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NEW DATA ON THE GENUS *SYNDYAS* LOEW (DIPTERA: HYBOTIDAE), WITH DESCRIPTIONS OF TWO NEW PALAEARCTIC SPECIES FROM CYPRUS AND TAJIKISTAN

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ABSTRACT

Two new Palaearctic species of *Syndyas* Loew (Diptera: Hybotidae) are described – *S. merzi* sp. nov. (Cyprus) and *S. tajikistanica* sp. nov. (Tajikistan). *Syndyas nigripes* (Zetterstedt, 1842) is recorded for the first time from the Russian Far East and Kazakhstan. A key to species of *Syndyas* from the Palaearctic is compiled.

Key words: Cyprus, Diptera, Hybotidae, new species, Palaearctic, Russia, *Syndyas*, Tajikistan

НОВЫЕ СВЕДЕНИЯ ПО РОДУ *SYNDYAS* LOEW (DIPTERA: HYBOTIDAE) С ОПИСАНИЯМИ ДВУХ НОВЫХ ПАЛЕАРКТИЧЕСКИХ ВИДОВ С КИПРА И ИЗ ТАДЖИКИСТАНА

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РЕЗЮМЕ

Описаны два новых палеарктических вида рода *Syndyas* Loew (Diptera: Hybotidae): *S. merzi* sp. nov. (Кипр) и *S. tajikistanica* sp. nov. (Таджикистан). *Syndyas nigripes* (Zetterstedt, 1842) впервые указывается с Дальнего Востока России и из Казахстана. Составлена определительная таблица видов *Syndyas* Палеарктики.

Ключевые слова: Кипр, Diptera, Hybotidae, новые виды, Палеарктика, Россия, *Syndyas*, Таджикистан

INTRODUCTION

Syndyas Loew, 1858 is one of distinctive genera of the subfamily Hybotinae that comprises quite small species with body length ranging from 2–3.5 mm and sharing highly arched thorax, evanescent vein

between the basal cells, short Rs vein, and strongly clavate hind tibia (Teskey and Chillcott 1977). The genus includes 34 species and is known from all zoogeographical realms: Afrotropical – 14; Australasian and Oriental – 3 and 10, respectively [recently reviewed by Grootaert and Yang (2009)]; Nearctic – 6 (revised by Teskey and Chillcott (1977)); Neotropical – 1; Palaearctic – 3. It should be noted that two

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species of *Syndyas* are common to the Australasian and Oriental Realms, and one species to the Oriental and Palaearctic Realms; no species are known from Australia (Grootaert and Yang 2009).

For a long time the list of the Palaearctic Hybotidae included a single species of *Syndyas*, *S. nigripes* (Zetterstedt, 1842), known from temperate areas of Europe (Chvála 1983). A second species was described by Chvála (1975) from Spain. Yang (2004) added a third Palaearctic species of *Syndyas* taken from China (Beijing).

Our paper includes descriptions of two new Palaearctic species of *Syndyas* from Cyprus and Tajikistan. Thus, this genus comprises currently 36 species worldwide and 5 species from the Palaearctic. In addition, *Syndyas* is recorded here for the first time from Israel with an undescribed species represented by a single female. Finally, new records of *S. nigripes* from the Asiatic part of the Palaearctic are given.

MATERIAL AND METHODS

This study is based on material deposited in Zoological Institute of Russian Academy of Sciences, St. Petersburg, Russia (ZIN) and Muséum d'Histoire Naturelle, Geneva, Switzerland (MHNG). Terms used for adult structures primarily follow those recently summarised by Cumming and Wood (2009), except for the antenna where the terms of Stuckenberg (1999) are used. Label data for primary types mounted on pins are cited from the top downward, with the data from each label in quotation marks. Holotype labels are cited in full, with original spelling, punctuation, date, and label lines are delimited by a slash (/). Additional information is included in square [] brackets. The repository of each type is given in parentheses. Secondary type data are abridged and listed alphabetically.

