

**NEW ASIAN SPECIES AND NEW RECORDS  
OF THE GENUS *STEGANA* MEIGEN  
(DIPTERA : DROSOPHILIDAE). I. SUBGENERA  
*OXYPHORTICA* DUDA AND *STEGANA* S. STR.**

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**Résumé.** – Espèces asiatiques nouvelles et peu connues du genre *Stegana* Meigen (Diptera : Drosophilidae). I. Sous-genre *Oxyphortica* Duda et *Stegana* s.str. – Neuf espèces du genre *Stegana* Meigen sont décrites : *S. (Oxyphortica) belokobylskiji*, sp. n. (Viêt Nam), *S. (O.) vietnamensis*, sp. n. (Viêt Nam), *S. (O.) burmensis*, sp. n. (Myanmar), *S. (O.) pyinoolwinensis*, sp. n., (Myanmar), *S. (O.) setifrons*, sp. n. (Chine), *S. (Stegana) emeiensis*, sp. n. (Chine), *S. (S.) cheni*, sp. n., (Chine), *S. (S.) zhangji*, sp. n. (Chine), *S. (S.) nartshukae*, sp. n. (Viêt Nam). *S. (S.) antlia* Okada est mentionnée pour la première fois du Viêt Nam.

**Abstract.** – Nine new species of the genus *Stegana* Meigen: *S. (Oxyphortica) belokobylskiji*, sp. n. (Viet Nam), *S. (O.) vietnamensis*, sp. n. (Viet Nam), *S. (O.) burmensis*, sp. n. (Myanmar), *S. (O.) pyinoolwinensis*, sp. n. (Myanmar), *S. (O.) setifrons*, sp. n. (China), *S. (Stegana) emeiensis*, sp. n. (China), *S. (S.) cheni*, sp. n. (China), *S. (S.) zhangji*, sp. n. (China), *S. (S.) nartshukae*, sp. n. (Viet Nam) are described. *S. (S.) antlia* Okada is recorded from Viet Nam for the first time.

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The genus *Stegana* Meigen consists of seven subgenera: *Ceratostylus* Hendel, *Orthostegana* Hendel, *Oxyphortica* Duda, *Parastegana* Okada, *Pseudostegana* Okada, *Stegana* s.str., *Steganina* Wheeler and includes about 90 species from various part of the world. Up to present, more than 50 species belong to six subgenera of this genus have been reported from Asia (WHEELER, 1981, 1986; GUPTA & PANIGRAHY, 1987; OKADA, 1988; SIDORENKO, 1990, SIDORENKO & OKADA, 1991; OKADA & SIDORENKO, 1992; TODA & PENG, 1992; HU & TODA, 1994). This number is one of the largest on the world and suggests that southeastern part of Asia is center of evolution of this genus, especially subgenera *Oxyphortica*, *Parastegana*, *Pseudostegana* and *Stegana*.

Based upon collections from China, Japan, Myanmar and Viet Nam, this paper adds 9 new species of subgenera *Oxyphortica* and *Stegana* to faunal list of genus *Stegana*. Abbreviations used for morphological descriptions are given according to ZHANG & TODA (1992).

Types of new species described here are deposited in the Entomological Institute, Hokkaido University, Sapporo, Japan (EHU) and Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (ZISP). New collection record is marked with an asterisk (\*).

## GENUS STEGANA Meigen

*Stegana* Meigen, 1830, *Syst. Besch. europ. zweifl. Insekt.*, 6 : 79. Type species : *Stegana nigra* Meigen, 1830 (designated by ZETTERSTEDT, 1847, *Diptera Scandinaviae*, 6 : 2577).  
*Protostegana* Hendel, 1920, *Wien. Ent. Zeit.*, 38 : 53. Type species : *Drosophila curvipennis* Fallén, 1823.

## Subgenus OXYPHORTICA Duda

*Oxyphortica* Duda, 1923, *Ann. Hist.-nat. Mus. Nat. Hung.*, 20 : 34 (as subgenus of *Phortica*). Type species: *Drosophila convergens* de Meijere, 1911.

*Chaetocnema* Duda, 1926, *Ann. Hist.-nat. Mus. Nat. Hung.*, 23 : 242 (preoccupied by *Chaetocnema* Stephens, 1831, *Alticinae*). Type species : *Chaetocnema (Oxyphortica) poeciloptera* Duda, 1926.

Four species are known from Asia: *adentata* Toda & Peng, 1992 (China), *convergens* (de Meijere, 1911) (Borneo, Java, New Guinea, Taiwan), *meichiensis* Chen & Toda, 1994 (China), *nigripennis* (Hendel, 1914) (Japan, Korea). The diagnosis of the subgenus was previously given by OKADA (1971, 1978).

*Stegana (Oxyphortica) belokobylskiji*, sp. n. (figs. 1, 2)

**Type material.** – Holotype male, Viet Nam, Tam Dao, pr. Vinh Phu, 1000 m, forest, 13-XI-1990 (*S. Belokobylskij*) (ZISP).

**Diagnosis.** – Surstylus with 2 curved finger-like processes : caudal process with brush of fine setae apically, lower one strongly sclerotized. Aedeagus (fig. 2) swollen medially, with 2 long seta-like lateral processes.

**Male.** – Body length ca. 2.8 mm. Thorax length ca. 1.5 mm. *Head.* Eye dark red. Ocellar triangle dark brown; ocelli reddish; ocellar setae long. Frontal vitta yellowish gray, anteriorly slightly darker, with a few small interfrontal setulae. Fronto-orbital plate yellowish gray, posteriorly yellowish. Face yellowish brown in upper part, yellow in mid part, lower one black. Facial carina broad, slightly prominent in upper part, yellow. Clypeus yellowish gray. Gena white. Occiput yellowish brown. Pedicel yellowish brown, with 1 stout seta; 1st flagellomere black, terminal bifurcation of arista small. Palpus yellow basally, yellowish brown apically.

*Thorax.* Scutum and scutellum yellowish brown. Postpronotal lobe slightly paler than scutum; postpronotal seta 1, long. Acrostichal setulae in 8 irregular rows. Mesopleuron yellow, with 2 broad brown longitudinal stripes, upper one darker. Basal scutellar setae divergent. Wing brown. Veins and crossveins brown. *C1* seta 1. Halter yellow, knob of halter gray. Middle and hind tibiae and femorae dark brown, but yellow apically and basally. Fore legs yellowish brown. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 3 succeeding tarsal segments together.

*Abdomen.* Tergites brown, with narrow black caudal bands on each tergite.

*Male terminalia.* Epandrium (fig. 1) broad, almost truncate below, with ca. 15 setae. Cercus slightly protruded below, with ca. 15 setae. Paramere complicated, clavate. Hypandrial lobe broader than longer.

*Measurements.* WL (wing length) = 2.6 mm; WW (maximum wing width) = 1.3 mm.

*Indices.* FW/HW (frontal width/head width) = 0.36; *ch/o* (maximum width of gena/maximum diameter of eye) = 0.09; *orbito* (distance between proclinate and posterior reclinate orbitals/distance between inner vertical and posterior reclinate orbital) = 2.29; *dcp* (length distance between dorso-centrals/ cross distance between anterior dorsocentrals) = 0.19; *sctlp* (distance between basal and apical scutellars/cross distance between apical scutellars) = 0.85; *C* = 1.84; *4c* = 1.24; *4V* = 1.68; *5x* = 1.3; *ac* = 15.5; *M* = 0.6; *C3F* = 0.58.

Female unknown.

**Distribution.** – Viet Nam.

**Relationship.** – This new species is rather differ from all known *Oxyphortica*' species by the shape of aedeagus. Shape of aedeagus of new species somewhat similar to that

of *S. (Stegana) nigrolimbata* Duda. Meanwhile, majority of features of the subgenus *Oxyphortica* are found in the new species. This species is very interesting to realize the relationship among subgenera *Oxyphortica* and *Orthostegana*. Setigerous frons is a diagnostic character of the subgenus *Orthostegana*, but some species (including 2 described here) of the subgenus *Oxyphortica* shared this feature with *Orthostegana*' species.

**Etymology.** – Patronym, in honor of Dr. S. A. BELOKOBYSKIJ, Zoological Institute, Russian Academy of Sciences, who collected the specimen.

