

New Chinese *Cheilosia* flower flies (Diptera, Syrphidae)

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Barkalov, A.V. (1999): New Chinese *Cheilosia* flower flies (Diptera, Syrphidae). – Volucella 4 (1/2), 69-83. Stuttgart.

Seven new *Cheilosia* Meigen, 1822 species are described from Sichuan, China: *Cheilosia cystorhyncha*, *C. grahami*, *C. intermedia*, *C. neversicolor*, *C. mupinensis*, *C. oblonga*, and *C. sera*. Three species are recorded from China for the first time: *Cheilosia josankeiana*, *C. mutini*, and *C. ussuriana*. Drawings of the male genitalia, head and the antenna are provided for the new species.

Zusammenfassung

Sieben neue Arten der Gattung *Cheilosia* Meigen, 1822 werden aus China (Sichuan) beschrieben und mit Zeichnungen von Kopf, Antennen und männlichen Genitalien illustriert: *Cheilosia cystorhyncha*, *C. grahami*, *C. intermedia*, *C. neversicolor*, *C. mupinensis*, *C. oblonga* und *C. sera*. Drei weitere Arten (*C. josankeiana*, *C. mutini* und *C. ussuriana*) werden erstmals für China nachgewiesen.

Introduction

The genus *Cheilosia* Meigen is the largest genus of the flower flies, consisting of more than 300 species from the Palearctic Region and some 400 total species. The genus is found throughout the north temperate region, with its southernmost extent in the New World Guatemala and in the Old World Malaya. *Cheilosia* is undoubtedly very species-rich in mainland China (nine species are known from Taiwan [Shiraki 1930]), but so far only a few species have been recorded (Knutson et al. 1975, Peck 1988). The known mainland Chinese species were described by Curran (1929) (*C. versicolor*), Hervé-Bazin (1930a) (*C. antennalis*, *C. difficilis* and *C. parachloris*), Hervé-Bazin (1930b) (*C. kulinensis*, *C. lucens* and *C. victoria*), Sack (1941) (*C. fumipennis* and *C. unicolor*), Stackelberg (1963a) (*C. grummi*), Stackelberg (1963b) (*C. tibetana*) and Barkalov & Cheng (1998) (*C. distincta*, *C. egregia*, *C. sini*, *C. certa*, *C. suspecta* and *C. lucida*). From a comparatively small collection made years ago in Sichuan Province, I have found ten species previously not recorded from mainland China, including seven new species. Holotypes are deposited in the collection of the United States National Museum, Smithsonian Institution (Washington) (USMN), and some paratypes are deposited in the Zoological Museum of the Institute of Animal Systematics and Ecology (Novosibirsk) (ZMISEA).

Large collections of Chinese flower flies outside of China are rare. The largest ones known to me are the Hervé-Bazin Collection in Paris at the Museum National d'Histoire Naturelle and the Graham material at the Smithsonian. Also many Chinese specimens are in the Natural History Museum (London) and the Zoological Institute (St. Petersburg). The Smithsonian is indebted to an American missionary, David Crockett Graham, who was also interested in Natural History and willing to collect specimens. Published information on Reverend Doctor Graham (21 March 1884 - 17 Sept 1961) is limited, but we know, for example, that in 1930 he collected (or had collected for him by local Chinese) more than 62,000 specimens (Friedmann 1931) from Sichuan. Over the years that Graham was in China (1911-1948) he sent the Smithsonian numerous specimens, virtually all from Sichuan. During the period of 1919 to 1939, he made 14 summer expeditions to different parts of Sichuan and the China-Tibetan border area (Graham 1961). Most of Graham's personal papers are now held by the Smithsonian Archives and his daughter, Mrs. Dorothy Graham Edson, is now writing a biography of her father (Annual Report, Smithsonian Archives 1992).

Cheilosia cystorhyncha **spec. nov.**

♂ (fig. 1-5): Head: Face moderate in width, slightly broadened ventrally, silver pollinose except tubercle and oral margin shiny; tubercle very prominent, swollen (fig. 1); paraface narrow, densely gray pollinose, short white pilose; gena narrow, fine gray pollinose, white pilose; frontal triangle slightly swollen, smooth, shiny, black pilose; angle approximation of eyes equal 90 degrees; lunula black, its anterior process only touching face, so antennal pits are confluent; scape and pedicel black; basoflagellomere lacking; eye bare; eye contiguity longer than frontal triangle; vertex slightly swollen, black pilose; vertical triangle elongate, equilateral.

Thorax: Postpronotum black, shiny anterolaterally, gray pollinose posteromedially, black pilose; mesonotum shiny, coarsely punctate, covered with white pile anteriorly, black pile posteriorly; scutellum hind margin with long but not strong black bristles; pleurae gray pollinose except shiny maculae on anepisternum and katepisternum, mainly yellow pilose, black pilose on anepimeron and posterodorsally on anepisternum. – Legs: Mostly black, only extreme apex of mesofemur and basal part of pro- and mesotibiae dark-brown; metafemur ventrally with short black and long pale and black pile. – Halter with black head. – Wing: Comparatively broad, light-brownish, with veins black; internal angle between veins M1 and R4+5 acute.

Abdomen: Oval, brown pollinose, with small shiny punctae on posterior corners of 2nd tergum, larger punctae on anterior corners of 3rd tergum, with very large maculae on 4th tergum, long erect yellow pile laterally, with shorter depressed and semidepressed black pile medially. – Genitalia: See fig. 2-4.

Size: Body 9.0 mm; wing 7.2 mm.

♀: Unknown.

