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**TO THE KNOWLEDGE OF BUTTERFLIES (LEPIDOPTERA:
RHOPALOCERA) OF HENAN PROVINCE, CHINA:
NEW RECORDS AND CORRIGENDA**

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Summary. One genus and six species/subspecies are reported as new to the butterfly fauna of Henan Province, China, viz. *Abrota* Moore, 1857, *Ampittia dioscorides etura* (Mabille, 1891), *Polytremis lubricans* (Herrich-Schäffer, 1869), *Potanthus flavus flavus* (Murray, 1875), *Potanthus trachalus phoebe* (Evans, 1934), *Graphium leechi* (Rothschild, 1895) and *Abrota ganga pratti* Leech, 1891. Images of the adults of these taxa are provided. The records of 11 skipper species (Hesperiidae) from Henan in literature are recognized as misidentifications and corrected. Some taxonomic notes are also given.

Key words: butterflies, Hesperidae, Nymphalidae, Papilioidea, distribution, new record, misidentification.

Г. С. Сю. К познанию булавоусых чешуекрылых (Lepidoptera: Rhopalocera) провинции Хэнань, Китай: новые указания и исправления // Дальневосточный энтомолог. 2019. N 374. С. 14-20.

Резюме. Впервые для китайской провинции Хэнань приводятся один род и 7 видов (подвидов): *Abrota* Moore, 1857, *Ampittia dioscorides etura* (Mabille, 1891), *Polytremis lubricans* (Herrich-Schäffer, 1869), *Potanthus flavus flavus* (Murray, 1875), *Potanthus trachalus phoebe* (Evans, 1934), *Graphium leechi* (Rothschild, 1895) и *Abrota ganga pratti* Leech, 1891. Приводятся фотографии бабочек этих видов. Исправлены предыдущие указания для Хэнаня 11 видов семейства Hesperidae, основанные на ошибочном определении. Также приводятся некоторые таксономические замечания по ряду таксонов.

INTRODUCTION

Henan Province is located in central China. The south, southwest and west parts of this province are mountainous, consisted of Dabie Mountains and the extensions of Qinling mountain range. Some researchers considered this area as a transitional zone between the Palaearctic and the Oriental Regions in China (Chen, 2004; Xie *et al.*, 2004). Field surveys have shown a high biodiversity in this region (Shen & Shi, 1998; Shen & Pei, 1999; Shen, 2009), but the investigation of butterflies is still far from complete. In this paper, we report one genus and six species/subspecies as new to the butterfly fauna of Henan, including four skippers (Hesperiidae), one papilio (Papilioidea) and one nymphalid (Nymphalidae).

Prior to this study, a total of 156 genera and 333 species/subspecies of butterflies in Henan have been recorded, including 28 genera and 47 species/subspecies of skippers (Shen *et al.*, 2014). Among these records, there are some misidentified or doubtful species needing to be clarified. In the present paper, we provide a correction of 11 misidentified skipper species in literature. A more extensive review of the butterfly fauna of Henan Province is in preparation.

MATERIAL AND METHODS

Specimens examined in this study are deposited in the Zhengzhou University of Light Industry, Zhengzhou, Henan, China. Images of the butterflies were taken with a Canon PowerShot G12 digital camera. Image post-processing was accomplished with Adobe Photoshop CS 8.0.1. Genitalia were examined with a Motic-700L stereomicroscope after clearing in 10% NaOH solution. Terminology for morphological characters mainly follows Evans (1949).

NEW RECORDS FOR HENAN PROVINCE

Family HesperIIDae

Ampittia discorides etura (Mabille, 1891)

Fig. 1

MATERIAL EXAMINED. **China:** Henan Province, Xin County, Liankangshan National Natural Reserve of Henan, 28.IV 2014, 1♂ (M. Li leg.).

DISTRIBUTION. China (S Henan, Jiangxi, Fujian, Taiwan, Guangdong, Hong Kong, Guangxi, Yunnan), Vietnam, Laos.

NOTES. This subspecies has been known as distributed from South China to Vietnam and Laos. Discovery of this taxon in southern Henan remarkably extends its northern limit.

Polytremis lubricans (Herrich-Schäffer, 1869)

Fig. 2

MATERIAL EXAMINED. **China:** Henan Province, Tongbai County, Shuiliandong, 3.VIII 2011, 1♂ (Y. Qiao & G.X. Xue leg.).

