

Notes on the genus *Thoressa* SWINHOE, [1913] from China, with the description of a new species (Lepidoptera, Hesperidae)

by

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Abstract: A checklist of species and subspecies of the genus *Thoressa* SWINHOE, [1913] is given. The type specimens of *Thoressa zinnia* (EVANS, 1939) and *Thoressa pedla* (EVANS, 1955) are illustrated for the first time. *Thoressa hishikawai* YOSHINO, 2003 is considered as a new junior synonym of *Thoressa pedla* (EVANS, 1955). *Halpe fusca senna* EVANS, 1937 is considered as a new junior synonym of *Thoressa fusca caenis* (LEECH, 1893). *Thoressa masuriensis cuneomaculata* MURAYAMA, 1995 is considered as a new junior synonym of *Thoressa masuriensis tali* (SWINHOE, 1912). *Pedesta naumanni* HUANG, 1998 is considered as a new junior synonym of *Thoressa hyrie* (DE NICEVILLE, 1891). The type specimen of *Halpe lucasi merea* EVANS, 1932 is illustrated for the first time and proved to belong in *Thoressa hyrie* (DE NICEVILLE, 1891). Finally, a new species, *Thoressa yingqii spec. nov.*, from Shaanxi Province of Central China is described.

Introduction: The author has finished a taxonomic review of the tribe Aeromachini TUTT, 1906 (sensu WARREN & al. 2008) from China, and presents the taxonomic changes within the genus *Thoressa* SWINHOE, [1913] in this paper. More results of the review will be published separately.

Abbreviations:

BMNH: Natural History Museum, London.

BSNU: Biological laboratory of Shanghai Normal University, Shanghai, China.

CCAM: Collection of An-Ming Chen, Wuhan, China.

CCZB: Collection of Zhi-Bing Chen, Shanghai, China.

CHH: Collection of Hao Huang, Qingdao, China.

EMNW: Entomological Museum, Northwest Sci-Tech University of Agriculture and Forestry, Yangling, Shaanxi, China.

IZAS: Institute of Zoology, Chinese Academy of Science, Beijing, China.

LBMJ: Lake Biwa Museum, Japan.

QVTC: Qingdao Vocational and Technical College, Qingdao, China.

TL: Type locality.

ZMHB: Museum für Naturkunde, Humboldt Universität, Berlin.

Synonymic checklist of species and subspecies of *Thoressa* SWINHOE, [1913]

1. *Thoressa aina* (DE NICEVILLE, 1889) (original generic name: *Halpe*) (TL: Sikkim) - Sikkim, Northwest India (Garhwal).
2. *Thoressa astigmata* (SWINHOE, 1890) (*Parnara*) (TL: Nilgiris, South India) - South India.
3. *Thoressa baileyi* (SOUTH, 1914) (*Halpe*) (TL: Mengong, Yunnan) - Southwest China (North Yunnan, West Sichuan).
= *Pedesta baileyi nanka* EVANS, 1949 (synonymised by HUANG & ZHAN, 2004) (TL: Wushi, Sichuan).
= *Thoressa dianchiana* MURAYAMA, 1995 (synonymised by HUANG & ZHAN, 2004) (TL: Tuguancun, North Yunnan).
4. *Thoressa bivitta* (OBERTHÜR, 1886) (*Pamphila*) (TL: Tatsienlou, Sichuan) - China (West Sichuan, North Yunnan).
= *Pamphila albivitta* (OBERTHÜR, 1886) (incorrect subsequent spelling).
5. *Thoressa blanchardii blanchardii* (MABILLE, 1876) (*Hesperilla*) (TL: Mupin, Sichuan) - China (West Sichuan).
Thoressa blanchardii shensia (EVANS, 1949) (*Pedesta*) (TL: Tapai Shan, Shaanxi) - China (Shaanxi, Northeast Sichuan).
= *Thoressa abprojecta* WANG & YUAN, 2003 (synonymised by HUANG & ZHAN, 2004) (TL: Qinling, Shaanxi).
6. *Thoressa cerata* (HEWITSON, 1876) (*Hesperia*) (TL: Sikkim) - Sikkim, Northeast India (Assam), Myanmar, Thailand, Laos, Vietnam.
7. *Thoressa decorata* (MOORE, [1881]) (*Halpe*) (TL: Ceylon) - Sri Lanka.
8. *Thoressa evershedii* (EVANS, 1910) (*Halpe*) (TL: Palni Hills, South India) - South India (Nilgiris, Animalai Hills, Palni Hills, Travancore).
= *Thoressa cochina* (EVANS, 1932) (*Halpe*) (synonymised by EVANS, 1949) (TL: Animalai Hills, South India).
9. *Thoressa fusca fusca* (ELWES, [1893]) (*Halpe*) (TL: Bernardmyo, Burma) - N Myanmar, SW China (Dulong valley of Yunnan, SE Tibet), Laos, Vietnam.
Thoressa fusca caenis (LEECH, 1893) (*Halpe*) (TL: Chiakouho, Sichuan) - West China (Yunnan except Dulong valley, Sichuan).
= *Thoressa fusca senna* (EVANS, 1937) (*Halpe*) (TL: Siaolou, Sichuan) **syn. nov.**
= *Thoressa breviprojecta* YUAN & WANG, 2003 (synonymised by HUANG & ZHAN, 2004) (TL: Lushan, Sichuan).
Thoressa fusca debilis (ELWES & EDWARDS, 1897) (*Halpe*) (TL: Khasia Hills, NE India) - NE India.
Thoressa fusca strona EVANS, 1949 (TL: Kuatun, Fujian) - Southeast China (Fujian, Guangdong).
10. *Thoressa gupta gupta* (DE NICEVILLE, 1886) (*Halpe*) (TL: Sikkim) - Sikkim, N.W. India (Garhwal), China (Dulong valley of Yunnan).
Thoressa gupta leechii (EVANS, 1932) (*Halpe*) (TL: Wassukow, Sichuan) - China (Sichuan, Guangdong).
Thoressa gupta nujiangensis HUANG, 2003 (TL: Nujiang, Yunnan) - China (Nujiang valley and Gaoligongshan Mts. of Yunnan).
Thoressa gupta ssp. (TL: Qinling, Shaanxi) - China (South Shaanxi, Northeast Sichuan).
11. *Thoressa honorie* (DE NICEVILLE, 1887) (*Halpe*) (TL: Palni Hills) - South India.
12. *Thoressa hyrie* (DE NICEVILLE, 1891) (*Halpe*) (TL: Naga Hills, Northeast India) - Northeast India, Southeast Tibet, Bhutan, Thailand, North Myanmar, Laos, Vietnam.
= *Halpe lucasi merea* EVANS, 1932 (synonymised by EVANS, 1949) (TL: Pemako, Mere, Southeast Tibet, now Metok).
= *Pedesta naumanni* Huang, 1998 (TL: Metok, Southeast Tibet) **syn. nov.**
13. *Thoressa justini justini* INOUE, 1970 (TL: North Luzon) - Philippines (North Luzon).
= *Halpe nuydai* MURAYAMA & OKAMURA 1973 (synonymised by KAWAZOE, 1973) (TL: Luzon).