Holotype: ♂. China. Sichuan: Mu Sang sai. 10 mi. NW Wei Chew, 8,000-10,000 feet, 27 July 1928 (D. C. Graham), deposited in the United States National Museum, Washington.

Diagnosis: *Cheilosia cystorhyncha* is close to *C. nuda* Shiraki, but differs by hyaline wing, more swollen facial tubercle, pale pilosity on anterior part of mesonotum

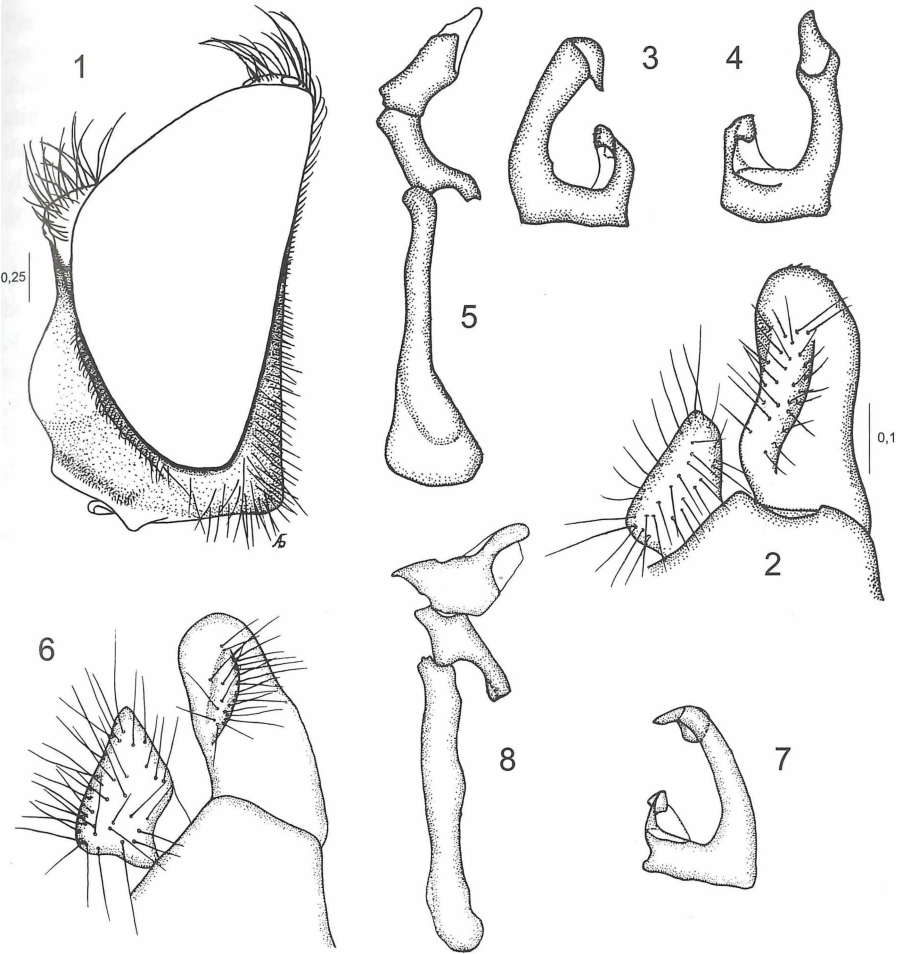


Fig. 1-5: *Cheilosia cystorhyncha* spec. nov., ♂. - 1. head in profile; - 2. surstylus and cercus laterally; - 3, 4. superior lobe of hypandrium laterally; - 5. aedeagus with apodema laterally. - Fig. 6-8: *Cheilosia nuda* Shiraki, ♂. - 6. surstylus and cercus laterally. - 7. superior lobe of hypandrium laterally; - 8. aedeagus with apodema laterally.

and structures of the genitalia. *Cheilosia nuda* has the wing darkened on anterior half, the facial tubercle less swollen and the male genitalia as in fig. 6-8.

Etymology: The epithet, *cystorhyncha* (Greek *Kystis* [=bladder] + Greek *rhynchos* [=nose]), is an adjective referring to the large swollen facial tubercle.

Cheilosia grahami **spec. nov.**

♂ (fig. 9-13): Head: Black; face narrow, shiny, distinctly elongate, with small tubercle (fig. 9); paraface very narrow, gray pollinose, comparatively short white pilose; gena narrow, gray pollinose, white pilose; frontal triangle slightly swollen, shiny, black pilose; angle approximation of eyes less than 90 degrees; lunula yellow; antennal pits distinctly separated; antenna mainly black-brown; basoflagellomere round, yellowish basally, brown apically; arista black, short pilose (fig. 10); eye contiguity distinctly longer than frontal triangle length; eye densely short black pilose; vertex flat, long black pilose; vertical triangle equilateral.

Thorax: Black; postpronotum gray pollinose, yellow pilose; mesonotum and scutellum shiny, with fine granulation, long curly yellow and black pilose; scutellum hind margin with long yellow and some black hairs which are curly apically; pleurae shiny, white pilose. – Legs: femora black, except narrow yellow dorsoapically, white pilose basally, black pilose apically; pro- and mesotibiae yellowish on basal 1/3 and apically, brownish medially; metatibiae mainly brown, only slightly yellowish basally; tarsi black except mesobasitarsomere yellow. – Halter yellow. – Wing: Hyaline, elongate, internal angle between veins M1 and R4+5 slightly less than 90 degrees.

