberg, S. L., Kraatz, B. P., **Luo Z.-X.**, Meng, J., Ni, X., Novacek, M. J., Perini, F. A., Randall, Z. S., Rougier, G. W., Sargis, E. J., Silcox, M. T., Simmons, N. B., Spaulding, M., Velazco, P. M., Weksler, M., Wible, J. R., and A. L. Cirranello. 2013. The placental mammal ancestor and the post-K-Pg radiation of placentals. SCIENCE 339: 662-667.

2012

- 81) **Luo, Z.-X.**, I. Ruf and T. Martin. 2012. The petrosal and inner ear of the Late Jurassic cladotherian mammal *Dryolestes leiriensis* and implications for evolution of ear in therian mammals. Zoological Journal of Linnean Society (London) 166:433-463.

2012

- 81) **Luo, Z.-X.**, I. Ruf and T. Martin. 2012. The petrosal and inner ear of the Late Jurassic cladotherian mammal *Dryolestes leiriensis* and implications for evolution of ear in therian mammals. Zoological Journal of Linnean Society (London). 166:433-463.
- 80) Chen, M. and **Z.-X. Luo**. 2012. Postcranial skeleton of the Cretaceous mammal *Akidolestes cifellii* and its locomotor adaptations. Journal of Mammalian Evolution. (DOI10.1007/s10914-012-9199-9) (Online version published in 2012; print version published in 2013)

2011

- 79) **Luo, Z.-X.** 2011. Developmental patterns in Mesozoic evolution of mammal ears. Annual Review of Ecology, Evolution and Systematics 42: 355–80 (10.1146/annurev-ecolsys-032511-142302).
- 78) **Luo, Z.-X.**, C.-X. Yuan, Q.-J. Meng, and Q. Ji. 2011. A Jurassic eutherian mammal and the divergence of marsupials and placentals. NATURE 476: 442-445 (doi:10.1038/nature10291)
- 77) Rowe, T. B., T. E. Macrini, and **Z.-X. Luo**. 2011. Fossil evidence on origin of the mammalian brain. SCIENCE 332: 955-957 (DOI: 10.1126/science.1203117).

2010

- 76) **Luo, Z.-X.**, I. Ruf, J. A. Schultz, and T. Martin. 2011. Fossil evidence on evolution of inner ear cochlea in Jurassic mammals. Proceedings of Royal Society Series-B (Biological Sciences) 278: 28-34 (doi: 10.1098/rspb.2010.1148). Published online in July 28, 2010.
- 75) **Luo, Z.-X.** 2010. Evolutionary Development and Homoplasy of the Middle Ear in Early Mammal Evolution. Pp. 163-179. In: *Darwin's Heritage Today* (Manyuan Long, Zhonghe Zhou and Hongya Gu, editors). China Higher Education Press. Beijing, China.

2009

- 74) Ji, Q., **Z.-X. Luo**, X.-L. Zhang, C.-X. Yuan, and L. Xu. 2009. Evolutionary development of the middle ear in Mesozoic therian mammals. SCIENCE 326:278-231 (DOI:10.1126/science.1187501).
- 73) Gao, C.-L., G. P. Wilson, **Z.-X. Luo**, A. M. Maga, Q.-J. Meng, and Wang, X.-R. 2009. A new mammal skull from the Lower Cretaceous of China with implications for the evolution of obtuse angled molars and amphilestid eutriconodonts. Proceedings of Royal Society (London) Series B (Biological Sciences). 277:237-246 (doi:10.1098/rspb.2009.1014)
- 72) Ruf, I., **Z.-X. Luo**, J. R. Wible, and T. Martin. 2009. Petrosal Anatomy and Inner Ear Structure of the Late Jurassic Mammal *Henkelotherium* And the Ear Region Characters of Basal Therian Mammals. Journal of Anatomy. 214: 679-693. doi:10.1111/j.1469-7580.2009.01059.x

2008

- 71) Chen, M. and **Z.-X. Luo**. 2008. Morphology of dentition and postcranial skeleton of *Akidolestes*. Acta Geologica Sinica (Chinese Edition) 82(2): 155-164 (with English Abstract).
- 70) You, H.-L. and **Z.-X. Luo**. 2008. Dinosaurs from the Lower Cretaceous Gonpoquan Basin in Jiuquan Area, Gansu Province, China. Acta Geologica Sinica (Chinese Edition) 82(1): 139-144. (with English Abstract).