- Thoressa justini raphaeli* NUYDA & KITAMURA, 1994 (TL: Leyte) - Philippines (Leyte).
14. *Thoressa kuata* (EVANS, 1940) (*Halpe*) (TL: Kuantun, Fujian) - Southeast China (Fujian, Zhejiang).
15. *Thoressa latris* (LEECH, 1893) (*Halpe*) (TL: Tatsienlou, Sichuan) - Southwest China (Sichuan, Yunnan).
16. *Thoressa luanchuanensis* (WANG & NIU, 2002) (*Ampittia*) (TL: Luanchuan, Henan) - Central China (Henan, Hubei).
= *Thoressa nakai* YOSHINO, 2003 (synonymised by HUANG & ZHAN, 2004) (TL: Shennongjia, Hubei).
17. *Thoressa masoni* (MOORE, [1879]) (*Pamphila*) (TL: Upper Tenasserim, Burma) - Myanmar, Thailand, NE India (Manipur), Vietnam, Laos.
18. *Thoressa masuriensis masuriensis* (MOORE, 1878) (*Isoteinon*) (TL: Mussoorie, Northwest India) - Northwest India (Kulu-Kumaon), Northeast India (Assam), Sikkim, Laos.
Thoressa masuriensis tali (SWINHOE, 1912) (*Pedestes*) (TL: Haut Yunnan) - West China (North Yunnan, West Sichuan).
= *Thoressa masuriensis cuneomaculata* MURAYAMA, 1995. (TL: Yunnan) **syn. nov.**
19. *Thoressa monastyrskii monastyrskii* DEVYATKIN, 1996 (TL: North Vietnam) - North & Central Vietnam.
Thoressa monastyrskii annamita DEVYATKIN & MONASTYRSKII, 1999 (TL: Central Vietnam) - Central Vietnam.
20. *Thoressa panda* (EVANS, 1937) (*Pedesta*) (TL: Naga Hills, Northeast India) - Northeast India (Naga Hills, Manipur).
21. *Thoressa pandita* (DE NICEVILLE, 1885) (*Isoteinon*) (TL: Sikkim) - Sikkim, Northeast India (Naga Hills), North Myanmar, North Vietnam, Southwest China (Yunnan, Southeast Tibet).
= *Thoressa nanshaona* MURAYAMA, 1995 (TL: Tengchong, Yunnan) **syn. nov.**
22. *Thoressa pedla* (EVANS, 1955) (*Pedestes*) (TL: Yunnan) - China (Yunnan).
= *Pedesta hishikawai* YOSHINO, 2003 (TL: Zhongdian, Northwest Yunnan) **syn. nov.**
23. *Thoressa serena* (EVANS, 1937) (*Halpe*) (TL: Tatsienlou, Sichuan) - China (Sichuan, Yunnan), Northeast Myanmar, Vietnam.
24. *Thoressa similissima* DEVYATKIN, 2002 (TL: North Vietnam) - North & Central Vietnam.
25. *Thoressa sitala* (DE NICEVILLE, 1885) (*Halpe*) (TL: Nilgiris, South India) - South India.
26. *Thoressa submacula* (LEECH, 1890) (*Halpe*) (TL: Changyang, Hubei, Central China) - China (Hubei, Zhejiang, Fujian, Anhui, Guangdong), North Vietnam.
= *Thoressa submacula rubella* DEVYATKIN, 1996 (possible synonym) (TL: North Vietnam).
27. *Thoressa thandaunga* (EVANS, 1926) (*Halpe*) (TL: Karen Hills, Buma) - Myanmar (Karen Hills, Htawgaw).
28. *Thoressa varia varia* (MURRAY, 1875) (*Pamphila*) (TL: Japan) - Japan.
= *Halpe melancholica* BRYK, 1942 (synonymised by EVANS, 1949) (TL: Tomari, Kurile Islands).
= *Halpe varia obscura* NAKAHARA, 1951 (synonym?) (TL: Shimashima, Shinano Province, Japan).
Thoressa varia horishana (MATSUMURA, 1910) (*Halpe*) (TL: Formosa) - Taiwan.
= *Halpe aokii* MATSUMURA, 1934 (synonymised by EVANS, 1949) (TL: Formosa).
= *Halpe ara* FRUHSTORFER, 1911 (synonymised by EVANS, 1949) (TL: Formosa).
= *Halpe formosa* SEITZ, 1926 (nom. nud.) (TL: not mentioned).
29. *Thoressa viridis* (HUANG, 2003) (*Pedesta*) (TL: Upper Nujiang Valley, Northwest Yunnan) - China (Northwest Yunnan: Upper Nujiang, Upper Lancang valley).
30. *Thoressa xiaoqingae* HUANG & ZHAN, 2004 (TL: Guangdong) - Guangdong, Hainan.
31. *Thoressa yingqii spec. nov.* (TL: Houzhenzi, Qinling, Shaanxi) - Central China (Shaanxi).
32. *Thoressa zinnia* (EVANS, 1939) (*Halpe*) (TL: Likang, Yunnan) - North Yunnan (Lijiang area).

