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Regina BAŃKOWSKA

Conopidae (Diptera) from North Korea

Abstract. The paper gives descriptions and faunistic data on *Conopidae* collected by the workers of the Institute of Zoology PAS during the expeditions to North Korea (1959–1990). Seven species were distinguished in the material. More of them are not noted in Korea till now. They are: *Conops nigrifrons* KRÖB., *C. strigatus* WIED., *Conops (Asiconops) hwangi* CHEN, *Physocephala robusta* ZIM. and *Neobrachycera obscuripennis* (KRÖB.).

Key words: *Conopidae (Diptera)*, North Korea, Polish expeditions.

Author's address: Muzeum i Instytut Zoologii PAN, Wilcza 64, 00-679 Warszawa, POLAND.

INTRODUCTION

Conopid are the small group of the dipterans with only 760 species known on the whole world. From the Palaearctic region there are established 172 species (CHVÁLA, SMITH 1988). They are endoparasites of bumble bees (*Apidae*, *Hymenoptera*). The life of imagines is very short, so they are rarely captured in nature. The material from the expeditions to North Korea by the Institute of Zoology PAS is rather small. But because of poor knowledge about this group of *Diptera* in the Eastern Asia including Korea, the material have to be elaborated. Conopid flies were collected by the Polish zoologists in the North Korea in the years 1959, 1965, 1987 and 1990. Location of sampling areas of Korea are presented in Fig. 1.

It was established seven Conopid species. More of them are rare, known only from the description of typical forms. The rare species are described in details and illustrated.

Great contribution to the cognition of *Conopidae* fauna of Eastern Asia is given by KRÖBER (1913, 1915, 1916a, 1916b, 1925, 1939, 1940). Many papers

of this author are actual till now. Besides there are elaboration by COGUILLET (1898) and BRUNETTI (1923). From later period there are the papers from China and Japan: CHEN (1939), ÔUCHI (1939a, 1939b), MYATAKE (1966a, 1966b) and paper by CAMRAS (1960) from Siberia and China. Many elaborations of dipterans from the family *Conopidae* in the region of Eastern Russia are gives ZIMINA: (1964, 1968, 1969, 1974, 1975, 1976). One of the last paper devoted *Conopidae* in Far East is given by MAETA and MACFARLANE (1993) from Japan.

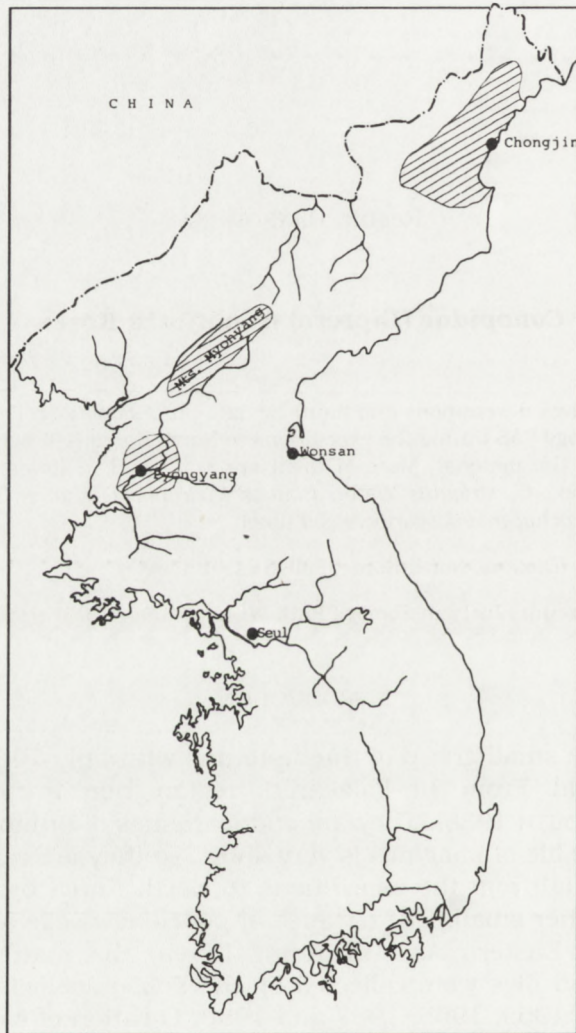


Fig 1. Location of sampling areas in North Korea in years 1959–1990.

