A revision of the genus *Eutetrapha* Bates
(Coleoptera: Cerambycidae: Lamiinae: Saperdini)

MEI-YING LIN1,3, WEN-XUAN BI2 & XING-KE YANG1,3
1Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beichen West Road, Chaoyang Dist., Beijing, 100101, China.
2Room 401, No. 2, Lane 155, Lianhua South Road, Shanghai, 201100, China.
3Corresponding authors. Mei-Ying Lin (linmeiy@ioz.ac.cn), Xing-Ke Yang (yangxk@ioz.ac.cn)

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Abstract

A revision of the genus *Eutetrapha* Bates, 1884 is presented. Four new species are described from China: *E. parastigmosa* Lin & Yang, sp. nov. from Hubei, Chongqing and Shaanxi; *E. tiamushana* Lin & Bi, sp. nov. from Zhejiang; *E. shaanxiana* Lin & Yang, sp. nov. from Shaanxi, Hubei, Gansu; and *E. gui* Lin & Yang, sp. nov. from Hainan. *Eutetrapha virides* Pu & Jin, 1991 is transferred to the genus *Paraglenea*, and *Glenea ocelota* Bates, 1873 is transferred from *Eutetrapha* to *Saperda* (Lopezcolonia). *Eutetrapha laosensis* is newly recorded from India and Myanmar, while *Eutetrapha flavoguttata*
Pu & Jin, 1991 is newly recorded from Myanmar. India and Myanmar represent new country records for *Eutetrapha*. Twenty-one taxa are recognized in the genus *Eutetrapha*, and a key to the described species of the genus is presented.

**Key words:** new species, new combination, taxonomy, genitalia, distribution, Oriental region

**Introduction**

The genus *Eutetrapha* was erected by Bates (1884) for five species: *E. variicornis* Bates, 1884 and *E. chrysargyrea* Bates, 1884; together with *Saperda carinata* Blessig, 1873; *Saperda metallescens* Motschulsky, 1860; and *Glenea ocelata* Bates, 1873. Bates (1884) first defined the genus *Eutetrapha* as: “A gen. *Saperda* differt elytris lateraliter carinatis. Segmental ventralia 1–4 subæqualia; unguibus simplicibus; elytris apice rotundatis vel breviter et obtuse truncatis.” and “Closely allied to *Saperda tremula* and *punctata*, and differing solely in the carinated sides of the elytra.”

However, this genus has not been well-defined since the original description, and is often confused with *Paraglenea* Bates, 1866. Though Bates (1884) defined *Eutetrapha* as having “unguibus simplicibus” (claws simple), all five species he included in the genus have appendiculate claws (i.e., males with small teeth on anterior pro- and mesotarsal claws, and simple claws (not appendiculate) on females and metatarsal claws of males). On the other hand, he transferred *Glenea chrysochloris* Bates, 1897 to the genus *Paraglenea* in the same paper, saying that “the claws in the male have a short and broad, but sharp tooth at the base, the claws in the female alone being simple.” However, the claws of *Glenea chrysochloris* are similar to the five species he combined as *Eutetrapha*, and later, K. Ohbayashi (1959) transferred this species to the genus *Eutetrapha*. Similarly, *Eutetrapha velutinofasciata* Pic, 1939 had been placed in the genus *Paraglenea* (Breuning 1952; Hua 2002; Hua et al. 2009) until Lin et al. (2006) returned it to *Eutetrapha*. *Paraglenea nigromaculata* Wang & Chiang, 2002 was synonymized with *E. velutinofasciata* Pic, 1939 (Lin et al. 2006). We believe *Eutetrapha virides* Pu & Jin, 1991 should be transferred to the genus *Paraglenea* because of the appendiculate claws (Fig. 144) of males.

*Eutetrapha* was also confused with *Saperda* and *Glenea*. Some authors considered it as a subgenus of *Saperda* (e.g., Felt & Joutel 1904; Pic 1910), and Abdullah & Abdullah (1966) treated it as a junior synonym of *Saperda* because they did not accept the generic value of carinate elytra. These authors transferred eight taxa from *Eutetrapha* to *Saperda*, but this proposal was not followed by subsequent authors. The only major distinction between the genera *Saperda* and *Eutetrapha* is that the sides of the elytra are simple in the former, and carinate in the latter (Bates 1884; Felt & Joutel 1904; Abdullah & Abdullah 1966). *Eutetrapha sedecimpunctata* (Motschulsky, 1860) was first described under the genus *Saperda*, and *Eutetrapha variicornis* Bates, 1884 and *Saperda motschulskyi* Plavilistshikov, 1915 (=*Saperda sulphuratus* Matsushita, 1906) were synonymized with this species. Also, *Eutetrapha ocelota* (Bates, 1873) was first described under the genus *Glenea* and transferred to *Eutetrapha* by Aurivillius (1923), and *Saperda maculithorax* Pic, 1923 had been synonymized with this species. Herein, we transfer *Eutetrapha ocelota* to *Saperda* (Lopezcolonia).

Finally, we recognize 21 taxa in the genus *Eutetrapha*, including four new species from China: *E. parastigmosa* Lin & Yang, **sp. nov.**, *E. tianmushana* Lin & Bi, **sp. nov.**, *E. shaanxiana* Lin & Yang, **sp. nov.** and *E. gui* Lin & Yang, **sp. nov.** Among these, male claws of *E. chlorotica* Pu & Jin, 1991 and *E. tianmushana* Lin & Bi, **sp. nov.** are not typical for the genus, but the other morphological characters proved to be consistent with the generic definition of *Eutetrapha*.

**Materials and methods**

Photographs were taken with several different camera systems. Habitus photographs were usually taken with a Sony T30, or Canon EOS 7D + Canon Macro 100 mm, and genitalia photographs were taken with a Sony T30, or Sony T30 + Leica S8AP0. All the photographs of metallic scales and some of the genitalia photographs were taken with a large depth of field 3D Digital Microscope (Keyence VHX-1000C).

Specimens studied are deposited in the following institutions, museums or private collections:


Saperda (*Eutetrapha*): Felt & Joutel, 1904: 6; Pic, 1910: 9, 10.

Saperda (pars): Abdullah & Abdullah, 1966: 87. (synonymized *Eutetrapha* with *Saperda*)

**Redefinition.** Medium sized (length between 10–25 mm), body length more than 3.3 times of humeral width. Head as broad as prothorax; frons subquadrate; eyes deeply concave, of which inferior lobe subequal to or narrower than half of frons. Antennae longer than body, sparsely fringed with short hairs on ventral sides of basal antennomeres; scape slightly expanded, without ridge; the third antennomere longest; fourth longer than scape. Pronotum slightly broader than long, without lateral tubercles. Elytra subparallel sided, with distinct lateral carinae; apices rounded or slightly truncated. Procoxal cavity closed or narrowly open posteriorly; mesosacual cavity open externally to mesepimeron; metepisternum more than twice as wide anteriorly as posteriorly; metatibiae grooved; metafemora reaching fourth to fifth abdominal segment; first metatarsal segment subequal to or slightly longer than following two combined. Female claws simple (Fig. 143); male claws with anterior ones of pro- and mesotarsi appendiculate with small teeth on outer side, others simple (Figs. 146a–c).
**Male genitalia:** Apex of male tergite VIII rounded, truncated or emarginated. Lateral lobes stout (length less than four times of width) to slender, with a finely setose ridge at ventral base; ringed part elongated in widest portion, converging; basal piece well-developed and bifurcated. Median lobe slightly curved, longer or shorter than tegmen, dorsal plate shorter than ventral plate. Median foramen elongated. **Female genitalia:** Setae of sternite VIII dense and long. Spermathecal capsule and gland positioned on apex of spermathecal duct. Spermathecal capsule strongly sclerotized, composed of an apical orb and a short to long stalk, spiculum ventrale slightly shorter to or slightly longer than scape in Paraglenea.

**Diagnosis.** This genus differs from Paraglenea Bates (Fig. 144) by the distinct male claws (Figs. 146a–c), which are quite different from the typical appendiculate claws on inner side (Fig. 145). However, two other species (E. chlorotica Pu & Jin, 1991 and E. tianmushana Lin & Bi, sp. nov.) also possess atypical claws, with anterior ones appendiculate on outer side while others appendiculate on inner side (Figs. 147a, b). For females, usually antennomere III is much longer than scape, while antennomere III is subequal to or slightly longer than scape in Paraglenea.

Generally speaking, this genus differs from Glenea Newman by elytral apex without distinct teeth. However, there are some species with almost round or slight truncated elytral apex and same male claws in Glenea Newman, such as G. subviridescens Breuning, 1963 (which may belong to Pseudochlorisanis Breuning, 1954, according to Viktora & Lin 2012).

**Remarks.** Prior to this work, 19 taxa (17 species and 2 subspecies) were recorded in the genus (Tavakilian & Chevillotte 2016), with all species distributed in China except two subspecies endemic to Japan: E. chrysochloris chrysochloris Bates, 1879 and E. sedecimpunctata australis Takakuwa & Hirokawa, 1998. Four new species are described from China, and two species are transferred out of Eutetrapha. In this work, we recognize 21 taxa in the genus Eutetrapha.

Eutetrapha can be separated into two subgroups, the sedecimpunctata group, which are covered with pubescence and is quite similar to Saperda except due to its distinct elytral lateral carinae; and the chrysochloris group, which are covered with metallic scales and is quite distinct from the sedecimpunctata group according to molecular analyses (Dr. Nonaka Masaru, personal communication). The type species (E. sedecimpunctata) is the only species in the genus with procoxal cavity narrowly open posteriorly. The first author will use both morphological and molecular data to study morphological characters and test the monophyly of the genus (in preparation).

**Distribution.** China, Russia, North Korea, South Korea, Japan, Laos, India (new country record), Myanmar (new country record).

**Eutetrapha sedecimpunctata sedecimpunctata** (Motschulsky, 1860)
Figs 1–9

*Saperda sedecimpunctata* Motschulsky, 1860: 151. Type locality: Russia, Siberia, Daourie. Type depository: ZMUM.
*Saperda duodecimpunctata* Motschulsky, 1860 (neext Brahmi, 1790): 151. Type locality: Russia, Siberia, Daourie. Type depository: ZMUM. [preoccupied by *Leptura duodecimpunctata* Brahmi, 1790: 176 = *Saperda perforata* (Pallas, 1773).]
*Saperda carinata* Blessig, 1872: 219. Type locality: Russia, E. Siberia, Bureja-Gebirge, Am Suyfun und bei Wladiwostok. Type depository: ZIN.
*Eutetrapha 16 punctata* Heyden, 1885: 310.
*Eutetrapha 12 punctata* Heyden, 1885: 310.
*Saperda (Eutetrapha) 16-punctata var. rosiniae* Pic, 1904: 17. Type locality: Russia, Siberia, Radde. Type depository: MNHN.
*Saperda sulphurata* Matsumura, 1906 (neext Gebler, 1825): 11. pl. 1. fig. 13. Type locality: Japan. Type depository: Entomological Museum, Hokkaido University, Sapporo. [preoccupied by *Saperda sulphurata* Gebler, 1825: 52 = *Menesia sulphurata* (Gebler, 1825)]
*Saperda (Eutetrapha) 16-punctata*, Pic, 1910: 11.
*Saperda (Eutetrapha) 16-punctata var. rosiniae*, Pic, 1910: 11.
*Saperda motschulskyi* Plavilstshikov, 1915: 80. [new name for *Saperda sulphurata* Matsumura, 1906]
*Eutetrapha 16-punctata ab. infrequens* Plavilstshikov, 1927: 109. [infrasubspecies, from Russia Siberia]
*Eutetrapha sedecimpunctata*; Aurivillius, 1923: 488; Matsushita, 1933: 403, 404; Gressitt, 1951: 555; Breuning, 1952: 132, pl.
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Eutetrapha sedicimpunctata m. rosinae; Breuning, 1952: 133.
Eutetrapha sedicimpunctata m. infrequens; Breuning, 1952: 133.
Saperda (Saperda) motschulskyi; Breuning, 1952: 190.
Eutetrapha sedicimpunctata m. reductemaculata Breuning, 1957: 278. [infrasubspecies, from Aomori, northern Japan]
Saperda (s. str.) motschulskyi; Podany, 1963: 69, fig. 11.
Saperda sedicimpunctata; Abdullah & Abdullah, 1966: 90.
Saperda varicornis; Abdullah & Abdullah, 1966: 90.
Saperda sedicimpunctata var. infrequens; Abdullah & Abdullah, 1966: 90.
Saperda sedicimpunctata var. quattuordecimpunctata; Abdullah & Abdullah, 1966: 90.
Saperda sedicimpunctata reductemaculata; Abdullah & Abdullah, 1966: 90.

FIGURES 1–4. Eutetrapha sedicimpunctata sedicimpunctata (Motschulsky, 1860), habitus. 1. Type of Saperda (Eutetrapha) 16-punctata var. rosinae Pic, 1904, male, from Russia, Siberia; 2. Male, from China, Jilin. 3. Female, from China, Heilongjiang. 4. “Holotype” of Eutetrapha sedicimpunctata m. reductemaculata Breuning, 1957, male, from Japan, Gifu Pref. 1–3. Scale 2 mm. 4. Not to scale.