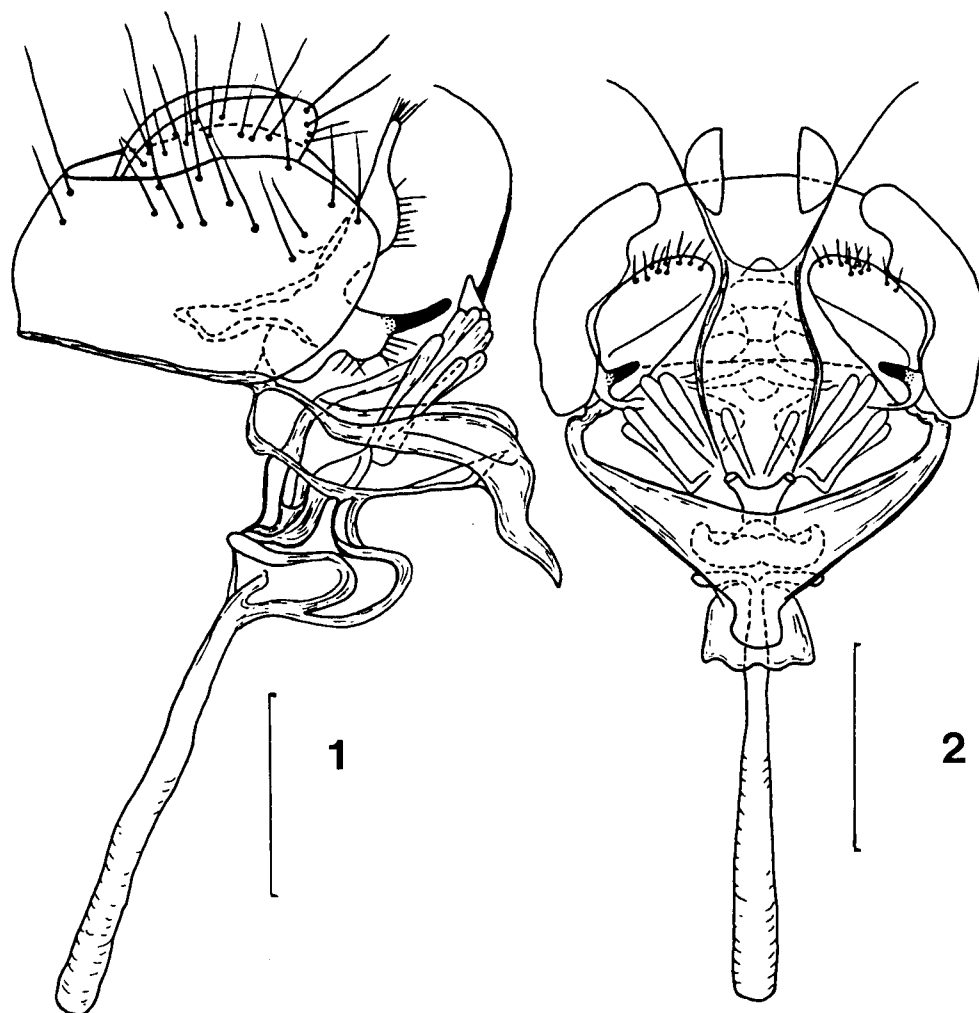


Fig. 1 and 2, *Stegana (Oxyphortica) belokobylskiji*, sp. n. – 1, male terminalia (lateral view). – 2, ditto (ventral view). (Scale-line = 0.25 mm).

*Stegana (Oxyphortica) vietnamensis*, sp. n. (figs. 3–6)

**Type material.** – **Holotype male**, Viet Nam, pr. Hanoi, 70 km NW Hanoi, Ba Vi, meadow' forest, 24–XI–1990 (*S. Belokobylskij*) (ZISP).

**Diagnosis.** – Surstylus (fig. 4) elongated, with 1 stout, black tooth below and ca. 14 spine-like prenisetae. Paramere palpe-shaped, setigerous.

**Male.** – Body length ca. 2.5 mm. Thorax length ca. 1.35 mm. *Head.* Eye dark red, with sparse short pile. Ocellar triangle dark brown; ocelli yellow; ocellar setae long. Frontal vitta yellowish brown, anteriorly slightly darker, with a few small interfrontal setulae. Fronto-orbital plate yellowish gray. Face yellowish brown in upper part, middle part yellow, lower one black. Facial carina broad, slightly prominent in upper part, yellow. Clypeus yellow, dark brown medially. Gena whitish yellow. Occiput brown. Pedicel yellowish brown, brown anteriorly, with 1 stout subterminal seta; 1st flagellomere black. Palpus yellow basally, brown apically, with 1 terminal stout seta and 4–5 ventral setulae.

*Thorax.* Scutum yellowish brown, with 2 indistinct short black longitudinal stripes anteriorly. Scutellum brownish black, with yellow margin. Postpronotal lobe yellowish brown; postpronotal seta 1, long. Acrostichal setulae in 8 irregular rows. Mesopleuron yellow, with 2 broad, brown longitudinal stripes. Wing brown. Veins and crossveins brown. *Cl* setae 2, equal in size. Halter yellowish brown. Middle and hind tibiae and femorae dark brown, but yellowish apically and basally. Fore legs yellowish brown. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 3 succeeding tarsal segments together.

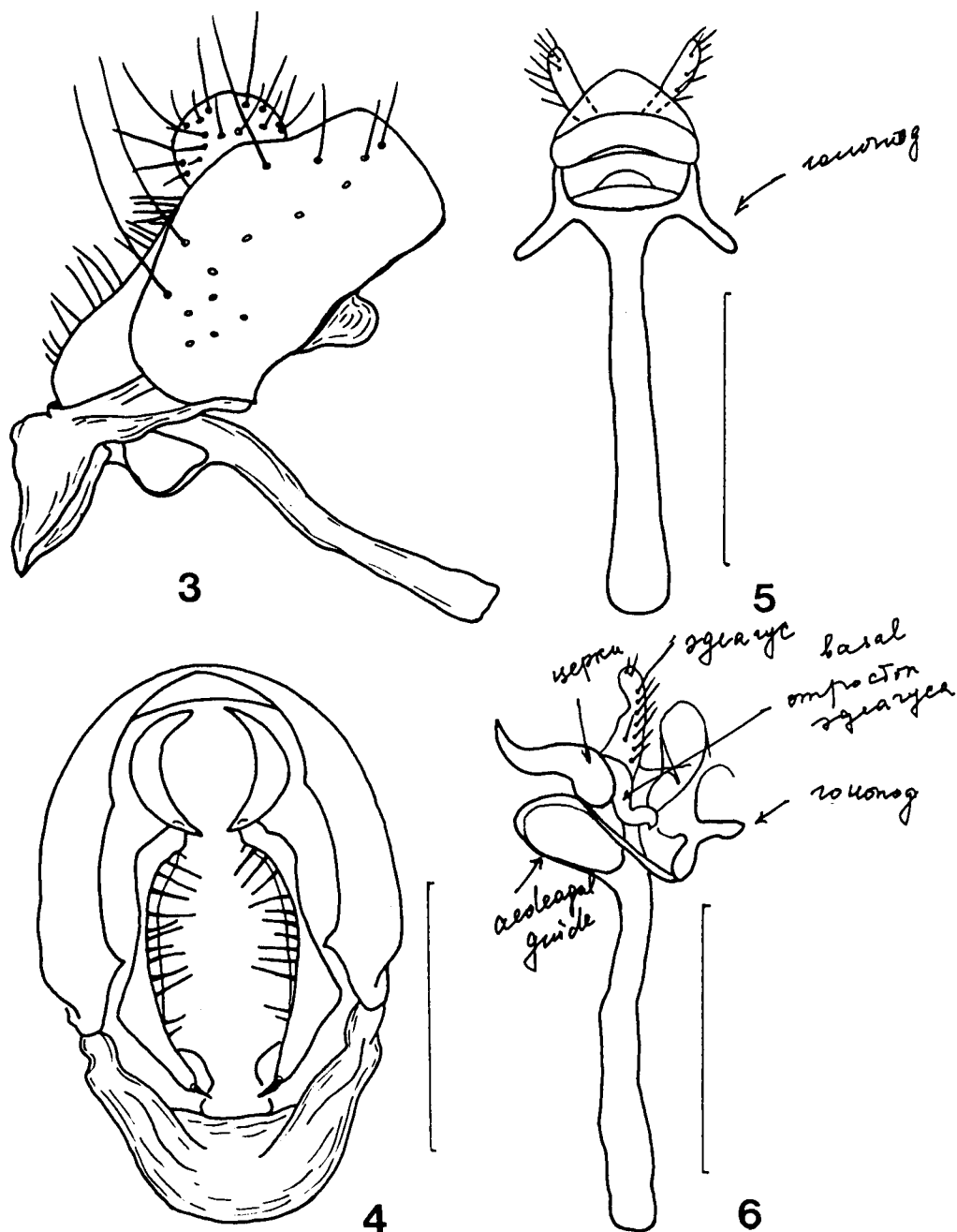


Fig. 3 to 6, *Stegana (Oxyphortica) vietnamensis*, sp. n. – 3, male terminalia (lateral view). – 4, *ditto* (ventral view). – 5, aedeagus (ventral view). – 6, *ditto* (lateral view). (Scale-line = 0.25 mm).

