

New and little known species of flies of Lauxaniidae and Strongylophthalmyiidae (Diptera)

Новые и малоизвестные виды мух семейств Lauxaniidae и Strongylophthalmyiidae (Diptera)

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КЛЮЧЕВЫЕ СЛОВА: Lauxaniidae, Strongylophthalmyiidae, таксономия, новые виды.

ABSTRACT: The following taxa are described: family Lauxaniidae — *Calliopum caucasicum* sp.n., *C. sakhalanicum* sp.n., *Minettiella elbergi* sp.n., *Pachycerina ninae* sp.n., *Sapromyza cerata* sp.n., *S. ferganica* sp.n., *S. hissarica* sp.n., *S. persica* sp.n., *S. picea* sp.n., *S. ravidia* sp.n., *S. romanovi* sp.n., *S. ziminae* sp.n.; family Strongylophthalmyiidae — *Strongylophthalmyia freidbergi* sp.n., *S. freyi* sp.n., *S. indica* sp.n., *S. microstyla* sp.n., *S. pectinigera* sp.n., *S. spinipalpa* sp.n., *S. stylocera* sp.n., *S. verrucifera* sp.n. The key to the species of *S. crinita*-group is given. *Sapromyza citrinella* nom.n. for *S. citrina* Shatalkin and *Sapromyza remmae* nom.n. for *S. micropyga* E. Remm et Elberg are proposed.

РЕЗЮМЕ: В работе описаны следующие таксоны: семейство Lauxaniidae — *Calliopum caucasicum* sp.n., *C. sakhalanicum* sp.n., *Minettiella elbergi* sp.n., *Pachycerina ninae* sp.n., *Sapromyza cerata* sp.n., *S. ferganica* sp.n., *S. hissarica* sp.n., *S. persica* sp.n., *S. picea* sp.n., *S. ravidia* sp.n., *S. romanovi* sp.n., *S. ziminae* sp.n.; семейство Strongylophthalmyiidae — *Strongylophthalmyia freidbergi* sp.n., *S. freyi* sp.n., *S. indica* sp.n., *S. microstyla* sp.n., *S. pectinigera* sp.n., *S. spinipalpa* sp.n., *S. stylocera* sp.n., *S. verrucifera* sp.n. Дана таблица для определения видов группы *S. crinita*. Предложены *Sapromyza citrinella* nom.n. для *S. citrina* Shatalkin и *Sapromyza remmae* nom.n. для *S. micropyga* E. Remm et Elberg.

The work summarizes the results of the examination of material represented in the Zoological Museum of Moscow State University and also of some collections borrowed from a number of institutions. The following abbreviations are used for the institutions holding material studied in the present paper: DEI — Deutsches Entomologisches

Institut, Eberswalde, Germany; TAU — Entomological Collection, Department of Zoology, Tel Aviv University, Israel; USNM — United States National Museum, Washington, DC, USA; ZISP — Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia; ZMUH — Zoological Museum University of Helsinki, Finland; ZMUM — Zoological Museum of Moscow State University, Russia.

Family Lauxaniidae

Here I continue a discussion of the Palaearctic species of the Lauxaniidae. This theme was started by me in the three papers that came off the press earlier [Shatalkin, 1992a,b, 1993a].

Genus *Calliopum* Strand, 1927

Calliopum albomaculatum Strobl, 1909

MATERIAL: ♀, Sakhalin, Yuzhno-Sakhalinsk, "Chekhova" Peak, 27.VII.1971 (Nartshuk).

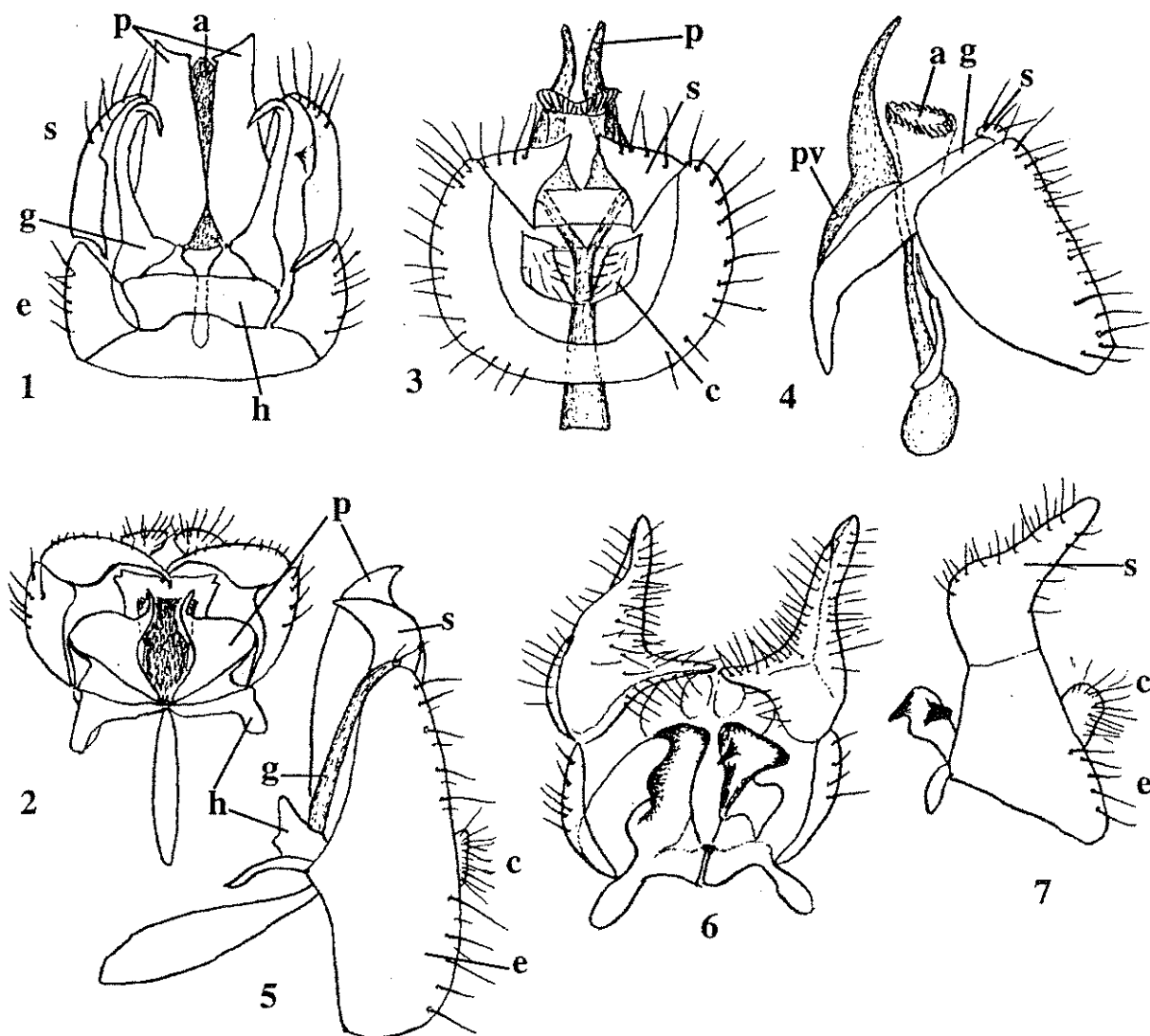
DIAGNOSIS. *C. albomaculatum* is characterized by the black halteres, entirely black legs and parafacials dusted with silver from below the antennae to the mouth. L. Papp has mentioned (personal communication) this species to be found in Primorskiy Kray. In the Palaearctic region the most of species of the genus *Calliopum* are known from its Western subregion (Europe, North Africa, Near East). The only species *C. potanini* Czerny was described from Szechuan (China). *C. albomaculatum* and *C. sakhalanicum* described below are the first representatives of this genus from Far East.

Calliopum caucasicum Shatalkin sp.n.

Fig. 1.

MATERIAL. Holotype: ♂, Caucasus, North Osetiya, Alagir, 28.V.1989 (Ozerov). Paratypes: 5 ♂♂, 5 ♀♀, same locality as holotype, 19-28.V.1989 (Ozerov) (ZMUM).

DESCRIPTION. MALE. Frons black, matt; orbital plates very broad, black and shining. Face black, glossy,



Figs 1-7. Male terminalia of Lauxaniidae: 1 — *Calliopum caucasicum* sp.n. (ventral view); 2 — *C. sakhalinicum* sp.n. (ventral view); 3-4 — *Minettia austriaca* Hennig (dorsal and lateral view); 5 — *Minettiella elbergi* sp.n. (lateral view); 6-7 — *Pachycerina ninae* sp.n. (ventral and lateral view). The following abbreviations are used: a — aedeagus; c — cerci; da — aedeagal dorsal sclerite; e — epandrium; g — gonopod; h — hypandrium; ld — lobes of aedeagal dorsal sclerite; p — paramere; pv — ventral arm of paramere; s — surstyle.

