

# Lecithoceridae (Lepidoptera) of Taiwan (I): Subfamily Lecithocerinae: Genera *Homaloxestis* Meyrick and *Lecithocera* Herrich-Schäffer

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**Kyu-Tek Park (1999)** Lecithoceridae (Lepidoptera) of Taiwan (I): Subfamily Lecithocerinae: genera *Homaloxestis* Meyrick and *Lecithocera* Herrich-Schäffer. *Zoological Studies* **38**(2): 238-256. In a review of the genera *Homaloxestis* Meyrick and *Lecithocera* Herrich-Schäffer belonging to the subfamily Lecithocerinae in Taiwan, 4 species of *Homaloxestis* and 22 species of *Lecithocera* are recognized. A new species of *Homaloxestis*: *H. baibaraensis* and 13 new species of *Lecithocera*: *L. bimaculata, L. paralevirota, L. thaiheisna, L. fuscosa, L. latiola, L. shanpinensis, L. angustiella, L. palingensis, L. fascicula, L. altusana, L. tienchiensis, L. pulchella, and L. atricastanea, are described. Seven species (<i>Homaloxestis hiloris* Gozmány, *Lecithocera* errecta Meyrick, *L. aulias* Meyrick, *L. pelomorpha* Meyrick, *L. megalopis* Meyrick, *L. rotundata* Gozmány, and *L. chartaca* Wu and Liu) are reported for the 1st time from Taiwan. The genera Sarisophora Meyrick and Patouissa Walker are synonymized with *Lecithocera*, and *L. squalida* Gozmány is synonymized with *L. aulias* Meyrick. *Lecithocera*, and *L. cerussata* Wu represent new combinations .

Key words: Systematics, Lecithoceridae, Homaloxestis, Lecithocera, Taiwan.

 ${\sf S}$ ince the genus *Lecithocera* was proposed by Herrich-Shäffer (1853) on the basis of the type species Carcina luticornella Zeller, 1839 and placed in the family Oecophoridae, the taxonomic status of the family Lecithoceridae has not been well defined, due to various differing opinions as to its rank. Members of this family were commonly referred to the Gelechiidae in earlier days (Heinemann 1870, Diakonoff 1954, Janse 1954), but Le Marchand (1947) placed them in the newly established subfamily Lecithocerinae of Gelechiidae. However, Clarke (1955) established a new family, the Timyridae, based on his new genus Timyra, and he (1965) placed the lecithocerid genera in Timyridae, which was synonymized with Lecithoceridae. Its family status, as Lecithoceridae, had been accepted by Gozmány (1970 1978), Sattler (1973), Common (1990), and Nielsen and Common (1991); however, Hodges (1978) reassigned the Lecithoceridae as a subfamily of Gelechiidae. Most recent workers including Park (1983), Robinson et al. (1994), Wu (1994 1997), Common (1996), and Karsholt and Razowski (1996) have referred it to Lecithoceridae,

following Gozmány (1978). Hodges (per. comm.) recently elevates the subfamily to the family Lecithoceridae, based on the apomorphies: gnathos fused to tegumen, and mesial region downturned and laterally compressed. There is no doubt that it should be considered as a family rank by such autapomorphic characters, as antennae being longer than forewing length (except Oditinae established by Lvovsky 1996), and gnathos always bent downwardly. Gozmány (1978) suggested that these characters support the Lecithoceridae as a monophyletic group, separating it from other related families. He (1978) also transferred several genera that were previously included in Timyridae by Clarke (1955) to other families: Aulithiotis Meyrick, Demiophila Meyrick, and Encrasima Meyrick to Gelechiidae; Cophomantella Fletcher, Cynicocrates Meyrick, Enthetica Meyrick, Philarachnis Meyrick, Semnolocha Meyrick, and Sphagiocrates Meyrick to Xyloryctidae; and Irenidora Meyrick to Symmocidae. Common (1990) transferred the genus Sisyrodonta Meyrick to the Lecithoceridae again, on the basis of wing venation and the presence of supplementary wing-coupling

setae, but there is little doubt that it belongs to this family. Gozmány (1978) established 3 new subfamilies for Lecithoceridae: Ceuthomadarinae Gozmány (based on the genus Ceuthomadarus); Lecithocerinae Le Marchand (based on the genus Lecithocera); and Torodorinae Gozmány (based on the genus Torodora). His principle characters separating the 3 subfamilies are the proboscis and the bridgelike structure of the valva of the male genitalia. The subfamily Ceuthomadarinae is well defined by the absence of a proboscis, which is present in the other 2 subfamilies. The subfamily Lecithocerinae is characterized by the presence of a bridgelike structure connecting the tegumen and the valval costa of the male genitalia. Members of the subfamily Torodorinae have no bridgelike structure in the valva of the male genitalia, while the uncus is directed caudally and is thornlike. The generic key for the family given by Gozmány (1978) was based mainly on wing venation, especially in the presence or absence of M<sub>2</sub> of the hindwing, and the zone of stout setae on abdominal tergites. His ideal 4 major groups are: 1) M<sub>2</sub> present on the hindwing and with stout setae zones on abdominal tergites; 2) M2 present and lacking stout setae zones; 3) M<sub>2</sub> absent from the hindwing and with stout setae zones on abdominal tergites; and 4) M<sub>2</sub> absent and lacking stout setae zones. However, many of the valid genera, separated by the venational character, do not correlate to the superficial and genital characters, and they are thus misplaced in many cases. Moreover, many of the early-described genera by Meyrick (1906 1925 1935) and by Gozmány (1978) were often based on a single species (monotypy), without discussion as to their phylogenetic relationships. Further study of the generic status of these genera is needed. Lvovsky (1996) proposed a new subfamily Oditinae including genera Odites Meyrick and its allies (Trichernis Meyrick, Amphitrais Meyrick, Scythropiodes Matsumura, Rhizosthenes Meyrick, and Myriopleura Meyrick). Even though these members have short antennae, the male genital character with gnathos bent downward indicates that they are undoubted Lecithoceridae.

The family is widely distributed throughout the world, with approximately 700 known species, but more than 90% of the described species are found in the Oriental and the southern border of the Palaearctic regions. The area extends from southern China to the southern Himalayas, and beyond to the entire Oriental region. Another 45 species are known from Australia, some of which are also distributed in the Mediterranean subregion including Asia Minor, southeastern Europe, and South Africa. Most of the previously known species show a relatively narrow distributional range; for example, many of Taiwanese species are restricted to Taiwan and southern China, and most Australian species are endemic to the region. One exception includes *Homaloxestis cholopis* Meyrick, which is widely distributed from the Philippines through India to South Africa. The Lecithocerinae and Torodorinae both occur in most of the regions, but the Ceuthomadarinae are restricted to the southern part of Europe and North America, and do not occur in Taiwan.

Adults are mostly nocturnal, although some of the brightly colored species, e.g., *Issikiopteryx* species, may be diurnal. Larval feeding material of the Lecithoceridae includes dead plant, remains (Gozmány 1978, Common 1996), although little has been published on their habits. A few Australian species feed on eucalyptus leaf litter or, less frequently, on leaf litter beneath "Kunzeaor" detritus in grass tussocks (Common 1996).

The material examined for this study was largely based on collections in the Smithsonian Institution, US National Museum of Natural History (USNM), Washington DC, the Florida State Collection of Arthropods (FSCA), Gainesville, Florida, and on the author's recent collecting in Taiwan. For identification, all species were compared with figures of the genitalia of the type or related species illustrated by Clarke (1965) or the type specimens in the Natural History Museum (formerly the British Museum [Natural History]) (BMNH), London, UK, and Museum de Istorie Naturala "Grigore Antipa" (MINGA), Bucharest, Rumania. The author also examined type specimens or related species in the Hungarian Museum of Natural History (HMNH), Budapest, Hungary; the Institute of Zoology, Academia Sinica (IZAS), Beijing, China; and the Australian National Insect Collection (ANIC), CSIRO, Australia. Few of the types in the Deutsches Entomologisches Institut (DEI), Eberswald, Germany were not examined during this study. Types for the newly described species are deposited in different collections as noted under each species. Holotypes which indicated as "to CIS on indefinite loan from Taiwan" will be placed in a national museum or a institute in Taiwan when the right organization for the deposit is fixed after a further discussion. Original references for the previously known species and genera are cited with their abbreviations, sources of types of genera and type specimens are provided, and type localities for invalid genera are indicated in square brachets.

In Taiwan, the family is represented by 16 genera and 18 species (Kanazawa and Heppner 1992), but more than 100 species, including numerous undescribed species, are anticipated.

### SYSTEMATICS

### Subfamily Lecithocerinae Le Marchand, 1947

*Type*: Lecithocera Herrich-Schäffer, 1853, Syst. Bearb. Schmett. Eur. 5: 11.

Synonym: Timyridae Clarke, 1955

The subfamily Lecithocerinae is characterized by male genitalia with a costal bridgelike structure connecting the tegumen and valva, and the uncus almost always vestigal, with 2 lobes at the base dorsally, only exceptionally united into a broad plate, but never as a thorn or spine. The female genitalia of Lecithocerinae have a short, non-telescopic, ovipositor, and corpus bursae with a signum. This subfamily comprises approximately 500 species, and is found abundantly in the southeastern Palaearctic, Oriental, and Australian regions, with about 20 species known from the Neotropical region.

#### Homaloxestis Meyrick, 1910

*Homaloxestis* Meyrick, 1910: 440; Janse, 1954: 338; Diakonoff, 1967: 129; Wu, 1997: 143-145. Type: *Homaloxestis endocoma* Meyrick, 1910 [S. India].

The genus is defined by the following characters: forewing usually without markings and discal spots, costa often lighter than ground color, except in myeloxesta Meyrick; M<sub>2</sub> and M<sub>3</sub> never stalked, CuA<sub>1</sub> and CuA<sub>2</sub> originating far from each other at base; hindwing without a sinuous batch of hairs below cell,  $M_2$  originating from about middle of  $M_1$ - $M_3$ , never nearer to M<sub>3</sub>; abdominal terga without zones of spiniform setae; valva irregularly concave on ventral margin, with short strong setae; aedeagus without lateral spines; ovipositor short, almost always telescopic or reaching far beyond abdomen. The distributional range includes the Palaearctic and Oriental Regions, extending from the southern part of Japan to Turkey and also to S. Africa. Most species occur from central Europe to East Asia. Thirteen species of this genus are known worldwide. Two species, H. myeloxesta Meyrick and H. chololopis Meyrick, were known from Taiwan, and 9 species were known from China.

