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# ZOOLOGICAL RESEARCH



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# A reflection on the significant findings published in *Zoological Research* over the past 35 years

Since its founding in 1980 by a group of first generation biologists after the reform and opening of China, *Zoological Research* (ZR) has followed a rather long and difficult 35-year journey. However, through the excellent guidance of our former and current editors-in-chief, the extraordinary members of the editorial board and reviewers, and most importantly, with the strong support of our diligent and enthusiastic authors and readers, we have never deviated from our original goals, despite setbacks and frustrations, such as financial difficulties. Through all the trials and tribulations, we have retained our leading position as a respectable and quality academic journal.

During the past 35 years, ZR has steadfastly placed a premium on the academic values and quality of the manuscripts it publishes. The many significant findings reported in ZR have not only aroused extensive discussions from both the academic and industrial fields, but also brought profound social effects.

Hosted by the Kunming Institute of Zoology of the Chinese Academy of Sciences and the China Zoological Society, ZR has provided an avenue for significant studies on animal biodiversity and taxonomy, including newly discovered species, which is imperative given the unique geography of the Yunnan Province, one of the world's 25 featured biodiversity regions. For example, the discovery and naming (Ma et al, 1990), as well as karyotype detection, of the Gongshan muntjac (*Muntiacus gongshanensis*) (Shi & Ma, 1988), an endangered species inhabiting the Gongshan Mountains in northwestern Yunnan, southeast Tibet and northern Myanmar, were originally published in ZR.

Another major area of coverage in ZR has been the study of non-human primates. From 1981-2010, many high quality articles were published regarding various aspects of primatology, including taxonomy, distribution, ecology, conservation, behavior and physiology in diversified primate species, such as the rhesus monkey (*Macaca mulatta*), Assam macaque (*Macaca assamensis*), Tibetan macaque (*Macaca thibetana*), Yunnan black-and-white snub-nosed monkey (*Rhinopithecus bieti*), black-crested gibbon (*Hylobates concolor jingdongensis*), hoolock gibbon (*Hoolock hoolock*), western black crested gibbon (*Nomascus concolor*), Francois' leaf monkey (*Trachypithecus francoisi*) and Phayre's leaf monkey (*Trachypithecus phayrei*). Publication of these important studies plays a crucial role in directing and promoting the development of primate research. Today, we continue to publish some of the very best research on primates, including the fields of primate conservation, behavior and brain sciences and their applications in the biomedical field, as featured by our special

issues in recent years.

Moreover, ZR is also recognized by its featured publications on genetics and evolution and utilization of rich bioresources, i.e., studies on DNA polymorphism, *Bombina maxima* skin secretion proteomes and trefoil factors. The special issues released on November 1981 (Volume 2) and December 1987 (Volume 8) on the biochemical characteristics and physiological effects of snake venom represented pioneering studies of this field in China, and promoted transitions of these academic findings into clinical and industrial applications. Numerous relevant studies were later awarded with provincial and national honors.

Attributed to the outstanding work of our authors and readers, ZR has earned its position and shown its influence as a prosperous journal. Citations of ZR publications are impressive, and have been increasing since 2002. Up to April 30, 2015, a total of 1 384 articles have been cited 5 051 times, with the average citation per item being 3.65 (statistical data from January 1, 2002, to April 30, 2015, were obtained from Web of Science).

Due to the limited space here, we are unable to list all the many wonderful and deserved papers previously published in ZR. We hope this brief reflection can help our young readers and authors to better know the outstanding contributions of the earlier scientists and the path they paved. The dedication and endless support of our predecessors, by contributing their best research to ZR, has helped shape our reputation. We believe that following the strategies of our predecessors, we will have an enduring and substantial impact on ZR into the future. By working together, ZR will continue to publish the best research.

