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Source: Florida Entomologist, 96(4) : 1257-1262

Published By: Florida Entomological Society

URL: <https://doi.org/10.1653/024.096.0403>

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THE GENUS *MATAPA* (LEPIDOPTERA: HESPERIIDAE: HESPERIINAE) FROM CHINA WITH DESCRIPTION OF A NEW SPECIES

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Supplementary material for this article in Florida Entomologist 96(4) (2013) is online at <http://purl.fcla.edu/fcla/entomologist/browse>

ABSTRACT

Our review of the skipper genus *Matapa* Moore (Lepidoptera: HesperIIDae: HesperIInae) in China revealed that there are 6 species in the country. A new species, *M. pseudodruna*, **sp. nov.** from Nanling National Nature Reserve, Guangdong Province, is described and illustrated. *M. druna* (Moore), *M. purpurascens* Elwes & Edwards and *M. cresta* Evans are recorded in the country for the first time. We propose that *Matapa pseudosasivarna* Lee should be a new synonym of *M. sasivarna* (Moore). The key for the separation of the *Matapa* species by de Jong is modified to reflect our result. The type specimens of the new species are deposited in the Insect Collection of the South China Agricultural University, Guangzhou (SCAU).

Key Words: *pseudodruna*, skipper, Oriental region, Guangdong

RESUMEN

Nuestra revisión del género *Matapa* Moore (Lepidoptera: HesperIIDae: HesperIInae) en China reveló que hay 6 especies en el país. Se describe e ilustra una nueva especie, *M. pseudodruna*, **sp. nov.** de la Reserva Nacional de Naturaleza Nanling, en la provincia de Guangdong. Se registran en el país por primera vez *M. druna* (Moore), *M. purpurascens* Elwes y Edwards y *M. cresta* Evans. Proponemos que *Matapa pseudosasivarna* Lee debería ser un nuevo sinónimo de *M. sasivarna* (Moore). Se modifica la clave por de Jong para la separación de las especies del género *Matapa* para reflejar nuestros resultados. Los especímenes tipo de la nueva especie son depositados en la Colección de Insectos de la Universidad Agrícola de China del Sur, Guangzhou (SCAU).

Palabras Clave: *pseudodruna*, hesperíido, región Oriental, Guangdong

The skipper genus *Matapa* (Lepidoptera: HesperIIDae: HesperIInae), described by Moore in 1881 with *Ismene aria* Moore, 1866 as the type species, is a small group of the family HesperIIDae. The members of the genus share the following characters: the eyes are red, wings are dark brown above and below without spots in both sexes, the hindwing cell at vein M_3 is acutely produced, the males of all but *M. deprivata* have a stigma on the upperside of the forewing in spaces Cu_1 and Cu_2 . The genus is comprised of 9 species, which occur mainly in Oriental region (de Jong 1983).

Prior to the present study, 3 species, *M. aria* (Moore, 1866), *M. sasivarna* (Moore, 1866) and *M. pseudosasivarna* Lee, 1962, had been recorded from China, and the distribution was restricted to the south provinces (de Jong, 1983; Bridges, 1994). In his latest revision of the genus, de Jong

(1983) was not able to examine *M. pseudosasivarna* and treated it as a distinct species. In studying skippers from China, we recognized 6 species including a new species, and considered that *M. pseudosasivarna* Lee is a synonym of *M. sasivarna*. Three species, *M. druna* (Moore, 1866), *M. purpurascens* Elwes & Edwards, 1897, and *M. cresta* Evans, 1949, are recorded in China for the first time.

Specimens examined are mainly in the collection of the South China Agricultural University (SCAU), Guangzhou, except the holotype of *M. pseudosasivarna* Lee, which is deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS), Beijing, and *M. druna* from Malaysia, Thailand and Myanmar in the private collection of H. Chiba. For research methods, see Fan et al. (2010). New records are indicated by asterisk (*).

TAXONOMIC ACCOUNT

Matapa aria (Moore, 1866) (Figs. 1-4)

Ismene aria Moore, 1866: 784. (Type locality: Bengal).

