

A Taxonomic Review of the Genus *Tachinus* Gravenhorst in Korea (Insecta: Coleoptera: Staphylinidae)

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Abstract - A taxonomic study of the tachyporine genus *Tachinus* Gravenhorst in Korea is presented. Five species are recognized, three of which are reported for the first time in Korea [*Tachinus (Tachinoderus) nigriceps* Sharp, *Tachinus (Tachinus) sharpi* Bernhauer & Schubert, and *Tachinus (Tachinus) yezoensis* Li]. The differences and illustrations of morphological characters among members of the Korean *Tachinus* species are presented. [Taxonomy, Coleoptera, Staphylinidae, *Tachinus*, Korea].

INTRODUCTION

Members of the genus *Tachinus* Gravenhorst are one of the largest group of the subfamily Tachyporinae. They are found in various habitats, such as mushrooms, mosses, leaf litters, and near streams. They are recognized by combination of: broad body shape; maxillary palpomere 4 filiform shape; and mesosternum without median carina (Campbell 1973).

Since *Tachinus* was first characterized by Gravenhorst in 1802, about 202 species have been known over the world (Li 1995). *Tachinus (Tachinus) koreanus* was the first Korean species described by Bernhauer (1915) from North Korea, but they were synonymized under *Tachinus marginatus* Gyllenhal by Ullrich (1975). Later, Yuh *et al.* (1985) reported another species *Tachinus (Tachinus) sibiricus* Sharp in Korea.

In this paper, we report three additional species, *Tachinus (Tachinoderus) nigriceps* Sharp, *Tachinus (Tachinus) sharpi* Bernhauer & Schubert, and *Tachinus (Tachinus) yezoensis* Li, for the first time in Korea.

RESULTS

Family Staphylinidae Latreille 반날개과
Subfamily Tachyporinae MacLeay
뽕족반날개아과

Tribe Tachyporini MacLeay 뽕족반날개족
Genus *Tachinus* Gravenhorst 1802
시베리아뽕족반날개속

Key to the Korean species of the genus *Tachinus*

1. Antennomeres 1~2 glabrous
..... *T. nigriceps* Sharp
- Antennomeres 1~4 glabrous 2
2. Female tergite VIII (Fig. 3E) with three lobes;
sternite VIII (Fig. 3F) with fused lobes
..... *T. sharpi* Bernhauer & Schubert
- Female tergite VIII with four lobes; sternite
VIII with separated lobes 3
3. Inner lobes of female tergite VIII (Fig. 4G) much
shorter than outer lobes *T. yezoensis* Li
- Inner lobes of female tergite VIII equally or
slightly shorter than outer lobes 4
4. Male sternite VII (Fig. 4C) with spoon-shaped
large seta; female sternite VIII (Fig. 4F) with-
out triangular process
..... *T. sibiricus* Sharp
- Male sternite VII (Fig. 1C) without spoon-
shaped large seta; female sternite VIII (Fig.
1F) with triangular process
..... *T. marginatus* Gyllenhal

1. *Tachinus (Tachinus) marginatus*
Gyllenhal, 1810 고려뽕족반날개 (Fig. 1)
Tachinus marginatus Gyllenhal 1810: 255;
Thomson 1861: 156; Ganglbauer 1895: 342; Luze

