

# Curriculum vitae

## Zhonghe Zhou (周忠和)

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## Education

1995-1999. Ph.D. Dept of Ecology and Evolutionary Biology, University of Kansas.

1986-1989. Master of Sciences, Dept of Geological Sciences, Chinese University of Science and Technology.

1982-1986. Bachelor of Sciences, Dept. of Geology, Nanjing University.

## Employment

2018- Senior research fellow: Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences

2010- Director: Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences

2008- Acting director: Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences

1999-: Senior research fellow: Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences

1995-1999: Associate research fellow: Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences

1992-1995: Assistant research fellow: Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences

## Current professional services

Chinese Society of Science Writers (chairman)

Deputy Editor in Chief of *National Science Review*

*Paleontological Research* (Associate editor)

*Current Biology* (Board member)

Editorial committee of *Zoologica Scripta* (member)

Editorial committee of *Chinese Science Earth Sci* (member)

Editorial committee of *Vertebrata Palasiatica* (member)  
Editorial committee of *Acta Paleontologica Sinica* (member)  
Editorial committee of *Advance in Earth Sciences* (member)  
Editorial committee of *Natural Sciences and Museums* (member)  
Editorial committee of *Fossils* (in Chinese) (member)  
Editorial committee of *Newton* (in Chinese) (member)  
Adjunct professor of Beijing University  
Adjunct professor of Nanjing University  
Adjunct professor of the University of the Chinese Academy of Sciences

## **Current professional committee**

Academic committee of the State Key Laboratory of Paleobiology and Stratigraphy of Nanjing Institute of Geology and paleontology (chairman)

Academic Committee of the State Key Laboratory of Biogeology and Environmental Geology of the Chinese University of GeoSciences (member)

Scientific Committee of the Chinese Academy of Sciences on Resources and Environments (member)

Advisory Committee of the Department of Earth Sciences of the National Natural Science Foundation of China

## **Research interest and on-going research**

His main interest is on the origin and early evolution of birds, feathers and bird flight. He is also involved in the study of Mesozoic fishes, feathered dinosaurs, pterosaurs, stratigraphy and the evolution of the Jehol Biota and the relationship between paleoenvironment and biological evolution in order to reconstruct the Lower Cretaceous terrestrial ecosystem.

In the past thirty years, together with his colleagues, he has discovered and published nearly 30 new species of birds from the Early Cretaceous of Northeast China, making it the most important area for the study of early bird evolution. Recently his group has studied various aspects of the biology (e.g., skeletal development, reproductive and digestive systems etc.) of the transition from dinosaurs to birds. Our understanding of their early morphological differentiation and ecological and evolutionary radiation has been greatly improved with the information revealed by Zhou and his colleagues. Also with colleagues, he has named over a dozen dinosaurs and pterosaurs and much enriched our understanding of the famous Lower Cretaceous terrestrial Jehol Biota.

## **Selected Grants**

1. Chinese Academy of Sciences, 1990-1993 “Study of Mesozoic Vertebrate Fossils in Liaoning” (Investigator)
2. Chinese NSF, 1993-1995, “Study of Mesozoic Birds in Liaoning” (Investigator)
3. National Geographical Society, 1994-1997, “Excavation and study of Early Cretaceous Birds in

China” (Investigator)

4. Chinese NSF, 1997-1999. “Excavation of Chinese Mesozoic Birds.” (Investigator)
5. National Geographical Society, 1998-2000. “Excavation of the Early Cretaceous Birds from the dinosaur sites in Inner Mongolia” (PI)
6. National Geographical Society, 1999-2000. “Study of Late Jurassic Birds in China.” (Investigator)
7. Chinese NSF, 1998-2001. “Study of the Jehol Fauna in Liaoning” (Investigator)
8. Chinese Academy of Sciences. 1999-2000. “Mesozoic vertebrates of the Jehol Biota” (Investigator)
9. Chinese Ministry of Sciences and Technology (Special Funds for Basic Research Fund of China). 2000-2005. “The diversification of Mesozoic life and the origin of birds” (PI)
10. Chinese NSF (Distinguished Young Scientist Fund), 2000-2004. “Mesozoic birds of China and their stratigraphy” (PI)
11. Chinese NSF (Innovation Research Group Fund), 2001-2004. “Studies of the Jehol Biota” (PI)
12. NSF of the USA, 2004-2006. “Phylogeny of Enantiornithes” (co-PI)
13. Chinese Academy of Science, 2004-2007. “Origin, radiation and environmental background of the Jehol Biota” (PI)
14. Chinese NSF (Innovation Research Group Fund), 2005-2010. “Studies of the Jehol Biota” (PI)
15. Chinese Ministry of Sciences and Technology (Special Funds for Basic Research Fund of China). 2006-2010. “The Cretaceous biodiversity ” (PI)
16. Chinese Ministry of Sciences and Technology (Special Funds for Basic Research Fund of China). 2011-2016.”Evolution of Chinese terrestrial biota and its paleoenvironmental background in the past 400 million years” (PI).
17. Chinese NSF. 2016-2017. “Impact of the North China Craton on the Yanliao and Jehol biotae” (PI).
18. Chinese NSF. 2017-2021. “North China Craton Destruction and the Terrestrial Biotal Evolution” (PI).