Key to the species of *Homaloxestis* in Taiwan, based on adult and male genitalia

- 3. Ventral margin of valva less concave; aedeagus longer than valva ...... cholopis Meyrick Ventral margin of valva strongly concave; aedeagus shorter than valva ...... baibaraensis, sp. nov.

### Homaloxestis cholopis (Meyrick, 1906) (Figs. 1, 25, 25a-b, 52)

Lecithocera cholopis Meyrick, 1906: 149 [Koni, Burma].

Homaloxestis cholopis: Meyrick, 1914: 50; Gaede, 1937: 502; Clarke, 1965: 84; Gozmány, 1973: 415; 1978: 67; Wu, 1997: 146. Lectotype, ♂, Koni, Burma, BMNH-8726/Clarke, Coll. BM.

Homaloxestis lophophora Janse, 1954: 341 [Pretoria]. Homaloxestis surrepta Diakonoff, 1967: 130 [Philippines].

*Diagnosis*: Wingspan, 14.5-16.0 mm. Similar to the following new species, but it can be separated by the more grayish hindwing and the shape of the male genitalia.

*Male and female genitalia* (Figs. 25, 25a-b, 52): See also Clarke (1965, pl. 42, fig. 1a) for the male; Gozmány (1978, pl. 18, fig. 9; pl. 59, fig. 9) and Wu (1997, pl. 15, fig. 4; pl. 31, fig. 6) for the male and female.

*Materials examined*: 1 &, Baibara, Meiyuan, Taichung Co., 24 Mar. 1943 (S Issiki), Issiki Coll. 1972; 1 &, Hokuto, 26 Nov. 1933 (S Issiki), Issiki Coll. 1972, gen. slide no. CIS-4098; 1 &, Kenting Park 50 m, Pingtung Co., 1-5 Sept. 1983 (JB Heppner); 3 & &, 2  $\Leftrightarrow$   $\Leftrightarrow$ , Shanpen For. Stn. 750 m, 10 km SE Liukuei, Kaohsiung Co., 5-6 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4255 ( $\Leftrightarrow$ ); 2 &&, Fushan, Taoyuan Co., 29-30 Aug. 1995 (WJ Jou); 1 &, 1  $\Leftrightarrow$ , same locality, 27 July 1995 (A Warnecke); 2 & &, same locality, 30 Aug. 1995 (A Warnecke); 2 & &, Fushan, Ilan Co., 29-30 Aug. 1995 (WT Jou); 1 &, 1  $\Leftrightarrow$ , 1  $\Leftrightarrow$ , Lienhuachih, For. Res. Stn. 650 m, Nantou Co., 19-20 Nov. 1997 (KT Park).

*Distribution*: Taiwan, China (Fujian, Guangdong, Hainan, Yunnan), Myanmar, Nepal, India, Java, SW Africa.

*Remarks*: The species was previously known from Kankau, Koshun, Taiwan (Gozmány, 1978), and recently reported from China (Wu 1997).

### Homaloxestis baibaraensis, sp. nov. (Figs. 2, 26, 26a-b)

*Diagnosis*: This species is superficially similar to *H. cholopis* (Meyrick). It is easily separated from the

latter by the male genitalia, especially in the ventral margin of the valva being strongly concave with strong spiniform setae.

Description: Male. Wingspan 15.5 mm. Head light orange anteriorly and light brown dorsally. Tegula and thorax light brown. Antenna yellowish white to light orange; annulation on segments obscure. Labial palpus moderate; 2nd segment normally thickened, brownish orange on basal 1/3, paler to light orange on outer surface, and evenly yellowish white on inner surface; 3rd segment slender, as long as 2nd. Forewing light brown, speckled with brown scales throughout; costa almost straight; discal spot absent; apex more or less acute; termen not sinuate; R<sub>4</sub> and R<sub>5</sub> stalked to 2/3 length; R<sub>3</sub> stalked at 1/3 of  $R_{4+5}$ ;  $R_5$  to termen; CuA<sub>1</sub> and CuA<sub>2</sub> distant at base. Hindwing pale gray; apex obtuse; termen slightly sinuate; cell short, closed; M<sub>2</sub> originating about middle of M<sub>1</sub>-M<sub>3</sub>.

*Male genitalia* (Figs. 26, 26a-b): Uncus broad, with round distal margin; basal lobes of uncus short. Gnathos relatively small. Costa of valva emarginated before 2/5 length and almost straight beyond; ventral margin strongly concave twice beyond middle, with short, strong spiniform setae on upper part of concave margin, and sharply angled outwardly at middle. Lobes of juxta short, round at apex. Sacculus terminated before middle. Sclerite between 7th and 8th segments similar to that of *H. cholopis*. Aedeagus relatively short, with numerous microdenticles.

*Type*: Holotype:  $\mathcal{S}$ , Baibara, Meiyuan, Taichung Co., 28 Mar. 1943 (S Issiki), Issiki Coll. 1972, gen. slide no. CIS-4275, USNM.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the type locality, "Baibara."

### Homaloxestis hilaris Gozmány, 1978 (Figs. 3, 53)

Homaloxestis hilaris Gozmány, 1978: 70; Wu, 1994: 147. Type: &, West Tienmushan, Zhejiang Prov., H Hóne. Coll. LNK.

*Diagnosis*: Wingspan 15.0 mm. Superficially this species is hardly distinguishable from the preceding species, but can be separated by the valva of the male genitalia having a lobe on the ventral margin medially.

*Female genitalia* (Fig. 53): See Gozmány (1978, pl. 20, fig. 13; pl. 59, fig. 13) and Wu (1997, pl. 15, fig. 6; pl. 31, fig. 9) for the male and female.

Materials examined:  $2 \Leftrightarrow \Leftrightarrow$ , Shanpin For. Stn. 750 m, 10 km SE Liukuei, Kaohsiung Co., 5-6 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4251. *Distribution*: Taiwan (new record), China (Zhejiang).

*Remarks*: The species was originally described from SE China, based on a single male. Wu (1997) recently reported and illustrated the female genitalia.

### Homaloxestis myeloxesta Meyrick, 1932 (Figs. 4, 27, 27a-b, 54)

Homaloxestis myeloxesta Meyrick, 1932: 203; Gaede, 1937: 503; Issiki, 1957: 41; Clarke, 1965: 92; Gozmány, 1978: 74-75; Moriuti, 1982: 274. Type: ♂, Sinten, Formosa, BMNH-8713/ Clarke, Coll. BMNH.

*Diagnosis*: Wingspan, 15.0-16.0 mm. This species can be recognized by the paler costa of the forewing.

*Male and female genitalia* (Figs. 27, 27a-b, 55): See also Clarke (1965, pl. 46, fig. 3) for the male; Gozmány (1978, pl. 21, fig. 19; pl. 61, fig. 19) and Wu (1997, pl. 16, fig. 3; pl. 32, fig. 3) for the male and female.

*Materials examined*: 1 3, Shinten (= Hsintien),



**Figs. 1-12.** Adults. 1. *Homaloxestis cholopis* Meyrick; 2. *H. baibaraensis* sp. nov.; 3. *H. hilaris* Gozmány; 4. *H. myeloxesta* Meyrick; 5. *Lecithocera pelomorpha* Meyrick; 6. *L. bimaculata* sp. nov.; 7. *L. paralevirota* sp. nov.; 8. *L. thaiheisana* Wu and Liu; 9. *L. metacausta* Meyrick; 10. *L. latiola* sp. nov.; 11. *L. shanpinensis* sp. nov.; 12. *L. megalopis* Gozmány.

Taipei, 11 Sept. 1927 (S Issiki), Issiki Coll. 1972.; 1  $\stackrel{\circ}{+}$ , Kukuan 720 m, Taroko Natl. Park, Taichung Co., 8 July 1996 (KT Park and JS Lee); 2  $\stackrel{\circ}{\rightarrow}$ , 2  $\stackrel{\circ}{+}$ , Shanpen For. Stn. 750 m, 10 km SE Liukuei, Kaohsiung Co., 5-6 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4263 ( $\stackrel{\circ}{\rightarrow}$ ), 4271 ( $\stackrel{\circ}{+}$ ); 1  $\stackrel{\circ}{\rightarrow}$ , 1  $\stackrel{\circ}{+}$ , Lienhuachih, For. Res. Stn. 650 m, Nantou Co., 19-20 Nov. 1997 (KT Park).

Distribution: Taiwan, Japan.

*Remark*: The species was originally described from Taiwan by Meyrick (1932), based on a single male, and Gozmány (1978) first reported and illustrated the female.

### Lecithocera Herrich-Schäffer, 1853

- Lecithocera Herrich-Schäffer, 1853: 11; Meyrick, 1925: 255; Janse, 1954: 342; Gozmány, 1978: 78; Wu, 1997: 108. Type: Carcina luticornella Zeller, 1839 [Europe].
  - = Patouissa Walker, 1864: 820 [Sarawak], syn. nov.
  - = Sarisophora Meyrick, 1904: 256, 403, syn. nov. Type: Sarisophora leptoglypta Meyrick, 1904: 404 [Queensland, Australia].
  - = Brachyerga Meyrick, 1925: 4 [Borneo].
  - ? = Pheriphorectis Meyrick, 1925: 11 [S. India].
    - = Xanthocera Amsel, 1953: 425 [Libyen].
    - = Xanthocerodes Amsel, 1955: 60 [Libyen].
    - = Leviptera Janse, 1954: 342 [Pretoria].
    - = Parrhasastris Gozmány, 1972: 292 [Sri Lanka].

