

**Notes on the Korean species of the Genus *Streblocera*  
(Insecta: Hymenoptera: Braconidae) with Description of  
a New Species and a Key to Korean Species**

**Sergey A. Belokobylskij and Deok-Seo Ku\***

(Zoological Institute Russian Academy of Sciences, Universitetskaya nab., 1, St. Petersburg 199034, Russia; \*Division of Overseas Pest, Department of Crop Protection, National Institute of Agricultural Sciences and Technology, Rural Development Administration, Suwon 441-707, Korea)

**ABSTRACT**

A new species *Streblocera planispina* sp. nov. is described from Korea. *S. macroscapa* Ruthe and *S. dentiscapa* Belokobylskij are recorded for the first time from Korea. A key to Korean species of *Streblocera* is given.

Key words: Braconidae, *Streblocera*, new species, new records, key, Korea

**INTRODUCTION**

The first information on *Streblocera* Westwood of Korea was given by Papp (1985), who described two species from northern part of the country. The Korean species of *Streblocera* with descriptions of three new species from South Korea was reviewed by Ku (1997).

During the first author's visit to Korea, we made additional study of *Streblocera* material in NIAST collection. This paper includes: (1) description of a new species of the subgenus *Asiastreblocera*, which is very closely related to a undescribing Vietnam species, (2) corrections in specific names after Ku (1997), (3) two newly recorded species from Korea, and (4) a key to Korean species.

The terms of the wing venation are followed Tobias (1986). The following abbreviation are used: POL (postocellar line), OOL (ocular-ocellar line), OD (maximum diameter of lateral ocellus), NIAST (National Institute of Agricultural Sciences and Technology, Suwon, Korea), and ZISP (Zoological

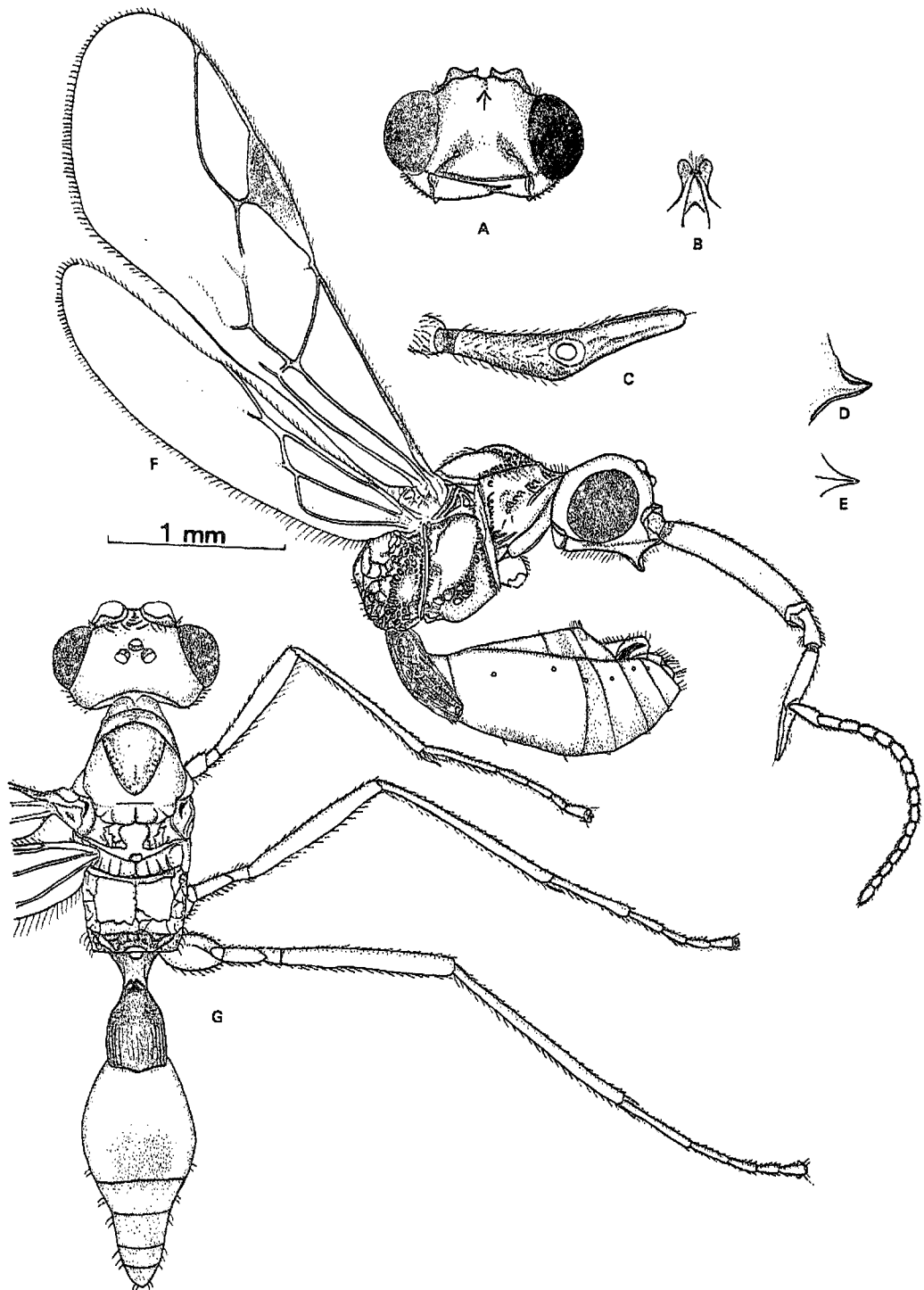
Institute, Russian Academy of Sciences, St. Petersburg, Russia).