## **Selected Academic Awards and Honors**

1. First class prize for presentation at the 1st Chinese Graduate Symposium on Paleontology and Stratigraphy (1992), Nanjing, China
2. Second class Young Scientist Prize of the Chinese Academy of Sciences (1995), Beijing, China
3. Dissertation Fellowship of the University of Kansas, 1998-1999 Academic Year, USA
4. First Class Natural Science Award of the Chinese Academy of Sciences (1999)
5. Second Class National Natural Science Award of China (2000)
6. Distinguished Team of the Chinese Academy of Sciences (2002) (as the lead of the team)
7. Distinguished Innovation Research Group of the Chinese Academy of Sciences (2003) (as the lead of the group)
8. Outstanding individual returning from study abroad recognized by the Chinese government. (2003)
9. Outstanding Science and Technology Achievement Prize of the Chinese Academy of Sciences (2003)

10. Distinguished Investigator of the “973” Project of the Ministry of Sciences and Technology of China. (2004)
11. Science and Technology Award for Young Scientist of the Chinese Association of Sciences and Technology (2006).
12. Second Class National Natural Science Award of China (2007)
13. The Chinese Government Publishing Award (2007)
14. Foreign Associate of the National Academy of Sciences, USA (2010)
15. Member of the Chinese Academy of Sciences (2011)
16. Distinguished Experts of the Chinese Government (2014)
17. Member of the Third World Academy of Sciences (2015).
18. Corresponding member of the Brazilian Academy of Sciences (2015).
19. Honorary member of the American Ornithological Society (2019)

## Complete list of publications

### Papers

- Zhou, Z. 1992. Review on *Peipiaosteus* based on new materials of *P. pani*. *Vertebrata Palasiatica*. 30(2): 85-101.
- Zhou, Z., F. Jin, and J. Zhang. 1992. Preliminary report on a Mesozoic bird from Liaoning, China. *Chinese Sci. Bull.* 37(16): 1365-1368.
- Jin, F., J. Zhang and Z. Zhou. 1993. A review of *Longdeichthys* (Teleostei: ?Clupeocephala) from northern China). *Vertebrata Palasiatica*. 31(4): 241-256.
- Zhang, J. F. Jin and Z. Zhou. 1994. A review of Mesozoic osteoglossomorph fish *Lycoptera longicephalus*. *Vertebrata Palasiatica*. 32(1): 41-59.
- Zhou, Z. 1995. Is *Mononykus* a bird? *The Auk*. 112: 958-963.
- Zhou, Z. 1995. The discovery of Early Cretaceous birds in China. *Courier Forschungsinstitut Senckenberg*. 181: 9-22.
- Zhou, Z. 1995. New understanding of the evolution of the limb and girdle elements in early birds -evidences from Chinese fossils. In: Sun A, and Y. Wang eds. *Sixth Symposium on Mesozoic Terrestrial Ecosystems and Biota, short papers*. Beijing: China Ocean Press. 209-214.
- Zhou, Z. 1995. Discovery of a new enantiornithine bird from the Early Cretaceous of Liaoning, China. *Vertebrata Palasiatica*. 33(2): 99-113.
- Hou, L., Z. Zhou, L. D. Martin and A. Feduccia. 1995. A beaked bird from the Jurassic of China. *Nature*. 377: 616-618.
- Hou, L., Z. Zhou, Y. Gu and H. Zhang. 1995. *Confuciusornis sanctus*, a new Late Jurassic sauriurine bird from China. *Chinese Sci. Bull.* 40(18): 1545-1551.
- Hou, L., Z. Zhou, Y. Gu and T. Sun. 1995. Introduction to Mesozoic birds from Liaoning, China. *Vertebrata Palasiatica*. 33(4): 261-271.
- Jin, F., J. Zhang and Z. Zhou. 1995. Late Mesozoic fish fauna from Western Liaoning, China. *Vertebrata Palasiatica*, 33(3): 169-193.
- Hou, L., L. D. Martin; Z. Zhou and A. Feduccia. 1996. Early adaptive radiation of birds: evidence from fossils from Northeastern China. *Science*. 27(5290): 1164-1167.
- Zhou, Z. 1997. Cladistics and Popper’s philosophy. *in Evidence for Evolution: essays in honors of*