Abdomen: Black, oval, broadest apically on 2nd tergum, with bluish reflections laterally on 2nd-3rd terga and apically on 4th tergum, brown pollinose medially on 2nd-4th terga, long erect white pilose laterally, short white and black pilose medially (sometimes some long hairs black but sometimes only few small pili black). – Genitalia: See fig. 11-13.

Size: Body 10-11.2 mm; wing 9.7-11 mm.

♀ (fig. 14-15): Face as in male but tubercle slightly larger (fig. 14). Frons comparatively broad, almost parallelsided (fig. 14); lunula slightly darkened medially; antenna same as in male (fig. 15). Eye densely blackish pilose.

Mesonotum shiny, semidepressed short yellow pilose, on posterior half with black hairs intermixed. Scutellum hind margin with long but not strong yellow hairs; pleurae gray pollinose, with large shiny maculae on anepisternum and katepisternum. All other characters as in male.

Size: Body 9.4 mm; wing 8.9 mm.

Holotype: ♂. China. Sichuan: West of Chetu Pass near Tatsienlu 13,000-14,500 feet (D.C. Graham), deposited in the United States National Museum, Washington. Paratypes: 4♂, the same data as holotype (USNM, ZMISEA); 1♀, China. Sichuan: Yellow Dragon Gorge, near Songpan, 12,000-14,000 feet (D.C. Graham) (USNM).

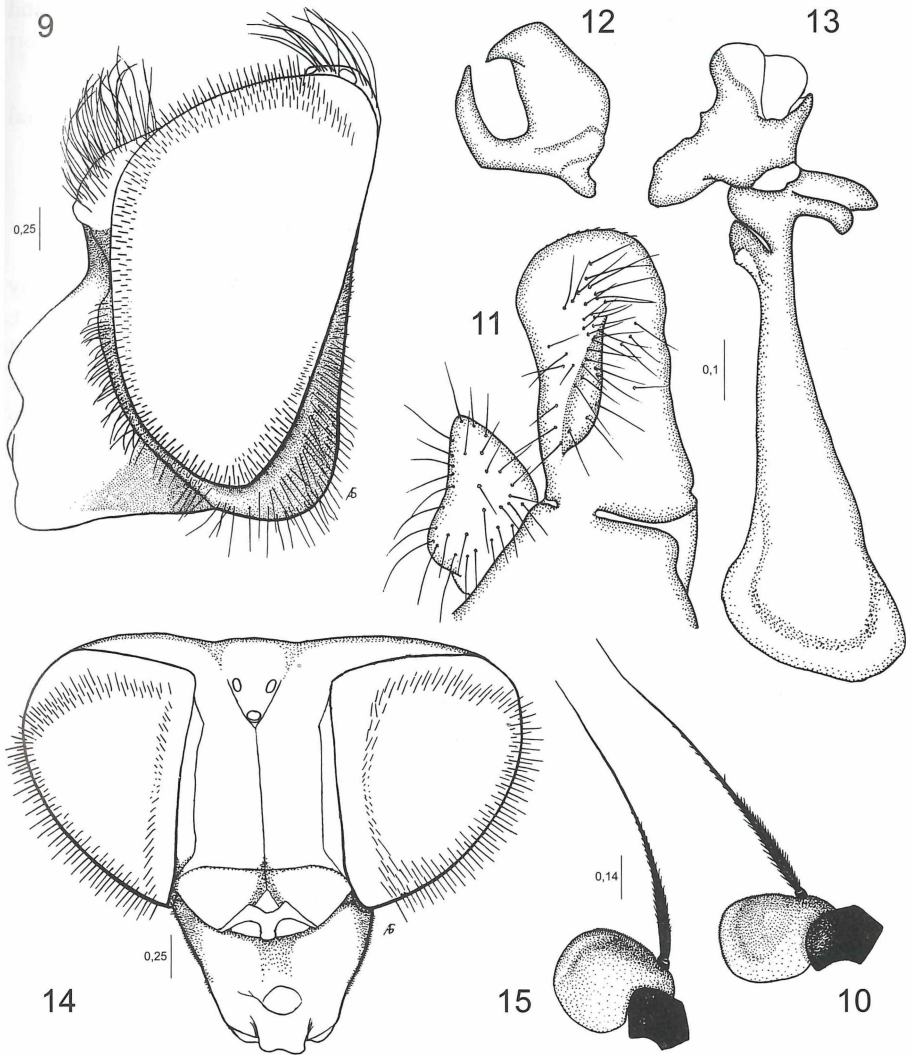


Fig. 9-13: *Cheilosia grahami* spec. nov., ♂. – 9. head in profile; – 10. antennal segments 2-3; – 11. surstylus and cercus laterally; – 12. superior lobe of hypandrium laterally; – 13. aedeagus with apodema laterally. – Fig. 14-15: *Cheilosia grahami* spec. nov., ♀. – 14. head in dorsal view; – 15. antennal segments 2-3.

Diagnosis: *Cheilosia grahami* is similar to *C. longiptera* Shiraki in facial shape, wing length (elongate) and the type of genitalia, but differs by pilosity of mesonotum and abdomen. In *C. longiptera* the mesonotum is covered with short black pile and 3-4 times longer black and yellow pile and the abdomen is covered with short depressed pile medially.

Etymology: This new species is named in honor of and after the collector, Reverend Doctor David Crockett Graham.