*Abdomen.* Tergites yellowish brown, each with narrow black caudal band.

*Male terminalia.* Epandrium (fig. 3) slightly rounded below, with 15 setae. Cercus semicircular, with ca. 15 setae. Aedeagus (figs. 5, 6) small, without hair crown. Gonopod sharply acuted (in lateral view). Hypandrial lobe wide and short.

*Measurements.* WL = 2.25 mm; WW = 1.1 mm.

*Indices.* FW/HW = 0.37; *ch/o* = 0.12; *prorb* (proclinate orbital/posterior reclinate orbital) = 1.0; *rcorb* (anterior reclinate orbital/posterior reclinate orbital) = 0.73; *vb* (subvibrissal/vibrissa) = 0.24; *orbto* = 2.14; *dcp* = 0.2; *sctlp* = 0.8; *C* = 1.85; *4c* = 1.3; *4V* = 1.73; *5x* = 1.26; *ac* = 8.67; *M* = 0.54; *C3F* = 0.54; *arb* (dorsal branches of arista/ventral branches of arista) = 8/5.

Female unknown.

**Distribution.** – Viet Nam.

**Relationship.** – New species closely related to *S. (O.) convergens* in general appearance, but can be clearly distinguished from the latter by the shape of male genitalia.

*Stegana (Oxyphortica) burmensis*, sp. n. (figs. 7–10)

**Type material.** – **Holotype male**, Myanmar, Yangon, B.G.C. (Burmere Golf Country-club), 13-I-1982 (*M. J. Toda*). – **Paratypes** : 2 females, the same locality as holotype; 2 males, Yangon, Mingaladon, 18-I-1982 (*M. J. Toda*) (EHU).

**Diagnosis.** – Anterior reclinate orbital about equal to posterior reclinate in length; 4th and 5th abdominal tergites each with broad, black, caudal band protruding medially and laterally. Epandrium

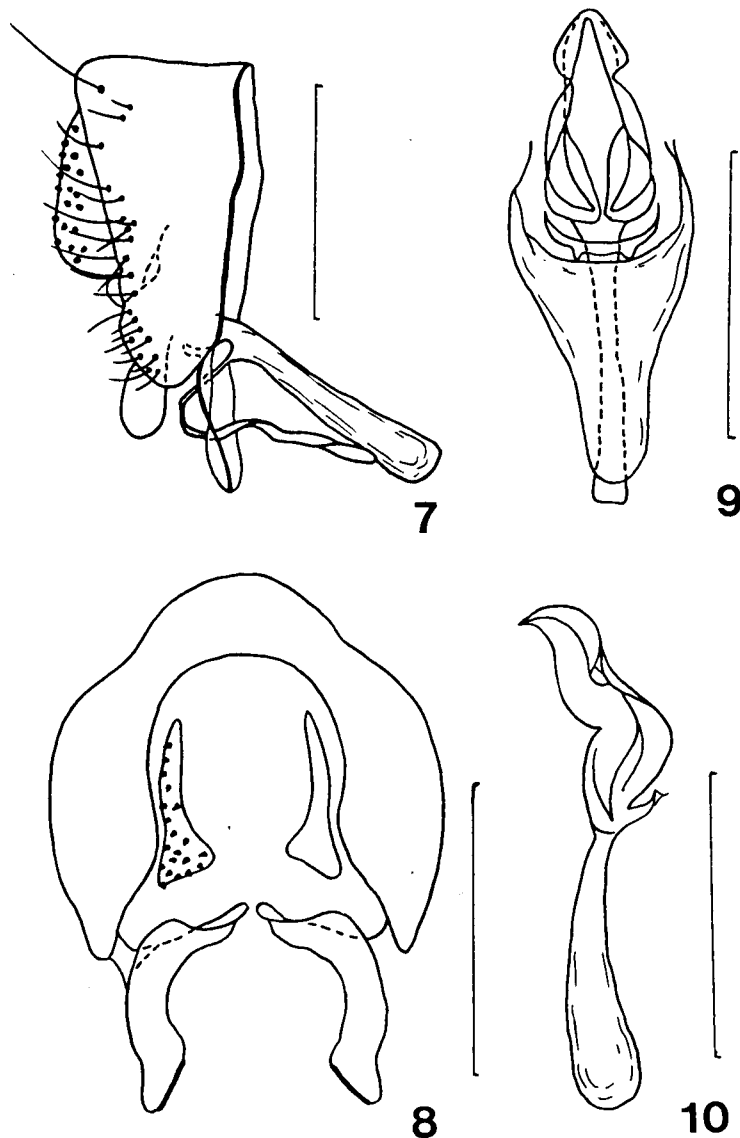


Fig. 7 to 10, *Stegana (Oxyphortica) burmensis*, sp. n. – 7, male terminalia (lateral view). – 8, *ditto* (caudal view). – 9, phallic organs (ventral view). – 10, aedeagus (lateral view). (Scale-line = 0.25 mm).

(fig. 7) with ca. 18 recurved setae along caudal margin. Cercus with numerous small sclerotized spinules.

**Male and female.** – Body length ca. 2.9 mm in holotype (2.65–2.9 in paratypes). Thorax length ca. 1.4 mm in holotype (1.2–1.4 in paratypes). *Head.* Eye bright red. Ocellar triangle dark brown; ocelli yellow; ocellar setae long. Frontal vitta yellowish brown. Sometimes additional small setula between proclinate and anterior reclinate orbitals present. Fronto-orbital plate yellowish gray. Face yellow. Facial carina yellow, slightly prominent in upper part. Clypeus yellow. Gena yellowish gray. Occiput yellowish brown. Pedicel yellow, with 1 stout seta and numerous setulae; 1st flagellomere light yellow; terminal bifurcation of arista small. Palpus pale yellow, with 1 terminal stout seta and 4–5 ventral setulae.

*Thorax.* Scutum and scutellum yellowish brown. Postpronotal lobe yellowish brown; postpronotal seta 1, long. Acrostichal setulae in 8 irregular rows. Mesopleuron yellow, with broad obscure brown longitudinal stripe. Basal scutellar setae divergent; apicals ones convergent and crossed. Wing light brown. Veins and crossveins brown. *Cl* setae 2, equal in size. Halter yellow, knob of halter white. Legs yellow. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 4 succeeding tarsal segments together.

*Abdomen.* Tergites (excluding 4th and 5th) yellowish brown. Sternites pale gray. Pleural membrane pale yellow.

*Male terminalia.* Epandrium (fig. 7) almost triangular below. Surstylus (Fig. 8) slightly curved, with chitinized inner margin. Cercus almost triangular (in lateral view), lower part strongly chitinized. Aedeagus (fig. 10) curved dorsally, without hair crown. Paramere small, without sensilla. Hypandrial lobe (fig. 9) small, narrowed below.

*Measurements.* WL = 2.4 mm in holotype (2.2–2.4 in paratypes); WW = 1.1 mm in holotype (1.1–1.2 in paratypes).

