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## FLIES OF THE FAMILY CONOPIDAE FROM EASTERN ASIA

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This paper is based mainly on specimens in the U.S. National Museum, particularly the collections of D. C. Graham in Szechwan, and T. D. A. Cockerell in Eastern Siberia. Only a few species of Conopidae have been recorded from Szechwan and Western China, but the material from better collected areas has yielded many important records. It has therefore been deemed worth while to list all the specimens examined.

This study has been especially aided by the interest and courtesy of C. W. Sabrosky, U.S. Department of Agriculture, who, besides arranging the loans of material, provided information on types in the Kröber Collection at the U.S. National Museum. Dr. R. Kano, Tokyo Medical and Dental University, has been most helpful by providing information and copies of Matsumura's works, and also some Japanese Conopidae. Dr. C. H. Curran loaned a small collection of the American Museum of Natural History with some very significant specimens.



**Genus *Abrachyglossum* Kröber**

*Abrachyglossum* Kröber, Arch. Naturg., vol. 83, Abt. A, Heft 7, p. 142, 1917.

***Abrachyglossum cockerelli*, new species**

Female: Length 10 mm. (without antenna). Head yellow, dark brownish at ocellar tubercle and anterior half of front. Velvety black frontofacial mark. Antenna dark brown, dark yellow on ventral half of first segment, dark reddish on ventral half of second and third segments. Arista black. First antennal segment three times as long as wide. Second segment two times length of first. Third segment about  $1\frac{1}{2}$  times length of first. Proboscis black, shorter than length of head. Occiput yellow behind vertex and below, blackish above at sides.

Thorax black, faint white pollinose forming a distinct pleural stripe. Humeri and distal half of scutellum yellow. Metapleura reddish. Coxae black, white pollinose. Legs yellow, blackish in middle of femora forming a distinct black mark on dorsal apical half of hind femur. Tips of claws black. Wings yellowish hyaline, forming an indistinct brownish band between first and third veins and vena spuria. Calypters yellow. Halteres yellow, dark brown at base.

Abdomen black. Pale yellowish distal margin on first, second, fifth, and sixth segments. Blackish yellow distal margin on third and fourth segments. Yellowish white pollinose band on distal margin of second segment and sides of distal margin of first segment. Faint white pollinose on sixth and seventh segments. Theca triangular, about as long as wide.

Type: Holotype, female, USNM 64475, Kongaus, Siberia, August 1923, Cockerell.

This species is similar to *A. capitatum*, but has black on the femora and lacks the yellow pollinose bands on the third and fourth abdominal segments, although the paler areas preceding these bands are present. The frontofacial mark is very prominent in the new species, a character which has not been mentioned in descriptions of *capitatum*. In six specimens of *capitatum* examined, this mark is absent in three, faint in two, and distinct but not as prominent as in *A. cockerelli* in one.

*Abrachyglossum wui* Ouchi, the only other *Abrachyglossum* described for Asia, is here referred to *Siniconops elegans* (see below).

**Genus *Conops* Linné**

*Conops* Linné, Systema naturae, ed. 10, p. 604, 1758.

***Conops vesicularis* Linné**

*Conops vesicularis* Linné, Fauna Suecica, p. 1903, 1761.

This widely distributed European species has been previously recorded in Asia only from "Siberia."



Material examined: Korea: Suigen, June 3, 1927, T. R. Gardner, 1 female, USNM.

*Conops flavipes* Linné

*Conops flavipes* Linné, Fauna Suecica, p. 1904, 1761.

The specimen from Suifu lacks the fourth abdominal tergite, but the fourth sternite is present beneath the third tergite. The Szechwan specimens have the scutellum mainly yellow, but otherwise the males agree with European specimens.

In the female, the yellow band on the third abdominal segment is separated in the center. This suggests *Conops licenti* Chen, but there are some other differences in the description of *licenti*.

*Conops jozankeanus* Matsumura also appears to be very similar, if not the same, as this species.

Material examined: Siberia: Okeanskaya, August 1923, Cockerell, 1 male, author's collection ex USNM; Smolenschina, Aug. 26, 1927, Cockerell, 1 male, USNM. Szechwan: Suifu, alt. 1,000–1,500 ft., June 1–21, 1928, D. C. Graham, 1 male, USNM; near Mupin, alt. 2–8,000 ft., July 1929, D. C. Graham, 1 male, USNM. Manchuria: Yalhenya, Pin-chang Province, July 1–10, 1939, M. I. Nikitin, 1 female, author's collection, ex Steyskal.

*Conops thecoides*, new species

Male: Length 10 mm. Head yellow. Reddish brown vertical stripe on front, widening above and below, divided by a yellow vertical stripe in the center. Antennal prominence above, and most of the facial grooves and keel black. Cheeks reddish posteriorly. Vertex and adjacent occiput translucent yellow. Vestigial ocellar tubercle present. Side of occiput yellow laterally, blackish centrally. Antenna dark reddish brown, more blackish on third segment and arista. Moderately long process on second aristal segment. Proboscis black, nearly  $1\frac{1}{2}$  times as long as head.

Thorax black, faintly yellow pollinose on dorsum. Humeri and scutellum entirely bright yellow. Metapleura yellow. Pleura partly reddish, no pollinose stripe. Coxae mainly black, partly dark reddish. Legs dark yellow, reddish on the femora. Middle third of posterior femur diffusely blackish. Apical tarsal segments and tips of claws blackish. Calypters bright yellow. Halteres bright yellow, dark reddish brown at base. Wings hyaline, with dark brown band from costa to fifth vein. Submarginal cell paler apically. Pale mark at center of anterior margin of first posterior cell. Discal cell entirely dark.

Abdomen black, indistinctly yellow pollinose. Orange yellow band on distal margins of first to fourth segments. This band is very narrow on the first segment except at the sides. Sternite



of fifth segment very large and prominent, resembling a female theca. Genitalia dark reddish black.

Type: Holotype, male, USNM 64476, Uen Chuan, Szechwan, Aug. 7-14, 1924, D. C. Graham.

This species belongs to the *C. scutellatus* group in having the scutellum entirely yellow, and, as in *scutellatus*, the first abdominal segment has a narrow yellow distal margin. It differs conspicuously from *scutellatus* by the wing pattern, in addition to the unique fifth sternite.

***Conops nigrifrons* Kröber**

*Conops nigrifrons* Kröber, Arch. Naturg., vol. 81, Abt. A, Heft. 11, p. 55, 1915.

Otherwise known only from the type male from Japan. This specimen agrees very well with Kröber's description, except that the cheeks are entirely yellow.

Material examined: Siberia: Okeanskaya, August 1923, Cockerell, 1 male, USNM.

***Conops quadrifasciatus* DeGeer**

*Conops quadrifasciatus* DeGeer, Mémoires pour servir à l'histoire des insectes, vol. 6, p. 104, 1776.

This widely distributed European species has not been previously recorded east of Asia Minor. This specimen has some blackish on the femora, a character occasionally possessed by European individuals.

Material Examined: Siberia: Smolenschina, Aug. 26, 1927, Cockerell, 1 male, USNM.

**Subgenus *Asiconops* Chen**

*Asiconops* Chen, Notes d'entomologie chinoise, vol. 6, p. 170, 1939.

