

Notes of new genus and new species of *Fulgoroidea* from China (*Homoptera: Fulgoroidea*)^{*}

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Summary Three new genus and thirteen new species published during 1988-1991 are described in this paper. They are: Fulgoridae—*Nealcahous huangshanana*, *N. wuyishanana*, *Kalidasa lui*; Achilidae—*Ganachilla zhenyuanensis*, *Haicixidia jianfengensis*, *Magadha yadongensis*, *M. gyirongensis*, *M. taibaishanensis*, *Catonidia tibetensis*, *C. guadunensis*, *C. wuyishanana*, *C. fujianensis*; Cixiidae—*Oliarus zaonensis*. They all are collected from China. The type specimens of them are deposited in the Shijiazhuang Pomology Institute, Northwestern Agricultural University and Institute of Zoology, Academia Sinica.

Key words new species, China, *Homoptera*, *Fulgoridae*, *Achilidae*, *Cixiidae*

Introduction

Three new Genus and thirteen new Species of *Fulgoroidea* collected from China are reported in this paper. All the type specimens are deposited in the insect collection of the Shijiazhuang Pomology Institute, Northwestern Agricultural University and Institute of Zoology Academia Sinica. Those new genus and new species were reported in Chinese in the Acta Agriculturae Boreali-Sinica and Acta Universitatis Agriculturae Boreali-Occidentalis during 1988-1991. They are collected and given a minute description as follows.

Fulgoridae

Nealcahous Wang et Huang 1989

Type of the Genus: *Nealcahous huangshanana* Wang et Huang.

This genus resembles closely *Alcahous* Stal 1863, but the head far more narrow than prothorax and to come into horn toward above. Front dilates near the base and with three carinae. Clypeus with a median carina. Rostrum slender and almost reaching to apex abdomen. Pronotum with a median carina. Mesonotum with three carinae. Forewings slightly narrowly long, outer margin oblique, longitudinal veins never divaricate, veins with netting at the half of apex. Veins of hindwings with netting as the forewings. Hind-tibiae with six spines. But *Alcahous* Stal hasn't median carina at the pronotum and only one thirds of forewings with netting veins.

1. *Nealcahous huangshanana* Wang et Huang, 1989

Body length 15 mm, forewings length 23 mm.

Head and thorax grey-green; the back with small red spots; the venter with small black-brown spots; anterior termination of head protruding and curving to above, and

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nearly rectangular with the body; the apex with horn shape. Vertex with near square shape; the disc concave; the median carina obscure. Clypeus triangular shape. Rostrum slender and reaching to apex abdominis. Anterior margin of pronotum prominent and truncated, posterior margin nearly plane, the middle part of pronotum with two black triangular streaks, near the margins with a large black spot. Two carinae between eyes and tegula. Mesonotum with three longitudinal carinae and anterior margin with four black spots, anterior lateral angular and posterior lateral area with a large irregular black spot. Forewings almost red-brown, and the round and the apex of them with olivaceous, one third of the apex with brown spots, and two thirds of the apex with netting veins. Hindwings olivaceous two thirds of the apex black-brown and with netting veins.

Holotype: 1 ♂; Allotype: 1 ♂, collected by Huang Ju and Wang Sizheng from the Huangshan Mountains of Anhui province, (890 m, 1000 m), 1980-08-04.

2. *Neocalthous wuyishanana* Wang et Huang 1989

Body length 16 mm, forewings length 20 mm.

Body yellow-green; the apex of head protruding; vertex slight with ladder shaped; front pendent-clock shaped and with netting sculpture. The disc convex and with three carinae. The disc of clypeus convex, rostrum brown, slenden and reaching to the apex abdominis. The eyes rotundate, luteous. Anterior margin of pronotum with four black spots, one carinae between eyes and tegula. Mesonotum with three carinae, near the anterior margin with four black spots, posterior lateral margin with two black rotundate spots. The base of forewings with 33 light colour spots, near the outer margin with 19 spots in light colour and near two thirds of the apex with netting veins. Hindwings fuliginous at about half near the outer margin, seven fuliginous rotundate spots at about half near the interior margin. Hind-tibiae with six spinae.

Holotype: 1 ♂, collected by Jiang Fan from the Wuyi Mountains of Fujian province, 1981-09-23.

