

中国丽细蛾属研究

(鳞翅目: 细蛾科: 细蛾亚科)

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丽细蛾属 (*Caloptilia* Hübner) 是细蛾亚科里的一个大属。它的种类很多, 遍布全世界。成虫前翅常为棕褐色, 前缘中央多具一半圆形或三角形鲜黄色斑。成虫有趋光性。幼虫早期潜叶, 晚期卷叶, 有些种类是林业重要害虫。

丽细蛾属于 1825 年由 Hübner 创立。它和细蛾属 (*Gracillaria* (Haworth)) 十分近似。它们的主要区别是: 丽细蛾属雄蛾第 7 和第 8 腹节各具一对味刷 (*coremata*); 雌蛾交配囊除少数种类外均具有两个囊突 (*signa*); 而细蛾属仅在第 8 腹节有一对味刷, 囊突一个。此外, 丽细蛾属的下列性状: 触角栉毛、前翅脉序、雄性背兜构造、雌性囊突的形状、老熟幼虫的毛序以及幼虫习性等变异很大。根据这些性状, 又可将丽细蛾属划分为 8 个亚属, 它们的主要检索如下:

丽细蛾属成虫分亚属检索表

- 1. 触角柄节有栉毛或栉鳞 2
- 触角柄节无栉毛或栉鳞 6
- 2. 前翅 M_2 和 M_3 脉彼此分离 3
- 前翅 M_2 和 M_3 脉同出一点或共柄 5
- 3. 背兜腹面肛管两侧有刚毛; 囊突两枚、镰刀状, 其中之一在弯弧的两侧均有齿 锤丽细蛾亚属 *Sphyrophora*^a
- 背兜腹面肛管两侧无刚毛; 囊突 1—2 枚, 如呈镰刀状, 仅在内侧有齿 4
- 4. 囊突一枚呈刺状 小丽细蛾亚属 *Minyoptilia*
- 囊突两枚呈镰刀状 瘦丽细蛾亚属 *Cecidoptilia*
- 5. 背兜有一对角突, 出自抱器瓣的基部 角丽细蛾亚属 *Rhadinoptilia*
- 背兜无角突 丽细蛾亚属 *Caloptilia* (大部种类)
- 6. 下唇须第 2 节下方有长三角形丛毛, 几乎和末节等长; 阳茎端环无刚毛; 两个囊突短、呈刺状 鳞丽细蛾亚属 *Povolnya*
- 下唇须第 2 节光滑, 若有丛毛则只相当末节之半; 阳茎端环有长刚毛; 两个囊突长、呈镰刀状 7

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7. 前翅 R_2 脉比 Cu_{1b} 脉出自中室点更接近翅端 8
 前翅 R_2 脉比 Cu_{1b} 脉出自中室点更远离翅端 丽细蛾亚属 *Caloptilia* (少数种类)
8. 背兜肛管两侧有一对骨化突, 上面有一列长刚毛; 阴茎端环背面有长刚毛
 刺丽细蛾亚属 *Timodora*
 背兜肛管两侧无骨化突; 阴茎端环无刚毛 叶丽细蛾亚属 *Phylloptilia*

我国迄今为止, 只报道过 4 种丽细蛾, 都属于丽细蛾亚属。它们是: 柳丽细蛾 [*Caloptilia (Caloptilia) chrysolampra* (Meyrick)], 茶丽细蛾 [*C.(C.) theivora* (Walsingham)], 枫丽细蛾 [*C.(C.) recitata* (Meyrick)], 和苹丽细蛾 [*C.(C.) zachrysa* (Meyrick)]。在对中国丽细蛾属研究过程中, 共发现 18 个新种和 17 个新记录, 分别隶属下列 6 亚属: 丽细蛾亚属 (*Caloptilia*), 叶丽细蛾亚属 (*Phylloptilia*), 角丽细蛾亚属 (*Rhadinoptilia*), 鳞丽细蛾亚属 (*Povolnya*), 刺丽细蛾亚属 (*Timodora*) 和锤丽细蛾亚属 (*Sphyrophora*)。其中丽细蛾亚属占绝大多数, 有 34 种。其他 5 亚属各有 1 种, 共计 39 种。

现将每种的主要异名、分布及寄主植物按发表迟早顺序连同新种名录整理如下:

1. 白桦丽细蛾 *Caloptilia (Caloptilia) suberinella* (Tengstr.) 新记录

Gracilaria suberinella Tengstr., 1847, Not. Sällsk. Faun. Fenn. Forh. 1:145;
 Benander, 1943, Opusc. Ent. Lund. 8:139-141.

分布: 黑龙江(五营); 欧洲。

寄主植物: 白桦 (*Betula platyphylla* Suk.) 和暴马丁香 [*Syringa reticulata* var. *mandshurica* (Maxim.) Hara]。

2. 茶丽细蛾 *Caloptilia (Caloptilia) theivora* (Walsingham)

Gracilaria theivora Walsingham, 1893, Ind. Mus. Notes 2:49, f. 1.

Caloptilia (Caloptilia) theivora: Kumata, 1982, Ins. matsum. n.s. 26:35-37, figs.

分布: 浙江(杭州)、江西(庐山、大余)、四川(峨眉山、青城山)、台湾; 日本、印度、斯里兰卡。

寄主植物: 山茶 (*Camellia japonica* L.)、茶梅 (*C. sasanqua* Thunb.) 和茶 (*Thea sinensis* L.) 等。

3. 大豆丽细蛾 *Caloptilia (Caloptilia) soyella* (Deventer) 新记录

Gracilaria soyella Deventer, 1904, Tijdschr. Ent. 47:22, pl:2(1).

Caloptilia (Caloptilia) soyella: Kumata, 1982, Ins. matsum. n.s. 26:87-89, figs.

分布: 北京市(怀柔、植物园)、江西(南昌、临江镇)、福建(莆田); 日本、爪哇、印度。

寄主植物: *Azuki angularis* Ohwi (豆科)、大豆 (*Glycine max* Merr.)、鸡眼草 (*Kummerovia striata* Schindler)、短梗胡枝子 (*Lespedeza cyrtobotrya* Miq.)、黑绿豆 (*Phaseolus mungo* L.) 和木豆 (*Cajanus indicus* Sprengel)。

4. 苹丽细蛾 *Caloptilia (Caloptilia) zachrysa* (Meyrick)

Gracilaria zachrysa Meyrick, 1907, Journ. Bomb. Nat. Hist. Soc. 17:983.

Caloptilia (Caloptilia) zachrysa: Kumata, 1982, Ins. matsum. n.s. 26:37—39, figs.

分布: 河北(昌黎)、江西(庐山)、台湾;日本、印度。

寄主植物: 苹果 (*Malus pumila* Mill.)、光叶石南 (*Photinia glabra* Maxim.) 及一种悬钩子 (*Rubus*)。

5. 枫丽细蛾 *Caloptilia (Caloptilia) recitata* (Meyrick)

Gracilaria recitata Meyrick, 1918, Exot. Microlep. 2:178.

Caloptilia (Caloptilia) recitata: Kumata, 1982, Ins. matsum. n.s. 26:57—59, figs.

分布: 江西(大余)、福建(三港);日本、印度、尼泊尔。

寄主植物: 盐肤木 (*Rhus javanica* L.)、野漆树 (*R. sylvestris* Sieb. et Zucc.)、毛漆树 (*R. trichocarpa* Miq.) 及黄栌 (*Cotinus coggygria* var. *cinerea* Engl.)

6. 桦丽细蛾 *Caloptilia (Caloptilia) betulicola* (Hering) 新记录

Gracilaria betulicola Hering, 1927, Zeit. Ang. Ent. 13:168.

Caloptilia (Caloptilia) betulicola: Kumata, 1982, Ins. matsum. n.s. 26:84—86, figs.

分布: 北京市(百花山);日本、欧洲中部和北部。

寄主植物: 数种桦木属 (*Betula* spp.), 包括白桦 (*Betula platyphylla* Sukatchev)。

7. 栗丽细蛾 *Caloptilia (Caloptilia) sapporella* (Matsumura) 新记录

Gracilaria sapporella Matsumura, 1931, 6 000 Ill. Ins. Jap.:1101, f.2286.

Caloptilia (Caloptilia) sapporella: Kumata, 1982, Ins. marsum. n.s. 26:79—82, figs.

分布: 北京市(密云), 吉林(长白山);日本。

寄主植物: 日本栗 (*Castanea crenata* Sieb. et Zucc.)、麻栎 (*Quercus acutissima* Carr.)、柞栎 (*Q. dentata* Thunb.)、粗齿蒙古栎 (*Q. mongolica* Fisch. var. *grosseserrata* Rehd. et Wils.) 和抱栎 (*Q. serrata* Thunb.)、及一种杜鹃 (*Rhododendron macrosepalum* Maxim.)。

8. 柳丽细蛾 *Caloptilia (Caloptilia) chrysolampra* (Meyrick)

Gracilaria chrysolampra Meyrick, 1938, Exot. Microlep. 5:38.

Caloptilia (Caloptilia) chrysolampra: Kumata, 1982, Ins. matsum. n.s. 26:34—35, figs.

分布: 浙江(杭州)、江西(庐山、大余)、四川(峨眉山、青城山)、台湾;日本。

寄主植物: 黑杨 (*Populus nigra* L.) 和垂柳 (*Salix babylonica* L.).

9. 漆丽细蛾 *Caloptilia (Caloptilia) rhois* Kumata 新记录

Caloptilia recitata: Issiki, 1957, Icon. Heterocer. Jap. Color. Natur. 1:30, pl. 4 (114) (part).

Caloptilia (Caloptilia) rhois Kumata, 1982, Ins. matsum. n.s. 26:62—65, figs.

分布: 江西(九连山)、四川(青城山); 日本、朝鲜。

寄主植物: 盐肤木 (*Rhus javanica* L.) 和野漆树 (*R. succedanea* L.)。本种有夏秋二型, 我国现仅发现夏型。

10. 槭丽细蛾 *Caloptilia (Caloptilia) aceris* Kumata 新记录

Caloptilia aceris Kumata, 1966, Ins. matsum. 29:1, pls.

Caloptilia (Caloptilia) aceris: Kumata 1982, Ins. matsum. n.s. 26:44, figs.

分布: 陕西(宁陕火地塘); 日本、苏联。

寄主植物: 宫部氏槭 (*Acer miyabei* Maxim.)、地锦槭 (*A. mono* Maxim.)、鸡爪槭 (*A. palmatum* Thunb.) 和糖槭 (*A. saccharum* Marsch.)。

11. 赤杨丽细蛾 *Caloptilia (Caloptilia) alni* Kumata 新记录

Caloptilia alni Kumata, 1966, Ins. matsum. 29:12, pls. 2(13&14), 8(34) and 17 (56).

Caloptilia (Caloptilia) alni: Kumata, 1982, Ins. matsum. n.s. 26:83 & 84, fig. 55(A—C).

分布: 黑龙江(带岭、五营); 日本、苏联。

寄主植物: 毛赤杨 (*Alnus hirsuta* Turcz.) 和日本栲木 (*A. japonica* Steud.)。

12. 黑丽细蛾 *Caloptilia (Caloptilia) kurokoi* Kumata 新记录

Caloptilia kurokoi Kumata, 1966, Ins. matsum. 29:7, pls.

Caloptilia (Caloptilia) kurokoi: Kumata, 1982, Ins. matsum. n.s. 26:54, fig. 52(E).

分布: 四川(峨眉山、青城山)、江西(庐山); 日本。

寄主植物: 褐脉槭 (*Acer rufinerve* Sieb. et Zucc.)。

本种前翅三角斑在 Kumata (1966) 的原始描述中为白色, 而在我们的标本均为黄色。除此之外, 其余特征均与原始描述符合。

13. 五角枫丽细蛾 *Caloptilia (Caloptilia) monticola* Kumata 新记录

Caloptilia monticola Kumata, 1966, Ins. matsum. 29:8, pls.