Рис. 1-7. Гениталии видов Lauxaniidae: 1 — *Calliopum caucasicum* sp.n. (вид спереди); 2 — *C. sakhalinicum* sp.n. (вид спереди); 3-4 — *Minettia austriaca* Hennig (вид сзади и сбоку); 5 — *Minettiella elbergi* sp.n. (вид сбоку); 6-7 — *Pachycerina ninae* sp.n. (вид спереди и сбоку). На этих и следующих рисунках используются следующие сокращения: а — эдеагус; с — церки; да — дорсальный склерит эдеагуса; е — эпандрий; г — гоноподы; h — гипандрий; ld — лопасти дорсального склерита эдеагуса; p — парамера; pv — вентральная рука парамеры; s — сурстили.

moderately convex; parafacials dark-brown, matt. Antennae with basal segments yellow; third antennal segment dark brown with brownish yellow base, it about 2.7 times as long as its width. Arista yellowish brown, with clear hairs: width of its feathering a little more than thickness of its basal part. Height of frons about 1.2 times less than its width. Gena about 4.1 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 3.9. Mouthparts and palpi black. Thorax black, shining, with greenish reflection. Fore legs black with yellow knees. Mid and hind legs yellow; femora black, yellow apically. Preapical bristles present on all tibiae. Hind tibia with dense apical brush of black spinules ventrally; mid metatarsi with a similar brush anteroventrally. Wings yellowish with yellow veins. *ta* beyond

middle of discal cell. Ultimate section of M_{1+2} about 1.8 times as long as penultimate. Halteres yellow. Abdomen black, slightly shining. Genitalia (Fig. 1) as in *C. aeneum* Fl. but surstyli longer (their length equal to 2/3 and more of paramere) and parameres cut apically.

Chaetotaxy. 1 h, 1 ph, 0+3 dc, ac in 6 rows, 1 ppl, 1 mspl, 2 stpl.

Body length 3.8 mm.

FEMALE resembles male. Body length 3.4-4.0 mm.

DIAGNOSIS. *C. caucasicum* sp.n. is very similar to *C. aeneum* and differs from it by the structure of male genitalia. The paramere is not cut apically and the surstyli are 1/2 and less of the parameres in *C. aeneum*. The last species occurs in the same locality as *C. caucasicum* but at least a month later.

Calliopum sakhalinicum Shatalkin sp.n.

Fig. 2.

MATERIAL. Holotype: ♂, Sakhalin, Yuzhno-Sakhalinsk, "Chekhova" Peak, 27.VII.1971 (Nartshuk). Paratypes: 1 ♂, 1 ♀, same locality as holotype, 27.VII.1971 (Nartshuk) (ZISP).

DESCRIPTION. MALE. Frons black, shining, above antennae yellow. Face black, glossy, moderately convex; parafacials dark-brown. Antennae with basal segments yellow; third antennal segment dark brown with brownish yellow base, about 2.2 times as long as wide. Arista yellowish brown, with clear hairs: width of its feathering equal to thickness of its basal part. Height of frons about 1.3 times less than its width. Gena about 3.6 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 3.2. Mouthparts and palpi black. Thorax black, shining. Legs black. Preapical bristles on all tibiae. Middle and hind tarsi yellowish. Wings grayish. *ta* beyond middle of discal cell. Ultimate section of M_{1+2} about 2 times as long as penultimate. Halteres yellow. Abdomen black, slightly shining. Genitalia as in Fig. 2.

Chaetotaxy. 1 *h*, 1 *ph*, 0+3 *dc*, *ac* in 4 rows, 1 *ppl*, 1 *mspl*, 2 *stpl*.

Body length 3.3 mm.

FEMALE resembles male. Body length 3.4 mm.

DIAGNOSIS. Males of the new species are easily distinguished from those of known European species by the genital structure.

Genus *Minettia* Robineau-Desvoidy, 1830

Minettia austriaca Hennig, 1951

Figs 3-4.

MATERIAL. ♂, Sakhalin, Yuzhno-Sakhalinsk, "Chekhova" Peak, 27.VII.1971 (Nartshuk) (ZISP).

DIAGNOSIS. This species resembles representatives of *Schumannimyia* Papp in external characters. It can be distinguished from dark species of *Minettia* on the basis of the structure of the male postabdomen. Genitalia (Figs. 3, 4) with surstyli pointed apically; gonopods are present (?); parameres are symmetrical with developed (parameral) arms articulating with hypandrium ventrally. Till now *M. austriaca* was known from Europe.

Genus *Minettiella*, Malloch 1929

Malloch [1929] considered *Minettiella* to be a subgenus of the genus *Minettia* R.-D.

Key to the species.

- 1(2). Width of feathering of arista noticeably more than thickness of its basal part. 3rd antennal segment shorter. One pair of large acrostichal bristles in front of prescutellars. Genitalia — Fig. 5. 2.5-3.5 mm. Primorskiy Kray *M. elbergi* sp.n.
- 2(1). Arista equal to or less than thickness of its basal part.
- 3(4). 1+3 *dc*. Mid and hind tibiae yellow, blackish only apically. 3.5 mm. Formosa, Vietnam, Sumatra *M. atratula* (de Meijere)
- 4(3). 0+2(3) *dc*.
- 5(6). 0+2 *dc*. Mid and hind tibiae black, yellowish basally. 3.0 mm. Vietnam, Java *M. atrata* (de Meijere)
- 6(5). 0+3 *dc*. Mid and hind tibiae yellow, blackish only

apically. 3.9-4.5 mm. Primorskiy Kray *M. coracina* Shatalkin

Minettiella elbergi Shatalkin sp.n.

Fig. 5.

MATERIAL. Holotype: ♂, Primorskiy Kray, Khasan distr., "Kedrovaya Padd" Reserve, 17.IX.1980 (Shatalkin). Paratypes: 2 ♀♀, same locality as holotype, 21-23.IX.1980 (Shatalkin); ♀ same locality, 15.X.1968 (Gorodkov); 2 ♂♂, Primorskiy Kray, Kamenushka (30 km SE from Ussuriysk), 10 and 13.VIII.1987 (Shatalkin); 2 ♀♀ same locality, 30.VII and 15.VIII.1984 (Shatalkin) (ZMUM).

DESCRIPTION. MALE. Head black. Frons in anterior part brownish yellow and spotted with brown in front of ocellar triangle. Face black, slightly grey dusted. Parafacials from brown to brownish yellow. Antennae yellowish brown; third antennal segment about 1.7 times as long as its width. Arista yellowish brown, width of its feathering slightly less than half width of third antennal segment. Height of frons practically equal to its width. Gena about 8.6 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 5.8. Mouthparts and palpi black. Thorax black, shining. Legs black, tibiae in basal 1/5, middle and hind tarsi yellowish. Preapical bristles on all tibiae. Wings grayish. *ta* beyond middle of discal cell. Ultimate section of M_{1+2} about 1.8 times as long as penultimate. Halteres yellow. Abdomen black, slightly shining. Genitalia (Fig. 5) strongly sclerotized; epandrium elongate; surstyli beak-like pointed ventrally; gonopods narrow, curved dorsally.

Chaetotaxy. 1 *h*, 1 *ph*, 0+3 *dc*, *ac* in 4 rows, posterior *ac* of middle rows long, slightly less than prescutellars, 1 short *ia*, 1 *ppl*, 1 *mspl*, 1 *stpl*.

Body length 3.2 mm.

FEMALE resembles male. Body length 3.0-3.6 mm.

DIAGNOSIS. *M. elbergi* sp.n. is the second representative of the genus in the Palaearctic region. The new species differs from *M. coracina* in being smaller, its mid and hind tibiae being black, hairs of arista more expanded, and its genitalia different. The new species is very like *M. atrata*. I compared *M. elbergi* with Vietnamese specimens determined by me as *M. atrata*.

The new species is dedicated to the Estonian dipterologist K. Elberg.

Genus *Pachycerina* Macquart, 1835

The genus was known hitherto from the three Palaearctic species. One more species is described as new below.

Pachycerina ninae Shatalkin sp.n.

Figs 6-7.

MATERIAL. Holotype: ♂, Kurile Is., Kunashir, "Stolbchaty" Cape, 9.VII.1985 (Czurkin). Paratypes: ♀, same locality as holotype, Tretjakovo, 10.VII.1985 (Czurkin); ♀, same locality as holotype, Tjatja Volcano, 4.VII.1976 (Sinitshenkova) (ZMUM).