Sincerely yours,



Yong-Gang YAO, Editor-in-Chief  
Kunming Institute of Zoology, Chinese Academy of Sciences  
Kunming 650223, China



Yun ZHANG, Executive Editor-in-Chief  
Kunming Institute of Zoology, Chinese Academy of Sciences  
Kunming 650223, China

## Appendix: 20 representative publications of *Zoological Research* from 1980-2015

- 1 Shi LM, Ma CX. 1988. A new karyotype of muntjac (*Muntiacus sp.*) from Gongshan County in China. *Zoological Research*, **9**(4): 343-347.
- 2 Ma SL, Wang YX, Shi LM. 1990. A new species of the genus muntiacus from Yunnan, China. *Zoological Research*, **11**(1): 47-53.
- 3 Jiang XL, Wang YX, Ma SL. 1991. Taxonomic revision and distribution of subspecies of rhesus monkey (*Macaca mulatta*) in China. *Zoological Research*, **12**(3): 241-247.
- 4 Lin ZH, Ji X. 1998. The effects of thermal and hydric environments on incubating eggs and hatchlings of the grass lizard, *Takydromus septentrionalis*. *Zoological Research*, **19**(6): 439-445.
- 5 Zhang YP, Shi LM. 1992. Mitochondrial DNA polymorphisms in animals: a review. *Zoological Research*, **13**(3): 289-298.
- 6 Zhang YP, Wang W, Su B, Oliver AR, Fang ZY, Zhang HM. 1995. Microsatellite DNAs and kinship identification of the giant panda. *Zoological Research*, **16**(4): 301-306.
- 7 Zhang YP. 1996. DNA sequence and species tree. *Zoological Research*, **17**(3): 247-252.
- 8 Yao YG, Zhang YP. 2000. Mitochondrial DNA and human evolution. *Zoological Research*, **21**(5): 392-406.
- 9 Chen SH, Ding P, Fan ZY, Zheng GM. 2002. Selectivity of birds to urban woodlots. *Zoological Research*, **23**(1): 31-38.
- 10 Zheng ZM, Jiang GF. 2002. One new genus and seven new species of Tetrigoidea from southern region of Guangxi. *Zoological Research*, **23**(5): 409-416.
- 11 Chen B, Kang L. 2003. Supercooling point shift of pea leafminer pupae with latitude and its implication for the population dispersion. *Zoological Research*, **24**(3): 168-172.
- 12 Zhou Q, Wang W. 2004. Detecting natural selection at the DNA level. *Zoological Research*, **25**(1): 73-80.
- 13 Wang YQ, Fang SH. 2005. Taxonomic and molecular phylogenetic studies of amphioxus: a review and prospective evaluation. *Zoological Research*, **26**(6): 666-672.
- 14 Zhu XC, Liu HJ, Sun XW, Xue LL, Mao LJ. 2006. Assessment of homozygosity in gynogenetic diploid using microsatellite markers in Japanese Flounder (*Paralichthys olivaceus*). *Zoological Research*, **27**(1): 63-67.
- 15 Zhang Y. 2006. Amphibian skin secretions and bio-adaptive significance-implications from *Bombina maxima* skin secretion proteome. *Zoological Research*, **27**(1): 101-112.
- 16 Zhang ZW, Cao ZM, Yang H, Wang JL, Cao JL, Han YP, Wu TT. 2006. Microsatellites analysis on genetic variation between wild and cultured populations of *Ctenopharyngodon idella*. *Zoological Research*, **27**(2): 189-196.
- 17 Wang J, Zhou QX, Tian M, Yang YX, Xu L. 2011. Tree shrew models: a chronic social defeat model of depression and a one-trial captive conditioning model of learning and memory. *Zoological Research*, **32**(1): 24-30.
- 18 Wang XC, Sun XY, Sun QQ, Zhang DX, Hu J, Yang Q, Hao JS. 2011. Complete mitochondrial genome of the laced fritillary *Argyreus hyperbius* (Lepidoptera: Nymphalidae). *Zoological Research*, **32**(5): 465-475.
- 19 Xu L, Zhang Y, Liang B, LÜ LB, Chen CS, Chen YB, Zhou JM, Yao YG. 2013. Tree shrews under the spot light: emerging model of human diseases. *Zoological Research*, **34**(2): 59-69.
- 20 Irwin DM. 2015. Genomic organization and evolution of ruminant lysozyme *c* genes. *Zoological Research*, **36**(1): 1-17

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