# A review of the Gonioctena tredecimmaculata (Jacoby, 1888) group (Coleoptera, Chrysomelidae, Chrysomelinae)

Autor(en): **Bezdk, Jan**

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# A review of the *Gonioctena tredecimmaculata* (JACOBY, 1888) group (Coleoptera, Chrysomelidae, Chrysomelinae)

by **Jan Bezděk**

**Abstract.** The *Gonioctena tredecimmaculata* (JACOBY, 1888) group is revised. *G. emeishana* sp.nov. is described, *G. nigrosparsa* (FAIRMAIRE, 1889) is removed from synonymy and *G. tredecimmaculata* var. *cinctipennis* (ACHARD, 1924) is raised to species rank. Lectotypes are designated for *Paropsides nigrosparsus* FAIRMAIRE, 1889 and *Phytodecta 13-maculatus* var. *cinctipennis* ACHARD, 1924. Diagnostic characters of all known species, including male genitalia, are figured. Larva of *G. tredecimmaculata* described by ZAYTSEV (1985) refers to *G. cinctipennis*.

**Key words.** Coleoptera – Chrysomelidae – Chrysomelinae – *Gonioctena* – taxonomy – new species – Oriental Region

## Introduction

The subgenus *Asiphytodecta* [type species *Gonioctena tredecimmaculata* (JACOBY, 1888)] was proposed by CHEN (1935) for *Gonioctena* CHEVROLAT, 1837 species without setigerous pores in pronotal angles. Later, CHEN & YOUNG (1941) raised *Asiphytodecta* CHEN, 1935 to genus rank in their revision. Recent authors (e.g. GRESSITT & KIMOTO 1963; KIMOTO & GRESSITT 1981; MEDVEDEV 1987; DACCORDI 1994) treat it as subgenus of *Gonioctena*.

The author had the opportunity to examine *Gonioctena* material deposited in several institutional and private collections (see list below). It was found during the study of extensive material that a complex of species usually identified as *G. tredecimmaculata* is made up of 5 independent species. Of those, *G. emeishana* sp.nov. is described below, *G. cinctipennis* (ACHARD, 1924) is raised from variety to species rank and *G. nigrosparsa* (FAIRMAIRE, 1889) is removed from synomymy.

## Methods

In recording label data from material examined, a double slash (//) divides data on different labels. Exact label data are cited for type specimens. Author´s remarks and complements are found in square brackets: [p] – preceding data are printed; [h] – the same, but handwritten; [w] – white label.

The following abbreviations identify the collections housing the material examined:

**Institutions**

BMNH ..... The Natural History Museum, London, United Kingdom (Sharon Shute)
MCZC ..... Massachusetts, Museum of Comparative Zoology, Cambridge, USA (Phillip D. Perkins)
MNHN ..... Muséum National d´Historie naturelle, Paris, France (Nicole Berti)
NHMB ..... Naturhistorisches Museum, Basel, Switzerland (Eva Sprecher-Uebersax)
NMPC ..... Národní muzeum, Prague, Czech Republic (Josef Jelínek)

**Private collections**

AWPW ..... Andrzej Warchałowski collection, Wrocław, Poland
JBCB ..... Jan Bezděk collection, Brno, Czech Republic
JVCJ ..... Jiří Voříšek collection, Jirkov, Czech Republic
FKCC ..... František Kantner collection, České Budějovice, Czech Republic
LMRM ..... Lev N. Medvedev collection, Moscow, Russia
MSCC ..... Miroslav Snížek collection, České Budějovice, Czech Republic
MZCM ..... Miroslav Zúber collection, Mladá Boleslav, Czech Republic

## Taxonomy

### *Gonioctena tredecimmaculata* group

The following character combination separates the *G. tredecimmaculata* group from the other species within the sbg. *Asiphytodecta*: labrum with small tooth-like projection in the middle of anterior part, antennae entirely yellowish red, elytral punctation confused, pronotum with black median longitudinal streak, each elytron with 6 black spots which may vary from small separated spots to connected spots forming transverse black bands. The density and intensity of elytral punctation are variable as well; in some specimens 3 narrow, smooth longitudinal stripes may be found on the disc of each elytron. No distinct sexual dimorphism. The species of this group are externally very similar to each other, except *G. trilochana* which can be easily recognized by the shape of the black pattern on the pronotum (Figs 47–49).

*G. tredecimmaculata* was described by JACOBY (1888) from Foochow (China). One year later, FAIRMAIRE (1889) described *Paropsides nigrosparsus* from Tonkin. JACOBY (1890) synonymized these two taxa on the basis of only nearly identical descriptions, but he did not study the Fairmaire specimens. ACHARD (1924) described two varieties of *G. tredecimmaculata*: var. *taiwanensis* for specimens with reduced black markings on the elytra and var. *cinctipennis* for specimens with connected black spots on the elytra. CHÛJÔ (1958) expressed some doubts about the validity of var. *taiwanensis* and later (CHÛJÔ 1963) he treated both var. *cinctipennis* and var. *taiwanensis* as synonyms of *G. tredecimmaculata*. The last species in this group, *G. trilochana*, was described by MAULIK (1926) from Upper Burma.

The author had the opportunity to study most of type material of the above taxa and the results are addressed below.

### 1. *Gonioctena* (*Asiphytodecta*) *tredecimmaculata* (JACOBY, 1888) (Figs 1–2, 9–17)

*Phytodecta tredecimmaculata* JACOBY, 1888: 347 (type locality: Foochan).
*Phytodecta 13-maculata*: JACOBY, 1890: 118.
*Phytodecta tredecimmaculatus*: WINKLER, 1930: 1296; CHEN, 1934: 71 (key), 74 (partim).
*Phytodecta* (*Phytodecta*) *tredecimmaculatus*: WEISE, 1916: 180.
*Phytodecta* (*P.*) *tredecimmaculatus*: WU, 1937: 855 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim); CHÛJÔ, 1958: 64 (partim).
*Asiphytodecta tredecimmaculatus*: CHEN & YOUNG, 1941: 207 (key).
*Gonioctena tredecimmaculata*: KIMOTO, 1989: 247; KIMOTO, 1991: 8.
*Gonioctena* (*Asiphytodecta*) *tredecimmaculata*: GRESSITT & KIMOTO, 1963: 359 (key), 365 (partim); CHÛJÔ, 1963: 386; KIMOTO, 1966: 25; KIMOTO, 1967: 59; KIMOTO, 1969: 22; KIMOTO & GRESSITT, 1981: 385 (key), 386 (partim).
*Gonioctena* (*Asiphytodecata*) [sic!] *tredecimmaculatus*: KIMOTO & CHU, 1996: 53, 145 (colour photo).
*Phytodecta 13-maculatus* var. *cinctipennis*: CHÛJÔ, 1963: 386 (as syn. of *G. tredecimmaculata*).
*Phytodecta 13-maculatus* var. *taiwanensis* ACHARD, 1924: 34 (type locality: Formose: Tai-Horin); CHÛJÔ, 1963: 386 (as syn. of *G. tredecimmaculata*).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus* var. *taiwanensis*: CHEN, 1935: 132; CHEN, 1936: 88; CHÛJÔ, 1958: 67.
*Asiphytodecta tredecimmaculatus taiwanicus* [sic!]: CHEN & YOUNG, 1941: 207 (key).
*Gonioctena* (*Asiphytodecta*) *tredecimmaculata taiwanica* [sic!]: GRESSITT & KIMOTO, 1963: 359 (key).

