Record of the sarcophagid flies (Diptera, Sarcophagidae) from Vietnam

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Abstract: Three subfamilies, three genera and 19 species of the sarcophagid flies collected by the authors during the survey of Monbusho International Co-operation Scientific Program in Vietnam are recorded. Three new species, *Sarcophaga (Lioproctia) vietnamensis* sp. nov., *S. (Parasarcophaga) owadai* sp. nov. and *S. (Parasarcophaga) dambriensis* sp. nov. are described and figured. *Sarcophaga (Phallosphaera) konakovi* (Rohdendorf), *S. (Robineauella) anchoriformis* (Fan), *Senotainia albifrons* (Rondani) and *S. navigatrix* (Meigen) are newly recorded from Vietnam.

Key words: Sarcophagidae, Vietnam, new species, new record

INTRODUCTION

Kano et al. (1999) reported 32 sarcophagid species from the northern part of Vietnam. Among them, 19 species were new records. Afterwards, the authors joined Monbusho International Co-operation Scientific Program by the National Science Museum, Tokyo and Institute of Ecology and Bioresources, NCNST, Vietnam in 2002. The present paper is a part of the result and records 16 sarcophagid species collected during the survey, including 3 new and 4 newly recorded species. Systematics of Sarcophagidae followed Pape (1996).

Subfamily MILTOGRAMMATINAE

Miltogramma angustifrons

(Townsend, 1933)

Specimens examined: 1 ♀, Dambri, 15 km NW Bao Loc, Lam Dong Prov., 29 May–1 June 2002, S. Shinonaga.

Miltogramma ibericum Villeneuve, 1912

Specimen examined: 1 ♀, Dambri, 15 km NW Bao Loc, Lam Dong Prov., 29 May–1 June 2002, S. Shinonaga; 1 ♀, Cuc Phuong, 120 km SW of Hanoi, Ninh Binh Prov., 13–14 June 2002, T. H. Thinh; 1 ♀, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 1 ♀, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, T. H. Thinh.

Senotainia albifrons (Rondani, 1859)

Specimen examined: 1 ♀, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga (new record from Vietnam).

Senotainia navigatrix (Meigen, 1919)

Specimens examined: 1 ♀, Dambri, 15 km NW Bao Loc, Lam Dong Prov., 29 May–1 June 2002, S. Shinonaga; 1 ♂, Deo Cao Pha, E. of Ban Song, Son La Prov., 7 June 1999, H. Kurahashi; 1 ♀, Deo Pha Din, Son La Prov., 6 June 1999, H. Kurahashi;

1 ♀, Pa Ham Waterfall, Muong Lay, Lai Chau Prov., 5 June 1999, H. Kurahashi (new record from Vietnam).

Subfamily SARCOPHAGINAE

Sarcophaga (Phallosphaera) gravelyi

Senior-White, 1924

Specimens examined: 81 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 8 ♂, ditto, 5 May 2003, T. H. Thinh.

Sarcophaga (Phallosphaera) konakovi

(Rohdendorf, 1938)

Specimens examined: 8 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 1 ♂, ditto, 5 May 2003, T. H. Thinh (new record from Vietnam).

Sarcophaga (Boettcherisca) nathani

(Lopes, 1961)

Specimens examined: 4 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 1 ♂, Cuc Phuong, 120 km SW of Hanoi, Ninh Binh Prov., 13–14 June 2002, S. Shinonaga; 1 ♂, Tam Dao Nat. Park, 900–1,200 m, Vinh Phu Prov., 13 May 2003, T. H. Thinh.

Sarcophaga (Boettcherisca) peregrina

(Robineau-Desvoidy, 1830)

Specimen examined: 1 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga.

Sarcophaga (Seniorwhitea) princeps

Wiedemann, 1830

Specimens examined: 5 ♂, 1 ♀, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 7 ♂, ditto, T. H. Thinh; 1 ♂, Bao Loc, 800 m, Lamg Prov., 27 May 2003, T. H. Thinh.