- Prof. Chuangchien Young on the hundredth anniversary of his birth. Y. Tong, J. Li, L. Si (eds.). Ocean Press, Beijing. Pp. 233-245.
- Zhou Z. 1997. Book review of "The origin and evolution of birds" by Feduccia (1996). *Vertebrata PalAsiatica*. 35 (2): 154-158.
- Martin, L. D. and Z. Zhou, 1997. *Archaeopteryx*-like skull in enantiornithine bird. *Nature*. 389: 556.
- Zhou, Z. and L. Hou. 1998. *Confuciusornis* and the early evolution of birds. *Vertebrata PalAsiatica*. 36(2): 136-146.
- Martin, L. D., Z. Zhou, L. Hou and A. Feduccia. 1998. *Confuciusornis sanctus* compared to *Archaeopteryx lithographica*. *Naturwissenschaften* 85: 286-289.
- Tang, F., Z. Luo, Z. Zhou, H. You and L. Tan. 1998. The genetic stratigraphy of the sequence in the terrestrial late Mesozoic basins of Mazongshan Area, Gansu, China. *Chinese Geology*. 10: 40-44.
- Zhang, F., L. Hou and Z. Zhou. 1998. About the femur microstructure of *Confuciusornis*. Proceedings of first Postdoctors' symposium of Chinese Academy Sciences. 238-239.
- Zhang, F., L. Ouyang, L. Hou and Z. Zhou. 1998. New method of fossil birds study: Histology and its implication. Proceedings of first Postdoctors' symposium of Chinese Academy Sciences. 240-241.
- Zhou, Z. and L. D. Martin. 1999. Feathered dinosaur or bird? - a new look at the hand of *Archaeopteryx*. *Smithsonian Contribution to Paleontology*. 89: 289-293.
- Zhou, Z. 1999. Early evolution of birds and avian flight-evidence from Mesozoic fossils and modern birds. PhD Dissertation, Department of Systematics and Ecology, University of Kansas, 216 pp.
- Hou, L., L. D. Martin, Z. Zhou, A. Feduccia and F. Zhang. 1999. Diapsid skull in *Confuciusornis*-evidence from a new species. *Nature*. 399: 679-682.
- Hou, L. and Z. Zhou. 1999. Paleornithology of China: a general review. *Chinese Sci. Bull.* 44(23): 2113-2116.
- Hou, L., L. D. Martin, Z. Zhou and A. Feduccia. 1999. *Archaeopteryx* to opposite birds—missing link from the Mesozoic of China. *Vertebrata PalAsiatica*, 37(2): 88-95.
- Zhou, Z. 2000. Review of the study of the origin of birds. *Vertebrata PalAsiatica*. 38(1): 72-78.
- Zhou, Z. and X. Wang. 2000. A new species of *Caudipteryx* from the Yixian Formation of Liaoning, northeast China. *Vertebrata PalAsiatica*. 38(2): 111-127
- Zhou, Z., X. Wang, F. Zhang and X. Xu. 2000. Important features of *Caudipteryx*-evidence from two nearly complete new specimens. *Vertebrata PalAsiatica*. 38(4): 241-254.
- Burnham, D. A., K. L. Derstler, P. J. Currie, R. T. Bakker, Z. Zhou and J. H. Ostrom. 2000. Remarkable new bird-like dinosaur (Theropoda: Maniraptora) from the Upper Cretaceous of Montana. Special Publication of the Paleontological Institute, University of Kansas.
- Hou, L., Z. Zhou, F. Zhang and J. Li. 2000. A new vulture form the Miocene of Shandong, eastern China. *Vertebrata PalAsiatica*. 38(2): 104-110.
- Lim, J., Z. Zhou, L. D. Martin K.-S. Baek, and S.-Y. Yang. 2000. The oldest known tracks of web-footed birds from the Lower Cretaceous of South Korea. *Naturwissenschaften*. 87(6): 256-259.
- Wang, X., Y. Wang, Z. Zhou, F. Jin, J. Zhang and F. Zhang. 2000. Vertebrate faunas and biostratigraphy of the Jehol Group in western Liaoning, China. *Vertebrata PalAsiatica*, 38(supplement to 2): 41-63.

