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Volume 13

Anthomyiidae—Tachinidae

The Catalogue contains the basic taxonomic, nomenclatorial and distribution data of all species occurring in the Palaeartic Region with the fundamental morphological features for the majority of the fly groups.

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Spiders of the genus Clubiona Latreille, 1804
(Aranei, Clubionidae) of North Korea*

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Abstract. — Twenty-one species of the spider genus Clubiona belonging to 2 subgenera, 6 species groups and 3 species subgroups are reported from North Korea. The male of C. hwangheensis PAIK, 1990 and female of C. mandshurica SCHENKEL, 1953 are redescribed. A key for distinguishing 5 very close Oriental species of the pellidusa-group is provided. Additional drawings are given to separate the males of C. propinquus L. KOCH, 1879 and C. maynani OEON, 1993. With 8 figures.

INTRODUCTION

This paper continues my research on Oriental Clubiona (MIKHAILOV 1990, 1991, 1995, etc.). Generally, the spider fauna of North Korea is poorly known, only some papers, mainly based on the collections of the Hungarian Natural History Museum (Budapest), are available. Nine Clubiona species from North Korea have been mentioned in my review of the USSR fauna (MIKHAILOV 1992) with no exact localities, seven species have been described or recorded in details (MIKHAILOV 1995).

A review given herein is based upon the collections of two European museums, namely the Institute of Zoology, Polish Academy of Sciences, Warsaw (IZ), and the Hungarian Natural History Museum, Budapest (HNHM). Altogether, 21 Clubiona species are reported up-to-date from the territory of North Korea. Some necessary redescriptions are incorporated as well.

Descriptions are arranged according to a traditional pattern. The following abbreviations are accepted: Cd — cymbium, F — femur, M — metatarsus, Pt — patella, Sp1 — first part of spermatheca, Sp2 — second part of spermatheca, T — tarsus, Ti — tibia, d. — dorsally, l. — laterally, v. — ventrally. All measurements are given in mm.


* Zoological Collectings by the Hungarian Natural History Museum in Korea, No. 136.
A typical pattern of leg armature in *Clubiona* is as follows: P I-II d.1,1.2, III-IV d.1,1.3, Pr III-IV r.1,1, T1-I-II d.2,2, III-IV r.1,1.1, IV d.2,2, v.1,1.1, Mt I-II v.2, III d.2,1,2, lat.1,2, v.2,2, IV 2,1,2, lat.2,2, v.2,1,2. Only deviations are given in the descriptions.

**TAXONOMIC PART**

Subgenus *Buciona* BENNOIT, 1977 (= *Bichiona* MIKHAILOV, 1994)

*Clubiona (Buciona) jacunda* (KARSH, 1879)

Material. 1 ♀ (IZ), S Pyongan Prov., Sangmun-ri, dist. Samson, xerothermic locality, grass litter, 22.05.1965, MM. – 1 ♀ (HNM), S Pyongan Prov., Mt. Daesong-san, 12 km NE from Pyongyang, deciduous-coniferous forest, 8.08.1971, PP & SH. – 1 ♀ (IZ), N Pyongan Prov., Myohyang-san, near a stream, 5.08.1959, BP & JP. – 1 ♀ (IZ), N Hamgyong Prov., Onpho near Chonjin, 14-20.08.1959, BP & JP. – 1 ♀ (IZ), N Hamgyong Prov., Kyongju County, Sun-guopo-ri, 17.06.1990, EI.

Distribution. Russia – S Far East (continental); Japan; North & South Korea; Northeast & Central China.

Subgenus *Clubiona* s. str.

The *trivialis*-group

*Clubiona rostrata* PAIK, 1985

Material. 1 ♀ (IZ), S Pyongan Prov., Thongsong, dist. Kangso, grass & shrubs, 26.05.1965, MM & AR. – 1 ♀ (IZ), N Hamgyong Prov., Onpho near Chonjin, 14-20.08.1959, BP & JP. – 1 ♀ (IZ), N Hamgyong Prov., Onpho near Chonjin, 17.06.1990, EI.

