Fig. 27. First to fifth sternites of female of *M. tsukamotoi*

Fig. 28. Tergites of ovipositor of *M. tsukamotoi*

Fig. 29. Sternites of ovipositor of *M. tsukamotoi*

Fig. 30. Spermatheca of *M. tsukamotoi*

fall have usually yellow femora, yellow humerus and yellow pattern of abdomen. Some inter-

mediate types of them are found in summer and fall. Differentiation from related species is shown in Table 1.

Key to three new species of *Melinda*

- 1) Tibiae black, anterior part of wing dark brown *M. tsukamotoi*
Tibiae yellow or brown, base of wing light brown or yellow (2)
- 2) Femora black *M. itoi*
Femora yellow or orange *M. okazakii*

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DESCRIPTIONS OF TWO NEW SPECIES OF SARCOPHAGID FLIES (DIPTERA: SARCOPHAGIDAE) FROM KOREA

By

Soung Ho Park

During the period from April of 1959 to September of 1961, the author had made an intensive collection of flies from Korea totaling 5,892 specimens of *Sarcophaga*.

A close examination of the specimens revealed that three species of *Sarcophaga* were new and one of these species was published in the Japanese Journal of Sanitary Zoology (Vol. XII, No. 2) in collaboration with Dr. Rokuro, Kano,

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Professor of Tokyo Medical and Dental University.

The author will describe two new species in this paper.

1. *Sarcophaga kanoi* n. sp.

Korean name: *Kanap-shuepali*

MALE

Body length: 10 to 15 mm

Head: Front about 1/2(26:45) as wide as

one eye; frontal vitta black; width of frontal vitta about twice that of parafrontal; parafrontals and parafacials with golden pollen; frontal bristles 11-12 pairs; antennae black, 3rd segment with brownish pollen and length of 2nd segment about $1/2$ (10:22) that of 3rd; bucca with numerous black hairs; 3 regular rows of black setae present on postocular part; metacephalon with grayish white hairs; palpi black.

Thorax: Scutum with golden or grayish pollen and with 3 black longitudinal stripes; acrostichals 0+1; dorsocentrals 4-5+4-5.

Wings: Costal spine indistinct; ventral side with 5 setae on the basal node of r_{4+5} ; r_{4+5} with 10 setae located dorsally about half way from basal node to r-m.

Legs: Black; fore femur with a pair of rows of bristles on dorsal surface and with a row of bristles on ventral surface; mid femur with a pair of rows of short bristles on ventral surface, 4 pairs curved present at apex on ventral surface; hind femur with a pair of rows of bristles each on dorsal surface and ventral surface and with numerous long hairs curved at apex on ventral surface; hind tibia with 3 pairs of long bristles on dorsal surface and with numerous long hairs curved at apex on ventral surface.

Abdomen: With black and gray checkered pattern; a pair of lateral marginal bristles each on 2nd and 3rd tergites; 4-6 pairs of lateral marginal bristles and one pair of median marginal bristles on 4th tergite; 5th tergite with a continuous row of marginals; 1st genital tergite with black and grayish pollen and without marginals; 2nd genital tergite shiny black; 1st and 2nd genital tergites with numerous weak black hairs; genitalia as shown in Fig. 1 (A-E).

TYPES

Holotype: Male; Mt. Pal-gong (Taegu, Korea); August 16, '60; collected by the author, the type specimen is preserved in collection of the author.

Paratype: Mt. Pal-gong (14 males, May 3, '59; 12 males, July 13, '59; 1 male, June 1, '60; 1 male, June 16, '60; 3 males, July 20, '60; 2 males, August 20, '60; 59 males, July, 10, '60; 36 males May 12, '59) Mt. Kaya (4 males, August 1-5, '60; 1 male, August 30, '60; 2 males, September 12, '60) Mt.

Choe-jeung (2 males, Aug. 3, '60; 1 male, July 1-10, '59) Go-san-gol (5 males, June 3, '60; 1 male, June 19, '60) Mt. Ju-am (1 male, June 10, '60; 1 male, August 29, '59) Mt. Huang-ach (21 males, June 11, '60) Mt. Songli (19 males, July 21-25, '61); collected by the author.

Remarks: This species was commonly found in mountains of Taegu and vicinities. Though this species is closely related to *Sarcophaga tsushimae*, it differs from *S. tsushimae* (Fig. 2) by the shape of the Phallosome.

The specific trivial name of the present species was dedicated to Dr. Rokuro Kano by the author to express his appreciation.

2. *Sarcophaga kayaensis* n. sp.

Korean name: *Kaya-shuepali*

MALE

Body length: 12 mm

Head: Front about $2/3$ (22:35) as wide as one eye; frontal vitta black; frontal vitta about 2 times as wide as parafrontal; parafrontals and parafacials with golden pollen; frontal bristles 9 pairs; bucca with goldenly pollinose and with black hairs; antennae black and length of 3rd segment twice that of 2nd; metacephalon with grayish white hairs; 2 rows of black setae present on postocular part; palpi black.

Thorax: Scutum with grayish pollen and with 3 black longitudinal stripes; acrostichals 0+1; dorsocentrals 3+4.

Wings: Costal spine distinct; r_1 without setae; ventral side with 5 setae on the basal node r_{4+5} ; r_{4+5} with 9 setae located dorsally about half way from basal node to r-m.