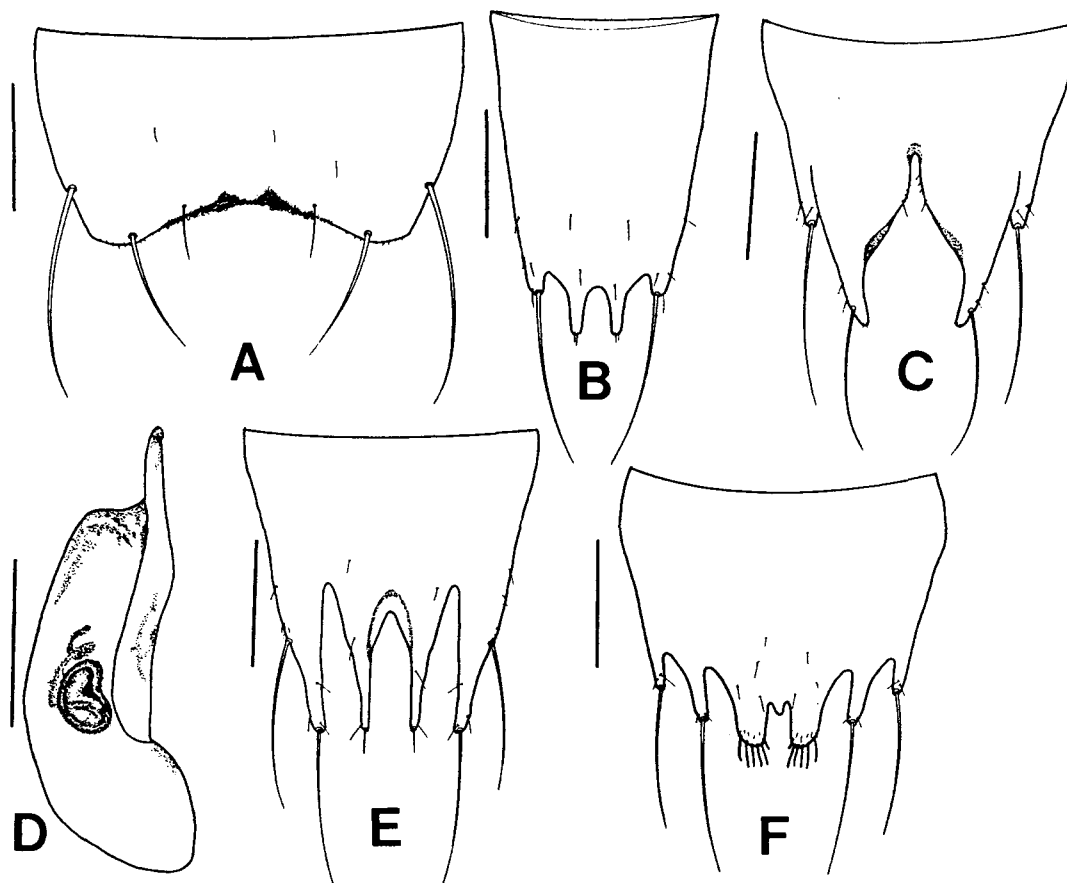


Fig. 1. *Tachinus marginatus* Gyllenhal. A, Male sternite VII; B, Male tergite VIII; C, Male sternite VIII; D, Male aedeagus; E, Female tergite VIII; F, Female sternite VIII. Scale bars = 0.5 mm.

1900: 495; Ullrich 1975: 118; Schülke 1995: 37.

Tachinus koreanus Bernhauer 1915: 75; Bernhauer & Schubert 1916: 482; Yuh *et al.* 1985: 251.

Diagnosis. Body length 6.5~7.5 mm. Head dark brown to black; pronotum and elytron brown to dark reddish brown; lateral and posterior margin of pronotum, and posterior margin of elytra yellowish light brown; elytra with one or two large yellowish light brown to orange spots at anterior region. Head about 0.84 times as long as wide. Antennomeres 1~4 glabrous; antennomere 10 about 1.5 times as long as wide; antennomere 11 about 1.5 times as long as 10. Maxillary palpomere 4 about 1.5~1.6 times as long as 3. Labial palpomere 3 about 1.3~1.5 times as long as 2. Pronotum about 0.50~0.65 times as long as wide. Elytra about 1.5~1.7 times as long as pronotum. Abdominal tergites III~IV with pruinose spots.

Male: Sternite VII (Fig. 1A) with granules near

posterior margins. Tergite VIII (Fig. 1B) with 4-lobes. Sternite VIII (Fig. 1C) with deep median emargination. Median lobe (Fig. 1D) long and slender. Paramere slender and sinuate; slightly deflexed at apex.

Female: Tergite VIII (Fig. 1E) with 4-lobed, inner lobes as long as outer lobes. Sternite VIII (Fig. 1F) with 6-lobed and large triangular process between inner lobes.