*Indices.* FW/HW = 0.41 (0.41–0.48); *ch/o* = 0.07 (0.06–0.07); *prorb* = 1.12 (1.05–1.23); *rcorb* = 0.95 (0.84–1.0); *vb* = 0.58 (0.5–0.8); *dcl* (anterior dorsocentral/posterior dorsocentral) = 0.46 (0.43–0.48); *sctl* (basal scutellar/apical scutellar) = 1.08 (1.0–1.21); *sterno* (anterior katapisternal/posterior katapisternal) = 0.81 (0.67–0.81); *presctl* (prescutellar/posterior dorsocentral) = 0.54 (0.5–0.58); *orbito* = 2.0 (2.0–2.4); *dcp* = 0.29 (0.19–0.3); *sctlp* = 0.84 (0.61–0.84); *C* = 2.62 (2.53–2.68); *4c* = 0.84 (0.81–0.88); *4V* = 1.68 (1.68–1.79); *5x* = 1.33 (1.28–1.39); *ac* = 6.0 (4.2–6.0); *M* = 0.48 (0.48–0.52); *C3F* = 0.91; *arb* = 5/3 (5–6/3–4).

**Distribution.** – Myanmar.

**Relationship.** – This species somewhat resembles *S. (O.) convergens*, but can be clearly distinguished from this species by the diagnostic characters.

**Etymology.** – Pertaining to the former name of Myanmar.

### *Stegana (Oxyphortica) pyinoolwinensis*, sp. n. (figs. 11–14)

**Type material.** – **Holotype male**, Myanmar, Pyin Oo Lwin, (May Myo), 30–XII–1981 (*M. J. Toda*). – **Paratypes** : 2 females, the same locality as holotype, (*M. J. Toda*) (EHU).

**Diagnosis.** – Anterior dorsocentrals very small. *C3F*-index = 1.0. Aedeagus (fig. 13, 14) without hair crown. Sustylus (fig. 12) with only 1 stout, black tooth. Hypandrial lobe narrowed, almost parallel-sided.

**Male and female.** – Body length ca. 2.0 mm in holotype (2.5–2.6 in paratypes). Thorax length ca. 0.95 mm in holotype (1.15–1.23 in paratypes). *Head.* Eye red. Ocellar triangle brownish gray; ocelli reddish; ocellar setae long. Frontal vitta yellowish brown. Fronto-orbital plate yellowish gray. Face yellowish gray. Facial carina slightly prominent in upper part. Clypeus yellow to yellowish brown. Gena yellowish gray. Occiput yellowish brown. Pedicel yellowish brown, with 1 stout seta and a few setulae; 1st flagellomere lighter; terminal bifurcation of arista moderate. Palpus yellow, with 1 sub-terminal seta and 2–3 ventral setulae.

*Thorax.* Scutum and scutellum yellowish brown. Postpronotal lobe yellowish brown; post-

pronotal seta 1, long. Acrostichal setulae in 8 irregular rows. Mesopleuron yellow, with broad obscure brown longitudinal stripe. Basal scutellar setae divergent; apicals ones convergent and crossed. Wing light brown, darker anteriorly and apically. *C1* setae 2, equal in size. Halter whitish yellow. Legs yellow. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 4 succeeding tarsal segments together. Hind 1st tarsomere as long as 2 succeeding segments together.

**Abdomen.** Tergites yellowish brown. Sternites yellowish gray. Pleural membrane pale yellow.

**Male terminalia.** Epandrium (fig. 11) rounded and slightly sclerotized below, with ca. 8 long setae upper part and ca. 14 fine setae in lower part. Inner side of epandrium (fig. 13) with 1 black spine. Cercus narrow, with ca. 8 setae. Paramere without sensilla.

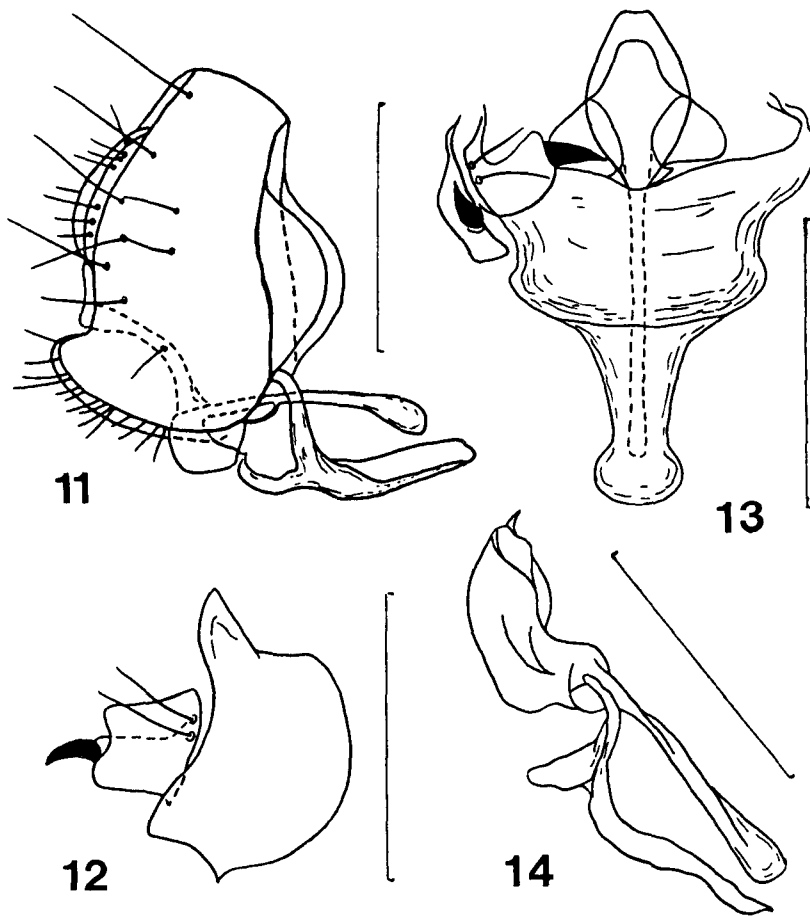


Fig. 11 to 14, *Stegana (Oxyphortica) pyinoolwinensis*, sp. n. – 11, male terminalia (lateral view). – 12, surstylus (lateral view). – 13, phallic organs, surstylus and lower part of epandrium (ventral view). – 14, aedeagus (lateral view). (Scale-line = 0.25 mm).

**Measurements.** WL = 1.8 mm in holotype (2.25–2.3 in paratypes); WW = 0.8 mm in holotype (0.95–1.05 in paratypes).

**Indices.** FW/HW = 0.4 (0.35–0.43); *ch/o* = 0.1 (0.14); *prorb* = 1.1 (1.24–1.33); *rcorb* = 0.38 (0.61); *vb* = 0.4 (0.51–0.64); *dcl* = 0.33 (0.33–0.38); *sctl* = 1.12 (1.72–1.77); *sterno* = 0.66 (0.66–0.77); *presctl* = 0.38 (0.47–0.52); *orbito* = 1.67 (1.67–2.0); *dcp* = 0.29 (0.26–0.29); *sctlp* = 0.86 (0.72–0.75); *C* = 2.29 (2.43–2.67); *4c* = 0.91 (0.86); *4V* = 1.87 (1.8); *5x* = 1.53 (1.5); *ac* = 5.25 (4.2); *M* = 0.5 (0.49); *C3F* = 1.0; *arb* = 7–6/4–3.

**Distribution.** – Myanmar.

**Relationship.** – This new species closely related to *S. (O.) convergens* in general appearance, especially in coloration of head and scutum, but completely differs from it by the shape of male terminalia, e. g., surstylus with 1 stout, black tooth; aedeagus rather compact, without hair crown (fine hairs distally in *convergens*) as well as by meaning of *C3F*-index (0.85 in *convergens*).

**Etymology.** – Pertaining to the type locality.

*Stegana (Oxyphortica) setifrons*, sp. n. (figs.15, 16)

**Type material.** – **Holotype male**, People's Republic of China, Hubei Prov., Shennongjia, 26–VII–1992 (*M. J. Toda*). – **Paratypes** : 2 males, the same locality as holotype, 15/16–VII–1992 (*M. J. Toda*) (EHU).

**Diagnosis.** – Frontal vitta with numerous small interfrontal setulae. Aedeagus (fig. 16) curved apicodorsally, with hair crown. Surstylus with two strongly sclerotized teeth.