***Thoressa yingqii spec. nov.* (fig. 1)**

Holotype (= HT) ♂ (BSNU): China, Shaanxi Province, Zhouzhi County, Houzhenzi Township, south slope of Mt. Taibai-shan, 1300 m, V.2007, local collector.

Description: Length of forewing 15mm. Antenna with 13 orange nudum antennomeres at apex, 10 in apiculus and 3 before apiculus. Antennal club without pale patch before apiculus. Apiculus of antenna slender. Male brand only appeared on upperside of forewing, continued from dorsum to base of space 2, closer to wing-base than to termen at vein 2A, associated with yellow and gray scales. Ciliae mostly destroyed. Upperside. Forewing. Vein 2A a little distorted upwards at ♂ brand, but no so strong as in *Th. baileyi* (SOUTH). Vein Cu2 distorted upwards at base, but not so strong as in *Th. blanchardii* (MAB.). Ground color brown and sparsely clad with yellow scales. Discal spots in spaces 2 and 3 very small and separated widely, both smaller than subapical spots. All spots pure white in color. Cell spots paired but separated. Hindwing brown and clad with yellow scales, unmarked. Underside. Forewing paler than on upperside, with all pale spots repeated. Hindwing densely clad with yellow scales, without any clear markings (probably due to the worn-out condition of the specimen).

♂ **genitalia:** Uncus bifid, with two branches widely separated and finger-shaped at tip. Tegumen expanding a little laterally but without lateral processes. Gnathos paired and not expanding laterally. Left footstalk of valva very short but right footstalk of valva very long, nearly four times as long as left one, oblong and serrate at posterior margin. Left valva similar to right valva in shape but not the same, both with two branches, an upper one and a distal one, like in *Th. blanchardii* (MAB.). Juxta like in *Th. latris* (LEECH) and *Th. xiaoqingae* HUANG & ZHAN. Aedeagus like in *Th. latris* (LEECH) and *Th. xiaoqingae* HUANG & ZHAN, but a little longer. Coecum penis expanding laterally. Cornuti absent.

Diagnosis: This new species can be distinguished from all the known species by the following combination of characters: 1) forewing discal spots smaller than subapical spots; 2) left footstalk of ♂ valva very short but the right footstalk of ♂ valva nearly four times as long as the left one.