Material examined. KOREA: Chungcheongbuk-do, Youngdong-gun, Mt. Minjujisan, 4 X 1997, Y. B. Cho (2 ♂♂, 1 ♀); 7 X 1997 (1 ♂, 1 ♀); Okcheon-gun, Whanpyeong-ri, 18 V 1998 (1 ♂); Iwon, 21 X 1995 (1 ♂); Chungcheongnam-do, Geumsan-gun, Majeon, ? X 1996 (2 ♀♀); Gyeongsangbuk-do, Jinnam-gun, Mt. Woonjangsan, 18 V 1995 (5 ♂♂, 3 ♀♀); Mungyeongsaejae, Suok-ri, 30 V 1996 (14 ♂♂, 15 ♀♀); Gyeongsangnam-do, Hamyang, Mt. Baekunsan, 30-31 V 1997 (1 ♂); 22 V 1999 (1 ♀); Jeonlabuk-do, Seolcheon-myeon, Mt. Deokyusan, Temple Bae-

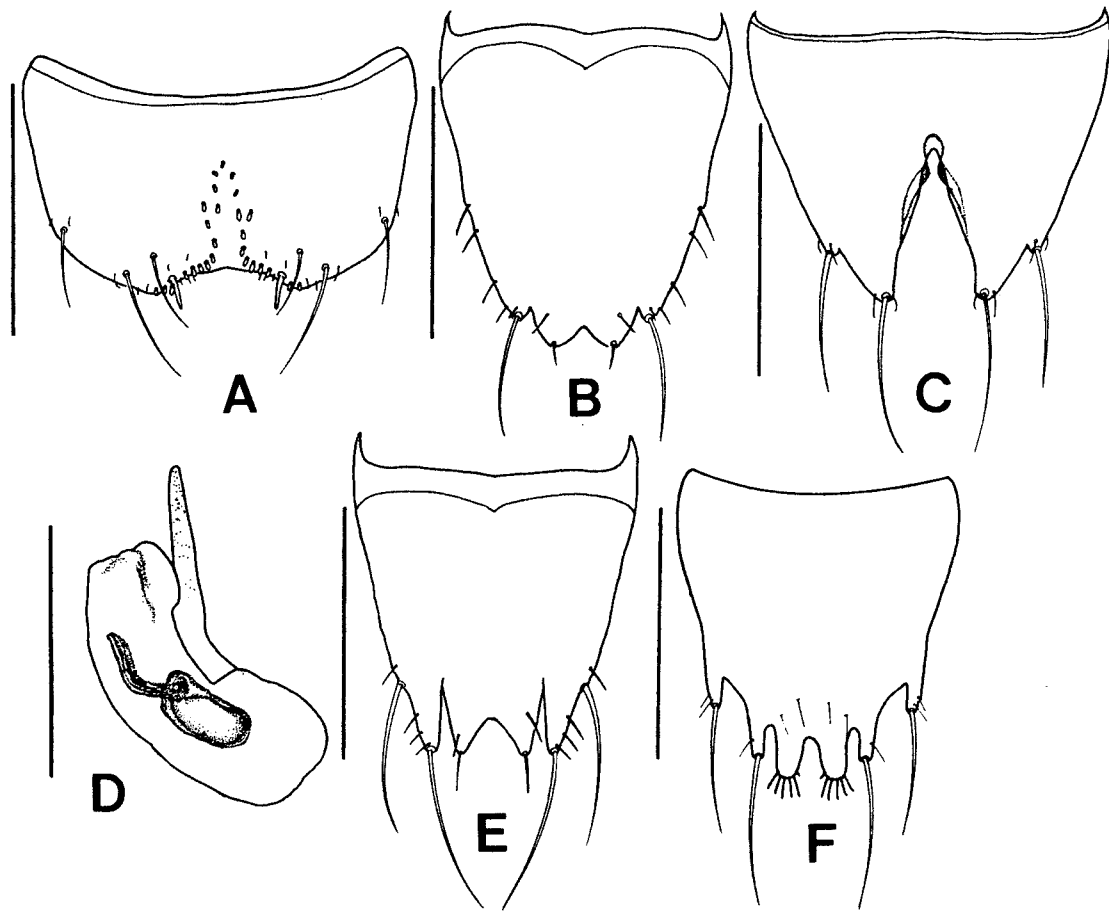


Fig. 2. *Tachinus nigriceps* Sharp. A, Male sternite VII; B, Male tergite VIII; C, Male sternite VIII; D, Male aedeagus; E, Female tergite VIII; F, Female sternite VIII. Scale bars = 0.5 mm.