Specimens Examined

CHINA: Guangdong: 2♂, Dinghushan, 1992-IV. M. Wang; 1♂, Yingde, 1999-VII, Min Wang; 1♀, Guangzhou, 2004-IX-14, X. L. Fan; Hainan: 1♂, Jianfengling, 2008-IX-16, D. Guo; THAILAND: 1♂, Pattaya, 2003-I-19, M. Wang.

Matapa sasivarna (Moore, 1866) (Figs. 5-8)

Ismene sasivarna Moore, 1866: 784. (Type locality: Bengal).

Metapa [sic] *pseudosasivarna* Lee, 1962: 142. (Type locality: Yunnan) (**syn. nov.**)

[*Matapa cresta*: Gu & Chen, 1998: 326.] mis-identification.

Specimens Examined

CHINA: Hainan: 1♂, 1♀, Yinggeling, 2005-V-18, M. Wang & L. S. Chen; 1♂, Bawangling, 1989-III-23, M. B. Gu (Gu & Chen, 1998); 1♀, Bawangling, 1989-V-20, M. B. Gu; Yunnan: 1♂, Xiaomengyang, 1957-IV-4, L. C. Zang, (*Metapa pseudosasivarna* Lee, 1962: holotype)

Remarks

Metapa pseudosasivarna was described from a single male from Yunnan Province, China (Lee, 1962). Based on the original description, this species differs from *M. sasivarna* in longer and narrower forewings (length 20 mm), linear and shorter male stigma (about 2 mm, extending obliquely from vein 2 to vein 3) and genitalia (the formations of the gnathos and uncus). We examined the holotype of *M. pseudosasivarna* (Figs. 9-11). Although the specimen of the adult and its male genitalia (Fig. 22) are not in good condition, the following characters can be observable: male stigma linear, straight, grey and conspicuous in space CuA₁, and inconspicuous in space CuA₂; hindwing fringes of orange yellow; valva with inner lamella folded and smooth, ventro-distal process irregular rectangular and dorsal part densely endowed with small spines. Obviously, the characters of *pseudosasivarna* are within the range of *sasivarna*.

Matapa druna (Moore, 1866) (Figs. 12-13)

Ismene druna Moore, 1866: 784. (Type locality: Bengal).

Specimens Examined

CHINA*: Guangdong: 1♂, Dadongshan, Lian County, 1992-V-17; Thailand: 2♂, Ranong, 2001-VI; Myanmar: 1♂, Kachin, 1996-IX-10; Malaysia: 1♂, Sabah, 1979-I-26.

Remarks

The species is well described by de Jong (1983), and known from Sikkim to North Vietnam, Borneo and Bali. The specimen illustrated in this paper is from Guangdong, China, and we considered that it is *Matapa druna* (Moore, 1866), and that it differs only slightly from the specimens examined by de Jong, i.e., central process of the tegument not reaching to the tip of the uncus, fold of inner lamella of valve with inconspicuous serration on the dorsal part.

Matapa pseudodruna **sp. nov.** (Figs. 14-17)