- Wang, X., Y. Q. Wang, F. Zhang, J. Zhang, Z. Zhou, F. Jin, Y. Hu, G. Gu and H. Zhang. 2000. Vertebrate biostratigraph of the Lower Cretaceous Yixian Formation in Lingyuan, western Liaoning and its neighboring southern Nei Mongol (Inner Mongolia), China. *Vertebrata Palasiatica* 38(2): 81-99.
- Wang, X., Y. Q. Wang, J. Zhang, F. Jin, Z. Zhou, X. Xu, F. Zhang, Y. Wang, Y. Hu and J. Lu. 2000. New discoveries of vertebrates from the Jehol Group and the non-marine Jurassic-Cretaceous boundary in northern China. In *Proceedings of the 3<sup>rd</sup> National Conference on Stratigraphy*. Geological Publishing House, Beijing. Pp. 252-259.
- Xu X., Z. Zhou and X. Wang. 2000. The smallest known non-avian theropod dinosaur. *Nature*. 408: 705-708.
- Zhang F and Z. Zhou. 2000. A primitive enantiornithine bird and the origin of feathers. *Science*. 290: 1955-1959.
- Zhou, Z. and J. Farlow. 2001. Flight capability and habits of *Confuciusornis* in Jacques Gauthier and Lawrence F. Gall, editors. *New perspectives on the origin and early evolution of birds : proceedings of the international symposium in honor of John H. Ostrom; 1999 Feb 12-14; New Haven, CT*. New Haven: Peabody Mus. Nat. Hist., Yale Univ. 237-254.
- Zhou, Z. and F. Zhang. 2001. Origin of feathers-perspectives from fossil evidence. *Science Progress*. 84(2): 87-104.
- Zhou, Z. and Zhang F. 2001. Two new ornithurine birds from the Early Cretaceous of western Liaoning, China. *Chinese Sci. Bull.* 46(15): 1258-1264.
- Zhou, Z. 2001. Discovery of early birds and the origin of avian flight. *Bull. Chinese Academy of Sciences*. 16(1): 53-55.
- Zhou, Z. 2001. Progress in the study of the Jehol Biota. *China Basic Science*. 2: 27-30.
- Zhou, Z. and Zhang F. 2001. Advances in the study of paleornithology in China. *Bull. Biol.* 36(5): 1-3.
- Tang, F., Z. Luo, Z. Zhou, H. You, J. A. Georgi, Z. Tang and X Wang. 2001. Biostratigraphy and paleoenvironment of the dinosaur-bearing sediments in Lower Cretaceous of Mazongshan Area, Gansu Province, China. *Cretaceous Research*. 22: 115-129.
- Xu X, Z. Zhou and R. O. Prum. 2001. Branched integumental structures in *Sinornithosaurus* and the origin of feathers. *Nature*. 411: 200-204
- Zhang, F., Z. Zhou., L. Hou and G. Gu. 2001. Early diversification of birds: evidence from a new opposite bird. *Chinese. Sci. Bull.* 46: 945-949.
- Zhou, Z. 2002. A new and primitive enantiornithine bird from the Early Cretaceous of China *J. Vert. Paleo.* 22 (1): 49-57.
- Zhou, Z. and F. Zhang. 2002. Largest bird from the Early Cretaceous and its implications for the earliest avian ecological diversification. *Naturwissenschaften*. 89: 34-38.
- Zhou. Z. and L. Hou, 2002. The discovery and study of Mesozoic birds in China. In: Chiappe L. and L. Witmer (eds.) *Mesozoic birds above the head of dinosaurs*. California University Press. Pp. 160-183.
- Zhou, Z. and F. Zhang. 2002. A long-tailed, seed-eating bird from the Early Cretaceous of China. *Nature*. 418: 405-409.
- Zhou. Z., J. Clarke and F. Zhang. 2002. Archaeoraptor's better half. *Nature*. 420: 285.
- Wang, X. L., Z. Zhou, F. Zhang and X. Xu. 2002. A nearly completely articulated rhamphorhynchoid pterosaur with exceptionally well-preserved wing membranes and "hairs"