Caloptilia (Caloptilia) monticola: Kumata, 1982, Ins. matsum. n.s. 26:54, figs. 52(F—H) & 76(C).

分布: 黑龙江(五营); 日本、苏联远东。

寄主植物: 五角枫(五叶槭) (*Acer pentaphyllum* Diels.)、齿叶槭(*A. argutum* Maxim.)、华北茶条槭(*A. ginnala* Maxim.)、褐脉槭(*A. rufinerve* Sieb. et Zucc.)、地锦槭(*A. mono.* Maxim.)、花楷槭(*A. ukurunduense* Trautv. et Mey.)和天山槭(*A. semenovi* Regel et Herd.)。

14. 檀木丽细蛾 *Caloptilia (Caloptilia) pulverea* Kumata 新记录

Caloptilia pulverea Kumata, 1966, Ins. matsum. 29:13, pls.

Caloptilia (Caloptilia) pulverea: Kumata, 1982, Ins. matsum. n.s. 26:86 & 87, figs.

分布: 黑龙江(带岭)、四川(峨眉山); 日本、苏联。

寄主植物: 毛赤杨(*Alnus hirsuta* Turcz.)、乌苏里赤杨(*A. maximowiczii* Callier)、赤杨(*A. japonica* Steud.)、东北桤木(*A. matsumurae* Callier)、锯叶桤木(*A. serrulata* Callier.)。

15. 双色丽细蛾 *Caloptilia (Caloptilia) bicolor* Ermolaev 新记录

Caloptilia bicolor Ermolaev, 1977, Proc. Zool. Inst. Acad. Sci. USSR 70:105 & 110.

Caloptilia (Caloptilia) bicolor: Kumata, 1982, Ins. matsum. n.s. 26:72-74, figs.

分布: 北京市(百花山); 日本、苏联远东。

寄主植物: 岳桦(*Betula ermanii* Cham.)、日本樱桦(*B. grossa* Sieb. et Zucc.) 和黑桦(*B. dahurica* Pall.)。

16. 朴丽细蛾 *Caloptilia (Caloptilia) celtidis* Kumata 新记录

Caloptilia (Caloptilia) celtidis Kumata, 1982, Ins. matsum. n.s. 26:76-79, figs.

分布: 四川(青城山); 日本。

寄主植物: 朴树(*Celtis sinensis* Pers.)。

本种有夏秋二型, 我国目前仅发现夏型。

17. 桤丽细蛾 *Caloptilia (Caloptilia) issikii* Kumata 新记录

Caloptilia (Caloptilia) issikii Kumata, 1982, Ins. matsum. n.s. 26:82 & 83, figs. 31 & 54(J).

分布: 黑龙江(镜泊湖); 日本。

寄主植物: 日本桤木(*Alnus japonica* Steud.)。

18. 蒙丽细蛾 *Caloptilia (Caloptilia) mongolicae* Kumata 新记录

Caloptilia (Caloptilia) mongolicae Kumata, 1982, Ins. matsum. n.s. 26:70-72, figs.

分布: 江西(庐山)、四川(峨眉山)、北京市(百花山); 日本。

寄主植物：日本栗 (*Castanea crenata* Sieb. et Zucc.)、麻栎 (*Quercus acutissima* Carr.)、辽东栎 (*Q. dentata* Thunb.) 和粗齿蒙古栎 (*Q. mongolicae* Fisch. var. *grosseserrata* Rehd. et Wils.)。

19. 榆丽细蛾 *Caloptilia (Caloptilia) ulmi* Kumata 新记录

Caloptilia (Caloptilia) ulmi Kumata, 1982, Ins. matsum. n.s. 26:74—76, figs.

分布：北京市(百花山、植物园)；日本。

寄主植物：黑榆 (*Ulmus davidiana* Planch. var. *japonica* Nakai forma *suberosa* Nakai) 和光叶榉 (*Zelkova serrata* Makino.)。

20. 双斑丽细蛾 *Caloptilia (Caloptilia) bimaculata* Liu et Yuan 新种：四川(峨眉山)。

21. 指丽细蛾 *Caloptilia (Caloptilia) dactylifera* Liu et Yuan 新种：江西(大余)。

22. 元宝枫丽细蛾 *Caloptilia (Caloptilia) dentata* Liu et Yuan 新种：北京市(植物园)。

23. 黄丽细蛾 *Caloptilia (Caloptilia) flavida* Liu et Yuan 新种：江西(九连山)、湖南(长沙)、四川(青城山)。

24. 钩丽细蛾 *Caloptilia (Caloptilia) hamulifera* Liu et Yuan 新种：四川(青城山、峨眉山)。

25. 瓢丽细蛾 *Caloptilia (Caloptilia) hypodroma* Liu et Yuan 新种：福建(莆田)、海南。

26. 花丽细蛾 *Caloptilia (Caloptilia) jasminicola* Liu et Yuan 新种：广东(广州市植物园)。

27. 栎丽细蛾 *Caloptilia (Caloptilia) koelreutericola* Liu et Yuan 新种：北京市(植物园)。

28. 京丽细蛾 *Caloptilia (Caloptilia) pekinensis* Liu et Yuan 新种：北京市(百花山)。

29. 四点丽细蛾 *Caloptilia (Caloptilia) quadripunctata* Liu et Yuan 新种：北京市(百花山)。

30. 鳞丽细蛾 *Caloptilia (Caloptilia) saccisquamata* Liu et Yuan 新种：海南。

31. 川丽细蛾 *Caloptilia (Caloptilia) sichuanensis* Liu et Yuan 新种：四川(青城山)。

32. 针丽细蛾 *Caloptilia (Caloptilia) spinulosa* Liu et Yuan 新种：江西(庐山)。

33. 纹丽细蛾 *Caloptilia (Caloptilia) striata* Liu et Yuan 新种：江西(庐山)。

34. 三色丽细蛾 *Caloptilia (Caloptilia) tricolor* Liu et Yuan 新种：福建(拗头)。

35. 梨叶丽细蛾 *Caloptilia (Phylloptilia) perseella* Kumata 新记录(图 35)
Caloptilia (Phylloptilia) perseella Kumata, 1982, Ins. matsum. n.s. 26:93—95,
 figs.

分布: 福建(莆田); 日本。

寄主植物: 一种鳄梨 (*Persea thunbergii* Kosterm.)。

36. 纹鳞丽细蛾 *Caloptilia (Povolnya) striolata* Liu et Yuan 新种: 福建(黄
 岗山)。

37. 擦角丽细蛾 *Caloptilia (Rhadinoptilia) sassafrasicola* Liu et Yuan 新
 种: 福建(莱州)。

38. 斑锤丽细蛾 *Caloptilia (Sphyrophora) trimaculiformis* Liu et Yuan 新
 种: 江西(大余), 福建(沙县)。

39. 人面果刺丽细蛾 *Caloptilia (Timodora) garcinicola* Liu et Yuan 新种:
 广西(南宁)。

全部标本, 包括模式标本, 都保存在中国科学院动物研究所昆虫标本馆。

丽细蛾亚属种检索表(雄性外生殖器)

1. 抱器瓣不呈瓢状(指抱器腹凸出) 2
 抱器瓣呈瓢状 5
2. 抱器端缩小 3
 抱器端膨大 栾丽细蛾 *C. (C.) koelreutericola* 新种(图 27)
3. 抱器端有一钩状刺 钩丽细蛾 *C. (C.) hamulifera* 新种(图 24)
 抱器端无钩状刺 4
4. 有许多阳茎针 白桦丽细蛾 *C. (C.) suberinella* (图 1)
 无阳茎针 檀木丽细蛾 *C. (C.) pulverea* (图 14)
5. 抱器瓣上有特化结构 6
 抱器瓣上无特化结构 9
6. 抱器腹有脊(从抱器背基部到抱器腹端部) 7
 抱器腹无脊 8
7. 基腹弧狭长; 阳茎长过抱器瓣 鳞丽细蛾 *C. (C.) saccisquamata* 新种(图 30)
 基腹弧不狭长; 阳茎短于抱器瓣 大豆丽细蛾 *C. (C.) soyella* (图 3)
8. 抱器腹有一钩状刺 指丽细蛾 *C. (C.) dactylifera* 新种(图 21)
 抱器腹有一排齿状刺 元宝枫丽细蛾 *C. (C.) dentata* 新种(图 22)
9. 抱器瓣端部 2/3 形成瓢形凹陷, 有分散粗刚毛 瓢丽细蛾 *C. (C.) hypodroma* 新种(图 25)
 无以上特征 10
10. 有阳茎针 11
 无阳茎针 22
11. 阳茎针只有 2—3 枚 12
 阳茎针至少在 5 枚以上 13
12. 阳茎针只有 2 枚, 呈刺状 漆丽细蛾 *C. (C.) rhois* (图 9)
 阳茎针 3 枚, 角状; 基部连接并分叉 枫丽细蛾 *C. (C.) recitata* (图 5)
13. 阳茎针只位于阳茎中 14

- 阳茎针大部或全部位于阳茎基中17
14. 阳茎末端有骨化弯钩15
 阳茎末端无骨化弯钩16
15. 阳茎长过抱器瓣;阳茎针 9—13 枚,刺状 栗丽细蛾 *C. (C.) sapporella* (图 7)
 阳茎短于抱器瓣;阳茎针 10 枚,角状,成两列并排于阳茎中
 双色丽细蛾 *C. (C.) bicolor* (图 15)
16. 阳茎与抱器瓣等长;阳茎针 9 枚,角状,排列不规则 朴丽细蛾 *C. (C.) celtidis* (图 16)
 阳茎短于抱器瓣;阳茎针 40—50 枚成聚集排列 榆丽细蛾 *C. (C.) ulmi* (图 19)
17. 阳茎针大部位于阳茎基中,少数位于阳茎中18
 阳茎针全部位于阳茎基中20
18. 阳茎近末端有长钩 黑丽细蛾 *C. (C.) kurokoi* (图 12)
 阳茎近末端无长钩19
19. 阳茎针 20 枚成双排位于阳茎基中,有 10 枚位于阳茎中 栲丽细蛾 *C. (C.) issikii* (图 17)
 阳茎针 30—40 枚呈一纵列排在阳茎和阳茎基中 蒙丽细蛾 *C. (C.) mongolicae* (图 18)
20. 阳茎末端有一短针突;阳茎针细长成束位于阳茎基中
 针丽细蛾 *C. (C.) spinulosa* 新种(图 32)
 阳茎末端无短针突21
21. 阳茎针较大、呈角状,11—15 枚基本排列成单行 五角枫丽细蛾 *C. (C.) monticola* (图 13)
 阳茎针细小、针状,20—30 枚排列成双行 赤杨丽细蛾 *C. (C.) alni* (图 11)
22. 阳茎长过抱器瓣23
 阳茎短或等于抱器瓣长24
23. 抱器端明显膨大,相当抱器瓣基部的 2 倍宽 纹丽细蛾 *C. (C.) striata* 新种(图 33)
 抱器端不膨大 三色丽细蛾 *C. (C.) tricolor* 新种(图 34)
24. 阳茎与抱器瓣接近等长25
 阳茎比抱器瓣明显短26
25. 下匙形突基部不加宽 苹丽细蛾 *C. (C.) zachrysa* (图 4)
 下匙形突基部加宽 黄丽细蛾 *C. (C.) flavida* 新种(图 23)
26. 基腹弧长度不及抱器瓣的 1/227
 基腹弧长度超过抱器瓣的 1/228
27. 下匙形突基部宽而薄;抱器端刚毛分为上下两撮 茶丽细蛾 *C. (C.) theivora* (图 2)
 下匙形突基部宽而厚;抱器端刚毛分布均匀 柳丽细蛾 *C. (C.) chrysolampra* (图 8)
28. 抱器端腹面有粗刚毛 川丽细蛾 *C. (C.) sichuanensis* 新种(图 31)
 抱器端腹面无粗刚毛29
29. 抱器瓣弧形并向上弯曲;抱器端明显膨大 花丽细蛾 *C. (C.) jasminicola* 新种(图 26)
 抱器瓣弧形无明显弯曲;抱器端无明显膨大 双斑丽细蛾 *C. (C.) bimaculata* 新种(图 20)

