

한국응용곤충학회지

Korean J. Appl. Entomol. 57(4): 235-241 (2018) DOI: https://doi.org/10.5656/KSAE.2018.08.0.027

© The Korean Society of Applied Entomology pISSN 1225-0171, eISSN 2287-545X

Eight New Records the Genus *Teleutaea* (Hymenoptera, Ichneumonidae, Banchinae) from South Korea

Gyu-Won Kang, Jin-Kyung Choi and Jong-Wook Lee*
Department of Life Sciences, Yeungnam University, Gyeongsan 38541, Korea

한국산 나방살이뭉툭맵시벌속(벌목, 맵시벌과, 가시뭉툭맵시벌이과)의 8미기록종에 관한 보고

강규원·최진경·이종욱*

ABSTRACT: South Korean species of the genus *Teleutaea* is taxonomically studied. This genus is recorded from South Korea for the first time with eight species, *Teleutaea acarinata*, *T. brischkei*, *T. diminuta*, *T. minamikawai*, *T. mishae*, *T. nigra*, *T. orientalis* and *T. ussuriensis*. A key to eight South Korean species of *Teleutaea* and digital images are provided.

Key words: New records, Eastern Palaearctic, Taxonomy, Glyptini

조록: 본 연구결과에서는 한국산 나방살이뭉툭맵시벌속의 8미기록종을 한국에 처음 보고하며, 나방살이뭉툭맵시벌속(신칭) 역시 한국에 처음으로 기록되는 속이다. 본 논문에서는 한국산 나방살이뭉툭맵시벌속의 분류를 위한 검색표 및 미기록종들의 진단형질과 표본사진을 제공하였다.

검색어: 미기록, 동구북구, 분류, 나방뭉툭맵시벌족

Teleutaea is a moderately sized genus, comprising 19 described species from Palaearctic, Neotropic and Oriental regions. The data of the *Teleutaea* species from the neighbor countries was summarized as follow: nine species from Far East of Russia (Kuslitzky, 2007), ten from Japan (Momoi, 1978; Watanabe and Maeto 2014), 15 from continental China (Sheng et al., 1999; Sheng, 2008; Sheng and Sun, 2009, 2014), and three from Taiwan (Chiu, 1965). Until now, the genus has not known from South Korea. The species of this genus are parasitoids of lepidopterous larvae living in different kinds of hideaways, especially Tortricidae (Momoi, 1963, 1969; Minamikawa, 1969; Momoi et al., 1975; Momoi, 1978).

*Corresponding author: jwlee1@ynu.ac.kr Received July 4 2018; Revised August 6 2018

Accepted September 15 2018

They usually attack larvae or nymph and after that emerge from the pupae.

In this paper, we record the genus *Teleutaea* with eight unrecorded species to South Korean fauna for the first time. A key for identification of South Korean species of the genus is given. Furthermore, we provide lateral habitus and diagnoses of South Korean species.

Materials and Methods

Materials used in this study were collected by sweeping and Malaise trapping, after which they were deposited in the animal systematic laboratory of Yeungnam University (YNU, Gyeongsan, South Korea). Morphological terminology follows that of Townes (1969). Specimens were examined using an

AxioCam MRc5 camera attached to a stereo microscope (Zeiss SteREO Discovery. V20; Carl Zeiss, Göttingen, Germany), processed using AxioVision SE64 software (Carl Zeiss), and optimized with a Delta imaging system (i-solution, IMT i-Solution Inc. Vancouver, Canada).

Abbreviations used in this paper are as follows: **CB**, Chungcheongbuk-do; **GB**, Gyeongsangbuk-do; **GN**, Gyeongsangnam-do, **GG**, Gyeonggi-do; **GW**, Gangwon-do; **JB**, Jollabuk-do; **TL**, Type locality; **TS**, Type species; **TD**, Type depository. Abbreviations for collections are as follows: **HU**, Hokkaido University, Faculty of Agriculture, Entomological Institute, Sapporo, Japan; **MOMOI**, Kobe University, Faculty of Agriculture, Entomological Laboratory, Kobe, Japan (S. Momoi collection).; **NR**, Naturhistoriska Riksmuseet, Sektionen for Entomologi, S-10405 Stockholm, Sweden; **ZI**, Zoological Institute, Academy of Sciences, St. Petersburg, Russia.