**Type material.** ***Phytodecta tredecimmaculata* JACOBY, 1888** – Holotype (male), labelled: "Foochau, April, 1886. Leech. [w, p] // Phytodecta 13 maculata Jac. [blue label, h] // 1st Jacoby Coll. [w, p] // Type [p] 17504 [red label, h]" (MCZC). Paratype (female), labelled: "Foochau, April, 1886. Leech. [w, p] // Phytodecta 13 maculata Jac. [blue label, h]" (MCZC).
***Phytodecta 13-maculatus* var. *taiwanensis* ACHARD, 1924** – Holotype (female), labelled: "Taihorin Formosa H.Sauter VI/1 [w, p] // 13-maculatus v. taiwanensis typus m. [w, h] // TYPE [red label, p] // COLL. ACHARD MUS. PRAGENSE [w, p]" (NMPC).

**Additional material examined.** CHINA: Kuatun (2300m), 27,40n. Br. 117,40ö., L. J. Klapperich, 30.iv.1938 (Fukien), 8 ex. (NHMB); Tienmuschan N.W.China Rtt., 10 ex. (NHMB); Hubei, Dashennongjia Nat. Res. Muyu, E slope, 2000 m 12-15.vi.1997, Bolm leg., 9 ex. (NHMB); Hubei, 20 km S Caodian, Wudanshan, 5–7.vii.1998, Bolm leg., 1200 m, 2 ex. (NHMB); Foochow. San Chiang. 1927, C. H. Pope, 3 ex. (BMNH); Hunan, Ling Xian env., 16.vi.1994, E. Jendek & O. Šauša leg., 10 ex. (JVCJ, MSCC); Fujian, Shaomu env., 13–16.vi.1991, Nikodým & Červenka leg., 3 ex. (MSCC); Shaanxi, Hua Shan peak env., 100 km E of Xi´an, 17–22.vi.1991, Z. Kejval leg., 10 ex. (JBCB, MSCC, MZCM); Shaanxi, Qing Ling Shan mts., road Baoji – Taibao vill., cca 35 km S of Baoji, 18.vii.1998, Z. Jindra leg., 1 ex. (JVCJ); Shaanxi, 28.vii.1990, R. Dunda leg., 12 ex. (JVCJ, MSCC); Shan-Xi, Hua Shan, 19–28.vii.1989, Dunda leg., 2 ex. (MZCM); Jiangxi, Jinggang Shan-Liping, 2–14.vi.1994, Jendek & Šauša leg., 6 ex. (MSCC); Shaanxi, Qinling mts, ~ 1200m, Xunyangba env., 20.v.–10.vi.2000, 1 ex. (MSCC); Sichuan, Baoxing 100 km N of Yaan, 12–14.vii.1995, Z. Jindra leg., 10 ex. (MSCC); Sichuan, Baoxing env. cca 50 km NNW of Yaan, 30´´22´N 102´´50´E, 12–14.vii.1995, M. Trýzna et O. Šafránek leg., 1 ex. (MSCC); Taiwan, Nan Shan Chi, Nantou Hsien, 24.iii.1981, M. Sakai leg., 1 ex. (JVCJ).

**Distribution.** All material examined was collected in China and Taiwan.

**Notes.** JACOBY (1888) described this species on the basis of two specimens (holotype – male, paratype – female) from Foochow, now deposited in MCZC. Aedeagus is short, with apex acuminately rounded (Figs 1–2). Spermatheca appears to be variable (Figs 9–12). The variability of pronotal pattern is shown in Figs 13–17.

The type material of var. *taiwanensis* deposited in National Museum in Prague comprises only one female with reduced black markings and elytra with 3 smooth longitudinal stripes. However, these characters are very variable throughout the distributional area of *G. tredecimmaculata*. CHÛJÔ (1958) expressed some doubts about the status of this variety and later (CHÛJÔ 1963) treated it as a synonym of *G. tredecimmaculata*. After study of extensive material of *G. tredecimmaculata* (not only from Taiwan, but also from many China provincies) the synonymization is confirmed.

*G. tredecimmaculata* can be distinguished from its congeners by the structure of the aedeagus (Figs 1–2). All other characters are variable and overlap with the other species of the *G. tredecimmaculata* group.

### 2. *Gonioctena* (*Asiphytodecta*) *emeishana* sp.nov. (Figs 3–4, 18–24)

*Phytodecta tredecimmaculatus*: CHEN, 1934: 71 (key), 74 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim).
*Phytodecta* (*P.*) *tredecimmaculatus*: WU, 1937: 855 (partim).
*Gonioctena* (*Asiphytodecta*) *tredecimmaculata*: GRESSITT & KIMOTO, 1963: 359 (key), 365 (partim).
*Phytodecta 13-maculatus* var. *cinctipennis*: ACHARD, 1924: 33 (partim).
*Phytodecta* (*P.*) *tredecimmaculatus* var. *cinctipennis*: WU, 1937: 855 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus* var. *cinctipennis*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim).
*Asiphytodecta tredecimmaculatus cinctipennis*: CHEN & YOUNG, 1941: 207 (key) (partim).
*Gonioctena (Asiphytodecta) tredecimmaculata cinctipennis*: GRESSITT & KIMOTO, 1963: 359 (key) (partim).

**Type material.** Holotype (male), labelled: "CHINA/Sichuan 103.20el/29.30nw Mt.Emei 500–1200m 4.–18.V.1989 S.&J.Kolibáč leg. [w, p] // Freiwilliger Museumsverein Basel 1989 [yellow label, p]" (NHMB); 9 paratypes, the same data as holotype (NHMB, 1 ex. in JBCB); 3 paratypes, labelled: "CHINA, pr. Sichuan EMEI Mt. 1000 m 4.–20.5.1989 [w, p] // Vít Kubáň Leg. [w, p] // Freiwilliger Museumsverein Basel 1989 [yellow label, p]" (NHMB); 1 paratype, labelled: "CHINA: Sichuan Mt. EMEI, 600–1050m 5.–19.5.1989 Lad.Bocák, lgt. [w, p] // Freiwilliger Museumsverein Basel 1989 [yellow label, p]" (NHMB); 3 paratypes, labelled: "CHINA: Sichuan Mt. EMEI, 1050 m 18. VII. 1990 L.&M. Bocák lgt. [w, p]" (NHMB); 6 paratypes, labelled: „Kiautschau China [w, p]" (NHMB, 1 ex. in JBCB); 4 paratypes, labelled: "China.Cent.Sichuan Emei Co. Emei Shan 12.–16.6.93. Beneš [w, p]" (MSCC, 1 ex. in JBCB); 1 paratype, labelled: "CHINE Kouy Tchéou, Kouy Yang Fou [w, p]" [paralectotype of *Phytodecta tredecimmaculata* var. *cinctipennis* ACHARD, 1924] (NMPC); 3 paratypes, labelled: "Museum Paris Kouy-Tchéou Gan Chouen Fou Kiang-Long et Yun-Lin-Tchéou P. Cavalerie 1912 [w, p]" (MNHN); 2 paratypes, labelled: "Museum Paris Kouy-Tchéou Kouy-Yang P. P. Cavalerie et Fortunat 1906 [w, p]" (MNHN); 5 paratypes, labelled: "Museum Paris Kouy-Tchéou P. Cavalerie 1910 [w, p]" (MNHN). Specimens of the newly described species are provided with one red label: „HOLOTYPUS [or PARATYPUS], *Gonioctena emeishana* sp.nov., J. Bezděk det. 2002".