This subgenus is characterized by having transverse grooves on the front, anterior to the vertex. In a few species the transverse grooves of the front are relatively indistinct. In addition I have found in the female a tooth-shaped process extending from the middle of the posterior margin of the sixth abdominal segment. Most of the species have a frontofacial mark.

This subgenus dominates the Indo-Malayan representatives of the genus *Conops*.

Type: *Conops aureomaculatus* Kröber.

***Conops (Asiconops) kanoi*, new species**

Male: Length 15 mm. Front brownish yellow, with longitudinal grooves radiating from the antennal prominence and a few transverse grooves in the middle. Vertex and face yellow; most of face and posterior orbit gold pollinose. Lower third of facial keel dark brown. Occiput black. Antenna dark brown. First segment four times as



long as wide. Second segment nearly twice as long as first. Third segment as long as first. Arista yellow at base of apical segment; process of second segment small. Proboscis  $1\frac{1}{2}$  times length of head, reddish on distal half.

Thorax black; dorsum faintly yellow pollinose, more distinct medial to the humeri, on metanotum, and on metapleura. Humeri dark reddish black. Pleura faintly white pollinose with indistinct pleural stripe. Coxae black, partly dark reddish. Femora black, rufous dorsally and on apical ventral third. Remainder of anterior and middle legs missing. Posterior tibia rufous. Posterior tarsus and tips of claws black. Remainder of claws and pulvilli yellow. Wings brownish yellow hyaline, darker between first and third veins and vena spuria, and along the fifth vein. Veins mainly black apically, yellowish basally. Calypters yellow. Halteres reddish yellow, dark reddish at base of stem.

Abdomen entirely black. Faintly gold pollinose on sides of first to third segments and indistinct narrow distal margin of fourth and fifth segments. Sixth segment faintly yellowish white pollinose.

Type: Holotype, male (author's collection), Niiijima, Tokyo, Japan, Aug. 30, 1953, R. Kano.

This species is related to *C. curtulus* but is larger and darker, and differs conspicuously by the absence of the distinct abdominal bands.

***Conops (Asiconops) curtulus* Coquillett**

*Conops curtulus* Coquillett, Proc. U.S. Nat. Mus., vol. 21, p. 328, 1898.

The type is a female according to Sabrosky. The brown punctures on the face and cheeks are at the insertions of small hairs and are more or less distinct in many species of *Conops*. *Conops kuriensis* Ouchi is very suggestive of this species.

Material Examined: Japan: Mitsukuri, 1 female paratype, USNM 4000, with second and third antennal segments missing.

***Conops (Asiconops) tristis* Chen**

*Conops (A.) tristis* Chen, Notes d'entomologie chinoise, vol. 6, p. 180, 1939.

The specimens listed are referred here although they are not as dark as the description of *tristis*. The face is not largely infuscated in these specimens.

The specimen from Szechwan has more pollen on the abdomen than the one from Foochow, but no pale bands of ground color, except slightly laterally on apex of fourth segment.

Material examined: Fukien: Foochow, C. R. Kellogg, 1 female, USNM. Szechwan: Mount Omei, 5-11,000 ft., Aug. 24-27, D. C. Graham, 1 female, author's collection ex USNM.



*Conops (Asiconops) kulinicus* Chen

*Conops (A.) kulinicus* Chen, Notes d'entomologie chinoise, vol. 6, p. 180, 1939.

The specimen examined does not have the sixth abdominal segment gold pollinose, but it is rather "worn." The humerus is distinctly rufous, rather than a little reddish as described for *kulinicus*.

Material examined: Szechwan: Near Mupin, 2-8,000 ft., July 1929, D. C. Graham, 1 female, USNM.

*Conops (Asiconops) chinensis*, new species

Male: Length 17 mm. Front and vertical swelling dark rufous. Sides of vertex and adjacent front blackish brown. Frontofacial mark velvety black. Upper part of antennal prominence black. Face yellow, gold pollinose except for antennal prominence. Black at junction of facial and oral keel. Occiput dark reddish, partly blackish centrally. Yellow pollinose posterior orbit extending across back of vertex. Antenna dark reddish to black, rufous on proximal half of third segment. First segment four times as long as wide. Second segment nearly two times length of first. Third segment as long as first. Second segment of arista without definite process. Third segment of arista nearly three times length of first and second combined. Proboscis black, reddish on distal ventral half, about  $1\frac{1}{2}$  times length of head.

Thorax black, faintly yellow pollinose including a pleural stripe. More distinct yellow pollinose areas medial to the humeri anterior to the transverse suture, above base of wings, anterior to scutellum, upper half of postnotum, and on the metapleura. Reddish on humeri, calli, and tip of scutellum. Anterior coxae mainly rufous, posterior mainly black. Trochanters rufous. Anterior femur mainly rufous; middle femur blackish dorsally and on basal half; posterior femur black on basal two thirds. Tibiae rufous, blackish basally. Tarsi black, rufous on first segment, especially on posterior tarsus. Pulvilli and claws, except black tips, yellow. Wings faint yellowish brown hyaline, brown between first and third vein and vena spuria, and along fifth vein. Costal and basal cells yellow. Calypters yellow. Halteres yellow, blackish on club and base.

Abdomen black, very narrow reddish margin on third, fourth, and fifth segments and on the genitalia. Gold pollinose distal margins on all segments, the sixth nearly entirely gold pollinose.

Type: Holotype, male, Amer. Mus. Nat. Hist., Yenping, Fukien, June 14, 1917.

This species is related to what I have identified as *C. tristis*, but the front is predominantly rufous, and the humeri, calli, and apex of scutellum are rufous. It agrees with *tristis* in having an entirely



dark abodmen. It is also apparently related to *C. hwangi* and *C. opimus*, but these species have a partially reddish abdomen.

*Conops (Asiconops) grahami*, new species

Male: Length 16 mm. Front and occiput brownish yellow. Face yellow, gold pollinose except for antennal prominence. Gold pollinose on orbits covering the black frontofacial mark. Spot at center of junction of vertex and front gold pollinose. Occiput brownish yellow, black centrally. Antenna dark reddish brown, black on second segment and on base and apex of arista. Process of second segment of arista relatively small.

Thorax black, humeri and most of scutellum rufous. Thorax faintly yellow pollinose, more distinct medial to the humeri, on the metanotum, and on the metapleura. Indistinct pollinose pleural stripe. Coxae mostly black, anterior coxa partly reddish and gold pollinose. Middle and posterior coxae white pollinose. Femora and tibiae entirely rufous. Tarsi and tips of claws black. Remainder of claws and pulvilli yellow. Wings brownish yellow hyaline with brown pattern between first and third veins and vena spuria, and along the fifth vein. Calypters yellow. Halteres yellow, dark reddish brown at base.

Abdomen black with distinct wide gold pollinose band on distal part of each segment. Sixth segment mostly gold pollinose. Second segment with the gold pollen forming a triangle on each side. Sixth segment rufous except for black spot at base on dorsum. Genitalia partly black, partly rufous.

Type: Holotype, male, USNM 64477, Uen Chuan Shien, Suifu, Szechwan, Aug. 7-14, 1924, D. C. Graham.

The ptilinum and lower front are inflated, but the specimen is not otherwise teneral.

This species seems related to *C. hwangi* but has very distinct pollinose abdominal bands. The pollen covering the frontofacial mark is a character not noted as yet in any other species.

*Conops (Asiconops) opimus* Coquillett

*Conops opimus* Coquillett, Proc. U.S. Nat. Mus., vol. 21, p. 329, 1898.