Supplementary description (genitalia). Male genitalia (Figs. 5–7): Tergite VIII (Figs. 5a & 5c) broader than long; apex truncated, with setae which are long at sides, and shorter and sparser at middle. Spiculum gastrale slightly shorter than ringed part of tegmen, spiculum relictum about one half of spiculum gastrale in length. Tegmen (Figs. 6a–6c) about 3.2 mm in length; lateral lobes (Figs. 7a–7b) slender, tapering apically, each about 0.8 mm long and 0.2 mm wide; apex with fine setae which are shorter than half of length of lateral lobes; median lobe slightly curved (Fig. 6b) in lateral view, shorter than tegmen (7:8); median struts about half-length of median lobe (Fig. 6c); apex of ventral plate (Fig. 7a) pointed; endophallus more than triple length of median lobe, with four pieces of basal plate-like sclerites (located behind apex of median struts), and three rod-like sclerites at end, which are about 2.0 mm, much shorter than tegmen. Female genitalia: spermathecal capsule (Fig. 8) composed of an apical orb and a curved stalk, stalk only a little longer than apical orb. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 10.8 mm for an adult with abdomen measured 9.2 mm in ventral view.

Host plants. Acer sp. (Aceraceae), Populus sp. (Salicaceae), Robinia pseudoacacia Linnaeus (Fabaceae), Salix sp. (Salicaceae), Tilia cordata Miller (Tiliaceae), Tilia japonica (Miquel) Simonkai (Tiliaceae).

Favorite host plants. Salix cardiophylla Trautvetter & Meyer (Salicaceae), Senecio sp. (Asteraceae).
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Remarks. The distribution record from Hubei was mentioned by Hua without reference material or literature cited (Hua 2002; Hua et al. 2009) and followed by Löbl & Smetana (2010). We could not examine any specimens from Hubei, but found three specimens from Hebei.

For the Taiwanese fauna, E. sedecimpunctata was recorded by Chen et al. (1959), including some ecological notes. Meanwhile, Menesia sulphurata (Gebler, 1825) the occurrence from Taiwan was not included in Chen et al. (1959), Hua (2002) and Hua et al. (2009). Thus, we conclude that these authors misapplied Saperda sulphurata Matsumura, 1906 (a homonym of Saperda sulphurata Gebler, 1825 and a synonym of Eutetrapha sedecimpunctata) to Saperda sulphurata Gebler, 1825. As a result, we exclude Hubei and Taiwan, and add Hebei to the distribution of this species.

The black maculae on the pronotum and elytra are quite variable, and several varieties, aberration or morphs were described as infrasubspecific taxa. Also, E. duodecimpunctata = 16-punctata (Motschulsky, 1960) or E. varicornis Bates, 1884 have been synonymized with E. sedecimpunctata.

Distribution. China: Heilongjiang, Jilin, Liaoning, Hebei (new province record), Shaanxi; Russia, North Korea, South Korea, Japan.

Type specimens examined. Holotype (of Saperda (Eutetrapha) 16-punctata var. rosinæ Pic, Fig. 1), male, Siberia, Radde, 1903, leg. Maximilian & Rosina Korb (MNHN, ex Coll. M. Pic).

Other specimens examined. Heilongjiang: 1 male, Jixi City, Hutouzhen, 2009.V.25, leg. Ye Liu (IZAS); 1 male 1 female, Harbin, 1966.VI.20–22 (IZAS); 1 female, Heilongjiang, 1957.XI.13, leg. Sanfu Liu (IZAS); 5 males 6 females, Harbin, 1947.VII.16 (IZAS); 12 males 47 females, same data but 1965.VI.20–22; 1 male 1 female, Yichun, 1956.VI.2–20 / VII.10 (IZAS); 1 male, Yangmugang, 1959.VI.13 (IZAS); 1 male 1 female, Laogang, 1959.VI.24 (IZAS); 1 female, Hulin, 1971.VI.13 (IZAS); 1 male, Shanhedun, 1970.VII.9 (IZAS); 1 male, Maoshan, 1931.VII.12 (IZAS); 1 female, Dailing, 1956.VI.20, leg. Jiao Kang (IZAS); 1 female, Dailing, alt. 390 m, 1957.VI.15, leg. Zhong He (IZAS); 2 males, Dailing, alt. 390 m, 1962.VII.3–6, leg. Jiu-Wei Bai (IZAS); 1 male 1 female, Dailing, Liangshuigou, 1957.VI.9 (IZAS); 2 females, Ercengdianzi, 1941.VI.15 (IZAS). Jilin: 1 male 1 female, Linjiang, 1955.VI.4 / VIII.27 (IZAS); 1 female, Fusong, 1955.VI.22 (IZAS); 1 female, Changbaishan, 1982.VII.2, leg. Baolin Zhang (IZAS); 1 male, Changbaishan, alt. 740 m, 1990.VII.26 (IZAS); 1 female,
Changbaishan, alt. 740 m, 1993.VII.4–7, leg. Pei-Yu Yu (IZAS); 1 female, Manjiang, 1955.VI.27 (IZAS); 1 male 3 females, Yitong, 2003.V.12, leg. Chang-Sheng Zhao, host: *Tilia* sp. (TILIACEAE). **Liaoning:** 1 male, Gaolingzi, 1937.VII.2 (IZAS); 2 females, Gaolingzi, 1939.VI.7 / VII.15 (IZAS); 1 female, Gaolingzi, 1940.VII.10 (IZAS); 2 males 5 females, Gaolingzi (IZAS); 1 male 3 females, Qingyuan, 1954.VI.12–VII.17, leg. Lin (IZAS); 1 female, Qingzong, 1954.VII.18; 1 female, Fengcheng, Tongyuanbao, 1963.VI.29, leg. Hongxing Li (IZAS). **Hebei:** 3 females, Zunhua, E. Tomb (IZAS).

**Japan:** 1 male (Fig. 4), “holotype” of *Eutetrapha sedecimpunctata* m. *reductemaculata* Breuning, 1957, Japan, Hondo, Gifu Prefecture, Kumagawa, 1949.VII.5 (NHMB, not matching with collecting data in original description = Insel Hondo, Aomori Pref., Obokutai, ex coll. Shimoyama); 3 females (Fig. 9), Fukushima Pref., Hinoematamura, Aizu-gun, 1982.VI.13, leg. Kiichi Shimizu (IZAS, ex Ehime University); 1 female, Fukushima Pref., Minamiaizu-gun Tatateiwa-mura, 1994.VII.2, leg. Satoshi Maru leg. (IZAS, ex Ehime University).

_Eutetrapha sedecimpunctata australis_ Takakuwa & Hirokawa, 1998

Figs. 10–11

_Eutetrapha sedecimpunctata australis_ Takakuwa & Hirokawa, 1998: 303, figs. 1, 2. Type locality: Japan, Kyushu, Momiki, Izumi-mura. Type depository: Kanagawa Prefectural Museum of Natural History, Odawara, Japan. 

_Eutetrapha sedecimpunctata australis_; Kurihara & A. Saito, In: N. Ohbayashi & Niisato, 2007: 653, pl. 73, fig. 13.

**Host plant.** *Tilia japonica* (Miquel) Simonkai (Tiliaceae).

**Remarks.** We did not examine any specimens of this subspecies except photographs of the holotype and one female paratype. According to the original description by Takakuwa & Hirokawa (1998), this subspecies is distinguishable from the nominotypical subspecies by the following features: body stout, especially in male, with rather flattened elytral disk, and densely clothed with orange-yellow pubescence throughout; dorsum of antennae with all the segments in male or basal five segments in female clothed with minute, fuscous pubescence; elytral black maculations evidently smaller and often indistinct or nearly obsolete. In addition, according to the photographs we studied, it appears that this subspecies has shorter antennae than the nominotypical subspecies. However, the coloration of pubescence or black maculae would not be important diagnostic characters because these features are quite variable even in the nominotypical subspecies. This subspecies is known only from areas above 1,400 m altitude in Kyushu, Japan.

**Distribution.** Japan (Kumamoto Prefecture).

_Type specimens examined_ (through photographs from Kanagawa Prefectural Museum of Natural History, Odawara). Holotype (Fig. 10), male, Japan, Kumamoto Pref., Izumi-Mura, Momiki, Mt. Shiratoriyama, alt. 1400 m, 1989.IX.9 (larva, mesh co. 4830-57-49), leg. Fuminori Hirokawa; 1 paratype (Fig. 11), female, Japan, Kumamoto Pref., Yabe T. Shiuyatôge, alt. 1400 m, 1986.VI.10 (mesh co. 4831-70-14), leg. Fuminori Hirokawa.

_Eutetrapha complexa_ Pu & Jin, 1991

Figs. 12–21

_Eutetrapha complexa_ Pu & Jin, 1991: 192, 197, pl. IIIIB: 4. Type locality: China, Shaanxi, Zhouzhi County. Type depository: IZAS. 

_Eutetrapha complexa_; Hua et al., 2009: 455; Löbl & Smetana, 2010: 323; Lin, 2015: 274, fig. 217691.

**Supplementary description.** Male (Figs. 12–13, described for first time) matches female quite well, with antennae slightly longer, body slender, anterior claw of pro- and mesotarsi appendiculate with short tooth (Figs. 14a–c). Male (n =1): length 12.6 mm, width 4.0 mm. Female (n =2): length 15.5–17.0 mm, width 5.0–5.7 mm. **Male genitalia** (Figs. 15–20): Tergite VIII (Figs. 15a, 15c) slightly broader than long, apex almost rounded, slightly emarginate in middle, with setae which are long at sides, and shorter and sparser at middle. Spiculum gastrale subequal to ringed part of tegmen, spiculum relictum about a half of spiculum gastrale in length. Tegmen (Figs. 16a–c) about 3.1 mm in length; lateral lobes stout, each about 0.7 mm long and 0.3 mm wide; gradually narrower apically (from outer), apex with several fine setae which are shorter than half of length of lateral lobes; median lobe
slightly curved (Fig. 17b) in lateral view, slightly shorter than tegmen (28:31); median struts about half-length of median lobe (Fig. 17b); apex of ventral plate (Fig. 18) bluntly pointed; endophallus more than triple length of median lobe, with four pieces of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end (Fig. 20), two longer rods each about 2.1 mm, much shorter than tegmen, short rod about 1.9 mm. **Female genitalia:** spermathecal capsule (Fig. 21) composed of an apical orb and a stalk. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 8.4 mm for an adult compared with abdomen which measured 7.7 mm in ventral view.

**Diagnosis.** This species resembles *E. sedecimpectata* (Motschulsky, 1860) by the tawny pubescence and black spots on pronotum and elytra, but can be easily distinguished by having the elytron with a row of punctures between humeral carinae instead of two rows, punctures sparser between the exterior margin and external carina of humerus and black maculae on elytra larger and positioned near lateral margin (Pu & Jin 1991, partially modified).

**Distribution.** China: Shaanxi, Gansu (new province record).

**Type specimen examined.** Holotype (Fig. 14), female, Shaanxi, Zhouzhi County, 1981.VII.19, leg. Zhong-Fang Wang (IZAS, IOZ(E) 217691).

**Other specimens examined.** Shaanxi: 1 male (Fig. 12), Ningshan, Huoditang, 1580 m, 1998.VII.27, leg. Xue-Zhong Zhang (IZAS); 1 female, Qinlingshanliang, and North slope, 2050 m, 1998.VII.30, leg. Jian Yao (IZAS); 1 female, Qinling Mts., S. slope, Xunyangba - S+W env., 33°28′–37′N, 108°23′–33′E, 1400–2100 m, 1995.VI.5–9, leg. L. & R. Businsky (CCH, examined by Carolus Holzschuh). Gansu: 1 male (Fig. 13), S. Gansu,
through a photograph shown to us by Tomas Tichy, the locality could be Wudu, which was also available on website http://www.gorodinski.ru/view_cerambycidae.php?id_cerambyx=357 (access on April 13, 2015).


*Eutetrapha stigmosa* Pu & Jin, 1991

Figs. 22–26

*Eutetrapha stigmosa* Pu & Jin, 1991: 191, 196. Type locality: China, Guangxi, Tianpingshan. Type depository: IZAS.

*Eutetrapha stigmosa*; Hua et al., 2009: 455 (part); Löbl & Smetana, 2010: 324 (part); Lin, 2015: 278, fig. 217695.

**Supplementary description (female and male genitalia).** Female (Fig. 23, described for first time) matches male quite well except sexual differences of genus, including claws simple, antennae shorter than male and subequal to body length, body stouter and middle of last visible abdominal ventrite with a fine longitudinal furrow. Female genitalia not available. **Male genitalia** (Figs. 24–26): Tergite VIII (Fig. 24) nearly as broad as long, apex weakly projected, with setae which are long at sides, and shorter and sparser at middle. Spiculum gastrale slightly shorter than ringed part of tegmen, spiculum relictum about one half of spiculum gastrale in length. Tegmen (Figs. 25a–c, 26) about 3.5 mm in length; lateral lobes slender, each about 0.8 mm long and 0.2 mm wide; apex with fine setae which are shorter than half of lateral lobes; median lobe slightly curved (Fig. 25b), slightly shorter than tegmen.
median struts about half-length of median lobe (Fig. 25c); apex of ventral plate (Fig. 26) pointed; endophallus more than triple length of median lobe, with more than four pieces of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and largely and quite strongly chitinized part after basal plate-like sclerites. Rod-like sclerites at end destroyed in specimen observed, but it is assumed that there are three of similar length.