DESCRIPTION. MALE. Head yellow. Frons with black oval spot superposed on ocellar triangle; anterior margin of this spot closed before one comes to level of hind *or*, and its height about 1.4 times less than distance from spot to base of antennae. Black spots in place of insertion of *or* absent. Face with a pair of black spots on each side of lofty facial knob. Antennae yellow, with basal segments brownish; third antennal segment about

4.2 times as long as wide, rounded apically. Arista incrassate, with dense black hairs, about 1.2 times as long as third antennal segment. Height of frons about 1.8 times less than its width. Gena about 2.2 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 5.2. Mouthparts brownish, palpi yellow, in apical half black. Mesonotum, metanotum, and sternopleuron black, grey dusted; humeri, notopleuron, pleurae in upper part yellowish grey. Legs dark brown, knees slightly yellowish. Preapical bristles on all tibiae. Wings slightly brownish, with costal margin clouded and **ta** and **tp** bordered. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.4 times as long as following section. Ultimate section of M_{1+2} about 1.6 times as long as penultimate. Halteres yellow. Abdomen black, shining, slightly grey dusted. Genitalia (Figs. 6, 7) strongly sclerotized; parameres equal to height of epandrium; left paramere with wide flattened prominence lateroapically and with small black tooth ventroapically.

Chaetotaxy. 2 **or** with anterior of them inclinate, 1 **h**, 1 **ph**, 0+3 **dc**, **ac** in 4 rows with internal setulae regular and longer than those of external rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

Body length 3.2 mm.

FEMALE resembles male. Length 3.2-3.8 mm.

DIAGNOSIS. New species is similar to *P. seticornis* Fll. The latter differs by yellow coloration of the body in general; its mesonotum with stripes; the central frontal spot is larger and spots in place of insertion of **or** are clear. Parameres are weakly sclerotized and are less than the height of epandrium.

Genus *Sapromyza* Fallen, 1820

Sapromyza might be regarded as a blanket genus containing very different forms. It includes more than 80 Palaearctic species, 8 of them being described below. I propose new names for the following two species: *Sapromyza citrinella* Shatalkin is new name for *S. citrina* Shatalkin (1993, Russian Entomol. J.: 112) nec Meigen (1826, Syst. Besch., 5:264). Type locality: Far East, Ussuriysk, Kamenushka. *Sapromyza remmae* Shatalkin is new name for *S. micropyga* E. Remm et Elberg (1980, [Insects of Mongolia], 7: 426) nec Malloch (1933, Diptera of Patagonia and South Chile, 6(4): 377). Type locality: Mongolia, Govialtai, Jargalant. *Sapromyza remmae* is named after Dr. Mrs. Evi Remm (Tartu, Estonia).

Sapromyza cerata Shatalkin sp.n.

Fig. 8.

MATERIAL. Holotype: ♂, Azerbaydzhan, Khachin River, VI.1885 (Khavraiskiy). Paratypes: 1 ♂, 1 ♀, same locality as holotype, VI.1885 (Khavraiskiy) (ZISP).

DESCRIPTION. MALE. Head yellow. Ocellar triangle yellow. Antennae yellow; third antennal segment about 1.6 times as long as wide, rounded ventroapically, with slight dorsal angle and deep black apical half. Arista yellow, in microscopic hairs. Height of frons about 1.2 times less than its width. Gena high, about 2.5 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 4.4. Mouthparts brownish, palpi yellow, slightly brownish apically. Thorax yellow. Legs yellow. Preapical bristles on all tibiae. Wings

yellowish. **ta** slightly before middle of discal cell. Ultimate section of M_{1+2} about 1.5 times as long as penultimate. Halteres yellow. Abdomen yellow. Genitalia — Fig. 8: parameres asymmetrical; right of them longer than aedeagus; gonopods absent; surstyli pointed dorsally.

Chaetotaxy. 1 **h**, 1 **ph**, 0+3 **dc**, **ac** in 4 rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

Body length 3.5 mm.

FEMALE resembles male. Apical darkening of palpi practically not expressed. Body length 3.9 mm.

DIAGNOSIS. The male of the new species is very similar to those of *S. pistaciphila* group in genital structure in which gonopods are lacking and surstyli are pointed dorsally. Representatives of the *S. pistaciphila* group differ from *S. cerata* sp.n. in that the frons has black spots in the place of the insertion of **or**. Parameres of *S. pistaciphila* are symmetrical and longer than aedeagus. In the coloration of body *S. cerata* agrees also with those specimens of *S. ravidia* sp.n., which are characterized by the absence of the frontal black spot (as in *S. kabuli* Papp). The shape of the surstyli, hypandrial processes, and aedeagus in both species are different. Palpi of *S. cerata* with weak apical darkening, practically not expressed in female. In this respect the new species is similar to *S. remmae* n.n. (*S. micropyga* Remm et Elberg) from Mongolia. The latter species is distinguished externally by the darkened tarsi.

Sapromyza ferganica Shatalkin sp.n.

Fig. 9.

MATERIAL. Holotype: ♂, Tadzhikistan, Ferganskiy Khr., upper reaches of the Jassy. 2000 m, 20.VI.1954 (Zhelochovtsev) (ZMUM).

DESCRIPTION. MALE. Head yellow. Ocellar triangle yellow. Antennae yellow; third antennal segment about 1.8 times as long as wide, rounded ventroapically, with slight dorsal angle; deep black in apical half. Arista yellow, in microscopic hairs. Height of frons about 1.4 times less than its width. Gena high, about 2.3 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 2.0. Mouthparts brownish, palpi yellow, in apical half black. Thorax yellow, mesonotum greyish yellow. Legs yellow. Preapical bristle on hind tibia absent. Wings yellowish. **ta** slightly before middle of discal cell. Ultimate section of M_{1+2} about 1.5 times as long as penultimate. Halteres yellow. Abdomen yellow. Genitalia — Fig. 9: right paramere bilobed with ventral lobe straight and pointed apically; ventral lobe of left paramere absent; gonopods absent.

Chaetotaxy. 1 **h**, 1 **ph**, 0+3 **dc**, **ac** in 4 rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

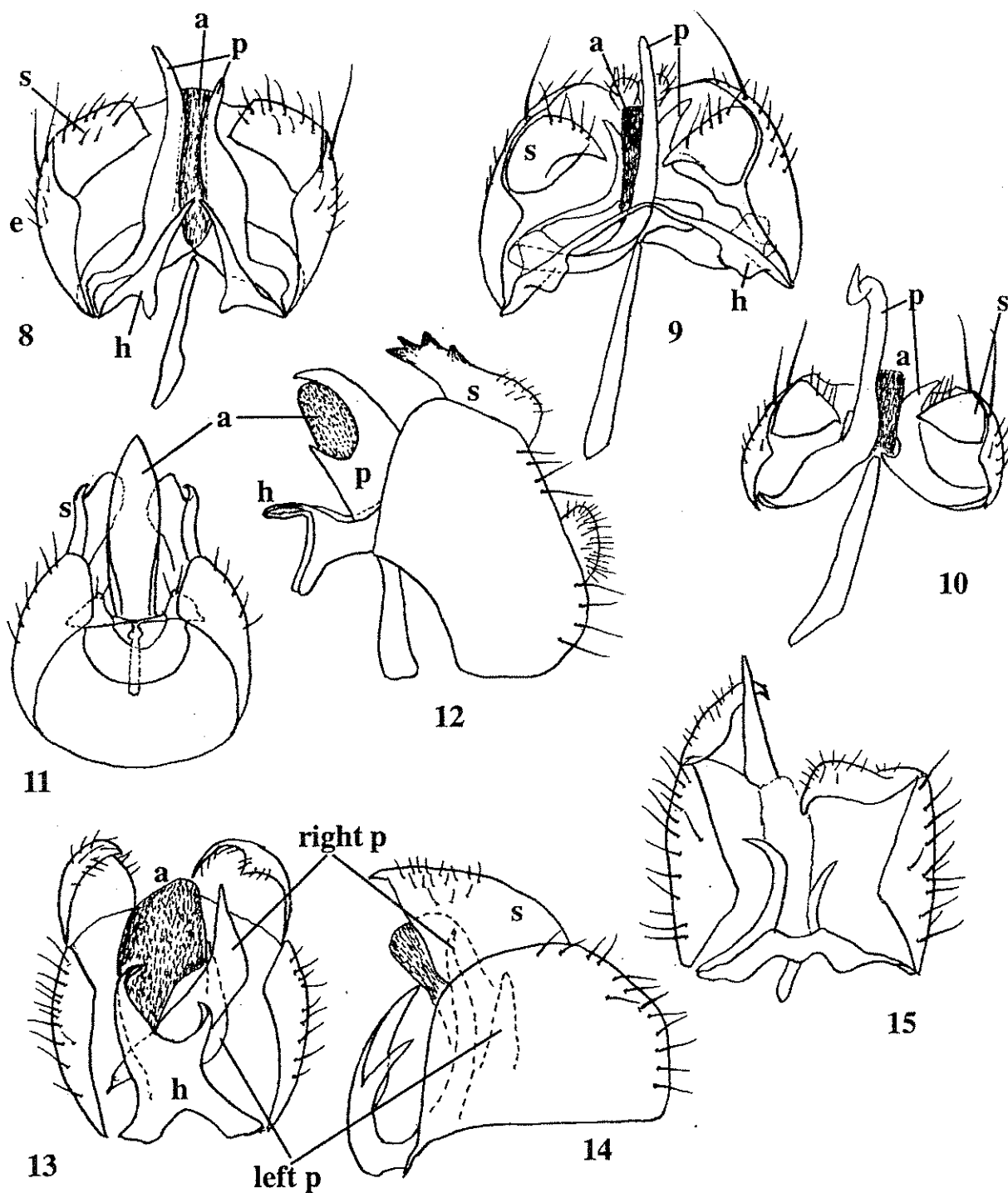
Body length 4.3 mm.