The specimen from Japan has a black frontofacial mark as does the type according to Sabrosky. The type is also a female.

The specimen from Kuliang is more rufous and thus varies toward *C. rufifrons* of Amboina. The specimens from China referred to *rufifrons* by Ouchi may be this form.

*Conops izuoshimensis* Ouchi, based on a male, is close to this species if not identical. However the wing veins are described as pale yellowish for *izuoshimensis*. *Conops flavonervosus* Kröber also has



yellow wing veins and is closely related, but has the abdomen mainly reddish.

Material examined: Japan: K. Miyushi, 1 female, USNM (arranged as *opimus*, no type label, slightly grease stained). Fukien: Kuliang, 1925, H. A. Jaynes, 1 female, USNM.

***Conops (Asiconops) rufomaculatus* Kröber**

*Conops rufomaculatus* Kröber, Arch. Naturg., vol. 81, Abt. A, Heft 11, p. 44, 1915.

The specimen examined has the dorsum of the thorax black, except for the humeri, sides, and scutellum. The first antennal segment is dark yellow, although the species was described as having the antenna black, third segment dark red brown.

I do not find any significant differences between this species and descriptions of *aureomaculatus* (= *pieli*).

Material examined: Formosa: Kagi, 1 female cotype, Kröber collection No. 24283, USNM.

***Conops (Asiconops) szechwanensis*, new species**

Female: Length 13 mm. Front dark reddish yellow, more yellowish on the vertex. Indistinct rufous frontofacial mark. Face and grooves yellow, gold pollinose except for antennal prominence. Blackish at base of facial keel. Posterior orbit yellow pollinose. Occiput dark yellow, blackish centrally. Antenna black, dark reddish black on third segment. First segment four times as long as wide. Second segment less than twice as long as first. Third segment nearly as long as first. Process of second segment of arista small. Proboscis black, yellowish on apical half, about  $1\frac{1}{2}$  times length of head.

Thorax black, faintly yellowish pollinose more distinct medially to the humeri, on the metanotum, and on the metapleura. No definite pleural stripe. Humeri and apical margin of scutellum rufous. Coxae black, yellowish white pollinose. Trochanters black. Femora mainly black, partly rufous. Posterior femur rufous only at narrow base and apical ventral third. Tibiae rufous. Tarsi and tips of claws black, remainder of claws and pulvilli yellow. Wings dark yellowish hyaline with darker pattern between first vein and third vein and vena spuria, and along the fifth vein. Wing pattern yellowish at base, blackish apically. Halteres bright yellow, dark reddish brown at base.

Abdomen mainly black, reddish on posterior margin of second to fifth segments, sides of third and sixth segments, and most of the seventh segment. Theca black, as long as wide. Genitalia black.

Male: Length 14 mm. Similar to the female. Rufous frontofacial mark more distinct. Process on second segment of arista longer. Gold pollen on second segment of abdomen more extensive laterally.



Types: Holotype, female, USNM 64478. Allotype, USNM, Suifu to Hongya, Szechwan, alt. 1,000–1,400 ft., June 15–21, 1929, D. C. Graham. Paratype: Szechwan: 1 male, author's collection ex USNM, between Yachow and Suifu, 1–2,200 ft., May 27 to July 14, 1930, D. C. Graham.

This species is similar to *C. rufomaculatus* and *C. aureomaculatus*, but is darker with the femora being mainly black.

***Conops (Asiconops) thecus*, new species**

Female: Length  $14\frac{1}{2}$  mm. Front dark reddish brown with distinct darker reddish brown frontofacial mark. Vertex more yellowish. Face and grooves yellow, gold pollinose except for antennal prominence. Black mark at junction of facila and oral keel. Occiput mainly black, dark reddish yellow laterally. Posterior orbit gold pollinose. First antennal segment rufous, four times as long as wide. Second segment less than twice the length of first, dark reddish black. Third segment as long as first, dark reddish basally. Arista black, process of second segment indistinct. Proboscis black, yellowish in the middle, about  $1\frac{1}{2}$  times length of head.

Thorax black, faintly yellowish pollinose. Humeri, posterior calli, and entire scutellum rufous. Coxae mainly black, partly reddish. Trochanters and narrow base of femora rufous. Apical dorsal third of femora reddish, apical ventral third rufous. Tibiae rufous. Tarsi yellowish proximally, black apically and on tips of claws. Remainder of claws rufous, pulvilli yellow. Wings pale yellow hyaline, darker between first and third veins and vena spuria, on anterior half of first basal cell, and along fifth and sixth veins. Calypters yellow. Halteres yellow, reddish on club and base of stem.

Abdomen mainly black, rufous on apex of second to fifth segments, apical half of sixth, and nearly entire seventh segment. This color on the sides of the second segment extending basally. Yellow pollinose on apical margin of first segment, sides of second segment, most of sixth and seventh segments, and indistinctly on the theca. Theca black, very large, twice as long as wide. Genitalia shiny black, partly reddish.

Type: Holotype, female, USNM 64479, Suifu, Szechwan, D. C. Graham.

This species is related to *C. opimus*, but has a rufous frontofacial mark and yet is darker in general coloration. Superficially it resembles *C. grahami* very much, but differs in the size of the theca and in the color of wing, scutellum, calli, trochanters, and other structures.

***Conops (Asiconops) rufigaster*, new species**

Male: Length 15 mm. Front entirely deep black. Vertex dark reddish in middle. Velvety black frontofacial mark. Face yellow,



gold pollinose except for antennal prominence, black at junction of facial and oral keel and on adjacent facial grooves. Occiput black. Yellow pollinose postorbitals extending across back of occiput. Antenna entirely black, faintly reddish on ventral part of first and third segments. First segment four times as long as wide. Second segment nearly two times as long as first. Third segment as long as first. Process of second aristal segment indefinite. Proboscis black, over  $1\frac{1}{2}$  times length of head.

Thorax black, reddish only on apical half of scutellum, faintly yellow white pollinose. Coxae mainly rufous, partly black. Trochanters rufous. Femora black, rufous on narrow base and basal ventral third. Distal third of posterior femur entirely rufous. Tibiae black, reddish on basal two thirds of posterior tibia. Tarsi and apical third of claws black. Pulvilli and remainder of claws yellow. Wings brownish hyaline, brown pattern from costa to fourth vein and vena spuria, and along fifth vein. Brown pattern gradually fading into the hyaline area. Calypters dark yellow. Halteres rufous, brown at base.

Abdomen entirely rufous except for black basal half of first segment and parts of the genitalia. Irregular and indefinite blackish area on third to fifth segments. White pollinose on distal half of first segment. Faintly yellow pollinose on apical part of sixth segment.

Type: Holotype, male, USNM 64480, Biliran Island, Philippines, Baker.

This species is related to some of the species of the *C. nubeculosus* group, having the abdomen almost entirely rufous. However, the antennae are mainly black.

***Conops (Asiconops) nubeculosus* Bigot**

*Conops nubeculosus* Bigot, Ann. Soc. Ent. France, ser. 7, vol. 6, p. 36, 1887.

The specimen from Malaya lacks a dorsal stripe as in the variety *indicus*, but has the wing entirely dark as in the variety *bigoti* (= *ornatus*). The specimen from the Philippines has three dark dorsal stripes and the tibia is white pollinose as in variety *bigoti*, but the wing is normally patterned.