This species resembles *N. huangshanana* Wang et Huang, but it may be distinguished by the colour and spots of wings.

3. *Kalidasa lui* Wang et Huang 1989

Body length 12 mm, forewings length 17 mm.

Head and thorax brown-red, vertex extremely wide, lateral margins parallel and carina-like, head-process black and its length about 6 mm. The apex of front slight narrow, the base of front slight dilatate, the disc of front with two parallel obsolete longitudinal carinae. The disc of clypeus slight dilatate, the rostrum slenden and reaching to the apex abdominis. The eyes castaneous. Anterior margin of pronotum repandus, the disc convex, posterior margin slight plane, lateral margins with a black streak. Mesonotum with a median carina. Forewings pink, anterior margin with 15 black speckles, outer margin with a black-brown broad fascia. This species resembles *K. pualinia* Sign 1862, but it may be distinguished by size, colour and spots of wings.

Holotype: 1 ♂, collected by Forestry Department of Guangxi from Pingxiang county, Guangxi province, 1980-09-15.

Achilidae

Ganachilla Wang et Huang 1988

Type of the Genus: *Ganachilla zhenyuanensis* Wang et Huang 1988.

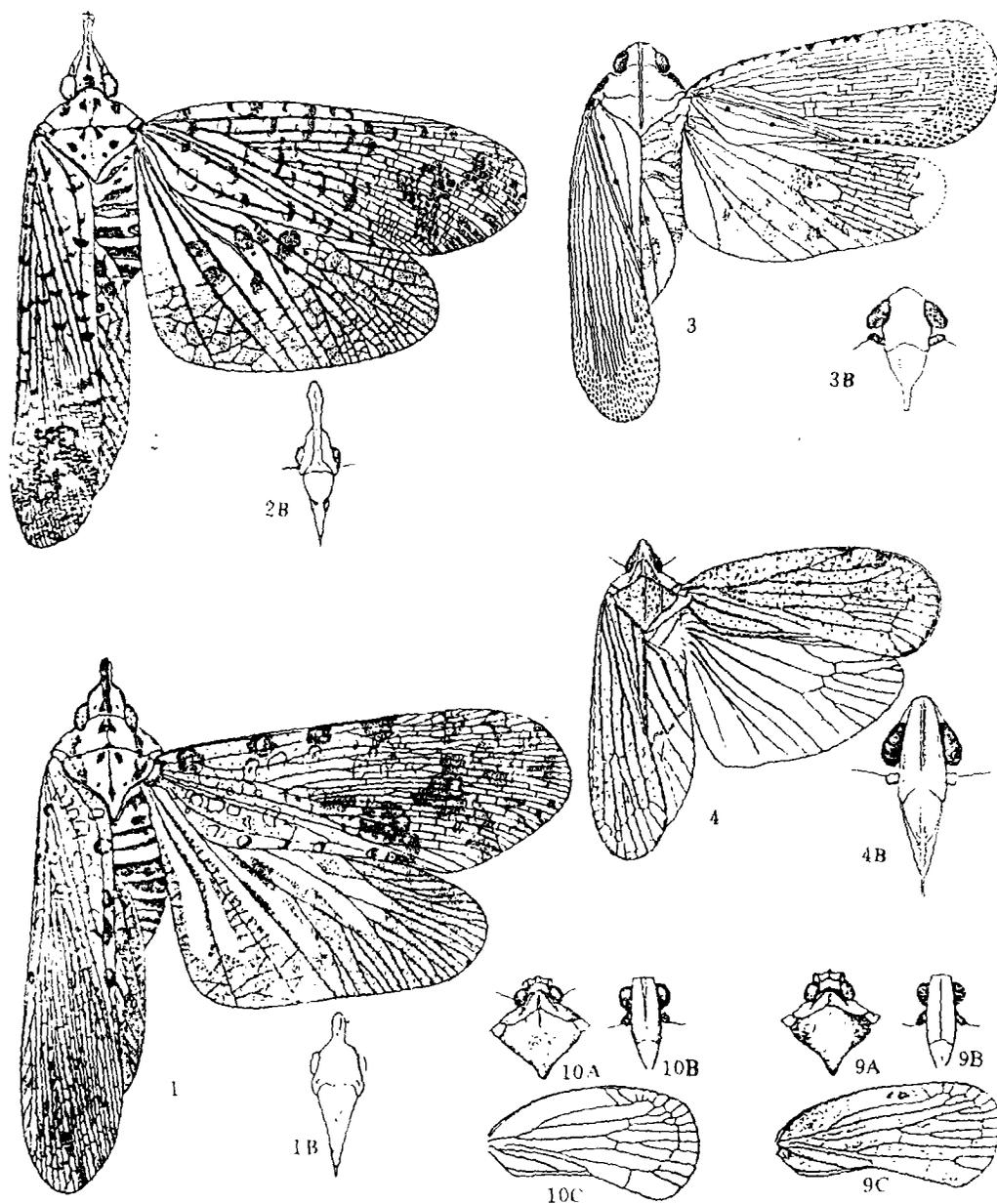


Fig. 1. Habitus (1)