**Description.** Body oval, widened towards the rear, strongly convex, glabrous, lustrous. General colour varies from orange to reddish brown. Mandibles black at apices. Pronotum with three black spots: median spot is situated before centre and touches anterior margin of pronotum, hind margin often deeply excised; two spots, smaller than median one, are placed near hind angles. Variability of pronotal pattern is shown in Figs 22–24. Pronotum and elytra with very narrow black bases. Scutellum dark brown to black. Each elytron with 6 black spots: one spot situated between scutellum and humeral callus broadly touching the basal margin; two spots situated transversally before the middle of elytron can be connected, forming a transverse band narrowly interrupted in suture; two spots transversally situated beyond centre may also narrowly fuse, inner

spots of both elytra broadly touch the suture forming one large spot; the last spot is situated in the apical area and, as in the preceding case, touches the suture forming one spot common to both elytra. Underside usually darker than dorsum and partly infuscate.

Head slightly convex, beyond the upper margin of eyes shallowly excavated, irregularly punctate, coarsely at sides, very finely in frons, marked with Y-shaped impressed line. Labrum with tooth-like projection in the middle of anterior part, covered with several long setae. Antennae short, reaching the base of elytra, with last five antennomeres distinctly dilated. Length to width ratios of antennomeres 1 to 11: 26 × 15, 13 × 9, 13 × 7, 13 × 8, 13 × 9, 10 × 10, 14 × 12, 15 × 15, 18 × 18, 18 × 18, 26 × 18.

Pronotum strongly convex, transverse, about 2.5 times as broad as long, widest at posterior corners, moderately narrowing anteriad. Anterior and lateral margins distinctly and thinly bordered, basal margin indistinctly bordered. Anterior margin strongly sinuate, lateral and basal margins rounded. Angles without setigerous pores. Pronotum coarsely punctate, rather sparsely on disc and very coarsely on lateral areas. As well as the coarse punctures, microscopic fine punctures and small, rather sparse punctures appear over the whole surface. Anterior angles acute, rounded, posterior angles square-cut.

Scutellum large, 1.5 times as broad as long, initially almost parallel, then widely rounded, surface with microscopic fine punctation, lustrous.

Elytra somewhat broader than base of pronotum, strongly convex, widened towards the rear, widest at last third, lustrous. Humeral calli well developed. Elytral surface covered in two types of confused punctation: coarse, dense punctures and fine, sparse punctures. Humeral calli and stripe along lateral margin without coarse punctures. In some specimens there are two or three very narrow longitudinal stripes without coarse punctures on the disc of each elytron. Epipleura widest and horizontal at base, gradually narrowing and oblique posteriad.

Macropterous.

Prosternal process extended posteriad, apical margin rounded, lateral margins distinctly bordered. Anterior margin of mesosternum deeply excavated for the reception of the apical part of prosternal process.

Outside of tibiae strongly triangularly dilated near the apical part. The third tarsomere slightly sinuate at middle of apical margin. Claws distinctly appendiculate.

Body length 6.55–7.75 mm (holotype 6.60 mm).

The shape of aedeagus as in Figs 3–4. Variability of spermatheca as in Figs 18–21.

Without visible sexual dimorphism.

**Distribution.** China.

**Diagnosis.** *G. emeishana* sp.nov. is externally very similar to the other species of the *G. tredecimmaculata* group. It can be distinguished from its congeners by the structure of the aedeagus. The apex is stout and broadly rounded, with flagellum turning round the apex in *G. emeishana* sp.nov. (Figs 3–4), while the apex is rather acuminately rounded and with flagellum hidden in apical part of the aedeagus in *G. tredecimmaculata*, *G. cinctipennis* and *G. trilochana* (Figs 1–2, 5–6, 50–51) or the apex is lanceolate in *G. nigrosparsa* (Figs 7–8). Moreover, *G. trilochana* differs in the shape of the black pattern on pronotum (the lateral spots broadly touch the base of pronotum in *G. trilochana*, while

the spots are placed near posterior angles and do not touch the base in *G. emeishana* sp.nov.).

**Etymology.** The new species is named after the type locality: the Emei Shan Mt. (China: Sichuan province).

**Notes.** The type series of *Phytodecta tredecimmaculata* var. *cinctipennis* ACHARD, 1924, consists of three species (see comments under *G. cinctipennis*). One specimen belongs to *G. emeishana* sp.nov. and is included in the type series of this species.

### 3. *Gonioctena* (*Asiphytodecta*) *cinctipennis* (ACHARD, 1924) stat.nov.
(Figs 5–6, 25–33)

*Phytodecta 13-maculatus* var. *cinctipennis* ACHARD, 1924: 33 (type locality: Tonkin: Bao-Lac).
*Phytodecta tredecimmaculatus*: CHEN, 1934: 71 (key), 74 (partim).
*Phytodecta* (*P.*) *tredecimmaculatus*: WU, 1937: 855 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim).
*Gonioctena* (*Asiphytodecta*) *tredecimmaculata*: GRESSITT & KIMOTO, 1963: 359 (key), 365 (partim); MEDVEDEV, 1987:76 (partim); KIMOTO & GRESSITT, 1981: 386 (partim).
*Gonioctena tredecimmaculata*: MEDVEDEV & DANG TKHI DAP, 1982: 90 (partim); ZAYTSEV, 1985: 105 (description of larva); TAKIZAWA, 1995: 45.
*Phytodecta* (*P.*) *tredecimmaculatus* var. *cinctipennis*: WU, 1937: 855 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus* var. *cinctipennis*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim).
*Asiphytodecta tredecimmaculatus cinctipennis*: CHEN & YOUNG, 1941: 207 (key) (partim).
*Gonioctena (Asiphytodecta) tredecimmaculata cinctipennis*: GRESSITT & KIMOTO, 1963: 359 (key) (partim).

**Type material.** Lectotype (unsexed), present designation, labelled: "Bao – Lac (Tonkin) [w, p] // v. cinctipennis TYPE m. [w, h]" (NMPC); paralectotype (unsexed), labelled: "Bao – Lac (Tonkin) [w, p] // COTYPE [red label, h]" (NMPC); 2 paralectotypes (male and female), labelled: "Bao – Lac (Tonkin) [w, p]" (NMPC); paralectotype (male), labelled: "TONKIN Collection Le Moult [w, p]" (NMPC); paralectotype (male), labelled: "CHINE Kouy Tchéou, Kouy Yang Fou [w, p]" [paratype of *G. emeishana* sp.nov.] (NMPC); paralectotype (male), labelled: "Yunnan [w, h]" [in reality *G. nigrosparsa*] (NMPC). The specimens are provided with one red label: "LECTOTYPUS [or PARALECTOTYPUS], *Phytodecta 13-maculatus* var. *cinctipennis* Achard, 1924, des. J. Bezděk 2002".

