

Four new species of the genus *Sphegina* Meigen, 1822 (Diptera: Syrphidae) from Russia and India

VALERI A. MUTIN

Mutin, V.A. Four new species of the genus *Sphegina* Meigen, 1822 (Diptera: Syrphidae) from Russia and India. *Int. J. Dipterol. Res.*, 9(3): 237–241.

Two new Palaearctic species have been discovered — *Sphegina* (*Sphegina*) *carbonaria* sp. n. from the Russian Far East and *Sphegina* (*Sphegina*) *pontica* sp. n. from the Western Caucasus, — and two new Oriental species — *Sphegina* (*Sphegina*) *guptai* sp. n. and *Sphegina* (*Sphegina*) *kumaoniensis* sp. n. from India.

V. A. Mutin, Department of Zoology, Komsomolsk-on-Amur State Pedagogical Institute, Kirova Street, 17/2, Komsomolsk-on-Amur, 681000, Russia.

Key words. Diptera, Syrphidae, *Sphegina* (*Sphegina*), Palaearctic, Oriental, new species.

Introduction

In the process of the authors revision of the genus *Sphegina* Meigen, 1822 two new Palaearctic species have been discovered — *Sphegina* (*Sphegina*) *carbonaria* sp. n. from the Russian Far East and *Sphegina* (*Sphegina*) *pontica* sp. n. from the Western Caucasus, — and two new Oriental species — *Sphegina* (*Sphegina*) *guptai* sp. n. and *Sphegina* (*Sphegina*) *kumaoniensis* sp. n. from India. The holotype of *Sph.* (*Sph.*) *carbonaria* sp. n. is located in the Institute of Biology and Pedology of the Far Eastern Branch of Russian Academy of Sciences in Vladivostok (IBP), the holotype of *Sph.* (*Sph.*) *pontica* sp. n. is located in the Zoological Museum of Moscow State University in Moscow (ZMMU), the holotypes of *Sph.* (*Sph.*) *guptai* sp. n. and *Sph.* (*Sph.*) *kumaoniensis* sp. n. are passed to National Museum of Natural History (Smithsonian Institution) in Washington, D. C. (USNM).

Sphegina (*Sphegina*) *carbonaria* sp. n.

= *aterrima* non Stackelberg, 1956: Mutin, 1984:
118 (*Sphegina* (*Sphegina*))

(Figs 1–4)

Type locality. The Sichote-Alin Reserve, Primorye, the Far East of Russia.

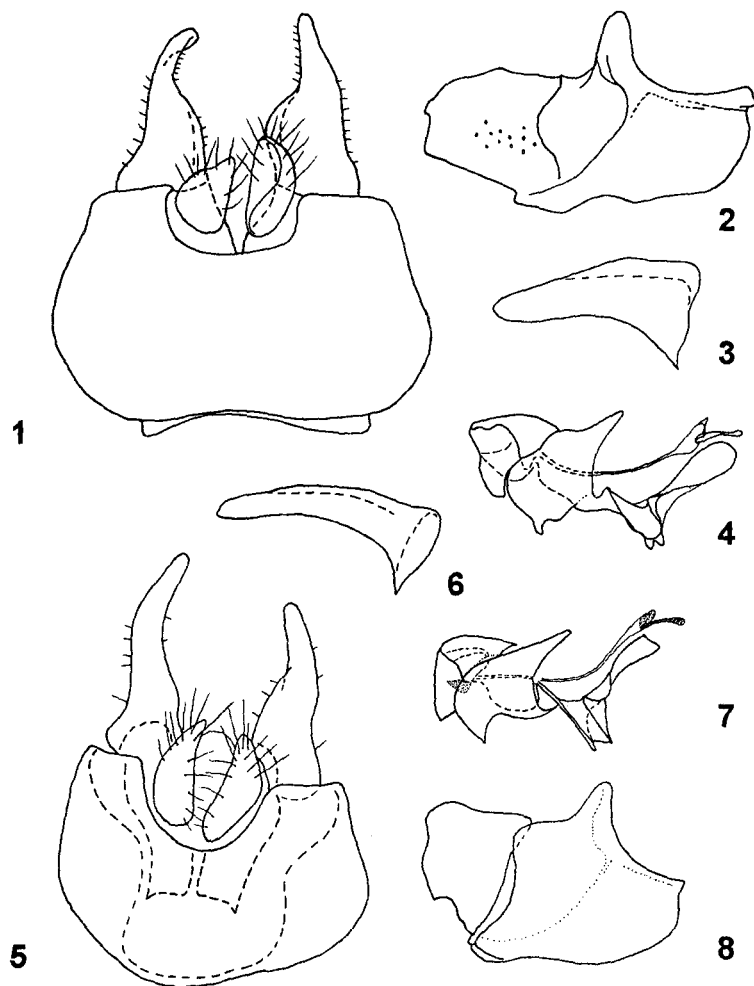
Holotype. ♂, **Russia**, “Приморский кр., 30 км С Тернея” (Primorskiy Kray, 30 km N Terney), 30. V. 1982 (V. Mutin leg.) (deposited in IBP).