新 种 描 述

1. 双斑丽细蛾 *Caloptilia (Caloptilia) bimaculata* 新种

翅长 5.7mm。头部银白色。触角灰褐色,各节端部渐呈褐色,栉毛浅黄色。下唇须基部黄白色,末端端部 1/2 深褐色,端顶白色。足褐色,中足腿节基部色浅至白色,跗节银白色,各节有棕褐色端环。前翅棕褐色,后缘基部和中部稍呈棕黄色;前缘有 2 个白色楔形

横斑,分别位于中央和端部 1/4 处,第一横斑顶角达翅褶处,第 2 横斑较第 1 横斑窄,顶角向外斜达翅后缘,翅端缘毛棕褐色,仅在外缘处有一小丛呈白色,后缘毛深灰色。后翅及缘毛灰色。

雄性外生殖器(图 20): 下匙形突纤细,基部呈 T 形。抱器端显著膨大,端缘平直,端下角缘毛特别加厚。基腹弧三角形,长约为抱器瓣的 1/2。阳茎纤细,长约为抱器瓣的 2/3;阳茎针无。后味刷约为前味刷的 1/2 长。

正模(♂): 四川(峨眉山、伏虎寺),1979.V.25.,刘友樵。

副模(♂): 四川(峨眉山、万年寺),1979.VI.15.,刘友樵。

本种雄性外生殖器结构与 *C. (C.) stigmatella* (Fabricius) 相近似。但成虫前翅花纹有明显差别。前者有 2 个楔形白斑,而后者仅有 1 个大黄斑。

2. 指丽细蛾 *Caloptilia (Caloptilia) dactylifera* 新种

翅长 3.5mm。体深褐色。头部棕灰色。触角赭黄色,柄节深褐色。前、中足褐色,前基节基部 2/3 黄色;跗节银白色,各节有褐色端环,其中第一节端环最宽。前翅褐色,有 2 个三角形黄斑: 第 1 黄斑较大,位于后缘基部 1/4 到 1/3 处,顶角在翅前缘平截;第 2 黄斑较小,位于前缘稍过中央处,顶角在翅宽中央平截。缘毛褐色,在翅端有一白色三角形小斑。后翅及缘毛深灰色。

雄性外生殖器(图 21): 下匙形突由顶端到基部逐渐加宽。抱器瓣在基部 1/4 处最窄,端部逐渐加宽;抱器腹近中央有 1 指形突。基腹弧长过抱器瓣的 1/2;囊形突短,顶端圆。阳茎细且弯曲;阳茎针无。

正模(♂): 江西(大余),1976.VI.18.,刘友樵。

本种成虫前翅花纹和雄性外生殖器结构均很特殊,不同于属内其他种类。

3. 元宝枫丽细蛾 *Caloptilia (Caloptilia) dentata* 新种

翅长 4.8—5.5mm。颜面淡黄色,头顶棕灰色。触角鞭节棕灰色,各亚节有棕褐色端环;柄节及栉毛棕褐色。下唇须浅黄色,第 3 节端部褐色。前、中足褐色;跗节银白色,第 1 节基部及所有各节端部均有褐色环。后足基节和腿节黄色,腿节外侧端部褐色;胫节和跗节淡棕色,跗节第 1 节基部及 3—5 节端部褐色。前翅棕色,后缘基部黄色;前缘基部 1/4—1/2 处有一梯形黄斑,其顶边达翅褶处,其前缘有 2—4 个小褐斑;翅端缘毛棕褐色,后缘毛灰色。后翅及缘毛灰色。

雄性外生殖器(图 22): 下匙形突基部呈 T 形。抱器瓣端部膨大,端缘圆,抱器腹有几丁质化锯齿。基腹弧和阳茎的长均相当抱器瓣的 4/5。阳茎针至少 5 个,呈长角状。雌性外生殖器(图 22): 后阴片梯形,前阴片新月形,两侧角稍向后延伸。导管端片长且强烈几丁质化;囊导管短。交配囊颈部几丁质化;囊突两个,镰刀形,等大。

正模(♂): 北京(植物园),1978.VIII.1.,张佐双。

配模(♀): 北京(植物园),1984.VI.26.,袁德成。

副模(4♂♂,2♀♀): 北京(植物园),1987.IX.21—26.,周淑芷,张培义,汪敏。

寄主植物: 槭树科元宝枫 (*Acer truncatum* Bunge)。

本种与榆丽细蛾 [*C. (C.) ulmi* Kumata] 接近,但前者雄性抱器腹有几丁质化锯

齿,而后者无。

4. 黄丽细蛾 *Caloptilia (Caloptilia) flavida* 新种

翅长 4.3—5.3mm。颜面银白色;头顶浅棕黄色。下唇须银白色,第 3 节端部褐色或棕褐色。触角鞭节淡棕色,各亚节有棕褐色端环;柄节棕褐色,栉毛棕色。前、中足褐色;跗节银白色,各节有棕褐色端环。后足基节和腿节淡黄色,腿节外侧端半部褐色;胫节和跗节淡赭黄色。前翅淡黄色,沿前缘朝翅基渐呈棕褐色,沿后缘向翅端渐呈棕褐直至褐色;翅前缘排列有 7 个小褐斑;翅端缘毛浅褐色,后缘毛灰色。后翅及其缘毛灰色。

雄性外生殖器(图 23):背兜与基腹弧大致等长;下匙形突基部加宽。抱器瓣端部膨大,端缘圆。阳茎较抱器瓣稍长,末端尖;阳茎针无。雌性外生殖器(图 23):后阴片倒梯形;前阴片缺。导管端片强烈几丁质化;囊导管除两端外,大部轻度几丁质化。交配囊梨形,囊突两个,镰刀形,等大。

正模(♂):四川(青城山),1979.V.27. 刘友樵。

配模(♀):四川(青城山),1979.V.22. 刘友樵。

副模(1♂,1♀):♂、湖南(长沙),1983.VIII.15., 酸枣,张贤开;♀、江西(九连山),1977.V.21., 刘友樵。

本种与 *C. (C.) acericola* Kumata 的雄性外生殖器构造相似,但本种雌性导管端片尾端不明显加宽,囊导管大部分几丁质化,而后者导管端片尾端明显加宽,呈三角形,囊导管膜质。

5. 钩丽细蛾 *Caloptilia (Caloptilia) hamulifera* 新种

翅长 5.8—6.6mm。颜面黄色;头顶灰色。触角深褐色;栉毛无。下唇须褐色,基部赭黄色。前、中足深褐色,前足基节基部棕黄色;跗节浅赭黄色。后足基节和腿节黄色,散布棕色斑点,腿节外侧端部褐色;胫节和跗节浅褐色,跗节除第 1 节外,各节基部赭黄色。前翅褐色,散布黄色斑点;翅端缘毛褐色,后缘毛灰色。后翅及其缘毛灰色。

雄性外生殖器(图 24):下匙形突纤细,基部不加宽。抱器腹中部凸出呈直角,抱器背弧形,抱器端腹面有一钩突。基腹弧三角形;囊形突窄,长稍不及基腹弧;基腹弧与囊形突的和长约为背兜的 1.3 倍。阳茎长稍超过基腹弧与囊形突的和。阳茎针 1 枚,棒状,位于阳茎端部,长约为阳茎的 1/2。

正模(♂):四川(青城山),1979.V.29., 刘友樵。

副模(♂):四川(峨眉山、清音阁),1979.VI.18., 刘友樵。

本种与五角枫丽细蛾 (*C. (C.) monticola* Kumata) 接近,但雄性外生殖器抱器端腹面有一钩突而易于与后者相区别。

6. 瓢丽细蛾 *Caloptilia (Caloptilia) hypodroma* 新种

翅长 4.4—5.0mm。颜面浅赭黄色;头顶浅棕褐色。触角鞭节淡棕色,各亚节端部及柄节棕褐色,栉毛褐色。下唇须浅赭黄色;第 2 节腹面有棕斑,第 3 节两端褐色。前、中足棕褐色;跗节银白色,各节有褐色端环。后足基节和腿节黄色,腿节端半部棕褐色;胫节和跗节赭黄色,胫节端部和第一跗节基部浅褐色。前翅棕褐色,翅端散布褐斑;前缘基部

1/4 到翅端处有 1 长黄斑,其宽相当翅宽之半,前缘排列 9 个小黑斑;翅端缘毛褐色,后缘毛深灰色。后翅及缘毛灰色。

雄性外生殖器(图 25):背兜短,相当抱器瓣的 1/2;下匙形突粗短。抱器瓣近似长方形,抱器腹基部 1/4 处稍凸出,抱器端圆。抱器瓣内面端部 2/3 形成瓢形凹陷,沿凹陷边缘分布粗刚毛,刚毛末端分裂为粗栉毛。基腹弧三角形,长约为背兜的 1.8 倍。阳茎粗,长约为抱器瓣的 1.4 倍;阳茎针纤细针状,排成两行。雌性外生殖器(图 25):后表皮突基部 2/3 宽,端部 1/3 窄;前表皮突不清晰。后阴片梯形;前阴片缺。导管端片强烈骨化,侧缘向内折叠;囊导管短,交配囊卵圆形;囊突两枚,镰刀形,大小不等。

正模(♂);福建(莆田),1978.VII.2.,刘友樵。

配模(♀):福建(莆田),1978.VII.3.,刘友樵。

副模(♂,2♀):福建(莆田),1978.VI.28. VII—4.,刘友樵;海南(尖峰五场)1984. III.24.,白九维。

本种前翅前缘有长黄斑与苹丽细蛾 [*C. (C.) zachrysa* (Meyrick)] 近似,但雄性抱器瓣有瓢形凹陷,雌性前表皮突不清晰。

7. 花丽细蛾 *Caloptilia (Caloptilia) jasminicola* 新种

翅长 4.0—4.5mm。颜面棕黄色;头顶深褐色。触角黑色;柄节棕黑色。下唇须棕黄色,末端黑色。前、中足深褐色,基节棕黄色;跗节浅褐色,各节端部渐呈棕黄色,有黑色端环。后足基节和腿节黄色,腿节近端部有一褐斑;胫节和跗节褐色,跗节除第 1 节外,其他各节基部棕黄色。前翅褐色,翅端部有多枚棕黄斑点;缘毛褐色。后翅棕褐色,缘毛黑色。

雄性外生殖器(图 26):下匙形突纤细。抱器瓣弧形向上弯曲,端部稍加宽,长约为基腹弧的 2.5 倍。基腹弧末端钝。阳茎短,稍长过基腹弧;阳茎针无。雌性外生殖器(图 26):前、后阴片缺。导管端片亦缺。囊导管细长。交配囊卵圆形;囊突两枚,钩状,大小相差一半。

正模(♂):广东植物园,1978.VI.2.,白九维。

配模(♀):福建,1984。

副模(♀):福建,1984。

寄主:茉莉花 (*Jasminum sambae* (L.) Aiton)。

本种雄性外生殖器构造与 *C. (C.) heliciae* Kumata 相似,但本种前翅褐色,无大黄斑,雌性外生殖器囊突大小不等,而后者前翅前缘黄斑延伸至翅基部,囊突大小相等。

8. 栾丽细蛾 *Caloptilia (Caloptilia) koelreutericola* 新种

翅长 5.2mm。颜面淡黄色;头顶棕灰色。触角鞭节棕灰色,各亚节有褐色端环;柄节及栉毛棕褐色。下唇须白色,腹面有少数棕黄色小斑,末端褐色。前、中足褐色;跗节银白色,各节有棕褐色端环。后足基节和腿节亮黄色,腿节外侧端半部有一大褐斑;胫节和跗节淡棕黄色,胫节背面端部深灰色。前翅棕褐色;前缘基部 1/4 到翅端有一长形黄斑,近翅端变窄,黄斑前缘不等距排列有 5—6 个小褐斑;翅端缘毛棕褐色,后缘毛灰色。后翅及