Cheilosia intermedia **spec. nov.**

♂ (fig. 16-20): Head: Black; face comparatively narrow, parallel-sided, fine gray pollinose except shiny tubercle and oral margin, rather densely black pilose (fig. 16); tubercle very broad, prominent; paraface narrow at its broadest, narrower than 1/4 width of basoflagellomere; gena narrow, gray pollinose, white pilose; frontal triangle distinctly swollen, shiny, black pilose; lunula dark-brown, with its anterior process connected but not merged with face; antenna mainly black; basoflagellomere round, usually reddish basally, sometimes completely black; arista with distinct pile (fig. 17). Eye with very short hardly visible white pile, dorsal facets slightly larger than ventral ones; eye contiguity distinctly longer than frontal triangle; vertex weakly swollen; vertical triangle equilateral.

Thorax: Postpronotum brownish black, gray pollinose, black pilose; mesonotum dull, brown pollinose, with fine punctuation, black pilose, pale pilose medially, with long bristles laterally; scutellum hind margin with variable sized black bristles. Pleurae densely gray pollinose, black and white pilose. Metasternum pilose. – Legs: Mostly black; femora narrowly pale apically, tibiae yellow on base and apex, tarsi with basal 1-2 tarsomeres narrowly yellow apically. – Halter dirty yellow with capitulum dark. – Wing narrow, elongate, hyaline to slightly brownish.

Abdomen: Narrow, parallelsided, dull, brown pollinose, 1st and 2nd and most of 3rd terga pale pilose, black pilose apically on 3rd tergum and on other terga; pile short and depressed medially, longer and erect laterally. – Genitalia: See fig. 18-20.

Size: Body 7.7-10.2 mm; wing 8.0-8.8 mm.

♀: Unknown.

Holotype: ♂. China. Sichuan: Gao-Gi, 4,000-8,000 feet, July 29 (D.C. Graham), deposited in the United States National Museum, Washington. Paratypes: same data as holotype (2♂, USNM, ZMIASE); near Mupin, 12,000-14,000 feet, July 29 (D.C. Graham) (2♂, USNM); Chengtu, 6 August 1933 (D.C. Graham) (1♂, USNM).

Diagnosis: *Cheilosia intermedia* is not closely allied to any other Palaearctic species. The presence of pile on the face, the practically bare eyes, connected antennal pits and partly yellow legs are characters found only in *C. angustigena* Becker, but

angustigena has a small and narrow tubercle (fig. 21), the mesonotum is covered with black hairs and the genitalia are completely different (see fig. 22-24).

Etymology: The epithet, *intermedia* (Latin *inter* [=among] + Latin *medius* [=middle]), is an adjective alluding to the position of the species in the genus.

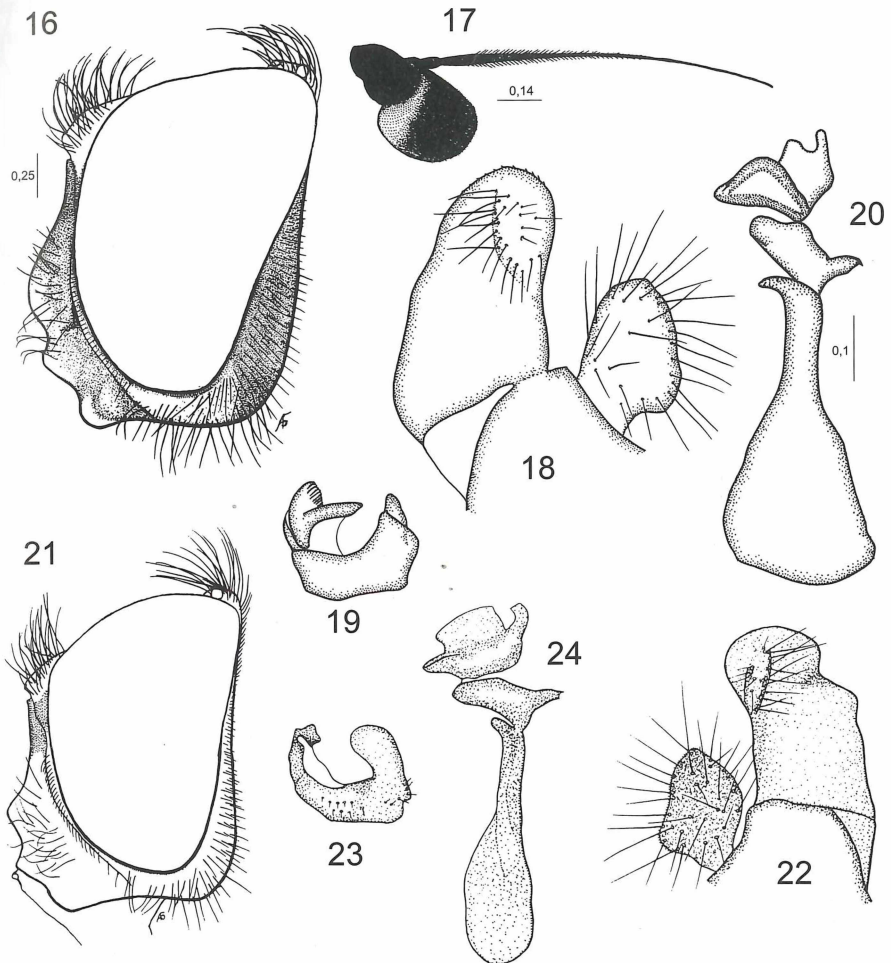


Fig. 16-20: *Cheilosia intermedia* spec. nov., ♂. – 16. head in profile; – 17. antennal segments 2-3; – 18. surstylus and cercus laterally; – 19. superior lobe of hypandrium laterally; – 20. aedeagus with apodema laterally. – **Fig. 21-24:** *Cheilosia angustigena* Becker, ♂. – 21. head in profile; – 22. surstylus and cercus laterally; – 23. superior lobe of hypandrium laterally; – 24. aedeagus with apodema laterally.

