



State of knowledge of the tachinid fauna of Eastern Asia, with new data from North Korea. Part III. Phasiinae. Supplement

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Abstract: Additions are made to the "State of knowledge of the tachinid fauna of Eastern Asia, with new data from North Korea. Part I. Phasiinae" (Draber-Mońko 2008). Seven species of the phasiine flies representing five genera were identified in the material. Six species are reported for the first time in the fauna of Korea. Two of them: *Calyptromyia barbata* Villeneuve, and *Parerigone tianmushana* Chao et Sun are presented in colour images. At present twenty three species of the phasiine flies are recorded from the Korean Peninsula.

Key words: Diptera, Tachinidae, supplement to Phasiinae, North Korea

INTRODUCTION

The present paper is a supplement to earlier papers on the Tachinidae collected by Polish expeditions to North Korea (Draber-Mońko 2008, 2011). In the first part of the paper on the Phasiinae (Draber-Mońko 2008) thirteen species of this subfamily were identified and most of them (10 species) had been previously unknown from the territory of Korea. Two new species are described and illustrated: *Dionaea karinae* Draber-Mońko and *Hemyda dominikae* Draber-Mońko. The first part also contains a discussion of the present state of knowledge of the Phasiinae fauna of the Far East and a rich list of relevant papers concerned with this region.

Since the first publication concerning the Korean Phasiinae (Draber-Mońko 2008), ten undetermined specimens of the phasiine flies have been found in the collections of the Museum and Institute of Zoology PAS. However, because of poor knowledge of this group of Diptera in Eastern Asia, including Korea, the material has been studied. Consequently, in spite of the fact that the material collected in North Korea by researchers from the Institute of Zoology PAS is fairly scanty, nowadays, twenty three species belonging to eleven genera of the phasiine flies are known from Korea.

MATERIAL AND METHODS

The phasiine flies were collected during six expeditions to North Korea: in 1959, 1965, 1966, 1970, 1987 and in 1990. Detailed descriptions of these expeditions are in Mroczkowski (1972) and to Bańkowska & Sterzyńska (1997). The locations of the sampling areas in North Korea are presented in Fig. 1 in the paper of Draber-Mońko (2008).

The scanty material of the Phasiinae, considered here, includes 10 specimens collected with a sweeping net. They represent seven species belonging to five genera of the phasiine flies. Six of them had been previously unknown from the Korean Peninsula. The current list was supplemented by four species mentioned by other authors (Kim 1981, 1996, Cha & Han 2009).

The systematic arrangement of the present paper follows that provided by Tschorsnig & Richter (1998) and Richter (2004), O'Hara, Shima & Zhang (2009) and Shima (2011).

SYSTEMATIC REVIEW OF SPECIES

Subfamily Phasiinae**Tribe Cylindromyiini***Cylindromyia* Meigen, 1803*Cylindromyia (Calocyptera)* Herting, 1983***Cylindromyia (Calocyptera) intermedia* (Meigen, 1824)***Ocyptera intermedia* Meigen, 1824: 212. Type locality: not given (probably Europe)*Ocyptera scalaris* Loew, 1844: 240. Type locality: Austria, Wien [= Vienna]*Ocyptera reinigi* Enderlein, 1934: 132. Type locality: Tadjikistan, Pamir, Kara-su.

Material examined: North Korea, Kangvön-do Prov., Vönsan, hill-side, 30.08.1987, 1 male, leg. J. Sawoniewicz.

Distribution: Palaearctic: Europe: Mediterranean region, northwards to Poland (warmer parts of Europe), Middle East, Transcaucasia, Uzbekistan, Tadjikistan, Iran, Mongolia, Russia: European part of Russia, S Siberia (Altai, Tuva, Chita), Russian Far East (Ussuria), China (Hebei Prov., Heilongjiang Prov., Inner Mongolia, Xinjiang Uygur Autonomous Region), Nearctic Region: widespread from North Canada to California and Texas (Herting 1983, Richter 2004, O'Hara et al 2009). First record from Korea.