缘毛灰色。

雄性外生殖器(图 27): 下匙形突基部锤状。抱器瓣宽; 抱器腹中部有一深凹陷, 深达抱器瓣宽的 1/2。基腹弧长, 相当抱器瓣长的 4/5。阳茎细, 较抱器瓣稍长; 阳茎针 14 枚, 角状, 排成一行。雌性外生殖器(图 27): 导管端片狭长, 侧壁骨化; 囊导管细长, 前部 1/2 轻度骨化, 表面呈鳞状。交配囊卵圆形; 囊突 2 个, 镰刀状, 大小相仿。

正模(♂): 北京植物园, 1984. VIII. 16., 袁德成。

配模(♀): 北京植物园, 1984. VII. 20., 袁德成。

配模(♂、♀): 北京植物园, 1982. VII., 张佐双; 1 ♀ 1984. VII. 20., 袁德成。

寄主: 无患子科栎树 (*Koelreuteria paniculata* Laxm.)。

本种前翅花纹与苹丽细蛾 (*C. (C.) zachrysa* Kumata) 近似, 但雄性抱器腹中部有一深凹陷; 雌性导管端片狭长, 侧壁骨化。

9. 京丽细蛾 *Caloptilia (Caloptilia) pekinensis* 新种

雌蛾翅长 4.5mm。颜面银白色; 头顶棕白色。触角鞭节淡棕黄色, 各亚节有深褐色端环; 柄节上侧淡黄色, 下侧棕褐色; 栉毛棕色。下唇须银白色, 近端部褐色。前、中足棕褐色; 跗节白色, 各节端部稍呈棕黄色。前翅棕褐色, 后缘基部黄色; 前缘基部 1/4 到 2/3 处有一三角形黄斑, 黄斑顶角在近后缘处平截; 缘毛棕灰色。后翅及缘毛浅棕灰色。

雌性外生殖器(图 28): 后阴片半椭圆形; 前阴片缺。导管端片半圆形。交配囊卵圆形; 囊突 1 对, 镰刀形; 等大。

正模(♀): 北京百花山, 1973. VII. 16., 刘友樵。

本种前翅花纹与槭丽细蛾 (*C. (C.) aceris* Kumata) 相似, 但本种可由雌性导管端片半圆形与后者呈漏斗形及囊导管衔接处有折叠相区别。

10. 四点丽细蛾 *Caloptilia (Caloptilia) quadripunctata* 新种

雌蛾翅长 5.8mm。颜面淡黄色; 头顶棕黄色。下唇须淡黄色, 近端部有褐斑。触角鞭节赭黄色, 各亚节端部褐色; 柄节上侧赭黄色, 下侧褐色; 栉毛赭灰色。前、中足赭褐色; 跗节白色, 第 1 节端半部有棕褐斑, 各节有棕褐色端环。前翅棕褐色, 微泛紫色; 沿前缘基部 1/4 到 1/2 处有一等腰三角形黄斑, 其顶角在翅褶处平截, 沿黄斑前缘分布 4 个小褐斑; 翅端缘毛赭灰色, 有 2 条褐色环纹, 后缘毛灰色。后翅及其缘毛深灰色。

雌性外生殖器(图 29): 后阴片大, 梯形, 尾端呈半圆形突出; 前阴片缺。导管端片强烈骨化, 朝交配孔显著加宽, 并有皱褶; 囊导管极短。交配囊卵圆形, 颈部表面鳞屑状; 囊突 1 对, 角状, 大小稍不等。

正模(♀): 北京(百花山), 1973. VI. 16., 刘友樵。

本种成虫外形与 *C. (C.) hidakensis* Kumata 相似, 但前者雌性囊导管极短; 囊突大小不等, 而后者囊导管长, 囊突大小相等。

11. 鳞丽细蛾 *Caloptilia (Caloptilia) saccisquamata* 新种

雄蛾翅长 4.5mm。头部棕黄色。触角鞭节褐色, 各亚节有黄色基环; 柄节赭黄色, 上侧有褐斑; 栉毛赭黄色, 仅端部浅褐色。下唇须灰白; 第 2 节末端及第 3 节腹面浅褐色。

前、中足褐色；跗节银白色，第1节端部褐色，其余各节端部淡赭黄色。后足基节和腿节柠檬黄色；胫节和跗节赭黄色，各节有褐色端环。前翅浅黄褐色，散布赭褐色斑点，翅端部渐呈褐色，后缘有许多赭黄色小斑；翅端缘毛褐色，基部有一赭黄色斑；后缘毛淡灰色。后翅及缘毛浅褐色。

雄性外生殖器(图30)：背兜长约为抱器瓣的 $2/3$ ；下匙形突不明显。抱器瓣下缘直，上缘呈S形，端缘平直；抱器端显著加宽，上角突出，下角接近直角形；从抱器背基部到抱器端下角有一平直的长脊，脊上有细刚毛。基腹弧与抱器瓣等长；囊形突短。阳茎细，长为抱器瓣的1.5倍；阳茎针无。

正模(♂)：海南(尖峰岭)，1978.V.7.，刘友樵。

本种与大豆丽细蛾(*C. (C.) soyella* Kumata)接近，但本种雄性基腹弧和阳茎接近或超过抱器瓣的长度，而后者基腹弧和阳茎仅相当抱器瓣长的一半或 $4/5$ 。

12. 川丽细蛾 *Caloptilia (Caloptilia) sichuanensis* 新种

雄蛾翅长4.3mm。颜面桔黄色；头顶棕褐色。触角鞭节棕褐色，各亚节基部有浅棕黄色基环；柄节棕褐色，栉毛褐色。下唇须金黄色，腹面有不规则棕褐色斑点，末节端部 $2/5$ 褐色。前、中足棕褐色，跗节银白色，各节有褐色端环。后足基节和腿节柠檬黄色，腿节端部 $1/2$ 褐色；胫节和跗节白色，跗节各节有褐色端环。前翅棕褐色有不规则深色斑点；前缘有2个三角形柠檬黄斑：第一黄斑位于基部 $1/4$ 至 $1/2$ 处，顶角在翅褶处平截；第二黄斑位于第一黄斑端侧，仅有其一半大；黄斑前缘有少数小褐斑；缘毛褐色。后翅及缘毛深灰色。

雄性外生殖器(图31)：下匙形突纤细，基部呈三角形。抱器端加宽，略呈弧形，下角缘毛特别加厚。基腹弧长不及抱器瓣的 $3/5$ ，末端尖。阳茎短于抱器瓣；阳茎针无。

正模(♂)：四川(青城山)，1979.VI.1.，刘友樵。

本种与*C. (C.) ryukyuensis* Kumata接近，但本种触角柄节有栉毛，前翅后缘无褐色小皱斑，而后者触角柄节无栉毛，前翅后缘有6—8枚褐色小皱斑。

13. 针丽细蛾 *Caloptilia (Caloptilia) spinulosa* 新种

雄蛾翅长5.8mm。颜面银白色；头顶浅黄褐色。触角柄节及栉毛褐色。下唇须银白色，端部褐色。前、中足褐色；跗节银白色，各节端部淡黄褐色。后足基节和腿节亮黄色，腿节外侧端半部褐色；胫节和跗节淡棕黄色。前翅大部呈棕黄色，前缘向翅基，后缘向翅端逐渐变褐，前缘不规则的排列有8个大小不等的褐斑；翅端缘毛棕色，有3条褐色环纹，后缘毛棕灰色。后翅及缘毛灰色。

雄性外生殖器(图32)：下匙形突基部宽三角形。抱器端宽，上角钝，下角圆。基腹弧长稍超过抱器瓣的 $3/4$ 。阳茎短于抱器瓣；阳茎末端呈尖角状，许多细长成束的阳茎针位于阳茎基中。

正模(♂)：江西(庐山)，1100m，1975.VI.16.，刘友樵。

本种与桤丽细蛾(*C. (C.) issikii* Kumata)接近，在雄性阳茎端部呈尖角状，但本种阳茎针细长呈束位于阳茎基中，而后者许多阳茎针呈角状，成列分布于阳茎中。

14. 纹丽细蛾 *Caloptilia (Caloptilia) striata* 新种

雄蛾翅长 6.3 mm。头部黄灰色。触角鞭节黄白色,各亚节有褐色端环;柄节黄色,有分散褐色斑,栉毛浅黄色。下唇须银黄色,第 2,3 节端部腹面有褐色长鳞毛丛。前、中足褐色,胫节中部有 1 黄斑;跗节黄色,散布小褐斑。后足基节、腿节黄棕色,胫节、跗节赭黄色。前翅黄褐色,有黄色横纹 7 条;翅端缘毛黄色,有 2 条褐色环纹,后缘缘毛深灰色。后翅及缘毛灰色。

雄性外生殖器(图 33):下匙形突粗,基部呈 T 形。抱器端部明显加宽,下缘端部向外凸,抱器端上角突出。基腹弧较背兜稍长,端部不明显变窄,末端钝。阳茎细长,约为抱器瓣的 1.2 倍;阳茎针无。

正模(♂):江西(庐山),1100m,1975.VI.19.,刘友樵。

本种下唇须端部 2 节有长鳞毛丛,前翅有黄色横纹 7 条,不同于丽细蛾亚属其它种类。翅脉同丽细蛾亚属。

15. 三色丽细蛾 *Caloptilia (Caloptilia) tricolor* 新种

雄蛾翅长 4.3mm。颜面白色,头顶浅黄褐色,近触角处浅褐。触角鞭节浅赭黄色,各亚节有赭褐色端环;柄节上侧棕褐色,下侧及栉毛浅灰黄色。下唇须银白色,腹面散布小褐斑。前、中足褐色,有淡黄色斑点;跗节银白色,各节有深褐色端环。后足基节和腿节亮黄色,腿节外侧基部和中部有棕褐色斑。前翅浅褐色,前缘基部 1/4 处有一白斜条斑伸向翅褶;端部 1/4 处由内向外有白色和黄色 2 条横带:黄带宽;白带近翅基的一侧另有一不清晰的黄侧纹由后缘伸达翅宽 1/2 处;翅端缘毛褐色,有一白色环纹,后缘毛灰色。后翅浅褐色,缘毛灰色。

雄性外生殖器(图 34):下匙形突短,基部宽。抱器瓣近似长方形,端部稍宽;下缘端部 1/4 处稍向内凹;中间有十多根刚毛。基腹弧与抱器瓣大致等长,末端钝。阳茎细长,相当抱器瓣的 1.3 倍;阳茎针微小,很多,成线状排列在阳茎端部。

正模(♂):福建(坳头),1980.VI.22.,江凡。

本种与 *C. (C.) semifasciella* Kumata 接近,但本种雄性阳茎针微小,很多,成线状排列在阳茎端部,而后者仅有 2 个大阳茎针。

16. 纹鳞丽细蛾 *Caloptilia (Povolnya) striolata* 新种

雌蛾翅长 7.7mm。头部灰白色。触角鞭节赭白色,各节有深褐色端环;柄节黄白色,上侧有棕褐色斑。下唇须黄白色,第 2 节腹面毛丛上散布棕褐色斑点,第 3 节腹面褐色。前、中足褐色,胫节中部有一白斑,跗节褐色。后足基节和腿节黄色;胫节浅灰色,端部渐呈褐色;跗节淡赭黄色,各节有黑端环。前翅底色由棕、褐、黄三色混杂形成,翅表面散布许多大小不等的白斑;沿翅前缘有 10 个白斑;翅端缘毛黄褐色,后缘缘毛浅褐色。后翅缘毛灰色。

雌性外生殖器(图 36):后阴片新月形;后阴片尾端圆,表面有皱折。导管端片细,骨化,与前表皮突等长;囊导管细长。交配囊卵圆形;囊突两枚,大小不等,分别呈镰刀形和菱形。