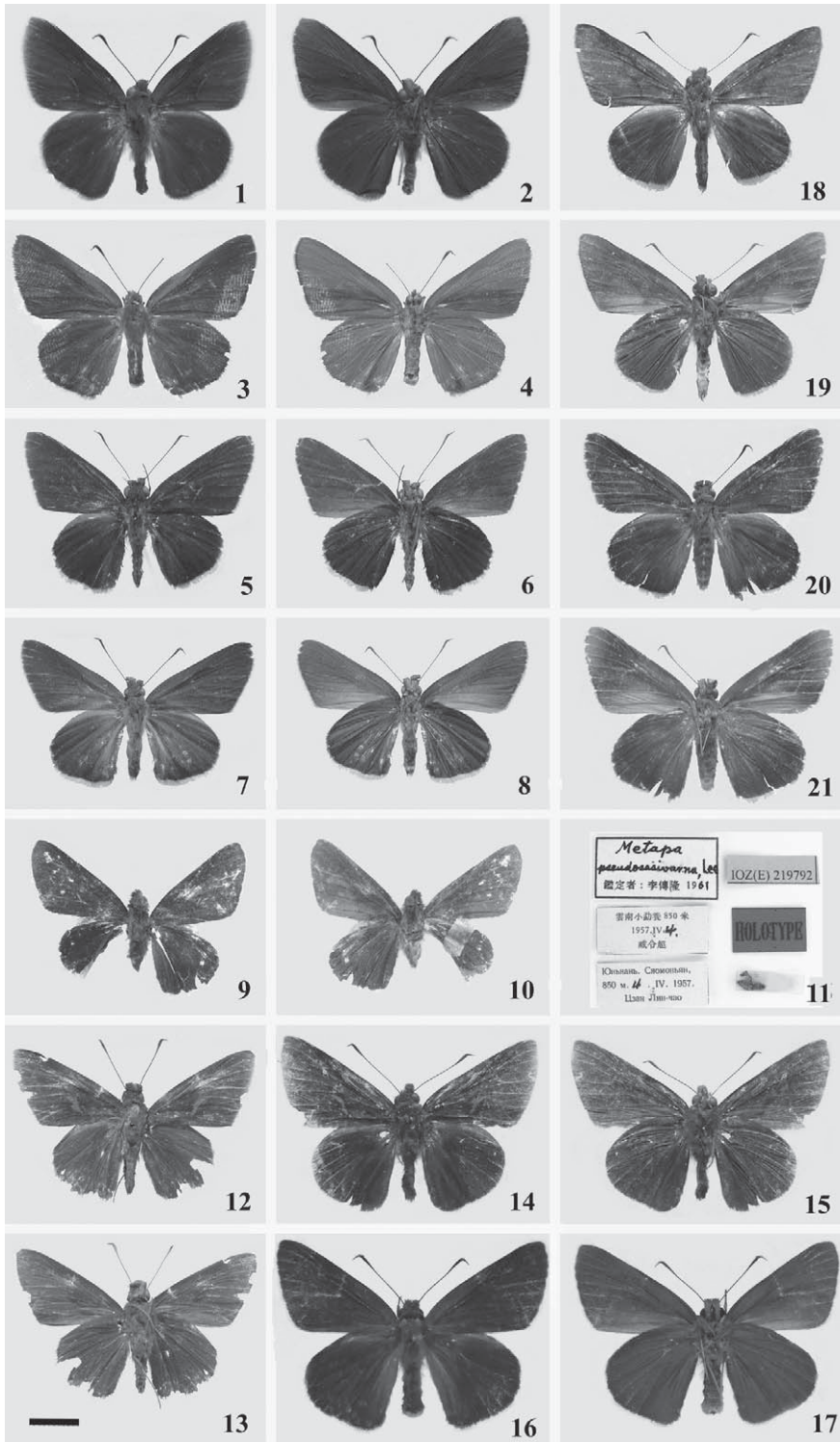
Description

Male. Forewing length 21 mm, antenna length 12 mm. Antennae dark brown with the apiculus pointed and hooked, red brown ventrally. Palpi second segment erect, densely covered with yellow brown scales ventrally; third segment short and small. Wings upperside dark brown; forewing with termen slightly convex; male stigma grey, conspicuous, relatively broad and long, slightly incurved; wings underside ferruginous with grey brown between the vein Cu₂ and dorsum of forewing.