kyangsa, 16 VI 1999, D.S. Kim (2♂♂, 3♀♀).

Distribution. Korea, Russia (Siberia), China.

Remarks. Ullich (1975) treated *Tachinus koreanus* Bernhauer as a synonym of *Tachinus marginatus* Gyllenhal. The species is distinguished from other Korean species by large spots of elytra and female sternite VIII (Fig. 1F) with triangular process.

2. *Tachinus (Tachinoderus) nigriceps* Sharp 1888 꼬마뽕족반날개 (신칭) (Fig. 2)

Tachinus nigriceps Sharp 1888: 384; Bernhauer & Schubert 1916: 484; Adachi 1957: 24; Ullich 1975: 315; Li 1995: 209.

Diagnosis. Body length 2.8~3.3 mm. Head brown to dark brown; pronotum yellowish brown to reddish brown; antennae and legs reddish brown; elytra and abdomen brown to dark brown. Head about 0.85 times as long as wide. Antennae long; antennomeres 1~2 glabrous; antennomere

10 about 1.1 times as long as wide; antennomere 11 about 1.7 times as long as 10. Maxillary palpomere 4 about 1.7~1.8 times as long as 3. Labial palpomere 3 about 1.7 times as long as 2. Pronotum about 0.5 times as long as wide. Elytra about 1.7~1.9 times as long as pronotum.

Male: Sternite VII (Fig. 2A) with large granules near middle area. Tergite VIII (Fig. 2B) with short 4-lobes. Sternite VIII (Fig. 2C) with deep median emargination. Median lobe (Fig. 2D) rounded. Paramere straight and gradually slender.

Female: Tergite VIII (Fig. 2E) with 4-lobes; inner lobes as long as outer lobes. Sternite VIII (Fig. 2F) with 6-lobes; inner lobes with 5 short setae in apical margins; median and outer lobes with long setae.

Material examined. KOREA: Gangwon-do, Wonju, Mt. Chiaksan, 10 VII 1999, H.-J. Kim (14♂♂, 7♀♀); Hwacheon-gun, Mt. Hwaaksan,