**Additional material examined.** VIETNAM: Tonkin, 22 ex. (MNHN); Tonkin, Yen-Tinh, 2 ex. (MNHN); Tonkin, Dong-Dang, 2 ex. (MNHN); Tonkin, Rouget, 6 ex. (MNHN); Haut Tonkin, 3 ex. (MNHN); Tamdao, 1982, L. Medvedev leg., 2 ex. (LMRM); Tam Dao, 12–14.v.1989, Pacholátko leg., 1 ex. (NHMB); Tam Dao, v.1989, J. Strnad leg., 1 ex. (FKCC); Tam Dao, 20–28.vi.1990, S. Brantlová leg., 2 ex. (NHMB); Vinh phu, Tam Dao, v.1990, J. Picka leg., 3 ex. (NHMB); Tam Dao nat. park, 75 km NW from Hanoi, 15.v.–16.vi.1991, E. Jendek leg., 2 ex. (NHMB); Vinh Phu, Tam Dao, 6–25.v.1990, O. Šauša leg., 2 ex. (NHMB); Vinh Phu, 15 km SE Doan Hung, 10.v.1990, Vít. Kubáň leg., 1 ex. (NHMB); Bao-Ha, Yen-Bay, 7.iv.1962, leg. A Warchałowski, 4 ex. (AWPW); Bay-Tuong, 300m, 11.viii.1963, Kabakov leg., 2 ex. (JVCJ, LMRM); 50 km NO Tkhay-nguen, 300m, 21.vi.1963, Kabakov leg., 1 ex. (LMRM); Tan-Sa, 3.iii.1962, O.K., 1 ex. (LMRM); Kha-Zang, 800m, 6.vii.1963, Kabakov leg., 1 ex. (LMRM); Zalay-Kontun, 40 km S Anke Buonloy, 4.vii.1981, 2 ex. (JVCJ, LMRM); Sao Kay, 1.iv.1918, Jeanvoine, 1 ex. (NHMB); LAOS: Xieng Khouang, 1 ex. (MNHN); Xieng Khuang prov., Nong Haet, 19°30′N 104°03′E, 29–31.v.2001, J. Bezděk leg., 2 ex. (JBCB); Boli Kham Xai prov., Ban Nape (8km NE), ~600m, 18°21′N 105°08′E, 1–18.v.2001, C. L. Peša leg., 1 ex. (JBCB); Luang Prabang, 1 ex. (MNHN); CAMBODIA: Cambodge, 1 ex. (MNHN)

**Distribution.** Vietnam, Laos, Cambodia, Thailand(?). KIMOTO & GRESSITT (1981) and TAKIZAWA (1995) mentioned specimens of *G. tredecimmaculata* from Laos and Thailand. These records could refer to *G. cinctipennis*.

**Notes.** The author had the opportunity to study the type series of *Phytodecta 13-maculatus* var. *cinctipennis* ACHARD, 1924, preserved in National Museum in Prague. There are 7 specimens of var. *cinctipennis* with locality data perfectly fitting the Achard description. Their aedeagi were examined enabling the conclusion that the type series in fact contains 3 species. The specimen collected in Bao-Lac and bearing the label "Type" was designated as lectotype. The species of the type series are divided as follows: 5 specimens (4 specimens from Bao-Lac and 1 specimen from Tonkin) belong to *G. cinctipennis*, 1 specimen (Yunnan) belongs to *G. nigrosparsa* and 1 specimen (China: Kouy-Tchéou) belongs to *G. emeishana* sp.nov. Var. *cinctipennis* was described on the basis of specimens with connected premedian spots forming a transverse black band. Specimens showing this character occur frequently in all species of the *G. tredecimmaculata* group. *G. cinctipennis* can be identified by the structure of the aedeagus (Figs 5–6). Variability of spermatheca as in Figs 25–27 and variability of pronotal pattern as in Figs 28–33.

**Larva.** ZAYTSEV (1985) described the larva of *G. tredecimmaculata* on the basis of material from the Vietnamese province Gialai-Kontum. Thanks to the kindness of Dr. Lev N. Medvedev the author had the opportunity to study one male with the same locality data as the larva. Without any doubt, the Zaytsev description refers to *G. cinctipennis*.

**Host plants.** MEDVEDEV & DANG TKHI DAP (1982) mentioned *Lepistemon binectariferum* (Convolvulacae) as a host plant of *G. tredecimmaculata*. This host record proved to be erroneous because of misidentification (MEDVEDEV 1987). According to ZAYTSEV (1985) and MEDVEDEV (1987), the host plants are *Mucuna* sp. and *Pueraria montana* (Fabaceae). Zaytsev's record of *Mucuna* sp. certainly refers to *G. cinctipennis*. The data cited by MEDVEDEV & DANG TKHI DAP (1982) and MEDVEDEV (1987) may refer to both *G. cinctipennis* and/or *G. nigrosparsa*.

### 4. *Gonioctena* (*Asiphytodecta*) *nigrosparsa* (FAIRMAIRE, 1889) removed from synonymy

(Figs 7–8, 34–43)

*Paropsides nigro-sparsus* FAIRMAIRE, 1889: 373 (type locality: Tonkin).
*Paropsides* (*Phytodecta*) *nigro-sparsus*: JACOBY, 1890: 118 (= *tredecimmaculata*).
*Phytodecta tredecimmaculatus*: CHEN, 1934: 71 (key), 74 (partim).
*Phytodecta* (*P.*) *tredecimmaculatus*: WU, 1937: 855 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim).
*Gonioctena* (*Asiphytodecta*) *tredecimmaculata*: GRESSITT & KIMOTO, 1963: 359 (key), 365 (partim); MEDVEDEV, 1987: 76 (partim).
*Gonioctena tredecimmaculata*: MEDVEDEV & DANG TKHI DAP, 1982: 90 (partim).
*Phytodecta 13-maculatus* var. *cinctipennis*: ACHARD, 1924: 33 (partim).
*Phytodecta* (*P.*) *tredecimmaculatus* var. *cinctipennis*: WU, 1937: 855 (partim).
*Phytodecta* (*Asiphytodecta*) *tredecimmaculatus* var. *cinctipennis*: CHEN, 1935: 132 (partim); CHEN, 1936: 88 (partim).
*Asiphytodecta tredecimmaculatus cinctipennis*: CHEN & YOUNG, 1941: 207 (key) (partim).
*Gonioctena (Asiphytodecta) tredecimmaculata cinctipennis*: GRESSITT & KIMOTO, 1963: 359 (key) (partim).

**Type material.** Lectotype (female), present designation, labelled: "Tonkin [w, h] // Paropsides nigrosparsa Fairm. [w, h] // Ex-Musćo L. Fairmaire 1883 [w, p] // LECTOTYPE [red label, p]" (MNHN). Paralectotype

(female), labelled: "Tonkin Beauchęne [w, h] // Ex-Musaeo L. Fairmaire 1883 [w, p] // PARALECTOTYPE [red label, p]" (MNHN).