This new species is in common with *Th. latris* (LEECH) and *Th. xiaoqingae* HUANG & ZHAN in the structures of tegumen, uncus, gnathos, juxta and aedeagus, but differs markedly from both of them in shape of valva and harpe. This new species is sympatric with *Th. blanchardii shensia* (EVANS), but differs from the latter not only in wing-markings and ♂ genitalia, but also in venation and antenna; the vein 2A of forewing is distorted upwards in *Th. yingqii spec. nov.* but is rather straight in *Th. blanchardii* (MAB.), the base of the vein Cu2 of forewing is much more distorted upwards in *Th. blanchardii* (MAB.) than in *Th. yingqii spec. nov.*, the apiculus of antenna is markedly longer in *Th. yingqii spec. nov.* than in *Th. blanchardii* (MAB.).

Distribution: Shaanxi (south slope of Mt. Taibaishan).

Taxonomic notes

Thoressa fusca caenis (LEECH, 1893)

Halpe caenis LEECH, 1894: 625, plate 42: 16, type ♂, Chiakouho (Jinkouhe), Sichuan (BMNH); ELWES & EDWARDS (1897: 262); MABILLE (1909: 350, plate 89g ♂).

Halpe fusca senna EVANS, 1937: Siaoou (near Baoxing area, Sichuan) (BMNH) **syn. nov.**

Thoressa fusca caenis, EVANS (1949: 256, Chiakouho); HUANG & ZHAN (2004: 182).

Thoressa fusca senna, EVANS [1949: 256, plate 5: G11-16 ♂, Tatsienlou area (Kangding)].

Thoressa breviprojecta Yuan & Wang, 2003: 64, 65, figs. 2A for ♂, figs. 2B, 2C, 2D, 2E for ♂ genitalia, HT ♂, Lushan, Sichuan (EMNW). Synonymised by HUANG & ZHAN (2004).

Specimens examined: China, Sichuan Province: 15 ♂♂ (CCZB), Baoxing County, Ziyun Village, V.2008, local collector leg..

Length of forewing: 15-16mm (♂).

Remarks: Both *Halpe caenis* LEECH and *Halpe fusca senna* EVANS were described from western Sichuan and their type localities are very close. EVANS (1949) treated them as two different subspecies of a single species and stated that the only difference is the presence or absence of the cell spots on upperside of forewing. EVANS only examined very few specimens from Sichuan and knew little about the Chinese geography. The authors examined 15 specimens from the type locality of *H. fusca senna* EVANS and found that the cell spots can be present or absent. The type locality of *H. caenis* LEECH, the Jinkouhe area is just to the southeast of the Baoxing area and there is no difference in butterfly fauna between the two adjacent areas. Thus *Halpe fusca senna* EVANS, 1937 **syn. nov.** is considered as a new junior synonym of *Halpe caenis* LEECH, 1893 in this paper. Moreover, the presence or absence of cell spots is also individually variable among the population of *Thoressa fusca fusca* (ELWES) from southeastern Tibet.

Distribution: Sichuan (Baoxing, Kangding, Emeishan), Yunnan (Dali, Nujiang).

Thoressa hyrie (DE NICEVILLE, 1891)

Halpe hyrie DE NICEVILLE, 1891: 388, plate G: 34, type ♂, Naga Hills (NE India) (Depository unknown, probably Indian Museum, Chowringhee, Calcutta?); ELWES & EDWARDS (1897: 258).

Halpe lucasi (sic) *merea* EVANS, 1932: HT ♂, Pemako, Mere, S.E. Thibet (now Metok, Southeast Tibet) (BMNH). Synonymised by EVANS (1949).

Thoressa hyrie, EVANS [1949: 253, plate 32: G11-4 ♂ genitalia. Bhutan, Manipur and Naga Hills (NE India), Sadon of N. Burma (Myanmar), N. Shan State (Myanmar), S.E. Thibet]; KIMURA (1997: 47, plate 1: 3, 4 ♂, Thailand); OSADA & al. (1999: plate 137 ♂ from Xiang Khouang, Laos); MONASTYRSKII & DEVYATKIN (2003: 46, North and Central Vietnam).

Pedesta naumanni HUANG, 1998: 211, fig. 1a for ♂ genitalia, colour plate 1: 1a, 1b, 2a, 2b ♂, HT ♂, Arniqiao, Metok, Southeast Tibet (QVTC) **syn. nov.**

Specimens examined: China, Tibet: 1 ♂ (BMNH, HT of *Halpe lucasi merea* EVANS, photos examined), Pemako, Mere (now Motuo County, Miri Village), 7.VI.1913, BAILEY & MORSHEAD leg.; 2 ♂♂ (CHH, HT and paratype (= PT) of *Pedesta naumanni* HUANG), Motuo County, Arniqiao, 23.VII.1996, H. HUANG leg.. Southern China: 2 ♂♂ (CCZB), no label.

Length of forewing: 16 mm (♂).