2007

- 69) **Luo, Z.-X.** 2007. Transformation and diversification in the early mammalian evolution. NATURE 450: 1011-1019.
- 68) **Luo, Z. X.**, Q. Ji and C.-X. Yuan. 2007. Convergent dental evolution in pseudotribosphenic and tribosphenic mammals. NATURE 450: 93-97.
- 67) **Luo, Z.-X.**, P.-J. Chen, G. Li, and M. Chen. 2007. A new eutriconodont mammal and evolutionary development of early mammals. NATURE 446: 288-293.
- 66) **Luo, Z.-X.**, and T. Martin. 2007. Analysis of molar structure and phylogeny of docodontan genera. Bulletin of Carnegie Museum of Natural History 39: 27-47.

- 65) **Luo, Z.-X. 2007.** Successive diversifications in early mammalian evolution. Pp. 337-391. *In: Major Transitions In Vertebrate Evolution* (J. S. Anderson and H.-D. Sues, eds.). Indiana University Press, Bloomington and Indianapolis, Indiana.

2006

- 64) Ji, Q., **Z.-X. Luo**, C.-X. Yuan, and A. R. Tabrum. **2006.** A swimming mammaliaform from the Middle Jurassic and ecomorphological diversification of early mammals. *SCIENCE* 311: 1123-1127. (Featured on Cover).
- 63) Li, G., and **Z.-X. Luo. 2006.** A Cretaceous symmetrodont therian with some monotreme-like postcranial features. *NATURE* 439: 195-200.
- 62) Hurum, J. H., **Z.-X. Luo**, and Z. Kielan-Jaworowska. **2006.** Were mammals originally venomous? *Acta Palaeontologica Polonica* 51(1): 1-11.

2005

- 61) **Luo, Z.-X.**, and J. R. Wible. **2005.** A new Late Jurassic digging mammal and early mammalian diversification. *SCIENCE* 308: 103-107.
- 60) Martin, T., and **Luo, Z.-X. 2005.** Paleontology: Homoplasy in the Mammalian Ear. *SCIENCE* 307: 861-862.
- 59) **Luo, Z.-X.**, and Q. Ji. **2005.** New study on dental and skeletal features of the Cretaceous mammal *Zhangheotherium*. *Journal of Mammalian Evolution* 12: 337-357.
- 58) Geisler, J. H., A. E. Sanders, and **Z.-X. Luo. 2005.** A new protocetid whale (Cetacea: Protocetidae) from the Middle Eocene of South Carolina, U.S.A. *The American Museum Novitates* 3480: 1-65.
- 57) **Luo, Z.-X. 2005.** Vertebrate Paleontology: Mesozoic mammals. Pp. 527-534. *In*, R. C. Selley, R. Cocks and I. Pilmer (editors): *Encyclopedia of Geology* (2004 Edition). Academic Press/Elsevier Science Ltd, Oxford and London.

2004

- 56) **Luo, Z.-X.**, Z. Kielan-Jaworowska, and R. L. Cifelli. **2004.** Evolution of Dental Replacement in Mammals. Pp. 159 - 175, *in Fanfare for an Uncommon Paleontologist - Festschrift in Honor of Dr. Malcolm C. McKenna*, (M. R. Dawson, and J. A. Lillegraven, eds.). The Carnegie Museum of Natural History Bulletin 36: 159-175.
- 55) Dooley, A. C., Jr., N. C. Fraser, and **Z.-X. Luo. 2004.** The earliest member of the rorqual-gray whale (Mammalia, Cetacea). *Journal of Vertebrate Paleontology* 24: 453-463.
- 54) Datta, P. M., D. P. Das, and **Z.-X. Luo. 2004.** A Late Triassic dromatheriid (Cynodontia, Synapsida) from Tiki Formation of India. *Annals of Carnegie Museum* 73(2): 72-84.

2003

- 53) **Luo, Z.-X.**, Q. Ji, J. R. Wible, and C.-X. Yuan. **2003.** An Early Cretaceous tribosphenic mammal and metatherian evolution. *SCIENCE* 302: 1934-1940.
- 52) You, H.-L., F. Tang, and **Z.-X. Luo. 2003.** A new basal titanosaur (Dinosauria: Sauropoda) from the Early Cretaceous of China. *Acta Geologica Sinica (English Edition)* (Beijing) 77: 424-429.
- 51) Shapiro, M. D., H.-L. You, N. H. Shubin, **Z.-X. Luo**, and J. P. Downs. **2003.** A large ornithomimid from the Lower Cretaceous of the Mazongshan area, northern Gansu Province, People's Republic of China. *Journal of Vertebrate Paleontology* 23: 695-698.
- 50) You, H.-L., **Z.-X. Luo**, N. H. Shubin, L. M. Witmer, Z.-L. Tang, and F. Tang. **2003.** The earliest-known duck-billed dinosaur from deposits of late Early Cretaceous age in northwest China and hadrosaur evolution. *Cretaceous Research* 24: 347-355.

