Atrocalopteryx auco spec. nov. from Vietnam, with taxonomic notes on its congeners (Odonata: Calopterygidae)

MATTI HÄMÄLÄINEN
Naturalis Biodiversity Center, P.O. Box 9517, 2300 RA, Leiden, The Netherlands. E-mail: matti.hamalainen@helsinki.fi

Abstract

Atrocalopteryx auco Hämäläinen, spec. nov. (holotype ♂, from Vietnam, Lang Son province, Huu Lien, Tan Lai, alt. 260 m, 9 June 2008, deposited at RMNH, Leiden, The Netherlands) is described and illustrated for both sexes and compared with other species in the genus. The new combination Atrocalopteryx laosica (Fraser, 1933), comb. nov. is made. An annotated list of Atrocalopteryx species and keys to both sexes are presented. Male of A. auco differs from the other two completely opaque-winged species (A. atrata and A. atrocyana) by having yellowish crossveins on the under surface of the wings and by having the underside of abdominal segments 8–10 strikingly yellowish. The female of A. auco can be easily separated from A. atrata and A. atrocyana by the presence of whitish pseudopterostigma in both wings. Problems in the definition of the genus Atrocalopteryx are discussed.

Key words: Odonata, Calopterygidae, Atrocalopteryx, new species, new combination, key, Vietnam

Introduction

The genus Atrocalopteryx Dumont, Vanfleteren, De Jonckheere & Weekers, 2005, with Calopteryx atrata Selys, 1853 as its type species, was established on the basis of a molecular phylogeny of the family Calopterygidae. Dumont & al. (2005) showed that the genus Calopteryx Leach, 1815, as defined at that time, was not a monophyletic group, with C. atrata being recovered together with species of the genus Matrona Selys, 1853 rather than with the other Calopteryx species studied. The same conclusion had been earlier made by Misof & al. (2000).

Calopteryx atrocyana (Fraser, 1935) was transferred to Atrocalopteryx by Wilson & Xu (2007) and this combination was confirmed in molecular studies by Dumont & al. (2007). The latter authors also wrote: “The relationships within Atrocalopteryx are less straightforward, although clearly, ‘Calopteryx’ coomani [(Fraser, 1935)] is seen to belong in Atrocalopteryx or a closely related taxon...”. Later Guan & al. (2012a) concluded that, besides coomani, also Calopteryx melli Ris, 1912, belongs to the genus Atrocalopteryx. The authors also transferred Calopteryx oberthueri McLachlan, 1894, to Atrocalopteryx, but with some reservations (see p. 569). In the present paper Calopteryx laosica Fraser, 1933, is transferred to the genus Atrocalopteryx. Some problems in the definition of the genus are discussed.

In November 2013 Sébastien Delonglée (Hanoi, Vietnam) sent me photos of a calopterygid male specimen that he had collected a few days earlier at Huu Lien in Lang Son province in the northern part of Vietnam and asked me to identify the species. I could see that it was an Atrocalopteryx species, but it did not match any of the known species in this genus. To my surprise, I soon found four specimens, three males and one female, of the same species in my own collection. I had collected them at Huu Lien in June 2008, at a stream only five kilometres away from Sébastien Delonglée’s site, but had misidentified them and they had lain forgotten in my collection. Also some photographs had been taken before the damselflies were collected (Fig. 1). This new species is described here as Atrocalopteryx auco, and its distinguishing characters with the other species of the genus are discussed.
Acknowledgements

I am grateful to Sébastien Delonglée, whose record in Huu Lien lead to the discovery of the existence of this new species. He also kindly donated a paratype male for me to study and provided excellent photographs of that specimen taken when still alive and field photographs of other species in the genus. Best thanks go also to Cuong Do for help in arranging our joint field work at Huu Lien and for a photo to be used in this paper. Rory Dow, Roy Futahashi, Tom Kompier, Shan-lian Mo, Akihiko Sasamoto, Xin Yu and Hao-miao Zhang have kindly provided either specimens, photographs and/or relevant information. Albert Orr kindly reviewed and improved the manuscript text and Sami Karjalainen helped in making the layout of the illustrations.

References


Guan, Z-Y., Han, B-P. & Dumont, H.J. (2012b) Atrocalopteryx melli orohainani ssp. nov. on the island of Hainan, China (Zygoptera: Calopterygidae). Odonatologica, 41, 37–42.


http://dx.doi.org/10.1006/mpev.1999.0724


http://dx.doi.org/10.1080/13887890.2007.9748292