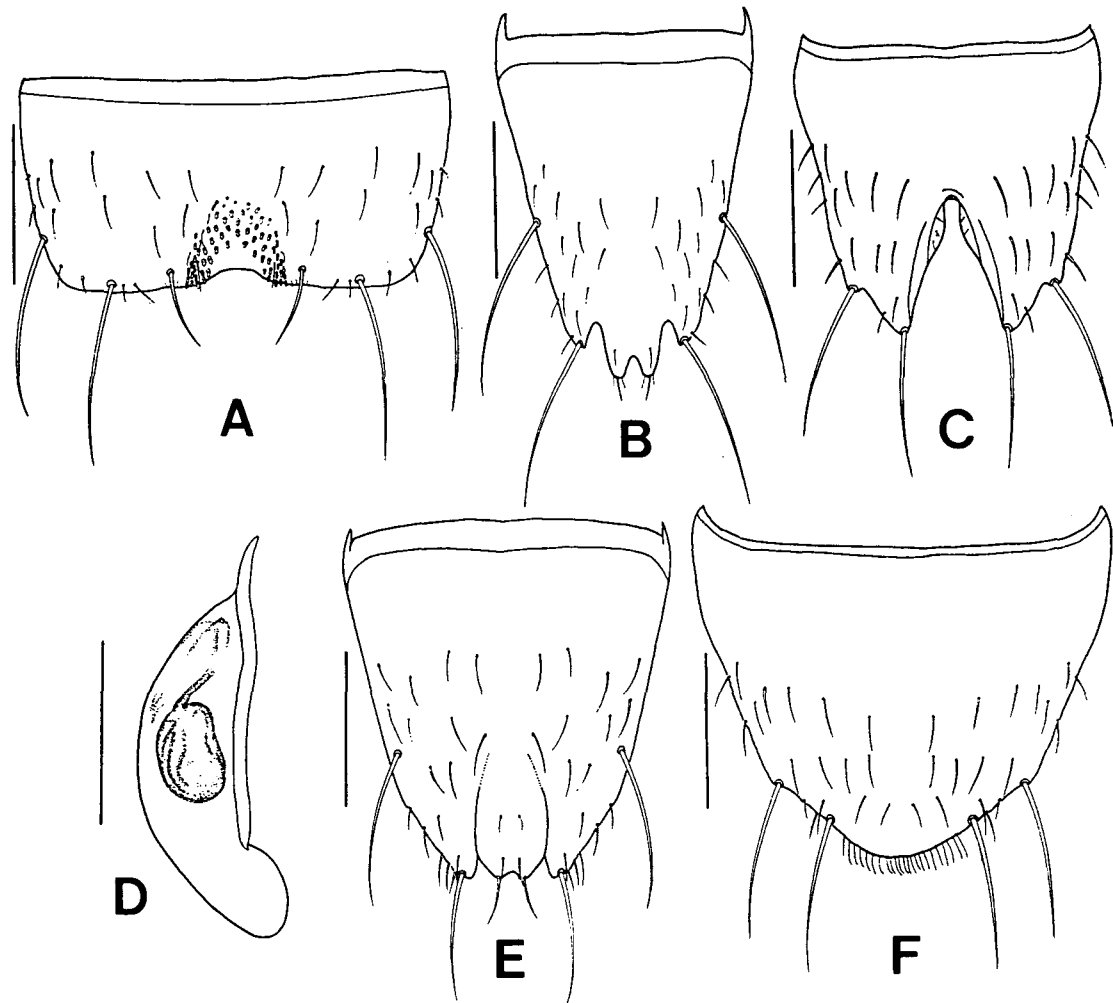


Fig. 3. *Tachinus sharpi* Bernhauer and Schubert. A, Male sternite VII; B, Male tergite VIII; C, Male sternite VIII; D, Male aedeagus; E, Female tergite VIII; F, Female sternite VIII. Scale bars = 0.5 mm.

30 VI~2 VII 1998, K.-L. You (1 ♂); Gyeonggi-do, Yangpyeong-gun, Mt. Yongmunsan, 2~4 VII 1998 (1 ♂); Namyangju, Mt. Chukryeongsan, 13 IX 1999, H.-J. Kim (15 ♂♂, 23 ♀♀); Chungcheongnam-do, Gongju, Mt. Gyeryongsan, 8 VIII 1997, Y.B. Cho (1 ♂); Hongseong-gun, Mt. Oseosan, 20 VI 1999, H.-J. Kim (4 ♂♂, 3 ♀♀); Daejeon, Secheon-dong, 17 VIII 1999 (2 ♂♂, 1 ♀); Daejeon, Sutonggol, 9 V 1998, K.-L. You (1 ♂); Gyeongsangbuk-do, Jinan-gun, Mt. Woonjansan, 19 V 1998, Y.B. Cho (4 ♂♂, 4 ♀♀); Gyeongsan, Mt. Palgongsan, 12 VI 1998 (2 ♂♂, 2 ♀♀); Euisong-gun, Mt. Sunamsan, 24 VI 1998 (2 ♂♂, 1 ♀); Gaknam-myeon, Mt. Whaaksan, 11 VI 1998 (5 ♂♂, 3 ♀♀); Mungyeongsaejae, 22 V 1999 (3 ♂♂, 1 ♀); Gyeongsangnam-do, Ulsan, Mt. Gajisan, 15 V 1999 (4 ♂♂, 2 ♀♀); Jeonlabuk-do, Seolcheon-myeon, Mt. Deokyusan,