FEMALE unknown.

DIAGNOSIS. The parameres of *S. ferganica* sp.n. show the bilobed condition. In this respect new species belongs to *S. simplicipes* group in which it is closely related to *S. hissarica* sp.n. and *S. simplicipes* Czerny. It differs from both in that it has mesonotum yellowish grey and mainly by its genitalia. In *S. hissarica* the dorsal lobe of the right paramere is absent and its ventral lobe elongated with apical hook-like bend. On the other hand *S. simplicipes* has the ventral lobe on the left paramere.

Sapromyza hissarica Shatalkin sp.n.

Fig. 10.



Figs 8-15. Male terminalia of *Sapromyza*: 8 — *S. cerata* sp.n. (ventral view); 9 — *S. ferganica* sp.n. (ventral view); 10 — *S. hissarica* sp.n. (ventral view); 11 — *S. persica* sp.n. (ventral view); 12 — *S. picea* sp.n. (lateral view); 13-14 — *S. ravida* sp.n. (ventral and lateral view); 15 — *S. ziminae* sp.n. (ventral view). See Figs 1-7 for abbreviations.

Рис. 8-15. Гениталии видов *Sapromyza*: 8 — *S. cerata* sp.n. (вид спереди); 9 — *S. ferganica* sp.n. (вид спереди); 10 — *S. hissarica* sp.n. (вид спереди); 11 — *S. persica* sp.n. (вид спереди); 12 — *S. picea* sp.n. (вид сбоку); 13-14 — *S. ravida* sp.n. (вид спереди и сбоку); 15 — *S. ziminae* sp.n. (вид спереди). Для расшифровки сокращений смотри рис. 1-7.

MATERIAL. Holotype: ♂, Tadzhikistan, Hissar Mt. Range, Kwak. 1800 m, 11.VIII.1969 (Keleiniukova). Paratypes: ♂, 4 ♀♀, same locality as holotype, 6-14.VIII.1969 (Keleiniukova) (ZMUM).

DESCRIPTION. MALE. Head yellow. Ocellar triangle yellow. Antennae yellow; third antennal segment

about 1.9 times as long as wide, rounded ventroapically, with slight dorsal angle; deep black in apical half. Arista yellow, in microscopic hairs. Height of frons about 1.2 times less than its width. Gena high, about 2.2 times less than height of eye. Facial index (ratio of width of face

to parafacial at border of fovea) about 2.2. Mouthparts brownish, palpi yellow, in apical half black. Thorax yellow. Legs yellow. Preapical bristle on hind tibia absent. Wings yellowish. **ta** beyond middle of discal cell. Ultimate section of M_{1+2} about 1.2 times as long as penultimate. Halteres yellow. Abdomen yellow. Genitalia (Fig. 10) with right ventral parameral lobe elongate and hook-like curved apically; left ventral and right dorsal lobes of parameres absent; gonopods absent.

Chaetotaxy. 1 **h**, 1 **ph**, 0+3 **dc**, **ac** in 4 rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

Body length 3.9 mm.

FEMALE resembles male. Body length 3.7-4.5 mm.

DIAGNOSIS. *S. hissarica* sp.n. is very similar to *S. ferganica* sp.n. but differs in having the yellow mesonotum and peculiar genital structure. Specifically, the second species has both dorsal parameral lobes; its right ventral lobe straight and pointed apically.

Sapromyza intonsina Yarom, 1990

MATERIAL. 2♂♂, Turkmeniya, Chandyr River (tributary of Sumbar River), 23.IV.1933 (Ushinskiy) (ZISP); 3♂♂, 4♀♀, Turkmeniya, Khr.Kopet-Dag, Aydere, 21 IV.-1.V.1981 (Ozerov) (ZMUM).

DIAGNOSIS. This species was described on the material from Israel [Yarom, 1990]. Taxonomically *S. intonsina* belongs to *S. intonsa* group differing mainly by genitalia.

Sapromyza persica Shatalkin sp.n.

Fig. 11.

MATERIAL. Holotype:♂, Iran, Asterabad (Gorgan) 26.IV.1914 (Kiritshenko) (ZISP).

DESCRIPTION. MALE. Head yellow. Ocellar triangle yellow. Antennae yellow; third antennal segment about 1.8 times as long as wide. Arista yellow, in clear hairs, width of its feathering equal to its thickened basal part. Height of frons about 1.3 times less than its width. Gena about 5.6 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 4.2. Mouthparts brownish, palpi yellow, in apical half black. Thorax yellow. Legs yellow. Preapical bristles on all tibiae. Wings yellowish. **ta** slightly before middle of discal cell. Ultimate section of M_{1+2} about 1.4 times as long as penultimate. Halteres yellow. Abdomen yellow. Genitalia (Fig. 11) with trough-like surstyli, cut apically and with relatively long aedeagus.

Chaetotaxy. 1 **h**, 1 **ph**, 0+4 **dc** (two anterior of them shorter), **ac** in 4 rows with setae of median rows longer than those of external rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

Body length 4.0 mm.

FEMALE unknown.

DIAGNOSIS. Characters of the genital apparatus indicate close relationship between this species and *S. gozmanyi* Papp. *S. persica* has a longer aedeagus; its surstyli cut apically. The new species is readily separated by the 4-rowed **ac** (instead of the 6-rowed **ac** in *S. gozmanyi*).

Sapromyza picea Shatalkin sp.n.

Fig. 12.

MATERIAL. Holotype:♂, Kurile Is., Kunashir, "Mendeleyeva" Volcano, 27.VII.1985 (Czurkin). Paratype: ♂, same locality as holotype, 27.VII.1985 (Czurkin) (ZMUM).

DESCRIPTION. MALE. Head black. Frons in anterior part above antennae brownish yellow. Face black,

mat. Parafacials brown. Antennae brown; third antennal segment about 1.6 times as long as wide, brownish yellow in lower part. Arista yellowish brown, practically bare. Height of frons about 1.2 times less than its width. Gena about 6.3 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 4.5. Mouthparts and palpi black. Thorax black, brownish dusted. Mesonotum shining. Legs black, middle and hind tarsi yellowish. Preapical bristles on all tibiae. Wings grayish. **ta** slightly before middle of discal cell. Ultimate section of M_{1+2} about 1.6 times as long as penultimate. Halteres yellow. Abdomen black, slightly shining. Genitalia (Fig. 12) with parameres bilobate apically; gonopods absent; surstylus with thorn-like teeth.

Chaetotaxy. 1 **h**, 1 **ph**, 0+3 **dc**, **ac** in 4 rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

Body length 2.8-3.1 mm.

FEMALE unknown.

DIAGNOSIS. This new species is very similar to *S. hyalinata* Mg. in external characters and can be separated from it by the characteristic genital structure.

Sapromyza ravida Shatalkin sp.n.

Figs 13-14.

MATERIAL. Holotype:♂, Iran, Tabriz, 5.V.1914 (Andrievskiy). Paratypes: 3♂♂, 3♀♀, same locality as holotype, 23.IV. and 5.V.1914 (Andrievskiy); Armeniya, VI.1885 (Khavraiskiy) (ZISP).

DESCRIPTION. MALE. Head yellow. Ocellar triangle yellow. Paratype from Armeniya with brownish arrow-like frontal spot as in *S. kabuli* Papp. Antennae yellow; third antennal segment about 1.8 times as long as wide, with dorsal angle as in *S. apicalis* Lw. and black in apical half. Arista yellow, in clear hairs, width of its feathering equal to its thickened basal part. Height of frons about 1.3 times less than its width. Gena about 3.2 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 1.5. Mouthparts brownish, palpi yellow. Thorax yellow, grey dusted. Legs yellow. Preapical bristles on all tibiae. Wings yellowish. **ta** slightly beyond middle of discal cell. Ultimate section of M_{1+2} about 1.2 (1.4 in paratype from Armeniya) times as long as penultimate. Halteres yellow. Abdomen yellow. Genitalia as in Figs. 13-14: epandrium with large surstyli pointed apically; hypandrium bilobed ventrally with asymmetric lobes (gonopods?); right paramere wide; it goes round of aedeagus ventrally and settles down on its left side; left paramere moved dorsally.