正模(♀): 福建(黄岗山), 1982. VI. 28., 江凡。

副模(♀): 福建(黄岗山), 1982. VI. 29., 张可池。

本种雌性外生殖器与 *C. (P.) obliquatella* (Matsumura) 相似, 但本种囊突一个大呈镰刀形, 另一个小呈菱形, 而后者两枚囊突大小相等, 呈短角形。

17. 椴角丽细蛾 *Caloptilia (Rhadinoptilia) sassafracicola* 新种

翅长 4.4—6.0mm。头部白色, 头顶夹杂赭色鳞毛。触角黄白色, 各亚节端部有褐色环。下唇须黄白色, 第 3 节腹面基部和中部各具一褐色狭带。前、中足褐色; 基节基部 3/4 黄色; 腿节和胫节散布浅棕色或浅灰色斑; 跗节黄白色, 各节有黑色端环。后足基节和腿节黄色; 胫节和跗节赭黄色, 各跗节有褐色端环。前翅亮黄色, 后缘、翅端及缘毛棕褐色, 沿前、后缘往往有系列小褐斑。后翅及缘毛棕褐色。

雄性外生殖器(图 37): 背兜骨化程度低; 兜毛突十分发达, 肥大, 末端尖; 下匙形突短, 基端尖。抱器瓣基部窄, 向端部逐渐膨大, 端缘圆; 抱器背稍过基部 1/3 处有一小突起。囊形突细长, 末端略膨大; 基腹弧与囊形突的合长同抱器瓣长大致相等。阳茎稍短于抱器瓣; 阳茎针一枚, 相当阳茎 1/2 长。雌性外生殖器(图 37): 前表皮突短于后表皮突和囊突, 两腹突通过后阴片相连。交配孔及导管端片骨化程度不强; 囊导管细长; 交配囊长梨形; 囊突 2 枚, 镰刀状, 基部有柄。

正模(♂): 福建(莱州), 1986, 李嘉源。

配模(♀): 福建(莱州), 1986, 李嘉源。

副模(7♂♂, 6♀♀): 福建(莱州), 1986, 李嘉源。

寄主: 椴树 [*Sassafras tsumu* (Hemsl.) Hemsl.]。

本种与双点角丽细蛾 (*C. (R.) bipunctata* Kumata) 相近。明显区别表现在本种雄性外生殖器抱器背基部 1/3 处有一小突起, 而后者只在该位置外缘上略凸出。

18. 三斑锤丽细蛾 *Caloptilia (Sphyrophora) trimaculiformis* 新种

翅长 5.0mm。颜面白色, 中部有浅褐色斑; 头顶覆盖端部浅褐, 基部白色的鳞毛。触角鞭节棕灰色, 各亚节端部褐色; 柄节褐色, 栉毛基部白色, 端部褐色。下唇须白色, 除第 3 节基部和末端外, 均密布褐色斑点。前、中足褐色; 跗节银白色, 第 1 节基部及各节端部褐色。后足褐色; 基节基部和腿节中部黄色; 跗节白色, 第 1 节基部及各节端部棕褐色。前翅棕褐色, 有 3 个黄色横斑: 第 1 横斑始于翅前缘基部 1/4 处, 第二横斑始于翅前缘中部, 二者均向翅后缘逐渐加宽; 第 3 横斑始于翅前缘端部 1/4 处伸向翅褶; 缘毛棕褐色夹杂白色。后翅及缘毛褐色。

雄性外生殖器(图 38): 背兜腹面大部微骨化, 表面有一些细长刚毛。抱器瓣近端部稍加宽, 端缘平直。基腹弧长约为抱器瓣的 2/3, 末端钝。阳茎长是抱器瓣的 1.2 倍; 阳茎针无。雌性外生殖器(图 38): 后阴片短, 梯形; 前阴片缺。囊导管细长。交配囊长椭圆形; 囊突 2 枚, 镰刀形, 其中之一较粗些。

正模(♂): 福建, 1980. VI. 28., 齐石成。

配模(♀): 福建, 1975. VI.

副模(♂): 福建(沙县), 1979. IX. 11., 林乃铨。

本种与 *C. (S.) sapiivora* Kumata 的雄性外生殖器相近似,但两种前翅花纹相差悬殊,雌性两个囊突本种大小相等,后者大小相差显著。

19. 人面果刺丽细蛾 *Caloptilia (Timodora) garcinicola* 新种

前翅 5.5mm。颜面黄色;头顶棕色。触角鞭节褐色,各亚节有赭黄色基环;柄节棕色,有深褐斑,栉毛棕色。下唇须白色,腹面棕褐色,末节端部 1/2 棕色。前、中足棕褐色;跗节白色,各节有褐色端环。后足腿节褐黄色,端部深褐色;胫节和跗节赭白色,胫节和跗节第 1 节背面浅褐色,各节有褐色端环。前翅棕黄色;翅端部棕色,缘毛棕色;后缘毛浅褐色。后翅及缘毛棕灰色。

雄性外生殖器(图 39):背兜有一多毛的锥状尾突,腹面肛管两侧有一对骨化突,上面有一列长刚毛。抱器瓣接近长方形,稍向上弯曲,端缘平直,无长缘毛;抱器瓣下缘端部附近有较多短刚毛,上缘端部内侧有一排较粗刚毛。囊形突细长;基腹弧与囊形突的合长约为抱器瓣的 3/4;阳茎弯曲,端部 1/3 细,阳茎针无。雌性外生殖器(图 39):交配孔开口于骨化的生殖板上。导管端片短小;交配囊卵圆形;囊突 2 枚,细长镰刀状,大小相等。

正模(♂):广西(南宁),1981.VI.25。

配模(♀):广西(南宁),1981.VI.25。

寄主:人面果 (*Garcinia tinctoria* (DC.) Wight)。

本种虽与 *C. (T.) elongata* Kumata 在外生殖器上有些近似,但在各部位的详细结构都存在着明显区别。

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A STUDY OF THE CHINESE *Caloptilia* Hübner, 1825 (LEPIDOPTERA:GRACILLARIIDAE: GRACILLARIINAE)

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The *Caloptilia* Hübner is one of the largest groups in Gracillariinae and known to be distributed throughout the world. Its forewing ochre-brown, usually with a brilliant brassy-yellow costal blotch isosceles-triangular. Adult phototaxis; hatched larva mines just above or under the epidermis, while late instars larva always rolls up the leaf. Some of them are serious pest in forest.

Genus *Caloptilia* is distinctly separated from the Genus *Gracillaria* in the male with a pair of coremata on 7th and 8th abdominal segments, the female with a pair of signa on corpus bursae.

According to the basal pecten of hairs on antenna, forewing venation, tegumen structure in male, shape of signum in female, chaetotaxy and bionomics of larva, Prof. Kumata have subdivide the Japanese species of Genus *Caloptilia* into 8 subgenera.

A total of 4 species belonging to the Genus *Caloptilia* were recorded in China, namely, *Caloptilia* (*Caloptilia*) *chrysolampra*, *C. (C.) theivora*, *C. (C.) recitata* and *C. (C.) zachrysa*. This paper deals with 39 species of *Caloptilia* collected by the authors during the past twenty years. Within them, 4 species are already known, 18 species are described as new and 17 species are recorded for the first time in China. With regard to subgenus, 34 species are belonging to subgenus *Caloptilia*, 5 species belonging to other 5 subgenera separately.

Descriptions of the new species, key to subgenera and key to 34 species of the subgenus *Caloptilia* by male genitalia are given in the Chinese text.

All specimens, including the types of new species are kept in the Institute of Zoology, Academia Sinica.

Caloptilia (*Caloptilia*) *bimaculata* sp. nov.

Forewing: length 5.7 mm.; ochre-brown, base and middle of posterior edge ochre-yellow; two white wedge-shaped fascia on costa. Hindwing and marginal setae grey. Male genitalia (fig. 20): Subscaphium slender, T-shaped at base extremity; valva slightly upturned, dilated apically, with long setae thickly on ventro-apical area; vinculum triangle, about half length of valva; aedoeagus nearly 2/3 length of valva; without cornuti.

Holotype ♂ Sichuan Province, Omeishan, 25-VI-1979, Liu Youqiao. Paratype ♂ 15-VI-1979, locality and collector same as Holotype.

This species is closely allied to *stigmatella* in male genitalia but differs from the latter in having two white wedged shaped fascia on costa of forewing.

Caloptilia (*Caloptilia*) *dactylifera* sp. nov.

Forewing: length 3.5 mm.; brown; with two triangular yellow blotches; marginal setae brown; apex with a triangular white fascia. Hindwing and its marginal setae dark-grey. Male genitalia (fig. 21): Subscaphium weakly sclerotized, rather slender, widened gradually toward base; valva slender near base, gradually dilated apically, round on terminal margin; sacculus

with a finger-like protuberance; vinculum longer than half length of valva; saccus short, rounded apically; aedoeagus slender and curved, without cornuti.

Holotype ♂ Jiangxi Province, Dayu, 18—VI-1976, Liu Youqiao.

Forewing pattern and male genitalia of this species are special in comparing to other species of this subgenus.

***Caloptilia (Caloptilia) dentata* sp. nov.**

Forewing: length 4.8—5.5 mm.; ochre, base of posterior edge yellow; base of costal margin $1/4$ — $1/2$ with a trapezoid yellow costal blotch, 2—4 brown spots on costa; apical marginal setae ochre-brown, posterior edge setae grey. Male genitalia (fig. 22): Subscaphium T-shaped at base; valva dilated apically, round on terminal margin; sacculus with sclerotized dentate; vinculum and aedoeagus about $4/5$ length of valva; cornuti at least 5, long horn-shaped. Female genitalia (fig. 22): lamella postvaginalis trapezoid; lamella antevaginalis crescentic; antrum long, strongly sclerotized; ductus bursae short; two curved sickle-shaped signa with equal size.

Holotype ♂ Beijing Botanical Garden, 1-VIII-1978, Chang Zuoshuang. Allotype ♀ Beijing Botanical Garden, 26-VI-1984, Yuan Decheng. Paratypes 4 ♂♂, 2 ♀♀ Beijing Botanical Garden, 21-26-IX-1987, Zhou Shuzhi, Zhang Peiyi, Wang Min.

Host Plant: *Acer truncatum* Bunge.

This species is closely allied to *ulmi*, but differs from the latter in sacculus with sclerotized dentate.

***Caloptilia (Caloptilia) flavida* sp. nov.**

Forewing: length 4.3—5.3 mm.; pale yellow, along costa toward base became ochre-brown, along posterior edge toward apex became brown; with 7 small brown spots on costa; marginal setae on apex light brown, on posterior edge grey. Hindwing and its marginal setae grey. Male genitalia (fig. 23): Tegumen and vinculum same in length; subscaphium widened at base; valva dilated apically, round on terminal margin; aedoeagus a little longer than valva, pointed apically, without cornuti. Female genitalia (fig. 23): Lamella postvaginalis reversed trapezoid, lamella antevaginalis absent; antrum strongly sclerotized; corpus bursae pear-shaped, two curved sickle-shaped signa with equal size.

Holotype ♂ Sichuan Province, Qingchenshan, 27-V-1979, Liu Youqiao. Allotype ♀ 22-V-1979, locality and collector same as Holotype. Paratypes 1 ♂, 1 ♀ Hunan Province, Changsha, 15-VIII-1983, Zhang Xiankai.

This species is closely allied to *acericola* in male genitalia, but differs from the latter in female genitalia: antrum not dilated, greater part of ductus bursae sclerotized.

***Caloptilia (Caloptilia) hamulifera* sp. nov.**

Forewing: length 5.8—6.6 mm.; brown; scattered with yellow spots; marginal setae of apex brown; posterior edge setae grey. Hindwing and marginal setae grey. Male genitalia (fig. 24): Subscaphium slender, not dilated basally; sacculus protruded in a right angle; costa curved; ventral of cucullus with a hook-like protuberance; vinculum triangular; saccus narrow, a little shorter than vinculum, length of vinculum plus saccus nearly equal to 1.3 of tegumen; aedoeagus longer than vinculum plus saccus, one cornutus, clubshaped, situated at the end of aedoeagus, about half length of aedoeagus.