Results

Family Ichneumonidae Latreille, 1802 맵시벌과 Subfamily Banchinae Wesmael, 1845 가시뭉툭맵시벌아과

Genus Teleutaea Förster, 1869 나방살이뭉툭맵시벌속(신칭)

Teleutaea Förster, 1869: 164. TS: *Lissonota striata* Grevengorst, 1829.

Hoplitophrys Förster, 1869: 164. TS: *Glypta brischkei* Holmgren, 1860.

Diagnosis. Frons without promontory. Apex of clypeus with notch. Upper part of occipital carina complete. Epomia strong and long; prepectal carina strongly present. Propodeum with apical carina and other carinae absent. Areolet present. Nervellus intercepted low part. 1st tergite with complete dorsolateral carina, median dorsal carina usually complete.

Key to Teleutaea species of South Korea

(Images of key character see plates of Watanabe and Maeto, 2014.)

Mesopleuron with one large ventral yellow mark ········ 2
 Mesopleuron without one large ventral yellow mark ······· 3
 Sth tergite with weak but distinct oblique groove ·······

 T. minamikawai

- 5th tergite without distinct oblique groove *T. mishae* 3. Epicnemal carina absent laterally. Median dorsal carina of 1st tergite ended near spiracle. Frons with medial longitudinal - Epicnemal carina present laterally. Median dorsal carina of 1st tergite longer. Frons with or without median longitudinal ridge. 2nd tergite usually elongate 4 4. Frons with a small but distinct lateral denticle between antennal socket and eye T. ussuriensis - Frons without a small lateral denticle between antennal socket and eye5 5. Pronotum with yellow band along its upper margin. Scutellum and subtegular ridge with yellow markings. Hind leg reddish brown to dark brown with yellow markings ... 6 - Pronotum without yellow band along its upper margin. Scutellum and subtegular ridge without yellow markings. Hind legs entirely dark brown to black ····· 7 6. Frons concave medially with weak triangular swelling and a median longitudinal ridge. Antennal socket strongly prolonged upwards on upper side. Hind coxa brown T. orientalis - Frons almost flat and simple. Antennal socket weakly prolonged upwards on upper side. Hind coxa yellow T. diminuta 7. Hind leg yellowish-brown with darkened areas, at least median part of femur yellowish-brown. Scutellum and mesopleuron relatively densely punctate in female T. brischkei

Teleutaea acarinata Kuslitzky, 1973 등매끈나방살이뭉툭맵시 벌(신칭) (Fig. 1A)

Diagnosis. Body length 12.0 mm.

Body black. Lower part of malar space orange. Ventral part of propleuron yellow. Upper part of pronotum with thick yellow line. Ventro-posterior part of pronotum with small yellow spot. Scutellum with V-shaped yellow mark. Hind coxa