**Additional material examined.** CHINA: Yunnan, 1 ex. [paralectotype of *Phytodecta 13-maculatus* var. *cinctipennis* ACHARD, 1924] (NMPC); VIETNAM: Cuc-Phong nat. park, 100 km S from Hanoi, 2–12.v.1991, E. Jendek leg., 3 ex. (NHMB); Ha nam ninh, Cuc phuong, 24–25.v.1986, J. Strnad leg., 1 ex. (NHMB); Cuc Phong, 2–11.v.1991, J. Strnad leg. 3 ex. (MSCC); Cuc Phong Nat. Park, 21–22.v.1996, Pacholátko & Dembický leg., 17 ex. (NHMB); Cucphong, 24–25.v.1986, A. Olexa leg., 1 ex. (NHMB); Ninh Binh, Cúcphuóng, 6.vi.1966, leg. R. Bielawski et B. Pisarski, 1 ex. (AWPW); 52 km SW of Lang Son, 21,35N 106,30E, 27.iv.–6.v.1996, 370 m, Pacholátko & Dembický leg., 1 ex. (NHMB); Tam-Dao, Dao-Chu, 1961, 200 m, Kabakov leg., 1ex. (LMRM); TamDao – 900 m, 16–23.v.1991, J. Strnad leg., 3 ex. (JBCB, MSCC); Tam Dao, 21.v.1991, 500m, 1 ex. (JVCJ); Hoa-Binh, A. Cooman , 6 ex. (NHMB); Hoa-Binh, 2 ex. (MNHN); Ha son binh, Hoa binh, 4–7.vi.1986, J. Strnad leg., 3 ex. (NHMB); Ha son binh, Hoa binh, 4–7.vi.1986, J. Rybníček leg., 1 ex. (NHMB); Hoang Lien Son, Sa Pa, v.1991, 1600m, Duong Tat Tu leg., 2 ex. (JVCJ); Sa Pa – 1530 m, 25.v.–9.vi.1991, J. Strnad leg., 5 ex. (JVCJ, MSCC, MZCM); Hagiang, 2 ex. (MNHN).

**Distribution.** S China, Vietnam.

**Notes.** *Paropsides nigrosparsus* FAIRMAIRE, 1889, was described on the basis of two females from Tonkin. JACOBY (1890) synonymized it with *G. tredecimmaculata* and this was adopted by all subsequent authors. However, the Vietnamese fauna comprises two independent species easily separated from *G. tredecimmaculata* by the structure of the aedeagus. Although both Fairmaire specimens are females, the absence of small lateral black spots on the pronotum, frequently missing in species with lanceolate apex of aedeagus, allows the author to attribute the Fairmaire females to this species and to remove *Paropsides nigrosparsus* from synonymy. The small lateral black spots occur in many specimens of the second Vietnamese species, *G. cinctipennis*.

*G. nigrosparsa* is characterised by the unique structure of the male genitalia. Aedeagus is very long and with lanceolate apex (Figs 7–8). Variability of spermatheca as in Figs 34–37 and variability of pronotal pattern as in Figs 38–43.

### 5. *Gonioctena* (*Asiphytodecta*) *trilochana* (MAULIK, 1926) (Figs 44–51)

*Phytodecta trilochana* MAULIK, 1926: 81 (type locality: Upper Burma: Myitkyina District: Sadon).
*Phytodecta* (*Asiphytodecta*) *trilochanus*: CHEN, 1935: 132.
*Asiphytodecta trilochanus*: CHEN & YOUNG, 1941: 207 (key).
*Gonioctena (Asiphytodecta) trilochana*: GRESSITT & KIMOTO, 1963: 359 (key).

**Material examined.** THAILAND: Nan prov., Bo Klua, 700 m, 19°08′N, 101°10′E, 22–26.iv.1999, D. Hauck leg., 6 ex. (JBCB); Chiang Dao, 10–16.v.1991, 600m, 19°24′N 98°55′E, Vít Kubáň leg., 1 ex. (NHMB); LAOS: Louangnamtha prov., 21°09′N 101°19′E, Namtha → Muang Sing, 5–31.v.1997, 900–1200m, Vít Kubáň leg., 17 ex. (NHMB); Luang Namtha env., 800 – 1200 m, v.1997, 3 ex. (JBCB); Hua Phan prov., Phu Loei N.P., Ban Sakok, 20°10′N 103°12′E, 23–26.v.2001, J. Bezděk leg., 4 ex. (JBCB); Hua Phan prov., 25 km SE Vieng Xai (by road), Ban Kangpabong env., 20°19′N 104°25′E, 14–18.v.2001, J. Bezděk leg., 1 ex. (JBCB).

**Distribution.** MAULIK (1926) described *G. trilochana* based on a specimen from Upper Burma: Sadon (now in Myanmar). Specimens examined in this study were collected in Thailand and Laos.

**Notes.** Holotype was not studied. According to Maulik´s description, it is deposited in the Indian Museum, Calcutta (India). However, the description, accompanied by

excellent figuring of habitus, allows its identification without any doubt. *G. trilochana* can be distinguished from its congeners by the structure of male genitalia (Figs 50–51) and by the pattern of black spots on the pronotum. Lateral spots widely touch the base of pronotum in *G. trilochana* (Figs 47–49) contrary to the other species of *G. tredecimmaculata*-group where the lateral spots are absent or situated in front of the base of pronotum (Figs 13–17, 22–24, 28–33, 38–43). Variability of spermatheca is shown in Figs 44–46.