Distribution. Russia – S Far East (both continental and island); Japan; North & South Korea; China: Zhejiang.

The *latesscens*-group

*Clubiona proszynskii* MIKHAILOV, 1995

Material. 1 ♀ (holotype, IZ), Pyongyang City, near Tomb of King Tongmen, 27.06.1990, EI. Distribution. Type locality only.

The *japonicola*-group

*Clubiona japonicola* BOSENBERG & STRAND, 1906

Material. 2 ♀ 1 ♂ (IZ), Pyongyang, shallow pond, grass, 15.09.1959, BP. – 1 ♀ (IZ), S-Hwanghae Prov., 20 km W of Haeju, rice field, 9.08.1987, HG. – 1 ♀ (HNM), N Hwanghae Prov., Lake Taesong-hoe, ca. 35 km SW of Pyongyang, coniferous-<i>Rohinia</i> forest, 4.07.1977, OD & ADD.


**North Korean Clubiona (Araneae, Clubionidae) species**

Distribution. Russia – S Far East (continental); Japan; North & South Korea; China; Taiwan; Philippines.

The *obescens*-group

*Clubiona parvaena* MIKHAILOV, 1995

Material. 1 ♂ (holotype, IZ), N Pyongan Prov., Myohyang-san, near Kumgang Cave, 10.06.1990, EI. Distribution. Type locality only.

*Clubiona kuninglesis* BOSENBERG & STRAND, 1906

Material. 1 ♀ (HNM), Pyongyang, Nam-nado island in the river Te-dong, 27.05.1970, S & SH. – 1 ♀ (IZ), N Hamgyong Prov., Sa Gun, ca. 30-40 km N of Pyongyang, river bank, 5.07.1977, OD & ADD.

Distribution. Russia – S Far East (both continental and island); Japan; North & South Korea; China.

*Clubiona wolchonongensis* PAIK, 1990

Material. 1 ♀ (HNM), Daeseong-san, 10 km NE of Pyongyang, disturbed Pinus densifolia – <i>Acer</i> sp. forest, sparse undergrowth, small ponds, 1.07.1987, OD & ADD. – 1 ♀ (IZ), N Pyongan Prov., Hyesan, Myohyang-san, river bank, 15.08.1987, HG. – 4 ♀ (IZ), Myohyang-san, valley of Hyesanwonsa River, 22.08.1987, EI. – 1 ♀ (IZ), Myohyang-san, near Kumgang Cave, 10.06.1990, EI. – 1 ♀ (IZ), Myohyang-san, near Myohyangsan Hotel, 11.06.1990, EI. – 1 ♀ (IZ), N Hamgyong Prov., Onpho near Chonjin, 14-20.08.1959, BP & JP.

Distribution. Russia – S Far East (continental); North & South Korea; China: Liaonin.

The *apporenensis*-subgroup

*Clubiona apporenensis* HAYASHI, 1986

Material. 3 ♀ ♀ (IZ), S Hamgnyong Prov., Hyangnam, sandy place with grass, 11.06.1985, MM & AR.

Distribution. Russia – S Far East (both continental and island); Japan: Hokkaido; North Korea.

*Clubiona microapporenensis* MIKHAILOV, 1990

Material. 1 ♀ (IZ), N Hamgyong Prov., Kyongju, 11.09.1966, CD & HS.

Distribution. Russia – S Far East (continental); North Korea.

The bakurovi-subgroup
*Clubiona bakurovi* MIKHAILOV, 1990

*Material.* 1 ♀ (IZ), N Hamgyong Prov., Omyong near Chonju, 14–20.08.1959, BP&JP.
*Distribution.* Russia – S Far East (both continental and island); North Korea.