## Systematics

### ***Streblocera (Asiastreblocera) planispina* sp. nov. (Fig. 1)**

**Material examined.** Holotype (NIAS): 1 female, Byeongsan, Samsan, Kosong, Kyongsangnam-do, Korea, at UV lamp, 20 VIII 1993, D.-S. Ku. Paratype (ZISP): 1 female, Chojeon, Chinju, Kyongsangnam-do, Korea, at light lamp, 13 VIII 1993, D.-S. Ku.

**Description.** Female. Body length 3.3–3.9 mm; fore wing length 2.8–3.1 mm. Head width 1.8–2 times its median length, 1.6–1.7 times width of mesoscutum. Temple behind eyes strongly and weakly–roundly narrowed. Transverse diameter of eye almost twice as long as temple. Ocelli medium-sized, in triangle with base 1.2 times its sides; POL almost equal to OD, 0.5 times OOL. Antennal sockets large. Eyes convex, glabrous, 1.2 times as high as broad. Malar suture distinct. Malar space 0.5 times as long as basal width of mandible, 0.15 times height of eye. Face flat, with rather long horn-like process in upper third, width of face 1.1 times its median height, 0.9 times height of eye. Facial horn-like process in lateral side wide and more or less obtuse apically, with high dorsal carina; in dorsal side regularly pointed apically. Clypeal suture complete. Clypeus almost flat, regularly convex ventrally and without lateral teeth, width of clypeus 2.2–2.5 times its median height, equal to minimum width of face. Occipital carina complete dorsally and ventrally. Antennae 18–19-segmented, geniculated at first flagellar segment. Scape incrassate, more or less distinctly curved outside, widened apically, in external side almost flat and with regular oblique short carinae along its ventral part; length of scape 4.8–5 times its maximum width, 1.3 times height of head. Pedicel rather long. First flagellar segment long, lanceolate, widest in middle part, distinctly narrowed towards apical and basal parts, round on apex, triangular in dissection, with distinct carinae in all three sides; length of first segment 5.5–5.8 times its maximum width, 0.7–0.8 times length of scape, 3.5 times length of second flagellar segment. Second segment 2.3–2.5 times as long as wide, with distinct carina in ventral side, connected with first segment near its middle. Penultimate segment 1.7 times as long as wide. Relative length of three section of antenna (scape : pedicel and first flagellar segment : second to last flagellar segments) as 1 : 0.9–1 : 1.7–1.8. Thorax length 1.75 times its height. Mesoscutum distinctly and roundly arised above prothorax. Notauli deep, complete and sculptured. Prescutellar depression long, deep, smooth, with distinct median carina. Scutellum slightly convex. Sternauli shallow, rather wide and strongly sculptured. Subalar depression shallow, smooth, with strong median carina. Length of fore wing 3–3.3 times its maximum width. Pterostigma 3.5–4 times as long as wide, 1.7–1.8 times as long as metacarpus. Radial vein arising distinctly behind middle of pterostigma. First radial abscissa 0.3–0.5 times as long as maximum width of pterostigma. Nervulus postfurcal. Hind wing 4.5 times as long as wide. Nervellus slightly antifurcal. Legs very long and slender. Hind femur 7.5–7.7 times as long as wide. Hind tarsus 0.8–0.9 times as long as hind tibia; basitarsus 0.75–0.8 times second–fifth segments combined; second segment 0.4 times as long as basitarsus, 1.6 times as long as fifth segment (without pretarsus). Abdomen more or less compressed, distinctly compressed in apical third. First tergite narrowed in basal third, strongly and roundly widened in apical two