A. Head & pronotum dorsal view; B. Frons; C. Forewings.

1. *Neocalathous huangshanana* Wang et Huang

2. *N. wuyishanana* Wang et Huang

3. *Kalidasa lui* Wang et Huang

4. *Ganachilla zhenyuanensis* Wang et Huang

9. *Catonidia tibetensis* Wang et Huang

10. *C. guadunensis* Wang et Huang

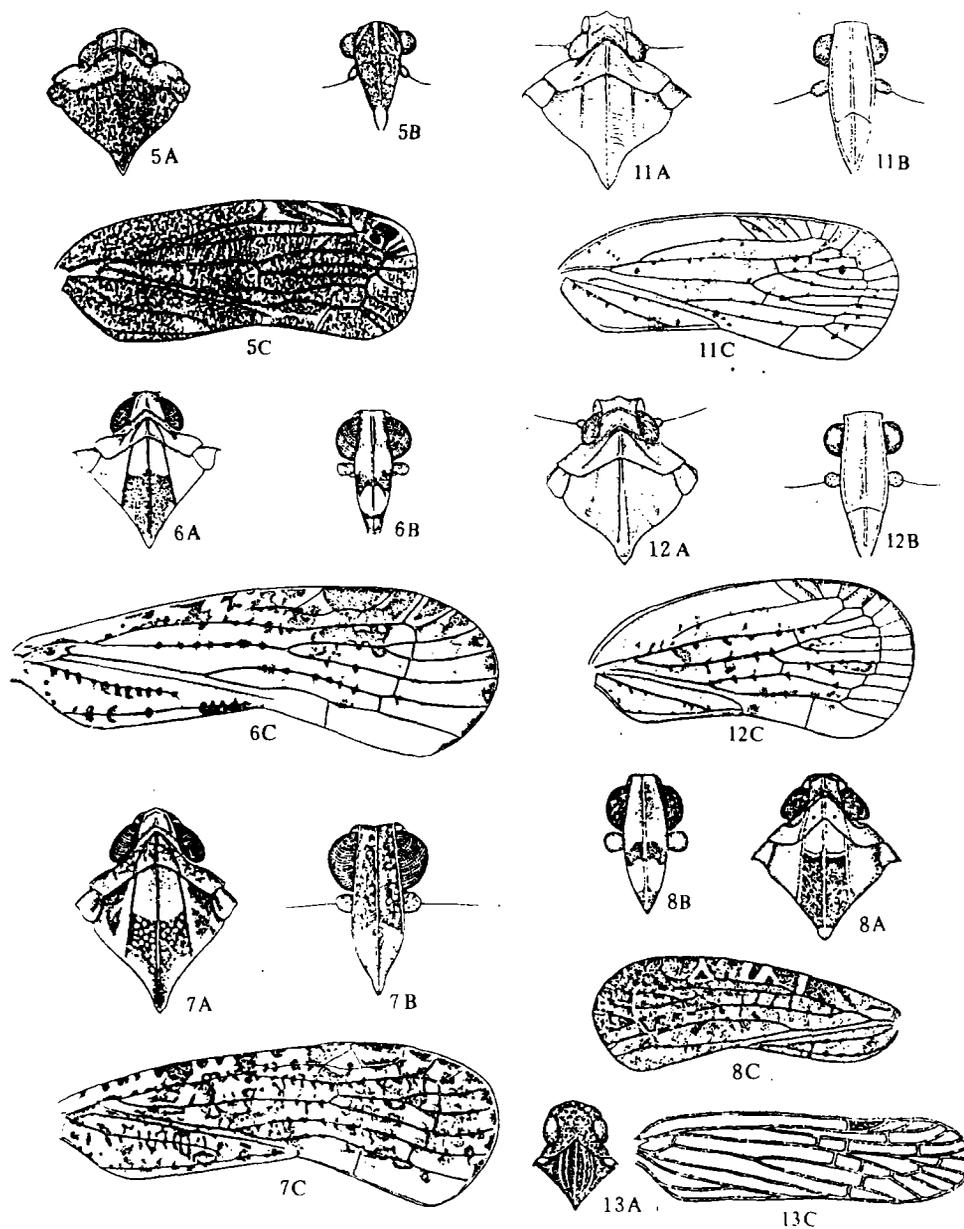


Fig. 2. Habitus (2)

A. Head & pronotum dorsal view; B. Frons; C. Forewing.

5. *Haicixidia jianfengensis* Wang

6. *Magadha yadongensis* Wang

7. *M. gyirongensis* Wang

8. *M. taibaishanensis* Wang

11. *Catonidia wuyishanana* Wang et Huang

12. *C. fujianensis* Wang et Huang

13. *Oliarus zaohensis* Wang

This genus is under Myconini. The body depressed, head more narrow than pronotum, vertex without median carina. The disc of pronotum depressed and with three carinae, anterior margin curve, posterior margin obtusely notched. Two longitudinal carinae between eyes and tegulae. The mesonotum with three longitudinal carinae. Outer margin of forewings curve, the M veins with three branches; the A veins united near the apex. Hindwings broad and with two fork veins near the apical angle; the median part of outer margin with two fork veins. The hind tibiae with a lateral spin.

This genus resembles *Cixidia* Fieber 1866, but it may be distinguished by the carina of head and mesonotum.

4. *Ganachilla zhenyuanensis* Wang et Huang 1988

Body length 4 mm, forewings length 6 mm.

Body dark-brown, and with scattered numerous light brown spots. The anterior margin of vertex curve and carina-like, and the lateral margin carina-like, the posterior margin obtusely notched; the disc hollow-sunken and without carina. The front narrowly long, the terminal margin of front truncated, lateral margin curve, basic margin notched, the disc depressed and without median carina. The clypeus depressed and with a median carina, lateral margins slight carina-like; rostrum slender and reaching to outer side