Studies on the Flies in Korea
1. On the Unreported Species of "*Sarcophagidae*" and "*Calliphoridae*" (Diptera) in Korea

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韓國産 파리의 硏究

第一報 쉬파리科와 검정파리科의 未記錄種에 對하여

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摘 要

1. 大邱隣近産 *Sarcophagidae* 와 *Calliphoridae* 約 6,000餘個體를 採集한바 9屬 34種을 얻었는데 이 中에는 *Sarcophagidae*의 韓國未記錄 1屬 10種과 *Calliphoridae* 韓國未記錄 2屬 2種이 있었다.

2. 筆者가 追加한 15種과 小林('18, '22, '24, '25, '29, '39, '40)와 堀('52)에 依해 報告된 旣知種과 합하면 韓國産 *Sarcophagidae*는 1屬 26種, *Calliphoridiae* 는 8屬 14種이 된다.

Flies are one of the most important insects since they can transmit pathogens of varicus diseases to human and animal.

A scientific research on the flies is thus an imperative one. As an initial step toward a thorough investigation of this group of insects the author has chosen to study two most important fly families, namely, "*Sarcophagidae*" and "*Calliphoridae.*"

Studies on the flies in Korea have been made by Kobayashi chiefly frcm the ecolcgical aspects, and by Hori from the systematic aspects during the period of 1918 to 1945.

Kobayashi ('18, '22, '24, '25, '29, '39, '40) reported 6 families, 12 genera and 19 species of flies in Korea.

Hori('52) made an extensive study on systematics of Korean flies, and added a list of 5 genera and 25 species of flies in Korea.

During the period of April, 1960 the author had made an intensive collection of flies in near-by Tae gu and a total of 4,844 specimens of "*Sarcophagidae*" and 1,922 of "*Calliphoridae*" was assembled.

A close examination of the collected specimens revealed that 3 species of "*Sarcophaga*" were new and 10 species of the genus were hitherto unreported from Korea. Two species from two separate genera of "*Calliphoridae*" were also of unnoted from Korea.

The present paper describes these unrecorded species of Korean flies which belcng to the two families.

Descriptions

Family SARCOPHAGIDAE

Subfamily SARCOPHAGINAE

Tribe SARCOPHAGINI

Genus SARCOPHAGA MEIGEN

Syst. Beschr., v, p. 14, 1826

Sarcophaga Caudagalli BOETTCHER (Boettcher 1912:-Ent. Mitteil., i, p. 167-168.)

Male

Body length: 9mm

Head: Front about 1/2 as wide as one eye; parafrontal about 3/4 as wide as frontal vitta; antennae black and length of 2nd segment about 2/3 that of 3rd.

Thorax: Acrostichals 0+1; dorsocentrals 2+3.

Abdomen: 1 pair of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles and 3 pairs of lateral marginal bristles on 4th tergite; genitalia as shown in Pl. I(1-3).

Localities: Go-san-gol. Distribution: Japan.

Sarcophaga musashinensis KANO et OKAZAKI (Kano et Okazaki 1956:-Tokyo Med. & Dent. Univ., iii-1, p. 77.)

Male

Body length: 10 to 12mm

Head: Front about 2/3 as wide as one eye; antennae black and length of 2nd segment about 3/4 that of 3rd.

Thorax: Acrostichals 0+1; dorsocentrals 2+3.

Abdomen: 3 pairs of lateral marginal bristles each on 2nd and 3rd tergites; 5 pairs of lateral marginal bristles and 1 pair of median marginal bristles on 4th tergite; genitalia as shown in Pl. I(4-7).

Localities: San-geuk, Mt. Ka-ya. Distribution: Japan(Honshu, Kyushu).

Sarcophaga basalis WALKER (Walker 1859:-Linn. Soc. Lond., iii, p, 129.)

Male

Body length: 19 to 20mm.

Head: Front about 2/3 as wide as one eye; antennae black and length of 2nd segment about 3/4 that of 3rd.

Thorax: Acrostichals 4+2; dorsocentrals 4+4.

Abdomen: 1 pair of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles and 2 pairs of lateral marginal bristles on 4th tergite; genitalia as shown in Pl. I(12-15).