Paratypes. 4 ♂, 3 ♀, **Russia**, “Хабаровский кр., хр. Мяочан” (Khabarovskiy Kray, Mayochan Chain), 25.VI.1982, 30.V.1987, 8.VI.1988 (V. Mutin leg.); 1 ♀, “40 км ниже Комсомольска” (40 km below Komsomolsk-on-Amur), 18.VI.1986 (V. Mutin leg.); 1 male, “Комсомольск-на-Амуре” (Komsomolsk-on-Amur), 5.VI.1995 (V. Mutin leg.); 4 ♂, 3 ♀, in the same place as the holotype, 27.V–3.VI.1982 (V. Mutin leg.); 1 ♂, “Южное Приморье, окр. г. Спасска” (Southern Primorye, environs of Spassk town), 25.VI.1978 (V. Barkalov leg.).

Diagnosis

Very similar to *Sphegina* (*Sphegina*) *aterrima* Stackelberg, 1956, from which it is distinguished by undark wings, lower part of face strong projected forward, almost unconcave face under antennae and mainly male genitalia with wider basal part of surstyli, longer thecka of hypandrium, small but more distinct ventral dens of lateral lobes of aedeagus base (Figs 1–8).

Other similar Palaearctic species *Sph.* (*Sph.*) *melancholica* Stackelberg, 1956 (= *hadosa* Violovitsh, 1981) differs from new species by partly yellow face and legs (at least knees yellow), face concave under



Figs 1—8. Male genitalia.

1—4, *Sphegina (Sphegina) carbonaria* sp. n.; 5—8, *Sph. (Sph.) aterrima* Stack. (the holotype); 1, 5, epandrium, dorsal view; 2, 4, theca of hypandrium, lateral view; 3, 6, right surstylus, lateral view; 4, 7, aedeagus, lateral view.

antennae as well as by male genitalia with sharp and strong expanded basal half of surstyli and large uniformly narrowed ventral dens of lateral lobes of aedeagus base.

Description

Male. Body length 9—10 mm, wing length 6.5—7.0 mm. Face black, whitish pollinose, almost strigose under antennae and strong projected forward by lower part (see in profil). Frontal prominence weakly expressed. Frons black, pale pollinose and short black pilose over antennae. Posterior part of frons and vertex dull black, with long black pile. Antenna black. Arista black, with distinct short pile.