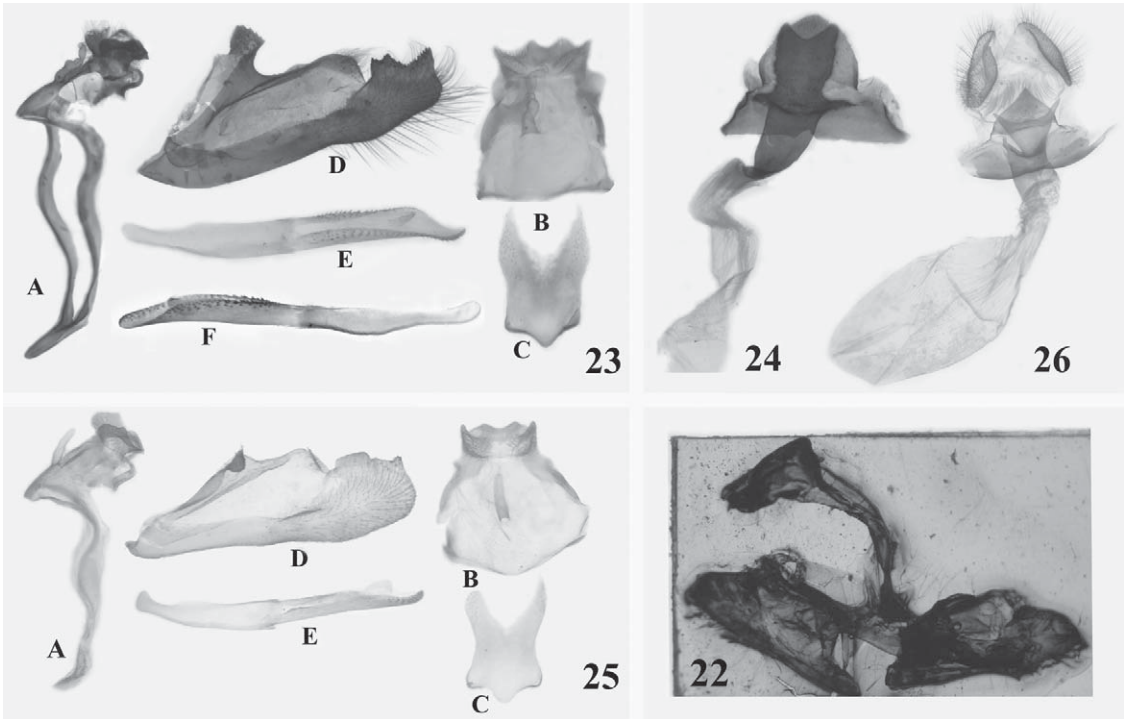
Male Genitalia (Fig. 23). Tegumen with central projection narrow and more or less twisted, reaching to base of uncus; uncus broad, 1.5 times as wide as long, distally uneven, apically slightly indented, laterally with auriform extensions; gnathos elbow-shaped with small spines distally; saccus short and narrow; valva with inner lamella extremely expanded and folded, transtilla foliated, strongly sclerotized with spines, ventro-distal process with flattened top, wavy and serrate dorsally; aedeagus with suprazonal sheath equal to subzonal sheath, suprazonal sheath with lateral small spines on both sides; juxta more or less nose-like, upper margin V-shaped.

Female. Forewing length 23 mm, antenna length 12 mm. Similar to male, but forewing upperside ferruginous from veins C to Sc, end of abdomen thick with densely packed hair-like scales.

Female Genitalia (Fig. 24). Anterior lamella rectangular, upper margin shallowly V-shaped; posterior lamella irregular quadrangular, upper margin arched; ductus bursa short, sclerotized; bursa copulatrix membranous.



Figs. 1-21. Adults of genus *Matapa* species: 1-4. *M. aria* (Guangdong), male (1-2), female (3-4); 5-8. *M. sasivarna* (Hainan), male (5-6), female (7-8); 9-11. *M. pseudosasivarna* (male, Holotype); 12-13. *M. druna*, male (Guangdong); 14-17. *M. pseudodruna* **sp. nov.** (Guangdong), male, Holotype (14-15), female, Paratype (16-17); 18-19. *M. purpurascens*, male (Yunnan); 20-21. *M. cresta*, female (Hainan). 1-10, Odd number, upperside; even number, underside; 12-21, reverse; scale bar, 10 mm.



Figs. 22-26: Genitalia of genus *Matapa* species: 22. *M. pseudosasivarna*, male genitalia; 23-24. *M. pseudodruna* sp. nov., 23. Male genitalia (A. ring, lateral view; B. tegumen, dorsal view; C. juxta; D. valva, inner view; E-F. aedeagus); 24. Female genitalia; 25. *M. druna*, male genitalia; 26. *M. aria*, female genitalia.