Remarks: 1) *Halpe lucasi* (sic) *merea* was treated by EVANS (1949) as a synonym of *Halpe hyrie*, but the type material of *Halpe lucasi* (sic) *merea* has never been illustrated. Because there is a *Sovia* species close to *Sovia lucasii* found at the type locality of *Halpe lucasi* (sic) *merea*, it is necessary to examine the HT of *Halpe lucasi* (sic) *merea*. The author examined the photos of the HT of *Halpe lucasi* (sic) *merea* and confirmed EVANS' (1949) conclusion that *Halpe lucasi* (sic) *merea* EVANS is a synonym of *Th. hyrie* (DE NICEVILLE), not a species of *Sovia*.

2). *Pedesta naumanni* HUANG is proved to be the same as *Halpe lucasi* (sic) *merea* EVANS and considered as a new junior synonym of *Th. hyrie* (DE NICEVILLE, 1891).

3) This species is rather variable in ♂ brand on upperside of forewing and the presence or absence of the black spots on underside of hindwing. The authors examined two specimens from some part of southern China and found they may represent a different subspecies, but the known specimens are not enough and no detailed locality is known.

Distribution: Tibet (Motuo), some part of southern China; northeastern India, Bhutan, Myanmar, Thailand, Laos, Vietnam.

Thoressa pandita (DE NICEVILLE, 1885)

Isoeteon pandita DE NICEVILLE, 1885: 121, plate II: 14 ♀, type ♀, Sikkim.

Pedestes pandita, ELWES & EDWARDS (1897: 193, plate 24: 41, 41a, 41b for ♂ genitalia. Sikkim, Naga Hills).

Pedesta pandita, EVANS [1949: 249, plate 31: G9-3 for ♂ genitalia. Sikkim, Naga Hills (NE India), North Burma to North Shan State (Myanmar), Tonkin (N Vietnam)]; HUANG (1998: 213: 1b for ♂ genitalia); HUANG (2003: 25, fig. 34 for ♂ genitalia, plate 3: 3 ♂, Metok, SE Tibet); MONASTYRSKII & DEVYATKIN (2003: 46, North Vietnam).

Thoressa nanshaona MURAYAMA, 1995: 33, figs. 14,16, HT ♂, „Tuguancun“ (HT actually labeled from Tengchong), Yunnan (LBMJ); HUANG & ZHAN (2004: 180, 183, fig. 2 for ♂ genitalia taken from HT of *Th. nanshaona*, colour plate 12b: 1, 2 for HT ♂) **syn. nov.**

Thoressa pandita, HUANG & ZHAN (2004: 180).

Specimens examined: China: 3 ♂♂ (CHH), Tibet, Motuo County, Arniqiao, 11.VII.1996 & 12.VIII.2005, H. HUANG leg.; 2 ♂♂ (CHH), Yunnan Province, Baoshan City, Tengchong County, Datang Village, 13.VI.2005; 1 ♂ (LBMJ, HT of *T. nanshaona*), Tengchong, 24.IV.1995; 3 ♂♂ (CHH), Baoshan City, Baihualing Nature Reserve, 23.V.2005, H. HUANG leg..

Length of forewing: 13-14.5 mm (♂).

Remarks: The HT of *Th. nanshaona* MURAYAMA has been dissected (HUANG & ZHAN, 2004) and its ♂ genitalia are in common with the specimens of *Th. pandita* (DE NICEVILLE) from southeastern Tibet. The authors collected more specimens from the area around the type locality of *Th. nanshaona* MURAYAMA and found that this species is rather variable in shape of forewing, the size and shape of discal spots on upperside of forewing, the shape of cell spots, and the presence or absence of pale markings on underside of hindwing. All the specimens examined have been dissected and they all belong in a single species. Thus the author considers *Thoressa*

nanshaona MURAYAMA, 1995 **syn. nov.** as a new junior synonym of *Isoteinon pandita* DE NICEVILLE, 1885.

Distribution: Yunnan (Gaoligongshan Mts.), Tibet (Motuo); Sikkim, northeastern India, Myanmar, Vietnam.

Thoressa pedla* (EVANS, 1955) **comb. nov.*

Pedestes pedla EVANS, 1955: 751. Yunnan (BMNH).

Pedesta hishikawai YOSHINO, 2003: 9, figs. 25, 27 for ♂, fig. 37 for ♂ genitalia, HT ♂, Zhongdian, North Yunnan (MNHA) **syn. nov.**
Thoressa hishikawai, HUANG & ZHAN (2004: 180).

Specimens examined: China: Yunnan Province: 1 ♂ (BMNH, HT, photos examined), no detailed locality, 1918, G. FORREST leg.; 2 ♂♂, 1 ♀ (CCAM), Lijiang, Mt. Yulongxueshan, 28.IV.1995, A.-M. CHEN leg.; 1 ♂ (CCAM), Zhongdian, 4.VII.1995, A.-M. CHEN leg..

Length of forewing: 12mm (♂ and ♀).