SYSTEMATICS

Genus *Syndyas* Loew, 1858

Syndyas Loew, 1858: 369 [1860: 332].

Sabinios Garrett Jones, 1940: 273. Type species: *Sabinios jovis* Garrett Jones, 1940, by monotypy.

Type species: *Syndyas opaca* Loew, 1858, des. Coquillett, 1903: 257.

Remarks. The species of the genus have a black to brown, shining or subshining body; head hemi-

spherical in profile; eyes holoptic in both sexes, with prominent border between upper larger and lower smaller ommatidia; face long, linear; antennae above middle of head in profile; stylus subapical or apical, bare; thorax highly arched, mesonotum partly pruinose, setation inconspicuous except notopleurals; hind tibia clavate; wing hyaline or finely infuscate, often lacking microtrichia basally, with vein Rs short, vein between cells br and bm evanescent, discal cell emitting two veins, cell cup nearly as long as basal cells with its outer angle acute; male hypopygium asymmetrical, rotated to right through about 90°.

Syndyas merzi sp. nov.

(Figs 1–5)

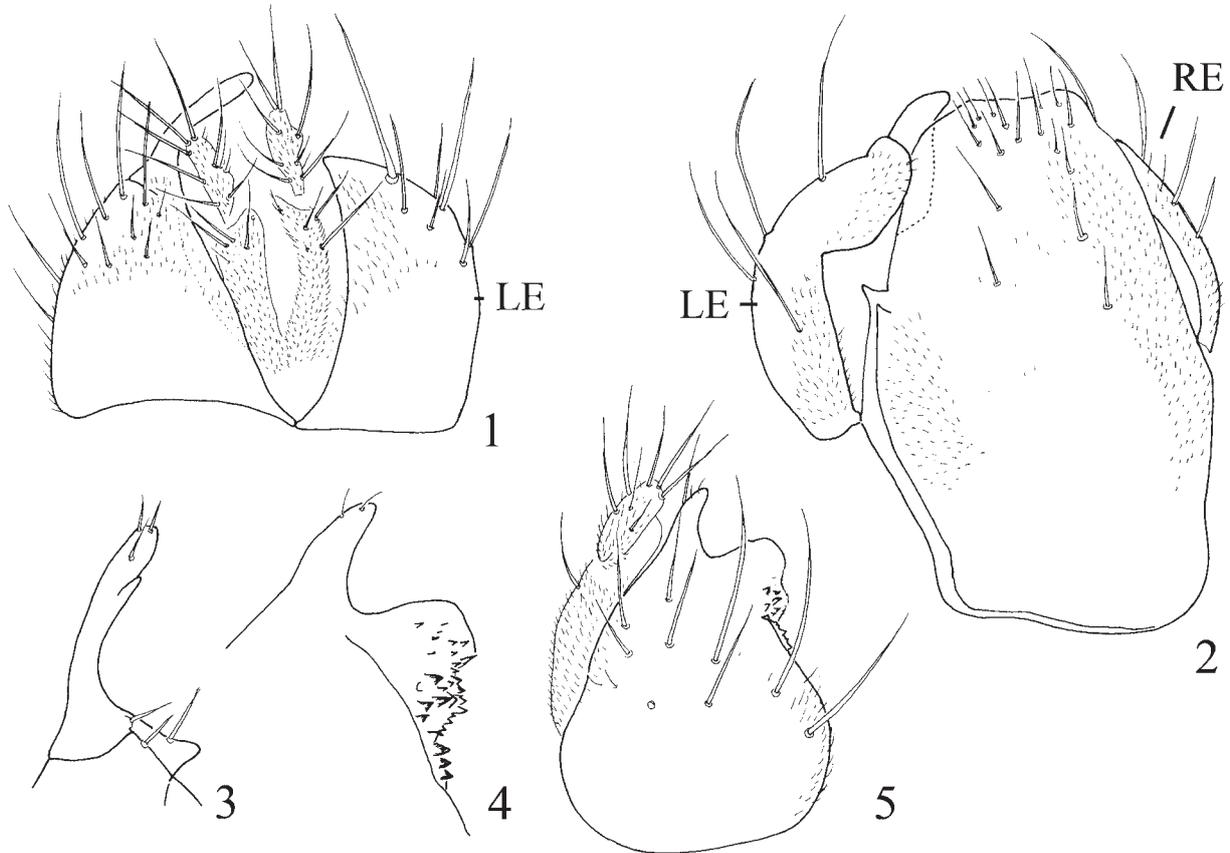
Etymology. The species is named in honour of the dedicated dipterist Dr. Bernhard Merz (Geneva, Switzerland) who collected part of the material that this paper is based upon.