Material examined: Malaya: Kepong, Selangor, August 1949, 1 male, author's collection ex USNM. Philippines: La Carlota, central Negros Occidental, Sept. 13, 1930, F. P. Goseca, 1 male, USNM.

***Conops nigriventris* Brunetti**

*Conops nigriventris* Brunetti, in Fauna of British India . . . , Diptera, vol. 3, p. 346, 1923.

This species has previously been known only from the description of two males from Assam.



The specimen examined has a slight elevation within a very slightly depressed area on the vertex. Such a change occurs in a few other species of *Conops* (s.s.), and represents a vestigial ocellar tubercle. Kröber in adding to the description of the type (Ann. Mag. Nat. Hist. ser. 11, vol. 5, p. 229, 1940), states that there is a distinct ocellar swelling (=tubercle) with two ocelli, and because of the spindle shaped abdomen, considers this species to be closely related to *C. nigripes*. However, this female shows that it is not at all related to *nigripes*, which belongs to *Siniconops*. The female has a small triangular theca with tip slightly hooked. The robust spindle shape of the abdomen is also entirely different from the long cylindrical abdomen of the female of *nigripes*.

This species is very distinctive structurally by having robust bristles on the sides of the dorsum of the thorax, and on the sternopleura. There is also a prominence of fine bristles on the dorsum of the thorax and on the abdomen.

Material examined: Siam: Chiangmai, Oct. 23, 1920, 1 female, Amer. Mus. Nat. Hist.

### Genus *Siniconops* Chen

*Siniconops* Chen, Notes d'entomologie chinoise, vol. 6, p. 197, 1939.

Similar to *Conops*, but having an ocellar tubercle, usually with two ocelli; and usually with a vertical swelling. The third and fourth abdominal segments are enlarged in both sexes so that the male abdomen is spindle shaped, and the female abdomen is elongated and cylindrical. The fifth, sixth, and seventh segments are relatively small in the female, but the theca is proportionately large and tooth-shaped.

Type: *Sinoconops elegans* Chen.

I am using the term vertical swelling (i.e., swelling of the vertex) after Kröber, instead of ocellar vesicle as used by Séguéy and Chen. Since ocellar vesicle is apt to be confused with ocellar swelling which Kröber and I have used for the ocellar tubercle, it is best to drop both of these terms. The ocellar tubercle is the small swelling within the ocelli (if present), at the anterior angle of the vertical swelling. The vertical swelling may be triangular and distinct from the vertex, or it may coincide with the vertex.

In addition to the species recorded here, *Physoconops microvalvus* Kröber belongs to this genus, although the base of the abdomen is relatively narrow.

### *Siniconops maculifrons* (Kröber)

*Conops maculifrons* Kröber, Arch. Naturg. vol. 81, Abt. A, Heft 11, p. 41, 1915.

The frontofacial mark is weak, but present in the specimen from Manchuria. It is absent in the specimen from Siberia.



Material examined: Manchuria: Yalhenya, Pin-chang Province, Aug. 7-12, 1939, M. I. Nitkin, 1 female, author's collection ex Steyskal. Siberia: Kongaus, August 1923, Cockerell, 1 female, USNM.

***Siniconops elegans* Chen**

*Siniconops elegans* Chen, Notes d'entomologie chinoise, vol. 6, p. 198, 1939.

*Abrachyglossum wui* Ouchi, Journ. Shanghai Sci. Inst., sec. 3, vol. 4 (1939) p. 195, 1940.

The males of this species differ from the males of the other species examined by having the apical abdominal segment more elongated dorsally, and more pointed (see illustration of *wui* Ouchi, *ibid.*, pl. 17).

Material examined: Fukien: Amoy, 1 male, USNM; Yenping, July 19-Sept. 11, 1917, 2 males and 5 females, Am. Mus. Nat. Hist. and author's collection.

***Siniconops curtirostris* (Kröber)**

*Conops celebensis* (Meijere) Kröber, Arch. Naturg., vol. 81, Abt. A, Heft 7, p. 52, 1915 (*C. curtirostris* Kröber cited as manuscript name on p. 53, under *celebensis*).

*Conops curtirostris* Kröber; Ann. Mag. Nat. Hist., ser. 11, vol. 5, p. 219, 233, 1940 (previously misidentified as *celebensis*).

This species is very close to *S. elegans*, but the front is almost entirely black, and the abdomen has less yellow.

Material examined: Sikkim, 1 female, USNM, labeled *celebensis* Kröber, determined 1914 (=cotype *Conops curtirostris*).

***Siniconops nigripes* (Kröber)**

*Conops nigripes* Kröber, Ent. Mitt. Berlin, vol. 2, p. 278, 1913.

Similar to *S. elegans* but paler, wing more diffusely yellowish, and humeri and scutellum rufous.

Material examined: Formosa, Sauter, 5 males and 5 females, author's collection ex Hungarian Mus.

***Siniconops* species**

The specimen examined is badly crushed and not suitable as the basis of a new species. Superficially it is very similar to *S. nigripes*, but the wing is less yellowish and the general coloration averages darker. The genitalia are mainly black, and the third antennal segment is proportionately longer. The junction between the subcostal and first vein (sc-r) is distal to the anterior crossvein (r-m).

Material examined: Szechwan: Near Mupin, 2-8,000 ft., June 28, 1929, D. C. Graham, 1 male, USNM.

***Siniconops splendens*, new species**

Male: Length 16 mm. Front dark reddish, surrounded by velvety black. Vertex dark reddish and shiny. Ocellar tubercle blackish with



two distinct yellow ocelli. Face dark reddish yellow at anterior orbit and in facial grooves. Posterior cheeks and median band in facial grooves velvety black. Occiput dark yellow with narrow velvety black posterior orbit and stripes from sides of vertex to neck. Antenna black, rufous on medioventral surface. First segment about two times as long as wide. Second segment three times as long as first. Third segment a little longer than first. Process on second segment of arista small. Third segment of arista three times as long as first and second combined. Proboscis as long as head, black, rufous basally.

Thorax velvety black, reddish on apex of scutellum and parts of pleura. Indistinct yellow pollen on thorax especially at metanotum, metapleura, and forming a diffuse pleural stripe. Coxae black, partly rufous on the anterior coxa. Anterior femur mainly rufous, a little blackish ventrally. Middle femur rufous above, blackish below. Posterior femur mainly blackish with a rufous longitudinal stripe, and rufous at apical ventral third. Tibiae dark yellowish, blackish apically on posterior tibia. Tarsi dark yellowish. Pilvilli and claws, except black tips, yellow. Wings grayish yellow hyaline, more yellowish basally between first and fourth vein, but no definite wing pattern. Junction of subcostal and first vein slightly proximal to anterior cross-vein. Calypters blackish. Halteres yellow, black at base.

Abdomen dull black on first and third segments. Reddish and then golden yellow on apical margin of second segment, apical half of third segment, and almost all of fourth segment. Fifth and sixth segments and genitalia entirely golden yellow. Narrow reddish distal margin on first segment.

Type: Holotype, male, USNM 64481, Yachow, Szechwan, Aug. 16, 1928, D. C. Graham.

Related to *nigripes*, but very distinct by having the black areas velvety, and the apical half of the abdomen mainly orange and gold pollinose.