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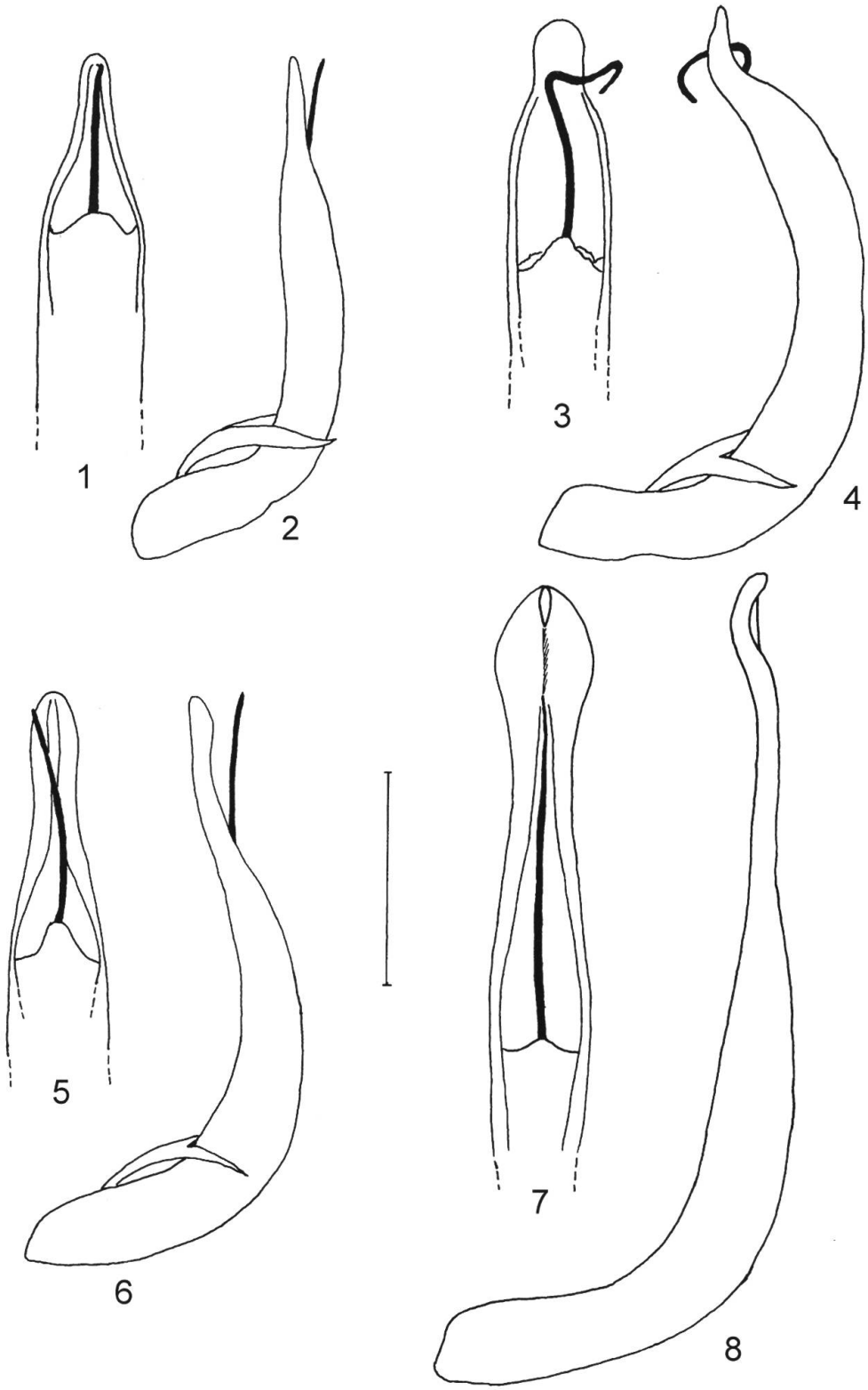
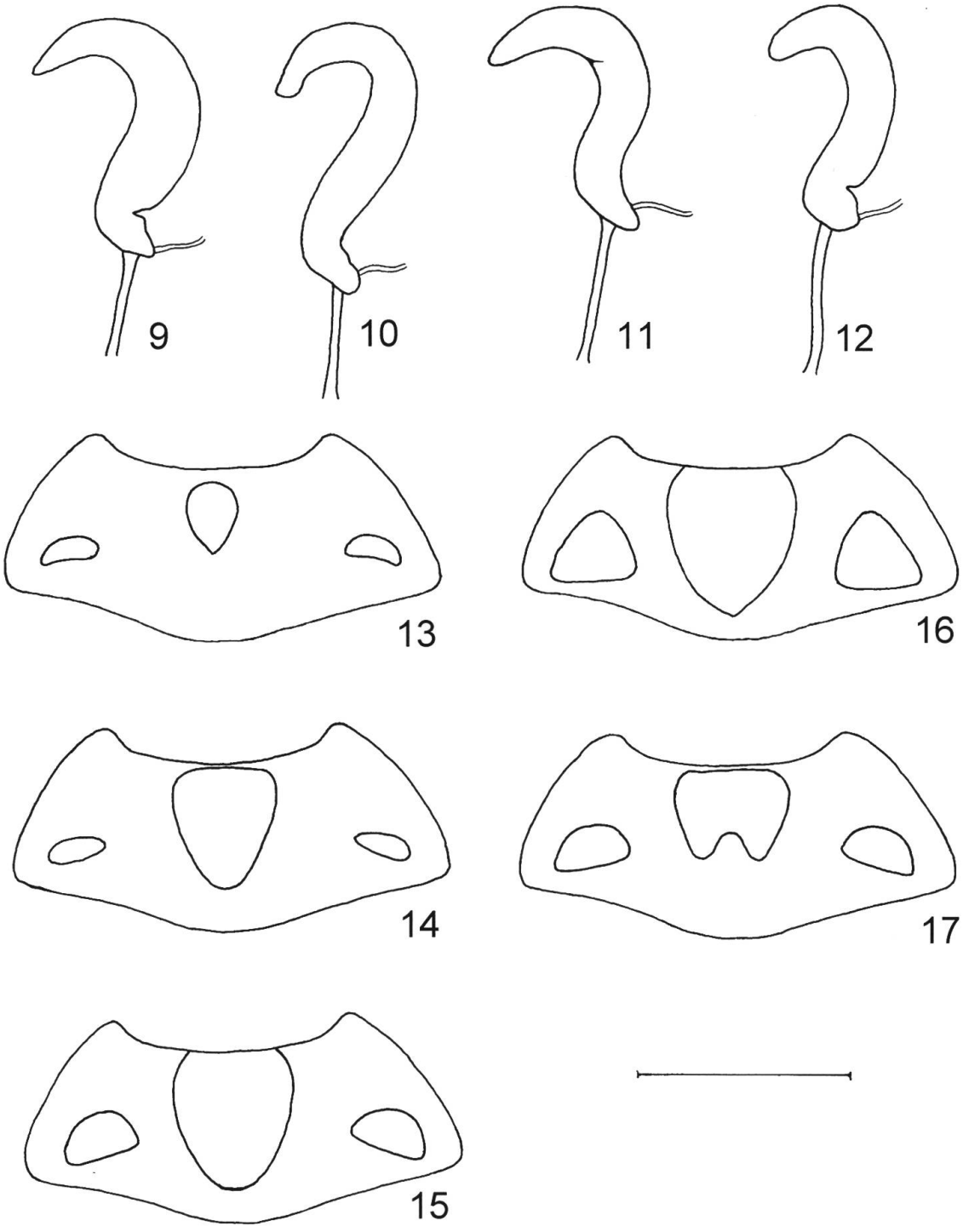
**Address of author:**

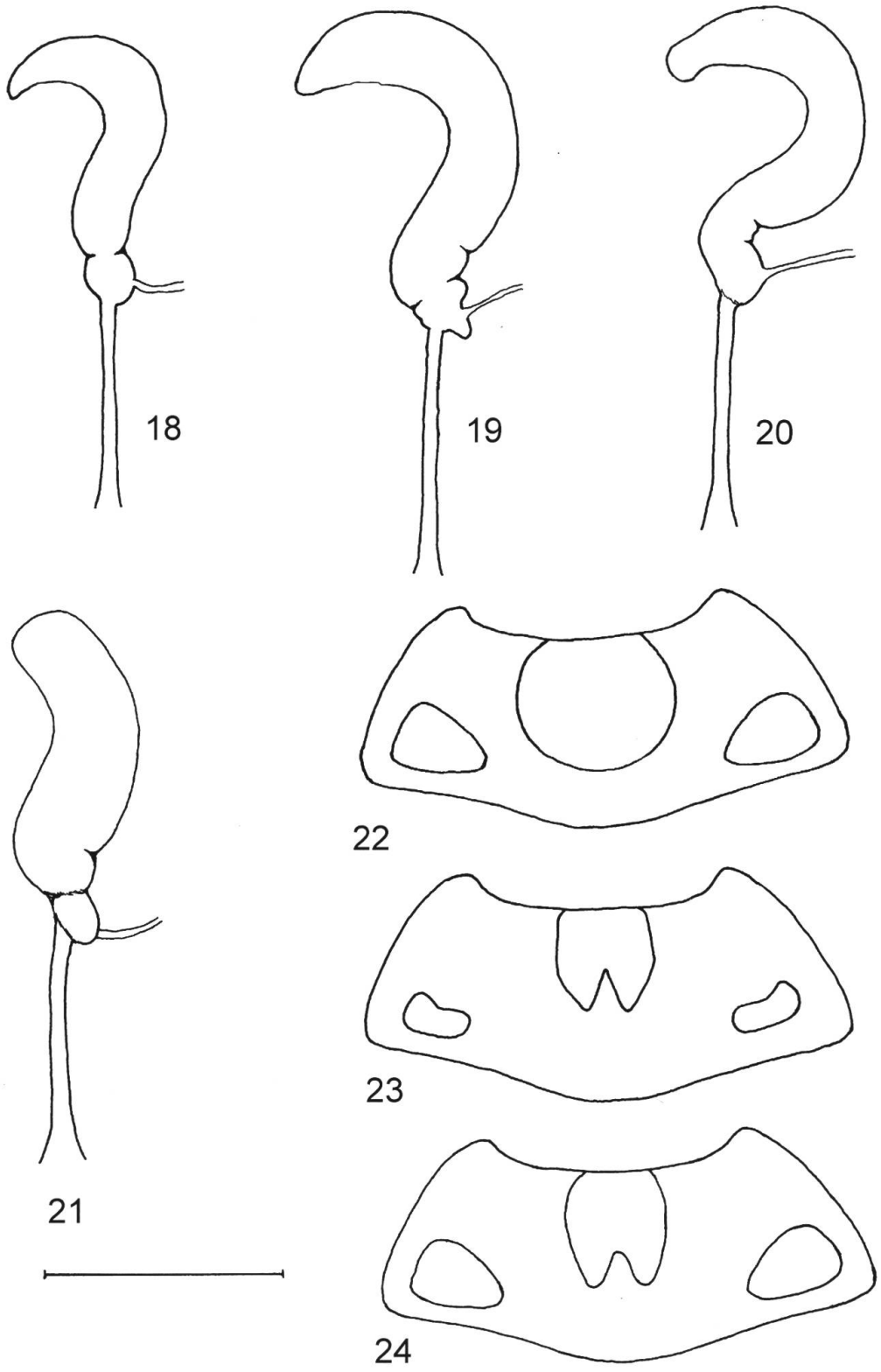
Jan Bezděk
Mendel University of Agricultre and Forestry
Department of Zoology
Zemědělská 1
613 00 Brno
CZECH REPUBLIC
E-mail: bezdek@mendelu.cz