Type material. Holotype – male, “CYPRUS: 165m/ Kalavassos Dam/ 24.iv.2002, St. 12/ 34.48N/ 33.16E; ruderal, reed/ leg. Merz, Deeming/ Ebejer & Gatt” (deposited in MHNG).

Diagnosis. Recognised by wing hyaline, lacking microtrichia basally; stigma indistinct, cell dm short; halter brown; abdominal tergites 1–3 densely brown pollinose.

Description. Male. Head black, with brownish to black setation; occiput finely greyish pollinose. Face very narrow, somewhat widened below antennae, subshining. Ocellar triangle very prominent, bearing 2 moderately long, proclinate fine setae. Postvertical and postocular setae moderately long, thin. Antenna brown; postpedicel conical, 2.3 times as long as wide; stylus long, bare, hair-like on subapical portion. Proboscis short, black; palpus brown, slightly shorter than proboscis, with scattered dark setulae.

Thorax black, very humped, with black setation; postpronotal lobes and anterior part of scutum shining, otherwise thorax brown tomentose. Postpronotal lobe with several fine setae of different lengths. Mesonotum with 2 strong long notopleurals, 1 fine short postalar and 3 pairs of thin, subequally long scutellars; additionally, some hair-like setae of different lengths present on notopleuron and supra-alar region; acrostichals absent (probably missing); dorsocentrals arranged in 2 irregular rows, minute anteriorly, prescutellars long and proclinate.



Figs 1–5. *Syndyas merzi* sp. nov., male genitalia: Epandrium and cerci, dorsal view (1); epandrium and hypandrium, ventral view (2); right surstylus, lateral view (3); apical part of left epandrial lamella (4); left epandrial lamella with left cercus, lateral view (5). LE: left epandrial lamella; RE: right epandrial lamella.

Legs entirely black, subshining, with black setation. Coxae and trochanters with numerous long unmodified setae. Fore and mid femora slender, with rows of very short anteroventral and posteroventral setae. Fore tibia somewhat thickened (except base), viewed dorsally slightly curved; tibial organ small; subapical circlet with only several short setae. Fore tarsomeres covered with short setulae (except circlet of longer subapicals); tarsomere 1 with longer ventral and subapical setae. Mid tibia slender, with 4–5 short dorsal and circlet of subapical setae, which includes 1 very long ventral seta. Mid basitarsus slender, with several strong anteroventral and posteroventral setae of different lengths (2 posteroventral subapicals longest); tarsomeres 2–5 with short setulae. Hind femur gradually thickened toward apex; with row of spine-like anteroventral setae and 2 strong short anterodorsal subapical setae. Hind tibia strongly thickened on about apical half; with several anterodorsal

and posterodorsal setae of different lengths. Hind basitarsus somewhat thickened, with short strong anteroventral and posteroventral setae; tarsomeres 2–5 with short setulae.

Wing hyaline, with brownish veins, basal section of M and anal vein very faint; no seta at wing base; stigma indistinct brownish yellow, elliptical, not overlapping apex of R₁; anal lobe very prominent, nearly at right-angles; costal cell and basal parts of cells br and bm lacking microtrichia. R₂₊₃ smoothly arched towards costa; R₄₊₅ and M₂ convergent near wing-apex; cell dm short, about 2.0 times shorter than basal cells, apical section of M 3.0 times as long as crossvein dm-cu; cell cup somewhat shorter than cells br and bm; anal vein long, ending just short of wing margin. Squama brownish, with concolorous setae. Halter brown.