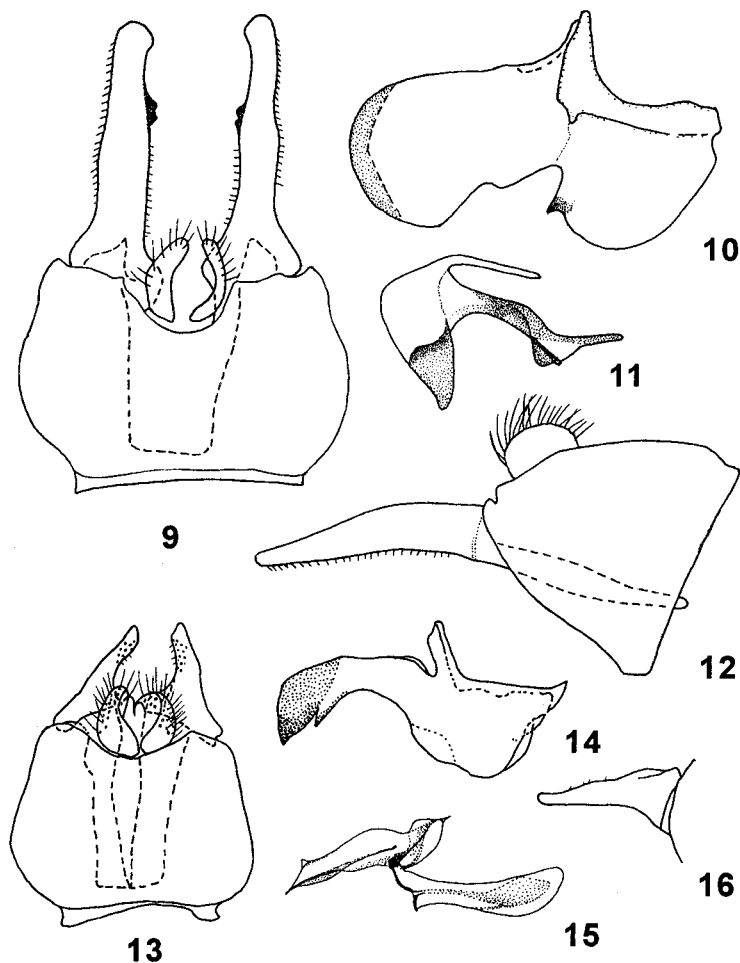
Thorax dull black; scutum brownish pollinose, with dense short and rare longer black pile. Scutellum rather shining black, with short black pile and a pair of long apical setae, rarely with a few less long subapical setae. Pile of anepimeron mainly white.

Wings usually clean. Apical portion of vein M_{1+2} rather parallel to wing margin. Apical part of vein Cu forms sharp angle with M_{1+2} ; its bend with small spur.

Legs whole black. Apicoventral dens of hind tibia rather small.

Abdomen dull black. Sternum 4 with submedial patches of more dense and longer brownish pile in posterior part; its posterior margin of weakly concave. Sternum 8 black, with very short yellow pile.

Genitalia, Figs 1—4.



Figs 9—16. Male genitalia.

9—12, *Sphegina (Sphegina) pontica* sp. n.; 13—16, *Sph. (Sph.) guptai* sp. n.; 9, 13, epandrium, dorsal view; 10, 14, theca of hypandrium, lateral view; 11, 15, aedeagus, lateral view; 12, epandrium, lateral view; 16, right surstylus, lateral view.

Female. Similar to male except characters of usual sexual dimorphism and the following: lower part of face less strong projected forward; frons and vertex more or less uniformly pollinose; scutum more dense pollinose, with short black pile. Length of tergum 2 is equal one of tergum 3. Posterior margin of tergum 3 hardly wider of one of tergum 2.

Distribution. The Southern Far East of Russia.

***Sphegina (Sphegina) pontica* sp. n.**
(Figs 9—12)

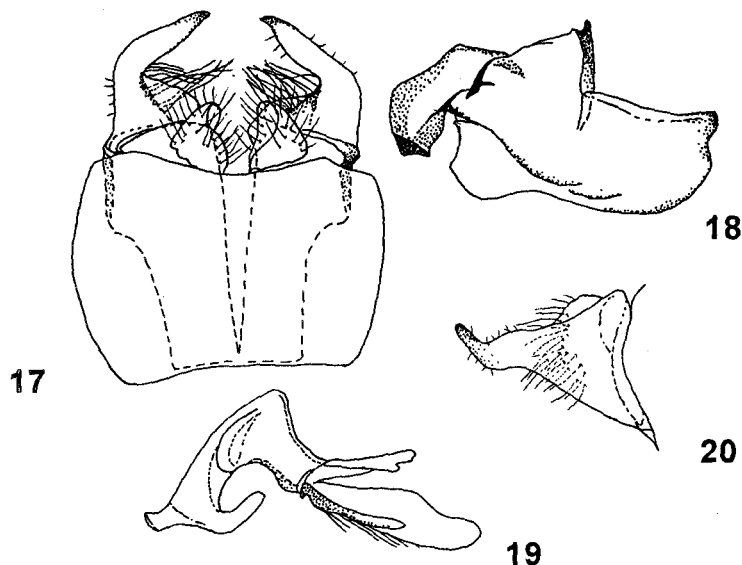
Type locality. Krasnaya Polyana, Western Caucasus.

