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## Synopsis of subfamily Haplogleniinae Newman, 1853 in China (Neuroptera: Ascalaphidae)

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### Abstract

A synopsis of the subfamily Haplogleniinae Newman, 1853 (Neuroptera: Ascalaphidae) is presented. One new synonym is proposed. *Protidricerus palliventralis* Yang, 1999 syn.n. is a junior synonym of *Protidricerus elwesii* (McLachlan, 1891). Two genera and eight species are redescribed and illustrated, and keys to the genera and species are presented.

**Key words:** Owlfly, *Idricerus*, *Protidricerus*, new synonym

### Introduction

The subfamily Haplogleniinae Newman, 1853 (Neuroptera: Ascalaphidae) has as its diagnostic character: eyes entire, without a transverse furrow. Nearly 100 species in 27 genera of the subfamily Haplogleniinae have been reported in the world, and are distributed mainly in South Asia, sub-Saharan Africa, Madagascar and the Americas (Tjeder 1992). To date, only a few species of Haplogleniinae have been recorded from northern hemisphere. No species of Haplogleniinae have been found in Australia. So far three genera are reported in Asia: *Protidricerus*, *Idricerus* and *Ptyngidricerus*. Before our study 5 species of *Idricerus* and 5 species of *Protidricerus* were reported in China. We found a synonym relationship among them. As a result, five species of *Idricerus* and four species of *Protidricerus* were recognized in China.

### Material and methods

Terminology of wing venation follows Wang *et al.* (2003), while genitalia terminology follows Tjeder (1977). Photographs of morphological characteristics were taken with a Canon EOS 500D digital camera connected to an Olympus U-CTR30-2 microscope, using UV-C (Application Suite) applied software by United Vision Ltd. Photographs of habitus were taken by a Nikon COOLPIX4500 digital camera. All figures were processed in Adobe Photoshop CS5.

All specimens examined are deposited in the Insect Collections of China Agricultural University (ICCAU), Beijing, China.

### Haplogleniinae Newman, 1853

Haplogleniidae Newman, 1853: 199. **Type genus:** *Haploglenius* Burmeister, 1839.

Olophthalmi Lefèvre, 1842: 6.

Holophthalmi McLachlan, 1871: 230.

Holopthalminaee Weele, 1908: 26.

Holoftalmos Navás, 1912: 205.

Junchao Wang, CAUN200548; 2 ♂, Henan Shan county Ganshan, 600 m, 1. V. 2000, Shen and Ren, CAUN200355, CAUN200356; 1 ♀, Henan Song county Baiyun mountain, 1500 m, 14. VII. 2004, Zhiliang Wang, CAUN200265; 1 ♀, Hubei Shennongjia Wenshui forest farm, 1700–2000 m, 17. VII. 2003, Liang Zhang, CAUN200549; 1 ♀, Hubei Shennongjia Wenshui forest farm, 1700–2000 m, 18. VII. 2003, Suran Wu, CAUN200545; 1 ♀, Sichuan Kangding, 2550 m, V. 1982. unknown, CAUN200350; 1 ♀, Sichuan Wenchuan Wolong, 1920 m, 23. VII. 1987, Yanheng Han, CAUN200349; 1 ♀, Yunnan Weixi Pantiange, 2500 m, 25. VII. 1981, Subo Liao, CAUN200352; 1 ♀, Yunnan Lijiang Yuhu, 2750 m, 23. VII. 1984, Changfang Li, CAUN200351; 1 ♀, Yunnan Zhongdian county Chongjianghe, 1800 m, 6. VIII. 1984, Dajun Liu, CAUN200353; 1 ♀, Gansu Wen county Qiujiaba, 2350 m, 22. VII. 1999, Jie Yao, CAUN200354.