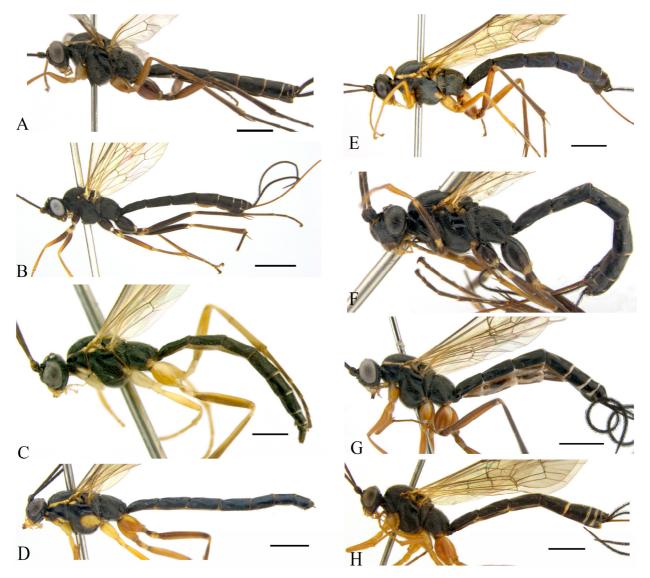


Fig. 1. Habitus in lateral view: A. *Teleutaea acarinata* Kuslitzky; B. *T. brischkei* (Holmgren); C. *T. diminuta* Momoi; D. *T. minamikawai* Momoi; E. *T. mishae* Kuslitzky; F. *T. nigra* Momoi; G. *T. orientalis* Kuslitzky; H. *T. ussuriensis* (Golovisnin). Scale bar: A, B, D, F, G, H: 2.0 mm; C, E: 1.0 mm.

brown, its dorsal part with yellow spot and laterally black line, trochanter and trochantellus black, femur brown, its basal part dark, tibia and tarsus blackish brown except for orange 5th tarsomere. Apex of 2nd-6th tergite with whitish yellow line.

Face flat, densely punctate with dense and long pubescence, its median part with sparse punctures and pubescence, 0.6 times as long as wide. Frons with median longitudinal ridge. Antennal socket prolonged and rather strongly tuberculate on upper side. Malar space about 0.7 times as long as basal mandibular width. Antenna with 46 flagellomeres. 1st flagellomere 2.0 times as long as 2nd flagellomere. Epomia strongly present. Epicnemal carina absent. Propodeum with

only waekly developed posterior transverse carina. Hind wing with 11 hamuli. 2nd tergite densely rugoso-punctate with anterior dorso-median carina at base. 2nd-4th tergites with one pair of oblique grooves. 5th tergite with weak oblique groove.

Material examined. South Korea: 1 male, CB, Jo-lyenog, 27.vii.2000, S. Cho, S.E. Nam, J.S. Lee; 1 female, GB, Yeongyang-gun, Subi-myeon, Sinam-ri, Suha valley, 3.ix.2000, J.W. Lee; 1 male, GB, Yeongyang-gun, Irwol-myeon, Mt. Irwolsan, 25.vi.2014, S.H. Oh.

Distribution. South Korea (New record), Russia (Khabarovsk Kray, Primorskye Kray)

Teleutaea brischkei (Holmgren, 1860) 백운나방살이뭉툭맵시 벌(신칭) (Fig. 1B)

Glypta brischkei Holmgren, 1860: 37. Lectotype: Q, TL: Sweden; TD: NR.

Diagnosis. Body length 10.0 mm.

Body black. Clypeus yellow with brown apical half. Mandible brown and partly yellow with dark brown mandibular teeth. Antenna brown with bright apical. Dorso-posterior tip of pronotum with yellow spot. Hind leg dark brown. Metasoma black with reddish apical segment.

Face slightly convex, 0.5 times as long as wide. Clypeus 0.7 times as long as wide. Frons strongly concave, shiny without lateral tooth adjacent to antennal socket. Antennal socket prolonged and rather strongly tuberculate on upper side. Malar space about 1.0 times as long as basal mandibular width. Inner margins of eyes parallel. Antenna filiform with 45 flagellomeres. 1st flagellomere 2.1 times as long as 2nd flagellomere. Notauli strongly developed. Pleural carina weak partly absent. Areolet with moderately short petiole. Hind wing with eight hamuli. 1st tergite slender, 1.8 times as long as apical width, its dorso-lateral carina and ventro-lateral carina complete. 2nd - 4th tergites with one pair of oblique grooves. 5th tergite without oblique groove.

Material examined. South Korea: 1 female, GB, Uljin-gun, Mt. Baekamsan, 20.vi-12.viii.1999, D. S. Ku; 2 females, GW, Wonju-si, Baegun-myeon, Mt. Baegunsan, 26.vii.2007.

Distribution. South Korea (New record), China (Henan), Japan, Russia (Altayskiy Kray, Amur Oblast, Buryatskaya Respublika, Irkutsk Oblast, Kamchatka Oblast, Sakhalin Oblast), Austria, Bulgaria, Croatia, Czech, Finland, Germany, Hungary, Italy, Latvia, Lithuania, Norway, Poland, Romania, Sweden, Ukraine, United Kingdom.