- from Inner Mongolia, northeast China. *Chinese Sci. Bull.* 47(3): 226-230.
- Swisher, III C. C., X. Wang, Z. Zhou, Y. Q. Wang, F. Jin, J. Zhang, X. Xu, F. Zhang and Y. Wang. 2002. Further Support for a Cretaceous age for the feathered-dinosaur beds of Liaoning, China: New  $^{40}\text{Ar}/^{39}\text{Ar}$  dating of the Yixian and Tuchengzi Formations. *Chinese Sci. Bull.* 47(2): 135-138.
- Zhang, F., Z. Zhou, X. Xu and X. Wang. 2002. A juvenile coelurosaurian theropod from China indicates arboreal habits. *Naturwissenschaften* 89: 394-398
- Lim J., L. D. Martin, Z. Zhou, K. S. Baek and S. Y. Yang. 2002. The significance of Early Cretaceous bird tracks. In: Zhou Z H, Zhang F C (eds.), *Proceedings of the 5<sup>th</sup> symposium of the Society of Avian Paleontology and Evolution, Beijing, 1-4 June 2000.* Beijing: Science Press. 157-163.
- Wang, X. and Z. Zhou. 2003. A new pterosaur (Pterodactyloidea: Tapejaridae) from the Early Cretaceous Jiufotang Formation of western Liaoning and its implications for biostratigraphy. *Chinese Sci. Bull.* 48(1): 16-23.
- Wang, X. and Z. Zhou. 2003. Two new pterodactyloid pterosaurs from the Early Cretaceous Jiufotang Formation of western Liaoning, China. *Vertebrata Palasiatica.* 41(1): 34-41.
- Wang, X., Zhou, Z. 2003. Mesozoic Pompeii. in Chang, M., Chen, P., Wang, Y.-Q., Wang, Y. eds. *The Jehol Biota.* Shanghai Scientific & Technical Publishers, Shanghai. pp. 19-36.
- Wang, X., Zhou, Z. 2003. Pterosaurs. in Chang, M., Chen, P., Wang, Y.-Q., Wang, Y. eds. *The Jehol Biota.* Shanghai Scientific & Technical Publishers, Shanghai. pp. 99-108.
- Xu, X., Z. Zhou, X. Wang, X. Kuang, F. Zhang and X. Du. 2003. Four-winged dinosaurs from China. *Nature.* 421: 335-340.
- Zhang, F., Zhou, Z., Hou, L. 2003. Birds. in Chang, M., Chen, P., Wang, Y.-Q., Wang, Y. eds. *The Jehol Biota.* Shanghai Scientific & Technical Publishers, Shanghai. pp.129-150.
- Zhou, Z., F. Zhang. 2003. *Jeholornis* compared to *Archaeopteryx*, with a new understanding of the earliest avian evolution. *Naturwissenschaften.* 90: 220-225.
- Zhou, Z., F. Zhang. 2003. Anatomy of the primitive bird *Sapeornis chaoyangensis* from the Early Cretaceous of Liaoning, China *Can. J. Earth Sci.* 40(5): 731-747.
- Zhou, Z., P. M. Barrett and J. Hilton. 2003. An exceptionally preserved Lower Cretaceous ecosystem. *Nature.* 421: 807-814.
- He, H., Wang, X., Zhou, Z., Wang, F., Boven, A., Shi, G., Zhu, R. 2004. Timing of the Jiufotang Formation (Jehol Group) in Liaoning, northeastern China and its implications. *Geophysical Research Letters* 31 (12): L12605.
- He H., Wang X., Zhou Z., Zhu R., Jin, F., Wang F., Ding, X., Boven A. 2004.  $^{40}\text{Ar}/^{39}\text{Ar}$  dating of ignimbrite in Inner Mongolia, northeastern China indicates a post-Middle Jurassic age for the overlying Daohugou Bed. *Geophysical Research Letters.* 31: L20609
- Zhang, F., Ericson, P. G. P. Zhou, Z. 2004. Description of a new enantiornithine bird from the Early Cretaceous of Hebei, northern China. *Canadian Journal of Earth Science.* 41: 1097-1107.
- Zhou, Z. 2004. Jehol Biota-a world-class fossil treasure house for exploring the Mesozoic life evolution. *Science Technology and engineering.* 2004(2): 143-151.
- Zhou, Z. 2004. Vertebrate radiations of the Jehol Biota and their environmental background. *Chinese Science Bulletin* 49: 754-756.