of hind-coxae; the eyes ovaliform, black-brown. The length of pronotum about equal as vertex, anterior margin curve, posterior margin obtusely notched, lateral margins slight curve, the disc depressed and with three longitudinal carinae. Two longitudinal carinae between eyes and tegulae. The mesonotum depressed, and scattered obscure black-brown speckles on it. The disc with three parallel longitudinal carinae. Forewings brown, semi-transparent and scattered obscure grey-brown speckles, outer margin curve, anterior margin region broad. The termination of Sc with two black-brown irregular spots; M veins with three branches. Hindwings broad, light-brown. Leg brown, tibiae slender, hind-tibiae with a lateral spin.

Holotype: 1 ♀; Paratype: 1 ♂, collected by Chao Wei from Zhenyuan county, Gansu province, 1984-08-02.

Haicixidia Wang 1989

Type of Genus: *Haicixidia jianfengensis* Wang 1989

This genus is under Myconini. Vertex broad; anterior margin and posterior margin curve and slight parallel; the median carina conspicuous; the disc slight hollow-sunken. The lateral margins of front curve; terminal lateral margins with a conspicuous small triangular region, and with a median carina; the disc of clypeus slight curve. Anterior margin of pronotum curve and prominent, posterior margin obtusely notched, with a median carina and a reversal V-shaped lateral carinae. Two longitudinal carinae between the eyes and tegulae. Mesonotum conspicuous, and with three parallel longitudinal carinae. Forewings slight rectangle; outer margin curve; Sc veins with four short branches reaching to the anterior margin; R veins with two short branches at terminal margin; M veins with three branches. Hind-tibiae with a lateral spin.

This genus resembles *Myconus* Stal, but it may be distinguished by the wide vertex and two carinae between eyes and tegular.

5. *Haicixidia jianfengensis* Wang 1989

Body length 8 mm (including forewings).