Specimens Examined

HOLOTYPE ♂, China: Guangdong, Nanling National Nature Reserve, Ruyuan, 2012-VII-3, M. Wang. Paratypes: 1♂, Nanling National Nature Reserve, Ruyuan, Guangdong, 2012-VII-16, M. B. Gu; 1♀, Nanling National Nature Reserve, Ruyuan, Guangdong, 2012-VI-6, M. Wang; 1♂, Wuzhishan town, Ruyuan, Guangdong, 2011-IV-28, H. M. Xu. All the type specimens are deposited in SCAU.

Distribution

China (Guangdong)

Etymology

The scientific name, *pseudodruna* is derived from *druna*, because the new species strikingly resembles *M. druna* (Moore, 1866) in appearance.

Remarks

Externally the male of the new species is similar to that of *Matapa druna* (Moore, 1866), but

can be separated from the latter by the following differences: antennae dark brown above and below (below yellow brown in *druna*); forewing termen slightly convex (straight in *druna*); male genitalia with dorsal process on tegumen twist [straight in *druna* (Fig. 25)], transtilla developed, armed with spines (spines only on edge in *druna*), suprazonal sheath of aedeagus with lateral small spines prominent on both sides (only on the right side in *druna*). Female is even more similar to *M. aria* and *M. druna*, but can be distinguished by the following characters: anterior lamella upper margin shallowly V-shaped [deeply U-shaped in *druna* (refers to de Jong 1983, Fig. 42), centrally concave shallowly and straight in *aria* (Fig. 26)]; posterior lamella with upper margin arched (almost straight in *druna*, reverse V-shaped in *aria*). However, externally as well as in the genitalia, the new species belongs to the *aria* group of the genus. Their distributions are sympatric, and both the new species and true *druna* occur in the same province, and the distance from Nanling, Ruyuan county (the type locality of the new species) to Dadongshan, Lian county (where *durna* was collected) is about 45 km (Fig. 27).

Matapa purpurascens Elwes & Edwards, 1897 (Figs. 18-19)

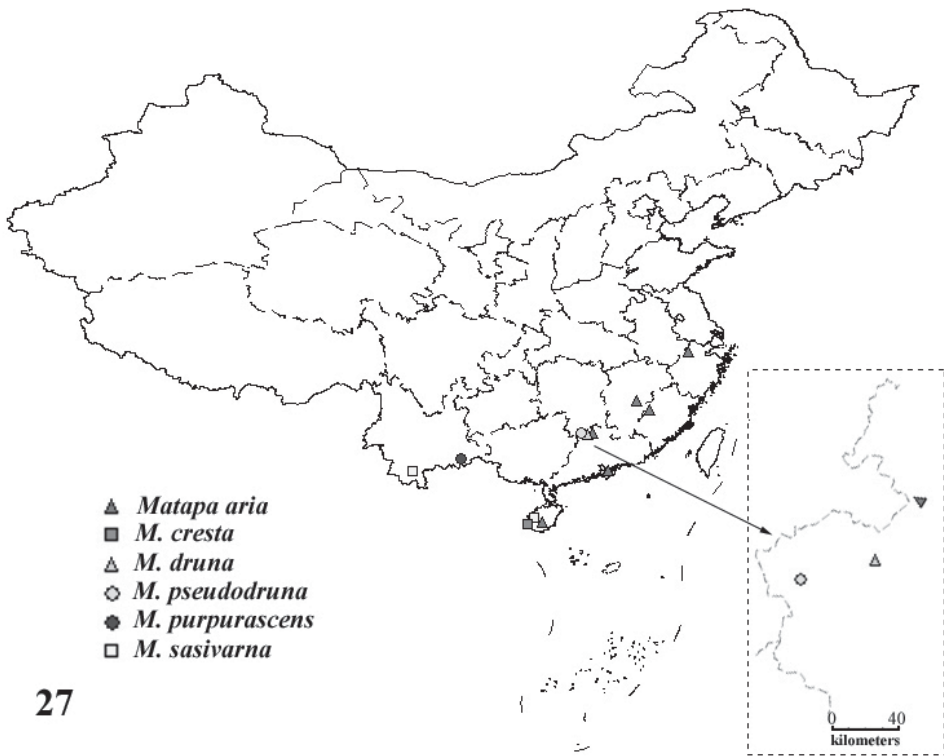


Fig. 27. Distribution map of the genus *Matapa* species in China. INFOLINK

Matapa purpurascens Elwes & Edwards, 1897: *Matapa cresta* Evans, 1949: 331 (Type locality: Sikkim) 209. (Type locality: Khasi Hills).