Holotype. Male, Russia, "З. Кавказ, Кр. Поляна" (Western Caucasus, Krasnaya Polyana), 14.VIII.1952 (Zhelochovtsev leg.) (deposited in ZMMU).

Paratype. Female, in the same place as the holotype, 5.VIII.1951 (Zhelochovtsev leg.).

Diagnosis

Similar to *Sphegina (Sphegina) elegans* Schummel, 1843, from which it is easily enough distinguished by black apical tarsomeres of front and mid legs, darkish wings, longer flagellomere, yellow basal 2/3 of hind tibia of male and mainly male genitalia with very long surstyli and more consolidated elements of aedeagus.



Figs 17—20. *Sphegina (Sphegina) kumaoniensis* sp. n.

17, epandrium, dorsal view; 18, theca of hypandrium, lateral view; 19, aedeagus, lateral view; 20, right surstylus, lateral view.

Description

Male. Body length 8.0 mm, wing length 6.0 mm. Face pale pilose, concave under antennae; its lower part yellow, moderately projected forward. Frontal prominence well expressed. Frons black, mostly dense brownish grey pollinose, with very small pale pile. Vertex shining black, with very small pile along eyes. Antenna with small black basal segments and large trapezoid brown flagellomere. Arista smallest pilose.

Thorax mainly black; prothorax including postpronotum brownish; scutum black, with weak violet reflection and bright yellow short pile. Scutellum black, with short pile and a pair of long apical setae. Upper part of sternopleuron (katepisternum), pteropleuron (anepimeron) and pleurotergite (katertergum) brownish in most part.

Wing brownish; apical portion of vein M_{1+2} forms accurate arc and right angle with R_{4+5} . Apical part of vein Cu forms sharp angle with M_{1+2} ; its bend without distinct spur.

Front and mid legs yellow except apical part of third tarsomere and whole two apical tarsomeres black. Hind leg mainly black; basal half of femur and basal 2/3 of tibia yellow. Apical half of hind tibia noticeable bent.

Abdomen shining black, with wide reddish fascia which does not reach lateral margin. Sternum 4 with wide and deep cut posteriorly and with long pale pile on posterior part. Sterna 7 and 8 black, with short yellow pile.

Genitalia, Figs 9—12.

Female. Similar to male except characters of usual sexual dimorphism and the following: postpronotum paler, yellow; pleuron and notopleuron brownish excluding lower part of sternopleuron (katepisternum) and hipopleuron (meron) and part of posterior mesopleuron (posterior anepisternum) black; abdomen whole dark brown; hind tibia weakly darkened in basal 1/3.

Distribution. Western Caucasus.

Sphegina (Sphegina) guptai sp. n.

(Figs 13—16)

Type locality. Rahla, Northwest Himalaya, India.

Holotype. ♂, India, Northwest Himalaya, Rahla, 2743 m, 12.VI.1970 (M. Gupta), No M33 (deposited in USNM).

Paratype. ♀, India: H. P., "Ahla" (?Rahla), 2286, 17.VI.1971 (M. Gupta leg.), No M51.

Diagnosis

Similar to European species *Sphegina (Sphegina) elegans* Schummel, 1843 and *Sph. (Sph.) pontica* sp. n. by high consolidated ejaculator and basal part of aedeagus, from which it is distinguished by rather brown prothorax, dense enough pollinose scutum and scutellum, uniform pollinose frons and vertex and mainly form of male genitalia.