Chaetotaxy. 1 **h**, 1 **ph**, 0+3 **dc**, **ac** in 4 rows, 1 **ppl**, 1 **mspl**, 2 **stpl**.

Body length 3.1 mm.

FEMALE resembles male. Body length 3.0-3.6 mm.

DIAGNOSIS. New species is very similar to *S. kabuli* Papp. Both species belong to the group including species which are distinguished by presence of the unique frontal spot above ocellar triangle [Papp, 1979]. *S. simplicior* Hendel (= *S. simplex* Lw.) — the first of the described species within the group, has a distinct type of the genitalic structure, showing undeveloped anterior hypandrial lobes. *S. ravida* sp.n. and *S. kabuli* have similar genitalia, differing in the structure of anterior hypandrial lobes (gonopods?) (Figs 13-14). In the new species they are asymmetric and without dorsal bend; in *S. kabuli* the hypandrial lobes are short and symmetric, they are curved dorsally in form of the hook; right

paramere of this species is narrow, left one is triangular and shorter than that of *S. ravidia* sp.n. *S. romanovi* sp.n., described below on the female, differs from other species of the group by grey colour of thorax.

Sapromyza romanovi Shatalkin sp.n.

MATERIAL. Holotype: ♀, Tadzhikistan, Ramit, Kafirnigan River, 26.VII.1939 (Romanov) (ZMUM).

DESCRIPTION. FEMALE. Head yellow. Frons divided in yellow anterior part not reaching first or and red-brown posterior part. Latter with dark brown triangular mark on anterior margin. Antennae yellow; third antennal segment short, about 1.4 times as long as wide, rounded ventroapically, and with dorsal angle; deep black in apical half. Arista yellow, in microscopic hairs. Height of frons about 1.3 times less than its width. Gena high, about 4 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 1.5. Mouthparts brownish, palpi yellow. Mesonotum grey, humeri and scutellum yellow; pleurae yellowish grey. Legs yellow. Preapical bristle on all tibiae. Wings yellowish. *ta* slightly before middle of discal cell. Ultimate section of M_{1+2} about 1.5 times as long as penultimate. Halteres yellow. Abdomen yellow.

Chaetotaxy. 1 h, 1 ph, 0+3 dc, ac in 4 rows, 1 ppl, 1 mspl, 2 stpl.

Body length 4.7 mm.

MALE unknown.

DIAGNOSIS. The triangular mark on frons and the grey mesonotum are sufficient to distinguish this species from all other in the genus. The former character shows that *S. romanovi* sp.n. is a member of *S. simplicior* (*S. simplex*) group in which it is closely related to *S. kabuli*.

Sapromyza ziminae Shatalkin sp.n.

Fig. 15.

MATERIAL. Holotype: ♂, Nakhichevan, 27.V.1957 (Zimina) (ZMUM).

DESCRIPTION. MALE. Head yellow. Ocellar triangle yellow. Antennae yellow; third antennal segment about 1.8 times as long as wide, rounded apically, without sharp dorsal angle, deep black in apical half. Arista brown, in microscopic hairs. Height of frons about 1.1 times less than its width. Gena about 4.6 times less than height of eye. Facial index (ratio of width of face to parafacial at border of fovea) about 3.5. Mouthparts brownish, palpi yellow, in apical half black. Thorax yellow. Legs yellow. Preapical bristles on all tibiae. Hind tibia with dense apical brush of black spinules ventrally; mid and hind metatarsi with a similar brush anteroventrally. Wings yellowish. *ta* beyond middle of discal cell. Ultimate section of M_{1+2} about 1.4 times as long as penultimate. Halteres yellow. Abdomen yellow. Genitalia (Fig. 15) with elongate epandrium; surstyli oriented perpendicularly relative to epandrium; parameres about 2 times less than height of epandrium, right paramere longer than left one.

Chaetotaxy. 1 h, 1 ph, 0+3 dc, ac in 4 rows, 1 ppl, 1 mspl, 2 stpl.

Body length 3.8 mm.

FEMALE unknown.

DIAGNOSIS. The male of *S. ziminae* sp.n. is very similar to that of *S. afghanica* Papp (from Afghanistan and Middle Asia) in having ventral brush on hind tibia, mid and hind metatarsi. The two represent a vicarious

pair of species. They differ mainly in the genitalic structure: in *S. ziminae* the aedeagus is long and upright apically (without triangular apex directed dorsally as in *S. afghanica*); parameres of *S. afghanica* is symmetrical and longer than those of new species. The third species with a similar ornamentation of legs (but without mid metatarsal brush) — *S. obsoleta* Fl. (Europe, Turkey) — has the most distinct genitalia and differs from two other species in the external characters.

The new species is dedicated to L.V. Zimina.

Family Strongylophthalmyiidae

The Strongylophthalmyiidae are a small family of Acalyptrate flies represented by strikingly elegant creatures with graceful legs and elongate body. The family includes three genera: *Longinasus* Frey [1955] with one Brazilian species; *Nartshukia* Shatalkin [1993b] with only Oriental species; *Strongylophthalmyia* Heller occurring in the Nearctic (1 species), Palaearctic (8), Oriental (23), and Afrotropical (2) regions [Frey, 1955; Iwasa, 1992; Steyskal, 1971].

Here I confine myself to analysis of two species group of the genus *Strongylophthalmyia*. Species of the *crinita* group possess peculiar genitalia. They form a monophyletic group. Species the *punctata* group are distinguished by male antennae with the third segment having the dorsal process near the base of arista. Possibly, this group contains phylogenetically different forms.

Species of *Strongylophthalmyia crinita* group

The distinguishing characters of this group are: body black, frons and face entirely black (except for *S. indica* sp.n.), wing unicolorous (except for *S. pectinigera* sp.n.), legs yellow, hind femur with brown subapical ring, genitalia of males with elongate crooked epandrial processes and developed surstyli [Hennig, 1940]. Species of the group exhibit sexual dimorphism in the structure of palpi. Females of all species are characterized by palpi of the same type, elliptical in form, slightly enlarged apically and black. Males show a modification of palpi to form elongated, narrowed in their base plates with diverse ornamentation of the black scales and bristles (Figs 22-25).

Key to Species of the *Strongylophthalmyia crinita* group

- 1(2). Face yellow, anterior part of frons yellow. Male palpus yellow, black in apical half. Genitalia — Fig. 18. India *S. indica* sp.n.
- 2(1). Face and frons wholly black.
- 3(4). Wing slightly infumated apically. Male palpus — Fig. 24. Genitalia — Fig. 19. Thailand *S. pectinigera* sp.n.
- 4(3). Wings transparent.
- 5(6). Smaller: 3.0-3.4 mm. Male palpus — Fig. 25. Genitalia — Fig. 20. India *S. spinipalpa* sp.n.
- 6(5). Larger: 3.8-4.5. Male palpus and genitalia of different form.
- 7(8). Basal section of M_{1+2} , restricting discal cell till *ta* about 1.7-1.8 times as short as following section. Male palpus (Fig. 23) with one but wide scale apically. Genitalia — Fig. 17. Burma, Vietnam *S. freyi* sp.n.

- 8(7). Basal section of M_{1+2} , restricting discal cell till **ta** about 1.3-1.4 times as short as following section.
 9(10). Male palpus (Fig. 22) with two — three scales apically. Genitalia with epandrial process (Fig. 16) twisted. Taiwan, Japan, Far-East (Russia)
 *S. crinita* Hennig.
 10(9). Male palpus with spinules. Genitalia with epandrial process (Fig. 21) crooked. Vietnam
 *S. verrucifera* sp.n.

Strongylophthalmyia crinita Hennig, 1940

Figs 16, 22.

MATERIAL. Typus: ♂, S.-Formosa, Kosempo, 2.08 (H. Sauter) S.V. (DEI); 2 ♂♂, 3 ♀♀, Taiwan center: Chiayi, 25 km E, 700 m, 9.X.1993 (F. Kaplan, A. Freidberg) (TAU).

DESCRIPTION. MALE. Frons entirely black, shining. Face black, matt. Parafacials dark brown with silvery dust. Basal antennal segments yellow; third segment brownish yellow in lower part and greyish apically. Arista dark brown, bare. Mouthparts brown; palpi yellow, with 2-3 leaf-like black scales apically and bristle-like scales on lateral margin (Fig. 22). 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, hind femur with brown subapical ring; fore and middle femora with weak darkening apically; hind tibiae with very weak darkening in basal third. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.3-1.4 times as short as following section. Halteres yellow. Abdomen black, slightly shining. Genitalia (Fig. 16) with twisted epandrial processes.

Body length 3.5-4.1 mm.

FEMALE resembles to male; palpi black, normal elliptic form. Body length 3.8-4.5 mm.