Teleutaea diminuta Momoi, 1978 작은나방살이뭉툭맵시벌(신청) (Fig. 1C)

Teleutaea diminuta Momoi, 1978: 5. Type: Q, TL: Japan; TD: MOMOI.

Teleutaea kasparyani Kuslitzky, 1979: 134. Type: Q, TL: Russia; TD: ZI.

Diagnosis. Body length 9.0 mm.

Body black. Lower part of malar space yellow. Scape and pedicel gradate brown basal to yellow apical. Lower half of propleuron yellow. Upper part of pronotum with thin yellow mark, its lower part yellow. Upper and lower hind corner of mesopleuron with yellow spot. Scutellum with V-shaped yellow mark. Porsteior postscutellum with yellow mark. Dorsal part of hind coxa bright yellow, its ventral part yellow. Hind femur and tibia brown. Metasoma brownish black. Apex of 4th-7th tergite with yellow band.

Clypeus flat with long pubescence, 0.7 times as long as wide. Antennal socket prolonged and moderately tuberculate on upper side. Malar space coriaceus as long as basal mandibular width. Antenna with 21+α flagellomeres (broken). 1st flagellomere 1.8 times as long as 2nd one. Posterior transverse carina of propodeum well developed. Hind wing with seven hamuli. 1st tergite slender, 1.6 times as long as apical width, its dorso-lateral carina and ventro-lateral carina complete, dorso-median carina present extend to more than half. 2nd-3rd tergites with one pair of oblique grooves. 4th-5th tergite with weak oblique grooves.

Material examined. South Korea: 1 male, GG, Gapyeong-gun, Ha-myeon, Sangpan-ri, Gwimokgogae, 3.ix.1999, S.M. Ryu.

Distribution. South Korea (New record), China (Heilong-jiang), Japan

Teleutaea minamikawai Momoi, 1963 잎말이나방살이뭉툭 맵시벌(신칭) (Fig. 1D)

Diagnosis. Body length 13 mm.

Body black. Upper part of pronotum with thick yellow line. Lower part of malar space yellow. Lower part of pronotum with yellow mark. Dorso-anterior part of mesopleuron with small yellow mark, its lower part with large yellow mark. Scutellum with V-shaped yellow mark. Hind coxa orange with dorsally yellow mark femur gradate brown base to orange apical tibia blackish brown, tarsus and tarsal claw black. Apex of 4th-7th tergites with yellow band (4th tergite with pale yellow).

Face flat, sparsely punctate with long pubescence, 0.6 times as long as wide. Antennal socket not prolonged (simple form).

Malar space about 0.7 times as long as basal mandibular width. Antenna with 47 flagellomeres. 1st flagellomere 1.6 times as long as 2nd flagellomere. Only posterior transverse carina of propodeum developed. Hind tarsal claw pectinate. Hind wing with ten hamuli. Dorso-median carina of 1st tergite present extend to anterior half. 2nd-5th tergites with one pair of oblique grooves.

Material examined. South Korea: 1 male, GB, Pohang-si, Buk-gu, Jukjang-myeon, Haok-ri, 14.xi.2004; 1 female, GB, Gyeongsan-si, Sajeong-dong, Mt. Seungamsan, 15.v.2015, S.J. Lee.

Distribution. South Korea (New record), Japan (Honshu, Okinawa), Russia (Khabarovsk Kray, Primorskye Kray)

Teleutaea mishae Kuslitzky, 1973 백암나방살이뭉툭맵시벌(신청)(Fig. 1E)

Teleutaea mishae Kuslitzky, 1973: 890. Type: ♀, TL: Russia, TD: ZI.

Diagnosis. Body length 12.5 mm.