Localities: Mt. Pal-gong. Distribution: Japan.

Remarks: This species is one of the biggest among the *Sarcophaga*.

Sarcophaga pingi HO (Ho 1912:- Bull. Fan. Mem. Inst. Biol., v, p. 19.)

Male

Body length: 6 to 8mm.

Head: Front about 2/3 as wide as one eye; antennae black and length of 3rd segment about twice that of 2nd.

Thorax: Acrostichals 0+1; dorsocentrals 3-4+3-4.

Abdomen: 1 pair of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles and 3 pairs of lateral marginal bristles on 4th tergite; 5th sternite covered with moderately long hairs; genitalia as shown in Pl. I(16-19).

Localities: Pa-ge Temple, Go-san-gol, Mt. Ju-am, Mt. Pal-gong. Distribution: China

Sarcophaga kinoshitai HORI (Hori 1954:- Sci. Rep. Kanazawa Univ., ii-2, p. 3.)

Male

Body length: 13mm

Head: Front about 1/2 as wide as one eye; antennae black and length of 3rd segment about 3 times that of 2nd.

Thorax: Acrostichals 0+1; dorsocentrals 4-5+4.

Abdomen: 2 pairs of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles each on 3rd and 4th tergites; 3 pairs of lateral marginal bristles on 4th tergite; genitalia as shown in Pl. I(20-23).

Localities: Mt. Pal-gong, Mt. Ka-ya. Distribution: Japan(Honshu).

Sarcophaga harpax PANDELLE (Pandelle 1896:- Rev. Ent. Fr., xv, p. 189.)

Male

Body length: 14 to 16mm.

Head: Front about 2/3 as wide as one eye; antennae black and length of 3rd segment about two times that of 3rd.

Thorax: Acrostichals 0+1; dorsocentrals 4-5+4.

Abdomen: 1 pair of lateral marginal bristles each on 2nd and 3rd tergite; 1 pair of median marginal bristles and 4 pairs of lateral marginal bristles on 4th tergite; genitalia as shown in Pl. I(24-27).

Localities: Bong-duk, Mt. Ju-am, Pa-ge Temple, Mt. Pal-gong, Mt. Ka-ya, Go-san-gol.

Distribution: Japan, Formosa, Philippines, Ceylon, Singapore, Guam, Africa, Europe, Hawaii, N. America.

Sarcophaga orchidea BOETTCHER (Boettcher 1913:- Ann. Mus. Nat. Hung. xv, p. 375.)

Male

Body length: 11 to 14mm.

Head: Front about 2/3 as wide as one eye; antennae black; and length of 3rd segment about twice that of 2nd; parafrontal about 1/2 as wide as frontal vitta.

Thorax: Acrostichals 0+1; dorsocentrals 3-4+3-4.

Abdomen: 2 pairs of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles and 3 pairs of lateral marginal bristles on 4th tergite; genitalia as shown in Pl. II(28-30).

Localities: Ga-chang, Mt. Ju-am, San-geuk, Mt. Ji-li, Mt. Dae-duk, Pa-ge Temple, Mt. Pal-gong, Mt. Ka-ya, Mt. Choejeung.

Distribution: Burma, Ceylon, India, New Guinea.

Sarcophage tuberosa PANDELLE (Pandelle 1896:- Rev. Ent. Fr., xv, p. 192.)

Male

Body length: 13 to 15mm

Head: Front about 2/3 as wide as one eye; width of frontal vitta about twice that of parafrontal; antennae black and length of 3rd segment about twice that of 2nd.

Thorax: Acrostichals 0+1; dorsocentrals 4+4-5.

Abdomen: 2 pairs of lateral marginal bristles each on 2nd and 3rd tergites; 3 pairs of lateral marginal bristles and 1 pair of median marginal bristles on 4th tergite; genitalia as shown in Pl. Ⅱ (31-34).

Localities: Mt. Pal-gong, Go-san-gol, Ga-chang.

Distribution: Japan(Honshu, Kyushu), Formosa, Malay, N. Africa, N. America.

Sarcophaga schuetzei KRAMER (Kramer 1909:- Ent. Rundschau, xxvi, p. 14.)