Description

Male. Body length 5.5 mm, wing length 4.5 mm. Face mostly yellow, strong concave under antennae and rather slightly projected forward in lower part. Frontal prominence well expressed. Frons and vertex black, grey pollinose, with smallest rare white pile. Antenna brown, with paler flagellomere. Arista sharply thickened in basal 1/3.

Thorax mainly black, grey pollinose, with very short yellow pile; prothorax rather brown; scutum slightly shining between basis of wings laterally; scutellum weakly shining, with a pair of long yellow setae.

Wing clean; apical part of vein M_{1+2} rather parallel to wing margin; one of vein Cu forms sharp angle with M_{1+2} ; its bend without spur.

Front and mid legs yellow, three apical tarsomeres rather brownish. Hind leg mainly dark brown, except coxa and trochanter brownish yellow and basal half of femur and middle 1/4 of tibia yellow.

Abdomen mainly black, with short yellow pile; tergum 3 with wide yellow fascia near base; its anterior 1/7 and posterior 2/5 black. Sternum 4 brown, with rare pale subpressed pile and yellow concave posterior margin. Sternum 8 with rare short pale pile.

Genitalia, Figs 13—16.

Female. Similar to male except characters of usual sexual dimorphism and the following: postpronotum rather whole yellow; scutum brightly shining between basis of wings and over notopleuron laterally; abdomen shining black, without yellow fascia. Length of tergum 2 about 2 times as long as one of tergum 3. Posterior margin of tergum 3 more than 2 times as wide as width of posterior margin of tergum 2.

Distribution. Northwestern Himalaya.

Sphegina (Sphegina) kumaoniensis sp. n.
(Figs 17—20)

Type locality. Khati, Kumaon Himalaya, India.

Holotype. ♂, India: Kumaon Hills, Khati, 2210 m, 8.X.1973 (Girish leg.), No G61 (deposited in USNM), strong damaged specimens without antennae and legs, excluding coxae and a part of hind leg.

Diagnosis

Similar to species with high consolidated ejaculator and basal part of aedeagus such as *Sphegina (Sphegina) elegans* Schummel, 1843, *Sph. (Sph.)*

pontica sp. n. and *Sph. (Sph.) guptai* sp. n., from which it is easily distinguished by form of male genitalia as well as more pollinose body, including scutellum and abdomen, and absence of pale abdominal fascia at male.

Description

Male. Body length 6.5 mm, wing length 5.5 mm. Face brownish, paler in lower part, distinct concave under antennae and very strong projected forward by lower part. Frontal prominence rather weakly expressed. Frons and vertex dull black, with very short rare pale pile.

Thorax mainly dark black; prothorax and postalar callus brownish yellow. Scutum brownish pollinose, with short yellow subpressed pile.

Wing clean; apical portion of vein M_{1+2} forms rather accurate arc; apical part of Cu forms sharp angle with M_{1+2} , its bend without spur.

Coxae yellow. Hind femur enough thin, yellow in basal half and brown apically. Hind tibia brown, with paler subapical 1/3.

Abdomen dark brown; terga mostly with subpressed short brownish pile. Sternum 4 uniform pale pilose; its posterior margin almost straight. Sterna 7 and 8 with enough long pale pile.

Genitalia, Figs 17—20.

Distribution. Kumaon Himalaya.

Acknowledgements

I am grateful to following institutions and individuals from whom I borrowed specimens and in whose collections I examined types:

Institute of Systematics and Animal Ecology, Siberian Branch of Russian Academy of Sciences, Novosibirsk (A. V. Barkalov);

National Museum of Natural History, Smithsonian Institution, Washington, D. C. (F. C. Thompson); Zoological Institute, Russian Academy of Sciences, St. Petersburg (V. F. Zaitzev);

Zoological Museum of Moscow State University, Moscow (A. L. Ozerov).

References

- Mutin, V. A. 1984. Hover-flies of the genus *Sphegina* Meigen, 1822 (Diptera, Syrphidae) from the continental part of the Far East. *Fauna and ecology of insects of the South of the Far East*. Vladivostok: 117—127. (In Russian).

Received 28.IX.1998