2002

- 49) Ji, Q., **Z.-X. Luo**, C.-X. Yuan, J. R. Wible, J.-P. Zhang, and J. A. Georgi. **2002.** The earliest known eutherian mammal. *NATURE* 416: 816-822.

- 48) Kielan-Jaworowska, Z., R. L. Cifelli, and **Z.-X. Luo. 2002.** Dental structure of Shuotherium and its relationships. *Acta Palaeontologica Polonica* 47: 479-486.
- 47) **Luo, Z.-X.,** Z. Kielan-Jaworowska, and R. L. Cifelli. **2002.** In quest for a phylogeny of Mesozoic mammals. *Acta Palaeontologica Polonica* 47: 1-78.

2001

- 46) **Luo, Z.-X.,** A. W. Crompton, and A.-L. Sun. **2001.** A new mammaliaform from the Early Jurassic of China and evolution of mammalian characteristics. *SCIENCE* 292: 1535-1540. (Featured on the cover).
- 45) **Luo, Z.-X.,** R. C. Cifelli, and Z. Kielan-Jaworowska. **2001.** Dual origin of tribosphenic mammals. *NATURE* 409: 53-57. (Research article - with a News & Views commentary from Anne Weil).
- 44) Tang, F., **Z.-X. Luo,** Z.-H. Zhou, H.-L. You, J. A. Georgi, Z.-L. Tang, and X.-Z. Wang. **2001.** Biostratigraphy and Paleoenvironment of the Dinosaur-bearing Sediments in Lower Cretaceous of Mazongshan Area, Gansu Province, China. *Cretaceous Research* 22: 115-129.
- 43) **Luo, Z.-X. 2001.** Inner ear and its bony housing in tritylodonts and implications for evolution of mammalian ear. Pp. 81-97, *in Studies in Organismic and Evolutionary Biology in Honor of Alfred W. Crompton* (F. A. Jenkins, M. D. Shapiro, and T. Owerkowicz, eds.). *Bulletin of Museum of Comparative Zoology, Harvard University* 156: 81-97.

2000

- 42) **Luo, Z.-X. 2000.** Evolution: in search of the whales' sisters. *NATURE* 404: 235– 239. (Invited News & Views Commentary on the relationships of cetaceans to ungulate mammals).

1999

- 41) **Luo, Z.-X. 1999.** A refugium of relicts. *NATURE* 400: 23-25. (Invited News & Views commentary on the age of the feathered dinosaur fauna in China).
- 40) **Luo, Z.-X.,** and P. D. Gingerich. **1999.** Transition from terrestrial ungulates to aquatic whales: transformation of the basicranium and evolution of hearing. *Papers on Paleontology* 31: 1-98. Monograph Series of Museum of Paleontology, University of Michigan, Ann Arbor, Michigan.
- 39) Ji, Q., **Z.-X. Luo,** and S.-A. Ji. **1999.** A Chinese triconodont mammal and mosaic evolution of mammalian skeleton. *NATURE* 398: 326-330.

1998

- 38) Tang, F., **Z.-X. Luo,** Z.-H. Zhou, H.-L. You, and L. Tan. **1998.** Genesis of the stratigraphic sequence in the late Mesozoic terrestrial basin in the Ma-Zong-Shan areas of Gansu Province. *Chinese Geology* 1998(10): 40-44. [in Chinese]
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- 20) **Luo, Z.-X.**, and A.-L. Sun. 1993. Oligokyphus (Cynodontia: Tritylodontidae) from the Lower Lufeng Formation (Lower Jurassic) of Yunnan, China. *Journal of Vertebrate Paleontology* 13: 477-482.