Male

Body length: Front about 1/2 as wide as one eye; frontal vitta about twice as wide as parafrontal; antennae black, 3rd segment with brownish pollen and length of 3rd segment about twice that of 2nd.

Thorax: Acrostichals 0+1; dorsocentrals 4-5+4.

Abdomen: 2 pairs of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles and 4 pairs of lateral marginal bristles on 4th tergite; genitalia as shown in Pl. Ⅱ (35-38).

Localities: Mt. Pal-gong. Distribution: Japan, Germany, Triest, Slovakia, Ukraina.

Sarcophaga shiritakaensis HORI (Hori 1954:- Rep. Kanazawa Univ., ii-2, p. 5.)

Male

Body length: 17mm

Head: front about 1/2 as wide as one eye; frontal vitta black, about twice that of parafrontal width; antennae black, length of 3rd segment about twice that of 2nd.

Thorax: Acrostichals 0+1; dorsocentrals 3-4+4-5.

Abdomen: 3 pairs of lateral marginal bristles each on 2nd and 3rd tergites; 1 pair of median marginal bristles and 4 pairs of lateral marginal bristles on 4th tergite; ganitalia as shown in Pl. Ⅱ (39-42).

Localities: Mt. Pal-gong. Distribution: Japan(Hokkaido, Honshu).

Family CALLIPHORIDAE

Subfamily PHORMIINAE

Tribe CHRYSOMYINI

Genus CHRYSOMYA POBINEAU-DESVOIDY

Myod. p. 444, 1839

Chrysomya pinguis (WALKER) (Walker 1858:- Trans. Ent. Soc. Lond., p. 213.)

Male

Body length: 8 to 10mm

Head: Eye holoptic; front narrowest; front vitta blackish brown; parafrontals and parafacials brown and with golden pollen antennae with brownish orange, length of 3rd segment about 3 times that of 2nd; postocular setae black; palpi orange.

Thorax: Scutum metalic bluish green and covered with grayish pollen anteriory; acrostichals 0+1; dorsocentrals 2+3-4.

Abdomen: Shining bluish green; posterior margins of dark banded; genitalia as shown in Pl. Ⅱ (43-46).

Localities: Mt. Dae-duk, Mt. Ju-am, Mt. Pal-gong, Go-san-gol, Mt. Ka-ya.

Distribution: Japan(Honshu, Kyushu, Shikoku).

Remarks: Most obese and biggest among blow flies. Easily distinguishable by metalic bluish and general appearance.

Genus HEMIPYRELLIA TOWNSEND

Hemipyrellia ligurriens(WIEDEMANN) (Wiedemann 1830:-Ausser. Zweifl. Ins., ii. p. 655.)

Male

Body length: 7 to 8mm

Head: Front about 1/5 as wide as one eye; frontal vitta about equal as wide as parafrontals and parafacials; antennae brown, length of 3rd segment about 5 times that of 2nd; palpi orange.

Thorax: Shiny green; acrostichals 2+2; dorsocentrals 3+3;

Abdomen: Posterior margin of 2nd and 3rd segment bluish darkened; genitalia as shown in Pl. Ⅱ (47-49).

Localities: Mt. Ju-am. Distribution: Japan.

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Plate I.

1. *S. caudagalli* Phallosomes.
2. *S. c.* Parameres.
3. *S. c.* Forceps.
4. *S. musashinensis* Phallosomes.
5. *S. m.* Ejaculatory Apodemes.
6. *S. m.* Parameres.
7. *S. m.* Forceps.
8. *S. koreansis* Phallosomes.
9. *S. k.* Ejaculatory Apodemes.
10. *S. k.* Parameres.
11. *S. k.* Forceps.
12. *S. basalis* Phallosomes.
13. *S. b.* Ejaculatory Apodemes.
14. *S. b.* Parameres.
15. *S. b.* Forceps.
16. *S. pingi* Phallosomes.
17. *S. p.* Ejaculatory Apodemes.
18. *S. p.* Parameres.
19. *S. p.* Forceps.
20. *S. kinoshitai* Phallosomes.
21. *S. k.* Ejaculatory Apodemes.
22. *S. k.* Parameres.
23. *S. k.* Forceps.
24. *S. harpax* Phallosomes.
25. *S. h.* Ejaculatory Apodemes.
26. *S. h.* Parameres.
27. *S. h.* Forceps.