Sarcophaga (Harpagophalla) kempii

Senior-White, 1924

Specimen examined: 1 ♂, Cuc Phuong, 120 km SW of Hanoi, Ninh Binh Prov., 13–14 June 2002, S. Shinonaga.

Sarcophaga (Parasarcophaga) albiceps

(Meigen, 1826)

Specimens examined: 11 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 19 ♂, ditto, T. H. Thinh; 1 ♂, ditto, 7 May 2003, T. H. Thinh; 4 ♂, Tam Dao Nat. Park, 900–1,200 m, Vinh Phu Prov., 13 May 2003, T. H. Thinh.

Sarcophaga (Parasarcophaga) javana

Macquart, 1851

Specimens examined: 16 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 13 ♂, ditto, T. H. Thinh; 4 ♂, ditto, 1,300 m, 5 May 2003, T. H. Thinh; 3 ♂, Tam Dao Nat. Park, 900–1,200 m, Vinh Phu Prov., 13 May 2003, T. H. Thinh.

Sarcophaga (Parasarcophaga) taenionata

(Wiedemann, 1819)

Specimen examined: 1 ♂, Cuc Phuong, 120 km SW of Hanoi, Ninh Binh Prov., 13–14 June 2002, S. Shinonaga.

Sarcophaga (Parasarcophaga)

yunnanensis (Fan, 1964)

Specimens examined: 6 ♂, Dambri (800 m), 15 km NW. Bau Lok, 20 May–1 June 2002, S. Shinonaga; 2 ♂, Cuc Phuong, 120 km SW of Hanoi, Ninh Binh Prov., 13–14 June 2002, S. Shinonaga; 2 ♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga.

***Sarcophaga (Parasarcophaga)*
dambriensis sp. nov.**
(Fig. 1)

Male. Body length about 10 mm.

Head: Eyes bare; frons open, at narrowest point about 0.25 of head width; frontal vitta black with grayish dust, parallel sided; parafrontals black with grayish pollen; frontal bristles 10 to 11, upper 2 or 3 reclinate; antennae black, arista feathered; palpi black; genae black, about

Figs. 1–4. Male genitalia. 1, *Sarcophaga (Parasarcophaga) dambriensis* sp. nov.; 2, *Sarcophaga (Parasarcophaga) owadai* sp. nov.; 3, *Sarcophaga (Lioproctia) vietnamensis* sp. nov.; 4, *Sarcophaga (Mehria) suthep* Pape et Banziger. Scale: 1.0 mm.

0.22 of eye heights; genal hairs black; metacephalon with white hairs.

Thorax: Scutum black with grayish pollen and 3 dark longitudinal stripes; preacrostichal bristles differentiated, prescutellar acrostichal bristle 1; *dc* 5+5; *ia* 1+3; *h* 3; *ph* 2; scutellar bristles developed, 2 laterals, 1 preapical, 1 or 2 discals; *st* 1+1+1; propleuron bare; meso- and metathoracic spiracles dark brown.

Wings: Hyaline; *r*₁ bare; *r*₄₊₅ setose on basal 5/8 of distance to cross vein.

Legs: Black; *t*₁ with *p*-seta; ventral hairs on *t*₃ shorter than *av* seta.

Abdomen: Black with checkered pattern; 1st sternite hairy; 2nd and 3rd sternites with numerous long hairs; genitalia as shown in figure 1.

Female. Unknown.

Holotype. ♂, Dambri, 800 m, 15 km NW of Bao Lok, 29 May–1 June 2002, S. Shinonaga.

Remark. It differs from the other species of the same subgenus especially by the structure of male genitalia.

Sarcophaga (Parasarcophaga) owadai

sp. nov.

(Fig. 2)

Male. Body length about 11 mm.

Head: Eyes bare; frons open, narrowest point about 0.25 of head width; frontal vitta black with grayish dust, slightly widened anteriorly; parafrontals broad, protruding at antennal base seen laterally with grayish pollen; frontal bristles 10, upper 2 reclinate; antennae black, arista feathered; palpus black; genae black, about 0.3 of eye heights; genal bristles black; metacephalon with white hairs.