Six species of the family *Conopidae* are known from Korea (ÔUCHI 1939a, ZIMINA 1976). Four of them: *Thecophora atra* (F.), *Myopa fasciata* MEIG., *Conops flavipes* (L.) and *Sicus ferrugineus* (L.) are rather common in the whole

Palearctic region. *Physocephala chiahensis* ÔUCHI and *Sicus fusenensis* ÔUCHI were described in North Korea for first time (ÔUCHI 1939a). *Sicus fusenensis* is now known in some European countries (CHVÁLA 1963) and in China as well as from Mongolia (SMITH 1988).

LIST OF SPECIES

Conops LINNAEUS, 1758*Conops nigrifrons* KRÖBER, 1916

Arch. Naturg., 81 A (11) (1915): 55. Type-locality: Japan.

Material examined: Korea: Onpho ad Chongjin, 21. 07. 1959, 1 male, leg. B. Pisarski.

This species was recorded from East Asia: China, Siberia (CAMRAS 1960), Sacchalín, Kuril Is. (ZIMINA 1976) and Japan (MAETA, MACFARLANE 1993).

Now it has been established also in Korea.

Vertex and frons black, face pale yellowish with shining silvery tomentum. Facial keel narrow, black and shining. Antenna long and black, reddish on ventral part of third segmente. Arista black, process of second segment indistinct. Occiput black, with silver pollinose. Proboscis brownish black.

Thorax and scutellum black, humeri reddish brown. Pleural stripe distinct and silver pollinose. Calypteres small and brownish yellow. Halteres yellow, little reddish brown at base. Wings hyaline, faintly greyish at base. Legs partly black and yellow. Coxae with distinct silver pubescent.

Abdomen mostly elongated, black with distinct wide gold pollinose band on distal part on each segments. Sixth segment with very large, gold spot at base on dorsum. Genitalia dark brown.

Length of body: 12mm.

Conops strigatus WIEDEMANN, 1824

Syst. Besch., 4:133. Type-locality: Austria.

Material examined: Korea: Myohyang Mts., 20. 08. 1987, 1 male, leg. E. Kierych.

This widely distributed species known in all Europe, Transcaucasus, also in East Siberia, Kuril Is. and Japan. In Korea no mentioned.

Conops (Asiconops) hwangi CHEN, 1939

Notes Ent. chin., 6 (10): 175. Type-locality: China.

Material examined: Korea: Myohyang Mts., near Myohyangsan, 11. 06. 1990, 2 males, leg. Ekipa IZPAN.

This species previously known only from China (CHEN 1939). New for Korea.

Front and vertex dark rufus, blackish above antennal prominence. On the front transverse grooves strong and distinct. Face yellow with distinct silvery pollinose. Lower third of facial keel dark brown, shining. This species is characterised by having distinct black spot on the face, between the antenna and on the posterior margin of the eye. Antenna long, reddish brown, First antennal segment long (Fig. 2). Second segment two times as long as first. Third segment slightly longer than first. Third segment of arista distinctly long. Proboscis long and shining brown.