Cheilosia josankeiana Shiraki

Cheilosia josankeiana Shiraki, 1930: 306 (Japan, Hokkaido, Josankei).

The Chinese specimens differ from all other known specimens of this species by completely yellow basoflagellomere and hind basitarsomere. Specimens from Japan and the Russian Far East have the basoflagellomere brown except the basoventral part is pale and the hind basitarsomere is blackish to brownish.

The species was previously known only from Japan and the Russian Far East. Material examined: China. Sichuan: Mupin, 12,000-14,000 feet, July 29 (D.C. Graham) (2♂, USNM).

Cheilosia longula (Zetterstedt)

Eristalis longula Zetterstedt, 1838: 613 (Sweden, various localities).

Specimens from different points in China are very variable. For example, specimens from environs of Tatsienlu have very swollen faces atypical for the species. The color of the basoflagellomere in specimens from different places vary from dirty yellow to black. In common, all specimens studied were very atypical and even in genitalia construction they had some small differences.

The species is widely known in the Palaearctic but only recently recorded from China south of the 40th latitude.

Material examined: China. Szechuan: Chuan Shen, 7 August 1924 (D.C. Graham) (1♂, USNM); Tatsienlu, 9 mi. Southwest, 8,500-13,000 feet, 25 July 1923 (D.C. Graham) (1♂, USNM); Yellow Dragon Gorge, near Songpan, 12,000-14,000 feet, 1924 (D.C. Graham) (1♂, USNM).

Cheilosia mupinensis **spec. nov.**

♂ (fig. 25-29): Head: Black; face comparatively narrow, parallel-sided, with broad tubercle, shiny except fine gray pollinose dorsally and ventrad to tubercle; paraface narrow, gray pollinose, short white pilose (fig. 25); gena narrow, fine gray pollinose, white pilose; frontal triangle slightly swollen, shiny, black pilose; angle approximation of eyes equal 90 degrees; lunula light-brown, its anterior process connected with face but not fused with face; scape and pedicel black; basoflagellomere dirty yellow, slightly elongate; arista comparatively short, with fine pile (fig. 26); eye bare; eye contiguity distinctly longer than length of frontal triangle; vertex slightly swollen, black pilose; vertical triangle isosceles.

Thorax: Postpronotum black, shiny, black pilose; mesonotum shiny, bluish-black, with coarse punctation, yellow pilose; scutellum bluish, black pilose, its hind margin with long but not strong black bristles. Pleurae shiny, black, finely gray pollinose, white pilose. – Legs: Trochanters light brown anteriorly, blackish posteriorly; femora

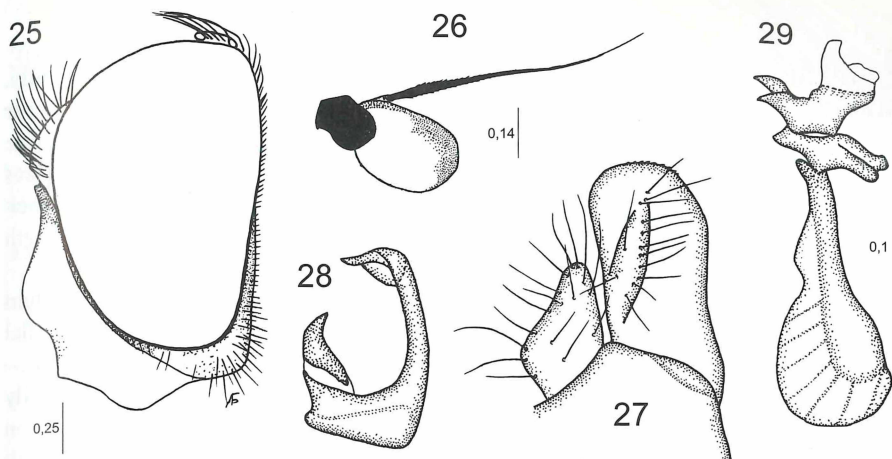


Fig. 25-29: *Cheilosia mupinensis* spec. nov., ♂. – 25. head in profile; – 26. antennal segments 2-3; – 27. sursstylus and cercus laterally; – 28. superior lobe of hypandrium laterally; – 29. aedeagus with apodema laterally.

black except comparatively broad yellow apices; tibiae mainly yellow, with black annulus medially; pro- and mesotarsi yellow except apical tarsomere; metatarsus blackish except yellow apices on tarsomeres 1-2. – Halter yellow with brown head. – Wing: Elongate, slightly brownish, internal angle between veins M1 and R4+5 acute.

Abdomen: Narrow, densely brown pollinose, erect yellow pilose, with some short depressed hairs medially on 2nd to 4th terga. – Genitalia: See fig. 27-29.

Size: Body 6.7 mm; wing 6.0 mm.

Holotype: ♂. China. Sichuan: near Mupin, 2,000-8,000 feet, July 29 (D.C. Graham), deposited in the United States National Museum, Washington.

Diagnosis: *Cheilosia mupinensis* is close to *C. nuda* Shiraki and *C. cystalphyncha* but differs by yellow pro- and mesotarsi, the yellow pilosity of mesonotum, and the shape of genitalia (fig. 2-4, 6-8).

Etymology: The epithet, *mupinensis*, is an adjective derived from the name of the type-locality.

Cheilosia mutini Barkalov

Cheilosia mutini Barkalov, 1983: 77 (Russia. Pacific Coast).

The species was known from the mountains of southern Siberia and from the Russian Far East.