Venation of both wings is highly variable within the genus; forewing with CuA<sub>1</sub> and CuA<sub>2</sub> shortstalked, M<sub>2</sub> nearer to M<sub>3</sub> than M<sub>1</sub> at base, M<sub>3</sub> originating far from stalk of  $CuA_1 + CuA_2$ , termen area not strikingly darkened; hindwing with M<sub>2</sub> free from M<sub>3</sub>, M<sub>3</sub> and CuA<sub>1</sub> stalked or coincident. Abdomen without zones of spiniform setae on terga, with well-developed coremata. Meyrick (1904) described Sarisophora, separating it from *Lecithocera* by the absence of  $M_2$  in the hindwing. Gozmány (1978) and Wu (1997) followed him and treated both as valid genera. However, according to the venation of the type species, S. leptoglypta Meyrick, the vein which Meyrick referred to as  $M_3$ , should be defined as  $M_2$ , and M<sub>3</sub> is connate with CuA<sub>1</sub>. Some other members of the genus, fuscosa sp. nov., palingensis sp. nov., and megalopis Meyrick described from the Philippines, show the vein, M<sub>3</sub>, separated from CuA<sub>1</sub> distally. This can be evidence that M<sub>2</sub> is present, and  $M_3$  and CuA<sub>1</sub> often are coincident. In this respect, Turner (1919) also stated for the genus Sarisophora that  $M_3$  is absent, due to its coincidence with  $CuA_1$ , and  $M_2$  and  $CuA_1$  are connate. On the other hand, the male genital character shows that they are a monophyletic group, and the abdominal sclerite between 7th and 8th segments in this group distinguishes it from others. The related genus Quassitagma Gozmány has a similar abdominal sclerite, but the forewing has M<sub>2</sub> and M<sub>3</sub> stalked. This condition is stable and *Lecithocera* is considered to be a monophyletic lineage. In this respect the genera *Lecitholaxa* Gozmány, *Nyctocyrma* Gozmány, *Psamoris* Meyrick, and *Recontracta* Gozmány, should be analyzed for their generic status in further studies. Gozmány (1978) divided the genus *Lecithocera* into 2 subgenera, *Lecithocera* **sensu stricto** and *Patouissa* Walker, based on a difference of venation and size of moths. However, the venation is highly variable within the genus, and the male genital characters are nearly inseparable. Thus, I propose to synonymize the genus *Sarisophora* Meyrick and *Patouissa* Walker with *Lecithocera* Herrich-Schäffer.

Lecithocera is widely distributed worldwide, but is most abundant from southern China to the Middle East, and the Australian Region, with more than 200 recorded species. Only a single species, *L. fascinatrix* Meyrick, was previously known from Taiwan.



Figs. 13-24. Adults. 13. Lecithocera fascinatrix Meyrick; 14. L. errecta Meyrick; 15. L. aulias Gozmány; 16. L. rotundata Gozmány; 17. L. fuscosa sp. nov.; 18. L. serena Gozmány; 19. L. charcata Wu and Liu; 20. L. angustiella sp. nov.; 21. L. palingensis sp. nov.; 22. L. altusana sp. nov.; 23. L. fascicula sp. nov.; 24. L. tienchiensis sp. nov.

Key to the species of *Lecithocera* in Taiwan, based on adult and male genitalia

- Hindwing with M<sub>2</sub> present ...... 2 Hindwing with M<sub>2</sub> absent ...... pulchella, sp. nov.

- 4. Forewing with broad brown fascia along termen ...... fascinatrix Meyrick Forewing without such fascia along termen .....
- Forewing dark brown, with creamy-white fascia medially; valva with rounded apex, ventral margin strongly emarginated before middle ...... *atricastanea*, sp. nov. Forewing brown, without such fascia; valva with rounded apex or tapered to apex, ventral margin not emarginated 7
- Wingspan less than 11 mm; forewing ground color fuscous, narrow; valva with rounded apex.... shanpinensis, sp. nov. Wingspan more than 15 mm; forewing ground color brown, relatively broad; valva tapered to apex... fuscosa, sp. nov.

- Forewing with outer discal spot often extended to pretornal patch inconspicuously; valva with acute apex; 7th abdominal sclerite V-shaped ...... bimaculata, sp. nov. Forewing with outer discal spot round, never extended to pretornal patch; 7th abdominal sclerite with triangular plate laterally ...... latiola, sp. nov.
- Forewing with R<sub>3</sub> connate to R<sub>4+5</sub>; hindwing with M<sub>3</sub> and CuA<sub>1</sub> stalked before middle; distal part of valva shorter than basal part, with rounded apex ........... pelomorpha Meyrick Forewing with R<sub>3</sub> free from R<sub>4+5</sub>; hindwing with M<sub>3</sub> and CuA<sub>1</sub> stalked beyond middle; distal part of valva more or
- 14. Basal 1/4 of antenna slightly thicker ...... *aulias* Meyrick Basal 1/3 of antenna much thicker .. *charcata* Wu and Liu

- 17. Forewing with  $CuA_1$  and  $CuA_2$  free ..... fascicula, sp. nov.

- 21. Wingspan more than 15 mm; hindwing gray ...... metachausta Meyrick Wingspan less than 13 mm; hindwing pale gray ..... rotundata Gozmány

### Lecithocera pelomorpha Meyrick, 1931 (Figs. 5, 28, 28a-b)

Lecithocera pelomorpha Meyrick, 1931: 69; Meyrick, 1935: 74, 1938: 5; Clarke, 1965: 155; Gozmány, 1978: 103; Wu, 1997: 116. Type: &, Kwanhsien, China, 8809/Clarke, Coll. BM.

*Diagnosis*: Forewing yellowish brown; R<sub>3</sub> connate with R<sub>4+5</sub>. Wingspan 18.0-21.0 mm. *Male genitalia* (Figs. 28, 28a-b): See also



**Figs. 25-28.** Male genitalia. 25. *Homaloxestis cholopis* (Meyrick), 25a. ditto, aedeagus, 25b. ditto, 7th sternite; 26. *H. baibaraensis* sp. nov., 26a. ditto, aedeagus, 26b. ditto, 7th sternite; 27. *H. myeloxesta* Meyrick, 27a. ditto, aedeagus; 28. *Lecithocera pelomorpha* Meyrick, 28a. ditto, aedeagus, 28b. ditto, 7th aedeagus (scales: 0.5 mm).

Clarke (1965, pl. 77, fig. 4) for the male; Gozmány (1978, pl. 26, fig. 41; pl. 64, fig. 41) and Wu (1997, pl. 8, fig. 3; pl. 28, fig. 5) for the male and female.

*Materials examined*: 2  $\beta$   $\beta$ , no locality or date label, Taiwan, (S Issiki), Issiki Coll. 1972, gen. slide no. CIS-4189, USNM; additional specimens in HNHM- 1  $\beta$ , West Tienmushan, Zhejiang Prov., 22 Sept. 1932 (H Höne), gen. slide no. 4264/Gozmány, Coll. HNMH; 1  $\beta$ , same locality, 12 Sept. 1932 (S Issiki), Issiki Coll. 1972; 1  $\beta$ , same locality, 27 VII 1932; 1?, same locality, 4 Sept. 1932 (S Issiki), Issiki Coll. 1972; 1?, same locality, 5 Oct. 1932 (H Höne) 1  $\beta$ , Kwanhsien, July 1928 (S Issiki), Issiki Coll. 1972.

*Distribution*: Taiwan (new record), China (Sichuan, Yunnan, Hunan, and Zhejiang).

### Lecithocera bimaculata, sp. nov. (Figs. 6, 29, 29a-b, 56)

*Diagnosis*: This species can be distingushed from the following new species by the pale yellowishwhite hindwing. It is very close to *L. manesa* Wu and Liu, 1992, but it is much smaller, with the forewing yellowish, more elongate. Inner discal spot of the forewing is larger and more distinct than that of *manesa* Wu and Liu. It is also separable from *L. longivalva* Gozmány and *mellifura* Gozmány by the dark suffusion on costal 1/4 and the distinct discal spots. A good character separating it from *manesa* Wu and Liu is the sclerotized structure between the 7th and 8th terga as shown in figure 29b; the distal margin of *manesa* is smoothly incurved.

Description: Male and female. Wingspan 20.0-21.0 mm. Head yellowish orange. Tegula and thorax concolorous. Antenna slightly shorter than wing; scape normal; flagellum not ciliate, with dark-brown annulations. Labial palpus relatively short; 2nd segment normally thickened, brown on outer surface and yellowish orange on inner surface; 3rd segment strongly angled and upturned, much shorter than 2nd. Forewing yellowish orange, slightly speckled with dark-brown scales, broader towards termen; costa with dark brown suffusion at basal 1/4; 2 discal spots present, a small one at middle, and larger one at end of cell and inconspicuously connected with pretornal patch; vein R<sub>3</sub> free. Hindwing pale yellowish white; apex obtuse; M<sub>3</sub> and CuA<sub>1</sub> stalked, separating before 1/2 length; R<sub>4</sub> and R<sub>5</sub> stalked beyond 2/3.

*Male genitalia* (Figs. 29, 29a-b): Uncus and gnathos as in *L. manesa*. Valva similar to that of the latter, but costa almost straight, bridgelike band conspicuously angled beyond middle, and with strong traces of setae along ventral margin of cucullus. Vin-

culum moderately broad, without lateral lobes; anterior margin of juxta with semiovate protrusion medially. Aedeagus with a pair of spines near apex; cornuti with long stringlike structures and 3-5 short spines apically. Abdominal sclerite between the 7th and 8th terga with a weakly sclerotized V-shaped plate.

*Female genitalia* (Fig. 56): Apophyses anteriores about 1/2 length of apophyses posteriores. Antrum cup-shaped, relatively long, sclerotized. Ductus bursae as long as corpus bursae; ductus seminalis arising from middle of ductus bursae. Corpus bursae ovate; plate of signum with denticles around margin, relatively small.