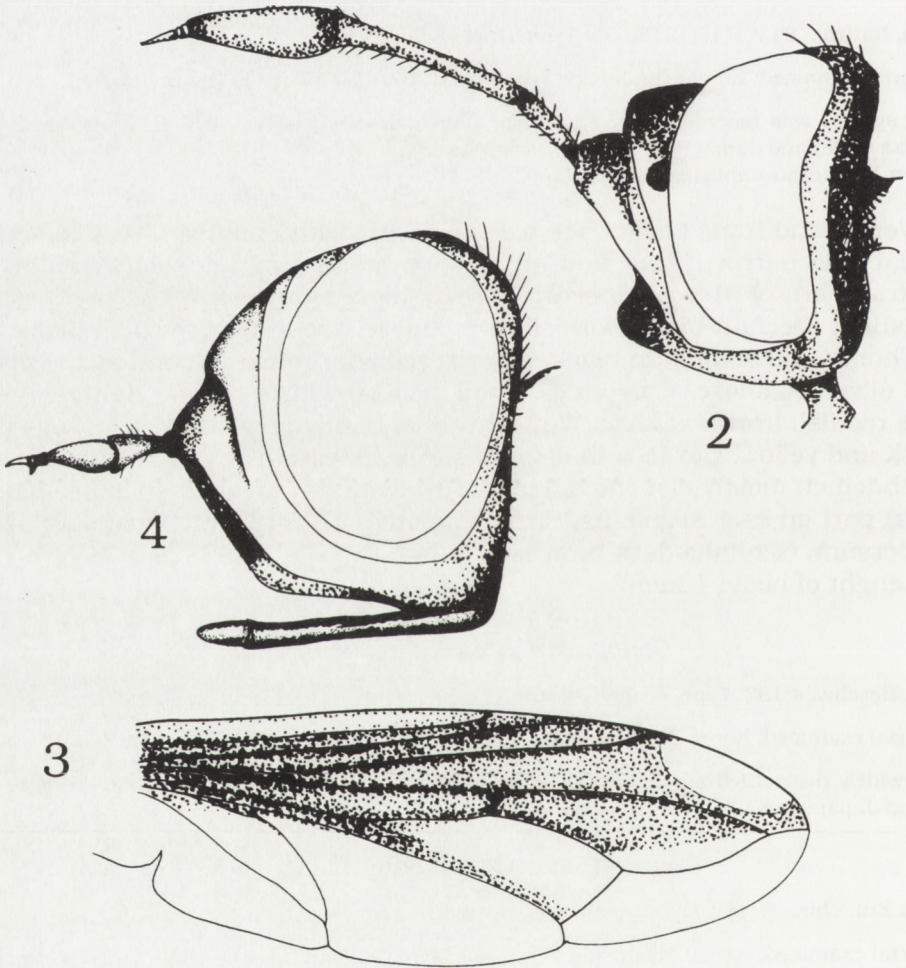


Fig. 2-4. 2 - *Conops huwangi* CHEN, head of the male, lateral view. 3 - *Physocephala robusta* ZIM., wing. 4 - *Neobrachycerea obscuripennis* (KRÖB.), head of the female, lateral view.

Thorax dark brown, dorsum black with indistinct pollinose stripes. Humeri and scutellum dark reddish brown. Pleura shining black, faintly silver pollinose. Calypteres and halteres yellow. Wings yellowish-brown. Coxae brownish black with strongly silvery pollinose. Femora black, rufous dorsally and on apical ventral part. Tibiae rufous, brownish basally. Tarsi darkened.

Abdomen slender, blackish with narrow yellow-reddish margin on segments. Dorsally all segments with gold-greish pollinose. Genitalia shining brown.

Length of body: 12–13mm

Physocephala SCHINER, 1861

Physocephala robusta ZIMINA, 1974

Zool. Zh., 53:478. Type-locality: Vladivostok (Russia).

Material examined: Korea: 20km. NE ad Chongjin, 5.06.1965, 1 female, leg. M. Mroczkowski, A. Riedel; Myohyang Mts., 11.06.1990, 1 male and 1 female, leg. Ekpa IZPAN.

Distribution: Far East of Russia (Ussurijsk Region). Species new for Korea.

Head. Vertex, occiput, frons and antennal prominence brownish yellow. Face yellow with shining brown, longitudinal keel. The checks brownish. Antennae dark red yellow, arista darkened. First segment of antennae faintly short. Second segment about three times as long as first. Third antennal segment distinctly longer as first. Arista long, second joint with a long prominence.