Legs: Black; fore femur with a row of bristles each on dorsal surface and ventral surface; mid femur a pair of rows of bristles on ventral surface and with numerous long hairs on the posteroventral surface; hind femur with a pair of rows of bristles on dorsal surface and with long hairs on ventral surface; hind tibia with 3 pairs of long bristles on dorsal surface and with long hairs on ventral surface.

Abdomen: With black and gray checkered pattern; one pair of lateral marginal bristles on 2nd tergite; 2 pairs of lateral marginal bristles on 3rd tergite; one pair of median marginal bristles and 4 pairs of lateral marginal bristles

Fig. 1 Male genitalia of *Sarcophaga kanoi* n. sp.

A : Phallosomes B : Parameres
D : 5th sternite E : Forceps

Fig. 2 Male genitalia of *Sarcophaga tsushimae*

C : Ejaculatory apodemes

Fig. 3 Male genitalia of *Sarcophaga kayaensis* n. sp.

A : Phallosomes B : Parameres
D : Forceps

Fig. 4 Male genitalia of *S. ugamskii*

C : Ejaculatory apodemes

on 4th tergite; 1st genital tergite with grayish pollen and without marginals; 2nd genital tergite shiny black; 1st and 2nd genital tergites with black weak hairs; genitalia as shown in Fig. 3 (A—D).

TYPES

Holotype: Male; Mt. Song-li (Chung-pook prefecture), July 21–25, '61; collected by the author, and type specimen is preserved in collection of the author.

Paratypes: 1 male, Ga-chang (Taegu), July 8, '59; 1 male, Mt. Ka-ya, August 8, '60; 1 male, Song-li, July 21–25, '61; collected by the author.

DISCUSSION and CONCLUSION

1) *Sarcophaga kanoi* n. sp. appears somewhat similar to *S. tsushimae* in the external features but the genital features of the latter described by Senior-White (1924, 1940) did not agree with those of the former. The author obtained 6 specimens of *Sarcophaga tsushimae* which were collected in Hokkaido by Dr. Kano and compared them with the *Sarcophaga kanoi* n. sp. The two groups of specimens were quite different. According to Dr. Kano's letter, his specimens were identical to Senior-White's illustration.

Rohdendorf (1937) also described a species of the fly, *S. tsushimae*, but after a close examination of features of the phallosomes illustrated in his paper, the author found that it was more like the author's new species, *Sarcophaga kanoi* n. sp. rather than *S. tsushimae*. The author believes that Rohdendorf's *S. tsushimae* is identical with the new species, *Sarcophaga kanoi* n. sp.

Although Dr. Katsushige Hori (1952) reported *S. tsushimae* from specimens collected in Korea, the author revealed his collection and found only *Sarcophaga kanoi* n. sp. from his collected specimens. The author, thus, found some reason to suspect Dr. Hori's identification of the species as being incorrect. The author, therefore, had eliminated *S. tsushimae* from his present list.

2) A total of one genus and 27 species of Sarcophagidae were collected in this investigation in Korea.

These species are as following list.

1. *Sarcophaga albiceps* Meig., 1826
2. *S. basalis* Walk., 1859*
3. *S. caudagalli* Boett., 1912*
4. *S. crassipalpis* Macq., 1838
5. *S. haemorrhoidalis* Fall., 1816
6. *S. harpax* Pand., 1896*
7. *S. hozawai* Hori, 1954**
8. *S. josephi* Boett., 1912
9. *S. kanoi* n. sp.
10. *S. kayaensis* n. sp.
11. *S. kinoshitai* Hori., 1954*
12. *S. koreaensis* Kano et Park, 1961
13. *S. knabi* Park., 1917
14. *S. macroauliculata* Ho, 1932
15. *S. melanura* Meig., 1826
16. *S. misera* Walk., 1849
17. *S. musashinensis* Kano, 1956*
18. *S. orchidea* Boett., 1913*
19. *S. peregrina* R.-D., 1830
20. *S. pingi* Ho, 1934*
21. *S. polystylata* Ho, 1934**
22. *S. schuetzei* Kram., 1909*
23. *S. shiritakaensis* Hori, 1954*
24. *S. similis* Mead., 1876
25. *S. striata* (Fab., 1794)
26. *S. tuberosa* Pand., 1896*
27. *S. ugamskii* (Rohd., 1937)

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* These species were reported at the Korean Zoological Society in November 1960 as unreported species found in Korea.

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クロキンバエ (*Phormia regina*) の越冬

このハエは最近のイエール大学一派の研究で、小児マヒのウイルスを体内で増殖させることがたしかめられた。それでこのハエの越冬習性をしらべてみたのであるが、そもそも、Hewitt (1915) によるとハエの越冬には、1. ハエが冬中隠れ場所に不動で“眠っている”場合、2. 眠っているが時々温度の昇った場合に活動する場合、3. 冬でも活動する場合（これは南方地域に見られる）の3型があると云う。コネチカットのニューヘブレンでは、クロキンバエはこの第2の場合にあてはまり、ここでは“hibernation”（冬眠）というより“overwintering activity”（越冬活動）をしていると云った方がよさそうである。即ち 35°F 以上の場合はハエの活動は日中の日射量に關聯し、40°F 以下の曇った日には動かないでいるという。

(Wallis, R. C. 1962: Ent. News, 73, 1, 1-5 より、朝比奈正二郎)

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