Abdomen black, mostly shining, covered with numerous long pale hair-like setae; tergites 1–3 densely

brown pollinose. Terminalia (Figs 1–5) small, black. Cercus short, digitiform, with unmodified setae of different lengths. Right epandrial lamella with numerous long setae; right surstylus barely differentiated from epandrium, short, digitiform, with several minute setae apically. Left epandrial lamella with numerous long setae, with notch apically; left surstylus undifferentiated from epandrium. Hypandrium subrectangular, with numerous setae of different lengths on apical part.

Female unknown.

Length (mm). Wing 2.5.

Comparison. In having hyaline wings and entirely black legs the new species could only be compared with *S. yunmengshanensis* Yang, 2004 (China, Beijing) and *S. tajikistanica* sp. nov. *Syndyas merzi* sp. nov. can be readily distinguished from both these species by densely brown pollinose abdominal tergites 1–3 (vs. abdomen entirely shining in *S. tajikistanica* sp. nov. or abdomen grey pollinose in *S. yunmengshanensis*).

Distribution. Cyprus.

Syndyas nigripes (Zetterstedt, 1842)

(Figs 6–9)

Ocydromia nigripes Zetterstedt, 1842: 2.

Material examined. KAZAKHSTAN: Vostochno-Kazakhstanskaya Province: 1 female, Kotonkaragay, Sarymsakty River, 2 August 1926, Verechagin. RUSSIA: Amurskaya Province: 1 male, Simonovo, 75 km W of Svobodny, forb meadow, 22 July 1959, Kerzhner. Chita Province: 1 female, Ingoda railway station, valley of Ingoda River, 7 July 1971, V. Richter. Leningrad Province: 1 female, vic. Luga, Tolmatschevo, 15 July 1937, Stackelberg. Primorskiy Territory: 1 female, Sidemi [= Bezverkhovo, Khasanskiy District], 27 July 1897, Yankovskiy; 1 male, same locality, 30 July 1897, Yankovskiy. 1 male, 1 female, Maykhe River [= Artemovka] near Peyshula [= Lesnoy Kordon, Shkotovskiy District], 21 July 1969, Kandybina; 1 male, valley of Maykhe River [= Artemovka] above Khotunichi [= Novo-Khotunichi, Shkotovskiy District], on *Phragmites*, 12 July 1963, Narchuk (ZIN).

Remarks. *Syndyas nigripes* is the only species of the genus that has a trans-Palaearctic area of distribution, also penetrating into the Oriental Realm through the territory of China (Yang and Yang 2004; Yang et al. 2007). We recorded *S. nigripes* from Ka-

zakhstan (Vostochno-Kazakhstanskaya Province) and eastern areas of Russia (Amurskaya and Chita Provinces, Primorskiy Territory) for the first time, filling the gap between European and Asiatic records of the species.

Distribution. ORIENTAL: China (Guizhou, Hainan). PALAEARCTIC: Austria, Belgium, China, Czech Republic, Finland, Germany, Great Britain, Hungary, Italy, Kazakhstan, Netherlands, Poland, Russia (Amurskaya, Chita, Leningrad Provinces, Primorskiy Territory), Sweden, Switzerland.

Syndyas tajikistanica sp. nov.

(Figs 10–12)

Etymology. The name of the new species refers to the country of its origin, Tajikistan.