Body black with yellow mark. Clypeus yellow mandible yellow with black mandibular teeth. Antenna dark brown with brown apical part. Upper part of pronotum with thick yellow band. Dorsal tip and ventro-posterior part of mesonotum with yellow spot. Mesepimeron brown. Scutellum with V-shaped yellow mark. Hind coxa brown with yellow dorsal half, trochanter, trochantellus and femur brown. Tibia, tarsus and tarsal claw dark brown.

Face convex, 0.7 times as long as wide. Clypeus 0.6 times as long as wide. Frons strongly concave, shiny without lateral tooth adjacent to antennal socket. Antennal socket prolonged and strongly tuberculate on upper side. Malar space about 0.8 times as long as basal mandibular width. Antenna filiform with 45 flagellomeres. 1st flagellomere 2.0 times as long as 2nd flagellomere. Notauli strongly developed. Pleural carina weak, partly absent. Posterior transverse carina of propodeum complete. Hind wing with nine hamuli. 1st tergite 1.5 times as long as apical width. 2nd - 4th tergites with one pair of oblique grooves. 5th tergite without oblique groove.

Material examined. South Korea: 2 females, GB, Uljin-gun, Mt. Baekamsan, 20.vi-12.viii.1999, D. S. Ku.

Distribution. South Korea (New record), Japan, Russia (Primorskye Kray; Sakhalin Oblast)

Teleutaea nigra Momoi, 1978 검정나방살이뭉툭맵시벌(신칭) (Fig. 1F)

Teleutaea nigra Momoi, 1978: 4. Type: ♀, TL: Japan; TD: MOMOI.

Diagnosis. Body length 11.0 mm. Fore wing 8.3 mm.

Body black. Middle part of clypeus yellow. Tegula and subtegular edge brownish black. All coxa brownish black. Hind trochanter and trochantellus brown with yellow mark, femur blackish brown, tibia brown and tarsus brown.

Face rather flat with shiny median small tubercle, 0.6 times as long as wide. Antennal socket prolonged and rather strongly tuberculate on upper side. Malar space about 0.8 times as long as basal mandibular width. Antenna with 45 flagellomeres. 1st flagellomere 2.5 times as long as 2nd flagellomere. Pleural carina present only basal part. Only posterior transverse carina of propedeum strongly developed. Hind wing with eight hamuli. 2nd tergite densely rugoso-punctate with anterior dorso-median carina. 2nd - 4th tergites with one pair of oblique grooves. 5th tergite with weak oblique groove. Ovipositor 0.7 as long as Metasoma.

Material examined. South Korea: 1 male, GW, Taebaek-si, Sodo-dong, Mt. Taebaeksan, 23.vii.1986, G.S. Jang.

Distribution. South Korea (New record), Japan

Teleutaea orientalis Kuslitzky, 1973 동양나방살이뭉툭맵시벌 (신칭) (Fig. 1G)

Teleutaea orientalis Kuslitzky, 1973: 890. Type: Q, TL: Russia; TD: ZI.

Diagnosis. Body length 11.0 mm.

Body black. Lower part of malar space brown. Antenna gradate dark brown base to bright brown apex. Ventral part of propleuron yellow. Upper part of pronotum with moderately thick yellow line. Ventro-porsterior part of pronotum yellow. Ventro-posterior corner of mesopleuron with yellow mark. Mesoepimeron yellow. Scutellum with V-shaped yellow mark. Prosterior part of postscutellum with yellow mark. Hind coxa orange with dorsally yellow spot, trochanter and trochantellus

brown, femur orange except for brown base, tibia, tarsus, tarsal claw brown. Apex of 2nd-3rd tergite with median white band. Apex of 4th-6th tergite with entirely whitish yellow band.

Face with median carina developed, 0.7 times as long as wide. Frons without small lateral tooth. Antennal socket prolonged and rather strongly tuberculate on upper side. Malar space about 0.7 times as long as basal mandibular width. Antenna with 47 flagellomeres. 1st flagellomere 1.3 times as long as 2nd flagellomere. Pleural carina weak. Propodeum in dorsal view densely regularly punctate. Posterior transverse carina of propodeum weakly developed. All tarsal claws pectinate. Areolet rather large with moderately long petiole. Hind wing with nine hamuli. 2nd tergite densely rugosopunctate with anterior dorso-median carina. 2nd- 4th tergites with one pair of oblique grooves. 5th tergite with weak oblique groove.