Vertex and pronotum light brown and scattered irregular stramineous speckles on it;

the disc of vertex slight hollow-sunken and with a median carina; margins carina-like. The front depressed, brown, and with scattered light-brown speckles on it; anterior margin curve; posterior margin obtusely notched; lateral margins carina-like, curve, and with a median carina. Clypeus brown and with some light brown speckles spreaded on it and a median carina. The rostrum light-brown and reaching to hind-coxae. The eyes dark-brown, roughly round. Length of pronotum is equal as vertex; the anterior margin curve and prominent; posterior margin obtusely notched, with a median carina and a reversal V-shaped lateral carinae. Two longitudinal carinae between the eyes and tegular; mesonotum conspicuous, brown and scattered stramineous speckles, and with three parallel longitudinal carinae. Tegular brown and scattered stramineous speckles. Forewings light brown, narrowly long, and scattered stramineous speckles; outer margin curve. Sc veins with four short branches and reaching to anterior margin; two branches of them near the outer margin with white marginate. R veins with two short branches at terminal margin; a large black spot within the second branches. M veins with three branches. Hindwings light brown and their veins dark-brown. Abdomen dark brown. Legs brown, and the hind-tibiae with a lateral spin.

Holotype: 1 ♀ collected by Chinese Academy of Forestry Sciences from Hainan province, 1968-05-11.

6. *Magadha yadongensis* Wang 1988

Body length 9 mm (including forewings).

Body brown. Anterior lateral margins of vertex with a conspicuous triangular region, the disc hollow-sunken and with a median carina, and a dark-brown streal at the base. The front dark-brown, narrowly long, and slight dilated near the clypeus. The median carina convexly, a grey-white lobiform spot near the base. Termination with a grey-white transverse band. Clypeus with two grey-white round spots. The rostrum light-brown and reaching to hind-coxa. The eyes black, round. Pronotum light-brown, and its anterior margin with conical prominence, posterior margin obtusely notched and with three longitudinal carinae. The mesonotum conspicuous, brown and with three longitudinal carinae; the disc near the two thirds termination with dark-brown spot; the anterior margin curve, and the termination with three light yellow small spots. Forewings narrowly long, light-brown, semi-transparent and scattered brown speckle on it; the spots of costal area large and irregular, and a large irregular brown spot near the bathmis. Cross-veins grey-white; main part of M veins with seven small brown spots; main part of CuI vein with six small brown spots. Hindwings fuliginous, and veins brown. Abdomen dark-brown. Legs light-brown; hind-tibiae with six spins.

This species resembles *M. cerrina* Fennah, but it may be distinguished by the size, colour of body and spots of forewings.

Holotype: 1 ♂ collected by Zhao Yongxiang from Yadong county, Xizang Autonomous Region, el. 2700 m, 1984-08-30. Allotype: 1 ♀ collected by Hu Shangpin from Yadong county, Xizang Autonomous Region, el. 2700m, 1984-08-29. Paratype: 3 ♀, collected by Li Eihua from Yadong county, Xizang Autonomous Region. el. 2700m, 1984-08-29.

7. *Magadha gyirongensis* Wang 1988

Body length 8.9 mm (including forewings).

Body castaneous. Anterior lateral margin of vertex with a slight conspicuous triangular region; the disc hollow-sunken and with a median carina, and some dark-brown spots at each side. The front narrowly long and slight dilated near the clypeous, and scattered light-brown small round spots on it. The median carina convexly. The clypeous light

brown and scattered light-brown small round spots on it. The rostrum brown and reaching to hind-coxa. Eyes castaneous round. Numerous light-brown small round spots scattered on the pronotum; anterior margin with conical prominence; posterior margin obtusely notched, and with three longitudinal carinae. Mesonotum conspicuous and with three longitudinal carinae; the disc near the apex dark-brown; anterior margin curve and numerous light-brown small round spots scattered on it; outer side of lateral carinae with dark-brown irregular large spots. Forewings narrowly long, light-brown, semi-transparent and numerous irregular castaneous spots scattered on it; veins light-brown. Hindwings fuliginous. Abdomen dark-brown. Legs brown. The femora of anterior legs and median legs with a light spot. The tibiae with two light spots; hind-tibiae light colour. This species resembles *M. yadangensis* Wang, but it may be distinguished by speckle of front, pronotum, mesonotum and forewings.