The irinac-subgroup
*Clubiona irinac* MIKHAILOV, 1991

*Material.* 1 ♀ (IZ), N Hamgyong Prov., Chonjin Town, Kyowon-ri, 16.06.1990, EI.
*Distribution.* Russia – S Far East (both continental and island); North Korea; China: Jilin, Heilongjiang.

The pellidulo-group
*Clubiona mandshurica* SCHENKEL, 1953
(Figs 1–2)

*C. mandshurica* SCHENKEL, 1953: 61–63, Fig. 29a–c (♂).
*C. mandshurica* – HU 1984: 294–295, Fig. 310 (1-4) (♂?, ♀?).

*Material.* 1 ♀ (IZ), Kangwon Prov., Kunsan-city, Okyong Valley, 22.06.1990, EI. – 1 ♂ 1 ♀ (HNHM), Kangwon Prov., Kunsan-city, 3–4 km S from Hotel Kunsan, shrubs & grass, OD & ADD. – 1 ♀ (IZ), Kaesong City, cave of Pajyon Full, 30.06.1990, EI.

*Diagnosis.* The ♂ differs by a combination of the following features: the embolus somewhat attenuated, length of embolus comparable with width of bulb, very long seminal duct, and conspicuous (not propinqua-like) shape of tibial apophysis. The ♀ differs by the lower (horizontal) level of Spt2 in relation to Spt1 and atrium as well as by the sub-rounded shape of Spt2.

*Description.* Female. Total length 8.40. Carapace length 3.25, width 2.50, fulvous, Chelicerae length 1.40, chestnut-coloured. Legs straw-coloured. Leg measurements: |  | I | II | III | IV |
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<td>Pt</td>
<td>1.28</td>
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<td>1.03</td>
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<td>Mt</td>
<td>1.40</td>
<td>1.45</td>
<td>1.63</td>
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<td>T</td>
<td>0.88</td>
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<td>0.70</td>
<td>0.83</td>
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*Remarks.* The figures of the ♀ of *C. mandshurica* presented in the papers by HU (1984) and PAIK (1990) obviously belong to different species, the former rather to *C. odesanensis* PAIK, 1990, the latter to *C. zaccharoi* MIKHAILOV, 1995.

Females of five very close Oriental species of the *pellidulo*-group can be separated by the following key:

1. Copulatory openings at the (vertical) level of atria

2. Copulatory openings at the level of Spt1

3. Copulatory openings wide, their width equal to the width of copulatory tubes. Genital plate does not hanging over genital fissure
   - *C. orientalis* MIKHAILOV, 1995
   - Copulatory openings narrow, ca. twice narrower than the width of copulatory tubes. Genital plate hanging somewhat over genital fissure
     - *C. komissarovi* MIKHAILOV, 1992

4. Spt1, Spt2, and atria at the same (horizontal) level. Spt2 ovoid
   - *C. zaccharoi* MIKHAILOV, 1995
   - Spermatticae and atria at different levels. Spt1 + Spt2 lower than atria. Spt2 ovoid or sub-rounded

5. *C. mandshurica* SCHENKEL, 1953

Judging only by the drawings of the male genititalia of *C. zaccharoi* MIKHAILOV, 1991 (MIKHAILOV 1991: Figs 52–53) and *C. mandshurica* (MIKHAILOV 1995: Figs 17–19), the two species appear to be closely related. But actually *C. zaccharoi* has larger body size, differing also in the length of the embolus being larger than the bulb width, by the tibial apophysis being more flat with a top of the ventral branch of more complicated shape and attenuating.

*Diagnosis.* Japan: Honshu; North & South Korea; China: Jilin.

*Clubiona venusta* PAIK, 1985

*Material.* 1 ♀ (IZ), Kaesong City, Haeong, near Tomb of King Kongmin, 14.08.1987, EI.
*Distribution.* North & South Korea.

Abdominal length 5.00, width 3.10, greyish brown. Epigyne as in Fig. 1.