Through the kindness of Dr. F. Menzel of the Deutsches Entomologisches Institut (Eberswalde) I have been able to study the male type of this species. As it turned out Hennig [1940] depicted the genitalia of *S. crinita* not quite exactly. I had doubts that numerous specimens from Japan and Far East were conspecific with *S. crinita*. A comparison with the type showed that these specimens must be referred to *S. crinita*.

S. crinita is a usual species in Far East. It is very similar to *S. freyi* sp.n. and *S. verrucifera* sp.n. externally but is distinguished by the characters given in the key above.

Strongylophthalmyia freyi Shatakin sp.n.

Figs 17, 23.

MATERIAL. Holotype: ♂, NE Burma, Kambaiti, 2000 m, 9.VI.1934 (Malaise). Paratypes: 5 ♀♀, same locality as holotype, 15-25.V.1934 (Malaise) (ZMUH).

DESCRIPTION. MALE. Frons entirely black, shining. Face black, matt. Parafacials dark brown with silvery dust. Basal antennal segments yellow; third segment brownish yellow in lower part and greyish apically. Arista dark brown, bare. Mouthparts brown; palpi yellow, with wide black scale apically and setules on lateral margin (Fig. 23). 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, hind femur with brown subapical ring; fore and middle femora with weak darkening apically. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**.

Basal section of M_{1+2} , restricting discal cell till **ta** about 1.7 times as short as following section. Halteres yellow. Abdomen black, slightly shining. Genitalia (Fig. 17) with strong crooked epandrial lobes.

Body length 3.8 mm.

FEMALE resembles male; palpi black, normal oval form. Body length 3.9-4.3 mm.

DIAGNOSIS. The male of *S. freyi* sp.n. is similar to that of *S. crinita* in the structure of palpi crowned with black scales apically (2-3 in *S. crinita* and 1 in *S. freyi*), but differs mainly in their genitalia. Epandrial processes in *S. crinita* are stronger twisted. This latter species has a much smaller ratio of sections of M_{1+2} , restricting discal cell.

I name this new species in honour of the distinguished Finnish dipterologist Richard Frey. It should be noticed that he [Frey, 1955] doubted justly that the Burmese specimens being at his disposal belonged to *S. crinita*.

Strongylophthalmyia indica Shatakin sp.n.

Fig. 18.

MATERIAL. Holotype: ♂, India, Meghalaya, Nongpoh-Forest, 25-28.IV.1980 (Freidberg) (USNM).

DESCRIPTION. MALE. Head black. Frons in anterior part above antennae yellow. Face yellow, matt, mouth with black bordering. Parafacials yellow. Basal antennal segments yellow; third antennal segment greyish-yellow. Arista dark, bare. Mouthparts brown; palpi yellow and deep black in apical half. 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, hind femur with brown subapical ring; fore and middle femora with weak darkening apically. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**. R_{4+5} and M_{1+2} slightly convergent apically. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.4 times as short as following section. Halteres whitish, with yellow knob. Abdomen black, slightly shining. Genitalia as in Fig. 18.

Body length 3.5 mm.

FEMALE unknown.

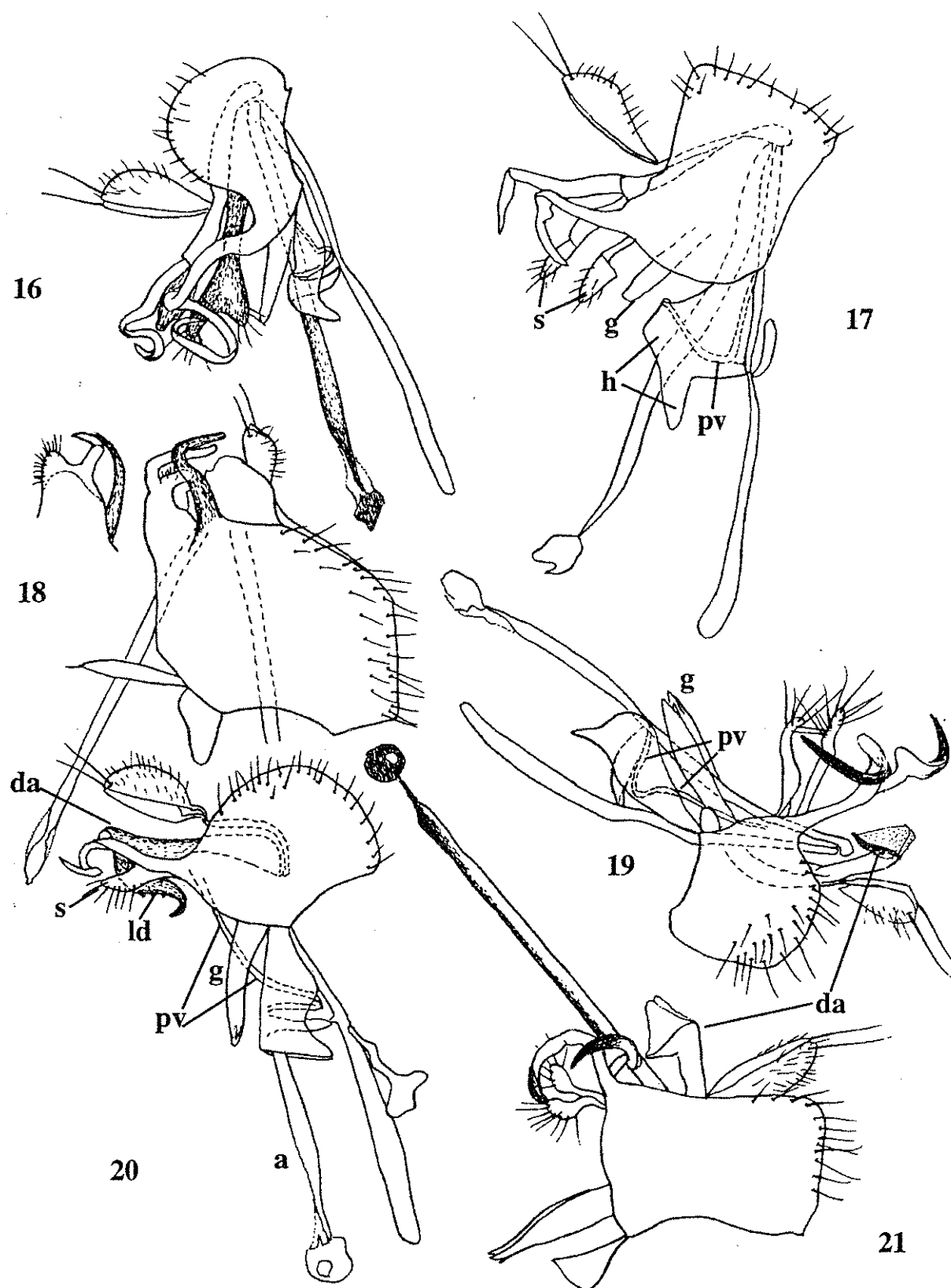
DIAGNOSIS. In Steyskal's key of the genus *Strongylophthalmyia* [Steyskal, 1971] *S. indica* sp.n., as having the face wholly yellow and the frons yellow in anterior part, would go to the *S. ustulata* group. The new species differs from species of the *S. ustulata* group in possessing the peculiar type of genital structure being similar to that of *S. crinita*. The male palpus *S. indica* is like those of *S. pectiniger* sp.n. and *S. spinipalpa* sp.n. Within the *S. crinita* group *S. indica* is best recognized by the colour of the head.

Strongylophthalmyia pectiniger Shatakin sp.n.

Figs 19, 24.

MATERIAL. Holotype: ♂, Thailand, NW Chiang-Mai, Doi Suket, 1000-1300 m, 12.X.1993 (F. Kaplan, A. Freidberg) (TAU).

DESCRIPTION. MALE. Frons entirely black, shining. Face black, matt. Parafacials dark brown with silvery dust. Basal antennal segments brown; third antennal segment yellowish orange. Arista dark brown, bare. Mouthparts brown; palpi darkish, with comb of bristles apically (Fig. 24). 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout



Figs 16-21. Male terminalia (16-21) of *Strongylophthalmyia*: *S. crinita* Hennig (16); *S. freyi* sp.n. (17); *S. indica* sp.n. (18); *S. pectinigera* sp.n. (19); *S. spinipalpa* sp.n. (20); *S. verrucifera* sp.n. (21); See Figs 1-7 for abbreviations.

Рис. 16-21. Гениталии самцов *Strongylophthalmyia*: *S. crinita* Hennig (16); *S. freyi* sp.n. (17); *S. indica* sp.n. (18); *S. pectinigera* sp.n. (19); *S. spinipalpa* sp.n. (20); *S. verrucifera* sp.n. (21); Для расшифровки сокращений смотри рис. 1-7.

bristles apically and a pair of weak hairs basally. Legs yellow, hind femur with brown subapical ring; fore and middle femora without darkening apically. Wing infumated apically. R_{2+3} long, its end far beyond the level of **tp**. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.8 times as short as following section. Halteres yellow. Abdomen black, slightly shining. Genitalia as in Fig. 19.