Cylindromyia (Malayocyptera) Townsend, 1926***Cylindromyia (Malayocyptera) agnieszkae* Kolomyetz, 1977***Cylindromyia (Malayocyptera) agnieszkae* Kolomyetz, 1977: 53. Type locality: Russian Far East: Primorie, Ussuriysk

Material examined: North Korea, Phjōngan-pukto Prov., Hjangsan distr., Mjohjang Mts, Hjangsan, near hotel, pine scrub, 21.08.1987, 1 male, leg. J. Sawoniewicz.

Distribution: Palaearctic: Asia, Russian Far East (Primorie) (Kolomyetz 1977, Ziegler & Shima 1996, Richter 2004), N Korea, Chōngdžin-si Prov., (Kolomyetz 1977, Draber-Mońko 2008), Kesōng-si Prov. (Herting 1983).

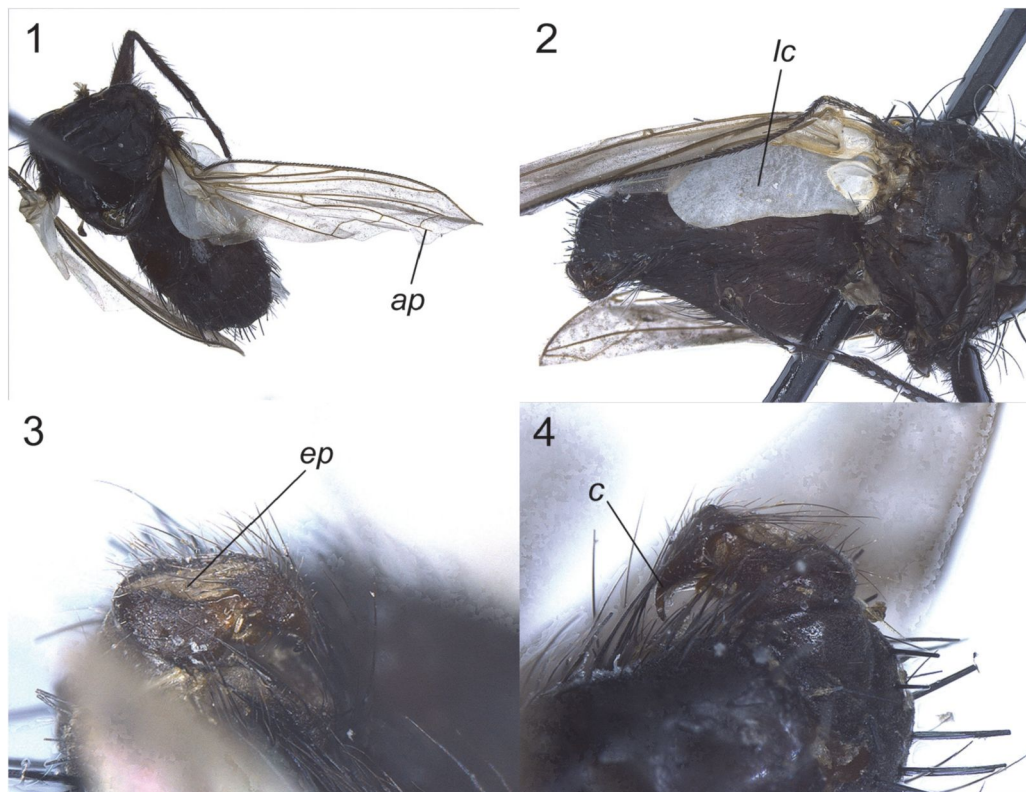
Tribe Leucostomatini*Calyptromyia* Villeneuve, 1915***Calyptromyia barbata* Villeneuve, 1915 (Figs 1–4)***Calyptromyia barbata* Villeneuve, 1915: 92. Type locality: Taiwan, Kaohsiung Hsien, Chiahsien Hsiang [as "Kosempo" (Formosa)].

Material examined: North Korea, Phjōngjang-si Prov., Phjōngjang City, Taesong-san Park, 1.09.1987, 1 male, leg. E. Kierych.