**Diagnosis.** This species can be easily separated from the known congeners by the grayish-white pubescent spots located along the humeral carina of elytra and arranged in a longitudinal row (Pu & Jin 1991).

**Distribution.** China: Guangxi, Guizhou (new province record).

**Type specimens examined.** Holotype (Fig. 22), male, Guangxi, Tianpingshan, 1963.VI.6, leg. Qi-Jing You (IZAS, IOZ(E)217695).

**Other specimens examined.** Guizhou: 1 female (Fig. 23), Jiangkou, Fanjingshan, 2001.VII.29, leg. Guo-Dong Ren (HBU).

**Remarks.** The allotype and one male paratype from Hubei Province were misidentifications of *Eutetrapha parastigmosa* Lin & Yang, *sp. nov.* The known localities of this species are Guangxi and Guizhou, which suggests a relationship with the Nanling Mountains. One specimen was reported from Guizhou, Fanjingshan by Wang (2014: 722, fig. 3419+1) as a variety of *E. elegans*, which obviously belonged to this species, and the locality was confirmed by the specimen we examined.

**Eutetrapha parastigmosa Lin & Yang, sp. nov.**

*Figs. 27–37*


*Eutetrapha* sp.; Lin, 2015: 278, fig. 217696.

**Description.** Male (*n* = 2): length: 13.8–14.2 mm, humeral width: 3.8–4.0 mm. Female (*n* = 2): length: 16.5–19.0 mm, humeral width: 4.8–5.5 mm. Body black. Head black, frons and genae clothed with grayish-white pubescence, vertex with two pair of grayish-white longitudinal stripes, one in middle and another behind superior eye lobes; lateral side of inferior eye lobe (tempora, *Fig. 27b*) covered with grayish-white pubescence. Antenna black, antennomeres I to III with grayish-white pubescence beneath, while antennomeres IV to IX ringed with grayish-white pubescence (usually more developed on ventral and inner sides), sparsely fringed with short hairs on ventral sides of basal five antennomeres. Prothorax dark black with four grayish-white pubescent longitudinal stripes, two median stripes sparse and indistinct, connected to each other at base and apex, and one on each side attaining basal and apical margins. Basal margin of pronotum and elytra with grayish-white pubescence; medium and margin of scutellum with pubescence. Elytron dark black, near median suture sparsely clothed with grayish-white pubescence.
pubescence, with seven grayish-white pubescent spots situated along humeral carina and arranged in a longitudinal row, not uniform in size (usually third and fifth are smaller). Elytra clothed with yellowish grey pubescence laterally (Figs. 27b & 29). Legs clothed with grayish-white pubescence. Ventral surface mostly covered with whitish gray pubescence (Fig. 27b).

Head slightly narrower than prothorax. Eyes medially emarginate, inferior eye lobes nearly 3.0 times as high as (male) or subequal to (female) genae. Antennae slender, slightly longer than (male) or subequal to (female) body; antennomeres ratio: male: 15:3:25:18:17:16:16:?:?:?:?; female: 19:4:28:19:19:16:16:16:16:14:15. Prothorax densely punctured, with five glossy calli on pronotum (Fig. 29). Elytron densely and coarsely punctured, gradually narrower apically, with two lateral carinae, neither from base nor reaching apex; apex rounded, with a blunt tooth at inner angle. Sternite VII of male narrow, apical margin slightly emarginate, with dense brown apical hairs; sternite VII of female with a middle groove, with longer apical brown hairs. Legs slender, mesotibiae slightly grooved, metafemur reaching fourth or fifth abdominal segment, first metatarsal segment longer than following two segments combined. Anterior claw of pro- and mesotarsal claws of male with a small tooth (Figs. 146a–c), female tarsal claws and metatarsal claws of male simple (Fig. 143). Male genitalia (Figs. 30–36): Tergite VIII (Figs. 30 & 35) longer than broad, apex weakly projected, with setae which are long at sides, and shorter and sparser at middle. Spiculum gastrale slightly shorter than ringed part of tegmen, spiculum relictum about one half of spiculum gastrale in length. Tegmen (Figs. 31a–c) about 3.1 mm in length; lateral lobes slender, tapering apically, each about 0.7 mm long and 0.2 mm wide (Fig. 33); apex with five setae which are subequal to length of lateral lobes; median lobe slightly curved (Fig. 32b) in lateral view, subequal to tegmen in length; median struts shorter than half-length of median lobe (Fig. 32c); apex of ventral plate (Fig. 32a) pointed; endophallus nearly four times as long as median lobe, with four pieces or more of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end (Fig. 34), each about 3.0 mm, subequal to length of tegmen. Female genitalia: spermathecal capsule (Fig. 37) composed of an apical orb and a curved stalk, strongly sclerotized part of stalk only a little longer than apical orb. Spiculum ventrale longer than abdomen. In our


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observation, Spiculum ventrale measured 9.0 mm for an adult compared with abdomen which measured 8.5 mm in ventral view.

**Diagnosis.** This species is similar to *Eutetrapha stigmosa* Pu & Jin, 1991 but can be distinguished by: a. with one more grayish-white or yellowish grey spot after middle of lateral spotted stripe on each elytron, that is, seven spots in total; b. antennomere III only covered with grayish-white pubescence beneath while upper side black; c. tergite VIII weakly projected and median lobe with median struts more strongly curved.

**Etymology.** This species name is derived from its similarity to *Eutetrapha stigmosa* Pu & Jin, 1991.

**Remarks.** The known localities of this species are Shaanxi, Hubei, Henan and Chongqing, which indicates a relationship with the Qinling Mountains. One pair of specimens was reported from Henan, Songshan, Baiyunshan by Wang (2014: 722, fig. 3419+2) as a variety of *E. elegans*, which obviously belongs to this new species and the locality may be correct.

**Distribution.** China: Shaanxi, Hubei, Chongqing, Henan.

**Type specimens examined.** Holotype (Fig. 27), male, Hubei, Shennongjia, 1981.VII.21–30, leg. Pei-Yu Yu (IZAS, IOZ(E)217696, misidentified as paratype of *Eutetrapha stigmosa* Pu & Jin, 1991). Paratypes: 1 female, Hubei, Shennongjia, Muyu, alt. 1200 m, 1983.VIII.26, leg. Gen-Tao Jin, Zu-Yao Liu, Jian-Zhong Zheng (SHEM, 24116857, misidentified as allotype of *Eutetrapha stigmosa* Pu & Jin, 1991); 1 female (Fig. 29), Shaanxi, Ningshan, Huoditang alt. 1580 m, 1998.VIII.22, leg. De-Cheng Yuan (IZAS, IOZ(E)1905303); 1 male (Fig. 28), Chongqing, Chengkou, Mingzhong, Shapo, N31°73.792′, E108°80.328′, alt. 1180, leg. Yu Li (CCCC, B08L0343).


*Eutetrapha laosensis* Breuning, 1965

Figs. 38–43

*Eutetrapha laosensis* Breuning, 1965: 62, fig. page 62. Type locality: Laos, Vientiane Province, Phou Kou Khouei. Type depository: BPBM.

Supplementary description. Body length: 13.8–14.2 mm (Rondon & Breuning 1970). Male is similar to female but slender, with antennae much longer than body (8th antennomere reaching elytral apex). Anterior claw of pro- and mesotarsal claws of male with a small tooth (Figs. 146a–c), female tarsal claws and metatarsal claws of male simple (Fig. 143). Male genitalia (Figs. 41–42): Tergite VIII (Fig. 41) longer than broad, apex weakly projected, with setae which are long at sides, and shorter and sparser at middle. Spiculum gastrale slightly shorter than ringed part of tegmen, spiculum relictum about one half-length of spiculum gastrale. Tegmen (Fig. 42a) about 3.2 mm in length; lateral lobes slender, expanded before apex and then tapering apically, each about 0.8 mm long and 0.2 mm wide; apex with fine setae which are shorter than a half-length of lateral lobes; median lobe slightly curved (Fig. 42b) in lateral view, subequal to tegmen in length; median struts shorter than half-length of median lobe (Fig. 42c); apex of ventral plate (Fig. 42a) bluntly pointed; endophallus more than triple length of median lobe, with four pieces or more of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end, each about 2.1 mm, much shorter than length of tegmen. Female genitalia: spermathecal capsule (Fig. 43) composed of an apical orb and a curved stalk, strongly sclerotized part of stalk only a little longer than apical orb. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 8.0 mm for an adult compared with abdomen which measured 6.4 mm in ventral view.

Diagnosis. This species is similar to Paraglenea sylvia Gressitt, 1951 by the two black maculae on the pronotum and four black maculae on each elytron, but can be easily distinguished by the two black maculae on the pronotum being much more developed and the first one on the elytron touching the lateral margin.

Distribution. China: Yunnan; Laos, India (new country record), Myanmar (new country record).


Other specimens examined. Laos: 11 males 1 female, Sayaboury, 1966.III.25 (IRSNB, ex Coll. J. Rondon); 4 males 1 female, same data but 1964.V.18; 1 female, same data but 1964.X.8; 1 male, Sayaboury, 1964.V.18 (MHNG, dissected); 1 male, Sayaboury, 1965.IV.15 (NHMB, ex collection of Frey); 1 female, same data but 1965.VI.19; 1 male, Sayaboury, 1964.VIII.13 (MHNG, labeled as paratype and with a handwritten label by Breuning, but not mentioned in original paper); 3 males 1 female, Phon Tiou (Khammouane), 1966.IV.18 (IRSNB,
ex Coll. J. Rondon). **China:** Yunnan: 1 female, Xishuangbanna, Xiaomengyang, alt. 850 m, 1957.V.7, leg. Fu-Ji Pu (IZAS); 1 female, Xishuangbanna, Damenglong, Mengsong, alt. 1600 m, 1958.IV.26, leg. Shu-Yong Wang (IZAS). **India:** 2 females, British Bootang, Maria Basti (NHMB, ex collection of Frey); 1 female, British Bootang (NHMB, ex collection of Frey); 1 female, British Bootang, 1898, leg. L. Durel (NHMB, ex collection of Frey). **Myanmar:** 1 female, Burma, MHNL (ex Coll. Lepesme, 2002).

**FIGURES 41–43.** Terminalia of *Eutetrapha laosensis* Breuning, 1965. 41–42. Male from Laos. 41. Tergite VIII and sternites VIII & IX. 42. Male genitalia. a. Ventral view, b. Lateral view, c. Dorsal view. 43. Female from China, Yunnan, showing the spermatheca, scale 0.5 mm. Others scale 1 mm.

**Eutetrapha shiqianensis** Pu & Jin, 1991

Figs. 44–51


*Eutetrapha shiqianensis*; Hua et al., 2009: 455; Löbl & Smetana, 2010: 324; Lin, 2015: 278, figs. 217693, 217694.
Supplementary description. Male (Fig. 45, described for first time) matches female quite well, with antennae slightly longer, body slender, anterior claw of pro- and mesotarsi appendiculate with short tooth (Figs. 146a–c). Male (n =1): length 13.1 mm, width 3.8 mm. Female (n =2): length 15.5–18.3 mm, width 4.0–4.7 mm. Male genitalia (Figs. 46–50): Tergite VIII (Figs. 46a, 46c) as broad as long, apex almost rounded, slightly emarginate in middle, with setae which are moderate long at sides, and shorter but not sparser at middle. Spiculum gastrale subequal to length of ringed part of tegmen, spiculum relictum about a half-length of spiculum gastrale. Tegmen (Figs. 47a–c) about 3.7 mm in length; lateral lobes slender, each about 1.0 mm long and 0.3 mm wide; slightly expanded before apex and then obliquely rounded, with fine setae which are shorter than half-length of lateral lobes; median lobe slightly curved (Fig. 48b) in lateral view, slightly longer than tegmen (39:37); median struts much shorter than half-length of median lobe (Fig. 48c); ventral plate (Figs. 48a, 49) slightly turned to right side in ventral view, apex pointed; endophallus more than triple length of median lobe, with four pieces of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end (Fig. 50), two longer ones each about 2.2 mm, much shorter than tegmen, short one about 2.1 mm. Female genitalia: spermathecal capsule (Fig. 51) composed of an apical orb and a strongly curved stalk. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 8.5 mm for an adult compared with abdomen which measured 8.0 mm in ventral view.

Diagnosis. This species is similar to E. laosensis Breuning, 1965, but can be separated by the black markings on elytra less developed, especially the first one not touching lateral margin and the second one at most partially touching lateral margin. It is similar to Paraglenea sylvia Gressitt, 1951 by the two black maculae on pronotum and four black markings on each elytron, especially the first one on elytron with similar shape and size, but can be easily separated by the two black maculae on pronotum much more developed and the second and third ones on elytron with distinctly different shape.