Body length 3.6 mm.

FEMALE unknown.

DIAGNOSIS. Within the investigated group, *S. pectinigera* sp.n. is readily distinguished by the apical darkening of wing. The male is similar to these of *S. indica* sp.n. and *S. spinipalpa* sp.n. in the structure of palpi, crowned with only bristles in these species.

Strongylophthalmyia spinipalpa Shatalkin sp.n.

Figs 20, 25.

MATERIAL. Holotype: ♂, India, Meghalaya, Nongpoh-Forest, 25-28.IV.1980 (Freidberg). Paratypes: 1 ♂, 3 ♀♀, same locality as holotype, 25-28.IV.1980 (Freidberg) (USNM).

DESCRIPTION. MALE. Frons entirely black, shining. Face black, matt. Parafacials dark brown with silvery dust. Basal antennal segments yellow; third antennal segment brownish yellow in lower part and greyish apically. Arista dark brown, bare. Mouthparts brown; palpi yellow, triangular, with thickened black bristle at apical corner and 4-5 setules below (Fig. 25). 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, hind femur with brown subapical ring; fore and middle femora with weak darkening apically. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.3 times as short as following section. Halteres yellow. Abdomen black, slightly shining. Genitalia as in Fig. 20.

Body length 3.1 mm.

FEMALE resembles male; palpi black, normal oval form. Body length 3.0-3.4 mm.

DIAGNOSIS. The new species is characterized by relatively long basal section M_{1+2} restricting discal cell. In this character *S. spinipalpa* sp.n. is similar to *S. crinita* and *S. indica* differing from the second species in the colour of the frons and face being wholly black; from the first species *S. spinipalpa* should be distinguished by the smaller size, the genitalia with epandrial processes less twisted, and the male palpi with only bristles (without black scales) apically.

Strongylophthalmyia verrucifera Shatalkin sp.n.

Fig. 21.

MATERIAL. Holotype: ♂, Vietnam, Tam Dao, prov. Vinh Phu, 1000 m, 11-14. 1990 (Belokobylskij). Paratypes: 1 ♂, 1 ♀, same locality as holotype, 1-14. 1990 (Belokobylskij) (ZISP).

DESCRIPTION. MALE. Frons entirely black, shining. Face black, matt. Parafacials dark brown. First antennal segment brown, second segment yellow; third segment dark grey. Arista dark brown, bare. Mouthparts brown; palpi dark, perhaps, with only spinules apically. 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, hind femur with brown subapical ring; fore and middle femora with

weak darkening apically. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.3-1.4 times as short as following section. Halteres yellow. Abdomen black, slightly shining. Genitalia as in Fig. 21 with crooked epandrial processes.

Body length 3.5 mm.

FEMALE resembles male; palpi black, normal oval form. Body length 3.7 mm.

DIAGNOSIS. *S. verrucifera* sp.n. is similar to *S. crinita* in size and appearance. I have been unable to find any external characters that should be sufficient to separate these two species. The structure of palpi, crowned with black scales apically in *S. crinita*, is not quite clear in case of *S. verrucifera* because of their bad visibility. The only characters of value are those of the genitalia. The epandrial processes in genitalia of *S. verrucifera*, unlike those of *S. crinita*, are less twisted. In this respect they are more like those of *S. freyi*. The latter species differs from *S. verrucifera* by a much larger ratio between the successive sections of M_{1+2} , restricting discal cell.

Species of *Strongylophthalmyia punctata* group

This group is restricted to three previously described and three new species. Two more species considered below may belong to it too. Species of the group are recognized mainly by the third segment of the male antennae with dorsal expansion.

Strongylophthalmyia freidbergi Shatalkin sp.n.

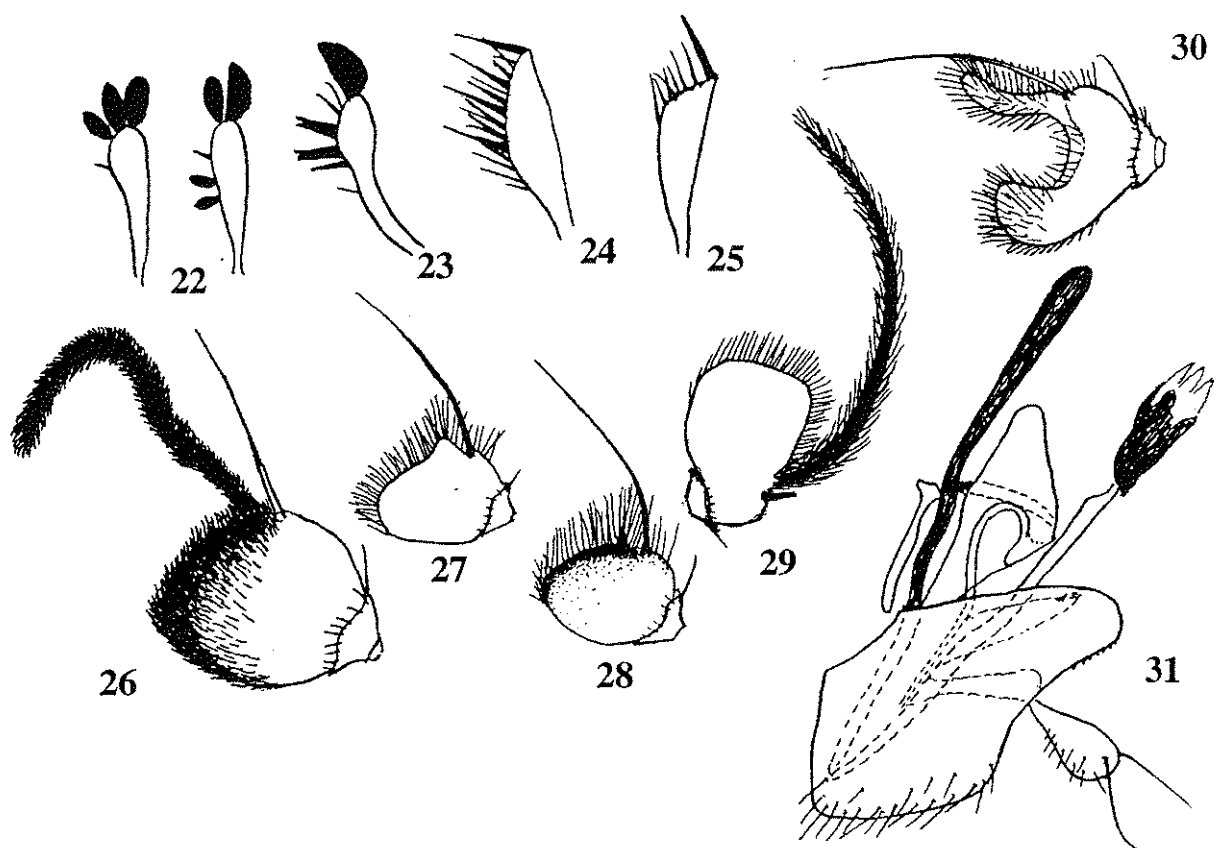
Fig. 26.

MATERIAL. Holotype: ♂, Thailand, NW Chiang-Mai, Doi Suket, 1000-1300 m, 12.X.1993 (F. Kaplan, A. Freidberg). Paratypes: 2 ♂♂, same locality as holotype, 12.X.1993 (F. Kaplan, A. Freidberg); 2 ♀♀, Thailand, S. Takua Pa and S. Khao Soknatpar, 21-22.X.1993 (F. Kaplan, A. Freidberg) (TAU).

DESCRIPTION. MALE. Head black. Frons in anterior part above antennae yellow. Face yellow, matt. Parafacials yellow. Basal antennal segments brownish yellow; third antennal segment (Fig. 26) blackish (except for yellow base) from outside and yellow with blackish bordering from inside; dense hairs on margin of third antennal segment black. Antennal process black, with dense black hairs. Arista dark, bare. Mouthparts brown; palpi brownish, undelated. 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 5 **dc**, relatively short except posterior pair. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, fore and middle femora with weak darkening in apical one third; middle and hind tibiae with wide pale brown ring in the middle. Hind femora with transversely flattened basal tubercle. Wings with weak apical spot and median crossband. R_{2+3} long, its end far beyond the level of **tp**. R_{4+5} and M_{1+2} not convergent apically. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.8 times as short as following section. Halteres whitish, with knob darkish in basal part. Abdomen black, slightly shining.

Body length 3.5 mm.

FEMALE differs from male in the following characters: third antennal segment with dorsal knob noticeable in the paratype from Takua Pa; antennal hairs whitish; anterior femora brown yellow, mid and hind tibiae brownish; median crossband of wing practically absent. Length 3.4 mm.