*Siniconops grandens*, new species

Male: Length 20.5 mm. Front and vertex yellow, slightly darker near back of antennal prominence and anterior to vertex. Vertical swelling and part of ocellar tubercle darker. Small velvety black frontofacial mark. Face yellow, cheeks blackish. Junction of facial and oral keel dark reddish. Posterior orbit and upper occiput yellow, remainder of occiput black. Antenna black, partly reddish on third antennal segment. First antennal segment two times as long as greatest width. Second segment three times as long as first. Third segment slightly longer than first. Process of second segment of arista is small but distinct. Third aristal segment short, hardly longer than first and second combined. Proboscis as long as head, black.



Thorax black, dark reddish yellow on humeri, most of scutellum, and parts of the pleura. Faint yellowish pattern on pleura forming indefinite pleural stripe. Coxae dark reddish. Femora reddish anteriorly, blackish posteriorly. Tibiae mainly dark rufous, partly black. Tarsi and tips of claws black. Pulvilli and remainder of claws dark reddish yellow. Wings dark yellowish hyaline. Dark brownish band between first and third veins and vena spuria, gradually diffusing with the hyaline area. Costal and basal cells more yellowish. Anterior cross-vein proximal to junction of subcostal and first vein. Calypters dark blackish red. Halteres yellow, partly rufous, brown at base.

Abdomen black on first segment, midline and anterior margin of second segment, most of third segment, sides of remaining segments and on the genitalia. Golden yellow pollinose on distal margin of first to third segments, sides of second segment, and most of remaining segments.

Type: Holotype, male, USNM 64482, Yachow, Szechwan, 2,200–5,000 ft., Aug. 21–25, 1930, D.C. Graham.

This very distinctive species is related to *S. maculifrons*, and *S. philippinensis* in having the second abdominal segment yellow with a black midline.

#### ***Siniconops philippinensis* (Kröber)**

*Conops philippinensis* Kröber, Philippine Journ. Sci., vol. 34, p. 340, 1927.

The front of the specimen examined is predominantly black, although basically the front is yellow with a large black area in the center and velvety black laterally and dorsally. The black at the lower lateral margin forms a distinct frontofacial mark. These differences from the description of the type (male) are within the variation seen in *Siniconops nigripes* and *Siniconops microvalvus* (formerly placed in *Physoconops*).

Material examined: Philippines, Mount Makiling, Luzon Island, Baker, 1 female, USNM.

#### **Genus *Archiconops* Kröber**

*Archiconops* Kröber, Ann. Mag. Nat. Hist., ser. 11, vol. 4, p. 381, 1939.

#### ***Archiconops erythrocephalus* (Fabricius)**

*Conops erythrocephalus* Fabricius, Entomologica systemica . . . , vol. 4, p. 392, 1805.

*Conops niponensis* Vollenhoven, Versl. Meded. Akad. Wet., vol. 15, p. 10, 1863.

*Conops nigricans* Matsumura, Thousand insects of Japan, Additamenta 2, p. 262, 1916.

The specimen from Siam is more shiny and violaceous than the specimens from China and Japan. The specimens from China have a



variable amount of hyaline at the base of the wing, but not as much as the Japanese specimen. This variation is seen in the closely related *Archiconops morosus*, and it seems best at present to unite *erythrocephalus* and *niponensis*. *Conops nigricans* Matsumura also appears to be this species.

Material examined: Siam: "7-6-1928," Hugh Smith collection, 1 male, USNM. Chekiang: Hangchow, July 19, 1925, T. P. Chao, 1 female, author's collection ex USNM; Hangchow, July 11, 1927, C. Y. Wong, 1 female, USNM. Kiangsu: Penniu, July 17, 1926, W. Shien, 1 male, USNM. Japan: Mitsukuri, 1 male, USNM, determined *niponensis* by Coquillett.

### Genus *Physocephala* Schiner

*Physocephala* Schiner, Wiener Ent. Monatschr., vol. 5, p. 137, 1861.

#### *Physocephala rufifrons*, new species

Female: Length 17 mm. Front and vertex dark rufous, blackish above antenna extending on each side in a line to upper part of face. Face and lateral margin of front yellow. Upper half of keel black. Cheeks brown. Occiput black, lower half of posterior orbit rufous. Antenna predominantly dark reddish brown, brighter ventrally and medially. First segment two times as long as wide. Second segment over  $2\frac{1}{2}$  times length of first. Third segment two times length of first. Arista black. Process of second segment of arista very long, as long as distal segment. Proboscis black, nearly two times length of head.

Thorax mainly black, rufous on humeri and scutellum, reddish on sides of thorax and parts of pleura. Coxae black. Legs rufous. Posterior femur blackish, rufous at apex and base. Apical tarsi and tips of claws blackish. Pulvilli very dark. Wing dark brownish from costa to fifth vein. Costal cell slightly paler. Hyaline areas in submarginal cell, first posterior cell, and apical half of discal cell. Calypters dark brown. Halteres dark brown, yellowish on pedicel.

Abdomen reddish. First segment black except for sides. Second segment with a pair of large black marks on basal half. Dorsum of third segment mainly black. Basal half of fourth and fifth segments black. Paired marks at base of sixth and seventh segments black. Genitalia shiny black. Theca folded under abdomen.

Type: Holotype, female, USNM 64483, Ningyuenfu, Szechwan, 6,000-10,800 ft., July 24-26, 1928, D. C. Graham.

This species belongs to the *P. vittata* group, but has the front rufous.



***Physocephala ammophiliformis* Kröber**

*Physocephala ammophiliformis* Kröber, Arch. Naturg., vol. 81, Abt. A, Heft 4, p. 122, 1915.

There is a variable amount of yellow on the lower lateral part of the front, so that the specimen from Mount Omei approaches having a black "T" pattern on the front. Another specimen is more reddish, with some black at the base of the hind femur, but no black ring.

Compared with a male and female of *P. gigas* from Java, which Kröber thinks may be synonymous, *gigas* differs by having barely a trace of reddish brown on the second abdominal segment. Also the legs are darker, but a black ring is distinguishable near the base of the hind femur, and the pedicle of the abdomen is more slender in *gigas*.

Material examined: Szechwan: Shin Kai Si Mount Omei, 3-5,000 ft., July-August 1923, D. C. Graham, 1 male, USNM; Kuanshien, 3,000 ft., Apr. 5-May 8, 1930, D. C. Graham, 2 males, USNM and author's collection.

***Physocephala nigra* (DeGeer)**

*Conops nigra* DeGeer, Memoires pour servir à l'histoire des insectes, vol. 6, p. 105, 1776.

The abdomen of the specimen examined is grease stained so that the pollinose bands are not distinct. This species has not previously been recorded east of Turkestan.

Material examined: Manchuria: Tsingtao, July 1938, Weymarn, D. G. Hall collection, 1 female, USNM.

***Physocephala obscura* Kröber**

*Physocephala obscura* Kröber, Arch. Naturg., vol. 80, Abt. A, Heft 10, p. 53, 1914.

The first four specimens listed agree with the original description but are smaller, 12-15 mm. The cotype agrees with the description of the female, but may represent another species. It is more robust, yellow pollinose, and more extensively rufous; and most of the front is reddish, not forming a midline.

Material examined: Siberia: Kongaus, August 1923, Cockerell, 2 males, USNM and author's collection; Okeanskaya, August 1923, Cockerell, 2 males, USNM and author's collection; "Wladiwastock," 1 male, cotype, USNM.