**Distribution.** China: Guizhou, Fujian (new province record).

**Type specimens examined.** Holotype, female, Guizhou, Shiqian, Jinxing, alt. 650–800 m, leg. Shu-Yong Wang (IZAS, IOZ(E) 217693); paratype, 1 female same data but IOZ(E) 217694.

**Other specimens examined.** Fujian: 1 male, Fujian, Majiaping, 1989.VI.13, leg. Nai-Yan Chen (SYSU, En-366121); 1 female, Fujian, Jiangle, 1987.VIII.11 (reported by Wang (2014: 721, fig. 3417.2) as variety of *E. chrysochloris*). Guizhou: 1 female, Jiangkou Co., ca. 50 km SW Jiangkou Shiduvillage, 27°32.83'N, 108°36.45'E, 600–800 m, 2001.VI.29–VII.6, leg. C. Holzschuh (CCH, examined by Carolus Holzschuh).
**Eutetrapha bicostata** Hayashi, 1994

Figs. 52–53

*Eutetrapha bicostata* Hayashi, 1994: 75, pl. 6, fig. 19. Type locality: China, Taiwan, Nantou H., Saichitau. Type depository: OSAKA.


**Diagnosis.** This species differs from all known congeners by having no punctuate black markings on elytra but only two pairs of longitudinal narrow black vittae (Hayashi 1994).

**Remarks.** We did not examine any additional specimens of this species during this study. The two dorsal habitus photographs presented by Yu *et al.* (2002) and Hua *et al.* (2009), were both same photograph of the holotype. The holotype is a female instead of a male (as reported in the original description), with the last visible sternite grooved (Fig. 52c) and claws simple. The male claws are unknown.

**Distribution.** China: Taiwan.

**Type specimens examined** (through seven photographs taken by Shigehiko Shiyake). Holotype, female (not male as reported by Hayashi 1994), Taiwan, Nantou H., Saichitau, 1972.V.8, leg. C. C. Raw (Fig. 53, not C. C. La as reported by Hayashi 1994), deposited in Osaka Museum of Natural History, ex Collection Masamichi Yagi, Japan.

Eutetrapha velutinofasciata Pic, 1939
Figs. 54–62

Eutetrapha velutinofasciata Pic, 1939: 2. Type locality: China, environs de Péking, Trappe (= China, Hebei, Zhuolu County, Yangjiaping). Type depository: MNHN.
Eutetrapha velutinofasciata; Gressitt, 1951: 556; Lin et al., 2006: 65, figs. 1–14; Löbl & Smetana, 2010: 324; Lin, 2015: 280, fig. 1859437.

Supplementary description. For descriptions, see paper by Lin et al. (2006), genitalia are described in more detail herein. Male genitalia (Figs. 57–61): Tergite VIII (Figs. 57a, 57c) as broad as long, apex rounded, with setae which are moderate long at sides, and shorter but not sparser at middle. Spiculum gastrale subequal to length of ringed part of tegmen, spiculum relictum shorter than a half-length of spiculum gastrale. Tegmen (Figs. 58a–d) about 2.8 mm in length; lateral lobes stout, each about 0.5 mm long and 0.2 mm wide; apex with fine setae longer than half of lateral lobes; median lobe slightly curved (Fig. 59b) in lateral view, slightly longer than tegmen (15:14); median struts subequal to half-length of median lobe (Fig. 59c); apex of ventral plate (Fig. 59a) pointed; endophallus with triple length of median lobe, with four pieces of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end (Fig. 60), which are about 2.2 mm, much shorter than tegmen. Female genitalia: spermathecal capsule (Fig. 62) composed of an apical orb and a short but strongly curved stalk. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 8.0 mm for an adult compared with abdomen which measured 7.2 mm in ventral view.

FIGURES 54–56. Eutetrapha velutinofasciata Pic, 1939, habitus. 54. Holotype, female, from China, Hebei. 55. Female, from China, Beijing. 56. Male, from China, Hebei. Scale 2 mm.
**Figures 57–62.** Terminalia of *Eutetrapha velutinofasciata* Pic, 1939. 57–60. Male from China, Inner Mongolia. 57. Tergite VIII and sternites VIII & IX. 58. Tegmen. 59. Median lobe with median struts and part of endophallus. 60. Last part of endophallus, with the rod-like sclerites. a. Ventral view, b. Lateral view, c. Dorsal view. 58d. The finely setose ridge at base of lateral lobes of tegmen. 61. Male from China, Hebei. 62. Female from China, Beijing, showing the spermathecal capsule. Scale 1 mm, 58d and 61–62: not to scale.

**Remarks.** The type locality was reported as “environs de Péking” (Pic 1939) and simply treated as Beijing (Lin et al. 2006). However, the “Trappe” written on the label (Fig. 1 in Lin et al. 2006) was ignored. In the “Étapes des Voyages du P. Licent (1914–1937)”, under the year 1930, “7 VI la Trappe (2 journées 1/2 à l’ouest de Péking” was explained as “Yangjiaping (Hebei, SE. Huailai County); “21 VI Retour à la Trappe” was explained as “return to Yangjiaping”; under the June of 1931, Licent’s records including “1 VI Kao kia yingze” (NE. Zhangjiakou), “12 VI Kalgan” (Zhangjiakou), “13 VI Tien tsin” (Tianjin), “26 VI Takou (en bateau)”, “27 VI Tcheu fou” (Qufu, Yantai), “30 VI ile des Français (Excur.)” Therefore, the “Trappe” indicates that the type locality should be Yangjiaping, which is located west of Beijing, belonging to Hebei Province, Zhuolu County, which is part of Xiaowutaishan Nature Reserve, and the date of collection should between 2 June 1931 to 13 June 1931. Two females from the exact type locality “Yangjiaping” were examined for this study.

Two specimens from Liaoning, Jinzhou were reported by Wang (2003: 329) as *Monochamus bimaculatus*, and they were reported again by Wang (2014: 832) as *Monochamus bimaculatus* and mislabeled the female as “Guangxi, Liuzhou”. Obviously they are same pair of specimens and Liaoning is the probable locality.

**Host Plant:** *Populus* sp. (Salicaceae).

**Distribution.** China: Heilongjiang, Liaoning, Inner Mongolia, Beijing, Hebei, Shanxi, Shaanxi.

**Type specimens examined.** Holotype (of *Eutetrapha velutinofasciata* Pic), female (Fig. 54), China, environs de Péking, Trappe (= Hebei, Zhuolu County, Yangjiaping), 1931.VI, leg. E. Licent (MNHN). Holotype (of *Paraglenea nigromaculata* Wang & Jiang), male, China, Shaanxi, Yan’an [36°35’N, 109°28’E.], 1980, leg. Yizhi.
Sun (SWU); paratype (of *Paraglenea nigromaculata* Wang & Jiang), 1 female, China: Inner Mongolia, Huhhot [40°52′N, 111°39′E], Datai, 1964.VI. 21, leg. Xinhua Liu (IZAS, IOZ(E)1859437 ex SWU).

**Other specimens examined.** **Heilongjiang:** 1 male, Wuying, 1980.VII.18 (IZAS). **Inner Mongolia:** 1 female, Huhhot, 1961.VIII.4 (host plant: *Populus*) (IZAS); 1 male, Chayouzhongqi, 1981.VII.15 (IZAS); 1 male, Wumeng, 1981.VII.14 (host plant: *Populus*) (IZAS); **Beijing:** 1 female, Beijing, Badaling, alt. 700 m, 1961.VIII.3, leg. Xue-Zhong Zhang (IZAS); 1 female, Beijing, Badaling, alt. 700 m, 1964.VII.23, leg. Su-Bai Liao (IZAS); 1 female (Fig. 55), Beijing, Miyun County, Wuzuoloulinchang (Shichengzhen, Lishugoucun), 2015.VIII.15, leg. Chao Wu (IZAS); 1 male, Beijing, Yangqing County, Songshan Nature Reserve, Linxiyuan, alt. 778 m, 40.50806°N, 115.79111°E, 2013.VIII.12, leg. Bo Liu by light trap (BJFU); 1 male, 60 km NE Peking, Qinglongqiao, 1990.VII.27, leg. S. Becvár (CCH, examined by Carolus Holzschuh). **Hebei:** 2 females, Xiaowutaishan Nature Reserve, Yangjiaping, alt. 820 m, 2011.VIII.3–4, leg. Jian Yao by light trap (IZAS); 1 male (Fig. 56), Hebei, Mt. Xiaowutaishan, Huichuan, alt. 1400 m, 1964.VII.14, leg. Yin-Heng Han (IZAS, IOZ(E) 1904751); 1 female, Hebei, Xuanhua, alt. 640 m, 1964.IX.17, leg. You-Heng Heng (IZAS).

*Eutetrapha weni* Huang & Lin, 2016

Figs. 63–65

*Eutetrapha weni* Huang & Lin, 2016: 590, figs. 1–23.

**Diagnosis.** This species can be separated from congeners by the unique brick red brown pubescence and unique elytral markings, larger body size, and unique golden brown metatarsi.

**Remarks.** For descriptions, see paper by Huang & Lin (2016). The description of male genitalia was in older style (Huang & Lin 2016) and some terminology terms are changed in this work: median lobe plus median struts = median lobe; internal sac = endophallus; basal armature = basal plate-like sclerites; rods of endophallus = rod-like sclerites.

**Distribution.** China: Guizhou.

**Material examined.** Holotype, male (Fig. 62, and Figs. 1a & 1b in Huang & Lin 2016), China, Guizhou, Leishan, Mt. Leigongshan, Lianhuaping, N26°22', E108°12', alt. 1631 m, 2014.VI.18, leg. Jing Yang (IZAS, IOZ(E) 1905306, ex KLUC). Paratypes: 1 female, same data to holotype but deposited in (KLUC); 1 female, same data to holotype but 2014.VI.16 and deposited in (KLUC); 1 male (Fig. 13 in Huang & Lin 2016) 1 female (Figs. 8a, 8b & 14 in Huang & Lin 2016), same data to holotype but 2014.VI.21, leg. Yang Li (IZAS, IOZ(E) 1905304–05, ex KLUC); 1 female (Fig. 65), same data to holotype but, 2011.VIII.11, leg. Jian-Yue Qiu & Hao Xu (CWD); 1 female, same data to holotype, but 2015.VII.12, leg. Bo-Yan Li (CGQH); 1 male (Fig. 64), S. China, SE. Guizhou, Dushan County, Gendingshan env., N25°52.5', E107°38', alt. 1445 m, 2009.VI, leg. Sehnal et Hackel (CPV).

**Eutetrapha elegans** Hayashi, 1966

Figs. 66–73

**FIGURES 66–68.** *Eutetrapha elegans* Hayashi, 1966. habitus. 66. Holotype, female, from China, Taiwan, photographed by Li-Jie Zhang. 67. Male, from China, Taiwan. 67e. Head, in frontal view. 68. Female, from China, Yunnan, photographed by Wen-Xuan Bi, not to scale. Scale 2 mm.
Eutetrapha elegans Hayashi, 1966: 9, pl. 1, fig. 6. Type locality: China, Taiwan, Hosakei. Type depository: NSMT.


**Supplementary description.** Male (Fig. 67, described for first time) matches female quite well, with antennae slightly longer, body slender, anterior claw of pro- and mesotarsi appendiculate with short tooth (Figs. 146a–c). Male (n = 3): length 10.8–12.4 mm, width 3.0–3.5 mm. **Male genitalia** (Figs. 69–73): Tergite VIII (Figs. 69a, 69c) as broad as long, apex emarginate in middle, with setae which are moderate long at sides, and much shorter and sparser at middle. Spiculum gastrale subequal to ringed part of tegmen in length, spiculum relictum less than a half-length of spiculum gastrale. Tegmen (Figs. 70a–c) length about 2.7 mm; lateral lobes slender, each about 0.8 mm long and 0.2 mm wide; apex, with fine setae which are shorter than one fifth of length of lateral lobes; median lobe slightly curved (Fig. 72b) in lateral view, slightly shorter than tegmen (23:27); median struts slightly shorter than half-length of median lobe (Fig. 72c); apex of ventral plate (Fig. 72a) pointed; endophallus more than triple length of median lobe, with four pieces of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end (Fig. 73), which are about 2.2 mm, shorter than tegmen.

**FIGURES 69–73.** Terminalia of *Eutetrapha elegans* Hayashi, 1966, from China, Taiwan. 69. Tergite VIII and sternites VIII & IX. 70. Tegmen. 71. Lateral lobes in ventral view, showing the ridge at base. 72. Median lobe with median struts. 73. Last part of endophallus, with the rod-like sclerites. a. Ventral view, b. Lateral view, c. Dorsal view. Scale 1 mm, 72b and 72c. not to scale.

**Remarks.** The black spots lack reddish pubescence and are variable in shape from those located at apical half of elytral. The female specimen from Yunnan matches the holotype from Taiwan quite well except for lacking pubescence behind the upper eye lobes and middle line of occiput. It could be a new species, however, until more
material from Yunnan and Taiwan become available, we consider it as an individual whose pubescence was strongly rubbed.