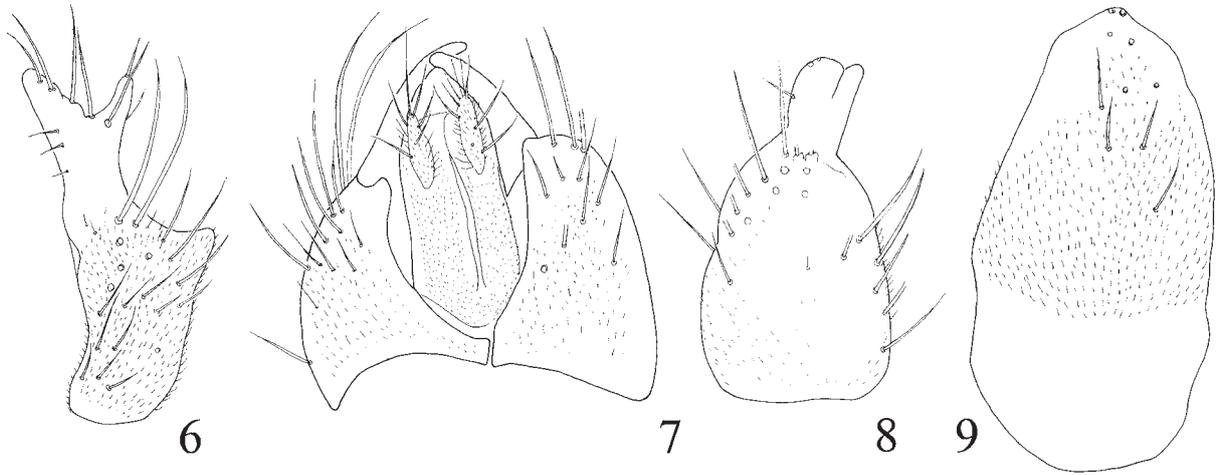
Type material. Holotype – male, TAJIKISTAN: [printed in Cyrillic] “Kondara, 1100 m./ d. Varzoba [= valley of Varzob], Taj. [= Tajikistan]/ Gussakovskiy; 18.viii.1945” (ZIN).

Paratypes: Tajikistan, env. of Kulyab, V. Popov; Tajik parasitologic expedition: 1 female, 6 August 1933; 1 female, 10 August 1933; 1 female, 1 September 1933 (ZIN).

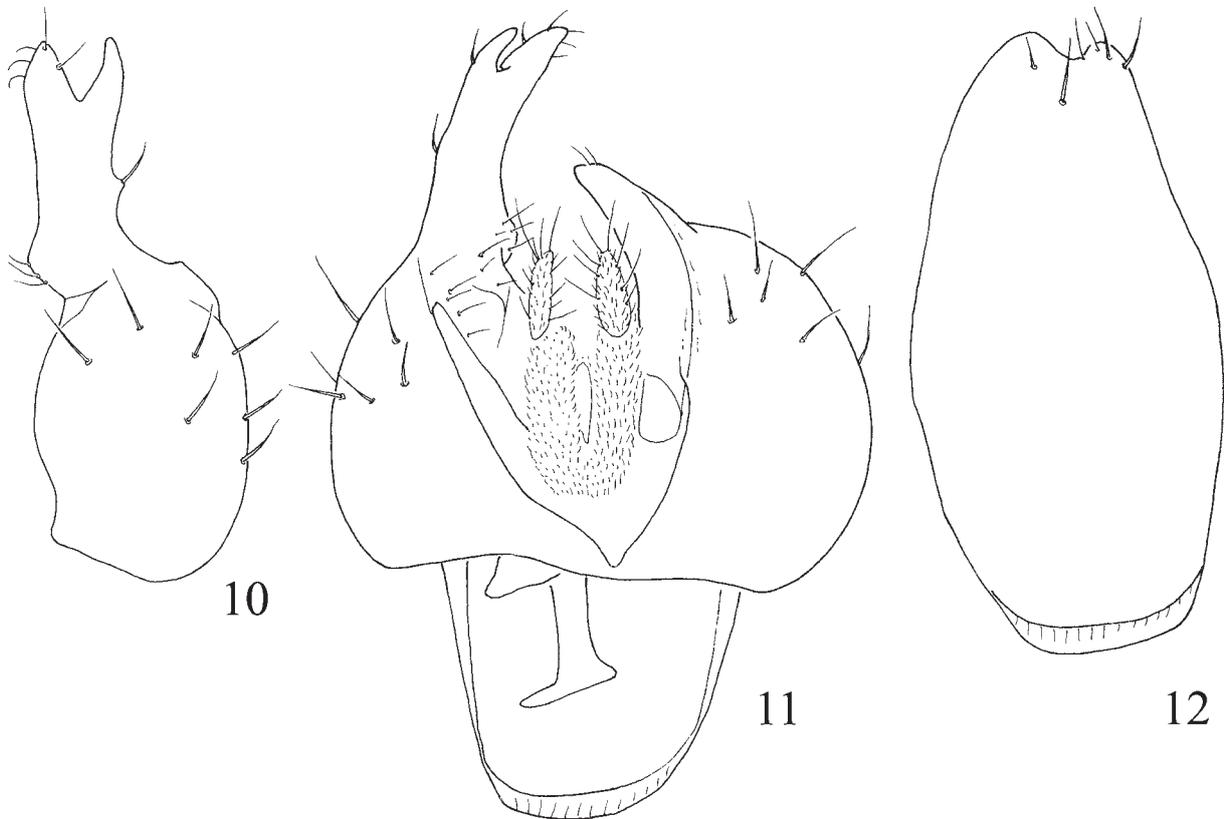
Diagnosis. Recognised by wing hyaline, lacking microtrichia basally, stigma indistinct, cell dm short; halter with brown stem and brownish yellow knob; abdomen shining.