Specimen Examined

CHINA*: Yunnan: 1♀, Malipo County, V-2008.
Matapa cresta Evans, 1949 (Figs. 20-21)

Specimen Examined

CHINA*: Hainan: 1♀, Jianfengling, 2008-IX-15.

In order to assign the new species *M. pseudodruna* **sp. nov.**, the key given by de Jong (1983) is modified (change 6 to 8 and 5 to 7) as follows:

- 3. Male without stigma. Upper side with strong purple gloss. *deprivata*
- Male with stigma 4
- 4. Male stigma grey, conspicuous. 5
- Male stigma black, inconspicuous. 7
- 5. Thorax and wing bases with bluish green metallic sheen, hindwing underside fuliginous with black veins; female without densely packed hairlike scales *sasivarna*
- Hindwing underside ferruginous without black veins; female with densely packed hairlike scales 6
- 6. Forewing with termen straight, stigma relatively broad. Male genitalia tegumen with narrow and straight central projection *druna*
- Forewing with termen slightly convex, stigma slightly narrower than *druna*. Male genitalia tegumen with narrow and twisted central projection *pseudodruna* **sp. nov.**

ACKNOWLEDGMENTS

We wish to express our appreciation to Dr. Liu-Sheng Chen (Shihezi University, Xinjiang, China), Mr. Dong Guo (SCAU), Mr. Hai-Ming Xu (SCAU) and Mao-Bin Gu (Research Institute of Tropical Forestry, Chinese Academy of Forestry) for collecting the specimens. Many thanks to Prof. Da-Yong Xue (Institute of Zoology, Chinese Academy Sciences, Beijing, China) for the permission to examine the holotype of *M. pseudosasivarna*. This research was financially supported by the Natural Science Foundation of China (no.31172136).

REFERENCES CITED

- BRIDGES, C. A. 1994. Catalogue of the family-group, genus-group and species-group names of the Hesperioidea (Lepidoptera) of the World. Part IX: 75. Charles A. Bridges. Urbana, Illinois, U. S. A.
- CHOU, I. [ED.]. 1994. Monographia Rhopalocerorum Sinensium. Henan Scientific and Technological Publishing House. Zhengzhou, China. 854 pp.
- DE JONG, R. 1983. Revision of the oriental genus *Matapa* Moore (Lepidoptera, Hesperidae) with discussion of its phylogeny and geographic history. Zool. Mededelingen Leiden 57: 243-270.
- ELWES, H. J., AND EDWARDS, J. 1897. A revision of the Oriental Hesperidae. Trans. Zool. Soc. Lond. 14(4): 101-324.
- EVANS, W. H. 1949. A catalogue of the Hesperidae from Europe, Asia & Australia in the British Museum (Natural History). The British Museum. London, England, United Kingdom. 502 pp.
- FAN, X. L., CHIBA, H., AND WANG, M. 2010. The genus *Scobura* Elwes & Edwards, 1897 from China, with descriptions of 2 new species (Lepidoptera: Hesperidae). Zootaxa 2490: 1015.
- GU, M. B., AND CHEN, P. Z. 1998. Butterflies of Hainan Island. China Forestry Publishing House. Beijing, China. 355 pp.
- LEE, C. L. 1962. Some new species of Rhopalocera from China. II. Acta. Entomol. Sinica 11(2): 139-158.
- MOORE, F. 1866. On the Lepidopterous Insects of Bengal. Proc. Zool. Soc. Lond. 1865: 755-823.
- MOORE, F. 1881. The Lepidoptera of Ceylon. London. 190 pp.