Distribution: Palaearctic: Russian Far East (S Primorie Yakovlevka 55 km ESE of Spassk-Dalniy), Japan (Honshū, Shikoku, Kyūshū, Tsushima), China Provinces: Anhui, Fujian, Zhejiang, Oriental: Taiwan, China (Hainan Prov.), Vietnam (Richter 1993, 2004, Shima 1999, O'Hara, Shima & Zhang 2009). First record from Korea.

Note: Among the specimens examined I found a male belonging to the *Calyptromyia barbata* Villeneuve, 1915 (after the Key to the insects of Russian Far East. Vol. VI. Diptera and Siphonaptera. Pt 3. pp. 148–398. Vladivostok. 2004. 124. Fam. Tachinidae. V. A. Richter: 387–388). This specimen lacked the head and therefore I am not sure of my identification. I

sent photographs of the Korean specimen to Professor Hiroshi Shima with a kind request to compare them with the Japanese specimen of *C. barbata* Villeneuve. After making the comparison Professor H. Shima stated the following: “Yes, I think your specimen is a male of *Calyptromyia barbata* Villeneuve. It exhibits the characteristic features of the strong male cerci, wing vein M_1 with an appendage at its bend, large lower calypter and black body. These correspond well with the characteristics of *C. barbata*”.



Figs 1–4. *Calyptromyia barbata* Villeneuve, male, North Korea, Phjǽngjang-si Prov., Phjǽngjang City, Taesong-san Park, 1.09.1987, 1 male, leg. E. Kierych (photo P. Ślipiński); 1 – habitus in dorsal view, *ap* – appendage of M_1 , 2 – habitus in lateral view, *lc* – lower calypter, 3 – abdomen in ventral view, *ep* – epandrium, 4 – postabdomen in back view, *c* – cerci.

Clelimyia Herting, 1981

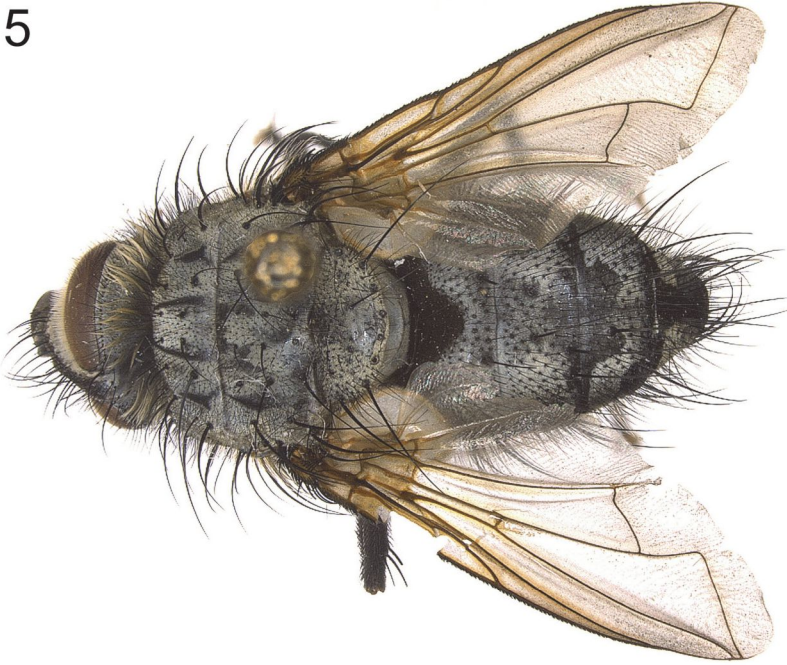
Clelimyia paradoxa Herting, 1981

Clelimyia paradoxa Herting, 1981: 15. Type locality: Japan, Minano, Saitama, Honshū.