NOTES. This species can be easily recognized by a pair of backward-bent processes on the top of the uncus of the male genitalia. Two subspecies are known (Evans, 1949: 446; Hsu *et al.*, 2006: 333), viz. the nominotypical subspecies and *Polytremis lubricans kuyaniana* (Matsumura, 1919). The former has been recorded from Guangdong, Hainan, Guangxi, Yunnan, SE Tibet, India, Indo-China Peninsula, Malaysia and Indonesia, and the later has been known as distributed in Guizhou, Hunan, Hubei, Anhui, Jiangxi, Zhejiang, Fujian and Taiwan. According to Evans (1949: 446), the two cell spots are usually connected in *P. lubricans lubricans*, but separated in *P. lubricans kuyaniana*. After an examination of about 50 specimens from Tibet, Yunnan, Guizhou, Guangxi, Jiangxi, Fujian, Zhejiang, Anhui and Henan, we found the distance between the cell spots is variable, and there is not a distinct geographic gap between the distributional ranges of these two subspecies, so *P. lubricans kuyaniana* may be merged into *P. lubricans lubricans*. But we are reluctant to draw the conclusion now, since more extensive material need to be examined in further study. Evans (1949: 446) listed Japan in the distribution of *P. lubricans taiwana* (= *P. lubricans kuyaniana*), but this record is possibly based upon a misidentification of *Zinaida pellucida* (Murray, 1875) (Chiba, pers. comm.).



Figs. 1–6. New recorded to Henan Province butterflies. 1 – *Ampittia discorides etura*, ♂; 2 – *Polytremis lubricans*, ♂; 3 – *Potanthus flavus flavus*, ♂; 4 – *P. trachalus phoebe*, ♂; 5 – *Graphium leechi*, ♂; 6 – *Abrota ganga pratti*, ♂. Scale bar = 1 cm.

***Potanthus flavus flavus* (Murray, 1875)**

Fig. 3

MATERIAL EXAMINED. **China:** Henan Province, Tongbai County, Shuiliandong, 3.VIII 2011, 2♂ (Y. Qiao & G.X. Xue leg.); Tongbai County, Huaiyuan Town, 4.VIII 2011, 1♂ (Y. Qiao & G.X. Xue leg.).

DISTRIBUTION. China (Heilongjiang, Jilin, Liaoning, Hebei, S Henan, Shandong, Hubei, Hunan, Zhejiang, Jiangxi, Fujian, Guizhou, Yunnan, W Sichuan), Russian Far East (Primorskii krai), Japan, Korea.

NOTES. The diagnostic character of the male genitalia of *Potanthus flavus* is that the uncus is tapered in dorsal view and constricted before the tip, with the end shallowly excavated between sharply angled lateral shoulders (Huang, 2003: 39, figs 57–58). Two subspecies have been recognized, distributed from Russian Far East, NE China to Korean Peninsula, through the central and southern Chinese mainland to India, Myanmar, Thailand and Malaysia (according to Evans, 1949: 381; Tuzov *et al.*, 1997: 131; Wang, 1999: 289; Huang, 2003: 40).

***Potanthus trachalus phoebe* (Evans, 1934)**

Fig. 4

MATERIAL EXAMINED. **China:** Henan Province, Sishan, Xixia County, 28.VIII 2011, 1♂ (FL: 14.5 mm) (Y. Qiao & G.X. Xue leg.).

DISTRIBUTION. China (Sichuan, S Gansu, SE Shaanxi, SW Henan, Anhui, Hubei, Hunan, Jiangxi, Fujian).

NOTES. A good character for recognizing *Potanthus trachalus* is that the uncus is tapered toward a round point in dorsal view (Eliot, 1992: 591, fig. 400; Huang, 2002: 118, fig. 29). This species is distributed from central and southern China westwards to India, through Myanmar, Thailand, and Malay Peninsula to Indonesia. Five subspecies have been separated (Evans, 1949: 376), three are known to China.

Evans (1949: 376) and Fan (2006: 154) recorded *Potanthus trachalus phoebe* from Yunnan and *P. trachalus trachalus* from Hainan; Chiba (2008: 344) also recorded the nominotypical subspecies in a check list of Hainan skippers. But Huang (2003: 40) considered the population from Yunnan as *P. trachalus tyleri* and that from Hainan as *P. trachalus phoebe*. More specimens from Yunnan and Hainan are needed in further study to clarify the distribution of these three subspecies in China.

Family Papilionidae

***Graphium leechi* (Rothschild, 1895)**

Fig. 5

MATERIAL EXAMINED. **China:** Henan Province, Xin County, Liankangshan National Natural Reserve, 7.VII 2012, 3♂ (G.X. Xue, W.H. Nan & X.L. Jia leg.)

DISTRIBUTION. China (S Henan, NE Yunnan, N Guangxi, Hunan to Fujian and Zhejiang), NE Vietnam.

Family Nymphalidae

***Abrota ganga pratti* Leech, 1891**

Fig. 6

MATERIAL EXAMINED. **China:** Henan Province, Luanchuan, Baimatan, 26.VII 2012, 1♂ (G.X. Xue leg.).