*Types*: Holotype:  $\beta$ , Hassenzan (= Pahsienshan), Taichung Co., 5 June 1942 (S Issiki), Issiki Coll. 1972, gen. slide no. CIS-4180/Park. Paratypes: 1  $\stackrel{\circ}{+}$ , same data as the holotype, gen. slide no. CIS-4280; 2  $\beta$   $\beta$ , Higasinoko (= Tunghunkao), Hualien Co., 3 June 1943 (S Issiki), Issiki Coll. 1972; 1?, Taiheisan (= Taipingshan), Ilan Co., 9 May



**Figs. 29-31.** Male genitalia. 29. *L. bimaculata* sp. nov., 29a. ditto, aedeagus, 29b. ditto, 7th sternite; 30. *L. paralenirota* sp. nov.; 30a. ditto, aedeagus, 30b. ditto, 7th sternite; 31. *L. thaiheisana* Wu and Liu; 31a. ditto, aedeagus, 31b, lateral aspect of uncus lobe and gnathos, 31c. ditto, 7th sternite (scales: 0.5 mm).

1942 (S Issiki), Issiki Coll. 1972. All types are deposited in USNM.

Distribution: Taiwan (endemic).

*Remarks*: Forewing with  $R_3$  free: this condition does not agree with that of the type species of the genus. Most of the species belonging to the genus *Lecithocera* in Taiwan have the same condition in the forewing venation as this species. Gozmány (1978) described *melliflua* based on specimens from China, with 4 male and 1 female paratypes. He noted that the holotype and a female paratype are in the BMNH, and 4 male paratypes in the "Grigore Antipa" Museum of Natural History, Bucharest. To confirm this species, the author examined a male paratype of *melliflua* Gozmány housed in the HMNH, "Chang Yang, 4000-6000 ft, Ichang, China, Pratt Coll. Leech 1886, Walsingham Collection, 910-427".

*Etymology*: The species name was derived from the Latin "bi" (= two) and "maculata" (= spot), corresponding to 2 distinct discal spots.

### Lecithocera paralevirota, sp. nov. (Figs. 7, 30, 30a-b)

*Diagnosis*: This species is very close to the preceding species and *L. levirota* Wu and Liu, 1993 in superficial and genital characters, but it is separable from the latter by the darker hindwing, and distal part of valva being more elongate, with more or less rounded apex in the male genitalia. It is also similar to *L. longivalva* Gozmány and *L. melliflua* Gozmány, but it differs from both by the relatively broader forewing and well-developed discal spots. A more distinct character is found in the shape of the sclerotized structure between the 7th and 8th terga, which is similar to that of *manesa* Wu and Liu. Externally paralevirota is hardly distinguishable from *bimaculata*, but the gray hindwing and the slightly smaller size are distinctive for *paralevirota*.

Description: Male. Wingspan 18.0-19.0 mm. Head yellowish orange. Thorax and tegula concolorous. Antenna yellowish orange; flagella with dark-brown rings dorsally. Second segment of labial palpus with outer surface brown, paler toward apex; inner surface yellowish orange on upper 1/2 and suffused with fuscous scales on lower 1/2; 3rd segment about 3/4 length of 2nd, dark brown ventrolaterally and yellowish orange dorsolaterally. Ventral surface of legs dark brown. Forewing broader distally; ground color yellowish orange, irregularly suffused with dark-brown scales; costa slightly arched near 1/3, with dark-brown suffusion on basal 1/4, and then almost straight; a small discal spot before middle and a larger, rectangular one near end of cell, inconspicuously connected with fuscous pretornal patch; apex obtuse; cilia concolorous with dark-brown basal line from before apex to beyond tornus;  $R_3$  free,  $R_4$  and  $R_5$  stalked beyond middle, CuA<sub>1</sub> and CuA<sub>2</sub> shortly stalked. Hindwing gray;  $M_2$  separate from  $M_3$  at base,  $M_3$  and CuA<sub>1</sub> stalked near 3/4; apex more or less obtuse. Female unknown.

*Male genitalia* (Figs. 30, 30a-b): Basal lobes of uncus relatively small; gnathos relatively long, slender. Valva longer, more elongate distally than that of *levirota* Wu and Liu, with round apex; bridgelike structure strongly angled medially; juxta with semiovate protrusion at both sides on distal margin, emarginate medially. It is also close to that of *manesa* Wu and Liu, but distal part of valva is not as narrow as that of *manesa*, and more elongated distally than that of *levirota*; aedeagus rather slender, with a pair of long cornuti. Abdominal sclerite between 7th and 8th segments with semiovate protrusion distally.

*Types*: Holotype: ♂, Baibara (Meiyuan), Taichung Co., Taiwan, 24 Mar. 1942 (S Issiki), Issiki



Figs. 32-35. Male genitalia. 32. *L. metacausta* Meyrick, 32a. ditto, aedeagus, 32b. ditto, 7th sternite; 33. *L. shanpinensis* sp. nov., 33a. ditto, aedeagus; 34. *L. latiola* sp. nov., 34a. ditto, aedeagus; 35. *L. megalopis* Gozmány, 35a. ditto, aedeagus, 35b. ditto, 7th sternite (scales: 0.5 mm).

Coll. 1972. gen. no. CIS-4112. Paratype: 1 ♂, same locality as holotype, 26 Mar. 1942 (S Issiki), Issiki, Coll. 1972. Types are deposited in USNM.

Distribution: Taiwan (endemic).

*Etymology*: The name was derived from the name of the related species, "*L. levirota*."

### Lecithocera thaiheisana, sp. nov. (Figs. 8, 31, 31a-c, 55)

*Diagnosis*: The species is closely related to *L. cuspidata* Wu and Liu, but the outer discal spot is distinct and round, whereas in the latter it is elongated and connected to the inner margin. The male genitalia are similar to those of the latter, but can be separated by the shape of the cornuti. Externally *L. thaiheisana* is more similar to *L. metacausta* (Meyrick), but the valva of the male genitalia is narrowed distally, with the apex acute.

Description: Male and female. Wingspan 19.0 mm. Head, thorax, and tegula gravish orange. Antenna pale orange, with distinctly developed annulation on segments. Second segment of labial palpus grayish orange on outer surface, yellowish white on inner surface; 3rd segment shorter than 2nd, dark brown ventrally. Hindtibia covered with yellowishwhite hair-like setae. Forewing gravish brown, broader toward termen, dark-brown scales sparsely scattered especially on lower 1/2 and beyond 2/3 length; 2 dark discal spots present, inner one slightly smaller than outer one; apex round; termen oblique; cilia concolorous with rest of wing; R<sub>3</sub> free, R<sub>4</sub> and R<sub>5</sub> stalked beyond middle, R<sub>5</sub> to termen, CuA<sub>1</sub> and CuA<sub>2</sub> short, stalked. Hindwing gray; apex obtuse; termen strongly sinuate in middle; M<sub>2</sub> present, M<sub>3</sub> and CuA<sub>1</sub> stalked before middle, CuA<sub>2</sub> arising near ventrodistal angle of cell; cell closed.

Male genitalia (Figs. 31, 31a-c): Basal lobes of uncus relatively large and elongate. Gnathos relatively short. Valva narrowed distally; apex acute; bridge-like band sharply angled in middle. Juxta moderate, smoothly incurved on distal margin, with short lateral lobes; convex on anterior margin medially. Aedeagus rather slender, shorter than valva, bent before middle, with few short cornuti, spicules in vesica medially. Abdominal sclerite between 7th and 8th segments with V-shaped plate and with 2 bundles of long hair-pencils medially.

*Female genitalia* (Fig. 55): Antrum wide, short; distal margin almost straight. Ductus bursae broadened medially, about 1.5 times length of corpus bursae; ductus seminalis arising from about 2/3 length. Corpus bursae with crescent-shaped signum. *Types*: Holotype:  $\beta$ , Taiheisan (= Taipingshan), Ilan Co., 10 May 1942 (S Issiki), Issiki Coll. 1972, gen. slide no. 4188/Park. Paratype: 1  $\uparrow$ , Suisya (= Shuishe), Nantou Co., 20 Mar. 1943 (S Issiki), Issiki coll. 1972, gen. slide no. CIS-4256. Types are deposited in USNM.

Distribution: Taiwan.

*Etymology*: The species name was derived from the type locality.

### Lecithocera metacausta Meyrick, 1910 (Figs. 9, 32, 32a-b)

*Lecithocera metacausta* Meyrick, 1910: 446; Clarke, 1965: 143; Wu and Liu, 1993: 322; Wu, 1997: 132. Type: ♂, Khasi Hills, N. India. Coll. BMNH.

*Diagnosis*: Superficially this species is closely related to *L. eretma* Wu and Liu, 1993, but it is smaller than *eretma* with the wingspan of the holotype being 19 mm. Their status requires further



Figs. 36-39. Male genitalia. 36. *Lecithocera fascinatrix* Meyrick, 36a. ditto, aedeagus, 36b. ditto, 7th sternite; 37. *L. errecta* Meyrick, 37a. ditto, aedeagus, 37b. ditto, 7th sternite, 37c. lateral aspect of uncus lobe and gnathos; 38. *L. aulias* Gozmány, 38a. ditto, aedeagus, 38b. ditto, 7th sternite, 38c. lateral aspect of uncus lobe and gnathos; 39. *L. rotundata* Gozmány, 39a. ditto, aedeagus, 39b. ditto, 7th sternite (scales: 0.5 mm).

analysis. The abdominal sclerite between the 7th and 8th segments is similar to that of the following new species, *latiola*. Wingspan 15.0-16.0 mm. Female unknown.

*Male genitalia* (Figs. 32, 32a-b): See Clarke (1965, pl. 71, fig. 4-4b) and Wu and Liu (1993, fig. 22), and Wu (1997, pl. 12, fig. 3).

Materials examined: 1 3, Minchr, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), gen slide no. CIS-4197/Park. 1 3, Suweon, Korea, 1 July 1990 (SW Oh), gen. slide no. CIS-4295/Park.

Distribution: Taiwan, Korea (new record).

### Lecithocera latiola, sp. nov (Figs. 10, 34, 34a-b, 60)

*Diagnosis*: This species is similar to *L. pelomorpha* Meyrick, but the ground color of the forewing is paler, with outer discal spot ovate,  $R_4$  and  $R_5$  stalked near middle, instead of beyond middle in *pelomorpha*.