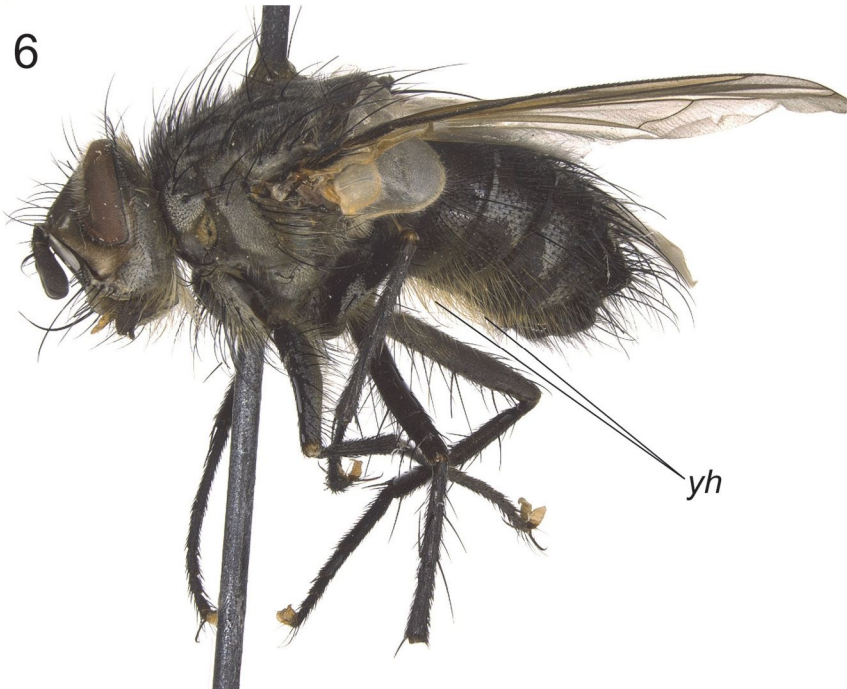
Material examined: North Korea, Phjǽnggan-pukto Prov., Hjangsan distr., Mjohjang Mts, Hjangsan, near hotel, pine scrub, 21.08.1987, 1 male, leg. J. Sawoniewicz.

Distribution: Palaearctic: Russian Far East (Amur Prov., Primorsk Territory), Japan (Honshū) (Herting 1981, 1984, Herting and Dely-Draskovits 1993, Richter 1986). First record from Korea.

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Figs 5–6. *Parerigone tianmushana* Chao et Sun, male, North Korea, Phjŏngjang-si Prov., Taesŏng-san Park, 6.06. 1990, 4 males, leg. E. Chudzicka, E. Kierych and R. Pisarska (photo P. Ślipiński); 5 – habitus in dorsal view; 6 – habitus in lateral view, *yh* – yellow hairs on ventral side.

*Dionaea Robineau-Desvoidy, 1830****Dionaea flavisquamis* Robineau-Desvoidy, 1863**

Dionaea flavisquamis Robineau-Desvoidy, 1863: 57. Type locality: France.

Dionaea aurulans: Dupuis, 1973: 373. Type locality: not given (probably France). Not Robineau-Desvoidy, 1830, misidentification.

Material examined: North Korea, Phjŏngan-pukto Prov., Hjangsan distr., Mjohjang Mts, Hjangsan, xerothermic plants on the bottom of a river, 18.08.1987, 1 female, leg. J. Sawoniewicz.

Distribution: Palaearctic: Europe: France, Germany, Swiss (Herting 1977, 1984), W Kazakhstan (Richter 2005). First record from Korea.

***Dionaea magnifrons* Herting, 1977**

Dionaea magnifrons Herting, 1977: 14. Type locality: France, Lagnes, Vaucluse.

Material examined: North Korea, Phjŏngan-pukto Prov., Hjangsan distr., Mjohjang Mts, Hjangsan, xerothermic plants on the bottom of a river, 18.08.1987, 1 male, leg. J. Sawoniewicz.

Distribution: Palaearctic: Europe: S France, Asia: Japan (Honshū, Kyūshū) (Herting 1984, Herting & Dely-Draskovits 1993). First record from Korea.