***Physocephala chrysorrhoea* (Meigen)**

*Conops chrysorrhoea* Meigen, Systematische Beschreibung der bekannten Europäischen zweiflügeligen Insekten, vol. 4, p. 128, 1824.

The specimen examined belongs to the variety *P. truncata*; but the related new species described below, from the same locality, has the wing of the typical form.



Material examined: Hopeh: Chao Yang, July 13, 1921, A. P. Jacot, 1 female, USNM.

*Physocephala theca*, new species

Female: Length 10 mm. Front, face, and cheeks yellow; blackish on apex of vertex, at base of antenna, and in the middle of facial grooves. Vertex translucent dark yellow. Occiput black. Posterior orbit white pollinose above, yellow pollinose below. Antenna dark reddish brown, blackish above. First segment three times as long as wide. Second segment three times length of first. Third segment nearly one and one half times length of first. Process of proximal segment of arista moderate, nearly as long as apical segment of arista. Proboscis blackish, reddish in the middle, nearly two times length of head.

Thorax black. Distinct yellow pollinose pleural stripe. Yellow pollinose areas present adjacent to humeri, on metathorax and on postnotum. Humeri rufous, scutellum entirely black. Coxae dark reddish black, partially yellow pollinose. Legs bright rufous, darker on apex of posterior tibiae and on tarsi. Claws blackish, pulvilli yellow. Wings dark brownish from first to fifth vein. Costal and subcostal cells yellowish. Apical half of first basal cell hyaline. Apical half of first posterior cell abruptly hyaline. Apical two thirds of discal cell hyaline except for posterior margin. Calypters yellow. Halteres rufous, dark brownish at base.

Abdomen mainly black, rufous at junction of second and third segments. Dark reddish at base of seventh segment and on the theca. Gold pollinose at distal margin of first to fifth segments and diffusely on parts of sixth and seventh segments. Theca very large, twice as long as wide. Posterior black serrate area slightly longer than wide, rufous proximally.

Male: 9 mm. Similar to the female, but front entirely black. Abdomen grease stained, rufous on most of second and third segments and at apical half of sixth segment.

Types: Holotype, female, USNM 64484, Chao Yang, Hopeh, July 9, 1921, A. P. Jacot. Allotype, Chao Yang, Hopeh, July 20, 1921, A. P. Jacot, author's collection ex USNM.

This species is very close to *P. chrysorrhoea* differing by the very large theca. There are no good characters for distinguishing the male. *P. vaginalis* of Southern Europe, differs by having the theca light reddish brown, and the wing pattern extending only to the third vein.



*Physocephala pusilla* (Meigen)

*Conops pusilla* Meigen, Systematische Beschreibung der bekannten Europäischen zweiflügeligen Insekten, vol. 4, p. 131, 1824.

The second specimen listed is questionably referred here because it is very dark and there is a trace of an apical spot on the wing. However it is too small and slender for *P. sinensis*.

Material examined: Shantung: Tsinan, May 27, 1922, A. P. Jacot, 1 female, USNM. Hopeh: Chao Yang, Aug. 10, 1923, A. P. Jacot, 1 female, author's collection ex USNM.

*Physocephala melana*, new species

Female: Length 8 mm. Front and vertex dark yellowish. Blackish in middle of front, and at groove at anterior margin of vertex. Face and cheeks yellow. Upper two thirds of facial groove and keel black. Occiput black, paler below. Posterior orbit white pollinose. Antenna dark reddish yellow, blacker dorsally. First segment two and one half times as long as wide. Second antennal segment three times length of first. Third segment one and one half times length of first. Process on proximal segment of arista moderate, as long as apical segment of arista. Proboscis dark, reddish in middle, nearly two times length of head.

Thorax black. Yellow pollinose pleural stripe. Yellow pollinose areas near humeri on metapleura and on postnotum. Humeri and narrow margin of posterior calli rufous. Scutellum entirely black. Coxae dark reddish brown, yellow pollinose. Legs rufous, darker on tarsi. Distal three fifths of posterior femur, except apex, black. Claws black, pulvilli yellow. Calypters dark brownish yellow. Halteres rufous, dark brown at base.

Abdomen short and robust, mainly black. Narrow dark reddish areas at junction of second and third segments and apical margins of third to sixth segments. Faint white pollinose in part, with gold pollinose areas on apical margin of third to sixth segments. Theca shorter than wide.

Type: Holotype, female, USNM 64485, Trang Bom, 30 miles northwest of Saigon, Cochin China, Aug. 8, 1932, M. Poilane.

This species is very close to *P. limbipennis* in coloration, but structurally it is quite distinct. The abdomen is relatively short and robust, and the theca is very short and wide. This short wide abdomen is one of the characters of *Pseudophysocephala*, but the head in this species is normal.

*Physocephala sinensis* Kröber

*Physocephala sinensis* Kröber, Ark. Zool., vol. 26, p. 15, 1933.

This species does not have any specific color character to distinguish it from *P. pusilla*, as the apical spot on the wing is not always



present. However, this series is larger and more robust, and the abdomen is more club shaped, so that the specimens are readily separable from *pusilla*.

Material examined: Szechwan: Suifu, 1,000–1,500 ft., June 1–21, 1928, July 1929, D. C. Graham, 1 with abdomen missing, 1 male, USNM and author's collection; Suifu to Hongya, 1,000–1,450 ft., June 15–21, 1929, D. C. Graham, 1 male, 1 female, USNM; Chungking, 1–2,000 ft., May 6–27, 1930, D. C. Graham, 1 male, author's collection ex USNM; Yao-Gi, 4–8,000 ft., July 3, 1929, D. C. Graham, 1 male, author's collection ex USNM. Hupeh: Hsiang Shan, 1 female, USNM. Chekiang: Hangchow, June 27, 1927, July 15, 1927, C. Y. Wong, 2 females, USNM and author's collection. Kiangsu: Penniu, Aug. 15, 1925, C. Y. Wong, 1 male, USNM. Hopeh: Peking, August 1921, 1 male, Amer. Mus. Nat. Hist.

*Physocephala bipartita* (Doleschall)

*Conops bipartita* Doleschall, Natuurk. Tijdschr. Nederland. Indië, vol. 17 (1858–59), p. 100, 1858.

This species has previously been recorded from Java, Sumatra, Philippines, Molluccas, and Celebes.

Material examined: Malaya: 16 miles north of Kuala Lumpur, Selangor, Malaya, March 1949, R. Traub, B. Insoll, 1 female, USNM.

*Physocephala elongata*, new species

Male: Length  $9\frac{1}{2}$  mm. Vertex, front, and face dark yellow. Blackish in middle at junction of vertex and front. Black on front forming an indistinct midline. Black above base of antenna extending indistinctly to upper part of face. Large black mark in middle of facial grooves including that part of the keel. Occiput yellowish black, paler below. Postorbitals yellowish white pollinose. Antenna nearly blackish on ventral and medial surfaces. First segment four times as long as wide. Second segment nearly  $2\frac{1}{2}$  times the length of first. Third segment nearly  $1\frac{1}{2}$  times length of first. Arista with elongated process on proximal segment as long as distal segment. Proboscis mainly yellowish,  $2\frac{1}{2}$  times length of head. Head nearly twice as high as long. Shiny triangular area at posterior margin of eye large and prominent.