**Distribution.** China: Taiwan, Yunnan (new province record).

**Type specimen examined.** Holotype, female (Fig. 66), Formosa, leg. T. Kano (National Science Museum of Tokyo, Japan, NSMT-I-C 37607, examined through photographs taken by Li-Jie Zhang).

**Other specimens examined.** Taiwan: 1 male (Fig. 67), Taiwan, Yilan County, Datongxiang, Nanshancun, 1999.VIII.15, leg. Chang-Chin Chen (CCCC); 1 male, Taiwan, Hsinchu (=Xinzhu) County, Wufengxiang, Taoshancun, 1993.IX.19, leg. Chang-Chin Chen (CCCC); 1 male, Taiwan, Hsinchu (=Xinzhu) County, Chienshih (=Jianshixiang), Mamei Cun, alt. 1400 m, leg. Hui-Neng Huang (CCCC); 1 male, Taiwan, Hsinchu, Chienshih, Mamei, 1200 m, 2000.V.27, leg. Tzu-W Chen (CCH, ex CCCC); 1 male, Taiwan, Hsinchu, Chienshih, Hewang, Beidongyanshan, 1992, leg. Jin-Ji Luo (CCCC, only elytra); 1 male, Taitung County, Haiduan Township, Siangyang, alt. Ca. 2100–2300 m, 2013.VI.7–9, leg. J. Yamasako (IZAS, ex Collection of Junsuke Yamasako); 1 male 1 female, same data but deposited in CNO. Yunnan: 1 female (Fig. 68), Nantou County, Ren’aixiang, Hewang, Beidongyanshan, 1992, leg. Jin-Ji Luo (CCCC, only elytra); 1 male, Taitung County, Siangyang, alt. Ca. 2100–2300 m, 2013.VI.7–9, leg. J. Yamasako (IZAS, ex Collection of Junsuke Yamasako).

*Eutetrapha cinnabarina* Pu, 1986

Figs. 74–86

*Eutetrapha cinnabarina* Pu, 1986: 201, 202, fig. 1. Type locality: China, Hubei, Shennongjia, Hongpinglinchang. Type depository: IZAS.


**Supplementary description.** Black spots in dorsal view lack pubescence, indicating a highly variable character, because pubescence can be rubbed off in many different ways. According to our observations, three spots on occiput and six spots on basal half of elytra are more or less stable in quantity, though size and shape are variable, while pronotal black spots are variable among four separated rounded spots (Figs. 75, 76, 79, 80) to two longitudinal stripes (Figs. 74, 77, 78), and black spots on apical half of elytra variable among one large patch (Figs. 74, 77), five to eight separated spots (Figs. 75, 76, 78–80). **Male genitalia** (Figs. 81–85): Tergite VIII (Figs. 81a, 81c) as broad as long, apex emarginate at middle, with setae which are long at sides, shorter and sparser at middle. Spiculum gastrale slightly shorter than ringed part of tegmen, spiculum reticulum about a half-length of spiculum gastrale. Tegmen (Figs. 82a, 82c, 82d) length about 2.9 mm; lateral lobes slender, each about 0.8 mm long and 0.2 mm wide (Fig. 82d); apex with fine setae which are shorter than half of lateral lobes; median lobe slightly curved (Figs. 82b, 85) in lateral view, shorter than tegmen; median struts shorter than half-length of median lobe; apex of ventral plate (Fig. 82a) pointed; endophallus nearly four times as long as median lobe, with two pairs of basal plate-like sclerites (located behind apex of median struts), two bands of indistinct supporting armature, and three rod-like sclerites at end (Fig. 83), two longer ones each about 2.5 mm, shorter than tegmen, short one about 2.2 mm. **Female genitalia:** spermathecal capsule (Fig. 86) composed of an apical orb and a short and strongly curved stalk. Spiculum ventrale slightly longer than abdomen. In our observation, spiculum ventrale measured 8.5 mm for an adult compared with abdomen which measured 8.0 mm in ventral view.

**Diagnosis.** This species is similar to *E. elegans* Hayashi, 1966 from Taiwan, but can be separated by the elytron lacking a black spot between the middle spot and the first spot just after scutellum. The appendiculate tooth of claws of pro- and mesotarsi are more developed (four males of *E. elegans* Hayashi, 1966 had been observed). The black spots before elytra apex are variable in shape and quantity in both species, which is not a good diagnostic character.

**Remarks.** One photograph was reported by Wang (2014: 722, fig. 3418+1) from Guangxi, but can be separated by the elytron lacking the middle spot and the first spot just after scutellum. The appendiculate tooth of claws of pro- and mesotarsi are more developed (four males of *E. elegans* Hayashi, 1966 had been observed). The black spots before elytra apex are variable in shape and quantity in both species, which is not a good diagnostic character.

**Distribution.** China: Hebei (new province record), Henan (new province record), Shaanxi (new province record), Hubei, Gansu, Shandong.
FIGURES 74–80. Eutetrapha cinnabarina Pu, 1986. habitus. 74. Holotype, male, from China, Hubei. 75. Female, from China, Shaanxi. 76. Male, from China, Hebei. 77–79. Males from China, Shaanxi, showing the variable blacking markings on pronotum and elytra. 80. Male from China, Henan. Scale 2 mm.

Type specimens examined. Holotype, male (Fig. 74), Hubei, Shennongjia [31°26’N, 110°16’E], Hongpinglinchang, alt. 1660 m, 1981.VII.19, leg. Yin-Heng Han (IZAS, IOZ(E) 217581); allotype, female, Hubei, Shennongjia, Jiuhulinchang, alt. 1640 m, 1981.VII.8, leg. Yin-Heng Han (IZAS, IOZ(E) 217582).

Other specimens examined. Shaanxi: 1 female, Ankangshi, Ningshan County, Guanghuojiezhen, alt. 1227 m, 33.779527°N, 108.790894°E, 2014.VII.26, leg. Yuan-Yuan Lu by light trap (IZAS, Ceram-218); 1 female, Qinling, Huoditang, 2012.VI.30, YQ09-G1 (BJFU); 1 male (Fig. 77), Ningshan, Huoditang, 1580–1650 m,
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1999.VI.26, leg. De-Cheng Yuan (IZAS); 1 male (Fig. 79), Ningshan, Huoditang, 1580 m, 1998.VII.27, leg. De-Cheng Yuan (IZAS), 1 male (Fig. 78) 1 female, same data but 1998.VIII.14, leg De-Cheng Yuan by light trap (IZAS); 2 females, Ningshan, 2003.VIII, leg. Song-Yun Lang (IZAS, ex Collection of Song-Yun Lang); 1 male 1 female, Zhouzhi, Houzhenzi, 1350 m, 1999.VI.21,24, leg. Jian Yao, You-Wei Zhang (IZAS); 1 female (Fig. 75), Zhouzhi County, Houzhenzi, Qinlingliang, 2021 m, 33.81491°N, 107.74357°E, 2007.V.27, leg. Mei-Ying Lin (IZAS); 1 male, Liuba, Miaotaizi, 1350 m, 1998.VII.21, leg. Jian Yao (IZAS); 1 female, Qinling Mts., S. slope, Xunyangba - S+W env., 33°28’–37°N, 108°23’–33’E, 1400–2100 m, 1995.VI.5–9, leg. L. & R. Businsky (CCH, examined by Carolus Holzschuh). **Hebei:** 1 male (Fig. 76), Chengde City, Xinglong County, Wulingshan, 2008.VII.15, leg. C. Wu (CCCC); 2 male, Fengning, Dengzhazi, 1999.VII.13, leg Ming Bai (HBU); 2 females, Fengning, Dengzhailinchang, 2000.VII.20, leg. Ai-Min Shi etc (HBU). **Henan:** 1 male (Fig. 80), Songxian, Baiyunshan, 1600 m, 2002.VII.25, leg. Li-Jie Zhang (IZAS). **Hubei:** 1 female, W-Hubei, Dashennongjia massif - E slope, 31°24’–30°N, 110°21’–24’E, 1300–2000 m, 1995.VI.28–VII.5, leg. L.+R. Businsky (CCH, examined by Carolus Holzschuh).

One special and doubtful sample: 1 female, Tianjin, Jixian, Xiaying, Huanghuashan, 2008.V.25, leg. Shi-Chun Chen (CCCC). This specimen has the black spot between the middle spot and the first spot just after scutellum.

**FIGURES 81–86. Terminalia of Eutetrapha cinnabarina Pu, 1986. 81–83. Male from China, Shaanxi. 81. Tergite VIII and sternites VIII & IX. 82. Tegmen and median lobe. 82d. Lateral lobes and apex of ventral plate of median lobe in ventral view, showing the finely setose ridge at base. 83. Last part of endophallus, with the rod-like sclerites. a. Ventral view, b. Lateral view, c. Dorsal view. 84–85. Male from China, Henan. 84. Tergite VIII and sternites VIII & IX, in ventral view. 85. Genitalia with the endophallus reversed, which is the situation during copulation. 86. Female from China, Shaanxi, showing the spermathecal capsule. Scale 1 mm, 82b, 82d, 83 and 85. not to scale.**
*Eutetrapha chlorotica* Pu & Jin, 1991

Figs. 87–91

*Eutetrapha chlorotica* Pu & Jin, 1991: 192, 197, pl. IIIB: 5. Type locality: China, Yunnan, Lijiang, Yulongxueshan. Type locality: IZAS.

*Eutetrapha chlorotica*; Hua *et al.*, 2009: 455. [misspelling]

*Eutetrapha chlorotica*; Löbl & Smetana, 2010: 323; Lin, 2015: 272, fig. 217692.

Supplementary description. Males (n = 2): length 14.4–15.5 mm, width 4.3–4.5 mm. All claws appendiculate but anterior appendiculate tooth much longer and larger than posterior one (Figs. 147a, b), same situation to pro-, meso- and metatarsi. Male genitalia (Figs. 89–92): Tergite VIII (Figs. 89a, 89c) slightly broader than long, apex almost rounded with a small notch in middle, with setae which are long at sides, and shorter and sparser at middle. Spiculum gastrale subequal to ringed part of tegmen, spiculum relictum about a half-length of spiculum gastrale. Tegmen (Figs. 90, 91m) about 3.0 mm in length; lateral lobes slender, each about 0.6 mm long and 0.15 mm wide (Fig. 92); apex with fine setae which are longer than half of lateral lobes; median lobe slightly curved (Fig. 90b), subequal to tegmen in length; median struts slightly more than half-length of median lobe (Fig. 90c); apex of ventral plate (Fig. 91) bluntly pointed; endophallus nearly four times as long as median lobe plus median struts, with two pairs of basal plate-like sclerites (located behind apex of median struts), two bands of indistinct supporting armature, and three rod-like sclerites at end (Fig. 90), two longer ones each about 3.1 mm, subequal to tegmen, short one about 2.5 mm.

Diagnosis. This species can be easily distinguished from other congeners by the distinct male claws and the lack of metallic scales.

REMARKS. The male claws of this species are distinct (Figs. 147a & 147b), exhibiting a combination of characters from the genera *Eutetrapha* and *Paraglenea*. Until a generic system of the tribe Saperdini is reconstructed based on further systematic study, we have decided to keep this species in the original genus *Eutetrapha*. Females are unknown but we predict that they should have simple claws.

**Distribution.** China: Sichuan (new province record), Yunnan.

**Type specimen examined.** Holotype, male (Fig. 87), Yunnan, Lijiang, Yulongxueshan, 1986.VI.13, leg. Zai-Quan Pan (IZAS, IOZ(E)217692).
Other specimen examined. Sichuan: 1 male (Fig. 88), Jiulong, 29°00.591'N, 101°32.966'E, alt. 3211 m, 2006.VI.10, leg. Ai-Min Li (CCCC, 06L0037)

Eutetrapha chrysochloris chrysochloris (Bates, 1879)
Figs. 92–95, 148f–148j

Glenea chrysochloris Bates, 1879: 467. Type locality: Japan, Yezo (= Hokkaido). Type depository: MNHN.
Paraglenea chrysochloris v. brunneli Pic, 1952: 13. Type locality: Japan. Type depository: MNHN.
Paraglenea chrysochloris ab. breunningi Podany, 1953: 52, fig. 22. [infra-subspecies from Japan, Gifu]
Paraglenea chrysochloris v. podanyi Pic, 1953: 9. Type locality: Japan. Type depository: Collection C. Podany, Muséum de Benátky n. Jiz. [new name for Paraglenea chrysochloris ab. breunningi Podany, 1953]
Paraglenea chrysochloris ab. omissa Pic, 1953: 9. [infra-subspecies from Japan, Yokohama]
Glenea (Glenea) chrysochloris; Breuning, 1956a: 17; Breuning, 1956b: 815.
Glenea (Glenea) chrysochloris piciella Breuning, 1956a: 17. [Without type information and treated as an infrasubspecies by
Breuning, 1956b: 815. 816.]
Glenea (Glenea) chrysochloris m. podanyi; Breuning, 1956b: 816.
Glenea (Glenea) chrysochloris m. breunningi; Breuning, 1956b: 816.

Diagnosis. This subspecies is close to E. chrysochloris chrysargyrea, but differs by the larger black elytral maculae; outer angle of elytral apex angulate and apparently becoming more strongly angulate in specimens collected further north. Frons of male about twice width of inferior eye-lobe.