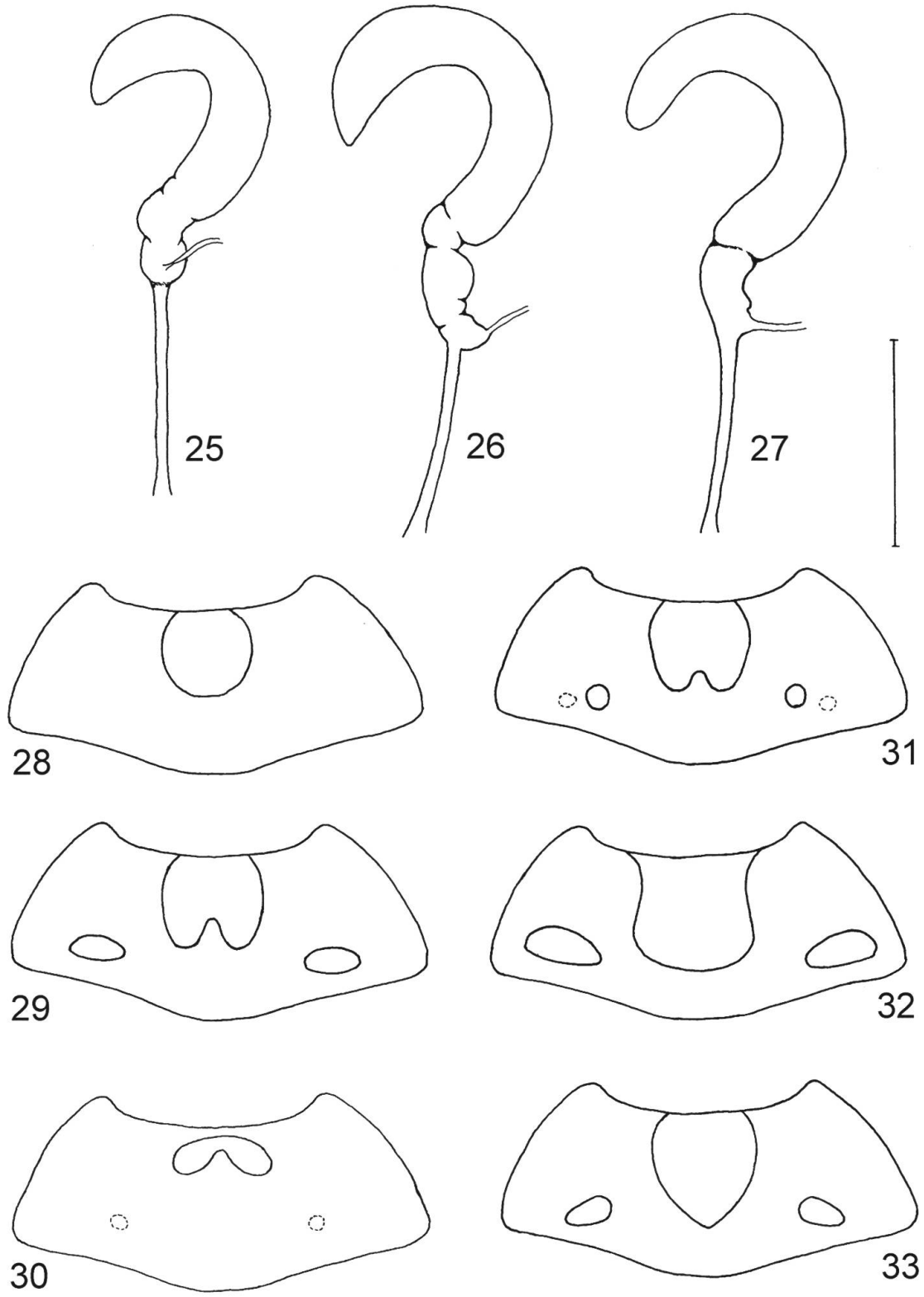

**Figs 1–8.** Aedeagus: 1–2, *Gonioctena tredecimmaculata* JACOBY (1, dorsal view, 2, lateral view); 3–4, *G. emeishana* sp.nov. (3, dorsal view, 4, lateral view); 5–6, *G. cinctipennis* ACHARD (5, dorsal view, 6, lateral view); 7–8, *G. nigrosparsa* FAIRMAIRE (7, dorsal view, 8, lateral view). Scale: 1 mm.