Thorax dull black. Humeri and parts of pleura dark yellow. Yellow white pollinose pleural stripe, and pollinose area medial to humeri and on postnotum. Coxae reddish black, white pollinose. Legs dark yellow. Blackish above on femora, forming an indistinct subbasal ring. Tarsi darker. Pulvilli and claws, except black tips, dark yellow. Wing with dark pattern from costa to third vein extending to apex. Basal half of first posterior cell dark, remainder



abruptly hyaline. Dark margin along sixth vein. Calypters dark yellowish brown. Halteres bright yellow, blackish at base.

Abdomen black. Second segment and basal half of third segment dark yellowish. Narrow distal margin on third, fourth, and fifth segments dark reddish yellow. Apical half of sixth segment and genitalia mainly dark reddish yellow. Pedicle of abdomen longer than club of abdomen.

Type: Holotype, male, USNM 64486, Ulu Gombak, Selangor, Malaya, Dec. 25, 1947, W. H. Lange.

This species is very close to *P. bipartita* in coloration, the differences being mainly structural. The abdomen is relatively long and slender and the head is relatively short (flattened), with a large triangular polished area on the posterior margin of the eye. The head characters are that of *Pseudophysocephala*, and Kröber did include one species with an elongated (instead of short) abdomen. However, the new species *Physocephala melana* is an intergrade, and there are species with a rounded head but large triangular eye area; so that at present I do not believe that *Pseudophysocephala* can be maintained.

#### *Physocephala pielina* Chen

*Physocephala pielina* Chen, Notes d'entomologie chinoise, vol. 6, p. 190, 1939.

The specimen examined agrees with the description, but is more brownish, less blackish; and the first basal cell is more hyaline.

Material examined: Fukien: Foochow, May 1924, C. R. Kellogg, 1 female, USNM.

#### *Physocephala aterrima* Kröber

*Physocephala aterrima* Kröber, Arch. Naturg., vol. 81, Abt. A, Heft 4, p. 122, 1915.

The specimen examined agrees very well with the original description, although the pollinose pleural stripe is relatively indistinct. Size: 12 mm.

This species has been previously recorded only from Sikkim and Chekiang, China.

Material examined: Indochina: Luang Prabang, 1,000 ft., June 30, 1929, Kelly-Roosevelt Expedition, 1 female, Chi. Nat. Hist. Mus.

#### Genus *Myopa* Fabricius

*Myopa* Fabricius, Systema entomologiae . . ., p. 798, 1775.

#### *Myopa picta* Panzer

*Myopa picta* Panzer, Faunae insectorum Germaniae initia, vol. 59, p. 22, 1798.  
*Myopa chusanensis* Ouchi, Journ. Shanghai Sci. Inst., sec. 3, vol. 4 (1939), p. 205, 1940.

Kröber incorrectly describes the third antennal segment as being about as long as the second. However, his illustrations show the



correct proportion. The other differences given by Ouchi for *chus-sanensis* fall into the range of variation. European specimens average darker and more distinctively colored, but the differences do not warrant a separate name.

Material examined: Shantung: Tsinan, Apr. 7, 1928, Apr. 8, 1930, A. P. Jacot, 2 males, author's collection and USNM. Kiangsu, Soochow, 1 male, USNM. Szechwan, Kuanshien, 3,000 ft., Apr. 5 to May 8, 1930, D. C. Graham, 1 male, USNM; Szechwan, D. C. Graham, 1 male, USNM. Chekiang; Hangchow, Apr. 10, 1926, T. P. Chao, 1 male, author's collection and USNM.

***Myopa buccata* (Linné)**

*Conops buccata* Linné, Fauna Suecica, p. 1905, 1761.

*Myopa sinensis* Chen, Notes d'entomologie chinoise, vol. 6, p. 215, 1939.

In describing *sinensis*, Chen apparently misinterpreted Kröber's use of the term "wulst." *Myopa buccata* does not have any spots on the face, but does have some on the occipital swelling behind the face. As in the previous species, European specimens average darker with more contrast between light and dark areas.

Material examined: Shantung: Tsinan, Mar. 18 to Apr. 25, 1922, 1931, A. P. Jacot, 7 males, 1 female, USNM and author's collection. Szechwan: Kuanshien, 3,000 ft., Apr. 5–May 8, 1930, D. C. Graham, 1 male, USNM; no locality, D. C. Graham, 1 female, USNM. Chekiang: Hangchow, Mar. 20, 1930, 1 female, USNM; Hangchow, Mar. 27–Apr. 24, 1926, T. P. Chao, 3 males, USNM and author's collection.

***Myopa curtirostris* Kröber**

*Myopa curtirostris* Kröber, Arch. Naturg., vol. 81, Abt. A, Heft 7, p. 32, 1915.

This species has previously been known only from the type female from Amur.

Material Examined: Manchuria: Tsingtao, July 1938, Weymarn, D. G. Hall collection, 1 female, USNM.

***Myopa fasciata* Meigen**

*Myopa fasciata* Meigen, Klassifikation und Beschreibung . . . , vol. 1, p. 286, 1804.

Material examined: Manchuria: Tsingtao, July 1938, Weymarn, D. G. Hall collection, 3 females, USNM and author's collection.

***Myopa testacea* (Linné)**

*Conops testacea* Linné, Systema naturae, ed. 10, vol. 2, p. 1006, 1759.

Material examined: Shantung: Tsinan, Mar. 31–Apr. 18, 1922–1931, A. P. Jacot, 6 males, 2 females, 1 with abdomen missing, USNM and author's collection. Korea: Suigen, June 16, 1927, T. R. Gardner, 1 male, USNM.



**Genus *Melanosoma* Robineau-Desvoidy**

*Melanosoma* Robineau-Desvoidy, Bull. Soc. Sci. Yonne, vol. 7, pp. 92, 122, 1853.

***Melanosoma pallipes* (Wiedemann)**

*Myopa pallipes* Wiedemann, in Meigen, Systematische Beschreibung der bekannten Europäischen zweiflügeligen Insekten, vol. 4, p. 149, 1824.

This species has been previously known from Europe to Central Asia.

Material examined: Shantung: Tsinan, Apr. 18, 1922, A. P. Jacot, 1 male, USNM.

**Genus *Sicus* Scopoli**

*Sicus* Scopoli, Entomologia carniolica . . ., p. 369, 1763.

***Sicus abdominalis* Kröber**

*Sicus ferrugineus* var. *abdominalis* Kröber, Arch. Naturg., vol. 81, Abt. A, Heft 1, p. 88, 1915.

This species differs from *S. ferrugineus* by having a shorter and wider abdomen, and by having a larger distinct theca in the female. I feel certain that Kröber's type is a specimen having the abdomen flexed so that difference of the theca from *ferrugineus* is not apparent.

The illustrations by Ouchi (Journ. Shanghai Sci. Inst., sec. 3, vol. 4 (1939), p. 211, 1940) show the differences between this and the other species. This species is shown as *S. fusenensis* var. a and var. b. The difference between variety a and b is simply that in variety a the abdomen is extended, and in variety b the abdomen is flexed.

In this species, when viewed from above, the second abdominal segment is as long or somewhat longer than wide, and the third abdominal segment is wider than long. In *ferrugineus*, the second abdominal segment is much longer than wide, and the third abdominal segment is as long or longer than wide. In the female sex the abdomen is even more elongated in *ferrugineus*, and the differences between the two species are greater.