Material examined. South Korea: 1 female, GG, Yangpyeong-gun, Yongmun-myeon, Sinjeom-ri 625 Mt. Yongmunsan, 5.-18.ix.2009, J.O. Lim; 1 female, GW, Sokcho-si, Seorakdong, Mt Seoraksan, Gongnyongneungseon, 18.viii.1987; 1 female, JB, Namwon-si, Juchen-myeon, Guryong valley, 30.ix.2011-2.i.2012, J.C. Jeong.

Distribution. South Korea (New record), China (Liaoning), Japan, Russia (Khabarovsk Kray, Primorye Kray),

Teleutaea ussuriensis (Golovisnin, 1928) 우수리나방살이뭉툭 맵시벌(신칭) (Fig. 1H)

Hoplitophrys brischkei japonicus Uchida, 1928: 69. Type: \mathbb{Q} , TL: Russia; TD: HU.

Diagnosis. Body length 12.0 mm.

Body black. Lower part of malar space yellow. Antenna yellowish brown. Ventral part of scape and pedicel yellow. Propleuron brown. Ventro-posterior margin of mesoepimeron yellow. Scutellum black with V-shaped yellow mark. Hind coxa brownish yellow, trochanter and trochantellus whitish yellow, femur and tarsus blackish yellow. Apex of 4th-7th tergites with white band. Face 0.7 times as long as wide. Frons

strongly concave, shiny with small lateral tooth adjacent to antennal socket. Antennal socket prolonged and rather strongly tuberculate on upper side.

Malar space about 0.5 times as long as basal mandibular width. Antenna with 47 flagellomeres. 1st flagellomere 1.6 times as long as 2nd flagellomere. Pleural carina weak. Only posterior transverse carina of propodeum developed. Areolet with moderately long petiole. Hind wing with 11 hamuli. 2nd tergite densely rugoso-punctate with anterior dorso-median carina. 2nd to 4th tergites with one pair of oblique grooves. 5th tergite with weak oblique groove.

Material examined. South Korea: 1 male, GW, Taebaek-si, Sodo-dong, Mt. Taebaeksan, 23.vii.1986, G.S. Jang; 1 female, GN, Goseong-gun Hyangrobong, 27.ix.1972. Japan: 1 male, Hokkaido, Jozankei, 30.vi.2009, J.W. Lee; 1 female, Sapporo, 13.ix.1924, T. Uchida.

Distribution. South Korea (New record), China (Liaoning), Japan, Russia (Khabarovsk Kray, Primorye Kray, Sakhalin Oblast)

Acknowledgements

We are grateful to Prof. Ohara of Hokkaido University (Japan) for permission of examination of ichneumonid specimens and to Prof. Yanko Kolarov (Bulgaria) for providing useful taxonomic comments. We also thank the anonymous reviewer for editing this manuscript. This work was supported by a grant from the National Institute of Biological Resources (NIBR), funded by the Ministry of Environment (MOE) of the Republic of Korea (NIBR201801201).

Literature Cited

Chiu, S.C., 1965. The Taiwan Glyptini, subfamily Banchinae (Hymenoptera: Ichneumonidae). Quart. J. Taiwan Mus. 18, 203-217.

Forster, A., 1869. Synopsis der Familien und Gattungen der Ichneumonen. Verh. Naturhist. Ver. Preuss. Rheinl. Westf. 25, 135-221.

Golovisnin, D. D., 1928. Zur Ichneumonidenfauna des Süd-Ussuri-Gebietes. Pimplinae und Ophioninae. Izv. Otd. Prikl. Entomol. 3, 225-228.

Gravenhorst, J.L.C., 1829. Ichneumonologia Europaea. Pars III. Vratislaviae, 1097 pp.

