

# *Dendroleon longicruris* (C.-k. Yang, 1986) - a new record for the Vietnamese antlion fauna (Neuroptera: Myrmeleontidae)

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PAPP, Z. & ÁBRAHÁM, L. 2024: *Dendroleon longicruris* (C.-k. Yang, 1986) - a new record for the Vietnamese antlion fauna (Neuroptera: Myrmeleontidae). - *Natura Somogyiensis* 44: 15-20.

**Abstract:** In this study, the authors describe the occurrence of a rare and representative antlion species, namely *Dendroleon longicruris* (C.-k. Yang, 1986), in northern and central Vietnam. This is the first time that this species has been found in the fauna of Vietnam. The most important distinguishing, phenological and distribution features are given.

**Keywords:** faunistic, new record, distribution, Vietnam, Oriental region

## Introduction

Antlions are well known for the pit-building lifestyle of their larvae. Although most species do not even build pits, these hide beneath the dry, loose soil surface or hunt directly on the surface. Perhaps even more peculiar than the predatory lifestyle of the pit-building larvae is the lifestyle of those antlions that hide as predatory larvae in hollows in trees, cracks in tree trunks, and among lichens covering tree trunks in forested areas (GEPP 2010).

The best-known representatives of this group belong to the genus *Dendroleon*. The distribution hotspot of *Dendroleon* species is in South East Asia, but some species are also found in Europe, North America and Australia (STANGE 2004). There are 25 species in the genus worldwide (OSWALD 2024).

As a result of intensive neuropterological research in China in recent years (YANG 1986, WAN et al. 2004, ZHAN et al. 2012, ZHENG et al. 2022, 2023), the number of *Dendroleon* species in the region has increased significantly. The latest *Dendroleon* fauna list (ZHENG et al. 2022) comprises 11 *Dendroleon* species from China.

The contrast in the intensity of research between Indo-Chinese areas (Cambodia, Laos, Myanmar, Thailand, Vietnam, and parts of Malaysia) and south of China is great, both in terms of taxonomic and faunistic examination. So far one species (*Dendroleon pupillaris* (Gerstaecker, 1894)) from Myanmar, two species (*Dendroleon pupillaris* (Gerstaecker, 1894), *Dendroleon vitripennis* (Navás, 1912)) from Malaysia (Banks 1931), and one species (*Dendroleon fukoeki* Ábrahám & X.-l. Wang, 2011) have been documented from Laos.

In the present study, we report a new occurrence of *Dendroleon longicruris* (C.-k. Yang, 1986) in Vietnam.

## Material and methods

During light trapping of different insect orders, strikingly large and decorative ant-lion species are sometimes found from areas covered with subtropical forests in several areas of Vietnam (ÁBRAHÁM et al. 2023). These specimens are also collected by entomologists and forwarded to neuropterologists for identification. So, two specimens of a very decorative and rare *Dendroleon* species were found from Vietnam.

The new habitus photos were taken using Canon EOS 400 digital camera equipped with a flashlight system (Sigma EM140 DM).

The distribution map was made using the SimpleMappr software (SHORHOUSE 2010).

**Abbreviations:** Checklist - Chlist, Distribution - Dist, Monograph - Mon, Original description - Odescr, Synonym - Syn..

## Results and discussion

Two female specimens of *Dendroleon longicruris* (C.-k. Yang, 1986) have been found in Vietnam during insect sampling in recent years. One is from the humid subtropical climate and mountainous dense forests of northern Vietnam and the other from the same habitat in central Vietnam.

**Myrmeleontidae** Latreille, 1802

**Dendroleontinae** Banks, 1899

**Dendroleontini** Banks, 1899

***Dendroleon*** Brauer, 1866

***Dendroleon longicruris*** (C.-k. Yang, 1986)

Type specimen: *Pantheroleon longicruris* (C.-k. Yang, 1986): 424 (Odescr).

Type locality: China: Yunnan (Yongde).

*Dendroleon perlistigma* Wan & Wang, 2004: 505 (Odescr), Wang & Wang 2008: 42 (Syn).

Type locality: China: Guangxi.

*Dendroleon longicruris* (C.-k. Yang, 1986) - Stange, 2004: 84 (Mon), Wang et al. 2018 (Mon), Zhan et al. 2012 (Dist), Yang et al. 2018: 62 (Chlist).

**Material examined:** CHINA: holotype female of *Pantheroleon longicruris* (Fig. 1), Zhengmu, Dedang Town, Yongde County, Yunnan (lamp-induced), 1661 m, 1980.V.26, Fan Yafu, CAU-N101291, Holotype male of *Dendroleon perlistigma*, Baiyan, Longsheng, Guangxi, 1150 m, 1963.VI.22, Wang Chunguang, Chinese Academy of Sciences, CAU-N101290; Paratype female, Hongkan Reservoir, Parrotling, Hainan (lamp-induced), 600 m, 2009. IV.22, Ao Weiguang, CAU-N102033. Deposited in the collection of China Agricultural University, Beijing (CAU)