Temple Baekyangsa, 28-29 V 1999 (6 ♂♂, 2 ♀♀); Namwon, Sandong-myeon, Mt. Cheonhwangsan, 10~11 VI 1999 (2 ♂♂, 1 ♀); Jeonlanam-do, Jangseong-gun, Mt. Taecheongsan, 10 VII 1998 (1 ♀); Seungju, Mt. Jogyesan, 12 VII 1998 (3 ♂♂); Jeju, Seogwipo, 20 VII 1986, K. S. Lee (1 ♂, 2 ♀♀); Donnaeko, 22 X 1986 (1 ♂, 1 ♀); Gyore-ri, 10 V 1985 (1 ♂, 1 ♀).

Distribution: Korea, Japan.

Remarks: The species is distinguished from other Korean species by small size, antennomeres 1~2 glabrous, and male sternite VIII with large granules in median area.

**3. *Tachinus (Tachinus) sharpi*
Bernhauer & Schubert 1916**
샤프뽀족반날개 (신칭) (Fig. 3)

Tachinus sharpi Bernhauer & Schubert 1916:

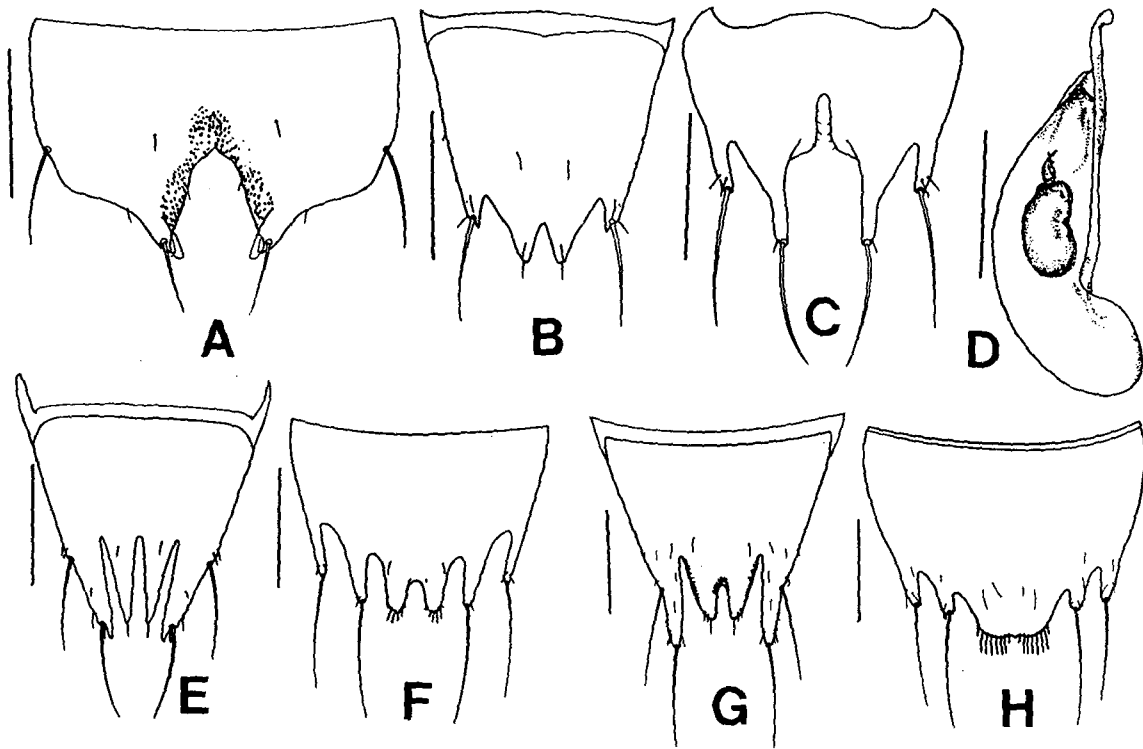


Fig. 4. *Tachinus sibiricus* Sharp. A, Male sternite VII; B, Male tergite VIII; C, Male sternite VIII; D, Male aedeagus; E, Female tergite VIII; F, Female sternite VIII; *Tachinus yezoensis* Li. G, Female tergite VIII; H, Female sternite VIII. Scale bars = 0.5 mm.