Holotype ♂ Sichuan Province, Qingchenshan, 29-V-1979, Liu Youqiao. Paratype ♂ 18-IV-1979, locality and collector same as Holotype.

This species is closely allied to *monticola*, but differs from the latter in the presence of a

hook-like protuberance on the ventral of cucullus.

***Caloptilia (Caloptilia) hypodroma* sp. nov.**

Forewing: length 4.4—5.0 mm.; ochre-brown, with brown spots scattered on apex; basal 1/4 to apex of costa with a long yellow fascia, as wide as 1/2 of wing; 9 black spots arranged on costa; marginal setae brown on apex, dark grey on posterior edge. Hindwing and marginal setae grey. Male genitalia (fig. 25): Tegumen short, about half of valva; subscaphium thick and short; valva nearly rectangular, basal 1/4 of succulus protruded, round on cucullus, inside of valva forming a ladle-like concave, around its edge scattered with thick setae which are split at its end into thick pecten; vinculum triangular, nearly one and 4/5 length of tegumen; aedoeagus thick, about one and 2/5 length of valva, cornuti slender, needle-shaped, arrange in two rows. Female genitalia (fig. 25): posterior apophysis basal 2/3 broad, 1/3 narrow apically; anterior apophysis indistinct; lamella postvaginalis trapezoid, antevaginalis absent; antrum strongly sclerotized; ductus bursae short, corpus bursae ovale, two curved sickle-shaped signa with unequal size.

Holotype ♂ Fujian Province, Putian County, 28-VI-1978, Liu Youqiao. Allotype ♀ 2-VII-1978, Paratypes 1♂, 2♀♀ 3-4-VII-1978, locality and collector same as Holotype.

This species with long yellow fascia on forewing is closely allied to *zachrysa* but differs from the latter in having a ladle-like concave on valva in male genitalia.

***Caloptilia (Caloptilia) jasminicola* sp. nov.**

Forewing: length 4.0—4.5 mm.; brown, with many ochre-yellow spots on apex; marginal setae brown. Hindwing ochre-brown, marginal setae black. Male genitalia (fig. 26): Subscaphium slender; valva curved, slightly dilated apically, about two and a half length of vinculum; aedoeagus short, a little longer than vinculum; cornuti absent. Female genitalia (fig. 26): Antevaginalis, postvaginalis and antrum absent; ductus bursae slender, corpus bursae ovale; 2 signa, hook-like, one of which is about half as long as the other.

Holotype ♂ Guangdong Province, Botanical Garden, 2-VI-1978, Bai Jiuwei. Allotype ♀ and Paratype 1♀ Fujian Province.

Host Plant: *Jasminum sambae* (L.) Aiton.

This species is closely allied to *heliciae* in male genitalia but differs from the latter in brown forewing without large yellow fascia and also female genitalia with 2 unequal sized signa.

***Caloptilia (Caloptilia) koelreutericola* sp. nov.**

Forewing: length 5.2 mm.; ochre-brown, basal 1/4 to apex with a long yellow blotch, anterior margin of yellow blotch arranged with 5—6 small brown spots; marginal setae on apex ochre-brown, posterior edge setae grey. Hindwing and marginal setae grey. Male genitalia (fig. 27): Subscaphium widened at basal extremity into a hammer-shaped; valva broad, in the middle of sacculus with a deep concave; vinculum long, about 4/5 of valva; aedoeagus slender, a little longer than valva, with 14 cornuti, horn-shaped, arranged in a row. Female genitalia (fig. 27): ductus bursae slender, anterior half sclerotized, with scale-like on the surface; corpus bursae ovale; two curved sickle-like signa with equal size.

Holotype ♂ and Allotype ♀ Beijing Botanical Garden, 16-VII-1984, Yuan Decheng. Paratypes 1♂, 1♀ Beijing Botanical Garden, VII-1982, Chang Zuoshuang, 1♀ 20-VII-1984, Yuan Decheng.

Host Plant: *Koelreuteria paniculata* Laxm.

This species is closely allied to *zachrysa* in forewing patterns but differs from the latter

by a deep concave in the middle of sacculus in male genitalia.

***Caloptilia (Caloptilia) pekinensis* sp. nov.**

Forewing: length 4.5 mm.; ochre-brown, base of posterior edge yellow; basal 1/4 to 2/3 of costa with a triangular yellow blotch; marginal setae grey. Hindwing and its marginal setae pale ochre-grey. Female genitalia (fig. 28): Lamella postvaginalis semiellipse; lamella antevaginalis absent; antrum semi-circle; corpus bursae ovale; two sickle-like signa equal in size.

Holotype ♀ Beijing, Baihuashan, 16-VII-1973, Liu Youqiao.

This species is closely allied to *aceris* in forewing patterns but differs from the latter in the semi-circle of antrum in female genitalia.

***Caloptilia (Caloptilia) quadripunctata* sp. nov.**

Forewing: length 5.8 mm.; ochre-brown, basal 1/4 to 1/2 of costa with a isosceles triangular yellow blotch, anterior margin of yellow blotch with 4 small brown spots, marginal setae on apex ochre-grey. Hindwing and its marginal setae dark-grey. Female genitalia (fig. 29): postvaginalis large, trapezoid; antevaginalis absent; antrum strongly sclerotized; ductus bursae short, dilated and wrinkled near corpus bursae; two horn-shaped signa nearly equal in size.

Holotype ♀ Beijing, Baihuashan, 16-VI-1973, Liu Youqiao.

This species is closely allied to *hidakensis* in external structures but differs from the latter in the short ductus bursae and nearly equal in size of signa in female genitalia.

***Caloptilia (Caloptilia) saccisquamata* sp. nov.**

Forewing: length 4.5 mm.; pale yellow-brown, scattered with ochre-brown spots; posterior edge with many ochre-yellow small spots, marginal setae on apex brown; posterior edge setae pale grey. Hindwing and its marginal edge setae light brown. Male genitalia (fig. 30): Tegumen about 2/3 length of valva; subscaphium indistinct; cucullus dilated, upper angle protruded, lower angle in right triangle; a flat straight ridge from base of costa till lower angle of cucullus; vinculum as long as valva; saccus short; aedoeagus slender, near one and a half of valva; cornuti absent.

Holotype ♂ Guangdong Province, Hainandao, 7-V-1978, Liu Youqiao.

This species is closely allied to *soyella* but differs from the latter in the vinculum and aedoeagus as long as or longer than valva.

***Caloptilia (Caloptilia) sichuanensis* sp. nov.**

Forewing: length 4.3 mm.; ochre-brown with irregular spots; costa with two triangular orange-yellow blotches, its anterior margin with some small brown spots; marginal setae brown. Hindwing and its marginal setae dark-grey. Male genitalia (fig. 31): Subscaphium slender, triangular at basal extremity; cucullus dilated, with thick setae on its lower corner; vinculum less than 3/5 length of valva; aedoeagus shorter than valva; cornuti absent.

Holotype ♂ Sichuan Province, Qingchengshan, 1-VI-1979, Liu Youqiao.

This species is closely allied to *ryukyuensis*, but differs from the latter in having pecten on scape of antenna, posterior edge of forewing without brown spots.

***Caloptilia (Caloptilia) spinulosa* sp. nov.**

Forewing: length 5.8 mm.; ochre-yellow, from costa to base of wing and from posterior edge to apex gradually change to brown; 8 brown spots arranged irregularly on costa; marginal setae on apex ochre; posterior edge setae ochre-grey. Hindwing and its marginal setae grey. Male genitalia (fig. 32): Subscaphium dilated and triangular at basal extremity; valva upturned, dilated apically, round on ventro-apical corner; vinculum longer than 3/4 of valva;

aedoeagus shorter than valva; many slender cornuti situated in phallobase.

Holotype ♂ Jiangxi Province, Lushan, 16-VI-1975, Liu Youqiao.

This species is closely allied to *issikii* in aedoeagus but differs from the latter in many slender cornuti in phallobase.

Caloptilia (Caloptilia) striata, sp. nov.

Forewing: length 6.3 mm.; yellowish-brown, with 7 yellow oblique fascia; marginal setae on apex yellow, on posterior edge dark-grey. Hindwing and its marginal setae grey. Male genitalia (fig. 33): Subscaphium thick, triangular at basal extremity; valva upturned, dilated apically, protuded on ventro-apical corner and dorso-apical corner; vinculum a little longer than tegumen, round apically; aedoeagus slender, about 1.2 length of valva; cornuti absent.

Holotype ♂ Jiangxi Province, Lushan, 19-VI-1975, Liu Youqiao.

This species with long scale tufts on termical 2 segments of labial pulpus, with 7 yellow oblique fascia, which are quite different from other species of subgenus *Caloptilia*.

Caloptilia (Caloptilia) tricolor sp. nov.

Forewing: length 4.3 mm.; light brown, basal 1/4 of costa with a white oblique fascia, terminal 1/4 with one white and one yellow transverse fascia; marginal setae on apex brown, posterior edge setae grey. Hindwing light brown, marginal setae grey. Male genitalia (fig. 34): Subscaphium short, dilated basally; valva nearly rectangular, dilated apically. Vinculum as long as valva, round apically; aedoeagus slender, about 1.3 length of valva; cornuti minute, numerous arranged in row on aedoeagus terminally.

Holotype ♂ Fujian Province, 22-VI-1980, Jiang Fan.

This species is closely allied to *semifasciella*, but differs from the latter in numerous minute cornuti arranged in a row on aedoeagus terminally.

Caloptilia (Povolnya) striolata sp. nov.

Forewing: length 7.7 mm.; with ochre, brown and yellow 3 colors mixed together, scattered with many white spots of various size; 10 white spots along costa; marginal setae on apex yellowish-brown, posterior edge setae light brown. Marginal setae on hindwing grey. Female genitalia (fig. 36): Lamella postvaginalis wrinkle and crescent, round posteriorly; antrum slender, sclerotized, as long as anterior apophysis, corpus bursae ovale, two signa not equal in size, one sickle-like and other in rhomb-shaped.

Holotype ♀ Fujian Province, Huanggangshan, 28-VI-1982, Jiang Fan. Paratype ♀ Locality as Holotype, 29-VI-1982, Chang Kechi.

This species is closely allied to *obliquatella* in female genitalia but differs from the latter in two different sized and shaped signa.

Caloptilia (Rhadinoptilia) sassafraicicola sp. nov.

Forewing: length 4.4—6.0 mm.; bright yellow, posterior edge, apex and marginal setae ochre-brown; along anterior and posterior edges usually with a series of small brown spots. Hindwing and its marginal setae ochre-brown. Male genitalia (fig. 37): Tegumen weakly sclerotized; subscaphium short, pointed basally; valva strongly dilated apically, basal 1/3 of costa with a finger-like protuberance; saccus slender, weakly dilated basally; vinculum plus saccus as long as valva; aedoeagus shorter than valva; with one cornutus about half length of aedoeagus. Female genitalia (fig. 37): Anterior apophysis shorter than posterior apophysis and signa; ostium bursae and antrum weakly sclerotized; ductus bursae long, slender; corpus bursae pear-shaped, 2 sickle-like signa.

Holotype ♂ Fujian Province, Laizhou, 1986, Li Jiayuan. Allotype ♀, Paratypes 7 ♂♂, 6♀♀ locality, date and collector same as Holotype.

This species is nearly allied to *bipunctata*, but differs from the latter in a fingler-like protuberance on costa of male genitalia.