**Fig. 1.** *Streblocera planispina* sp. nov. (♀). A, Head, frontal view; B, posteroventral spines of fifth sternite, posterior view; C, first flagellar segment, lateral view; D-E, facial horn-like process, in lateral view (D) and dorsal view (E); F, habitus, lateral view; G, body, dorsal view. F, G, scale = 1 mm.

thirds, with deep and round laterope, spiracular tubercles absent, spiracles situated near middle of tergite. Apical width of first tergite 2.5 times its minimum width; length of first tergite twice its apical width. Second suture absent. Median length of second and third tergites combined 1.6–1.8 times basal width of second tergite. Fifth sternite with distinct, flat, wide and obtuse apically spines (back–side view), with long dense hairs before spines. Hypopygium densely and shortly setose, with narrow and long cut medially. Ovipositor very short, flat, almost straight, covered by hypopygium. Head smooth, face and clypeus finely punctulate. Mesothorax smooth. Propodeum almost entirely smooth, with distinct longitudinal median carina in basal half and transverse irregular semicircular carina, with distinct short carinae posteriorly and laterally. Hind coxa smooth. First tergite smooth in basal half, striate in apical half, medially striae fine. Face and clypeus very densely and shortly setose. Body yellow, pale yellow partly; first tergite and propodeum apically darker. Antenna yellow, infusate towards apex. Palpi white. Legs pale yellow, yellow apically. Wings hyaline. Pterostigma brown, pale yellow in basal half. Male unknown.

**Discussion.** This new species is closely related to *S. (A.) dayuensis* Wang (Korea, Russian Far East, Japan, Taiwan, China) and *S. (A.) cornuta* Chao (China), but differs in having the facial horn–like process wide and obtuse apically in lateral view and strongly pointedly narrowed apically in dorsal view, first flagellar segment wide, second flagellar segment connected near middle of first one, posteroventral spines of fifth sternite wide and round apically, with long and dense hairs before spines of fifth sternite.

**Etymology.** This species name is after the Latin “planus” for “flat” and “spina” for “thorn” because of fifth sternite with flat posterior spines.

### ***Streblocera (Eutanycerus) macroscapa* Ruthe, 1856**

*Microctonus macroscapa* Ruthe, 1856, p. 291.

*Streblocera macroscapa*: Capek and Snoflak, 1959, p. 348; Shenefelt, 1969, p. 128.

*Streblocera (Cosmophoridia) macroscapa*: Belokobylskij, 1987, p. 171.

*Streblocera (Cosmophoridia) octaba* (sic!): Ku, 1997, p. 67 (misidentification).

**Material examined.** Korea: 2 females, Chojeon, Chinju, Kyongsangnam–do, at Mercury lamp, 22 VI 1995, D.–S. Ku; 1 female, same locality, at light lamp, 30 VI 1993, D.–S. Ku.