Description: Male and female. Wingspan 17.0-19.0 mm. Head covered with raised scales anteriorly. Thorax and tegula unicolorous. Second segment of labial palpus relatively slender, grayish orange on outer surface, inner surface almost unicolorous; 3rd segment slightly shorter than 2nd, dark brown ventrally. Forewing broader toward apex; ground color pale ochreous, brown scales scattered sparsely beyond 2/3 length; costa almost straight, dark brown near base; 2 dark-brown discal spots present, a small one in middle and a large one at end of cell; termen weakly sinuate; R1 arising before 1/2 length of cell, R<sub>3</sub> free, R<sub>4</sub> and R<sub>5</sub> stalked to 1/2 their length, M<sub>2</sub> almost parallel to M<sub>1</sub>, CuA<sub>1</sub> and CuA<sub>2</sub> connate. Undersurface of forewing covered with brown scales throughout. Hindwing grayish yellow; apex obtuse; M<sub>2</sub> arising far from M<sub>1</sub>, M<sub>3</sub> and CuA<sub>1</sub> stalked for 1/3 length; cell almost closed.

*Male genitalia* (Figs. 34, 34a-b): Basal lobes of uncus small, slender. Gnathos relatively small. Valva elongated, distal part slightly longer than basal part, with round apex. Aedeagus stout, bent at 1/3 length; cornuti with several short hook-shaped sclerites connected by a row of numerous small denticles, with a preapical spinelike process. Abdominal sclerite between 7th and 8th segments with 2 semiovate plates separated laterally.

*Female genitalia* (Fig. 60): Antrum cup-shaped, wider distally. Ductus bursae narrowed distally and relatively broad; ductus seminalis arising from middle. Corpus bursae rather small; plate of signum with dense denticles.

Types: Holotype: 3, Kuanyuan 2420 m, Mt.

Hohuan Hotel, Hualien Co., 3 July 1996 (KT Park and JS Lee), gen slide no. CIS-4195. Paratypes: 3  $\Im$   $\Im$ , same data as holotype, gen. slide no. CIS-4520, CIS; 4  $\Im$   $\Im$ , 1  $\stackrel{\circ}{+}$ , Tienchi 2260 m, Kaohsiung Co., 7 July 1996 (KT Park and JS Lee), gen. slide no. 4534 ( $\stackrel{\circ}{+}$ ), CIS. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Etymology*: The name was derived from the Latin "latus" (= broad), corresponding to the relatively broad forewings.

### Lecithocera shanpinensis, sp. nov. (Figs. 11, 33, 33a-b)

*Diagnosis*: This species is smaller than any other members of related species belonging to this genus.

Description: Male. Wingspan 10.5 mm. Head brown. Tegula and thorax concolorous with head. Antenna relatively thick, with dark annulations well developed on each segment. Second segment of



**Figs. 40-43.** Male genitalia. 40. *L. serena* Gozmány, 40a. ditto, aedeagus, 40b. ditto, 7th sternite; 41. *L. fuscosa* sp. nov., 41a. ditto, aedeagus, 41b. ditto, 7th sternite; 42. *L. angustiella* sp. nov., 42a. ditto, aedeagus, 42b. ditto, 7th sternite; 43. *L. charcata* Wu and Liu, 43a. ditto, aedeagus, 43b. ditto, 7th sternite, 43c. lateral aspect of uncus lobe and gnathos (scales: 0.5 mm).

labial palpus normally thickened, orange white, irregularly speckled with pale-brown scales on outer surface; 3rd segment slender, slightly shorter than 2nd, apical 1/3 brown. Forewing brown, with dark brown scales scattered throughout; discal spot absent; apex rounded; termen almost straight;  $R_3$ stalked near base of  $R_{4+5}$ ,  $R_5$  to termen. Hindwing gray;  $M_2$  and  $M_3$  coincident.

*Male genitalia* (Figs. 33, 33a-b): Basal lobes of uncus relatively large. Valva with round apex, with short, hair-like setae along ventral margin on distal 1/2 and a series of setae in middle. Juxta concave on distal margin. Aedeagus with two bundles of setae medially and preapically.

*Type*: Holotype:  $\beta$ , Shanpin For. Stn. 750 m, 10 km SE Liukuei, Kaohsiung Co., 5-6 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4254. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the type locality.

### Lecithocera megalopis Meyrick, 1916

(Figs. 12, 35, 35a-b)

Lecithocera megalopis Meyrick, 1916: 575; Clarke, 1965: 143; Wu and Liu, 1993: 320; Wu, 1997: 117. Lectotype: &, Mt. the Apo, the Philippines, BMNH-8802/Clarke, Coll. BMNH.

*Diagnosis: L. megalopis* is similar to *melliflua* Gozmány. Forewing with  $R_3$  approximated to  $R_{4+5}$ ,  $R_4$  and  $R_5$  stalked beyond middle. Hindwing with CuA<sub>1</sub> very weak, arising from 2/5 length of M<sub>3</sub>. Wingspan 14.0 mm.

*Male genitalia* (Figs. 35, 35a-b). See also Clarke (1965, pl. 71, fig. 3-3b), Wu and Liu (1993, fig. 4), and Wu (1997, pl. 8, fig. 5) for male genitalia.

*Material examined*: 1 *3*, Wulai, Taipei Co., 1-2 July 1996, (KT Park and JS Lee), gen. slide no. 4171/Park. Female was not found.

*Distribution*: Taiwan (new record), China (Jiangxi), the Philippines.

*Remarks*: This species was originally described from Mt. Apo, the Philippines, based on 4 specimens of both sexes, and recently it was reported from Jianxi, South China by Wu (1993, 1997).

### Lecithocera fascinatrix Meyrick, 1935 (Figs. 13, 36, 36a-b)

Lecithocera fascinatrix Meyrick, 1935: 563; Gaede, 1937: 520; Clarke, 1965: 131.

Lecithocera (Patouissa) fascinatrix: Gozmány, 1978: 118; Wu, 1997: 140. Lectotype: ♂, Tikusiko, Formosa, BMNH-8799/ Clarke, Coll. BMNH.

Diagnosis: Wingspan 12.0 mm. This species

can be separated from its allies by the dark-brown streak on the basal 1/5 of costal margin and the broad brown fascia along the termen.

*Male genitalia* (Figs. 36, 36a-b): See Clarke (1965, pl. 65, fig. 1), Gozmány (1978, pl. 32, fig. 64), and Wu (1997: 140, pl. 14, fig. 6) for the male. Female unknown.

Materials examined: 1 3, Tikusiko, 6 Aug. 1933 (S Issiki), Issiki Coll. 1972, gen slide no. 4078/Park, USNM; 1 3, Taiwan (no date or locality label), USNM; 2 3 3, Fushan For. Stn. 650 m, 4-11 June 1995 (JB Heppner), FSCA. Additional specimens examined: Lectotype, 3, "Tikusiko, Formosa, sl. 9.9. 33." "Lecithocera fascinatrix Meyr. E. Meyrick det. in Meyrick Coll" gen. slide no. 8799/Clarke; 1?, abdomen missing, "Tikusiko, Formosa, sl. 6.8.22," "Lecithocera fascinatrix Meyr. E. Meyrick det. in Meyrick Coll. BMNH."

Distribution: Taiwan (endemic).



**Figs. 44-46.** Male genitalia. 44. *L. palingensis* sp. nov., 44a. ditto, aedeagus, 44b. ditto, 7th sternite, 44c. lateral aspect of uncus lobe and gnathos; 45. *L. pulchella* sp. nov., 45a. ditto, aedeagus, 45b. ditto, 7th sternite, 45c. lateral aspect of uncus lobe and gnathos; 46. *L. tienchiensis* sp. nov., 46a. ditto, aedeagus, 46b. ditto, 7th sternite, 46c. lateral aspect of uncus lobe and gnathos (scales: 0.5 mm).

## Lecithocera erecta Meyrick, 1935

(Figs. 14, 37, 37a-c, 57)

Lecithocera erecta Meyrick, 1935: 74; Clarke, 1965: 128; Gozmány, 1978: 110; Wu, 1997: 127. Lectotype: ♂, Tienmushan, Checking Prov., China, BMNH-8793/Clarke, Coll. BM.

*Diagnosis*: Superficially this species is similar to *parenthesis* Meyrick, but can be separated by male and female genital characters, especially in the trapezoidal antrum and the round signum in *parenthesis*. Wingspan 13.0-14.0 mm.

*Male and female genitalia* (Figs. 37, 37a-c, 57): See also Clarke (1965, pl. 164, fig. 1) for the male; Gozmány (1973, pl. 29, fig. 52; pl. 66, fig. 52) and Wu (1997, pl. 11, fig. 2; pl. 30, fig. 2) for the male and female.

*Materials examined*: 3  $\beta \beta$ , 1 +, Chingshan 1100 m, Taichung Co., 27 III- 1 Apr. 1990 (JB Heppner and H Wang), gen. slide no. CIS-4082 ( $\beta$ ), 4196 (+), FSCA; 1 +, Liukuei, Kaohsiung Co., 16-23 Mar. 1990 (JB Heppner and H Wang), FSCA; 1  $\beta$ , Kuanyuan 2420 m, Mt. Hohuan Hotel, Hualien Co., 3 July 1996 (KT Park and JS Lee), gen slide no. CIS-4170; 1  $\beta$ , same data as previous one, CIS.

*Distribution*: Taiwan (new record), China (Zhejiang, Anhui, Jiangxi, Hunan, Fujian, Sichuan, Yunnan).

*Remarks: L. parenthesis* was originally described from Nepal, and Wu (1997) cited material of *parenthesis*, with 3 females which were collected only from Tibet.

### Lecithocera aulias Meyrick, 1910

(Figs. 15, 38, 38a-c, 58)

Lecithocera aulias Meyrick, 1910: 447; Clarke, 1965: 111. Lectotype: 3, Khasi Hills, Assam, BMNH-8766/Clarke, Coll. BMNH.

Lecithocera (Patouissa) aulias: Wu and Liu, 1993: 445: Wu, 1997: 131.