**Male.** – Body length ca. 2.7 mm in holotype (2.2–2.45 in paratypes). Thorax length ca. 1.2 mm in holotype (0.9–1.1 in paratypes). *Head.* Eye red. Ocellar triangle brownish gray; ocelli reddish; ocellar setae long. Frontal vitta yellowish brown. Fronto-orbital plate yellowish brown but slightly

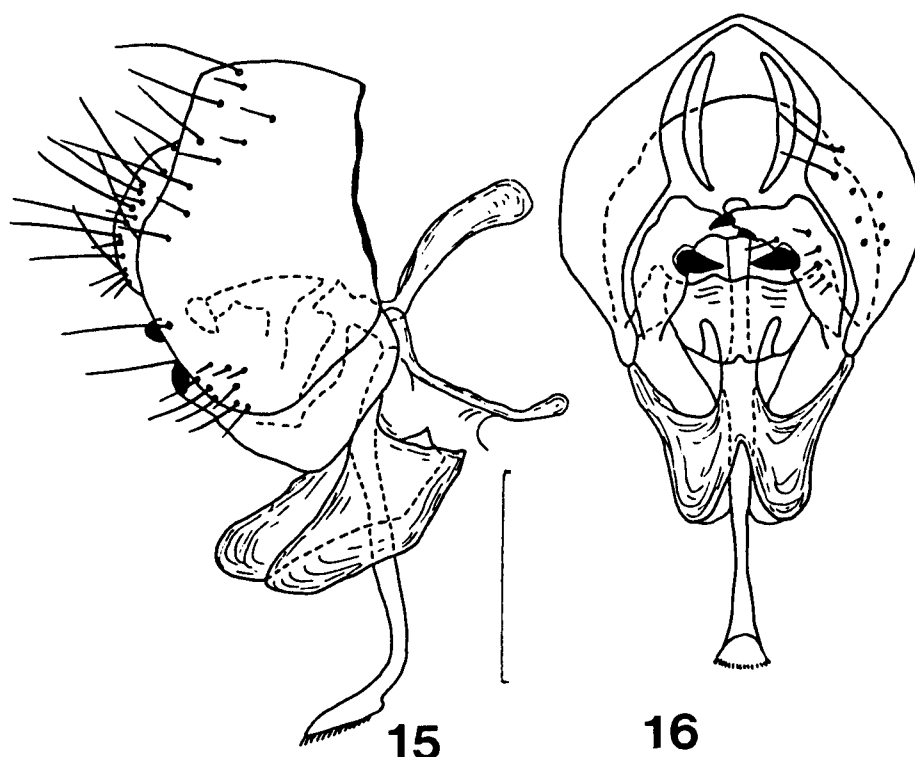


Fig. 15 and 16, *Stegana (Oxyphortica) setifrons*, sp. n. – 15, male terminalia (lateral view). – 16, *ditto* (ventral view). (Scale-line = 0.25 mm).

lighter than vitta. Face yellowish brown, lighter below. Facial carina slightly prominent in upper part. Clypeus pale brown. Gena yellowish gray. Occiput brown. Pedicel yellowish gray, with 1 stout seta and a few setulae; 1st flagellomere yellowish gray; terminal bifurcation of arista very small. Palpus yellow, with 2 subterminal setae and ca. 4 ventral ones.

*Thorax.* Scutum and scutellum yellowish brown. Postpronotal lobe yellowish gray; postpronotal seta 1, long. Acrostichal setulae in 8 irregular rows. Mesopleuron yellow, with broad obscure brown longitudinal stripe. Basal scutellar setae divergent; apicals ones convergent and crossed. Wing light brown. Veins and crossveins yellowish brown. *C1* setae 2, equal in size. Halter yellow. Legs yellow. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 2 succeeding tarsal segments together. Middle and hind 1st tarsomeres as long as 2 succeeding segments together.

*Abdomen.* Tergites brown, paler anteriorly. Sternites yellowish gray. Pleural membrane pale yellow.

*Male terminalia.* Epandrium (fig. 15) rounded below, with 12 setae in upper part and with ca. 11 ones in lower part. Surstylus with 2 stout, black teeth and ca. 6 setulae. Cercus almost semicircular, with ca. 15 setae. Aedeagus (fig. 16) longer in 2 times than its apodeme, with fine hair crown distally. Paramere minute, seems to be without sensilla. Hypandrial lobe curved apicodorsad.



**Measurements.** WL = 2.35 mm in holotype (1.9–2.2 in paratypes); WW = 1.05 mm in holotype (0.85–1.0 in paratypes).

**Indices.** FW/HW = 0.39 (0.37); *ch/o* = 0.09 (0.07–0.1); *prorb* = 1.5 (1.16–1.2); *rcorb* = 1.19 (0.95–1.06); *vb* = 0.38 (0.43); *dcl* = 0.54 (0.49); *sctl* = 0.92 (0.88); *sterno* = 0.88 (0.85–0.9); *presctl* = 0.54 (0.49); *orbito* = 3.0 (2.4–2.5); *dcp* = 0.38 (0.32); *sctlp* = 0.75 (0.63); *C* = 2.19 (2.33–2.42); *4c* = 0.95 (0.9–0.95); *4V* = 1.82 (1.84–1.86); *5x* = 1.56 (1.44–1.69); *ac* = 4.2 (3.8–4.5); *M* = 0.57 (0.55–0.58); *C3F* = 0.81 (0.70–0.78); *arb* = 5/3.

Female unknown.

**Distribution.** – China (Hubei).

**Relationship.** – New species closely related to *S. (O.) convergens* in general appearance (coloration of head and scutum) as well as in having 2 stout, black teeth on surstylus and fine hair crown on eadeagus, but rather differs from it in the presence of numerous small interfrontal setulae, chaetotaxy of epandrium as well as by the shape of surstylus.

**Etymology.** – Referring to the frontal vitta with numerous small interfrontal setulae.

### Subgenus *STEGANA* Meigen

Eleven species are recorded from Asia: *annulosa* (Duda, 1929) (Buru I.), *antlia* Okada, 1991 (Taiwan), *crescentica* Gupta & Panigrahy, 1987 (India), *furta* (Linnaeus, 1766) (Kazakhstan, Mongolia, Siberia, Russian Far East), *lateralis* Wulp, 1897 (Sri Lanka, Java, Sumatra), *sibirica* Duda, 1934 (Russian Far East), *singularis* Sidorenko, 1990 (Russian Far East), *sinica* Sidorenko, 1991 (China), *taba* Okada, 1971 (Japan, Korea, Russian Far East), *taiwana* Okada, 1991 (Taiwan), *undulata* de Meijere, 1911 (Java, Sumatra). The diagnosis of the subgenus was previously given by OKADA (1971, 1978) and LAŠTOVKA & MAČA (1982).

#### *Stegana (Stegana) emeiensis*, sp. n. (figs. 17, 18)

**Type material.** – **Holotype male**, People's Republic of China, Sichuan Prov., Mt. Emei, 550 m, by sweeping, 16–VII–1992 (*M. J. Toda*). – **Paratypes** : 1 male, 3 females, the same locality as holotype, 15/16–VII–1992 (*M. J. Toda*) (EHU).

**Diagnosis.** – Surstylus with row of dense and short prenisetae, without strongly sclerotized tooth. Anterior paramere triangular, slightly chitinized. *C3F*-index ca. 0.62.

**Male and female.** – Body length ca. 2.7 mm in holotype (2.8–3.3 in paratypes). Thorax length ca. 1.4 mm in holotype (1.3–1.5 in paratypes). **Head.** Eye red, with sparse thin pile. Ocellar triangle brownish gray; ocelli yellow; ocellar setae long. Frontal vitta yellowish brown, with a few interfrontal setulae. Fronto-orbital plate yellowish brown. Face yellow. Facial carina slightly prominent in upper part. Clypeus yellow. Gena yellowish gray, but darkened at base of vibrissa. Occiput brown. Pedicel yellowish gray, yellow basally, with 1 stout seta and a few setulae; 1st flagellomere yellowish gray, basally yellowish brown; terminal bifurcation of arista very small. Palpus broad, dark brown, with 1 terminal seta and ca. 10 ventral setulae.