***Caloptilia (Sphyrophora) trimaculiformis* sp. nov.**

Forewing: length 5.0 mm.; ochre-brown, with 3 yellow transverse fascia; marginal setae ochre-brown mixed white. Hindwing and its marginal setae brown. Male genitalia (fig. 38): Ventral tegumen weakly sclerotized with some long and thin setae on the surface; valva weakly dilated apically; vinculum about 2/3 length of valva; aedoeagus 1.2 length of valva, cornuti absent. Female genitalia (fig. 38): Lamella postvaginalis short, trapezoid; lamella antevaginalis absent; ductus bursae slender; corpus bursae ellipse; 2 saddle-like signa nearly equal in size.

Holotype ♂ Fujian Province, 28-VI-1980, Qi Shicheng. Allotype ♀ Fujian Province, VI-1975. Paratype ♂ Fujian Province, Shaxian, 11-IX-1979, Ling Naiquan.

This species is near to *sapiivora* in male genitalia but differs from the latter in forewing patterns and sizes of two signa.

***Caloptilia (Timodora) garcinicola* sp. nov.**

Forewing: length 5.5 mm.; ochre-brown, apex and marginal setae ochre; posterior edge setae light brown. Hindwing and its marginal setae ochre-grey. Male genitalia (fig. 39): Tegumen with haired conical socii; ventral-lateral of tuba analis with a pair of sclerotized protuberance which arranged with a series of long setae; valva somewhat rectangular, upturned; cucullus without long hairs, only with some scattered short thick setae on the middle of costa and anterior part of sacculus; saccus slender; vinculum plus saccus about 3/4 length of valva; aedoeagus curved, terminal 1/3 slender; cornuti absent. Female genitalia (fig. 39): Ostium bursae opened at sclerotized gonoplate; antrum short; corpus bursae ovale; 2 slender sickle-like signa with equal size.

Holotype ♂ Guangxi Zhuangzu Autonomous Region, Nanning, 25-VI-1981. Allotype ♀ locality, date same as Holotype.

Host Plant: *Garcinia tinctoria* (DC.) Wight.

This species is near to *elongata* in genitalia but differs from the latter in every detail structure.

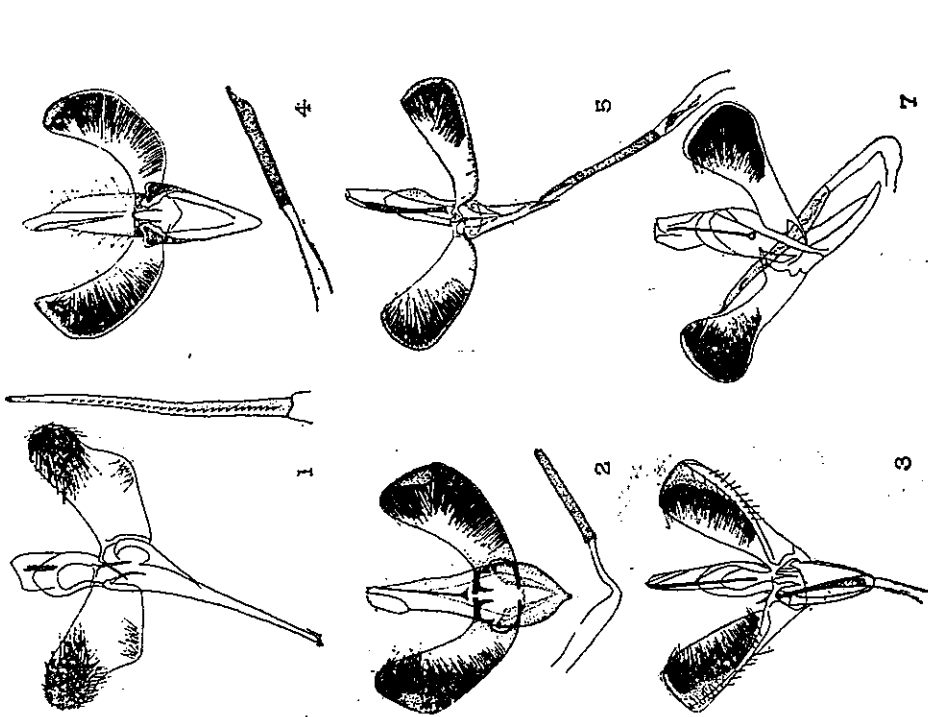


图 1-5, 7 雄柱外生殖器

1. 白桦丽细蛾 [*Caloptilia (Caloptilia) suberinella* (Tengstr.)]; 2. 茶丽细蛾 [*C. (C.) theipora* (Walsingham)]; 3. 大豆丽细蛾 [*C. (C.) soyella* (Deventer)]; 4. 苹丽细蛾 [*C. (C.) zachrysa* (Meyrick)]; 5. 枫丽细蛾 [*C. (C.) recitata* (Meyrick)]; 7. 栗丽细蛾 [*C. (C.) sapporella* (Matsumura)]。

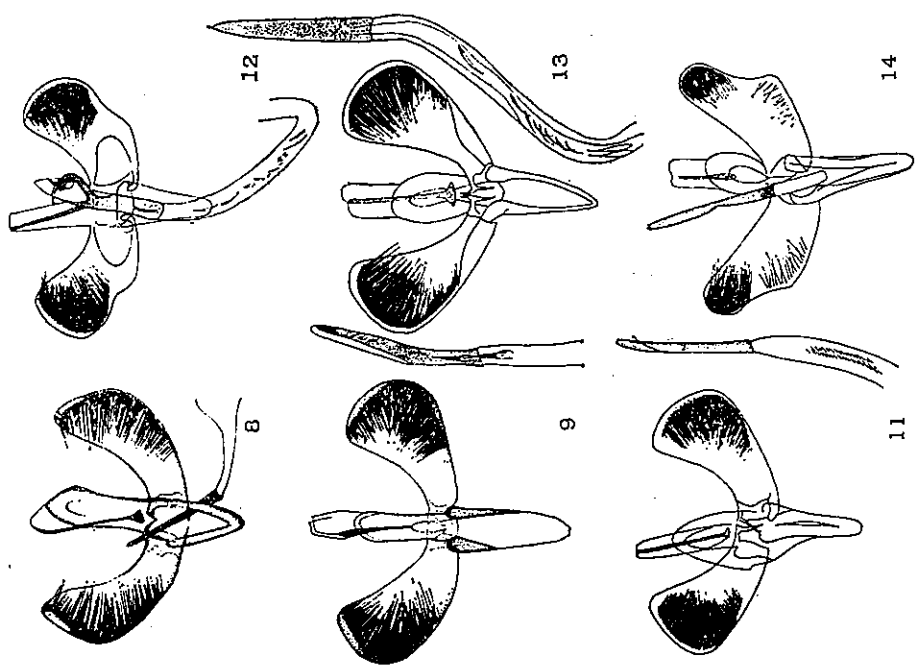


图 8-9, 11-14 雄柱外生殖器

⑧ 柳丽细蛾 [*C. (C.) chrysolampra* (Meyrick)]; 9. 漆丽细蛾 [*C. (C.) rhois* Kumata]; 11. 赤杨丽细蛾 [*C. (C.) alni* Kumata]; ⑨ 黑丽细蛾 [*C. (C.) kurōkoi* Kumata]; 13. 五角枫丽细蛾 [*C. (C.) monicola* Kumata]; 14. 植木丽细蛾 [*C. (C.) pulverea* Kumata]。

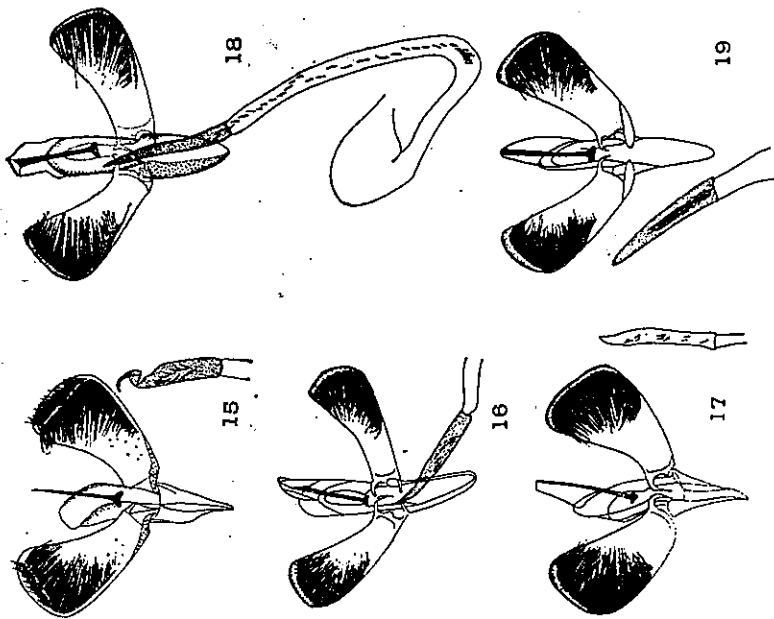


图 15-19 雄性外生殖器

15. 双色丽细蛾 [C. (C.) *bicolor* Ermolaev]; 16. 朴丽细蛾 [C. (C.) *celiidis* Kumata]; 17. 岩丽细蛾 [C. (C.) *issikii* Kumata]; (18) 蒙丽细蛾 [C. (C.) *mongolicae* Kumata]; 19. 榆丽细蛾 [C. (C.) *ulmi* Kumata]。

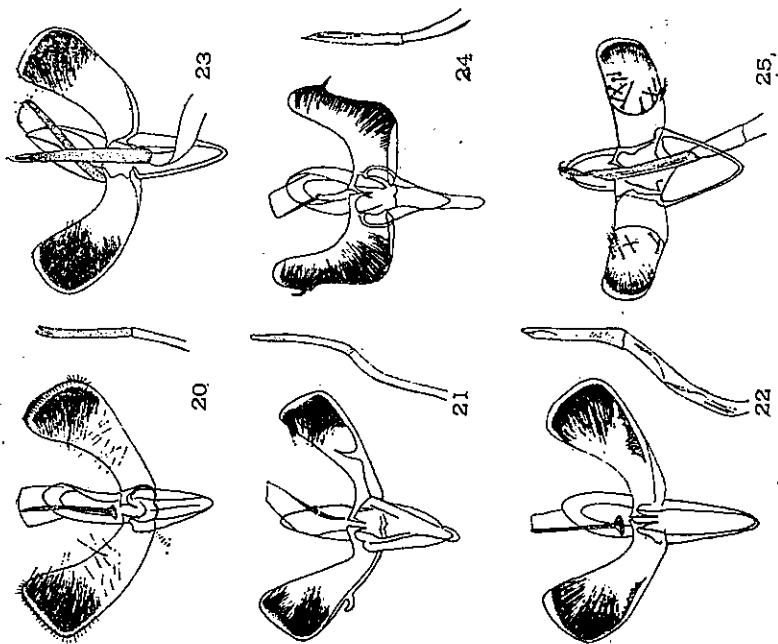


图 20-25 雄性外生殖器

20. 双斑丽细蛾 [C. (C.) *bimaculata* sp. nov.]; 21. 指丽细蛾 [C. (C.) *dactylifera* sp. nov.]; 22. 元宝枫丽细蛾 [C. (C.) *dentata* sp. nov.]; 23. 黄丽细蛾 [C. (C.) *flavida* sp. nov.]; 24. 钩丽细蛾 [C. (C.) *hamulifera* sp. nov.]; 25. 瓢丽细蛾 [C. (C.) *hypodroma* sp. nov.]。