In the original description of Glenea chrysochloris, Bates (1879) compared it with two species in the note as follows: “Differs from the allied G. swinhoei by the metallic-coloured clothing of the body. In this respect it agrees with the East-Siberian G. metallescens (Saperda id., Motsch.), from which its large black markings conspicuously distinguish it. The elytral spots are, on each side two large and angular, placed in succession on the disk before the middle, and one describing nearly an oval between the middle and the apex; the shoulders and lateral carinae of the elytra are also black. The elytra are briefly truncated at the apex, with a short tooth at the external angle of the truncature. The apex of the tibiae is black, the tarsi above pale blue. The antennae are black, with the basal joints more or less marked with blue.” Also in Bates (1884), he distinguished it from E. chrysargyrea by the following note: “Resembles E. chrysargyrea in its black markings and the form and colour of the elytral carinae; the spots are, however, much larger, the elytra have the external angle of the truncature briefly spinose.”

Host plants. Alnus sp. (Betulaceae), Pinus tabulaeformis Hort. ex C. Koch (Pinaceae), Populus sp. (Salicaceae), Tilia japonica (Miquel) Simonkai (Tiliaceae).

Remarks. One male figured by Wang (2014: 721, fig. 3417.1) from Hunan, Nanyue looks quite similar to Eutetrapha chrysochloris chrysochloris (Bates, 1879), especially due to the elongated black maculae on the pronotum and the black are on the apical half of the elytron. But no conclusion can be made without studying specimens. The records from Henan and Sichuan could not be clarified without available specimens.

The records from Shaanxi, Hubei and Gansu should be based on E. shaanxiana Lin & Yang, sp. nov. However, the record from Zhejiang would be E. tianmushana Lin & Bi, sp. nov. The record from Taiwan appeared in Hua (2002) and was repeated by Löbl & Smetana (2010), but it was not included in the Taiwanese faunal books (Yu & Nara 1988; Yu et al. 2002; Chou 2004; Chou 2008) or catalogue (Nakamura et al. 1992; Nakamura et al. 2014). We agree with the latter authors and do not believe that this species occurs in Taiwan.

Distribution. Japan, Russia.

Specimens examined. Japan: 1 female (Fig. 94), type of Paraglenea chrysochloris v. brunneli Pic, 1952, Japan (MNHN, ex Collection M. Pic); 1 female, Fukushima Pref., Tateiwa-mura, Nosihito, 2000.VI.11, leg. Toshihito Ito (IZAS, ex. CNO); 3 males 3 females (Fig. 93), same data but 2000.VII.29; 1 male, same data but 2000.VII.30; 1 male (Fig. 92) 1 female, Fukushima Pref., Aizu-gun, Hinoemata-mura, 2000.VI.16–17, leg. Kiichi
Shimizu (IZAS, ex. CNO); 1 male (Fig. 95), Fukushima Pref., Aizu-gun, Tateiwa-mura, Noshito, 2000.VI.16, leg. S. Maru (CNO); 1 female, same data but 2000.VI.10, leg. T. Ito (CNO); 1 female, Naganuma, Maoi, Hokkaido, 1996.VIII.10, leg. K. Mizota (IZAS).

**Eutetrapha chrysochloris chrysargyrea** Bates, 1884
Figs. 96–97, 149f–149k

*Eutetrapha chrysochloris chrysargyrea* Bates, 1884: 256. Type locality: Japan, Higo (= Kumamoto Pref.), Oyayama. Type depository: MNHN.

*Eutetrapha metallescens* var. *chrysargyrea*; Matsushita, 1933: 404.

*Eutetrapha chrysochloris*; K. Ohbayashi, 1963: 315, pl. 158, figs. 9a & 9b; Kojima & Hayashi, 1969: 156, pl. 49, fig. 7.

*Saperda chrysochloris*; Abdullah & Abdullah, 1966: 89


*Eutetrapha chrysochloris*; Pu & Jin, 1991: 190 (part); Hua, 2002: 208 (part); Hua et al., 2009: 213, 354 (part), pl. LXXXVIII, 896.

**Supplementary description.** Length 12–17 mm. Body black, furnished with golden-green scales and with white to brown erect hairs. Inner below of first and 3rd antennal segments, each tibia and dorsum of tibiae furnished with feeble silver-blue hairs, posterior tarsi with white hairs, especially at sides (Fig. 149j); pronotum provided with black maculae on each lateral side and a pair on dorsum. Elytra with lateral sides black with narrow or short green longitudinal stripe (Fig. 149h); each dorsum with three black maculae, apical one elongated and curved like a hook. Frons in male narrower than twice width of inferior eye-lobe.

**Diagnosis.** This subspecies is distinguishable from *Eutetrapha chrysochloris chrysochloris* (Bates) by outer angle of elytral apex quadrate or with minute spine; elytral maculae more or less smaller and an apical hook-like maculae sometimes separate into two ones; antennae slightly longer (N. Ohbayashi, January 2016, personal communication).

In the original description, Bates (1884) noted as follows: “Approaches *Glenea* more nearly than any of the other species, the first ventral segment being somewhat longer than other either of the three following; the apices of the elytra are, however, very obtusely and narrowly truncated.”

**Remarks.** According to N. Ohbayashi (2016, personal communication), the black maculae on the pronotum or elytra are rather variable though it shows the tendency for two groups in Japanese population. The most important difference of these two subspecies is the spine of elytral outer apex. But this spine of nominotypical subspecies seems to show the cline on the degree. That of the Hokkaido population (type locality) is most developed, but getting shorter toward southwest of Honshu, and the population of extreme western Honshu cannot be distinguished from *E. c. chrysargyrea* of Shikoku and Kyushu. Therefore, these two subspecies could be synonymized. We refrain from proposing any synonymies in this work since colleagues in Japan are better positioned to study and assess the situation in Japan.

**Distribution.** Japan (Shikoku, Kyushu and Chugoku district (extreme western) of Honshu).

**Specimens examined.** Japan: 1 female (Fig. 97), Ehime Pref. Imabari, Mt. Narabara, 2010.VIII.8, leg. N. Ohbayashi (IZAS, ex. CNO); 1 male (Fig. 96), Ehime Pref., Odamiyama, Honomata forest road, 1995.VII.1, leg.N. Ohbayashi (CNO); 1 female, Ehime Pref., Mt. Ishizuch, Tsuchigoya, 1997.VI.21, leg. N. Ohbayashi (CNO).

**Eutetrapha shaanxiana** Lin & Yang, sp. nov.
Figs. 98–106, 150f–150k

*Eutetrapha metallescens*; Zhou et al., 1988: 105, pl. XV, fig. 143. (nec Motschulsky, 1860)

*Eutetrapha chrysochloris*; Pu & Jin, 1991: 190 (part); Hua, 2002: 208 (part); Hua et al., 2009: 213, 354 (part). (nec Bates, 1879)

*Eutetrapha chrysochloris chrysargyrea*; Chou et al., 2010: 316, fig. 24. (nec Bates, 1884)

**Description.** Male: length: 11.5–14.0 mm, humeral width: 3.4–4.2 mm. Female: length: 14.6–16.5 mm, humeral...
width: 4.5–5.3 mm. Body black, covered with metallic green (Figs. 98–101) scales except some black markings. Antennae black, sparsely pilose below, underside of basal three antennomeres covered with metallic green scales. Sometimes there are several black spots on occiput (Figs. 98, 99). Prothorax with four black maculae: two rounded spots on disc, which may be elliptical (Fig. 99) due to lack of scales, a small one on each lateral side. Whole scutellum covered with metallic green scales. Each elytron with four black markings: a square one located on basal 1/5; second being an round to elliptical one located before middle of elytron; third being a rounded (Fig. 98) to stout arcuate, transverse vitta (Figs. 99–101), reaching or not reaching lateral margin; fourth being a rounded to inverted trapezoidal (Fig. 100) one before apex. Third and fourth may be confluent to form an arc (Fig. 99) opening to lateral margin, located on middle of apical half. Side of elytra covered by metallic green scales except carinae (Figs. 150h-1 & 150h-2). Ventral surface densely clothed with metallic scales, with few black spots. Legs black, covered with metallic green scales except underside of tarsi, posterior tarsi with black hairs especially at sides (Fig. 150j).

Inferior eye lobe four times as long as gena in male, or slightly longer than gena in female. Antennomere ratio: male: 16: 2: 21: 17: 18: 17: 16: 15: 14: 16: female: 16: 2: 22: 17: 18: 16: 15.5: 15: 14: 13: 13. Elytron with punctures larger and sparser than that of pronotum, rounded apically. Male claws: only anterior claws of pro- and mesotarsi appendiculate with small teeth (Figs. 146a–c), posterior claws of pro- and mesotarsi without teeth, and claws of metatarsi simple (Fig. 143). Females claws simple (Fig. 143).

**Male genitalia** (Figs. 102–105): Tergite VIII (Figs. 102a, 102c) slightly broader than long, apex rounded, with sparse and moderate long setae at sides. Spiculum gastrale slightly shorter than ringed part of tegmen, spiculum relictum shorter than a half of spiculum gastrale. Tegmen (Figs. 103a–c) about 2.8 mm in length; lateral lobes slender, each about 0.5 mm long and 0.15 mm wide (Fig. 103d), apex with fine setae which are longer than half of lateral lobes; median lobe slightly curved (Fig. 104b), slightly longer than tegmen; median struts about half-length of median lobe (Fig. 104c); apex of ventral plate (Fig. 104a-1) sharply pointed; endophallus more than triple length of median lobe, with two pairs of basal plate-like sclerites (located behind apex of median struts), two bands of indistinct supporting armature, and three rod-like sclerites at end (Fig. 105), two longer ones each about 2.5 mm, slightly shorter than tegmen, short one about 2.4 mm. **Female genitalia:** spermathecal capsule (Fig. 106) composed of an apical orb and a short but strongly curved stalk, strongly sclerotized part of stalk shorter than apical orb in length. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 8.0 mm for an adult compared with abdomen which measured 7.5 mm in ventral view.

**FIGURES 98–101.** *Eutetrapha shaanxiana* Lin & Yang, sp. nov. habitus. 98. Male, from China, Shaanxi. 99. Male, from China, Shaanxi, showing the variety of blacking maculae on elytra. 100. Female, from China, Shaanxi. 101. Female, from China, Hubei. Scale 2 mm.
FIGURES 102–106. Terminalia of *Eutetrapha shaanxiana* Lin & Yang, sp. nov., from China, Shaanxi. 102. Tergite VIII and sternites VIII & IX. 103. Tegmen. 103d. Lateral lobes in ventral view, showing the ridge at base. 104. Median lobe with median struts, including the endophallus. 105. Last part of endophallus, showing the rod-like sclerites. A. Ventral view, b. Lateral view, c. Dorsal view. 106. Female from China, Shaanxi, showing the spermathecal capsule. Scale 1 mm, 103d, 104a, 104b, 105 and 106: not to scale.

**Diagnosis.** This species is similar to *Eutetrapha chrysochloris chrysargyrea* Bates, 1884, but can be distinguished by the elytral apex rounded at the outer angle (Fig. 150i); black spots on disc of pronotum rounded, and small spots on sides; apical half of elytron with two black spots instead of an arc; side of elytra covered by metallic green scales (Figs. 150h-1 & 150h-2); scales much denser (Figs. 150f, 150g & 150k); punctures in the four basal black spots on elytra bigger and less numerous; and posterior tarsi with blackish hairs especially at sides and broader because more depressed (Fig. 150j).

**Etymology.** It is named after the type locality Shaanxi Province, China.

**Distribution.** China: Shaanxi, Gansu, Hubei.

**Type material.** Holotype, male (Fig. 98), Ningshan, Huoditang, 2010.VII, Youyu07 (IZAS, IOZ(E)1905307); Paratypes: China: Shaanxi: 1 male, Ningshan, Huoditang, alt. 1620 m, 1979.VII.30, leg. Yin-Heng Han (IZAS, IOZ(E)1905308)); 1 male, Ningshan County, Huoditanglinchang, Changbu, alt. 1554 m, 33.26023°N, 108.26539°E, 2015.VII.10, leg. Yi-Zhou Liu (IZAS, IOZ(E)1905449); 1 male (Fig. 99), Ningshan, 1980.VII.1–10, leg. Li-Sheng Chu (IZAS, IOZ(E)1905309); 1 male, Ningshan, Yaquegou, alt. 1580–1850 m, 1999.VII.2, leg. De-Cheng Yuan (IZAS, IOZ(E)1905310); 1 male, Shiquan (IZAS, IOZ(E)1905311); 1 female (Fig. 100), Huayinshi, Huashan, alt. 1618 m, 34.4934°N, 110.0812°E, 2007.VI.6, leg. Mei-Ying Lin (IZAS, IOZ(E)1905312); 1 male, Qinling Zhiwuyuan, Daxiai, 893 m, 33.9303°N, 108.3523°E, 2012.VII.6, leg. Wan-Gang Liu (IZAS, IOZ(E)1905448, Ceram-142 for molecular study); 1 male, Taibai Shan, Tsinling Mts., Houzhenzi vill., 33°53′N, 107°49′E, alt. 1500 m, 2000.IX, leg. Siniaev & Plutenko (CCH); 1 female, S. slope, Xunyangba S+W env., 33°28′–
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Eutetrapha tianmushana Lin & Bi, sp. nov.