436; Adachi 1957: 25; Ullrich 1975: 227; Schülke 1995: 37; Li 1995: 69.

Tachinus luridus Erichson 1840: 920; Sharp 1888: 381; Campbell 1973: 40.

Diagnosis. Body length 5.0~6.5 mm. Head and abdomen dark brown; elytra and legs light reddish brown; posterior margins of elytra dark brown. Head about 0.8 times as long as wide. Antennomeres 1~4 glabrous; antennomere 10 about 1.1 times as long as wide; antennomere 11 about 1.7~1.8 times as long as 10. Maxillary palpomere 4 about 1.9~2.2 times as long as 3. Labial palpomere 3 about 1.7 times as long as 2. Pronotum about 0.6 times as long as wide. Elytra about 1.6 times as long as pronotum. Abdominal tergites III~IV with pruinose spots; tergites IV~VIII with lateral bristles.

Male: Sternite VII (Fig. 3A) with granule region in median area; granules arranged semi-circle-shape. Tergite VIII (Fig. 3B) with 4-lobes. Sternite VIII (Fig. 3C) with deep emargination; inner lobes broad. Median lobe (Fig. 3D) long and slender. Paramere slender and sinuate.

Female: Tergite VIII (Fig. 3E) with 3-lobes; inner lobe broad with 2 setae. Sternite VIII (Fig.

3F) with all lobes fused one another; broad lobe with many short setae in apical margin and 4 long setae.

Material examined. KOREA: Gangwon-do, Pyeongchang-gun, Mt. Odaesan, 7-9 VII 1998, K.-L. You and H.-J. Lim (1 ♂, 1 ♀); Gyeong-sangbuk-do, Danyang-gun, Mt. Sobaeksan, 7-8 V 1999, H.-J. Kim and U.-S. Hwang (1 ♂, 2 ♀); Chungcheongnam-do, Gongju, Temple Donghaksa, 26 V 1983, Y. B. Cho (1 ♀); 6 VI 1983 (1 ♀).

Distribution. Korea, Russia (Siberia), China, Japan.

Remarks. The species is distinguished from other Korean species by abdominal tergites IV~VIII with lateral bristles and female sternite VIII with one broad lobe.

4. *Tachinus (Tachinus) sibiricus* Sharp

1888 북방뽕족반날개 (Fig. 4)

Tachinus sibiricus Sharp 1888: 383; Bernhauer & Schubert 1916: 487; Adachi 1957: 25; Ullrich 1975: 168; Watanabe & Shibata 1985: 314; Yuh et al. 1985: 251; Schülke 1995: 37; Li 1995: 62.

Tachinus bidens Sharp 1888: 380; Adachi 1957:

Table 1. The differences among members of Korean *Tachinus*

	<i>T. marginatus</i>	<i>T. nigriceps</i>	<i>T. sharpi</i>	<i>T. sibiricus</i>	<i>T. yezoensis</i>
glabrous antennomeres	1-4	1-2	1-4	1-4	1-4
Male sternite VII	As in Fig. 1A	As in Fig. 2A	As in Fig. 3A	As in Fig. 4A	
Female tergite VIII	4-lobes	4-lobes	3-lobes	4-lobes	4-lobes
Female sternite VIII	6-lobes triangular process	6-lobes	fused	6-lobes	inner lobes almost fused
Male aedeagus	As in Fig. 1D	As in Fig. 2D	As in Fig. 3D	As in Fig. 4D	

24.

Diagnosis. Body length 4.5~5 mm. Head and abdomen dark brown; lateral margins of pronotum, posterior margins of elytra, and bases of antenna brown to reddish brown; Head about 0.8 times as long as wide. Antennomeres 1~4 glabrous; antennomere 10 about 1.3 times as long as wide; antennomere 11 about 1.5 times as long as 10. Maxillary palpomere 4 about 1.8~2.2 times as long as 3. Labial palpomere 3 about 2.0~2.2 times as long as 2. Pronotum about 0.6 times as long as wide. Elytra about 1.7 times as long as pronotum. Abdominal tergites III~IV with pruinose spots.