Description. *Male.* Head black, with brownish to black setation; occiput finely greyish pollinose. Face very narrow, subshining. Ocellar triangle prominent, bearing 2 moderately long proclinate fine setae. Postvertical and postocular setae moderately long, thin. Antenna brown; postpedicel conical, 2.2–2.3 times as long as wide; stylus apical, long, bare, hair-like on subapical portion. Proboscis short, black; palpus brown, slightly shorter than proboscis, with scattered dark setulae.

Thorax black, moderately humped, mostly with yellowish to pale hair-like setation; postpronotal lobes, notopleural and prescutellar depressions, scutellum and mesopleuron finely brown tomentose, otherwise thorax shining. Postpronotal lobe with several thin pale setae of different lengths. Mesonotum with 2 long strong black notopleurals, 1 fine short postalar and 2 pairs of scutellars (apical pair much longer and stronger); additionally, some hair-like setae of different lengths present on notopleuron and supra-alar region; acrostichals arranged in 2 ir-



Figs 6–9. *Syndyas nigripes* (Zetterstedt), Primorsk Territory (Russia), male genitalia: Left surstylus, lateral view (6); epandrium and cerci, dorsal view (7); left epandrial lamella, lateral view (8); hypandrium, ventral view (several setae missing) (9).



Figs 10–12. *Syndyas tajikistanica* sp. nov., male genitalia: Right epandrial lamella, lateral view (10); hypopygium, dorsal view (11); hypandrium, ventral view (12).

regular rows, dorsocentrals uniserial, both longer and proclinate on prescutellar depression.

Legs entirely black, subshining, with black setation (except some setae on coxae). Coxae and trochanters with numerous unmodified setae of different lengths. Fore and mid femora slender, with rows of very short anteroventral and posteroventral setae. Fore tibia somewhat thickened (except base), viewed dorsally slightly curved; with several ventral and anteroventral setae of different lengths forming subapical circling, tibial organ small. Fore tarsomeres mostly covered with short setulae (except circling of longer subapicals); tarsomere 1 with rather longer setulae and with 1 long, strong posteroventral seta on basal part. Mid tibia slender, with 3–4 dorsal setae of different lengths, otherwise with similar setation to fore tibia. Mid tarsus with similar setation to fore tarsus. Hind femur narrow on about basal half, 1.5–1.7 times broader on apical part; with row of 5–6 short, spine-like anteroventral setae and row of short anterodorsal setae (1 subapical seta longer and stronger). Hind tibia thickened toward apex; with several anterodorsal and posterodorsal setae of different lengths and circling of moderately long subequal setae. Hind basitarsus slightly swollen, with short, strong anteroventral and posteroventral setae; tarsomeres 2–5 with short setulae.