Figs. 107–114, 151f–151k

Eutetrapha chrysochloris; Pu & Jin, 1991: 190 (part); Hua, 2002: 208; Hua et al., 2009: 213, 354. (nec Bates, 1879)

Description. Male: length: 12.0–12.5 mm, humeral width: 3.7–4.0 mm. Female: length: 13.5–14.0 mm, humeral width: 4.5–4.8 mm. Body black, covered by metallic blue or green (Figs. 107–108) scales except some black markings. Antennae black, sparsely pilose below, underside of basal three antennomeres covered with metallic blue or green scales. Occasionally with five black spots on occiput. Prothorax with four black markings: two elliptical ones on the disc, a rounded one on each lateral side. Whole scutellum covered with metallic blue or green scales. Each elytron with four black markings: a square one located on basal 1/5; second being an elliptical one with a stalk reaching lateral carina, located before middle of elytron; third being a stout arcuate, transverse vitta; fourth rounded one before apex. Third and fourth could be confluent to be an arc opening to lateral margin, located on middle of apical half. Side of elytra covered by metallic blue to green scales except the carinae and basal eighth. Ventral surface densely clothed with metallic scales, with some black spots (Fig. 107c). Legs black, covered with metallic blue or green scales except underside of tarsi, posterior tarsi with black hairs especially at sides (Fig. 151j).

Females claws simple. **Male genitalia** (Figs. 109–113): Tergite VIII (Figs. 109a, 109c) slightly broader than long, apex rounded, with sparse and short setae at sides. Spiculum gastrale subequal to ringed part of tegmen in length, spiculum relictum shorter than a half of spiculum gastrale. Tegmen (Figs. 110a–c) 2.6 mm in length; lateral lobes stout, about 0.4 mm long and 0.1 mm wide, with one finely setose ridge basally (in ventral view, Fig. 110d), apex rounded, with setae which are subequal to length of lateral lobes; median lobe with median struts slightly curved and slightly longer than tegmen (14: 13); median struts slightly longer than a half of whole median lobe; apex of ventral plate bluntly pointed; median foramen narrowly elongated; endophallus more than triple length of median lobe, with four pieces of basal plate-like sclerites, two bands of creating armature, and three rod-like sclerites at end, the two longer ones about 2.4 mm, slightly shorter than tegmen, the shorter one about 2.1 mm long. **Female genitalia**: spermathecal capsule (Fig. 114) composed of an apical orb and a curved stalk, strongly sclerotized part of stalk shorter than apical orb. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 8.3 mm for an adult compared with abdomen which measured 6.5 mm in ventral view.

**FIGURES 109–114.** Terminalia of *Eutetrapha tianmushana* Lin & Bi, sp. nov., from China, Zhejiang. 109. Tergite VIII and sternites VIII & IX. 110. Tegmen. 110d. Lateral lobes in ventral view, showing the ridge at base. 111. Median lobe with median struts. 112. Rod-like sclerites. 113. Male genitalia, before tegmen and median lobes separated. a. Ventral view, b. Lateral view, c. Dorsal view. 114. Female from China, Zhejiang, showing the spermathecal capsule. Scale 1 mm, 110d, 113b, 113c and 114: not to scale.

**Diagnosis.** This species is similar to *E. chrysochloris chrysochloris* (Bates, 1879), *E. chrysochloris chrysargyrea* Bates, 1884 and *E. shaanxiana* Lin & Yang, sp. nov., but can be distinguished by the distinct male claws, the metallic scales more blue (Figs. 151f, 151g & 151k). It differs from *E. chrysochloris chrysochloris* (Bates, 1879) and *E. chrysochloris chrysargyrea* Bates, 1884 also by the elytral apex rounded, apical half of elytron without a black arc and posterior tarsi with blackish hairs especially at sides (Fig. 151j). It differs from *E.
shaanxiana Lin & Yang, sp. nov. also by the larger pronotal and elytral black maculae, and the second one of elytral black marking reaching lateral carina, scales more blue and more sparse. It is similar to Paraglenea virides (Pu & Jin, 1991) comb. nov., but can be distinguished by the different male claws and the third elytral black marking not reaching lateral carina.

Remarks. The male claws of this species are unusual (Figs. 147a & 147b for pro- and mesotarsi and Fig. 144 for metatarsi usually), and highly variable; it appears to be a combination of Eutetrapha and Paraglenea. Some individuals with claws of mesotarsi as in Figs. 146a–c, which supports inclusion of this species in the genus Eutetrapha. Some individuals have claws of pro- and metatarsi as in Fig. 144, which supports a close relationship with the genus Paraglenea.

Etymology. It is named after the type locality Tianmushan, which is located in Zhejiang Province, China.


Type material. Holotype: male (Figs. 107a–c, 12.0 mm long), Zhejiang, Xitianmushan, alt. 1200 m, 2010.VII.3, leg. Ming Jin (IZAS, IOZ(E)1905314, ex CJM). Paratypes: China:Zhejiang: 1 male, same data to holotype but leg. Peng-Fei Xu (IZAS, IOZ(E)1905446, ex CBWX); 1 female (Fig. 108), same data to holotype but leg. Dong-Dong Fang (personal collection of Dong-Dong Fang, Zhejiang, China); 1 male, Tienmushan, 1927.VII.17 (IZAS, IOZ(E)1905315); 1 female, Xitianmushan, 2008.VI.29, leg. Yong-Xiang Wu (personal collection of Yong-Xiang Wu, Shanghai, China); 1 male, Xitianmushan, alt. 1200 m, 2012.V.18, leg. Wen-Xuan Bi (CBWX), 1 male, same data but alt. 1400 m (CBWX); 1 female, Xitianmushan, alt. 1100 m, 2016.VII.24, leg. Wen-Xuan Bi (CBWX); 1 male, Tienmushan Nature Reserve, alt. 1300 m, 2010.VII.3, leg. Ming Jin (CCCC, ex CJM); 1 male 1 female, same date but (CJM).

Eutetrapha metallescens (Motschulsky, 1860)

Figs. 115–121, 152f & 152g


Saperda metallescens; Abdullah & Abdullah, 1966: 89.

Supplementary description. Male genitalia (Figs. 117–120): Tergite VIII (Figs. 117a, 117c) broader than long, apex rounded, with sparse and short setae. Spiculum gastrale much shorter than ringed part of tegmen in length, spiculum relictum shorter than a half of spiculum gastrale. Tegmen (Figs. 118a–c) length about 3.4 mm; lateral lobes stout, each about 0.4 mm long and 0.2 mm wide (Fig. 118d), apex truncated and with fine setae which are as long as or shorter than lateral lobes, basal 2/3 strongly expanded in lateral view (Fig. 118); median lobe slightly curved (Fig. 119b), much longer than tegmen (9:7); median struts about half-length of median lobe (Fig. 119c); apex of ventral plate (Fig. 119a) sharply pointed; endophallus two times as long as median lobe, with two pairs of basal plate-like sclerites (located right behind apex of median struts), two bands of indistinct supporting armature, and three rod-like sclerites at end (Fig. 120), two longer ones each about 2.4 mm, much shorter than tegmen, short one about 1.9 mm. Female genitalia: spermathecal capsule (Fig. 121) composed of an apical orb and a strongly curved stalk, strongly sclerotized part of stalk shorter than apical orb in length. Spiculum ventrale measured 8.0 mm for an adult compared with abdomen which measured 7.8 mm in ventral view.

Diagnosis. Among the congeners with metallic scales, this species can be easily distinguished by the smaller black maculae on both pronotum and elytra, especially the narrow black hook on apical half of elytra, and the distinct apex of lateral lobes of tegmen (Figs. 118a–e).

Host plants. Prunus armeniaca Linnaeus (Rosaceae), Salix sp. (Salicaceae).

Remarks. Shaanxi was first reported by Zhou et al. (1988) but we believe that was a misidentification of E. shaanxiana Lin & Yang sp. nov., which may be confirmed by the figure 143 in that book. Therefore, we remove it from that locality list in this work.
Distribution. China: Heilongjiang, Jilin, Liaoning, Hebei, Shandong; Russia (Amur, E. Siberia), North Korea, South Korea.


Eutetrapha lini Chou, Chung & Lin, 2010
Figs. 122, 153f & 153g

Eutetrapha lini Chou, Chung & Lin, 2010: 313, figs. 1–16. Type locality: China, Taiwan, Taitung County, Soca. Type depository: NMNST.

Eutetrapha lini; Lin, 2015: 276, figs. 1859432–434.
FIGURES 117–121. Terminalia of Eutetrapha metallescens (Motschulsky, 1860), from China, Jilin. 117. Tergite VIII and sternites VIII & IX. 118. Tegmen. 118d. Lateral lobes in ventral view, showing the ridge at base and the expanded apex. 118e. Lateral lobes in lateral view, showing the hairs on ventral side of the expanded base. 119. Median lobe plus endophallus. 120. Rod-like sclerites. a. Ventral view, b. Lateral view, c. Dorsal view. 114. Female from China, Jilin, showing the spermatheca. Scale 1 mm, 118d, 118, 119b, 119c and 121: not to scale.

Description. Male: length: 13.2–14.0 mm, humeral width: 4.2–4.4 mm. Female: length: 13.8–16.0 mm, humeral width: 4.7–5.3 mm. Details refer to Chou et al. (2010).

Diagnosis. This species differs from Paraglenea spp. by male with only anterior claws of pro- and mesotarsi appendiculate, remainders all simple (all male claws in Paraglenea appendiculate). It is similar to Eutetrapha chrysochloris (Bates, 1879), but can be distinguished by metallic blue to purple blue scales, larger and sparser elytral punctures, almost rounded black arc on apical half of elytra, hardly visible elytral apical tooth at the outer angle, etc., and on genitalia distinguished by stouter lateral lobes of tegmen, nearly rounded apex of ventral plate etc.

Remarks. Eutetrapha lini is a nocturnal species, being attracted by light trap. We believe it is probably monophagous (Chou et al. 2010).

Distribution. China: Taiwan.

Type specimens: Holotype male, Taiwan, Taitung county, Soca, 22°15′N, 120°50′E, 2009.V.16, leg. Yi-Ting Chung (NMNST). Paratypes: 1 female, Taitung county, Soca, 1999.VII.7, leg. Wenhsin Lin (NMNST, ex CWSL); 1 female, Taitung county, Soca, Da-Ren Hsiang (township), alt. 500 m, 2006.VI.30, leg. WenI Chou (CWIC); 3 males 3 females, Taitung county, Soca, 2009.V.16, leg. Yiting Chung (1 female in CYTC, 1 male 2 females in IZAS, 1 male in CWIC, 1 male in CWSL); 2 females, same data but 2009.IV.29 (1 female in CCCC, 1 female in NMNST); 1 male, same data but 2009.IV.23 (CCCC); 1 male, same data but 2009.IV.2 (CYTC).
**Eutetrapha gui** Lin & Yang, sp. nov.

Figs. 123–130, 154f, 154g & 154k

**Description.** Male: length (n=2): 9.8–12.2 mm, humeral width: 3.3–4.0 mm. Female (n=1): length: 14.2 mm, humeral width: 4.8 mm. Body black, covered by metallic blue (Figs. 123–124) scales except some black markings, under scales is gray pubescence (Fig. 125). Antennae black, sparsely pilose below, basal three antennomeres covered with metallic blue scales except dorsal side. Occiput black except a narrow line surrounding eyes. Prothorax with four black markings: two rounded or square ones on disc, a rounded one on each lateral side. Whole scutellum covered with metallic scales. Each elytron with three black markings: a triangular one located on basal 1/5, reaching lateral carina but not reaching suture and scutellum; second being a transverse vitta reaching both lateral carina and suture, located before middle of elytron; third being a black arc, opening to lateral margin, reaching both lateral carina and suture, located on middle of apical half. Side of elytra covered by metallic blue scales except carinae and basal fifth. Ventral surface densely clothed with metallic scales, with some black spots (Fig. 124b). Legs black, covered with metallic blue scales except ventral side of tarsi.

**FIGURES 126–130.** Terminalia of *Eutetrapha gui* Lin & Yang, sp. nov., male from China, Hainan. 126. Tergite VIII and sternites VIII & IX. 127. Tegmen. 127d. Lateral lobes in ventral view, showing the fine hairs at base. 128. Median lobe with median struts. 129. Last part of endophallus, including rod-like sclerites. 128b+129 = complete median lobe and endophallus. a. Ventral view, b. Lateral view, c. Dorsal view. 130. Female from China, Hainan, showing the spermathecal capsule. Scale 1 mm, 127d, 128d & 130: not to scale.