Proboscis long, brownish black, except its apical half a little paler.

Thorax. Mesonotum black except the scutellum, humerus at its lateral margin tinged with redish brown. The anterior part of mesonotum with stripes composed of greyish dust in its middle. Mesonotum short, black hairy. Pleurae redish brown with distinct black spots. Sternopleura and mesopleura faintly grey pubescent. Squamulae brown, halteres orange yellow. Legs brownish red with distinctly darkened femora. Coxae black with silvering pollinose.

Wings distinctly darkened on its anterior margin, brown redish. Costal cell and subcostal paler. Radial and discoidal cels are partially darkened. (Fig.3).

Abdomen red with blackish bands on all segments with faintly greyish pollinose. Second segment very long (especially in males), with silvering band on posterior part. Genitalia shining brown. Theca large, semicircular, brown.

Length of body: 18–22mm.

Neobrachycerea SZILÁDY, 1926

Neobrachycerea obscuripennis (KRÖBER, 1913)

Ent. Mitt., 2:227. Type locality: Formosa.

Material examined: Korea: Myohyang Mts., 5.08.1959, 1 female, leg.:B. Pisarski and J. Prószyński.

Distribution: Asia: Mongolia, China, Formosa, Russia (Khabarovsk Region), Malaya.

This species has not been previously recorded from Korea.

Female. Head yellow, dark brownish at occiput and ocellar tubercle. Antennal prominence and facial keel shining brown. Face yellow with silvering pollinose. Antenna short, brownish, third segment reddish yellow. Arista darkened (Fig. 4). Proboscis brownish black, nearly as long as head.

Thorax brownish black, with indistinct silver pollinose. Calypteres and halteres pal yellow. Wings brownish darkened. Legs dark brown with silvering pollinose.

Abdomen long, brownish black with a band pollinose on apical part of second segment. Theca very distinct, long and black.

Length of body 13 mm.

Sicus SCOPOLI, 1763

Sicus ferrugineus (LINNAEUS, 1761)

Fauna Svecica, Ed. 2: 468. Type-locality: Sweden.

Material examined: Korea: Myohyang Mts. near Myohyangsan. 11.06.1990, 1 male, leg. Ekipa IZPAN.

Distribution: This is one of the most widely distributed species of the family *Conopidae*. Known throughout Palaearctic Region and India. In Korea mentioned by ZIMINA (1976).

Sicus nishitapensis (MATSUMURA, 1916).

Thousand Ins. Japan., Add. 2: 272. Type-locality: Hokkaido (Japan).

Material examined: Korea: Onpho ad Chongjin, 14–21. 08. 1959, 4 femals, leg. B. Pisarski and J. Prószyński; Pyongyang, 11. 09. 1959, 1 male, Leg. B. Pisarski.

Distribution: This species was recorded from East Asia: China (CAMRAS 1960), East Siberia, Sacchalin, Kuril Isl. (ZIMINA 1976) and Korea (CHVÁLA 1963).

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STRESZCZENIE

[Tytuł: *Conopidae* (Diptera) z Korei Północnej]

W niniejszej pracy przedstawiono materiał muchówek z rodziny *Conopidae*, zebrany przez pracowników Instytutu Zoologii PAN w Warszawie, podczas kilku ekspedycji do Korei Północnej w latach 1959-1990. Wyróżniono 7 gatunków, z których 5 jest rzadko spotykanych i były dotychczas nie znane z terenu Półwyspu Koreańskiego. Sa to: *Conops nigrifrons* KRÖB., *C. strigatus* WIED., *Conops (Asiconops) hwangi* CHEN, *Physocephala robusta* ZIM., *Neobrachycerea obscuripennis* (KRÖB). Do kilku z tych gatunków podano szczegółowe opisy i zamieszczono rysunki.