= *squalida* Gozmány, 1978: 120. Type: ♂, Zhejiang, China, 4567/Gozmány, Coll. ZFMK, **syn. nov**.

*Diagnosis*: Forewing with  $R_3$  connate to  $R_{4+5}$ ,  $R_{4+5}$  stalked beyond middle,  $CuA_1$  and  $CuA_2$  stalked from near base. Hindwing with  $M_3$  and  $CuA_1$  stalked near middle. Wingspan 13.0-14.0 mm.

*Male and female genitalia* (Figs. 38, 38a-c, 58): See Clarke (1965, pl. 55, fig. 4-4c) and Gozmány (1978, pl. 33, fig. 68) for the male; Wu (1997, pl. 7, fig. 2; pl. 30, fig. 5) for the male and female.

*Materials examined*: 1  $\beta$ , 1 +, Fushan For. Stn. 650 m, Ilan Co., 4-11 Apr. 1990 (JB Heppner and H Wang), gen. slide no. CIS-4081( $\beta$ ), FSCA; 1  $\beta$ , same locality, 27 July 1995 (WT Jou), CIS; 2  $\beta$ , 1 +, Minchr 1160 m, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4294 (  $\Im$ ) and 4289 ( $\Im$ ), CIS; 1  $\Im$ , Wulai 550 m, Taipei Co., 29-30 June 1996 (KT Park and JS Lee), CIS.

*Distribution*: China (Hunan, Jiangxi, Sichuan), Taiwan (new record), India.

*Remarks*: The Taiwnanese specimens of this species are identical to *squalida* Gozmány in superficial and genital characters. The male genitalia of the lectotype of *aulias* Meyrick (Clarke, 1965: 111, Fig. 3a-b) also agree well with those of *squalida* Gozmány (1978, 5: 120, Fig. 68). Gozmány (1978) described *squalida*, based on a single male, without comparision with specimens of this species, and Wu (1997) listed these 2 species separately, but I found their male genitalia to be identical and so synonymize *squalida* Gozmány with *aulias* Meyrick. Female unknown.

### Lecithocera rotundata Gozmány, 1978 (Figs. 16, 39, 39a-b, 59)

Lecithocera rotundata Gozmány, 1978: 116; Wu, 1997: 129. Type: &, Tienmushan, China, 4320/Gozmány, Coll. ZFMK.



Figs. 47-51. Male genitalia. 47. *L. fascicula* sp. nov., 47a. ditto, aedeagus, 47b. ditto, 7th sternite; 48. *L. altusana* sp. nov., 48a. ditto, aedeagus, 48b. ditto, 7th sternite; 49. *L. atricastanea* sp. nov., 49a. ditto, aedeagus, 49b. ditto, 7th sternite (scales: 0.5 mm). Adults. 50. *L. pulchella* sp. nov.; 51. *L. atricastanea* sp. nov.

*Diagnosis*: Hindwing with  $M_3$  and  $CuA_1$  stalked near 3/4;  $CuA_1$  and  $CuA_2$  stalked from near base. Wingspan 13.0 mm.

*Male genitalia* (Figs. 39, 39a-b, 59): See Gozmány (1978, pl. 6, fig. 62) and Wu (1997: pl. 6, fig. 5).

*Female genitalia* (Fig. 59): Female genitalia are illustrated herein for the 1st time. Apophyses anteriores longer than 1/2 length of apophyses posteriores. Anterior margin of 8th sternum slightly emarginate at middle. Antrum rather short, about 1/4 length of ductus bursae. Ductus bursae longer than corpus bursae; ductus seminalis arising from middle of ductus bursae forming a sac. Plate of signum ovate, with many denticles.

*Materials examined*: 1  $\beta$ , Taihoku, Taipei Co., 21 Apr. 1933 (S Issiki), Issiki Coll, 1972, gen slide no. CIS-4137; 1  $\beta$ , Sinten (= Hsintien) Taipei Co., 3 May 1934 (S Issiki), Issiki Coll. 1972, USNM; 1  $\uparrow$ , Tzuen 1975 m, Hualien Co., 19-20 June 1982 (JB Heppner), gen. slide no. 4139, FSCA; 1  $\uparrow$ , Upper Paling 1500 m, Taoyuan Co., 7-9 July 1985 (JB Heppner and H Wang), FSCA; 5  $\beta$   $\beta$ , 3  $\uparrow$   $\uparrow$ , Minchr, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), gen slide no. CIS-4172 ( $\beta$ ) and -4179 ( $\beta$ ), CIS.

*Distribution*: Taiwan (new record), China (Zhejiang, Jiangxi).

### Lecithocera fuscosa, sp. nov. (Figs. 17, 41, 41a)

*Diagnosis*: This species is easily separable from its allies by the blackish forewing.

Description: Male. Wingspan 15.0-16.0 mm. Head ochreous bronze on frons and dark brown on vertex with raised yellowish-brown scales laterally. Thorax and tegula almost black. Antenna yellowish orange; flagella with dark-brown rings dorsally. Second segment of labial palpus yellowish brown evenly suffused with dark scales, except apical 1/4, on outer surface; yellowish orange on inner surface, dark brown dorsally except apical 1/4; 3rd segment dark brown ventrally, yellowish brown dorsally. Mid-tibia yellowish brown ventrolaterally; hindtibia with ochreous bands medially and distally. Forewing heavily covered with dark, blackish scales throughout; costa almost straight, outer discal spot inconspicuously marked; apex rounded; termen not sinuated, more or less rounded; cilia concolorous; R<sub>3</sub> free, R<sub>4</sub> and R<sub>5</sub> stalked beyond middle, R<sub>5</sub> to termen, CuA<sub>1</sub> and CuA<sub>2</sub> short stalked. Hindwing dark gray; apex obtuse; termen almost straight; M2 free, M3 and CuA1 stalked, separating distally; cell almost closed. Female unknown.

Male genitalia (Figs. 41, 41a): Similar to those of *metacausta* Meyrick: Basal lobes of uncus rather short; valva narrower and more elongated distally, bridge-like structure connecting tegumen sharply angled at middle; juxta incurved on distal margin; aedeagus much shorter, with 3 elongated, barshaped cornuti; abdominal sclerite with triangular plates medially.

*Types*: Holotype: 3, Minchr, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), gen slide no. CIS-4505. Paratypes: 2 3, collecting data same as for holotype. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the Latin "fuscus" (= black), corresponding to the blackish forewing.

### Lecithocera serena (Gozmány, 1978), comb. nov. (Figs. 18, 40, 40a-b)

Sarisophora serena Gozmány, 1978: 161; Wu, 1997: 193. Holotype: ♂, Tapaishan, Shensi Prov., China, GU-4247/ Gozmány, Coll. ZFMK.

*Diagnosis*: Gozmány (1978) stated that *L.* serena is similar to *L. simulatrix* Gozmány, **comb. nov**., but forewing is much paler than in the latter. Forewing with  $R_3$  free; hindwing with  $M_3$  and  $CuA_1$  stalked beyond 3/4 of their length. Male of the latter is unknown.



**Figs. 52-55.** Female genitalia. 52. *Homaloxestis cholopis* (Meyrick); 53. *H. hilaris* Gozmány; 54. *H. myeloxesta* Meyrick; 55. *L. thaiheisana* sp. nov. (scales: 0.5 mm).

*Male genitalia* (Figs. 41, 41a-b): See Gozmány (1978, pl. 41, fig. 96) for the male; Wu (1997, pl. 21, fig. 8, pl. 34, fig. 6) for the male and female.

Material examined: 3, Upper Paling 2260 m, Taoyuan Co., Taiwan, 11-12 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4524, CIS.

Distribution: Taiwan.

### Lecithocera chartaca Wu and Liu, 1993 (Figs. 19, 43, 43a-c)

Lecithocera (Patouissa) chartaca Wu and Liu, 1993: 334, Figs. 27, 34; Wu, 1997: 136. Holotype: &, Lushan, Jiangxi Prov., China, Coll. IZAS.

*Diagnosis*: This species is superficially similar to *L. iodocarpha* Gozmány, which is described from Tienmushan, China, especially in the thick basal part of antenna and wing patterns, but it can be distinguished by the shorter distal part of the valva, the different shape of the cornuti in the male genitalia, the abdominal sclerite between 7th and 8th segments (Figs. 43b), and the different size of the signum in the female genitalia. *L. chartaca* is also similar to *aulias* Meyrick in the male genitalia, but the abdominal sclerite of the 7th segment is not triangular as that of *aulias* Meyrick. Venation of both wings is similar to that of *L. fuscosa* and *L. palinenssis*, with M<sub>3</sub> and CuA<sub>1</sub> stalked apically in the hindwing. Wingspan 14.0-15.0 mm.

*Male genitalia* (Figs. 43, 43a-c): See Wu and Liu (1993, figs. 27, 34) and Wu (1997, pl. 13, fig. 5, pl. 31, fig. 2) for the male and female.

*Materials examined*: 1 3, Kukuan 720 m, Taroko Nat. Park, Taichung Co., (KT Park and JS Lee), gen. slide no. CIS-4182, and 5 3 3, same data as the holotype, gen. slide no. CIS-4168 (3), 4283 (2), CIS; 1 3, Shanpen For. Stn. 750 m, Liukuei, Kaohsiung Co., 5-6 July 1996 (KT Park and JS Lee), CIS; 2 2 2, Fushan For. Stn. 650 m, 4-11 Apr. 1990 (JB Heppner), FSCA.

*Distribution*: Taiwan (new record), China (Jiangxi).

### Lecithocera angustiella, sp. nov. (Figs. 20, 42, 42a-b, 61)

*Diagnosis*: This species is superficially very close to *L. chartaca*, but can be separated by the following characters: inner discal spot more distinct and larger, almost similar to the distal one is in *angustiella*, whereas the inner one is much smaller than distal one in chartaca. However, male genitalia are quite different from each other. It is also superficially similar to *L. cerussata* (Wu, 1994), **comb. nov.**, but the 2nd segment of the labial palpus of the

latter is dark brown outwardly. The male genitalia of *angustiella* have an extremely long valva and similar to that of *Psammoris meninx* Wu, but the latter lacks  $R_5$  in the forewing.