Wing hyaline, with brownish veins, basal section of M and anal vein very faint; no seta at wing base; stigma very indistinct, brownish yellow, elliptical, not overlapping apex of R_1 ; anal lobe very prominent, obtuse; costal cell and basal part of cells br and bm lacking microtrichia. R_{2+3} smoothly arched meeting costa; R_{4+5} and M_2 somewhat convergent near wing-apex; cell dm short, about 1.5 times shorter than basal cells, apical section of M about 3.0 times as long as dm-cu crossvein; cell cup as long as cells br and bm; anal vein long, ending just short of wing margin. Squama brownish, with concolorous setae. Halter with brown stem and brownish yellow knob.

Abdomen black, shining, covered with numerous long pale hair-like setae. Sclerites of segment 8 separated but tergite 8 narrowed medially, stronger sclerotised. Terminalia small, black. Cercus short, digitiform, with unmodified setae of different lengths. Right epandrial lamella with several long setae; right surstylus barely differentiated from epandrium, rather long, bifurcate, with V-shaped incision, bearing several unmodified setae apically. Left epandrial lamella with several long setae; left surstylus undif-

ferentiated from epandrium. Hypandrium subrectangular, with small excision apically, bearing several setae of different lengths on apical part.

Female. Similar to male but abdominal setation shorter. Abdominal tergites 7–8 narrowly brownish pollinose posteriorly; cercus elongate, with minute setulae.

Length (mm). Body 2.4, wing 2.2.

Comparison. In having hyaline wings and entirely black legs the new species could only be compared with *S. yunmengshanensis* Yang, 2004 (China, Beijing) and *S. merzi* sp. nov. However, in these species the halteres are entirely brown (vs. with brownish yellow knob in *S. tajikistanica* sp. nov.). Additionally, *S. merzi* sp. nov. has densely brown pollinose abdominal tergites 1–3 and in *S. yunmengshanensis* the abdomen is grey pollinose (vs. entirely shining in *S. tajikistanica* sp. nov.).

Distribution. Tajikistan.

Syndyas sp.

Material examined. 1 female, ISRAEL: Enot Zukim (Ein Fashkha), 19 March 1995, Merz (MHNG).

Remarks. This specimen is very similar to *S. subsabinios* Chvála, 1975 described after 2 males from Spain, Gerona (Chvála 1975). However, it differs from the original description of *S. subsabinios* by the following characters: prescutellar depression densely tomentose; notopleural and apical scutellar setae yellow; apex of cells br, bm, cup and dm brown clouded; halteres with yellow stem and brownish knob. Although this is likely to be an undescribed species, we consider that it would be premature to name it from only a single female specimen. It should be noted that in the specimen, the vein separating cells br and bm is quite distinct and brownish; a similar condition to that found among species of *Hybos* Meigen. This is first record of *Syndyas* from Israel and from the Near East on the whole.

Key to species of *Syndyas* from the Palaearctic Region

1. Wings with vein R_{2+3} abruptly curved around stigma, which is almost spherical. Legs with fore and mid tibiae, extreme tips of fore and mid femora, and tarsomeres 1–4 yellow *S. subsabinios* Chvála
- Wings with vein R_{2+3} straight below stigma, which is elongate oval. Legs entirely black 2

2. Wings brownish infusate. Halter entirely brown to black. Abdominal tergites shining. Male: right surstylus with bifurcate projection having V-shaped incision (Fig. 6)..... *S. nigripes* (Zetterstedt)
- Wings hyaline. Different combination of characters ... 3
3. Halter with brown stem and brownish yellow knob. Male: right surstylus with V-shaped apical incision (Fig. 10)..... *S. tajikistanica* sp. nov.
- Halter entirely brown. Male: right surstylus without apical incision 4
4. Abdominal tergites 1–3 densely brown pollinose, remaining tergites shining *S. merzi* sp. nov.
- Abdomen grey pollinose ... *S. yunmengshanensis* Yang

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