Male: Sternite VII (Fig. 4A) with large spoon-shaped seta; granule region present around emargination. Tergite VIII (Fig. 4B) with 4-lobes. Sternite VIII (Fig. 4C) with deep emargination; inner lobes distinctly separated and parallel each other. Median lobe (Fig. 4D) long and rounded. Paramere slender and long; strongly curved at apex.

Female: Tergite VIII (Fig. 4E) with 4-lobes; inner lobes shorter than outer lobes; length of median emargination same as lateral. Sternite VIII (Fig. 4F) with 6-lobes; inner lobes with 4~5 short setae in apical margins; median and outer lobes with long setae.

Material examined. KOREA: Gangwon-do, Jeongseon-gun, Mt. Hambaeksan, 13 VII 1999, H.-J. Kim and U.-S. Hwang (4 ♂♂, 3 ♀♀); Wonju, Mt. Chiaksan, 10 VII 1999, H.-J. Kim (1 ♂, 1 ♀); Hongcheon-gun, Mt. Gyeongsan (900 m), 14 VII 1995, H.-C. Park (2 ♀♀); Pyeongchang-gun, Mt. Odaesan, 28-30 VIII 1998, K.-L. You and H.-J. Lim (1 ♂, 9 ♀♀); Taebaek, Mt. Taebaeksan, 1 VIII 1986, Y.B. Cho (1 ♂, 1 ♀); Chungcheongbuk-do, Youngdong-gun, Mt. Min-

jujisan, 7 IX 1997 (1 ♂); Gyeongsangbuk-do, Mt. Seondalsan (2 ♀♀); Danyang-gun, Mt. Sobaeksan, 7~8 V 1999, H.-J. Kim and U.-S. Hwang (2 ♂♂); Mungyeongsaesae, 22 V 1999, Y. B. Cho (6 ♂♂, 4 ♀♀); Gyeongsangnam-do, Ulsan, Mt. Gajisan, 10~15 V 1999 (1 ♂); Jeonlabuk-do, Seolcheon-myeon, Mt. Deokyusan, Temple Baekyangsa, 16 VI 1999, D.S. Kim (1 ♀).

Distribution. Korea, Russia (Siberia), China, Japan.

Remarks. The species is distinguished from other Korean species by male sternite VII with spoon-shaped seta and male paramere strongly curved at apex.

5. *Tachinus (Tachinus) yezoensis* Li 1995

큰갈색뽕족반날개 (신칭) (Fig. 4)

Tachinus yezoensis Li 1995: 67.

Diagnosis. Body length 5.5 mm. Head dark brown; pronotum and abdomen dark reddish brown; elytra reddish brown. Antennomeres 1~4 glabrous.

Female: Tergite VIII (Fig. 4G) with 4-lobed; inner lobes much shorter than outer lobes, Sternite VIII (Fig. 4H) with 5-lobes; broad inner lobe with many short setae at apical margin.

Material examined. KOREA: Jeonlanam-do, Mt. Jirisan, 4 VI 1984, Y.B. Cho (1 ♀).

Distribution. Korea, Japan.

Remarks. The species is distinguished from other Korean species by female tergite VIII with short inner lobes and female sternite VIII with broad inner lobe.

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한국산 시베리아뽕족반날개속(곤충강: 딱정벌레목: 반날개과)의 분류학적 재검토

김혜진·안기정

(충남대학교 자연과학대학 생물학과)

적요 - 한국산 시베리아뽕족반날개속에 대한 분류학적 재검토를 시도하였다. 3종의 한국산 미기록종이 밝혀졌다 [*Tachinus (Tachinoderus) nigriceps* Sharp, *Tachinus (Tachinus) sharpi* Bernhauer & Schubert, and *Tachinus (Tachinus) yezoensis* Li]. 한국산 시베리아뽕족반날개속은 총 5종이 되며, 종 기재를 하였고 진단 형질을 도식하였다.