Holotype, 1 ♀, collected by Huang Fusheng from Gyirong of Xizang Autonomous Region, el. 2030m, 1975-07-23.

8. *Magadha taibaishanensis* Wang 1989

Body length about 7 mm (including forewings).

Head brown; vertex dark-brown; the disc hollow-sunken; anterior lateral margins with a non-conspicuous triangular region. Front narrowly long; one third of the near base black-brown; one third of the apex brown; the median space yellow. Clypeous yellow; the near apex dark-brown. Rostrum dark-brown and reaching to hind-coxa. Eyes ellipsoidal in form and black-brown in colour. Pronotum grey-brown; its anterior margin curve and posterior margin obtusely notched; the disc with three longitudinal carinae. A light-brown speckles between the median carina and the lateral carinae. Mesonotum yellow and with three longitudinal carinae; the lateral carinae roughly parallel; two thirds of the disc near the posterior margin black-brown, and with two light-red small round speckles. Tegulae light-brown. Forewings narrowly long; the clavus region is apparent ample, the colour is slight dark. There are two grey-white streak spots in costal area near the median portion and the apex. Veins is black-brown. Abdomen black-brown. Legs light-brown; hind-tibiae with seven black spines. This species resembles *M. denticulata* Fennah, but it may be distinguished by the spots of mesonotum and forewings.

Holotype, 1 ♀, collected by Chen Tong from Taibai Mountains of Shaanxi province, 1984-08-06.

9. *Catonidia tibetensis* Wang et Huang 1991

Body length 9 mm (including forewings).

Head, pronotum and mesonotum castaneous. Vertex widen; anterior margin slight prominent; posterior margin slight concave; the disc concave. Front narrowly long; anterior margin slight truncated; posterior margin concave; lateral margins curve; the disc slightly convex and with a median carina. Clypeus is in long-triangle form and with a median carina; lateral margin carina-like. Rostrum slender and reaching to hind-coxae. The eyes round, black-brown colour and with light reticulated streak. Antenna brown; second joint dilated. Pronotum short and prominent at the median space of anterior margin; posterior margin obtusely notched and with a median carina and reversal V-shaped lateral carinae. Mesonotum conspicuous and its length is two times of the length of vertex and pronotum combined; it possesses a median carina and two obscurely lateral carinae. Forewings brown, semi-transparent and with conspicuous oil-state lustre, and scattered numerous irregular grey-white small speckles. Costal area with two dark-brown spots; veins dark brown. Hindwings light-brown, semi-transparent; its veins light-colour, Hind-tibiae with

a lateral spin. Abdomen dark-brown. This species resembles *C. sobrina* Uhler, but it may be distinguished by the colour and the spots of forewings.

Holotype: 1 ♂, collected by Li Fasheng from Nyingchi county Xizang Autonomous Region, el. 3500m, 1978-08-03.

10. *Catonidia guadunensis* Wang et Huang 1991

Body length 8.5 mm (including forewings).

Head, pronotum and mesonotum stramineous, and with oil-state lustre. Vertex widen; anterior margin slight prominent; posterior margin slight concave; the disc hollow-sunken; the margins carina-like and with a light median carina. Front narrowly long and with light reticulated streak; anterior margin truncated; posterior margin concave; lateral margins curve and carina-like; the disc slightly convex and with a median carina; it is thick in the part near the anterior apex. Clypeous triangle and with a light median carina; lateral margins carina-like. Rostrum slender and reaching to outer margin of hind-coxae. Eyes round in form and black-brown in colour. Antenna light-brown. Pronotum short; anterior margin truncated; posterior margin obtusely notched, and with a median carina and two reversal V-shaped lateral carinae. Mesonotum conspicuous and its length is three times of the length of head and pronotum combined, and with a median carina; the posterior section of median carina and the lateral carinae obscure. Forewings yellow-white and semi-transparent; terminal margin curve, veins light-brown. Colour of hindwings as forewings; veins brown. Hind-tibiae with a lateral spin. Abdomen brown. This species resembles *C. fujianensis* Wang et Huang, but it may be distinguished by pronotum.

Host: Olive.

Holotype: 1 ♂, collected by Wang Sizheng from Wuyi Mountains of Fujian province, 1984-07-09.