The inferior eye lobe two times as long as gena in male, or slightly longer than gena in female. Antennae longer than body, male slightly longer than female. Antennomere ratio: male: 16: 3: 19: 15: 16: 15: 14.5: 14: 13: 12: 15; female: 16: 4: 19: 16: 17: 16: 15: 14: 13: 12: 12. Elytron with punctures larger and sparser than that of pronotum, truncated apically, with a small tooth at outer angle. Male claws: only anterior claws of pro- and mesotarsi appendiculate with small teeth (Figs. 146a–c), posterior claws of pro- and mesotarsi without teeth, and claws of metatarsi simple (Fig. 143). Male genitalia (Figs. 126–129): Tergite VIII (Figs. 126a, 126c) broader than long, apex emarginate, with moderate long and denser setae, sparser in middle. Spiculum gastrale much shorter than ringed part of tegmen in length, spiculum relictum shorter than a half of spiculum gastrale. Tegmen (Figs.
127a–c) 2.4 mm in length; lateral lobes stout, about 0.25 mm long and 0.1 mm wide, with one finely setose ridge basally (in ventral view, Fig. 127d), apex rounded, with setae which are longer than lateral lobes; median lobe slightly curved and slightly longer than tegmen (9: 8); median struts about two thirds of whole length of median lobe; apex of ventral plate sharply pointed; median foramen strongly elongated; endophallus about triple length of median lobe, with four pieces of basal plate-like sclerites, two bands of creating armature, a strongly sclerotized part (at the apical 1/3) and three rod-like sclerites at end (Fig. 129), two longer ones each about 2.5 mm, subequal to tegmen in length, short one about 2.2 mm. Female genitalia: spermathecal capsule (Fig. 130) composed of an apical orb and a curved stalk, stalk longer than apical orb but less than twice of it in length. Spiculum ventrale much longer than abdomen. In our observation, spiculum ventrale measured 9.0 mm for an adult compared with abdomen which measured 6.5 mm in ventral view.

Diagnosis. This species is similar to Eutetrapha lini Chou, Chung & Lin, 2010, especially by the metallic blue scales, two similar size black pronotal maculae and three black elytral markings, but can be distinguished by the following characters: black maculae on pronotum larger, the width of the median metallic blue stripe less than one third of the width of each black macula; the basal two black elytral black markings reaching lateral carina, and the second one before middle also reaching suture; black arc on apical half of elytra reaching suture and the metallic blue spot inside the arc much smaller, less than one third of the arc in width; elytral apical tooth at the outer angle more developed; apex of tergite VIII emarginate and apex of ventral plate of median lobe sharply pointed.

Etymology. This species is named after Mr. Mao-Bin Gu, who collected the holotype specimen and who had collected many insects in Hainan Island. The epithet is a noun in the genitive case.


Eutetrapha flavoguttata Pu & Jin, 1991

Figs. 131–134, 156f, 156g-1, 156g-2, 156k & 156-elytron


Supplementary description. Females (n = 5): length 21.0–25.0 mm, width 6.5–8.0 mm. Claws simple. Female genitalia: Setae of sternite VIII dense and long. Spiculum ventrale (Fig. 133) slightly shorter than abdomen (103 to 110 and 90 to 97 we observed). Spermathecal capsule (Fig. 134) strongly sclerotized, composed of an apical orb and a long basal stalk, with length of basal stalk more than three times of diameter of apical orb.

Diagnosis. This species can be easily distinguished from other congeners by the rugose pronotum (Figs. 156g–1 & 156g–2), green body (not green pubescence or scales) and red-brown legs.

It resembles Glenea viridescens Pic, 1927 by the rugose pronotum and green body, but can be distinguished by the slightly truncate or nearly round elytral apex (without distinct teeth), red-brown legs (not blue-green legs), and four pubescent spots on elytron.

Remarks. Males are unknown but we predict that the male claws should be similar to Glenea viridescens Pic, 1927; that is: the anterior claw of the pro- and mesotarsi is toothed at the base, others simple (Viktora & Lin 2012). If this is confirmed, then it is reasonable to keep this species in the genus Eutetrapha. However, we do not transfer Glenea viridescens Pic, 1927 to Eutetrapha because of its distinctly emarginate elytral apex, and we believe it is reasonable to keep this species in the large genus Glenea. The morphology of male claws in the genus Glenea is diverse (Gahan 1897).

This species is recorded from Myanmar for the first time.


Type specimen examined. Holotype (Figs. 131 a & c), female, Xizang, Médog, 1979.VIII.16, leg. Gen-Tao Jin, Jian-Yi Wu (SHEM, 24201680).

Other specimens examined. Myanmar: 4 females, North Myanmar, Mt. Shan Guang, alt. 1400 m, near Putao Kachin, 2000.VIII.20, leg. Hiroshi Miyama (EUMJ, with one female deposited in IZAS).
**Key to species of *Euterapha* Bates**

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<th>Description</th>
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<td>Pronotum without transverse ridges; body mostly covered with scales or pubescence</td>
<td><em>E. flavoguttata</em> Pu &amp; Jin</td>
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<tr>
<td>2</td>
<td>Body not covered with scales, but covered with pubescence</td>
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<tr>
<td>3</td>
<td>Body covered with metallic green or blue scales</td>
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<td>4</td>
<td>Body covered with reddish pubescence</td>
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<td>5</td>
<td>Basal half of elytron with four black maculae (not including the humeral angle); apical half of elytron without a large black macula (combination of several small maculae)</td>
<td><em>E. elegans</em> Hayashi</td>
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<tr>
<td>6</td>
<td>Basal half of elytron with three black maculae (not including the humeral angle); apical half of elytron sometimes with a large black macula (combination of several small maculae)</td>
<td><em>E. cinnabarina</em> Pu</td>
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<td>Pronotal disc without macula</td>
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<td>8</td>
<td>Pronotal disc with macula</td>
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<td>Prothorax with black macula on each side; elytron with one black longitudinal stripe</td>
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<td>Pronotum with distinct black maculae and elytra not trimmed with narrow stripes</td>
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<td>14</td>
<td>Elybral black trim has six grayish-white pubescent spots</td>
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<tr>
<td>15</td>
<td>Elybral black trim has seven grayish-white pubescent spots</td>
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<td>16</td>
<td>Pronotum with one pair of round spots; elytron with five black maculae; body covered with grass green pubescence, somewhat yellow</td>
<td><em>E. chlorotica</em> Pu &amp; Jin</td>
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<tr>
<td>17</td>
<td>Pronotum with one pair of elongated maculae; elytron with four large black maculae</td>
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<tr>
<td>18</td>
<td>Elytron with maculae large and subquadrate, all four maculae reaching lateral margin; sides of each abdominal segment with black maculae</td>
<td><em>E. laotensis</em> Breuning</td>
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<td>Elytron maculae smaller and irregularly shaped, the first and fourth maculae not reaching lateral margin (the fourth sometimes reaching lateral margin); sides of each abdominal segment without black maculae</td>
<td><em>E. shigianensis</em> Pu &amp; Jin</td>
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<td>20</td>
<td>Elytron with metallic blue scales; pronotal black maculae large, length subequal to width, or length less than twice of width</td>
<td><em>E. tianmushana</em> Lin &amp; Bi, sp. nov.</td>
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<td>23</td>
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<tr>
<td>24</td>
<td>Elytron apex with a shorter tooth at the outer angle; elytron maculae more or less smaller</td>
<td><em>E. chrysoclooids</em> chrysargyreae Bates</td>
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<tr>
<td>25</td>
<td>Pronotal black spots larger, wider than the width between two spots; anterior claw of metatarsi of male appendiculate with a tooth</td>
<td><em>E. tianmushana</em> Lin &amp; Bi, sp. nov.</td>
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Paraglenea virides (Pu & Jin, 1991) comb. nov.
Figs. 135a & 135c, 155f, 155g & 155k

Eutetrapha virides Pu & Jin, 1991: 191, 196, pl. IIIB: 2. Type locality: China, Sichuan, Qingchuan, Tangjiahe. Type depository: IZAS.

Diagnosis. According to Pu & Jin (1991), this species is “related to E. chrysochloris Bates, but easily distinguished by the frons sparsely punctuate, posterior margin of pronotum straight, not sinuate, scutellum tongue-shaped; the second macula of elytra obliquely elongate, contact with humeral carina”. In fact, the male claws allow these two species to be separated into two genera.

Remarks. Eutetrapha virides Pu & Jin, 1991 is transferred to the genus Paraglenea Bates, 1866, due to the appendiculate claws in males (Fig. 144). Though we did not examine any females, the claws of females should be simple. This species is quite similar to Paraglenea fortunei (Saunders, 1853) and P. cinereonigra Pesarini & Sabbadini, 1996 due to the color pattern, but with metallic scales and with different black markings.


Type specimen examined. Holotype (Figs. 135 a & c), male, Sichuan, Qingchuan, Tangjiahe, 1980.VII.30, leg. Ming-Li Lan (IZAS, IOZ(E) 217697).

Saperda (Lopezcolonia) ocelota (Bates, 1873) comb. nov.
Figs. 136–142

Glenea ocelota Bates, 1873: 387. Type locality: Japan, Honshu, Hiogo. Type depository: MNHN.
Glenea ocelota: Gahan, 1889: 225.
Saperda maculithorax Pic, 1900: 19. Type locality: Japan, Honshu, Yokohama. Type depository: MNHN.
Eutetrapha ocellota ab. breuningi Podaný, 1962: 27. [infrasubspecies from Japan, Mont Kazuayama].

Supplementary description. Male claws: anterior claw of pro- and mesotarsi is toothed at base (Fig. 146), others simple. Female claws simple. Male genitalia (Figs. 139–141): Tergite VIII (Figs. 139a, 139c) slightly broader than long, apex rounded, with setae which are long and dense at sides, and shorter atmiddle. Spiculum gastrale subequal to ringed part of tegmen in length, spiculum relictum about one half-length of spiculum gastrale. Tegmen (Fig. 140d) about 2.7 mm in length; lateral lobes stout, slightly tapering apically, each about 0.5 mm long and 0.2 mm wide; apex with fine setae which are longer than lateral lobes; median lobe slightly curved (Fig. 140b) in lateral view, slightly longer than tegmen (29:27); median struts more than half-length of median lobe (Fig. 140c); apex of ventral plate (Fig. 140d) rounded; endophallus more than triple length of median lobe, with four pieces of basal plate-like sclerites (located behind apex of median struts), two bands of supporting armature, and three rod-like sclerites at end, which are about 2.9 mm in length, slightly longer than tegmen. Female genitalia: spermathecal capsule (Fig. 142) composed of an apical orb and a curved stalk, stalk only a little longer than apical orb. Spiculum ventrale longer than abdomen. In our observation, spiculum ventrale measured 6.2 mm for an adult compared with abdomen which measured 5.8 mm in ventral view.

Remarks. Matsushi (1933) first reported “Formosa” in the distribution list of this species, mentioning Formosa (Taihoku, Kankô) as the exact locality. Later, Breuning (1952), Hua (2002), Hua et al., (2009) and Löbl
& Smetana (2010) followed him to list Formosa or Taiwan as one of the localities. However, other authors considered it as a species endemic to Japan (Gressitt 1951; Samuelson 1965; Kurihara & A. Saito 2007), and Chou (2008) did not mention this species in his Taiwanese fauna list. We failed to find any specimens from Taiwan to confirm the report during this study. Lee (1987) did not mention this species in his Korean faunal list, while Jang, Lee & Choi (2015) listed it without photographs or specimens. Hua (2002) included Korea and this was followed by Hua et al. (2009) and Löbl & Smetana (2010). We could not confirm this locality either.

The first author believes that the Taiwan and South Korea records were based on misidentifications of Saperda (Lopezcolonia) tetrastigma Bates, 1879 or other species with four black spots on pronotum and four black spots on each elytron. Therefore, the distribution of this species is endemic to Japan.

This species does not belong in the genus Eutetrapha because of the absence of distinct lateral elytral carinae and may instead belong in the genus Saperda (Lopezcolonia). Actually, the elytral lateral margins are quite similar to that of Saperda (Lopezcolonia) alberti Plavilstshikov, 1916 and Saperda (Lopezcolonia) perforata (Pallas, 1773). Although a systematic study of all Saperdini has not yet been undertaken, we propose the new combination based on the morphological study conducted by the first author and a preliminary molecular analysis conducted by Dr. Nonaka Masaru. We believe this species is sister to Saperda (Lopezcolonia) octomaculata Blessig, 1872 and Saperda (Lopezcolonia) subobliterata Pic, 1910, while quite far from E. sedecimpunctata (Motschulsky) (Dr. Nonaka Masaru, 2015.VI.25, personal communication).

**FIGURES 139–142.** Terminalia of Saperda (Lopezcolonia) ocelota (Bates, 1873) **comb. nov.** 139–141. Male genitalia. 139. Tergite VIII and sternites VIII & IX. 140. Male genitalia. a. Ventral view, b. Lateral view, c. Dorsal view. d. Lateral lobes of tegmen and apex of ventral plate. 141. Rod-like sclerites. 142. Female spermathecal, especially showing the spermathecal capsule, a & b in different view. Scale 1 mm, 140a, b, c and 142: not to scale.

**Distribution.** Japan.

**Type specimen examined.** Syntypes, 1 male 1 female, Japan (MNHN, ex collection H.W. Bates). Holotype of Saperda maculithorax Pic, 1900, female, Japan, Honshu (Kanagawa), Yokohama (MNHN).


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