**Thorax.** Scutum yellowish brown, with 2 pair of brown longitudinal stripes outside of dc-line. Each pair of stripes confluent anteriorly. Scutellum in male yellowish brown; light brown in female. Postpronotal lobe yellowish gray; postpronotal seta 1, long. Acrostichal setulae in 12 irregular rows. Mesopleuron yellow, with 2 obscure brown longitudinal stripes. Basal scutellar setae slightly divergent; apicals ones convergent apically. Wing light brown, darker anteriorly, but along *C3* and *C4* (sometimes along *C2*) hyaline. *C1* setae 2, equal in size. Halter yellowish white. Legs yellow; fore femora sometimes with indistinct black patch; middle and hind femora each with 3 blackish patches. Middle and hind knee joints brownish black. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 3 succeeding tarsal segments together. Hind 1st tarsomere as long as 4 succeeding segments together.

**Abdomen.** Tergites brown, yellowish white laterally. 2nd tergite yellowish gray. Sternites light brown. Pleural membrane pale gray.

**Male terminalia.** Epandrium (fig. 17) micropubescent below, with ca. 15 setae. Surstylus confluent with epandrium. Cercus almost semicircular, with ca. 15 setae. Aedeagus (fig. 18) with hair crown distally, ventrally with several strongly sclerotized spines. Hypandrial lobe triangular, slightly longer than broad.

**Measurements.** WL = 2.3 mm in holotype (2.3–2.6 in paratypes); WW = 1.2 mm in holotype (1.2–1.4 in paratypes).

**Indices.** FW/HW = 0.41 (0.36–0.52); *ch/o* = 0.12 (0.09–0.14); *prorb* = 1.11 (1.1–1.33); *rcorb* = 0.72 (0.78–0.85); *vb* = 0.38 (0.41–0.55); *dcl* = 0.39 (0.31–0.45); *sctl* = 2.58 (1.69–1.88); *sterno* = 0.77 (0.70–0.88); *presctl* = 0.74 (0.56–0.69); *orbto* = 1.63 (2.0–2.5); *dcp* = 0.16 (0.15–0.24); *sctlp* = 0.89 (0.83–1.0); *C* = 2.0 (1.89–2.1); *4c* = 1.18 (1.24–1.35); *4V* = 1.86 (1.9–2.1); *5x* = 1.14 (1.13–1.3); *ac* = 6.5 (6.5–8.0); *M* = 0.55 (0.6–0.62); *C3F* = 0.58 (0.61–0.67); *arb* = 7/5.

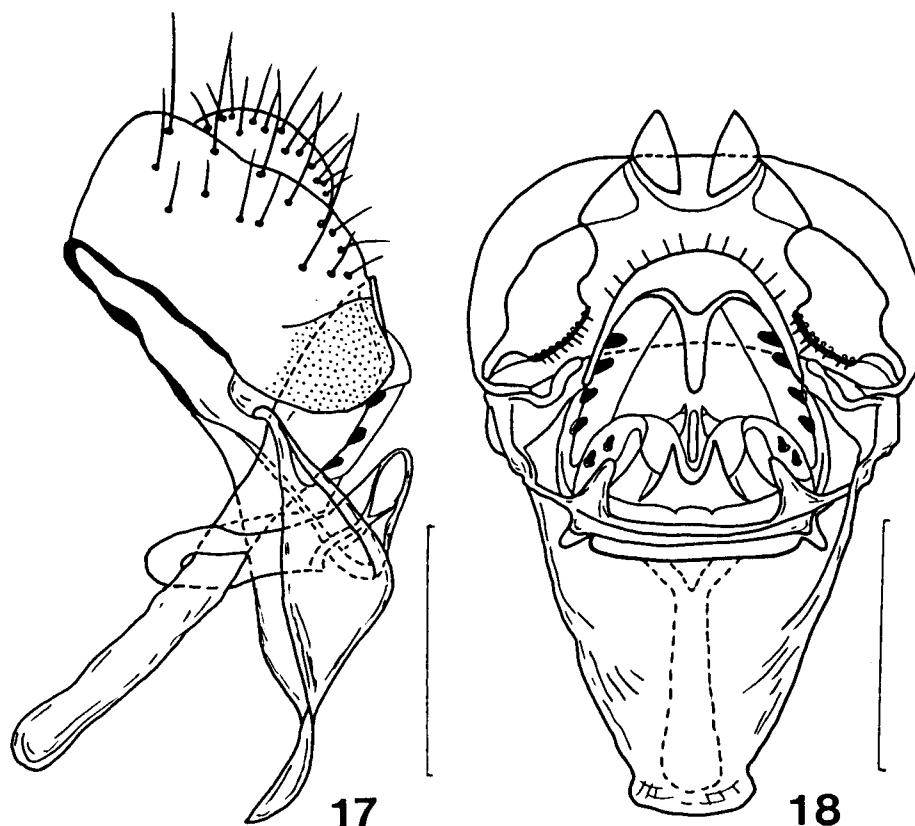


Fig. 17 and 18, *Stegana (Stegana) emeiensis*, sp. n. – 17, male terminalia (lateral view). – 18, ditto (ventral view). (Scale-line = 0.25 mm).

**Distribution.** – China (Sichuan).

**Relationship.** – This species resembles to *S. (S.) antlia* in having dark brown (black in original description) palpus, yellow face, mesopleuron with two brown longitudinal stripes, but rather differs from the latter by the absence of black tooth on surstylus, shape of aedeagus and surstylus.

**Etymology.** – Pertaining to the type locality.

*Stegana (Stegana) cheni*, sp. n. (figs. 19, 20)

**Type material.** – Holotype male, People's Republic of China, Mengsong, Menglongbanna, Yunnan, 1600 feet, 16-X-1958 (*Zhi-xin Chen*) (EHU).

**Diagnosis.** – Scutum with 2 pairs of broad, dark brown, longitudinal stripes; mesopleuron with 2 broad brown longitudinal stripes.

**Male.** – Body length ca. 2.9 mm. Thorax length ca. 1.4 mm. *Head.* Eye red. Ocellar triangle dark brown; ocelli yellow; ocellar setae long. Frontal vitta yellow, with a few short interfrontal setulae. Fronto-orbital plate yellow. Face yellowish gray. Facial carina prominent in upper part, broadened ventrally. Clypeus yellowish brown. Gena yellow, but darkened at base of vibrissa. Occiput yellowish brown. Pedicel yellowish gray, with 1 stout seta and a few short setulae; 1st flagellomere yellowish gray, protruded below; terminal bifurcation of arista very small. Palpus dark brown, with numerous fine setulae.

*Thorax.* Scutum dark yellow, with 2 pairs of dark brown, longitudinal stripes running through