11. *Catonidia wuyishanana* Wang et Huang 1991

Body length 9 mm (including forewings).

Body stramineous. Vertex widen and with two quadrangular regions. Front narrowly long; anterior margin truncated; posterior margin obtusely notched; lateral margins roughly parallel; the disc slightly convex and with scattered light reticulate streaks and a median carina, lateral margins carina-like. Clypeus triangle and with scattered light reticulate streaks, and a median carina; lateral margins carina-like. Rostrum slender and reaching to outer margin of hind-coxae. Eyes dark-brown, near round. Antenna light brown and its second joint dilated. Pronotum short; the median portion of anterior margin prominent, it with a median carina and two lateral carinae. Mesonotum conspicuous and its length is three times of the length of pronotum, and with three parallel longitudinal carinae; the disc with apparent transverse wrinkles. Forewings light yellow, semi-transparent; a dark-brown curve broad fascia from clavus region to apical angle; costal margin with a dark-brown spot near the apical angle. There are numerous apparent brown scattered speckles on the forewings; veins light-brown. Hindwings light yellow; a brown large spot near the apical angle. Hind-tibiae with a lateral spin. This species resembles *C. guadunensis* Wang et Huang, but it may be distinguished by pronotum and forewings.

Host: Peach.

Holotype: 1 ♀. Paratype: 2 ♀, collected by Wang Sizheng from Wuyi Mountains of Fujian province, 1984-07-23, 1984-07-25.

12. *Catonidia fujianensis* Wang et Huang 1991

Body length 8.5 mm (including forewings).

Body yellow-brown. Vertex widen and with two quadrangular regions. Front long; anterior margin truncated; posterior margin concave; lateral margins almost parallel; the disc slightly convex and with a median carina; lateral margins carina-like. Clypeus triangle and with a median carina; lateral margins carina-like. Rostrum slender and reaching to outer margin of hind-coxae. The eyes dark-brown, near round. Antenna light-brown and its second-joint dilated. Pronotum short; the median portion of anterior margin prominent, and with a median carina and two lateral carinae; lateral margins carina-like. Mesonotum length is about 2.9 times of the length of pronotum; the median carina apparent; the disc dark-brown. Forewings light-brown, semi-transparent and with numerous apparent dark scattered speckles; outer margin with eight curve dark speckles; veins brown. Hindwings light, transparent; outer margin light-brown; veins light-brown. Hind-tibiae with a lateral spin. This species resembles *C. sobrina* Uhler, but it may be distinguished by spots of mesonotum and forewings.

Host: Orange.

Holotype: 1 ♂, collected by Wang Sizheng from Wuyi Mountains of Fujian province, 1982-07-20.

Cixiidae

13. *Oliarus zaonensis* Wang 1991

Body length 3.6-4.1mm, forewings length 4.5-5.5 mm.

Body dark-brown and covered with pale-white wax. Vertex is five-pointed in shape; the disc hollow-sunken. Front and clypeus are in one united body and olive in shape; the median carina and lateral carinae stramineous; the apex of median carina forked in shape. Rostrum reach to hind-coxae. The eyes round and castaneous. Antenna black-brown, short and thick. Pronotum short, brown; margins stramineous; the posterior margin obtusely notched; mesonotum black and with a median carina and two lateral carinae. Ter-gosternal posterior margins of abdomen stramineous, and their apex truncated. Forewings light-brown, transparent; anterior margin and posterior margin almost parallel; outer margin curve; the forewing length and width is in a ratio of 4:1; veins brown and with thin small pellets and light-yellow haris; cross-veins of outer margin brown and with long small auredate spots; stigma brown in colour and narrowly triangle in shape. Colour of hindwings is lighter than that of forewings; veins light-brown. The legs yellow-brown; femora almost black-brown; tibiae and tarsi brown or yellow-brown; hind-tibiae with three lateral spins; apex with six spins. This species resembles *O. pachycephs* Mats, but it may be distinguished by size and colour of pronotum and mesonotum.

Host: Jujube.

Holotype: 1 ♂, Allotype: 1 ♀, Paratype: 2 ♂, 6 ♀, collected by Wang Sizheng and Huang Ju from Shijiazhuang Pomology Institute, 1991-06-24, 1991-06-21.

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