- Zhou Z. 2004. The origin and early evolution of birds: Discoveries, disputes, and perspectives from fossil evidence. *Naturwissenschaften*. 91:455-471.
- Zhou Z. and F. Zhang. 2004. A precocial avian embryo from the Lower Cretaceous of China. *Science*. 306: 653.
- Zhou Z., J. Clarke, F. Zhang, and O. Wings. 2004. Gastroliths in *Yanornis* - An indication of the earliest radical diet switching and gizzard plasticity in the lineage leading to living birds? *Naturwissenschaften*. 91: 571-574.
- Zhou Z, Zhang, F. 2004. Mesozoic birds of China: an introduction and review. *Acta Zoologica Sinica*, 50(6): 913-920.
- Wang, X., Zhou, Z. 2004. Pterosaur embryo from the Early Cretaceous of China. *Nature* 429: 621.
- Zhang F. and Z. Zhou. 2004. Leg feathers in an Early Cretaceous bird of China. *Nature*.431: 925.
- Zhou, Z., Zhang, F. 2005. Discovery of a new ornithurine bird and its implication for Early Cretaceous avian radiation. *PNAS*. 102(52): 18998-19002.
- Zhou, Z., Luo, Y., Dong, Y., Yuan, X., Gao, X. 2005. On some scientific issues in the study of Earth environment and life evolution in China. *Chinese Sci. Bull.* 50(2): 195-200. (in Chinese).
- Zhang, F., Ericson, Per G. P., Zhou, Z. 2005. Description of a new enantiornithine bird from the Early Cretaceous of Hebei, northern China. *Canadian Journal of Earth Sciences*. 41: 1097–1107.
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- Zhou, Zhonghe, Luis M. Chiappe & Fucheng Zhang, 2005. Anatomy of the Early Cretaceous bird *Eoenantiornis buhleri* (Aves: Enantiornithes) from China. *Canadian Journal of Earth Sciences* 42: 1331-1338.
- Zhou, Z., Zhang, F., 2005. Replying to: K. Padian & K. P. Dial *Nature* 438, doi:10.1038/nature04354 (2005). *Nature*. 438: E4.
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- Zhou, Z. 2006. Evolutionary radiation of the Jehol Biota: chronological and ecological perspectives. *Geological Journal*. 41: 377-393.
- Zhou, Z., Zhang, F. 2006. A beaked basal ornithurine bird (Aves, Ornithurae) from the Lower Cretaceous of China. *Zoologica Scripta*. 35: 363–373.
- Zhou, Z., Zhang, F. 2006. Mesozoic birds of China – a synoptic review. *Vertebrata PalAsiatica*. 44(1): 74-98.
- Zhou, Z. 2006. Adaptive radiation of the Jehol Biota and its evolutionary ecological background. In *Originations, radiations and biodiversity changes—evidences from the Chinese fossil record*, Rong J., Fang, Z., Zhou, Z., Zhan, R., Wang, X., Yuan, X. (eds.). Science Press: Beijing: 705-732, 943-945 (in Chinese, abstract in English).

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- He, H., Wang, X., Jin, F., Zhou, Z., Wang, F., Yang, L. K., Ding, X., Boven, A., Zhu, R. 2006. The  $^{40}\text{Ar}/^{39}\text{Ar}$  dating of the early Jehol Biota from Fengning, Hebei Province, northern China. *Geochemistry Geophysics Geosystems*. 7, Q04001, doi:10.1029/2005GC001083.
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- Lower Cretaceous Jiufotang Formation of western Liaoning, China. *Vertebrata Palasiatica*, 46(3): 178-189.
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