The series from Szechwan differs from the specimens from Siberia and Manchuria by averaging smaller, and by being paler and more pollinose. Also the latter have a pair of curved black marks on the second abdominal segment. These black marks, however, are present or absent in my series of *ferrugineus* from Europe, which includes a very dark male with the femora predominantly blackish.

*Occemyia ogumae* Matsumura (Thousand insects of Japan, Addimenta 2, p. 273, 1916) may be this species. The illustration shows the black marks on the second abdominal segment.

Material examined: Szechwan: Suifu, D. C. Graham, 3 males, 1 female, USNM and author's collection; Suifu, 1,000-1,500 ft., June



1-21, 1928, D. C. Graham, 1 male, USNM; Muping, 4,000-7,000 ft., July 1929, D. C. Graham, 1 male, author's collection ex USNM; O-Er, 26 miles north of Li Fan, 9,000 ft., 1933, D. C. Graham, 1 male, USNM; Wei Chow, 65 miles northwest of Chengtu, 9,000-12,500 ft., Aug. 15-21, 1933, D. C. Graham, 1 male, USNM. China-Tibet border: Yu-Long-Gong, 14,000 ft., Aug. 14, 1930, D. C. Graham, 1 female, USNM. Manchuria: Kaolingtze, July 15, 1941, V. N. Alin, 1 female, author's collection. Siberia: Kongaus, August 1923, Cockerell, 1 male, USNM; Kudia R., Amagu, July 1923, Cockerell, 1 male, author's collection ex USNM.

#### *Sicus nigricans* Kröber

*Sicus ferrugineus* var. *nigricans* Kröber, Ann. Mag. Nat. Hist., ser. 11, vol. 4, p. 370, 1939.

This species is similar to *S. abdominalis* in the shape of the abdomen, but differs in being predominantly dark, particularly on the dorsum of the thorax and second abdominal segment. While it might be considered a dark form of *abdominalis*, there are no intermediates in this series, and both occur at Kongaus.

*Occemyia nishitapensis* Matsumura (Thousand insects of Japan, Additamenta 2, p. 272, 1916) may be this species.

Material examined: Siberia: Kongaus, August 1923, Cockerell, 2 females, USNM. Japan: Tsuruga, June 29, Cockerell, 1 male, USNM; Senjogahara, Nikko, Aug. 9, 1953, R. Kano, 2 females, author's collection.

#### *Sicus fusenensis* Ouchi

*Sicus fusenensis* Ouchi, Journ. Shanghai Sci. Inst., sec. 3, vol. 4 (1939), p. 209, 1940.

This species is otherwise known only from the type female from Northern Korea. It is very similar to *S. ferrugineus*, and although the abdomen is not quite as elongated as *ferrugineus*, the third abdominal segment is much longer than wide.

The male is unknown, but will probably prove to be very similar to, if not indistinguishable from the male of *ferrugineus*. I have not seen any specimens of *ferrugineus* from Asia, and it is possible that such records may belong to *fusenensis*.

Material examined: China-Tibet border: Yu-Long-Gong, 14,000 ft., Aug. 14, 1930, D. C. Graham, 2 females, USNM and author's collection.

#### Genus *Thecophora* Rondani

*Thecophora* Rondani, Nuovi Aun. Sci. Nat. (Bologna), ser. 2, vol. 3, p. 15, 1845.

*Occemya* Robineau-Desvoidy, Bull. Soc. Sci. Yonne, vol. 7, p. 130, 1853.



*Thecophora atra* (Fabricius)

*Myopa atra* Fabricius, Species insectorum . . . , vol. 2, p. 469, 1781.

Each of the specimens examined differ from each other and from the typical European form. However additional material would be necessary to decide if any of these should be named.

The specimen from Siberia has more yellow on the anterior femora than the typical form, but this condition is matched by one or two specimens of a series from Cyprus in my collection.

The specimen from Yangchow has the pollen yellowish gray and the femora mainly yellowish and thus approaches *T. sauteri* of Formosa. However, it is paler than *sauteri* having the antennae and front mainly yellowish, and the wings are also yellowish. One of the two cotype males of *sauteri* sent by USNM for comparison has the abdominal pollen more grayish than yellowish.

The specimen from Szechwan has all of the femora almost entirely yellow, and the antennae are mainly yellowish.

This species has not been previously recorded from Siberia.

Material examined: Siberia: Ust Balei, July 1927, Cockerell, 1 male, USNM. Kiangsu: Yangchow, Aug. 18, 1924, C. Y. Wong, 1 male, USNM. Szechwan: Behluhdin, 6,000 ft., July 25–Sept. 1, 1936, D. C. Graham, 1 male, USNM.

*Thecophora philippinensis*, new species

Male: Length 4 mm. Vertex and front black. Narrow margin above base of antennae dark reddish. Face and facial grooves reddish-yellow. Posterior half of cheeks blackish. Occiput black. Antennae reddish-yellow, black on lateral surface and distal half of medial surface of third segment. Arista black. First segment as long as wide. Second segment four times length of first. Third segment  $2\frac{1}{2}$  times length of first. Proboscis missing beyond palpi.

Thorax black, with faint white pollinose areas leaving three indistinct black lines on dorsum. Legs black, basal two-fifths of posterior femur yellow. Base of tibiae, basal tarsi, pulvilli, and claws except black tips yellow. Wings hyaline. Calypters brownish. Halteres bright yellow, blackish at base.

Abdomen black, relatively distinct grayish yellow pollinose distal band on second, third, fourth, and fifth segments. Sixth segment indistinctly grayish yellow pollinose. Fifth sternite very prominent, resembling a theca.

Variation (in paratype): Length  $4\frac{1}{2}$  mm. No black on cheeks. Antennal proportions 1:3:2. Each of distal segments of proboscis about equal to length of head. Theca less prominent (abdomen flexed).



Types: Holotype, male, USNM 64487, Panal, Benguet, Luzon Island, Philippines, April 30, F. Rivera. Paratype: Philippines: 1 male, author's collection ex USNM, "Haight's Pl.," Benguet, Luzon Island, April 30, F. Rivera.

This species is related to *T. atra*, but is distinguished by the yellowish gray pollinose bands giving the abdomen an annulate appearance. The head is also characteristically dark, and although the legs are mainly black, the basal two-fifths of the hind femur is yellow.

*Thecophora simillima* (de Meijere) (Bijdr. tot de Dierkunde, vol. 18, afl. 17, p. 103, 1904) of Java, is described as similar to *T. atra*, but the white pollinose abdominal bands are very narrow and limited, and the second and third antennal segments are equal.

### Genus *Dalmannia* Robineau-Desvoidy

*Dalmannia* Robineau-Desvoidy, Mem. Acad. Sci. Inst. France, vol. 2, p. 248, 1830.

#### *Dalmannia affinis* Chen

*Dalmannia affinis* Chen, Notes d'entomologie chinoise, vol. 6, p. 228, 1939.

Previously known only from the type series, 2 males and 2 females from Kiangsu.

Material examined: Shantung: Tsinan, Apr. 8, 1922, A. P. Jacot, 2 females, USNM and author's collection.





Camras, Sidney. 1960. "Flies of the Family Conopidae from Eastern Asia."  
*Proceedings of the United States National Museum* 112(3432), 107–131.  
<https://doi.org/10.5479/si.00963801.3432.107>.

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