Description: Male and female. Wingspan 15.0-16.0 mm. Generally similar to *chartaca*. Head and thorax yellowish brown. Antenna yellowish brown, slightly thicker before 1/4; annulations hardly visible before 3/4, but more distinct beyond 3/4. Second segment of labial palpus yellowish brown, suffused with brown scales on both surfaces; 3rd segment strongly angled and upturned, slender, as long as 2nd, dark brown ventrolaterally. Forewing yellowish white, dark brown on costal 1/5; 2 discal spots present, inner one round and distal one elongated vertically; apex obtuse; cilia concolorous with rest of wing; R<sub>3</sub> stalked with R<sub>4+5</sub> near base. Hindwing pale gray; M<sub>2</sub> remote from M<sub>3</sub>+CuA<sub>1</sub> at base; M<sub>3</sub> and CuA<sub>1</sub> coincident.

*Male genitalia* (Figs. 42, 42a-b): Gnathos relatively small. Valva extremely long, tapered with round apex, whereas pointed in *cerrusta* Wu. Aedeagus relatively stout, about 3 times longer than width, with 3 long cornuti. Abdominal sclerite between 7th and 8th segments crecent-shaped, with incurved distal margin.



Figs. 56-59. Female genitalia. 56. *L. bimaculata* sp. nov.; 57. *L. errecta* Meyrick; 58. *L. aulias* Gozmány; 59. *L. rotundata* Gozmány (scales: 0.5 mm).

*Female genitalia* (Fig. 61): Apophyses anteriores relatively long, about 2/3 length of apophyses posteriores. Antrum short and wide. Ductus bursae broad with large leaf-like sclerites beyond 1/2 length; ductus seminalis arising from near anterior 1/3. Corpus burase large, ovate; signum small, with less than 10 denticles.

*Types*: Holotype:  $\mathcal{J}$ , Upper Paling 2260 m, Taoyuan Co., 11-12 July 1996 (KT Park and JS Lee), gen slide no. CIS-4138. Paratypes: 1  $\mathcal{J}$ , 1  $\stackrel{\circ}{+}$ , same data as holotype, gen. slide no. CIS-4284 ( $\stackrel{\circ}{+}$ ), CIS. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the Latin "angustus" (= narrow), corresponding to the shape of the narrow valva.

### Lecithocera palingensis, sp. nov. (Figs. 21, 44, 44a-c, 62)

*Diagnosis*: The species is hardly distinguishable from *L. nitikoba* Wu and Liu, 1993 in superficial characters, but it can be separated by the shape of the male genitalia with the valva more slender and straighter.

Description: Male. Wingspan 13.0-16.0 mm. Head, thorax, and tegula brownish yellow. Antenna brownish yellow; annulations on flagella hardly visible. Second segment of labial palpus pale brown on outer surface and brownish yellow on inner surface; 3rd segment shorter than 2nd, dark brown on ventral margin. Forewing ground color orange white, with dark-brown scales scattered sparsely throughout, with dark-brown fascia near 1/5 of costal margin; 2 dark discal spots well defined, inner one almost same as distal one in size; costa almost straight; apex acute;  $R_3$  stalked with  $R_4+R_5$  at 1/3,  $R_4$ and  $R_5$  stalked at 2/3,  $R_5$  to termen,  $M_2$  and  $M_3$  free, CuA<sub>1</sub> and CuA<sub>2</sub> shortly stalked. Hindwing pale gray; apex more or less acute; termen oblique, slightly sinuate; M<sub>2</sub> free, M<sub>3</sub> and CuA<sub>1</sub> stalked nearly to margin, CuA<sub>2</sub> arising relatively near distoventral angle of cell; cell closed.

*Male genitalia* (Figs. 44, 44a-c): Basal lobes of uncus small. Gnathos relatively small. Valva slender; distal part elongated, with a row of spines longitudinaly; apex obtuse. Juxta emarginate medially, with semiovate lobes on distal margin of both sides. Aedeagus 3/4 length of valva, with 2 forkshaped cornuti and numerous spicules in vesica. Abdominal segment with lateral crescentic sclerites extended distally.

*Female genitalia* (Fig. 62): Antrum cup-shaped, wider distally. Ductus bursae narrowed distally; duc-

tus seminalis arising before middle. Corpus bursae semiovate, without signum.

*Types*: Holotype: 𝔅, Upper Paling 2260 m, Taoyuan Co., 11-12 July 1996 (KT Park and JS Lee), gen slide no. CIS-4525, CIS. Paratypes: 4 𝔅 𝔅, 1 ♀, same data as the holotype, gen. slide no. CIS-4175, CIS; 1 𝔅, Chingshan 1100 m, Taichung Co., 31 Aug.- 4 Sept. 1988 (JB Heppner), gen. slide no. CIS-4106, FSCA; 1 𝔅, 1 ♀, Kukuan 720m, Taroko Nat. Park, Taichung Co., 8 July 1996 (KT Park and JS Lee), gen slide no. CIS-4288 (♀), CIS; 1 𝔅, Rengwati, 21 Mar. 1943 (S Issiki), Issiki Coll. 1972, USNM; 1?, Tikusiko, 6 Aug. 1933 (S Issiki), Issiki Coll. 1972, USNM; 36 𝔅 𝔅 and ♀♀, Lienhuachih, For. Res. Stn. 650 m, Nantou Co., 19-20 Nov. 1997 (KT Park), CIS.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the type locality, "Paling."

Lecithocera altusana, sp. nov. (Figs. 22, 48, 48a-b)

Diagnosis: This species can be separated from



**Figs. 60-63.** Female genitalia. 60. *L. latiola* sp. nov.; 61. *L. angustiella* sp. nov.; 62. *L. palingensis* sp. nov.; 63. *L. tienchiensis* sp. nov. (scales: 0.5 mm).

its allies by the dark-brown line running along the termen, and the male genitalia with valva almost parallelly margined.

Description: Male. Wingspan 15.0-15.5 mm. Head pale brown, thorax and tegula slightly darker. Antenna yellowish brown; annulations on flagella narrow, visible. Second segment of labial palpus pale yellowish white; 3rd segment concolorous, as long as 2nd. Forewing relatively broad, broader towards termen; ground color yellowish brown, scattered with brown scales; 2 dark discal spots well defined, distal one much larger, elongated vertically; apex more or less acute; dark brown line runs along termen; cilia concolorous; R<sub>3</sub> free, R<sub>4</sub> and R<sub>5</sub> stalked,  $R_5$  to termen, CuA<sub>1</sub> and CuA<sub>2</sub> shortly stalked. Hindwing slightly broader than forewing; apex more or less obtuse; termen slightly sinuate; M<sub>2</sub> present, M<sub>3</sub> and CuA<sub>1</sub> stalked near 1/3 of length; cell almost closed.

Male genitalia (Figs. 48, 48a-b): Basal lobes of uncus short, small. Gnathos relatively short. Valva almost parallelly margined and relatively broader beyond 3/4; distal part not clearly defined; costa heavily incurved; bridgelike band not strongly angled in middle; sacculus broadly developed with hairlike setae medially. Juxta strongly incurved medially on distal margin with lateral apices forming lobes. Aedeagus large, stout, as long as valva, with 2 acute processes dorsoapically; cornuti composed of several bundles of denticles. Abdominal sclerite between 7th and 8th segments divided into anterior and posterior parts connected vertically with a band.

*Types*: Holotype: *3*, Minchr, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), gen slide no. CIS-4177. Paratypes: 1 *3*, same data as the holotype (KT Park and JS Lee), CIS; 2 *3*, Upper Paling 2260 m, Taoyuan Co., 11-12 July 1996 (KT Park and JS Lee), CIS. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the Latin "altus" (= high).

### Lecithocera fascicula, sp. nov. (Figs. 23, 47, 47a-b)

*Diagnosis*: This species is similar to *L. altusana* in external and genital characters, but can be separated by the narrower forewing, the shape of the juxta, and 7th abdominal sclerite in the male.

Description: Male. Wingspan 14.0 mm. Head, thorax, and tegula yellowish white. Antenna yellowish white; annulations on flagella visible, darker beyond 2/3. Second segment of labial palpus pale yellowish white; 3rd segment concolorous, as long as 2nd. Forewing relatively narrow; ground color yellowish-white, with brown scales irregularly scattered, especially dense near apex; brownish-orange patch elongate from base to 1/4 along costa; 2 dark discal spots well defined, outer one much larger, elongated vertically; apex more or less acute; cilia with dark brown basal line running along termen, brown apically;  $R_3$  free,  $R_4$  and  $R_5$  stalked beyond middle,  $R_5$  to termen, CuA<sub>1</sub> and CuA<sub>2</sub> free. Hindwing pale gray; apex more or less obtuse; termen slightly sinuate;  $M_2$  present,  $M_3$  and CuA<sub>1</sub> stalked; cell closed.

*Male genitalia* (Figs. 47, 47a-b): Basal lobes of uncus ovate, stout. Gnathos short. Distal part of valva shorter than basal part, densely haired, with round apex; bridgelike band not sharply angled medially; sacculus with long hairlike setae medially. Juxta incurved medially. Aedeagus bent in middle, with several bundles of denticles; apex bifurcated. Abdominal sclerite between 7th and 8th segments with characteristic shape of plates as shown in fig. 47b, coremata a bundle of hair-pencils medially.

*Type*: Holotype:  $\mathcal{E}$ , Lienhwachih 690 m, Nantou Co., 4 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4181. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Remarks*: This species has somewhat different forewing venation from other members of *Lecithocera*, with  $M_3$ ,  $CuA_1$ , and  $CuA_2$  free of each other. However, the male genital and abdominal characters of this species agree well with the genus.

*Etymology*: The species name is derived from Latin "fascis" (= bundle, packet).

### Lecithocera tienchiensis, sp. nov. (Figs. 24, 46, 46a-c, 63)

*Diagnosis*: Superficially this species is very close to *L. eretma* Wu and Liu, 1993, but it can be separated by the male genitalic character: distal part of valva relatively long, as long as basal part, and heavily incurved on costa.