Thorax: Scutum black with grayish pollen and 3 dark longitudinal stripes; *ac* 0+1; *dc* 6 (small) +5; *ia* 1+2; *h* 3; *ph* 2; scutellar bristles developed, 2 laterals, 1 preapical, 1 discals; *st* 1+2; propleuron bare; notopleuron hairy; meso- and metathoracic spiracles dark brown.

Wing: Hyaline; *r*₁ bare; *r*₄₊₅ setose on basal 1/4 of distance to cross vein.

Legs: Black; *t*₁ with *p*-seta; *t*₃ with long hairs curled at apices on *av* and *pv* surfaces.

Abdomen: Black with checkered pattern; 1st sternite hairy; 2nd and 3rd sternites with numerous long hairs; genitalia as shown in figure 2.

Female. Unknown.

Holotype. ♂, Bach Ma, 1,000–1,200 m, Thua Thien Hue Prov., 7–11 June 2002, T. H. Thinh.

Remark. The species differs from other related species of the subgenus in the characteristic structure of phallosome and broad parafrontals.

Sarcophaga (Robineauella) anchoriformis

(Fan, 1964)

Specimen examined: 1♂, Bach Ma, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga; 1♂, Sapa, 1,800–2,000 m, 25 km NE of Lao Cai, 17 May 2003, T. H. Thinh (New record from Vietnam).

Sarcophaga (Lioproctia) vietnamensis

sp. nov.

(Fig. 3)

Male. Body length 10–12 mm.

Head: Eye bare; frons open, narrowest point about 0.21 of head width; frontal vitta black with grayish dust, parallel sided; parafrontals black with golden pollen; frontal bristles 9 to 10, upper 2 reclinate; antenna black, length of 3rd segment about 4 times that of the 2nd; arista feathered; palpus black; gena black, about 0.33 of eye heights; genal bristles black; metacephalon with white hairs.

Thorax: Scutum black with grayish pollen and 3 dark longitudinal stripes; *ac* 0+1; *dc* 5+4; *ia* 1+3; *h* 3; *ph* 2; scutellar bristles developed, 2 laterals, 1 preapical, 1 discals; *st* 1+1+1; propleuron bare; notopleuron hairy; meso- and metathoracic spiracles dark brown.

Wing: Hyaline; *r*₁ bare; *r*₄₊₅ setose on basal 3/4 of distance to cross vein.

Legs: Black; *t*₁ with *p*-seta; *t*₃ with long hairs on distal 3/5 of *av* and *pv* surfaces.

Abdomen: Black with checkered pattern; 3rd tergite with median marginal bristles; 1st sternite hairy; 2nd and 3rd sternites with numerous long hairs; cerci broad and pointed apically; genitalia as shown in figure 3.

Female. Unknown.

Holotype. ♂, Bach Ma, 1,000–1,200 m, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga.

Paratypes. 6♂, same data as holotype;

1♂, ditto, 500 m, 7 May 2003, T. H. Thinh.

Remarks. The species is closely related to *S. (Phallosphaera) kurashii* Shinonaga and Tumrasvin (1979) from Thailand in the external characters, however, the shape of phallosome is remarkably different. Shinonaga and Tumrasvin included *S. kurashii* in subgenus *Phallosphaera*, but *S. kurashii* has no conical protuberance on 5th sternite which is a typical character of the subgenus, therefore, this species does not belong to *Phallosphaera*, but *Lioproctia*.

Sarcophaga (Rosellea) suthep

Pape et Banziger, 2003

(Fig. 4)

Specimens examined: 10♂, Bach Ma, 1,000–1,200 m, Thua Thien Hue Prov., 7–11 June 2002, S. Shinonaga.

Remarks. The present species is recorded as *Parasarcophaga aratrix* by Kano et al. (1999), however, this was considered to be misidentification (Pape and Banziger, 2003).

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