*Remarks.* The figures of the ♀ of *C. mandshurica* presented in the papers by HU (1984) and PAIK (1990) obviously belong to different species, the former rather to *C. odesanensis* PAIK, 1990, the latter to *C. zaccharoi* MIKHAILOV, 1995.

Females of five very close Oriental species of the *pellidulo*-group can be separated by the following key:

1. Copulatory openings at the (vertical) level of atria

2. Copulatory openings at the level of Spt1

3. Copulatory openings wide, their width equal to the width of copulatory tubes. Genital plate does not hanging over genital fissure

4. Copulatory openings narrow, ca. twice narrower than the width of copulatory tubes. Genital plate hanging somewhat over genital fissure

5. Spt1, Spt2, and atria at the same (horizontal) level. Spt2 ovoid

6. Spermatticae and atria at different levels. Spt1 + Spt2 lower than atria. Spt2 ovoid or sub-rounded

7. *C. orientalis* MIKHAILOV, 1995

8. *C. komissarovi* MIKHAILOV, 1992

9. *C. mandshurica* SCHENKEL, 1953

Judging only by the drawings of the male genititalia of *C. zaccharoi* MIKHAILOV, 1991 (MIKHAILOV 1991: Figs 52–53) and *C. mandshurica* (MIKHAILOV 1995: Figs 17–19), the two species appear to be closely related. But actually *C. zaccharoi* has larger body size, differing also in the length of the embolus being larger than the bulb width, by the tibial apophysis being more flat with a top of the ventral branch of more complicated shape and attenuating.

*Diagnosis.* Japan: Honshu; North & South Korea; China: Jilin.
Clubiona orientalis MIKHAILOV, 1995.

Material. 1 ♀ (holotype, IZ), Kumgang Mts, Okryn Valley, 26.08.1987, EK. − Paratype: 1 ♀ (IZ), N Hamgyong Prov., Kyongsang County, Sang-o-sari, 17.06.1990, EK.

Distribution. Type locality only.

Clubiona sopeikensis PAIK, 1990

Material. 1 ♀ (IZ), S Hamgyong Prov., Hwang-kou, distr. Hamju, ca. 15 km W of Hamgyong, young pine plantation, 12.06.1985, MM & AR.

Distribution. Russia − S Far East (both continental and island); North & South Korea.

Clubiona odesanensis PAIK, 1990

Material. 1 ♂ (HNHM), Pyongyang, Nung-ri do (island in the river Te-dong), park, grass, 14.08.1971, PP&SH. − 2 ♀ ♀ (IZ), Kaesong, near hotel, 28.06.1990, EK. − 1 ♂ ♀ (IZ), Kaesong City, near the Pagyon Falls, 30.06.1990, EK. − 1 ♂ ♀ (IZ), N Pyongyang Prov., Myohyang-san, 6.08.1959, BP&JP. − 1 ♂ (IZ), Myohyang-san, near Kumgang Cave, 10.06.1990, EK. − 2 ♂ ♀ (IZ), Myohyang-san, near Myohyangsan Hotel, 11.06.1990, EK. − 1 ♂ ♀ (IZ), N Hamgyong Prov., Kyongsong County, Sangongpo, 17.06.1990, EK. − 1 ♂ ♀ (IZ), N Hamgyong Prov., Onch'o near Chonjin, 14–20.08.1959, BP&JP.

Distribution. Russia − S Far East (continental); North & South Korea.

Clubiona komissarowi MIKHAILOV, 1992

Material. 1 ♀ (IZ), N Hamgyong Prov., Chonjin, Chonju Mu., 2.09.1987, EK.

Distribution. Russia − S Far East (island); North Korea.

Clubiona hwanghakensis PAIK, 1990
(Figs 3–4)

Material. 1 ♂ (HNHM), Mt. Daesong-san, 10 km NE of Pyongyang, disturbed Pinus densifolia − Acer sp. forest, sparse undergrowth, small ponds, 1.07.1977, OD&AD.