**Distribution.** Korea, Russia (Primorskiy kray, European part), Taiwan, Kazakhstan, West Europe.

### ***Streblocera (Eutanycerus) dentiscapa* Belokobylskij, 1987**

*Streblocera (Cosmophoridia) dentiscapa* Belokobylskij, 1987, p. 168

**Material examined.** Korea: 1 female, Albong, Ulnungdo, Kyongsangbuk–do, 23 V 1995, H.–C. Park.

**Distribution.** Korea, Russia (Primorskiy and Khabarovskiy kray, Kuril Is.).

Key to the Korean species of the genus *Streblocera*

1. First flagellar segment long and lanceolate; second segment connected with first one near middle or apical third. Face with long horn–like process submedially. Fifth sternite usually with pair of posteroventral spines. (Subgenus *Asiastreblocera* Belokobylskij) ..... 2
- First flagellar segment short, if more or less long, then not lanceolate; second segment

- connected with first one apically. Face without horn-like process. Fifth sternite always without postero-ventral spines ..... 4
2. Fifth sternite without posteroventral spines. First flagellar segment distinctly constricted submedially, widest basally. Scape strongly incrassate, its length 3.2–3.5 times maximum width. Body length 2.6–2.7 mm. Korea ..... *S. (A.) moholei* Ku
- Fifth sternite with distinct posteroventral spines. First flagellar segment not constricted submedially, widest submedially. Scape less strongly incrassate, its length 5–8 times maximum width ..... 3
3. Facial horn-like process wide and obtuse apically in lateral view, strongly pointedly narrowed apically in dorsal view. First flagellar segment wide, its length 5.5–5.8 times maximum width; second flagellar segment connected near middle of first one. Fifth sternite with wide and rounded apically posteroventral spines, and with long and dense hairs before spines. Body length 3.3–3.9 mm. Korea ..... *S. (A.) planispina* sp. nov.
- Facial horn-like process narrow and pointed apically in lateral view, less strongly narrowed and obtuse apically in dorsal view. First flagellar segment narrow, its length 7–8 times maximum width; second flagellar segment connected distinctly behind middle of first one. Fifth sternite with narrow and pointed apically posteroventral spines, and with more short and sparse hairs before spines. Body length 2.7–3.3 mm. Korea, Russia (Primorskiy kray), Japan, China, Taiwan, Philippine ..... *S. (A.) dayuensis* Wang
4. First flagellar segment with hook-like process ventroapically, 1.7 times as long as second segment. All flagellar segments movably connected, not geniculate. Fifth–seventh flagellar segments without apical processes. Ovipositor strongly depressed and wide, rounded apically. Clypeus on lower margin with pair pointed tubercles forward directed. (Subgenus *Streblocera* Westwood). Body length 1.7 mm. Korea ..... *S. (S.) silvicola* Ku
- First flagellar segment without hook-like process ventroapically, almost equal or slightly longer than second segment. Basal flagellar segments usually immovably joined, geniculate. Fifth, sixth or seventh flagellar segments usually with apical processes. Ovipositor usually not depressed or not strongly depressed, rather slender, if sometimes wide and distinctly depressed (*S. nocturnalis*), then pointed apically. Clypeus on lower margin without pointed tubercles; if it sometimes present, then downward directed ..... 5
5. Occipital carina distinctly broken dorsolaterally and densely setose near this place; occipital carina widely absent dorsally. Mandible with wide ventral lamella. Temple 1.2–1.3 times as long as eye. Flagellum not geniculate. Scape short, its length almost equal to height of head. (Subgenus *Cosmophoridia* Hedqvist) Body length 2.8–3.2 mm. Korea, Russia (Primorskiy kray, Chita Province, European part), China, West Europe ..... *S. (C.) flaviceps* Marshall
- Occipital carina not broken dorsolaterally and without dense setose; occipital carina usually complete dorsally or shortly interrupted. Mandible without ventral lamella. Temple not longer than eye. Flagellum usually geniculate (except *S. macroscapa*). Scape long, its length usually distinctly larger than height of head (Subgenus *Eutanycerus* Foerster) ..... 6
6. Scape with long spine in apical quarter. Occiput with distinct numerous radial striae apically. Frons entirely striate. Scape short, its length 4.5–4.8 times maximum width. Body length 3.5–4.5 mm. Korea, Russia (Primorskiy and Khabarovskiy kray, Kuril Is.) ..... 4.5