Material examined: China. Yao-Gi, 4,000-8,000 feet. July 29, D.C. Graham (1♂, USNM).

Cheilosia neversicolor spec. nov.

♂ (fig. 30-35): Head: Black; face rather broad, distinctly broadened ventrally, with small tubercle, short pilose, gray pollinose (fig. 30); paraface broad, reddish near eyes and ventrally, gray pollinose, long black pilose; frontal triangle rather broad, fine gray pollinose, black pilose; angle approximation of eyes distinctly more than 90 degrees (fig. 31); lunula brown; basoflagellomere oval, brownish; arista long, bare, black (fig. 32). Eye long dense brown pilose; eye contiguity approximately equal to length of frontal triangle; vertex black, yellow pilose.

Thorax: Postpronotum black, lightly gray pollinose, long white pilose; mesonotum densely gray pollinose except for two shiny vittae, fine long white pilose, with medial vitta of black pile; scutellum fine long white pilose; pleurae densely white pilose. – Legs: Femora black with reddish extreme apex, long black pilose; metafemur ventrally short reddish pilose, long yellow and black pilose elsewhere; tibiae reddish brown on basal 1/3 and apical 1/8, black medially; protarsus reddish ventrally, blackish with reddish dorsoapically; meso- and metatarsi brownish except black apical tarsomere. – Halter whitish, with dark brown capitulum. – Wing: Hyaline, with distinct brownish macula medially.

Abdomen: Oval, black; tergum 1 gray pollinose, dense white pilose; tergum 2 gray pollinose, dense white pilose except medially reddish pilose; terga 3-4 reddish pilose except with patch of black pile laterally on 3rd; sterna 1-2 densely gray pollinose, white pilose; sternum 3 gray pollinose laterally, shiny medially, black and orange pilose; sternum 4 orange pilose. – Genitalia: See fig. 33-35.

Size: Body 12.5 mm; wing 11.8 mm.

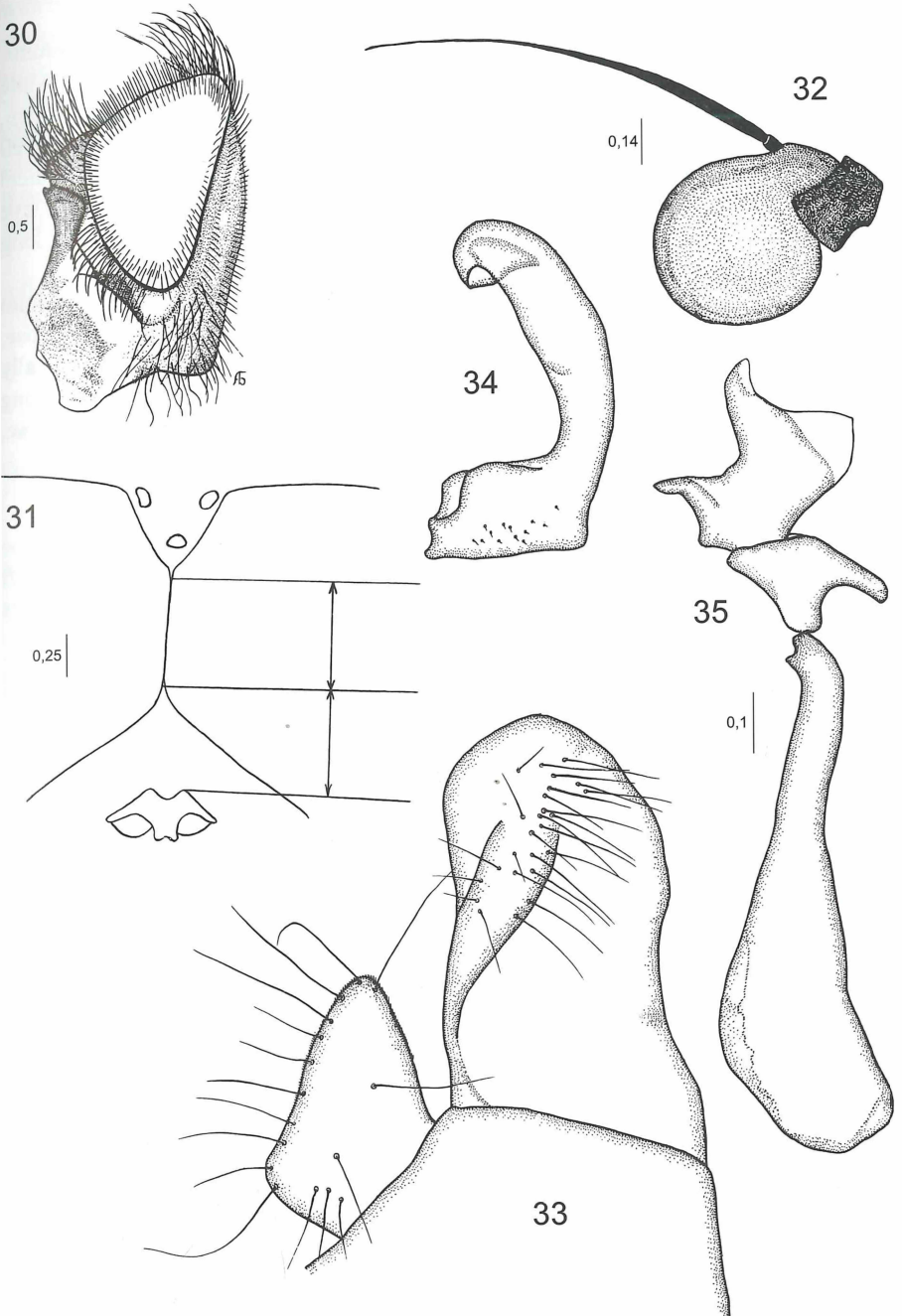
♀: Unknown.