Diagnosis. The male is close to both obesa- and pallidula-groups differing by the characteristic shape of the tibial apophysis and medium length of thin emolus being equal to the bulb width.

Description. Male. Total length 3.75. Carapace length 1.85, width 1.25, fulvous. Chelicere length 0.85, chestnut-coloured. Legs straw-coloured. Leg armature: F I−II d.1.13, TI III d.2.2, v.1.11(I), IV d.2.2, v.1.1. Leg measurements:


Figs 1–8. Figs 1–2. Clubiona manschurica SCHENNKE, 1953, ♀. 1 = epigyne, 2 = valva. − Figs 3–4. C. hwanghakensis PAIK, 1990, left palp of ♂, 3 = ventrally, 4 = ventrolaterally. − Figs 5–6. C. propinqua L. KOCH, 1879, Egerkino, Chukotka Peninsula, Russia, right palp of ♂, 5 = ventrally, 6 = dorsally. − Figs 7–8. C. maymiana ONO, 1993, Petropavlovski, Kanchatka Peninsula, Russia, right palp of ♂, 7 = ventrally, 8 = dorsally. Scale bar 0.14 (1–4, 7–8) and 0.25 (5–6) mm

Palp as in Figs 1–2. Length of femur, patella, tibia, and cymbium are 0.53, 0.25, 0.18, and 0.60, respectively.

Abdomen length 2.00, width 1.25, grey chocolate.

Remarks. C. hwangbokesis male and C. wolchongensis female are found in the same locality, but I see no reasons to synonymize them due to enormous differences in size: ca. 2 times instead of 0.3–0.5 times traditional in the genus.

Distribution. North & South Korea.

The propinquus-subgroup
Clubiona propinquus L. Koch, 1879
(Figs 5–6)

Material. 2 ♀ ♂ (IZ), N Pyongan Prov., Myohyang-san, bank of a stream, 5.08.1959, BP&JP. – 1 ♂ (IZ), N Hamgyong Prov., Musan-n'ong, ca. 60 km N of Chonjin, leaved forest, litter, 2.06.1965, MM&AR.

Remarks. Very similar males of C. propinquus (Figs 5–6) and C. mayumiiae ONO, 1993 (Figs 7–8) can be separated by the following features: 1) total length of C. propinquus male is ca. 8.00 mm, whereas the same for C. mayumiiae male is ca. 4.50 mm, 2) the cymbium of C. propinquus is longer and thinner, 3) the embolus of C. mayumiiae is more smooth and rounded, 4) the shape of the tibial apophysis is different, especially in a dorsal view.

Distribution. Russia – Siberia E of Yenisey, Far East; North Korea.

Clubiona pseudogermanica SCHENKEL, 1936


Material. 1 ♂ (IZ), Kaesong, near Zoological Garden, 20.06.1990, ELS. – 1 ♂ (IZ), Pyongan, Mt. Moran, under stones & in litter, near feet of rocks, 19.05.1965, MM & AR. – 1 ♂ (IZ), N Hamgyong Prov., Sinchiknon, grass and under stones, near feet of rocks, 25.05.1965, MM & AR. – 1 ♂ (IZ), Pyongan, Manghung Park, 23.08.1966, CD & HS.

Distribution. Russia – S Far East (continental); Japan; Honshu; North & South Korea; China.

North Korean Clubiona (Aranzii, Clubionidae) species

The reclusa-group
Clubiona kulczynskii LESSERT, 1907

Material. 1 ♀ (HINHM), Ryanggang Prov., Chanan-Po Plateau, 24 km NW from Samjiyon along the road to Mt. P'yŏksan-san, 2000 m., Lirios-Betula forest, 24.07.1975, FP&AY.

Distribution. Boreoconitime. Central Europe (sporadic), North Europe; Russia – N-European part, Urals, all Siberia, N- (and mountainous) Far East; Japan; Hokkaido; North Korea; N-America from Alaska to Colorado and N-Canada, USA.

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