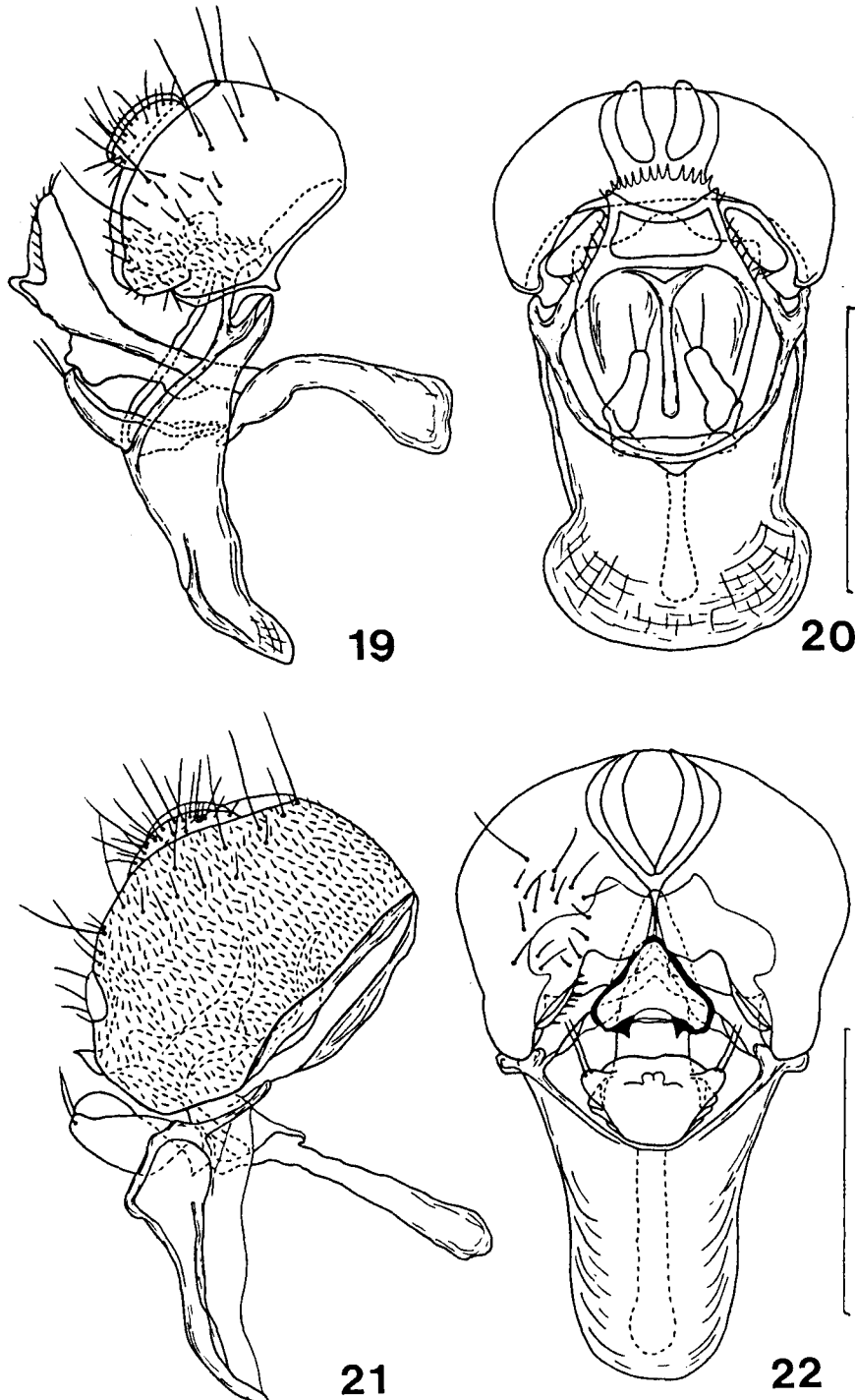


Fig. 19 and 20, *Stegana (Stegana) cheni*, sp. n. – Fig. 21 and 22, *Stegana (Stegana) zhangi*, sp. n. – 21 and 22, male terminalia (lateral and ventral view). – 19, 21, *ditto* (lateral and ventral view). (20, 22. : Scale-line = 0.25 mm).

entire length of scutum, and continuing to stripes on scutellum; inner pair inside of line of dorsocentral setae; outer one outside of dc-line. Scutellum dark yellow. Postpronotal lobe yellowish orange; postpronotal seta 1, long. Acrostichal setulae in 10 irregular rows. Mesopleuron yellowish. Basal scutellar setae divergent; apicals ones slightly convergent apically. Wing light brown. Veins and crossveins grayish brown. Halter yellowish white. Legs yellow. Preapicals on all tibiae; apical on middle tibia. Fore 1st tarsomere as long as 3 succeeding tarsal segments together. Hind 1st tarsomere as long as 3 succeeding segments together.

**Abdomen.** Tergites yellowish brown, with narrow brown caudal bands on each tergite. Sternites pale gray. Pleural membrane pale yellow.

**Male terminalia.** Epandrium (fig. 19) micropubescent and almost quadrate below, with ca. 7 long setae and with ca. 12 short ones. Surstylus oblong, with 3–4 setulae in lower part. Cercus rounded, with ca. 15 setae. Aedeagus (fig. 20) straight, broadened in mid part (in caudal view), with hair crown distally. Paramere with 2 sensillae. Hypandrial lobe almost quadrate.

**Measurements.** WL = 2.7 mm; WW = 1.2 mm.

**Indices.** FW/HW = 0.38; *ch/o* = 0.7; *prorb* = 1.29; *rcorb* = 0.71; *vb* = 0.36; *dcl* = 0.47; *sctl* = 1.92; *presctl* = 0.53; *orbito* = 2.0; *dcp* = 0.21; *sctlp* = 0.95; *C* = 2.21; *4c* = 1.14; *4V* = 2.02; *5x* = 1.0; *ac* = 6.86; *M* = 0.5; *C3F* = 0.71; *arb* = 7/5.

Female unknown.

**Distribution.** – China (Yunnan).

**Relationship.** – New species closely related to *S. (S.) lateralis* in coloration of head and halter, but differs from it in having scutum with 2 pairs of brown longitudinal stripes (scutum without any stripes in *lateralis*) as well as coloration of mesopleuron (1 black longitudinal stripe in *lateralis*).

**Etymology.** – Patronym, in honor of collector.

### *Stegana (Stegana) zhangi*, sp. n. (figs. 21, 22)

**Type material.** – Holotype male, People's Republic of China, Xishuangbanna, Yunnan, 1050–4080 feet, 24–IV–1958 (*Yi-ran Zhang*) (EHU).

**Diagnosis.** – Flagellomere yellow; clypeus brown; mid and hind femorae each with only 1 black patch.

**Male.** – Body length ca. 3.5 mm. Thorax length ca. 1.9 mm. **Head.** Eye red, with sparse long thin pile. Ocellar triangle brown; ocelli yellow; ocellar setae long. Frontal vitta yellowish brown. Fronto-orbital plate yellowish brown. Face yellowish brown. Facial carina prominent in upper part, very broadened ventrally. Gena yellow, but dark brown at base of vibrissa. Occiput yellowish brown. Pedicel yellowish gray, with 1 stout seta anteriorly and a few short setulae; 1st flagellomere protruded below; terminal bifurcation of arista very small. Palpus broad, black, with numerous fine setulae.

**Thorax.** Scutum yellowish orange, with indistinct broad brown longitudinal stripes. Scutellum yellowish orange. Postpronotal lobe yellow; postpronotal seta 1, long. Acrostichal setulae in 10 irregular rows. Mesopleuron dark yellow, with 2 obscure, brown longitudinal stripes. Basal scutellar setae almost parallel, slightly convergent apically; apicals ones convergent and crossed apically. Wing light brown, darker anterad. Veins and crossveins brown. *C1* seta 1. Halter yellowish brown. Legs yellow. Preapicals on all tibiae; apical on fore tibia. Middle and hind knee joints blackish. Fore 1st tarsomere as long as 3 succeeding tarsal segments together. Hind 1st tarsomere as long as 2 succeeding segments together.

**Abdomen.** Tergites yellowish brown, with obscure brown caudal bands on each tergite. Sternites pale gray. Pleural membrane pale yellow.

**Male terminalia.** Epandrium (fig. 21) micropubescent, rounded below, with ca. 18 setae along caudal margin. Surstylus confluent with epandrium, small, with ca. 8 short and slightly recurved setulae. Cercus oblong, with ca. 20 setae. Aedeagus (fig. 22) straight, broadened apically (in lateral view), with strongly sclerotized apical margin and without hair crown. Paramere with 2 sensillae. Hypandrial lobe narrower than long.

*Measurements.* WL = 3.25 mm; WW = 1.65 mm.

*Indices.* FW/HW = 0.4; *ch/o* = 0.24; *prorb* = 1.12; *rcorb* = 0.72; *vb* = 0.36; *dcl* = 0.52; *sctl* = 1.77; *presctl* = 0.81; *sterno* = 0.74; *orbito* = 2.29; *dcp* = 0.17; *sctlp* = 1.25; *C* = 2.09; *4c* = 1.35; *4V* = 2.23; *5x* = 1.14; *ac* = 7.0; *M* = 0.62; *C3F* = 0.71; *arb* = 8/5.

Female unknown.

**Distribution.** – China (Yunnan).

**Relationship.** – New species closely related to *S. (S.) annulosa* in coloration of scutum, postpronotal lobe and palpus, but differs from it in color of 1st flagellomere (black in *annulosa*) as well as clypeus and mid and hind femorae (2 black patches in *annulosa*).

