



Complete mitochondrial genome sequence of *Cheirotonus jansonii* (Coleoptera: Scarabaeidae)

L.L. Shao¹, D.Y. Huang^{1,2}, X.Y. Sun³, J.S. Hao^{1,3}, C.H. Cheng¹, W. Zhang¹ and Q. Yang³

¹College of Life Sciences, Anhui Normal University, Wuhu, China

²College of Forestry, Jiangxi Environmental Engineering Vocational College, Ganzhou, China

³Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, Nanjing, China

Corresponding authors: J.S. Hao / Q. Yang

E-mail: jshaonigpas@sina.com / qunyang@nigpas.ac.cn

Genet. Mol. Res. 13 (1): 1047-1058 (2014)

Received January 14, 2013

Accepted July 15, 2013

Published February 20, 2014

DOI <http://dx.doi.org/10.4238/2014.February.20.6>

ABSTRACT. We sequenced the complete mitochondrial genome (mitogenome) of *Cheirotonus jansonii* (Coleoptera: Scarabaeidae), an endangered insect species from Southeast Asia. This long legged scarab is widely collected and reared for sale, although it is rare and protected in the wild. The circular genome is 17,249 bp long and contains a typical gene complement: 13 protein-coding genes, 2 rRNA genes, 22 putative tRNA genes, and a non-coding AT-rich region. Its gene order and arrangement are identical to the common type found in most insect mitogenomes. As with all other sequenced coleopteran species, a 5-bp long TAGTA motif was detected in the intergenic space sequence located between *trnS*(UCN) and *nad1*. The atypical *cox1* start codon is AAC, and the putative initiation codon for the *atp8* gene appears to be GTC, instead of the frequently found ATN. By sequence comparison, the 2590-bp long non-coding AT-rich region is the second longest among the coleopterans, with two tandem repeat regions: one is 10 copies of an 88-bp sequence and the other is 2 copies

of a 153-bp sequence. Additionally, the A+T content (64%) of the 13 protein-coding genes is the lowest among all sequenced coleopteran species. This newly sequenced genome aids in our understanding of the comparative biology of the mitogenomes of coleopteran species and supplies important data for the conservation of this species.

Key words: Mitochondrial genome; Coleoptera; Scarabaeidae;
Cheirotonus jansonii