Distribution: Yunnan (Zhongdian, Lijiang).

Remarks: 1) EVANS (1955) described this species on a single ♂ and pointed out that the footstalk of ♂ genitalia is absent, however all the newly collected specimens have the footstalk well marked. The authors sent the photos of ♂ genitalia dissected from the newly collected specimens to Mr. JOHN CHAINEY, BMNH for a comparative study with the HT, and was told that they share the same ♂ genital characters with the HT. Therefore the absence of the footstalk in HT was due to a damage of specimen.

2) *Pedesta hishikawai* YOSHINO, 2003 **syn. nov.** is considered as a junior synonym of *Pedestes pedla* EVANS, 1955. YOSHINO (2003) overlooked the description of *P. pedla* EVANS when he described *P. hishikawai* YOSHINO. The specimens examined by the authors share the same wing characters with the type material of *P. hishikawai* YOSHINO, their ♂ genitalia were confirmed to be the same as the HT of *P. pedla* EVANS by Mr. JOHN CHAINEY.

3) This species is rather variable in appearance of wing markings. In normal form the discal spots in spaces 2-3 of forewing are absent and the pale longitudinal discal stripe is well marked. However the discal spots of forewing can be well marked or obscure. In HT of *Pedestes pedla* EVANS, the underside of hindwing without a clear pale longitudinal discal stripe but with the discal area markedly paler than costal and anal areas, and with some irregular dark smudges; such irregular smudges are also found in one of the three specimens of *Th. zinnia* (EVANS) examined and a few specimens of *Th. baileyi* (SOUTH) from the same area in Yunnan and seem not to be a constant character for species of *Thoressa* from Yunnan. The most important diagnostic characters found in either HT or the newly collected specimens include: size smaller than in all other species, with a length of forewing around 12mm in all known specimens; all ciliae on upperside of both wings uniform gray; all ciliae on underside of both wings uniform pale yellow and not mixed with dark colouring; the ♂ brand on upperside of forewing mixed only with dark and gray scales, not associated with pale yellow or whitish scales, closer to wing-base than to termen at vein 2A; discal area on underside of hindwing paler than costal and anal areas; Uncus with two branches pointed inwards and rather sharp at tip, and with a central split on dorsal surface; gnathos paired and expanding laterally and beyond the uncus in dorsal or ventral view; both valvae simple and nearly symmetric, with harpe stout and rounded, not branched; aedeagus with coecum penis expanding laterally and without cornuti. The important characters found in the newly collected specimens but damaged in HT include: antennal club without pale scales before apiculus; both left and right footstalks of male genitalia simple in structure, single pointed and smooth on outer margin.

4) The ♂ and ♀ genitalia are illustrated herein (figs. 18, 19).

***Thoressa masuriensis tali* (SWINHAE, 1912)**

Pedestes masuriensis tali SWINHAE, 1912: 149, type ♂, Haut Yunnan (BMNH).

Pedesta masuriensis tali, EVANS [1949: 249, plate 4: G9-1 ♂, Tali (Dali, N Yunnan), Bahand (Baihanluo, Upper Nujiang valley, NW Yunnan), Tatsienlou (Kangding, W Sichuan), Taytouho (Daduhe, Luding area, W Sichuan)].

Pedesta masuriensis cuneomaculata MURAYAMA, 1995: 33, figs. 9, 11, HT ♂, Tuguancun (between Zhongdian and Hutiaoxia), Yunnan (LBMJ); Huang, 2003: 71, fig. 33 for ♂ genitalia, plate 3: 1 ♂, Qiqi to Dongshaofang, Nujiang, Yunnan. **syn. nov.**

Thoressa masuriensis tali, HUANG & ZHAN (2004: 179).

Specimens examined: China: Yunnan Province: 1 ♂ (CHH), Nujiang Prefecture, Gongshan County, Bingzhongluo Township, Sijitong Village, 2.VI.2002, H. HUANG leg.; 4 ♂♂ (CHH), Diqing Prefecture, Weixi County, Bai-ji-xun Township, Xiao-weixi Village, 20.VII.2004, H. HUANG leg.; 1 ♂ (LBMJ, HT of *T. masuriensis cuneomaculata*), Zhongdian County, Tuguancun Village, 24.V.1995; 3 ♂♂ (CHH), Zhongdian County, Tuguancun Village, 25.V.2004, H. HUANG leg.. Sichuan Province: 1 ♂ (CCZB), Ganzi Prefecture, Jiulong County, West slope of Gongga Mts., 23.V.2008, local collector leg.

Length of forewing: 15-15.5 mm (♂).

Remarks: 1) It is very possible that *Th. m. tali* (SWINHAE) is independent from *Th. masuriensis* (MOORE), because the two taxa are markedly different in shape of the left footstalk and apex of the left valva in ♂ genitalia as shown by EVANS (1949), and because there is no intermediate form found between the two taxa. All the populations of *Th. m. tali* (SWINHAE) from Sichuan and Yunnan have the yellow discal spots on upperside of forewing, whereas all the populations of *Th. masuriensis* (MOORE) from the Himalayas and Laos have the white discal spots on the upperside of forewing.