Holotype: ♂. China. Sichuan: Tatsienlu, 9 mi. SW of, 8,500-13,000 feet, 25 June 1923 (D. C. Graham), deposited in the United States National Museum, Washington.

Diagnosis: *Cheilosia neversicolor* is close to *C. versicolor* Curran and *C. illustrata* Harris, but differs by the shape of superior lobe of hypandrium, which lacks the left process.

Etymology: Due to the similarity to *versicolor*, the species is named *neversicolor*, a noun in apposition meaning not *versicolor*.

→ Fig. 30-35: *Cheilosia neversicolor* spec. nov., ♂. – 30. head in profile; – 31. head in upper view; – 32. antennal segments 2-3; – 33. surstylus and cercus laterally; – 34. superior lobe of hypandrium laterally; – 35. aedeagus with apodema laterally.



Cheilosia oblonga spec. nov.

♂ (fig. 36-40): Head: Black; face distinctly elongate, shiny; tubercle rather prominent but narrow (fig. 36); paraface moderate in width, gray pollinose, short white pilose; gena sparsely gray pollinose, white pilose; frontal triangle weakly swollen, black pilose, shiny medially, pollinose laterally; angle approximation of eyes equal 90 degrees; lunula dark-brown; antennal pits distinctly separated; scape and pedicel black brown; basoflagellomere orange, rounded; arista long, finely pilose (fig. 37); eye dense white pilose; eye contiguity distinctly longer than frons length; vertex flat, long black and white pilose; vertical triangle equilateral.

Thorax: Black; postpronotum gray pollinose, long yellow pilose; mesonotum mainly shiny only anteriorly, laterally fine gray pollinose, erect short yellow pilose, with some 1.5-2 times longer black hairs; mesonotum laterally and scutellum marginally with many long and strong black bristles; pleurae black, fine gray pollinose, long yellow pilose; posterodorsal corner of anepisternum and anepimeron long black pilose,

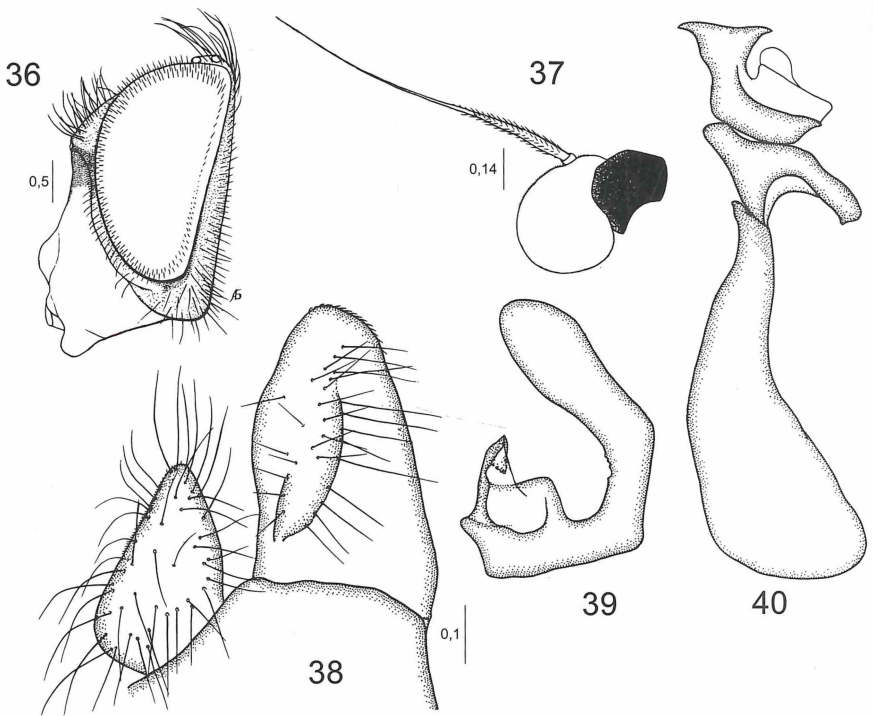


Fig. 36-40: *Cheilosia oblonga* spec. nov., ♂. – 36. head in profile; – 37. antennal segments 2-3; – 38. surstylus and cercus laterally; – 39. superior lobe of hypandrium laterally; – 40. aedeagus with apodema laterally.

with black bristles; katepisternum long yellow pilose. – Legs: Procoxa apically yellowish, meso- and metacoxae black; trochanters brownish; femora black with narrow yellow apices; profemur long black pilose; mesofemur yellow and black pilose; metafemur ventrally short and long yellow pilose on basal part, short black pilose on apical part; tibiae yellow in basal 2/5 and apices, elsewhere black; pro- and mesotarsi yellow except black apical tarsomere; metatarsus yellow except basitarsomere and apical tarsomere black. – Halter yellow. – Wing: Elongate, brownish, internal angle between veins M1+2 and R4+5 equal 90 degrees.

Abdomen: Elongate, broadest on apex 2nd tergum, brownish with large bluish reflective maculae on 2nd-3rd terga, erect dense but comparatively short yellow pilose.

– Genitalia: See fig. 38-40.

Size: Body 12 mm; wing 12.2 mm.

♀: unknown.

Holotype: ♂. China. Sichuan: near Mupin, 12,000-14,000 feet, July 1924 (D.C. Graham), deposited in the United States National Museum, Washington.