- Holmgren, A.E., 1860. Försök till uppställning och beskrifning af Sveriges Ichneumonider. Tredje Serien. Fam. Pimplariae. (Monographia Pimplariarum Sueciae). K. Sven. Vetenskapsakad. Handl. (B) 3, 1-76.
- Kuslitzky, W.S., 1973. Ichneumon-flies of the genera *Teleutaea* Foerst., *Cephaloglypta* Obrt. and *Zygoglypta* Mom. (Hymenoptera, Ichneumonidae) in the Soviet fauna. Entomol. Obozr. 52, 886-898 [Entomol. Rev. 53, 569-577.].
- Kuslitzky, W.S., 1979. *Teleutaea kasparyani* sp.n. a new Ichneumonidae species (Hymenoptera) from the Far East. Tr. Vses. Entomol. O-va. 61, 134-135. (in Russian)
- Kuslitzky, W.S., 2007. Banchinae (in Russian), in: Lelej, A.S. (Ed.), Key to the Insects of Russia Far East. Vol. IV. Neuropteroidea, Mecoptera, Hymenoptera. Pt 5. Vladivostok: Dalnauka, 1052 pp.
- Latreille, P.A., 1802. Histoire naturelle, générale et particulière, des Crustacés et des Insectes. Tome troisième. Paris, 468 pp (Ichneumonidae pp. 318-327).
- Minamikawa, J., 1969. Host records of Ichneumonidae (Hymenoptera). Kontyu 37, 220-232.
- Momoi, S., 1963. Revision of the Ichneumon-flies of the tribe Glyptini occurring in Japan (Hymenoptera: Ichneumonidae). Notes on *Lycorina ornata* Uchida and Momoi, 1959. Insecta Matsumurana 25, 98-117.
- Momoi, S., 1969. New host records of Ichneumonidae (Hymenoptera). Kontyu 37, 55.
- Momoi, S., 1978. New and little known Glyptini from Japan (Hymenoptera: Ichneumonidae). Akitu 15, 1-14.
- Momoi, S., Sugawara, H., Honma, K., 1975. Ichneumonid and

- Braconid parasites of Lepidopterous leaf-rollers of economic importance in horticulture and tea-culture, in: Yasumatsu, K., Mori, H. (Eds.), Approaches to biological control. 7, 47-60.
- Sheng, M.L., 2008. Species of the genus Teleutaea Forster (Hymenoptera, Ichneumonidae) in China. Acta Zootaxon. Sin. 33, 164-169. (in Chinese with English summary)
- Sheng, M.L., Sun, S.P., 2009. Insect fauna of Henan, Hymenoptera: Ichneumonidae. Science Press, Beijing, China, 340 pp. (in Chinese with English summary)
- Sheng, M.L., Sun, S.P., 2014. Ichneumonid Fauna of Liaoning. Science Press, Beijing, 464 pp. (in Chinese with English abstract)
- Sheng, M.L., Sun, S.P., Pei, H.C., Shang, Z.H., Shen, F.Y., Huang, W.Z., 1999. Hymenoptera: Ichneumonidae, in: Shen, X.C., Pei, H.C. (Eds.), The fauna and taxonomy of insects in Henan. Vol. 4. Insects of the Mountains Funiu and Dabie Regions. China Agricultural Scientech Press, pp. 373-379. (in Chinese with English summary)
- Townes, H.K., 1969. The genera of Ichneumonidae, Part 1. Memoirs of the American Entomological Institute. No.11, 300 pp.
- Uchida, T., 1928. Dritter Beitrag zur Ichneumoniden-Fauna Japans. Journal of the Faculty of Agriculture, Hokkaido University, No. 25, 115 pp.
- Watanabe, K., Maeto, K., 2014. Revision of the Genus *Teleutaea* Förster, 1869 from Japan (Hymenoptera: Ichneumonidae: Banchinae). Jpn. J. Syst. Entomol. 20, 27-41.
- Wesmael, C., 1845. Tentamen dispositionis methodicae. Ichneumonum Belgii. Nouveaux Mémoires de l'Académie Royale des Sciences, des Lettres et Beaux-Arts de Belgique, No. 18, 239 pp.