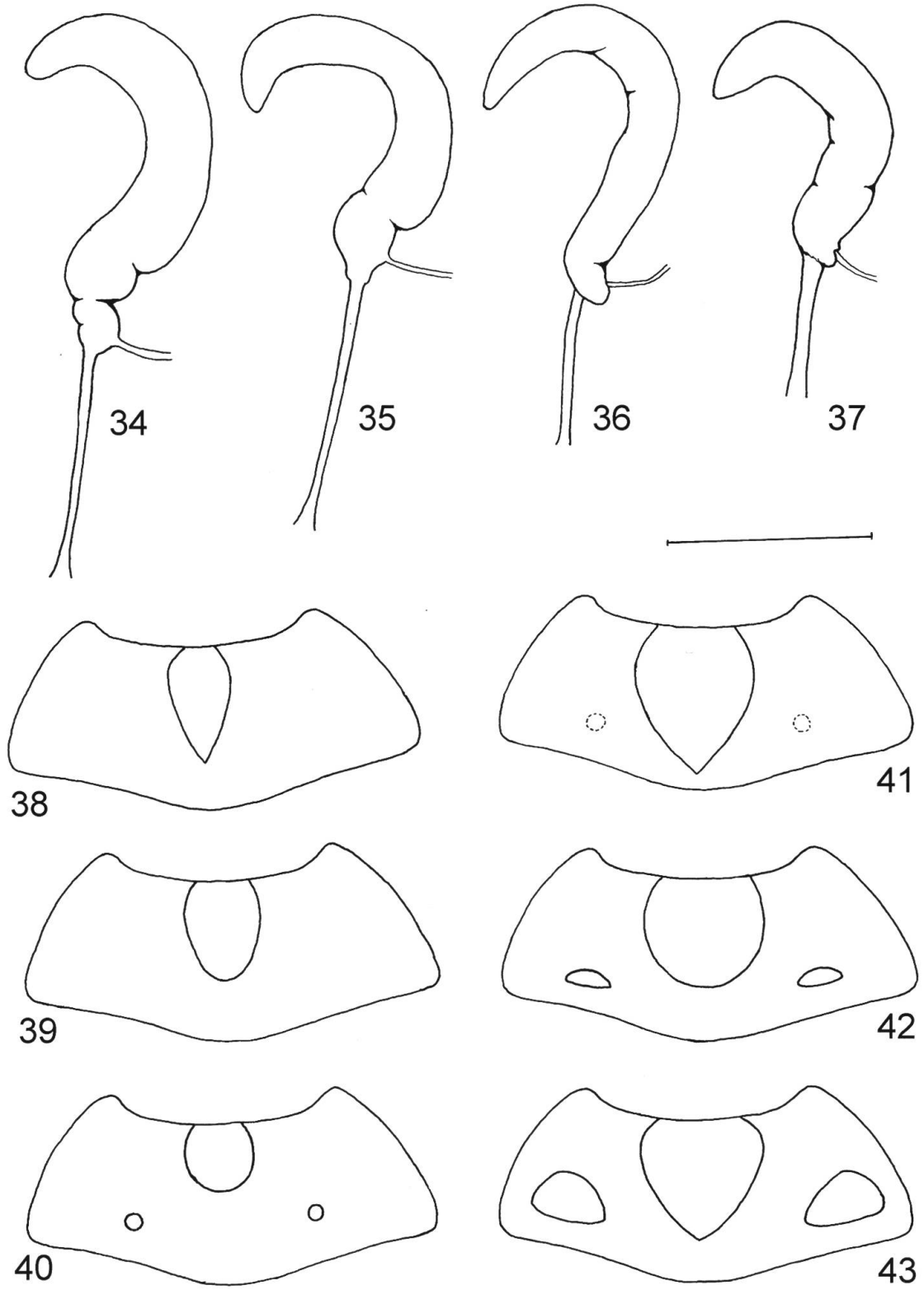

**Figs 9–17.** *Gonioctena tredecimmaculata* JACOBY: 9–12, variability of spermatheca; 13–17, variability of pronotal pattern. Scale: 0.5 mm for Figs 9–12; 2 mm for Figs 13–17.



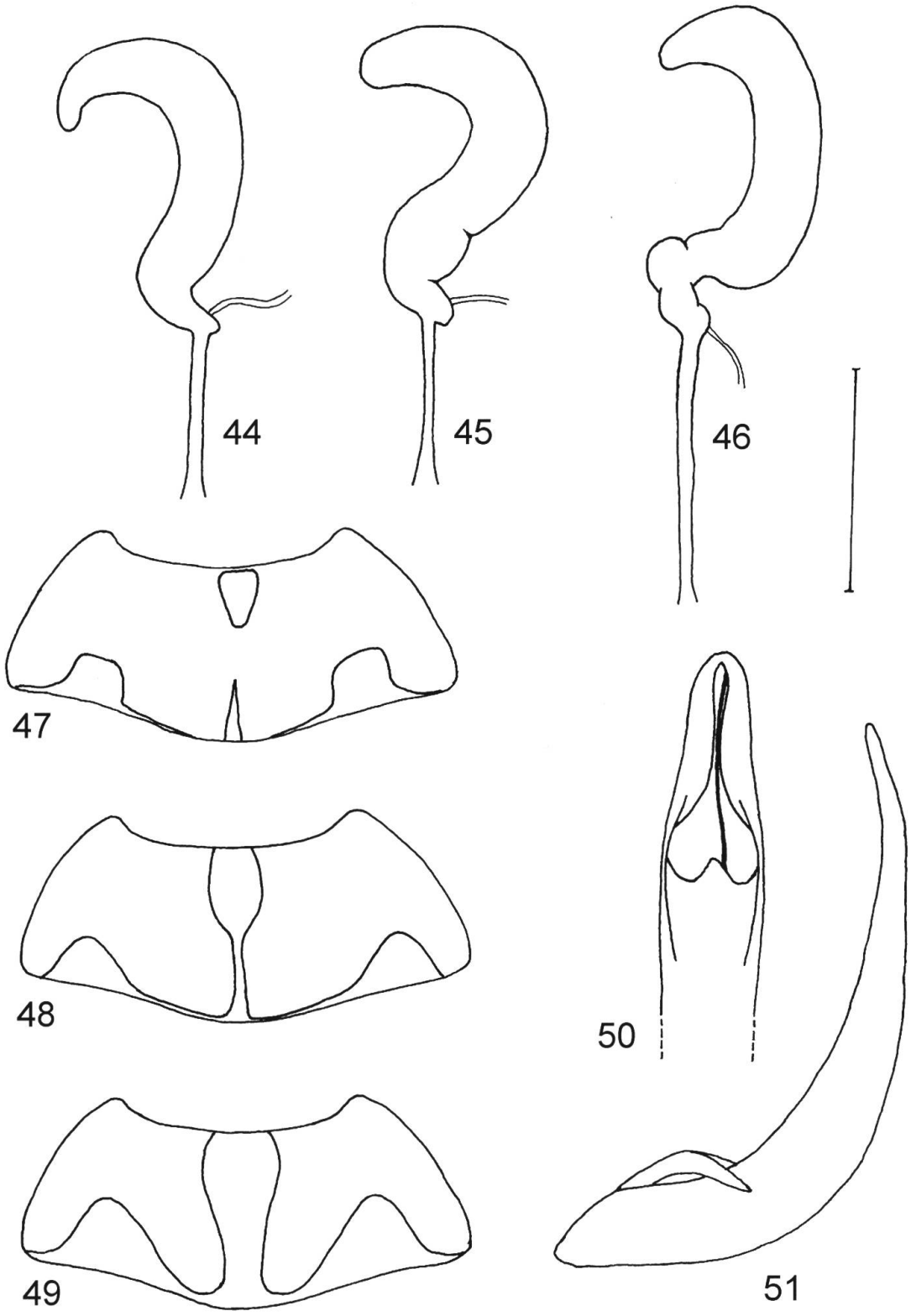

**Figs 18–24.** *Gonictena emeishana* sp.nov.: 18–21, variability of spermatheca; 22–24, variability of pronotal pattern. Scale: 0.5 mm for Figs 18–21; 2 mm for Figs 22–24.




**Figs 25–33.** *Gonioctena cinctipennis* ACHARD: 25–27, variability of spermatheca; 28–33, variability of pronotal pattern. Scale: 0.5 mm for Figs 25–27; 2 mm for Figs 28–33.




**Figs 34–43.** *Gonioctena nigrosparsa* FAIRMAIRE: 34–37, variability of spermatheca; 38–43, variability of pronotal pattern. Scale: 0.5 mm for Figs 34–37; 2 mm for Figs 38–43




**Figs 44–51.** *Gonioctena cinctipennis* ACHARD: 44–46, variability of spermatheca; 47–49, variability of pronotal pattern; 50–51, aedeagus (50, dorsal view, 51, lateral view). Scale: 0.5 mm for Figs 44–46; 2 mm for Figs 47–49; 1 mm for Figs 50–51.