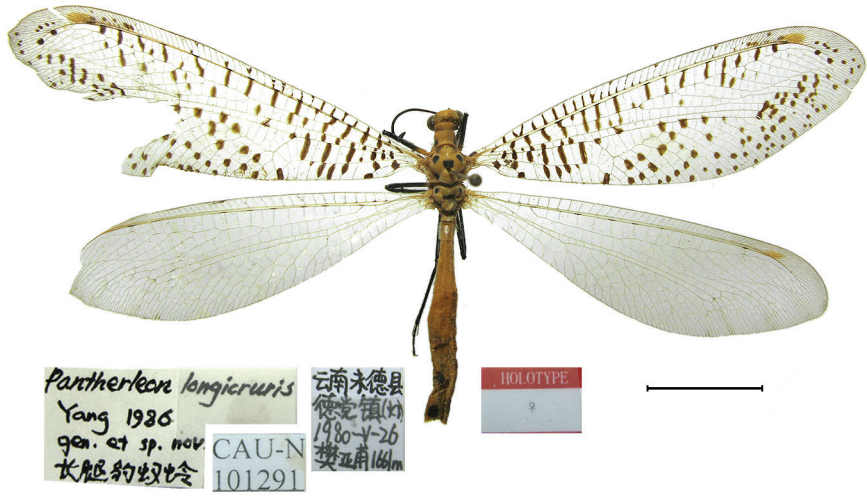


Fig. 1: Holotype female of *Dendroleon longicuris* (C.-k. Yang, 1986)



Fig. 2: New record of *Dendroleon longicuris* A– habitus, (Scale: 10 mm)  
 B– head in frontal view, C– vertex and pronotum in dorsal view

VIETNAM: 1♀, Đắk Lắk prov. Chu Yang Sin NP, 19. May, 2023, at light, leg: Dang Ngoc Van (Fig. 2), 1♀, Yên Bái prov, Yên Bái 11. July, 2023, at light, leg: Dang Ngoc Van. Deposited in the private collection of Z. Papp, Hungary.

Among the known *Dendroleon* species with similar size, colour and wing pattern, two other species described from southern China resemble the species of *D. longicuris* in their morphological features. The closest species are *Dendroleon lii* X. Wan & al., 2004. and *Dendroleon callipterum* X. Wan & al., 2004, but the latest is less morphologically similar and both species are expected to occur in Vietnam. The striking differences among the species are summarised in Table 1.

**Table 1: Comparative matrix for three similar *Dendroleon* species in SE Asia**

<i>Species/features</i>	<i>D. longicuris</i>	<i>D. lii</i>	<i>D. callipterum</i>
Length of forewing	38-43 mm	41-43 mm	38-39 mm
Vertex in dorsal view	without spots	with two lateral spots	with two lateral spots
Pronotum in dorsal view	with two caudo-lateral round spots	without spots	without spots
Forewing shape and marks	with small round and rectangular shape marks	predominantly with rectangular shape marks and few small round spots	with large irregular shape marks distally and small distinct rectangular shape marks basally
Pattern in costal area before pterostigma in forewing	only with some round spots	with rectangular shape marks, at least twice longer than wide	with rectangular shape marks, at least three times longer than wide
Hindwing	without large distinct marks and spots	with large distinct marks and spots	with large indistinct marks and spots

Since an easily recognisable species, mapping its populations is generally recommended for citizen science projects.

Although very little is known about the lifestyle of *Dendroleon* species in Southeast Asia, the lifestyle of the larvae of the newly recorded species is probably the same as that of the species belonging to the genus (ZHAN et al. 2012).

*Distribution:* Southern China: Yunnan, Guangxi, Hainan (ZHAN et al. 2012, WANG et al. 2018). It is a new species for the fauna of Vietnam: Đắk Lắk, Yên Bái. (Fig. 3)

## Acknowledgement

The authors thank Bálint Csernák for taking the excellent photos. The authors express their sincere thanks to Prof. dr. Wang Xinli for providing access to the type collection materials.

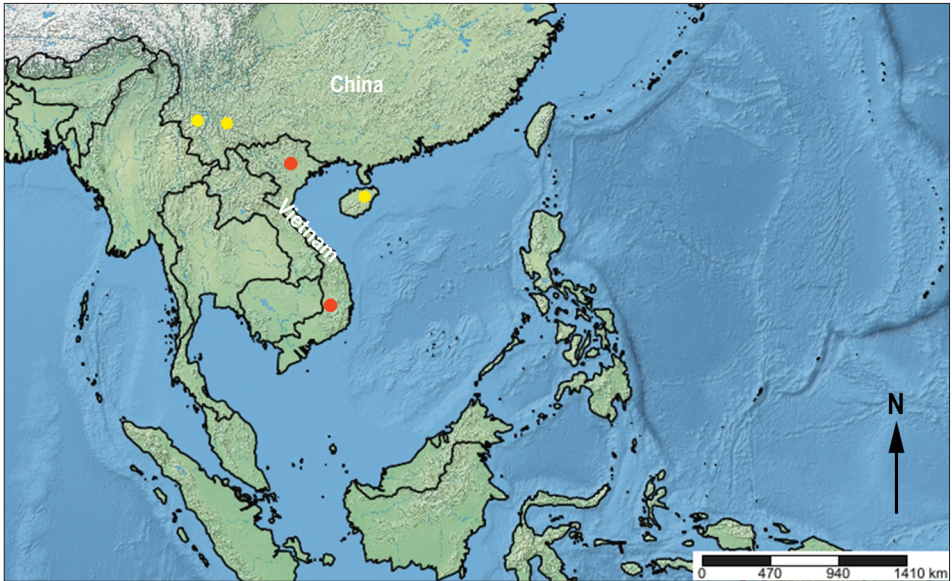


Fig. 3: Distribution of *Dendroleon longicruris* with new records (red dots) in Southern Asia

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