DISTRIBUTION. China (SW Henan, Shaanxi, Sichuan, Guizhou, Hubei, Hunan, Guangdong, Jiangxi, Fujian).

CORRIGENDA TO THE MISIDENTIFIED HESPERIIDAE OF HENAN

Among records of the butterflies from Henan Province, there are some misidentified or doubtful species needing to be clarified. Below we provide a correction of 11 misidentified skipper species.

***Choaspes benjaminii japonica* (Murray, 1875):** Wang, 1998 (fig. 11–10 for the male genitalia, figs 3, 4 in pl. 85 for the adult) = ***Choaspes hemixanthus furcatus* Evans, 1932**

NOTES. The male genitalia in Wang (1998) are the same as those of *Choaspes hemixanthus furcatus*.

***Spialia sertorius* (Hoffmansegg, 1804):** Wang, 1998 (fig. 11–37 for the male genitalia, figs 3, 4 in pl. 88 for adult) = ***Spialia orbifer lugens* (Staudinger, 1866)**

NOTES. Judging from de Jong (1974), the species in Wang (1998) should be *Spialia orbifer lugens*.

***Pyrgus malvae* (Linnaeus, 1785):** Yang, 2009 (fig. 3 for adult) = ***Pyrgus maculatus* (Bremer et Grey, 1853)**

NOTES. The photos of the specimen in Yang (2009) clearly represent *Pyrgus maculatus*.

***Celaenorrhinus maculosus maculosus* (Felder et Felder, 1967):** Wang, 1998 (fig. 11–9 for male genitalia, figs 1, 2 in pl. 85 for adult) = ***Celaenorrhinus* sp.**

NOTES. The male genitalia provided by Wang (1998) are conspicuously different to those of *Celaenorrhinus maculosus maculosus*. The lateral view of the valva somewhat resembles that of *C. oscula* Evans, 1949, but the images of the adult are not identical to that species. Huang *et al.* (2014: 283) included Henan in the distribution of *C. maculosus*, but they did not list any material from Henan in the specimens examined.

***Satarupa gopala gopala* Moore, 1865:** Wang, 1998 (fig. 11–36 for male genitalia, figs 1, 2 in pl. 88 for adult) = ***Satarupa nymphalis nymphalis* (Speyer, 1829)**

NOTES. The male genitalia provided by Wang (1998) are identical to those of *Satarupa nymphalis nymphalis*.

***Carterocephalus argyrostigma* (Eversmann, 1851):** Yang, 2009 (fig. 2 for adult) = ***Carterocephalus urasimataro* Sugiyama, 1992**

NOTES. The photos of the specimen in Yang (2009) are the same as those of *Carterocephalus urasimataro* provided by Sugiyama (1992, figs 33, 34).

***Baoris farri farri* (Moore, 1878):** Wang, 1998 (fig. 11–5 for male genitalia, figs 15, 16 in pl. 84 for adult) = ***Baoris leechii* (Elwes et Edwards, 1897)**

NOTES. Judging from Huang (2011), the specimen illustrated by Wang (1998) should be *Baoris leechii*.

***Pseudoborbo bevani* (Moore, 1878):** Wang, 1998 (figs 21, 22 in pl. 87 for the adult) = ***Thoressa* sp.**

NOTES. The images of the adult in Wang (1998) clearly represent a *Thoressa* species, but a precise identification is impossible without an examination of the male genitalia.

***Polytremis pellucida pellucida* (Murray, 1875):** Wang, 1998 (figs 17, 18 in pl. 87 for adult) = ***Zinaida* sp.**

NOTES. The images provided in Wang (1998) obviously differ to *Zinaida pellucida* but resemble *Z. zina* (Evans, 1932). An examination of the genitalia of the specimen is needed to identify the species.

***Potanthus confucius confucius* (Felder et Felder, 1862)**: Wang, 1998 (fig. 11–33 for male genitalia, figs 19–20 in pl. 87 for adult) = ***Potanthus* sp.**

NOTES. Judging from both the external and genital characters illustrated by Wang (1998), the skipper is not *Potanthus confucius confucius* but very possibly belongs to *P. flavus* (Murray, 1875) or *P. yani* (Huang, 2003). The dorsal view of the uncus is needed to be examined for a precise identification.

***Ochlodes ochracea* (Bremer, 1861)**: Wang, 1998 (fig. 11–124 for male genitalia, figs 11–14 in pl. 86 for adult) = ***Ochlodes linga* Evans, 1939**

NOTES. Characters of both the male genitalia and the wing pattern provided by Wang (1998) are identical to those of *Ochlodes linga*.

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