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XIV. Published Reviews, Commentaries & Popular Scientific Articles

- 16) **Luo, Z.-X.** 2010. Journal Club (Commentary on mammalian dental evolutionary development – Invited Column on Research Highlights). *NATURE* 465: 669 (10 June 2010).
- 15) Xiao, S.-H., Q. Yang, and **Z.-X. Luo** 2010. A golden age of paleontology in China? A SWOT analysis. *Palaeontologia Electronica* Vol. 13, Issue 1; 3E:4p; http://palaeo-electronica.org/paleo/2010_1/commentary/china.htm
- 14) Xu, X., **Luo Z.-X.** and J-Y Rong. 2009. Recent Advances in Chinese Palaeontology. *Proceedings of Royal Society B (Biological Sciences)* 277:161-164. (DOI: 10.1098/rspb.2009.1668)
- 13) **Luo, Z.-X.** 2009. The 100th Anniversary of the Discovery of Dinosaur National Monument. Pp: 22-25. Dinosaur Expo 2009 – The Miracle of Deserts Exhibit Catalogue Book. (Exhibit in Tokyo, Japan) Published by the Nikkei Press, Tokyo, Japan. (Translated into Japanese by Nikkei).
- 12) **Luo, Z.-X.** 2008. Rise of marsupial and placental mammals in the Cretaceous of Asia. In, K. Miyata (ed.) *Extinction of Dinosaurs and Rise of New Rulers* (Exhibit Book for Special Exhibition), pp. 105-108. Fukui Prefectural Dinosaur Museum, Fukui, Japan. (In English and Japanese: Japanese translation provided by Dr. K. Miyata).
- 11) K. C. Beard and **Zhe-Xi Luo**. 2007. Mammalian paleontology on a global stage: a tribute to Mary R. Dawson. *Bulletin of Carnegie Museum of Natural History* 39: 1-5.
- 10) **Luo, Z.-X.** 2007. Book Review: Natural history of human's most distant relatives: Echidna – Extraordinary egg-laying mammal. By Michael L. Augee, Brett A. Gooden, and Anne M. Musser. *Journal of Mammalian Evolution* 14: 283-285.
- 9) **Luo, Z.-X.** and M. Chen. 2007. The magic story of mammalian ear evolution. *Scientific American* (Chinese Edition, Taiwan). June 2007. No. 64: 96-98. (In Chinese).
- 8) P. D. Polly, J. A. Lillegraven, and **Z.-X. Luo**. 2005. Introduction: Paleomammalogy in Honor of Professor Emeritus William Alvin Clemens, Jr. *Journal of Mammalian Evolution* 12:3-9.
- 7) **Luo, Z.-X.** 2005. Book review: "*Doushantuo Fossils: Life on the Eve of Animal Radiation*." By Xun-lai Yuan, Shu-hai Xiao, Lei-ming Yin, Andrew H. Knoll, Chuan-ming Zhou and Xi-nan Mu. 2002. *Journal of Paleontology* 75:1040-1042.
- 6) **Luo, Z.-X.** 2004. A Window on Early Animal Evolution (Book review): for "*The Cambrian Fossils of Chengjiang, China – The Flowering of Early Animal Life*" by Xian-Guang Hou, Richard J. Aldridge, Jan Bergström, David J. Siveter, Derek J. Siveter & Xiang-Hong Feng. *Nature* 430: 405.
- 5) **Luo, Z.-X.** 2002. Evolutionary story of the Mesozoic tribosphenic mammals. *Scientific American* (Chinese Edition, Taiwan), April 2002: 62-63. (Popular Scientific Article, in Chinese).
- 4) **Luo, Z.-X.** 2002. Symmetrodonts (an entry to the McGraw-Hill Encyclopedia). *The McGraw-Hill Encyclopedia of Science and Technology, Ninth Edition*. P. 84. New York, NY. (Published Review).
- 3) **Luo, Z.-X.** 2001. Foreword to Rise of the Dragon. Pp. ix-xiv, in *Rise of the Dragon – Recent Advancement in Palaeontology in China*, (Henry Gee, ed.). The University of Chicago Press. (Invited contribution by the editor)
- 2) **Luo, Z.-X.** 1997. How do whales hear? *Carnegie Magazine*, Vol. LXIII: Pp. 23-25. (Popular Scientific Article).
- 1) **Luo, Z.-X.**, and Z. Zhang. 1995. *Thrinaxodon*: Digital Atlas of the Skull (by T. Rowe, W. Carlson, and W. Botoroff). *Journal of Vertebrate Paleontology*, 15: 871-874. (Published Review).

Ph.D. Thesis

- Luo, Z.-X.** 1989. The petrosal structures of Multituberculata (Mammalia) and the molar morphology of early Arctocyoniidae (Condylarthra, Mammalia). Ph.D. Dissertation, Museum of Paleontology, University of California at Berkeley. Pp. 1-426. (Major adviser: W. A. Clemens, Jr.; Committee Members: M. H. Wake, and K. Padian).