Diagnosis: *Cheilosia oblonga* is close to three East Palaearctic species (*C. japonica* Hervé-Bazin, *C. sichotana* Stackelberg, and *C. longipennis* Shiraki), but differs from all by more elongate face and by presence of long strong bristles on the mesonotum and scutellum. The male genitalia are also very distinctive.

Etymology: The epithet, *oblonga* (Latin *oblongus* [=longer than broad]), is an adjective referring to the facial shape.

Cheilosia sera **spec. nov.**

♂ (fig. 41-45): Head: Black; face comparatively narrow, weakly broadened ventrally, black except slightly brownish on mouth sides, fine gray pollinose except shiny tubercle and oral margins; tubercle small (fig. 41); paraface moderately broad, densely gray pollinose, white pilose; gena rather broad, gray pollinose, white pilose; frontal triangle distinctly swollen, shiny, black pilose; angle approximation of eyes equal 90 degrees; lunula black brown; antennal pits distinctly separated by anterior process of lunula; antenna black, basoflagellomere round; arista with very short pile (fig. 42). Eye densely white pilose; eye contiguity approximately equal to frontal triangle; vertex slightly swollen, black pilose; vertical triangle equilateral.

Thorax: Postpronotum black, light gray pollinose, yellow pilose; mesonotum with fine punctation, dull, brown pollinose, white and black pilose, with pilosity on posterior half of mesonotum and on scutellum curly; scutellum hind margin with numerous long bristle-like black pile; pleurae gray pollinose, yellow pilose. – Legs: Profemur anteriorly yellow with black portion in basal 1/3, posteriorly black with yellow apical 1/5; mesofemur anteriorly black in basal 1/2 and yellow in apical half, posteriorly black in basal 2/3 and yellow in apical 1/3; metafemur black except extreme apex brownish;

tibiae yellow-brown on basal 1/3 and apically, black medially; tarsi black except mesobasitarsomere brownish. – Halter yellow. – Wing: Comparatively broad, slightly brownish, angle between veins M1 and R4+5 almost equal 90 degrees.

Abdomen: Narrow, almost parallel-sided, dense brown pollinose, erect yellow pilose, with pile depressed medially. – Genitalia: See fig. 43-45.

Size: Body 9.5 mm; wing 8.8 mm.

♀: Unknown.

Holotype: ♂. China. Sichuan: West of Chetu Pass, near Tatsienlu, 13,000-14,500 feet (D.C. Graham), deposited in the United States National Museum, Washington.

Diagnosis: *Cheilosia sera* is similar to *C. melanopa* (Zetterstedt) in head shape, mesonotum pollinosity, and pilosity, but differs by absence of pile on the face. From all other species *C. sera* differs by shape of superior lobe (fig. 44).

Etymology: The epithet, *sera* (Latin *sera* [=bar used for fastening doors]), is a noun in apposition alluding to the narrow abdomen.

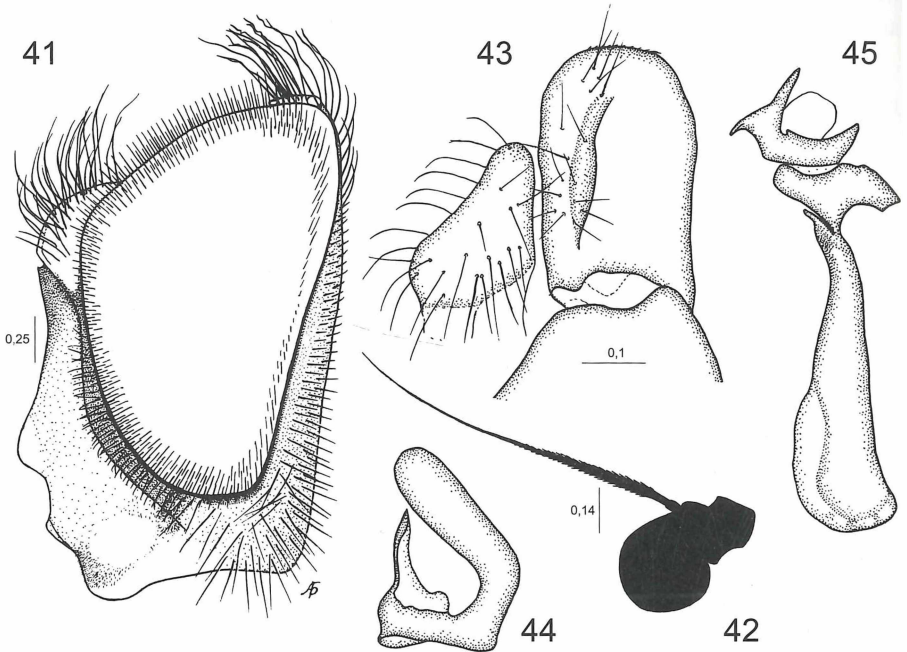


Fig. 41-45: *Cheilosia sera* spec. nov., ♂. – 41. head in profile; – 42. antennal segments 2-3; – 43. surstylus and cercus laterally; – 44. superior lobe of hypandrium laterally; – 45. aedeagus with apodema laterally.

Cheilosia ussuriana Barkalov

Cheilosia ussuriana Barkalov, 1980: 132 (Russia. Far East, Primorie, Posyet Bay).

The species was known earlier from southern Primorie of Russia.

Material examined: China. Hangchow, 2 March 1930 (1♂, USNM).

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Band/Volume: [4](#)

Autor(en)/Author(s): Barkalov Anatolii Vasilévich

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