**Etymology.** – Patronym, in honor of collector.

### *Stegana (Stegana) nartshukae*, sp. n. (figs. 23–26)

**Type material.** – **Holotype male**, Viet Nam, pr. Ha Son Binh, Da Bac, Tuly, forest, 19-X-1990 (*S. Belokobylskij*). – **Paratype** : female, the same locality as holotype, 22-X-1990 (*E. Nartshuk*) (ZISP).

**Diagnosis.** – Aedeagus (Figs. 25, 26) with a few small setulae on lateral side. Lateral processes of aedeagus curved, with 3–4 pointed projections and 1 strongly sclerotized tooth. Gonopode strongly chitinized, almost triangular.

**Male and female.** – Body length ca. 2.1 mm in holotype (2.45 mm in paratype). Thorax length ca. 1.25 mm in holotype (1.2 mm in paratype). *Head.* Eye red. Ocellar triangle brown; ocelli reddish; ocellar setae long. Frontal vitta yellow anteriorly, yellowish gray posteriorly, with a few small interfrontal setulae. Fronto-orbital plate yellow anteriorly, yellowish gray posteriorly. Face yellow. Facial carina prominent in upper part, broadened ventrally. Clypeus yellow. Gena yellowish white, but dark brown at base of vibrissa. Occiput yellowish brown. Pedicel yellow, with 1 prominent seta; 1st flagellomere yellowish gray; terminal bifurcation of arista small. Palpus broad, black, with 1 stout terminal seta and 3–4 ventral setulae.

*Thorax.* Scutum and scutellum yellowish brown. Postpronotal lobe yellowish brown; postpronotal seta 1, long. Acrostichal setulae in 10 irregular rows. Mesopleuron yellow, with broad dark brown longitudinal stripe and pale brown spot on katapisternum. Basal scutellar setae divergent; apicals ones convergent. Wing light brown, darker anterad. Veins and crossveins brown. *C1* setae 2, equal in size. Halter yellowish brown. Legs yellow, but darkened at knee joints. Preapicals on all tibiae; apical on middle tibia. Middle and hind knee joints blackish.

*Abdomen.* Tergites yellowish brown to dark brown, each with indistinct black caudal band. Sternites pale gray. Pleural membrane pale yellow.

*Male terminalia.* Epandrium (fig. 23, 24) broad, with ca. 14 setae. Surstylus confluent with epandrium, with ca. 9 setulae on inner margin. Cercus semicircular, lower half strongly sclerotized and with ca. 10 setae. Paramere rounded, with 1 seta. Hypandrial lobe longer than broad, rounded below.

*Measurements.* WL = 2.05 mm in holotype (2.1 in paratype); WW = 1.1 mm in holotype (1.1 in paratype).

*Indices.* FW/HW = 0.36 (0.41); *ch/o* = 0.09 (0.1); *prorb* = 1.22; *rcorb* = 0.66 (0.72); *vb* = 0.42; *dcl* = 0.39; *sctl* = 1.5; *presctl* = 0.5 (0.65); *sterno* = 0.96; *orbito* = 2.0; *dcp* = 0.24 (0.27); *sctlp* = 1.13 (1.14); *C* = 2.09; *4c* = 1.21 (1.29); *4V* = 1.92 (2.12); *5x* = 1.16 (1.31); *ac* = 6.57 (8.8); *M* = 0.58 (0.62); *C3F* = 0.73 (0.83); *arb* = 7/5.

**Distribution.** – Viet Nam.

**Relationship.** – This new species is somewhat similar to *S. (S.) vittata* in general appearance, but differs from it by the shape of aedeagus and gonopode.

**Etymology.** – Patronym, in honor of Prof. E. P. NARTSHUK, Zoological Institute, Russian Academy of Sciences, who loaned me very interesting material from Viet Nam.

*Stegana (Stegana) antlia* Okada, 1991

*Stegana (Stegana) antlia* Okada, 1991, *Jpn. J. Ent.*, 59: 658.

**Material examined.** – Male, female, Viet Nam, pr. Hanoi, 70 km NW Hanoi, Ba Vi, 24–XI–1990 (*E. Nartshuk*); male, pr. Ha Son Binh, Da Bac, Tuly, forest, 19–X–1990 (*S. Belokobylskij*) (ZISP).

**Distribution.** – Viet Nam \* (new record), Taiwan

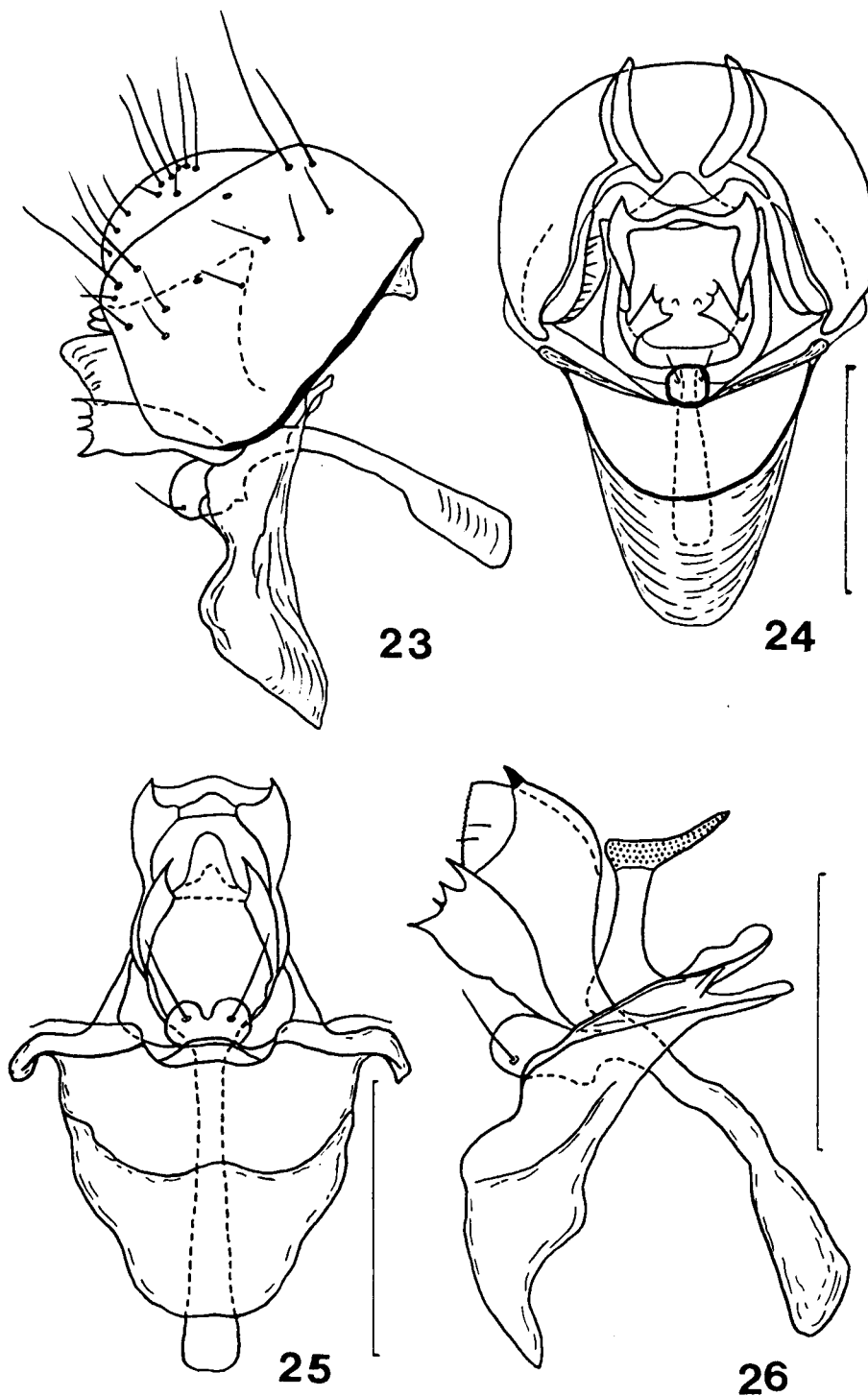


Fig. 23 to 26, *Stegana (Stegana) nartshukae*, sp. n. – 23, male terminalia (lateral view). – 24, *ditto* (ventral view). – 25, phallic organs (ventral view). – 26, *ditto* (lateral view). (Scale-line = 0.25 mm).

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