Tribe Parerigonini

Parerigone Brauer, 1898***Parerigone tianmushana* Chao et Sun, 1990 (Figs 5–6)**

Parerigone tianmushana Chao et Sun in Chao, Sun et Zhou, 1990: 231. Type locality: China, Zhejiang Prov., Tianmu Shan [as "Mt. Tianmu"]

Material examined: North Korea, Phjŏngjang-si Prov., Taesŏng-san Park, 6.06.1990, 4 males, leg. E. Chudzicka, E. Kierych and R. Pisarska.

Distribution: Palaearctic: China (Shaanxi Prov., Zhejiang Prov.) (Shima 2011). First record from Korea.

Note: Chao & Sun in their paper of 1990 on page 240 wrote: "The new species [(*Parerigone tianmushana* Chao et Sun) my addition] is closely related to *Parerigone aurea* B., but may be distinguished by the tibia in black unicolor, dorsal surface of the thorax with black hairs; in male the top of surstylus turning back ventrally and hook-shaped in lateral view". Shima published, in 2011 an important paper on the genus *Parerigone* Brauer and there in the key to the known species of *Parerigone* Brauer he provided more characteristics distinguishing *Parerigone tianmushana* Chao et Sun from the other species in this genus.

Tribe Phasiini

Phasia Latreille, 1804***Phasia albopunctata* (Baranov, 1935)**

Alophora albopunctata Baranov, 1935: 559. Type locality: Japan, Hokkaidō, Sapporo.

Distribution: Palaearctic: South Korea (Kim 1996 as *Alophora albopunctata* Baranov), Russia (West and East Siberia, Russian Far East), Japan (Hokkaidō), Oriental Region: Taiwan, Pakistan (O'Hara, Shima & Zhang 2009).

***Phasia aurigera* (Egger, 1860)**

Alophora aurigera Egger, 1860: 796. Type locality: Austria, Wien.

Distribution: Palaearctic: South Korea (Cha and Han 2009), West, East and South Europe, Russia (Southern Far East), China (Beijing Municipality Prov., Jilin Prov., Sichuan Prov.) (O'Hara, Shima & Zhang 2009).

***Phasia hemiptera* (Fabricius, 1794)**

Syrphus hemipterus Fabricius, 1794: 284. Type locality: United Kingdom, England [as "Angliae"].

Distribution: Palaearctic: South Korea (Kim 1981 as *Phasia vittata* Girschner), Europe (all), Russia (all), Transcaucasia, Japan (Hokkaidō, Honshū, Shikoku, Kyūshū), China (Beijing Municipality Prov., Heilongjiang Prov.) (O'Hara, Shima & Zhang 2009).

***Phasia takanoi* (Draber-Mońko, 1965)**

Alophora (Brumptalophora) takanoi Draber-Mońko, 1965: 147. Type locality: Russian Far East (Sudzukh).

Distribution: Palaearctic: Russian Far East, South Korea, Japan (Cha and Han 2009).

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STRESZCZENIE

[Stan wiedzy o faunie rązyc Azji Wschodniej z uwzględnieniem nowych danych z Korei Północnej. Część III. Phasiinae. Uzupełnienie]

Opracowanie stanowi kontynuację badań nad fauną rązyc Korei Północnej. Materiał został zebrany przez pracowników Instytutu Zoologii PAN w Warszawie w latach 1959–1990, podczas wypraw do Korei Północnej. Muchówki były zbierane siatką entomologiczną. Zidentyfikowano 7 gatunków Phasiinae zaliczanych do 5 rodzajów, 6 gatunków odnotowuje się tu po raz pierwszy z Półwyspu Koreańskiego. Dwa rzadko wykazywane i nowe dla fauny Korei gatunki rązyc *Calyptromyia barbata* Villeneuve, 1915 oraz *Parerigone tianmushana* Chao et Sun, 1990 przedstawiono na kolorowych fotografiach. Drugi z gatunków znany był tylko z locus typicus i jeszcze jednego miejsca w Chinach, więc stanowisko w Korei jest trzecim stwierdzeniem tego gatunku na świecie. Obecnie w faunie Półwyspu Koreańskiego znane są 23 gatunki Phasiinae zaliczane do 11 rodzajów.

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