2) The type specimen originally illustrated by EVANS (1949) belongs to a form with well developed pale markings on wings, whereas the HT of *Th. m. cuneomaculata* (MURAYAMA) belongs to a form with poorly developed pale markings. The examination of more specimens from Yunnan shows that both forms can be found in the same locality and there is no difference in ♂ genitalia between them. The discal pale markings in spaces 1b and 4 on forewing can be fully developed or totally absent, the underside of hindwing can be unmarked or marked with a few pale discal spots with variable sizes in different individuals. The HT of *Th. m. cuneomaculata* (MURAYAMA) has been dissected and shares the same genital characters with all other specimens examined in this study. Thus *Th. m. cuneomaculata* (MURAYAMA) **syn. nov.** is considered as a new junior synonym of *Th. m. tali* (SWINHAE).

Distribution: Yunnan (Dali, valleys of Yangtse River, valleys of Lancang River, valleys of Nujiang River), Sichuan (Gongga Mts.).

***Thoressa zinnia* (EVANS, 1939)**

Halpe zinnia EVANS, 1939: 165, type, ♂, Likiang (Lijiang), Yunnan (HT in ZMHB, paratypes in BMNH).

Thoressa zinnia, EVANS [1949: 255, plate 32: fig. G11-14 for ♂ genitalia, Likiang (Lijiang)].

Specimens examined: China, Yunnan Province: 3 ♂♂ (BMNH, 2 cotypes and a non-type specimen, photos examined), Lijiang, 1935, H. Hone leg..

Length of forewing: 15-16mm (♂).

Distribution: Yunnan (Lijiang).

Remarks: This species is very little known in the literature, only EVANS (1949) described very few characters in the key and published a hand-drawing of a ♂ genitalia. The photos of two cotypes in BMNH were examined by the author and one of them is published herein. This species is similar to *Th. gupta* (DE NICEVILLE) in most external features but is more in common with *Th. baileyi* (SOUTH) on the underside of wings, and is very similar to *Th. fusca* (ELWES) in ♂ genitalia but differs in the shape of gnathos. The more diagnostic characters observed from these specimens in BMNH are as follows: antennal club without pale yellow scales before apiculus; inner ciliae on upperside of both wings uniform grayish brown, outer ciliae on upperside of both wings uniform yellow, both inner and outer ciliae on underside of both wings uniform bright yellow; ♂ brand on upperside of forewing closer to wing-base than to termen and associated with two big yellow patches of scales; only upper cell spot visible on upper half of forewing cell; underside of hindwing bright brownish yellow, with yellow scales in most areas very closely distributed and forming an uniform ground color, neither powdered nor spotted, and with yellow scales in space 1b sparser and forming a darker anal area, underside of hindwing unmarked in two specimens, but with some obscure dark smudges in discal area as in the HT of *Th. pedla* (EVANS).

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Fig.1: *Thoressa yingqi* spec. nov., HT ♂, upperside (left half) and underside (right half).

Fig.2, 3: *Thoressa fusca caenis* (LEECH, 1893), ♂♂, Baoxing, Sichuan.

Fig.4: *Thoressa hyrie* (DE NICEVILLE, 1891), ♂ (HT of *Halpe lucasi merea* EVANS, 'Type// Pemako/ Mere/ 4000/ 7.6.13// W.H. Evans./ B.M.1932-274').

Figs. 5-8: *Thoressa pandita* (DE NICEVILLE, 1885), ♂♂. 5- Motuo, SE Tibet. 6- Datang, Tengchong, W. Yunnan. 7- Baihualing, Baoshan, W. Yunnan. 8- Datang, Tengchong, W. Yunnan.



Fig. 9: *Thoressa pedla* (EVANS, 1955). (9) HT ♂, 'Type// Yunnan/ 1918/ G.Forrest// M.J.Mansfield/ Coll./ B.M.1950-244// J.J. Joicey Coll. B.M. 1925-451'; (10): ♀, Lijiang, Yunnan; (11) ♂, Lijiang, Yunnan; (12) ♂, Zhongdian, Yunnan; (13) ♂, Lijiang, Yunnan. Fig. 14, 15: *Thoressa masuriensis tali* (SWINHOE, 1912). (14) ♂, Nujiang, Yunnan; (15) ♂, Lancangjiang, Yunnan. Fig. 16: *Thoressa zinnia* (EVANS, 1939), co-type ♂, 'Halpe/ Zinnia, Nov/ ♂ Cotype// Li-kiang. (China)/ Provinz Nord-Yuennan/ 1935. H. Hoene// Brit.Mus./ 1938-476'.