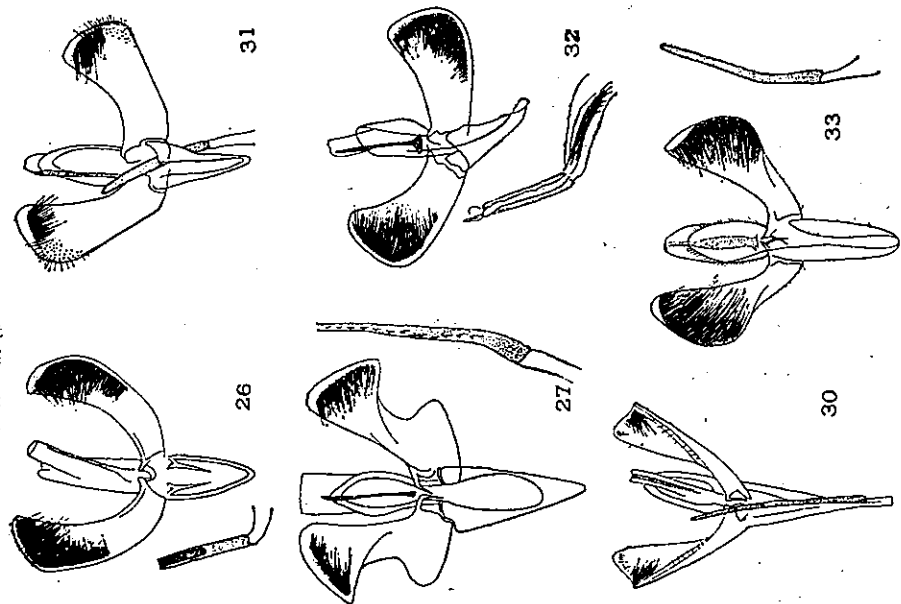


图 26-27, 30-33 雄性外生殖器

26. 花丽细蛾 [*C. (C.) jasmnicola* sp. nov.]; 27. 栾丽细蛾 [*C. (C.) koe-
ireutericola* sp. nov.]; 30. 鳞丽细蛾 [*C. (C.) sacisquamata* sp. nov.];
31. 川丽细蛾 [*C. (C.) sichuanensis* sp. nov.]; 32. 斜丽细蛾 [*C. (C.)
spinulosa* sp. nov.]; 33. 纹丽细蛾 [*C. (C.) striata* sp. nov.]。

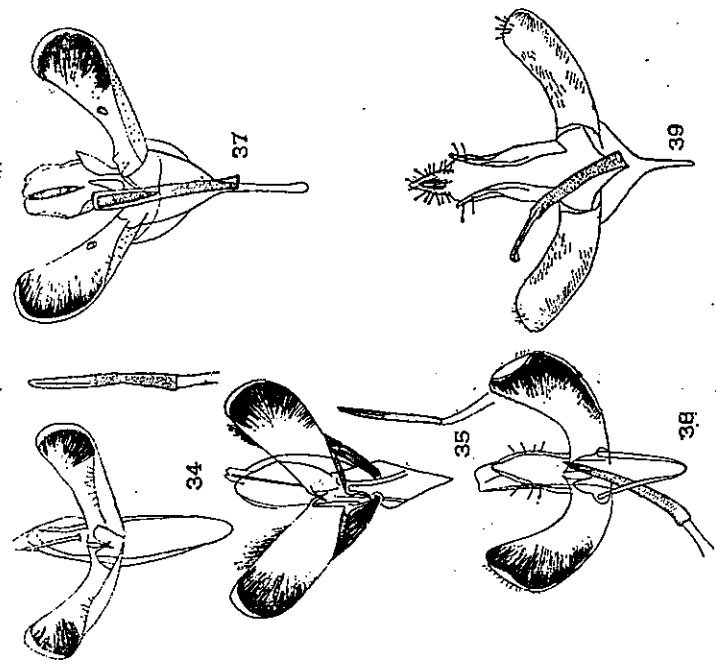


图 34-35, 37-39 雄性外生殖器

34. 三色丽细蛾 [*C. (C.) tricolor* sp. nov.]; 35. 梨叶丽细蛾 [*C. (Phylloptilia)
perseella* Kumata]; 37. 椴角丽细蛾 [*C. (Rhadinoptilia) sassaraticola* sp.
nov.]; 38. 斑鏗丽细蛾 [*C. (Sphyrophora) trimaculiformis* sp. nov.];
39. 人面果刺丽细蛾 [*C. (Timodora) garcinicola* sp. nov.]。

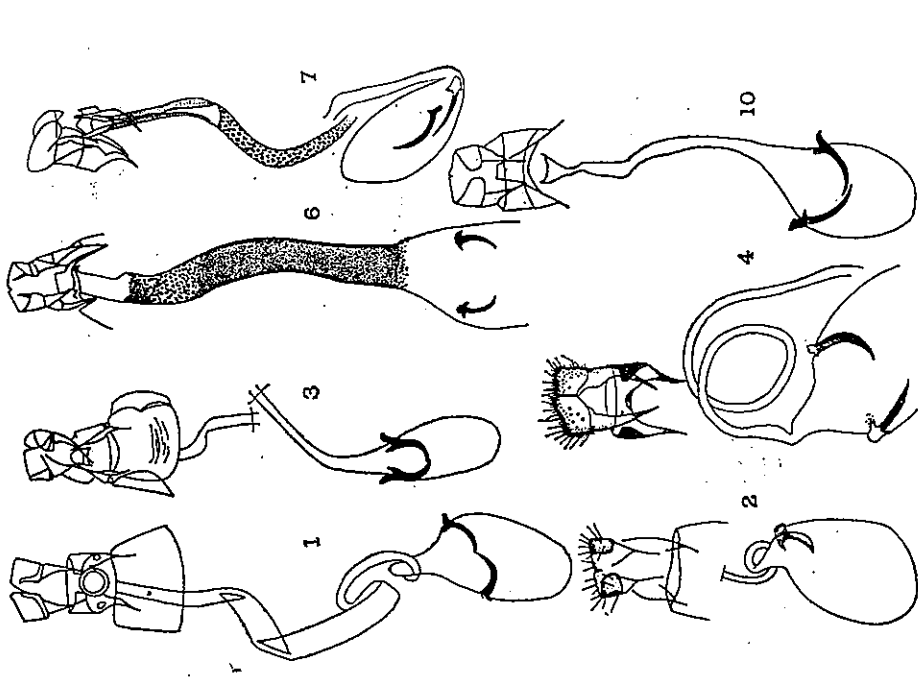


图 1-4, 6-7, 10 雌性外生殖器官

1. 白桦丽细蛾 [*Caloptilia (Caloptilia) suberinella* (Tengstr.)]; 2. 茶丽细蛾 [*C. (C.) theivora* (Walsingham)]; 3. 大豆丽细蛾 [*C. (C.) soyella* (Deventer)]; 4. 苹果丽细蛾 [*C. (C.) zachrysa* (Meyrick)]; 6. 桦丽细蛾 [*C. (C.) sapporella* (Matsumura)]; 10. 槭丽细蛾 [*C. (C.) aceris* Kumata].

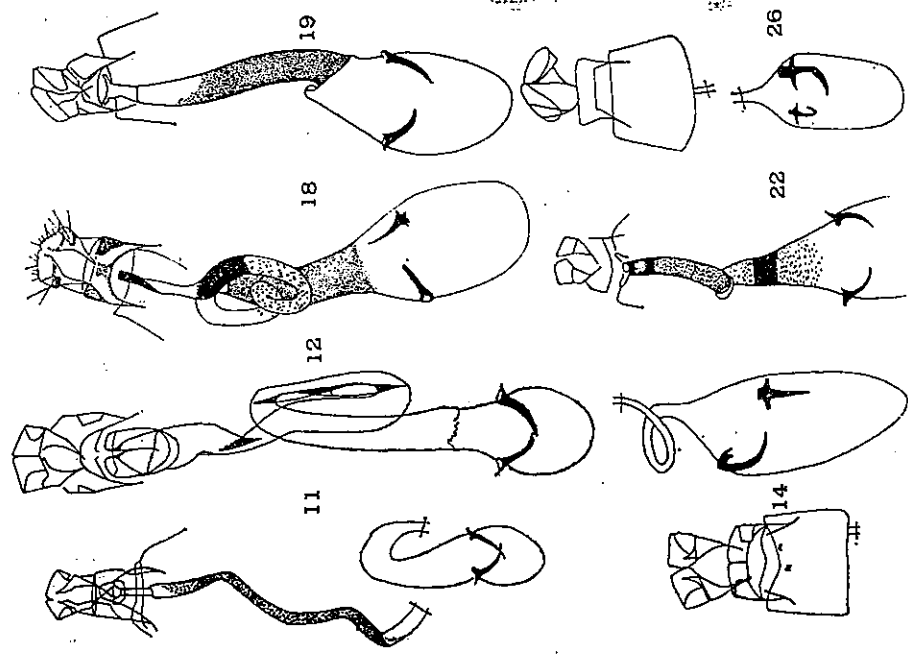


图 11-12, 14, 18-19, 22, 26 雌性外生殖器官

11. 赤杨丽细蛾 [*C. (C.) alni* Kumata]; 12. 黑丽细蛾 [*C. (C.) kurokoi* Kumata]; 14. 槐木丽细蛾 [*C. (C.) pulvereae* Kumata]; 18. 蒙丽细蛾 [*C. (C.) mongolicae* Kumata]; 19. 榆丽细蛾 [*C. (C.) ulmi* Kumata]; 22. 元宝枫丽细蛾 [*C. (C.) dentata* sp. nov.]; 26. 花丽细蛾 [*C. (C.) jasminicola* sp. nov.].

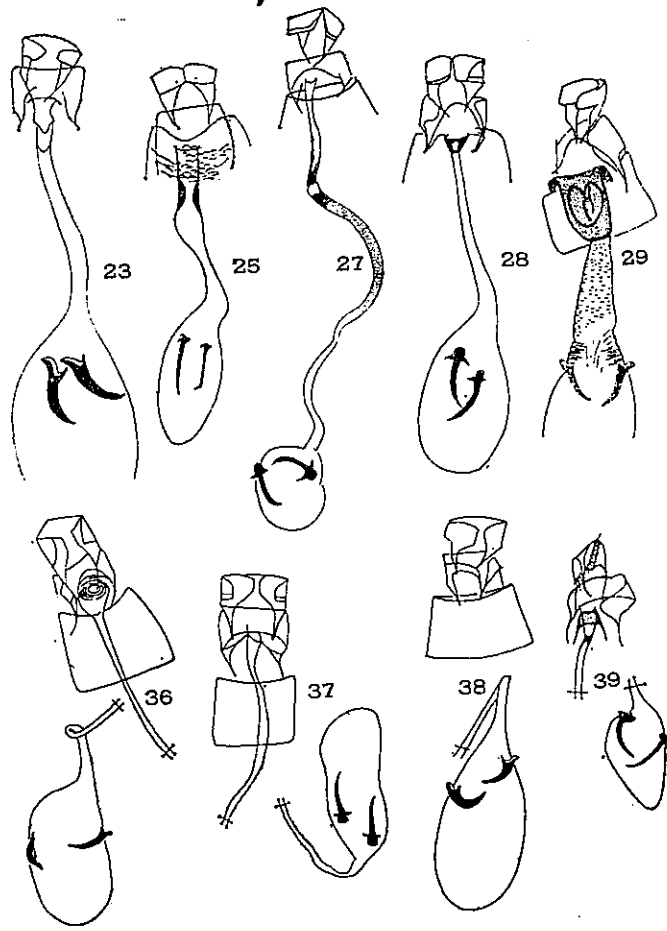


图 23,25,27-29, 36-39 雌性外生殖器

23. 黄丽细蛾 [*C. (C.) flavida* sp. nov.]; 25. 瓢丽细蛾 [*C. (C.) hypodroma* sp. nov.]; 27. 栾丽细蛾 [*C. (C.) koelreutericola* sp. nov.]; 28. 京丽细蛾 [*C. (C.) pekinensis* sp. nov.]; 29. 四点丽细蛾 [*C. (C.) quadripunctata* sp. nov.]; 36. 纹鳞丽细蛾 [*C. (Povolnya) striolata* sp. nov.]; 37. 椴角丽细蛾 [*C. (Rhadinoptilia) sassafrasicola* sp. nov.]; 38. 斑锤丽细蛾 [*C. (Sphyrophora) trimaculiformis* sp. nov.]; 39. 人面果刺丽细蛾 [*C. (Timodora) garcinicola* sp. nov.]。