Over 50 published abstracts with scientific conferences (not listed)

XV. Invited Research Seminars and Popular Scientific Talks (Partial list for 2002-2013)

- 2013 University of Chicago Center in Beijing
University of Illinois College of Dentistry
Natural History Museum, Harvard University
- 2012 Field Museum of Natural History, Chicago, Illinois
Department of Geological Sciences, Indiana University
Department of Biological Sciences, Duquesne University
Carnegie Museum of Natural History
EvMorph Seminar, University of Chicago
- 2011 Department of Organismal Biology and Anatomy, University of Chicago
Paleontological Museum of Liaoning, China
Institute of Paleontology, University of Zurich, Switzerland
Institute of Functional Genomics of Lyon, École Normale Supérieure de Lyon, France
- 2010 Ecology, Evolution and Conservation Biology, University of Illinois, Urbana-Champaign
Steinmann-Institut für Paläontologie, Universität Bonn, Germany
Department of Zoology, University of Cambridge, UK
The Santa Fe Institute, Santa Fe, New Mexico
- 2009 Café Scientifique (Pittsburgh), Carnegie Science Center (Pittsburgh)
College of Life Sciences, Peking University, China
A keynote speaker: 79 Jahrestagung der Paläontologischen Gesellschaft (2009), Germany
Museum of Zoology, University of Cambridge, UK
Humboldt Museum für Naturkunde zu Berlin, Germany
Department of Biological Sciences, University of Pittsburgh
The Wann Langston Lecture, University of Texas at Austin
Department of Geosciences, Princeton University
- 2008 Department of Integrative Biology, University of California at Berkeley
Field Museum of Natural History, Chicago, Illinois
The Ermine Cowles Case Lecture, University of Michigan, Ann Arbor, Michigan
The Fukui Prefectural Dinosaur Museum, Japan
Eye and Ear Institute, University of Pittsburgh School of Medicine
The Darwin Anniversary Keynote Lecture, College of Charleston, South Carolina
Community Foundation of Upper St. Claire Township, Pittsburgh, Pennsylvania
- 2007 School of Biological Sciences, University of Hong Kong, China
Café Scientifique (Pittsburgh)
Institut für Paläontologie, Universität Bonn, Germany
The Crafoord Symposium, Universität Tübingen, Germany
University of Colorado Museum, Boulder, Colorado
Northeastern Ohio Universities College of Medicine (NEOUCOM), Ohio
- 2006 Sigma Xi Society Chapter, GM Tech Center, General Motors Corporation
Pittsburgh Rock Hound Club
- 2005 Denver Museum of Nature and Science
Department of Organismic and Evolutionary Biology, Harvard University
Department of Geology and Geophysics, Yale University
Department of Biological Sciences, University of Pittsburgh
Bell Museum of Natural History, University of Minnesota at Twin City
Science Museum of Minnesota, St. Paul, Minnesota
Saint Vincent College, Latrobe, PA

- 2004 Pittsburgh Children's Hospital Foundation & Carnegie Museum of Natural History
Department of Biological Anthropology and Anatomy, Duke University
Geological Society of Pittsburgh
Museum of Paleontology, University of California at Berkeley
- 2003 Hunt Botanical Institute, Carnegie Mellon University, Pittsburgh, PA
Institute of Vertebrate Paleontology and Paleoanthropology, Beijing, China
School of Earth and Space Sciences, Peking University, Beijing, China
Department of Earth Sciences, Nanjing University, Nanjing, China
National Science Foundation of China, Beijing, China
Department of Biological Sciences, University of Pittsburgh
American Museum of Natural History, NY
Georgia Southern University, Statesboro, GA
Department of Geological Sciences, University of Texas at Austin
Carnegie Museum of Natural History Powdermill Nature Reserve (Rector, PA)
Department of Pathology, University of Pittsburgh School of Medicine
Department of Geological and Planetary Sciences, University of Pittsburgh
- 2002 Center for Functional Anatomy and Evolution, The Johns Hopkins University
Humboldt Museum für Naturkunde zu Berlin, Germany
The Nanjing Institute of Geology & Palaeontology, China
Department of Earth Sciences, Nanjing University, China
The Shanghai Museum of Science and Technology, China
Carnegie Museum of Natural History Powdermill Nature Reserve (Rector, PA)
Department of Biological Sciences, University of Pittsburgh