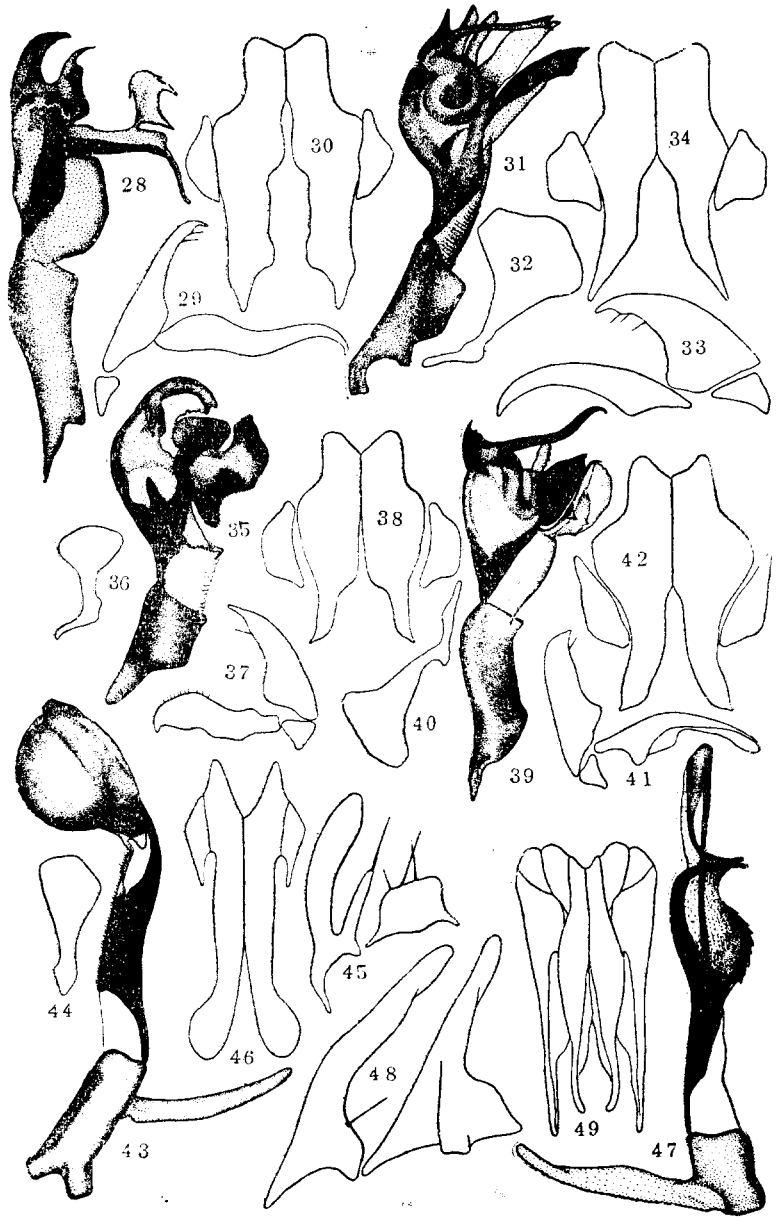

Plate II.

28. *S. orchidea* Phallosomes.
29. *S. o.* Parameres.
30. *S. o.* Forceps.
31. *S. tuberosa* Phallosomes.
32. *S. t.* Ejaculatory Apodemes.
33. *S. t.* Parameres.
34. *S. t.* Forceps.
35. *S. schutzei* Phallosomes.
36. *S. s.* Ejaculatory Apodemes.
37. *S. s.* Parameres.
38. *S. s.* Forceps.
39. *S. shiritakaensis* Phallosomes.
40. *S. s.* Ejaculatory Apodemes.
41. *S. s.* Parameres.
42. *S. s.* Forceps.
43. *Chrysomya pinguis* Phallosomes.
44. *C. p.* Ejaculatory Apodemes.
45. *C. p.* Parameres.
46. *C. p.* Forceps.
47. *Hemipyrellia ligurrens* Phallosomes
48. *H. l.* Parameres.
49. *H. l.* Forceps.