**Distribution.** China: Beijing, Hebei, Henan, Hubei, Sichuan, Yunnan, Gansu; Japan.

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## References

- Adams, P.A. (1958) *Studies in the Neuroptera, with special reference to wing structure and evolution in the Osmyloidea*. Ph.D. dissertation. Harvard University, Cambridge, Massachusetts, USA, 120 pp.
- Lefèuvre, A. (1842) Le genre *Ascalaphus* Fabr. *Guérin-Ménéville*, 4, 1–10.
- McLachlan, R. (1871) An attempt towards a systematic classification of The family Ascalaphidae. *The Journal of the Linnean Society of London, Zoology*, 11, 219–276.  
<http://dx.doi.org/10.1111/j.1096-3642.1871.tb02588.x>
- MacLeod, E.G. (1970) The Neuroptera of the Baltic Amber. I. Ascalaphidae, Nymphidae, and Psychopsidae. *Psyche*, 77 (2), 147–158.  
<http://dx.doi.org/10.1155/1970/45459>
- McLachlan, R. (1871) An attempt towards a systematic classification of The family Ascalaphidae. *The Journal of the Linnean Society of London, Zoology*, 11, 219–276.  
<http://dx.doi.org/10.1111/j.1096-3642.1871.tb02588.x>
- McLachlan, R. (1875) Descriptions de plusieurs Nevroptères-Planipennes et Trichoptères nouveaux de l'île de Célébes et de quelques espèces nouvelles de Dipseudopsis avec considérations sur ce genre. *Tijdschrift voor Entomologie*, 18, 1–21.
- McLachlan, R. (1891) Descriptions of new species of holophtalmous Ascalaphidae. *Transactions of the [Royal] Entomological Society of London*, 39, 509–515.  
<http://dx.doi.org/10.1111/j.1365-2311.1891.tb01660.x>
- McLachlan, R. (1894) On two small collections of Neuroptera from Tachien-lu, in the province of Szechwan, western China, on the frontier of Tibet. *Annals and magazine of natural history*, 13 (6), 424–425.
- Navás, L. (1909) Mis excursiones entomológicas durante el verano de 1909 (2 julio-3 agosto). *Butlletí de la Institució Catalana d'Història Natural*, 7, 52–56.
- Navás, L. (1912) Myrmélénoides (Ins. Névr) Nouveaux ou peu connus. *Annales de la Societe Scientifique de bruxelles*, 36, 203–248.
- Navás, L. (1927) Névroptères de la Chine. *Arkiv for Zoologi*, 19 (A), 1–5.
- Newman, E. (1853) Proposed division of Neuroptera into two classes. *Zoologist*, 11, 181–204.
- Orfila, R.N. (1949) Notas críticas sobre Ascalaphidae (Neurop.). *Anales de la Sociedad Científica Argentina*, 148, 187–194.
- Schroder, C. (1925) Überordnung: Neuropteroidea Handl. oder Planipennia (Banks)(Netzflugler). 825–839. In: Gustav Fischer. Vol 3. *Handbuch der Entomologie*. Jena, 1–839.
- Stange, L.A. (1967) Catalogo de Neuroptera de Argentina y Uruguay. *Acta Zoologica Lilloana*, 22, 5–87.
- Sziráki, G. (1998) An annotated checklist of the Ascalaphidae species known from Asia and from the Pacific Islands. *Folia Entomologica Hungarica*, 59, 57–72.
- Tjeder, B. (1977) Distal abdominal segments and sclerotized parts of genitalia in Ascalaphidae (Neuroptera). *Annales Entomologici Fennici*, 43 (2), 61–65.
- Tjeder, B. (1992) The Ascalaphidae of the Afrotropical Region (Neuroptera). 1. External morphology and bionomics of the family Ascalaphidae, and taxonomy of the subfamily Haplogleniinae including the tribes Proctolyrini n. tribe, Melambrotini n. tribe, Campylophlebini n. tribe, Tmesibasini n. tribe, Allocormodini n. tribe, and Ululomyiini n. tribe of Ascalaphidae. *Entomologica Scandinavica*, Supplement 41, 3–169.
- Tjeder, B. & Waterston, A.R. (1977) *Ptyngidricerus venustus* n.sp. from Oman and Iran (Neuroptera: Ascalaphidae).

- Entomologica Scandinavica*, 8, 87–92.  
<http://dx.doi.org/10.1163/187631277X00152>
- Walker, F. (1860) Characters of undescribed Neuroptera in the collection of W. W. Saunders. *Transactions of the [Royal Entomological Society of London]. (N.S.)* 5 (2), 176–199.
- Wang, X.L. (2003) Study on terminology of wing venation of Myrmeleontidae (Neuroptera: Myrmeleontidae). *Journal of China Agricultural University*, 8 (5), 21–25.
- Wang, X.L. & Yang, J. K. (2002) A new species of Ascalaphidae in Henan Province (Neuroptera: Ascalaphidae). *Acta Zootaxonomica Sinica*, 27 (3), 562–564.
- Weele, H.W. (1908) Ascalaphiden. *Collections Zoologiques du Baron Edm. de Selys Longchamps*, 8, 1–326.
- Yang, J.K. (1992) Neuroptera. In: Peng, J.W. & Liu, Y.Q. (Eds.), *Field Guide to forest insects in Hunan*. Hunan Science and Technology Press, Changsha, pp. 644–651.
- Yang, J.K. (1999) Neuroptera. In: Huang, F.S. (Ed.), *Insects of Fujian Vol. 3*. Fujian Science and Technology Publishing House, Fuzhou, pp. 140–167.