Description: Male and female. Wingspan 16.0-18.0 mm. Head, thorax, and tegula grayish-orange. Antenna pale orange with well-developed annulations on flagella. Second segment of labial palpus grayish orange, sparsely suffused with dark-brown scales on outer surface, yellowish white on inner surface; 3rd segment shorter than 2nd, dark brown ventrally. Hind tibia covered with yellowish-white hair-like setae. Forewing grayish brown, broader toward termen, brown scales sparsely scattered beyond 2/3 length; light orange along costa on under surface; 2 discal spots present, inner one slightly smaller than outer one; apex obtuse; cilia concolorous, but light orange on under surface;  $R_3$  free,  $R_4$  and  $R_5$  stalked near middle or beyond it (this condition variable within species), CuA<sub>1</sub> and CuA<sub>2</sub> shortly stalked. Hindwing gray; apex obtuse; M<sub>2</sub> distant from M<sub>3</sub>+CuA<sub>1</sub> at base, M<sub>3</sub> and CuA<sub>1</sub> stalked before middle; termen sinuate at middle, CuA<sub>2</sub> arising relatively near lower angle of cell; cell closed.

Male genitalia (Figs. 46, 46a-c): Basal lobes of uncus relatively large and elongate. Gnathos more or less short. Tegumen with long hair-pencils laterodistally. Valva with broad basal part; distal part narrow, as long as basal one, with hair bristles at conjunction; apex obtuse; bridge-like band not sharply angled in middle. Juxta emarginate medially on distal margin, with crescentic protrusion at both sides, convex on anterior margin medially. Aedeagus shorter than valva, with several short bar-shaped cornuti. Abdominal sclerite between 7th and 8th segments with crescent-shaped plates extending to both sides and 2 bundles of coremata medially.

*Female genitalia* (Fig. 63): Eighth sternum emarginate in middle. Antrum relatively long, cup-shaped; almost parallelly margined, sclerotized on distal 3/5 and membranous beyond. Ductus bursae broad on distal 1/2; signum elongate, about 1/3 length of corpus bursae, with denticles densely spaced.

*Types*: Holotype: 3, Tienchi 2260 m, Kaohsiung Co., 7 July 1996 (KT Park and JS Lee), gen. slide. no. CIS-4530. Paratypes: 6 3 3,  $1 \stackrel{\circ}{+}$ , same data as for holotype, gen. slide no. CIS-4537 ( $\stackrel{\circ}{+}$ ), CIS;  $1 \stackrel{\circ}{+}$ , Minchr 1160 m, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4537, 4539, CIS;  $1 \stackrel{\circ}{-}$ , Chingshan 1100 m, Taichung Co., 8-11 May 1989 (JB Heppner and H Wang), gen. slide no. CIS-4178, FSCA;  $1 \stackrel{\circ}{-}$ , Wulai 550 m, Taipei Co., 1-2 July 1996 (KT Park and JS Lee), CIS;  $1 \stackrel{\circ}{-}$ , Kukuan 720 m, Taroko Nat. Park, Taichung Co., 8 July 1996 (KT Park and JS Lee), CIS. Holotype to CIS on indefinite Ioan from Taiwan.

Distribution: Taiwan (endemic).

*Remarks*: *L. eretma* Wu and Liu, based on a single male from Sichuan, Central China (the right wing of the holotype removed and mounted on a slide), is very similar to *metacausta* Meyrick, which was described from Khasi Hills, N. India and hardly separable from the latter by superficial characters, except its smaller size. The male genitalia also resemble each other. *L. eretma* Wu and Liu and *L. metacausta* Meyrick may be synonymous.

Etymology: The species name was derived

from the type locality.

### Lecithocera pulchella, sp. nov. (Figs. 45, 45a-c, 50)

*Diagnosis: L. pulchella* is similar to *L. cerussata* (Wu), by lacking vein  $M_3$  in the hindwing, but can be separated from cerussata by its much larger size and broadly developed marginal fascia along the termen.

Description: Male and female. Wingspan 17.0-18.0 mm. Head and thorax yellowish orange. Antenna yellowish orange, with dark-brown rings dorsally, darker toward apex. Second segment of labial palpus brownish yellow, slightly suffused with dark scales on outer surface, inner surface paler than outer one; 3rd segment about 2/3 length of 2nd, with dark-brown apex. Forewing relatively broad; ground color yellowish orange, sparsely suffused with darkbrown scales beyond 2/3 length, with dark-brown fascia along costal margin at basal 1/4; 2 discal spots well defined, inner one near middle, smaller than distal one, distal one at end of cell; apex more or less acute; cilia brown along termen; R<sub>3</sub> stalked with  $R_4+R_5$  near 1/3,  $R_4$  and  $R_5$  stalked at 1/3 of  $R_{4+5}$ ,  $R_4$ and R<sub>5</sub> stalked beyond 2/3, R<sub>5</sub> to termen, CuA<sub>1</sub> and CuA<sub>2</sub> shortly stalked. Hindwing gray; apex rather acute;  $M_2$  connate with  $M_3$ ,  $M_3$  and  $CuA_1$  coincident; cell almost closed; cilia grayish-brown with yellowishorange line basally.

*Male genitalia* (Figs. 45, 45a-b): Basal lobes of uncus very short. Distal part of valva shorter than basal one, densely setose, well defined from basal one, with a row of short setae at conjunction; bridgelike band angled medially. Aedeagus slender, as long as valva, bent at basal 1/4. Abdominal sclerites simple.

*Types*: Holotype:  $\mathcal{J}$ , Upper Paling, Taoyuan Co., 11-12 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4174. Paratypes: 1  $\mathcal{J}$ , same data as holotype, CIS; 1  $\mathcal{J}$ , Shanpin For. Stn. 10 km SE Liukuei, Kaohsiung Co., 5-6. July 1996 (KT Park and JS Lee), gen. slide no. CIS-4176, CIS; 1  $\mathcal{J}$ , Lienhuachih 690 m, Nantou Co., 4 July 1996 (KT Park and JS Lee), gen. slide no. CIS-4522, CIS. Holotype to CIS on indefinite loan from Taiwan.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the Latin "pulcher" (= beautiful).

### Lecithocera atricastana, sp. nov.

(Figs. 49, 49a-b, 51)

*Diagnosis*: This species can be distinguished from its allies by the darker brown ground color of the forewing with well-developed, creamy-white median fascia.

Description: Male. Wingspan 15.5-17.0 mm. Head, thorax, and tegula dark brown. Antenna yellowish orange; flagella with brown rings dorsally, with dark brown apex. Second segment of labial palpi brownish yellow, slender; 3rd segment as long as 2nd, dark brown ventrolaterally. Ventral surface of legs dark gray; hindtibia dark gray on outer surface. Forewing more or less narrow, dark brown throughout, costa almost straight; a broad, creamy-white transverse fascia in middle; termen oblique; cilia concolorous with rest of wing; R<sub>3</sub> free, R<sub>4</sub> and R<sub>5</sub> stalked beyond middle, R<sub>5</sub> to termen, CuA<sub>1</sub> and CuA<sub>2</sub> shortly stalked. Hindwing gray; apex more or less acute; M<sub>2</sub> arched, M<sub>3</sub> and CuA<sub>1</sub> coincident.

*Male genitalia* (Figs. 49, 49a-b): Gnathos broad basally, relatively short. Valva strongly concave before middle on ventral margin and near basal 1/5 on costa; bridge-like structure angled in middle; distal part ovate; sacculus well developed, band-like. Juxta strongly emarginated on distal margin with lateral lobes incurved. Aedeagus simple, slightly shorter than valva, with a preapical spine; cornuti consist of 5 strong spines.

*Types*: Holotype:  $\mathcal{S}$ , Heiganzan (= Hungshan) Taichung Co., 11 Aug. 1943 (A Mutuura), gen. slide no. CIS-4253, USNM. Paratypes: 1  $\mathcal{P}$ , same data as for holotype, USNM; 1  $\mathcal{S}$ , 1  $\mathcal{P}$ , Minchr 1160 m, Taoyuan Co., 9-10 July 1996 (KT Park and JS Lee), CIS. Holotype and a female paratype in USNM and the last two paratypes in CIS.

Distribution: Taiwan (endemic).

*Etymology*: The species name was derived from the Latin "ater" (= black) and "castanea" (= brown), corresponding to the dark-brown forewing.

### Lecithocera theconoma Meyrick, 1926

Lecithocera theconoma Meyrick, 1926, Saraw. Mus., J., 3: 156; Gaede: 1937: 527.

Distribution: Taiwan.

*Remarks*: This species was originally described from Taiwan, but no specimen has been found.

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# 臺灣之祝蛾科(鱗翅目) (I): 祝蛾亞科中之 *Homaloxestis* Meyrick 屬 與 *Lecithocera* Herrich-Schäffer 屬

### 朴奎澤1

本文綜述臺灣之祝蛾亞科中之 Homaloxestis Meyrick 屬和 Lecithocera Herrich-Schäffer 屬,前者有 4 個種 類,後者有 22 個種類。 其中, Homaloxestis 屬的 H. baibaraensis,與 Lecithocera 屬的 L. bimaculata, L. paralevirota, L. thaiheisna, L. fuscosa, L. latiola, L. shanpinensis, L. angustiella, L. palingensis, L. fascicula, L. altusana, L. tienchiensis, L. pulchella, 及 L. atricastanea 等 13 個種為新種。 Homaloxestis hilaris Gozmány, Lecithocera errecta Meyrick, L. aulias Meyrick, L. pelomorpha Meyrick, L. megalopis Meyrick, L. rotundata Gozmány, 及 L. chartaca Wu and Liu 等 7 個種類為首次在臺灣發現。 Sarisophora Meyrick 屬和 Patouissa Walker 屬為 Lecithocera 的 同物異名; 而 L. squalida Gozmány 種為 L. aulias Meyrick 的同物異名。 L. simulatrix Gozmány, L. serena Gozmány 和 L. cerussata Wu 為新組合。

**關鍵詞**:系統分類, 祝蛾科, Homaloxestis, Lecithocera, 臺灣。

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