- ..... *S. (E.) dentiscapa* Belokobylskij
- Scape without spine or with spine in basal quarter. Occiput and frons smooth, sometimes frons striate near antennal sockets. Scape long, its length 5.5–7 times maximum width ..... 7
  - 7. Scape with very dense and rather long pubescence along ventral side. Flagellum generally not geniculate; fifth–seventh segment without ventroapical process. Body length 2.1–2.8 mm. Korea, Russia (Primorskiy kray, European part), Taiwan, Kazakhstan, West Europe .....  
..... *S. (E.) macroscapa* Ruthe (*octaba* auct.)
  - Scape without dense pubescence along ventral side. Flagellum distinctly geniculate at fifth or seventh segment; fifth or seventh segment with distinct ventroapical process ..... 8
  - 8. Scape with more or less distinct spine in basal quarter. Flagellum geniculate at seventh segment. Body length 2.7–3.6 mm. Korea, Russia (Primorskiy kray), Japan, China, Vietnam .....  
..... *S. (E.) okadai* Watanabe
  - Scape without spine. Flagellum geniculate at fifth segment ..... 9
  - 9. Ovipositor very short, almost as long as pedicel, wide and strongly narrowed apically. First abdominal tergite very thick, its length 2.5 times maximum height in lateral view; without dorsope. Mesosternum weakly concave, marginate strong carinae laterally and anteriorly, and very densely setose. Body length 4.7–4.8 mm. Korea ..... *S. (E.) nocturnalis* Ku
  - Ovipositor long, distinctly longer than pedicel, less wide and regularly narrowed apically. First abdominal tergite less thick, its length 3.5–4 times maximum height in lateral view; with more or less distinct dorsope. Mesosternum weakly convex, not marginate and sparsely setose ..... 10
  - 10. Face and clypeus covered tomentose hairs directed from middle line toward eyes. Antenna 21–22–segmented. First flagellar segment slightly longer than its apical width; second–fourth flagellar segments square. Body length 2.8–3.0 mm. Korea, China ..... *S. (E.) villosa* Papp
  - Face and clypeus without tomentose hairs, with usual pubescence. Antenna 25–segmented. First flagellar segment 3 times as long as its apical width; second and third flagellar segments distinctly longer than their apical width; fourth segment transverse. Body length 4.0 mm. Korea .....  
..... *S. (E.) debellata* Papp (*devellata* auct.)

## REFERENCES

- Belokobylskij, S.A., 1987. Contribution to the knowledge of the braconid wasps of the genus *Streblocera* Westwood of the southern Far East (Hymenoptera, Braconidae). Entomol. Obozr., **66**(1): 159–174 (In Russian).
- Capek, M. and J. Snoflak, 1959. Beitrage zur Kenntnis des europaischen Arten der Gattung *Streblocera* Westwood (Hym., Braconidae). Cas. Cesk. Spol. Entomol., **56**(4): 343–354.
- Ku D.-S., 1997. A taxonomic study of the genus *Streblocera* Westwood from Korea (Hymenoptera, Braconidae, Euphorinae). Insecta Koreana, **14**: 65–80.
- Papp, J., 1985. Braconidae (Hymenoptera) from Korea, VII. Acta zool. hung., **31**(4): 341–365.
- Ruthe, J.F., 1856. Prodrum einer Monographie der Gattung *Microctonus* Wesm. Stettin. entomol. Ztg., **17**(7/8): 289–312.
- Shenefelt, R.D., 1969. Hymenopterorum Catalogus. Braconidae. 1. Hybrizontinae, Euphorinae, Cosmo-

phorinae, Neoneurinae, Macrocentrinae., Pars 4: 1-176. 's-Gravenhage

Tobias, V.I., 1986. Order Hymenoptera, Family Braconidae, Introduction. In: Medvedev G.S. (ed.). Keys to the insects of the European part of the USSR. Hymenoptera. Braconidae, 3(4): 7-15 (in Russian).

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### 한국산 *Streblocera* 속 (별 목: 고치벌 과)의 추가종 기록 및 검색표

Sergey A. Belokobylskij · 구 덕 서\*

(러시아과학원 동물연구소, St. Petersburg, 러시아; \*농업과학기술원 해외병해충과, 대한민국)

#### 요 약

*Streblocera planispina* sp. nov.을 신종으로 기재하고, *S. macroscapa*와 *S. dentiscapa*를 한국 미기록종으로 보고한다. 한국산 *Streblocera* 속의 종에 대한 새로운 검색표를 작성하였다.