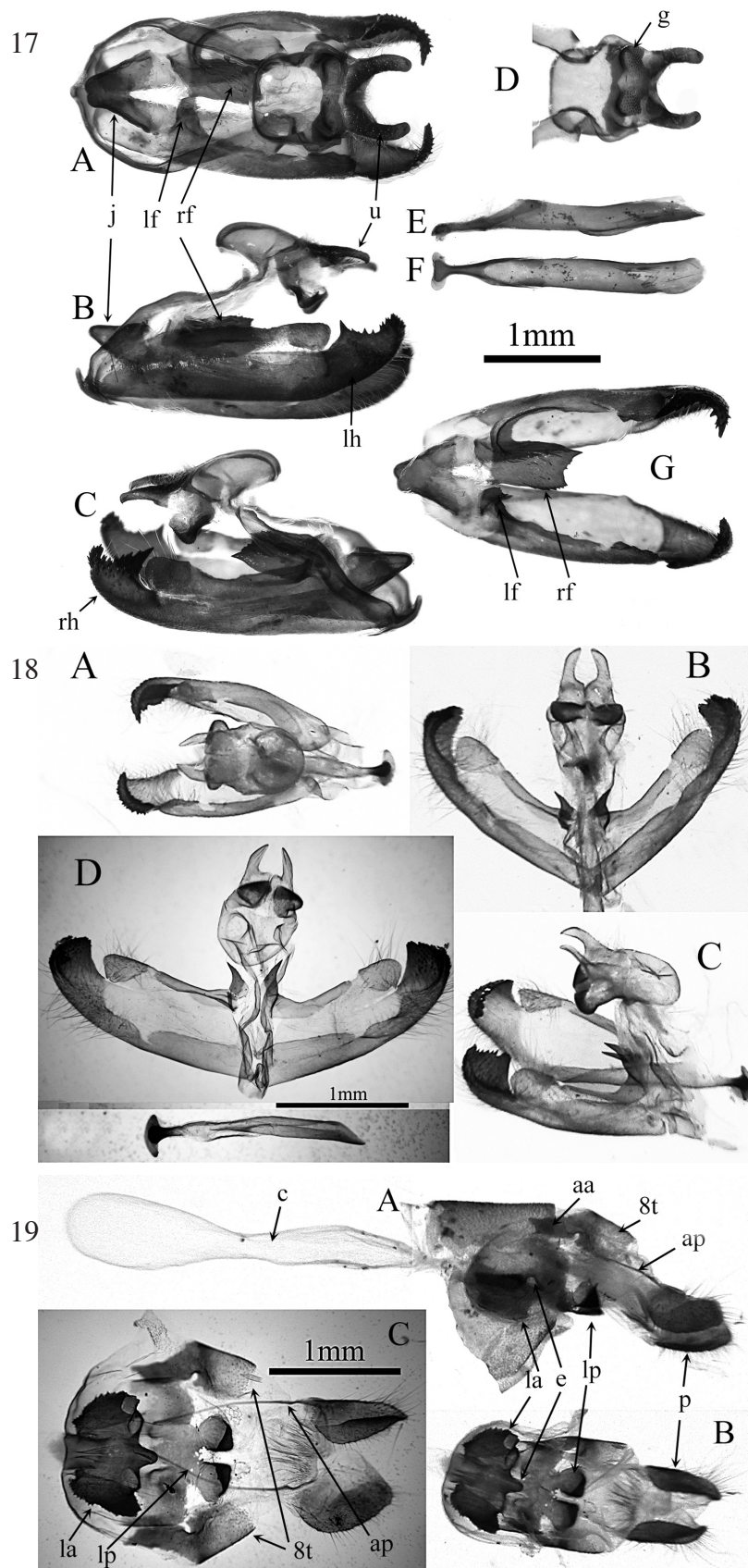


Fig. 17: *Thoressa yingqii* spec. nov., ♂ genitalia: A- Dorsal view. B- Left lateral view. C- Right lateral view. D- Tegumen, uncus and gnathos in ventral view. E- Aedeagus in lateral view. F- Aedeagus in dorsal view. G- Valvae and juxta in dorsal view with vinculum and dorsum removed. Abbreviations: j, juxta; lf, left footstalk; rf, right footstalk; u, uncus; lh, left harpe; rh, right harpe; g, gnathos.
 Fig. 18: *Thoressa pedla* (EVANS, 1955), ♂ genitalia: A- Dorsal view. B- Ventral view with valvae spread. C- Dorsolateral view. D- Slide with genitalia spread and flattened.
 Fig. 19: *Thoressa pedla* (EVANS, 1955), ♀ genitalia: A- Lateral view. B- Ventral view. C- Slide with genitalia spread and flattened.
 Abbreviations: c = corpus bursae; aa = apophysis anterioris; ap = apophysis posterioris; 8t, 8th tergum; p = papilla analis; la = lamella antevaginalis; e = entrance of ostium bursae; lp = lamella postvaginalis.

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