Figs 22-31. Male palpi (22-25) and antennal structure (26-30) and genitalia (31) of *Strongylophthalmyia*: 22 — *S. crinita* Hennig; 23 — *S. freyi* sp.n.; 24 — *S. pectiniger* sp.n.; 25 — *S. spinipalpa* sp.n.; 26 — *S. freidbergi* sp.n.; 27 — *S. gibbifera* Shatalkin; 28 — *S. microstyla* sp.n.; 29 — *S. stylocera* sp.n.; 30-31 — *S. raricornis* Shatalkin.

Рис. 22-31. Щупики (22-25), усики (26-30) и гениталии (31) самцов видов *Strongylophthalmyia*: 22 — *S. crinita* Hennig; 23 — *S. freyi* sp.n.; 24 — *S. pectiniger* sp.n.; 25 — *S. spinipalpa* sp.n.; 26 — *S. freidbergi* sp.n.; 27 — *S. gibbifera* Shatalkin; 28 — *S. microstyla* sp.n.; 29 — *S. stylocera* sp.n.; 30-31 — *S. raricornis* Shatalkin.

DIAGNOSIS. The male of *S. freidbergi* sp.n. may be easily recognized by the shape of antennal process. Other unique character is the presence of the black (not white as in typical case) hairs on margin of the third antennal segment. The true status of the females as *S. freidbergi* requires additional proof.

It is my pleasure to name this species in honor of Professor Amnon Freidberg from Tel Aviv University.

Strongylophthalmyia gibbifera Shatalkin, 1993
Fig. 27.

MATERIAL. Species is known by the holotype from Vietnam, prov. Hanoi, 70 km NW Ba Vi, 400 m, 22.XI.1990 (Nartshuk) (ZISP).

REDESCRIPTION. MALE. Head black. Frons entirely black. Face dark brown, matt. Parafacials slightly silvery dusted. Basal antennal segments and ventral half of third segment yellowish brown; dorsal half of third antennal segment dark brown. Dense hairs on margin of third antennal segment whitish. Antennal process (Fig. 27) short, triangular, with dense white hairs. Arista long, bare. Mouthparts dark brown; palpi narrow, brownish yellow with long bristle apically. 3 or, 2 vt, pvt present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 npl, 1 dc. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs

basally. Legs yellow; hind femora with weak darkening apically; hind tibiae darkened in median 1/2. Wings transparent. R_{2+3} long, its end far beyond the level of tp. R_{4+5} and M_{1+2} practically not convergent apically. M_{1+2} very thin in apical half. Basal section of M_{1+2} , restricting discal cell till ta about 2.3 times as short as following section. Halteres greyish, with knob dark. Abdomen black, slightly shining.

Body length 2.3 mm.

FEMALE unknown.

DIAGNOSIS. This distinctive species demonstrates a close relationship with *S. microstyla* described below.

Strongylophthalmyia microstyla Shatalkin sp.n.
Fig. 28.

MATERIAL. Holotype: ♂ Philippines, Manila (R. Brown) (USNM).

DESCRIPTION. MALE. Head black. Frons in anterior part as far as ocellar triangle yellow. Face yellow, matt. Parafacials yellow. Antennae yellow; third antennal segment (Fig. 28) with short style-form process; dense hairs on margin of third antennal segment and antennal process whitish. Arista dark, bare. Mouthparts brown; palpi delated, black. 3 or, 2 vt, pvt present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 npl, 7 dc (4 relatively short before suture),

ac brought together on middle line and equal to presutural **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow, fore coxae, middle and hind coxae and femora, middle tibiae in basal 1/2 part, hind tibiae in basal 2/3 part darkish brown. Fore femora with strong dorsal and ventral bristles. Wings transparent. R_{2+3} very short, its end far before the level of **tp**. R_{4+5} and M_{1+2} convergent apically. Basal section of M_{1+2} , restricting discal cell till **ta** about 3.6 times as short as following section. Halteres very dark. Abdomen black, slightly shining.

Body length 2.3 mm.

FEMALE unknown.

DIAGNOSIS. *S. microstyla* sp.n. is similar to *S. gibbifera* Shatalkin in antennal structure, but differs in colour characteristics of the head and legs. Characters of the wing with the unique pattern of vein R_{2+3} indicate a close relationship between *S. microstyla* and *S. immaculata* Hennig. The latter species was described on the material from Taiwan. Examination of Taiwan material kindly sent by Dr. A. Freidberg shows that specimens which with good reason may be referred to *S. immaculata*, are very similar to *S. microstyla* in antennal structure and also in the fore femora that are armed. Hennig [1940] did not point out this characters in the description of *S. immaculata*. One more species *S. spinosa* Frey, known from Burma and having analogically armed fore femur, most likely must be included in this group. Unfortunately, arista was broken in the holotype of *S. spinosa*.

Strongylophthalmyia punctata Hennig, 1940

I have not seen this species described from Taiwan. The male is similar to that of *S. stylocera* sp.n. in the structure of third antennal segment but differs by middle and hind femora that are black except for basal third and knee yellow, and also armed fore femora.

Strongylophthalmyia raricornis Shatalkin, 1981 Figs 30-31.

MATERIAL. This species was described on 2 ♂♂ and 3 ♀♀ from Khabarovskiy Kray, Khr. Malyi Khingan, 15 km SE from Radde. Later the additional material was collected: 5 ♀♀, Primorskiy Kray, Kamenushka (30 km SE from Ussuriysk), 18-23.VII.1983 (Shatalkin); 2 ♂♂, 1 ♀, same locality, 25-28.VI.1984 (Shatalkin); 2 ♂♂, Primorskiy Kray, Lazovskiy Reserve, 25 km SE from Lazo, 10 and 28.VII.1986 (Ozerov) (ZMUM).

REDESCRIPTION. MALE. Head black. Frons entirely black. Parafacials slightly dusted with silver. Antennae brown; third antennal segment (Fig. 30) brownish yellow basally with white dense hairs on margin; this segment bilobate with dorsal lobe (antennal process in other species) slightly longer and more narrow than ventral one. Arista dark brown, bare. Mouthparts brown; palpi black with apical long dark bristles along ventral margin. 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, without obvious short pale hairs. 2 **npl**, 9 **dc**, **ac** in two rows. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Mesopleuron in hind part and sternopleuron with light hairs. Legs black; fore coxa yellow with black laterally, middle coxa yellow, hind coxa black; fore tibiae and tarsi yellow; middle and hind tibiae yellow apically; middle and hind tarsi yellow except for two last segments. Hind trochanter with thorn-like appendage on

internal surface; hind femur with three small warty appendages on posterior surface basally. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**. R_{4+5} and M_{1+2} not convergent apically. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.8 times as short as following section. Halteres darkish grey. Abdomen black, slightly shining with blackish hairs. Genitalia as in Fig. 31: surstyli absent.

Body length 3.4-3.8 mm.

FEMALE. Similar to male with the following exceptions. Antennae with only small tubercle dorsally. Hind femora without appendages basally. Body length 3.8-4.3 mm.

DIAGNOSIS. This distinctive species is the sole representative of the group in the Palaearctic region. Within the group *S. raricornis* occupies an isolated position. The third antennal segment is bilobate with comparable dorsal and ventral lobes.

Strongylophthalmyia stylocera Shatalkin sp.n. Fig. 29.

MATERIAL. Holotype: ♂, Philippines, Mindanao, Cotabato, Barrio Lagdaan, IV.1932 (F. Rivera) (USNM).

DESCRIPTION. MALE. Head black. Frons entirely black. Face yellow, matt. Parafacials yellow with silvery dust, gena yellow. Antennae yellow; dense hairs on margin of third antennal segment whitish. Antennal process (Fig. 29) long, black, with dense white hairs. Arista short, style-form, bare. Mouthparts brown; palpi yellow with apical long dark hairs along ventral margin. 3 **or**, 2 **vt**, **pvt** present. Thorax black. Mesonotum shining, with obvious short pale hairs. 2 **npl**, 1 **dc**. Scutellum bare with a pair of stout bristles apically and a pair of weak hairs basally. Legs yellow; hind femora with weak darkening apically. Wings transparent. R_{2+3} long, its end far beyond the level of **tp**. R_{4+5} and M_{1+2} slightly convergent apically. Basal section of M_{1+2} , restricting discal cell till **ta** about 1.8 times as short as following section. Halteres whitish, with stem darkish in basal part. Abdomen black, slightly shining.

Body length 2.7 mm.

FEMALE unknown.

DIAGNOSIS. The distinctive species is closely related to *S. punctata* demonstrating likeness in the structure of the third antennal segment bearing a long process. The male of *S. stylocera* sp.n. may be easily recognized from all species by the combination of the following characters: antennal process long and narrow, black with white hairs; hairs on margin of the third antennal segment also white; legs yellow and anterior femora without strong dorsal spinules (distinction from *S. punctata*).

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