Six Species of the Tribe Ichneumonini (Hymenoptera: Ichneumonidae) New to Korea

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ABSTRACT

Six Ichneumonini species, Barichneumon constrictus (Uchida, 1956), Ctenichneumon albomaculatus (Uchida, 1956), Diphyus salicatorius (Gravenhorst, 1820), Ichneumon ohtaniensis Uchida, 1926, Ichneumon kuroishiensis (Uchida, 1929) and Stenichneumon odaiensis Uchida, 1932, are reported for the first time in Korea. Photographs and redescriptions are provided.

Key words: Barichneumon, Ctenichneumon, Diphyus, Ichneumon, Stenichneumon, newly recorded species

INTRODUCTION

The Ichneumonini laterille, 1802 (=Joppini of Townes et al. (1961, 1965)) is the largest tribe of subfamily Ichneumoninae, and contains 2,710 species in 214 genera worldwide (Yu et al., 2005). The species of the tribe Ichneumonini are all internal parasitoids of Lepidoptera, Coleoptera, and Hymenoptera.

This tribe is similar to the tribe Heresiarchini and the tribe Trogini, but distinguished by forms of propodeum: The Ichneumonini have distinct dorsoposterior faces in propodeum, the Heresiarchini (=Protichneumonini of Heinrich) have the abbreviated and evenly convex propodeum, and the Trogini (=Callajoppini of Heinrich) have the steeply sloping propodeum (Heinrich, 1934).

The taxonomic study of the Korean Ichneumonini was initiated by Uchida (1926) who reported eight Korean species. Thereafter, two authors, Uchida (1929, 1930, 1935, 1939, 1955) and Townes et al. (1965) added 47 species of Korean Ichneumonini. Kim (1955) and Kusigemati (1988) newly included three species in Korean fauna. Most recently, Yu et al. (2005) listed 61 species of the tribe Ichneumonini from Korea, and Jeong and his coworker (2007, 2008a, b) added seven species. Therefore, we confirmed 65 Korean species under 28 genera.

In this study, we report six species of the tribe Ichneumonini new to Korean. We also provide photographs and redescriptions.
TAXONOMIC ACCOUNTS

Family Ichneumonidae Latreille, 1802
Subfamily Ichneumoninae Latreille, 1802
Tribe Ichneumonini Latreille, 1802

Genus Barichneumon Thomson, 1893
Barichneumon Thomson, 1893: 1959. Type Species: Ichneu-
mon anator Fabricius, 1793.

Melanichneumon (Melanichneumon) constrictus (Uchida, 1956) (Fig. 1)

Material examined. [YNUE] KOREA: Gyonggi-do, Ga-
pyeong-gun, Hwaaksan, 05 Sep. 1998 (Y.T. Quan), 1 ♀; Gyeongsangbuk-do, Pohang-si, Cheongha, Yuye, 12 Jun.
2004 (M.G. Baek), 1 ♀; Gyeongju-si, Sanseok-myeon, Dan-
seoksan, Sinseon temple in Gyeongju National Park, 28 Aug.
2008 (J.C. Jeong), 1 ♀; [SEHU] JAPAN: Sasayama, 05 Sep.
1954 (K. Iwata), 1 ♀ 1*; [SEHU] JAPAN: Sasayama, 05 Sep.
1954 (K. Iwata), 1 ♀ (Holotype of Melanichneumon (Mela-
ichneumon) constrictus Uchida, 1956).

Remarks. This species is distinguished from the other spe-
cies of this genus by yellow lateral area of scutellum and
apicolateral marks of tergites 1-2.

Redescription. Female. Body length 11 mm. Forewing length 7 mm.

Color. Body ground plan color black. Flagella with a me-
dian white band. Following characters light yellow: inner margin of eye, maxillary and labial palp, labrum, pronotal
flange, dorsal margin of pronotum, subalar prominence, lat-
eral area of scutellum, postscutellum, apicolateral marks of
tergites 1-2, apicomedian marks of tergites 6-7 and median
area of sternites 2-4. Fore and mid legs dark brown except
ventral area of fore and mid femora; fore tibiae and tarsus
light brown.

Flagella. Flagella with 41 segments, lanceolate; third flag-
gellomere about 2.5X as long as wide, central flagellomeres
quadrate.

Head (Fig. 1C). Vertex with posterior section steeply de-
clivous behind ocelli, as long as ocellar area. Genae convex,
evenly receding behind eye in dorsal view, 0.5X as wide as
eye in lateral view. Juncture of hypostomal and occipital
carina separated from mandibular base by about 0.2X basal
mandibular width. Occipital carina more or less complete,
and dorsal and ventral regions with same height; occipital
notch absent. Distance between median and lateral ocellus
0.6X as long as diameter of median ocellus, area between
lateral ocellus and eye sparsely punctated. Ocellar area
weakly convex, supra-antennal area simple. Distance be-
tween eye and antennal socket narrower than distance be-
tween antennal sockets. Eye large, inner margin weakly con-
cave opposite antennal socket, surface glabrous. Supra-cly-
peal area weakly convex, with a weak median swelling.
Clypeus flat, entire, transverse, uniformly thick, about 2.5X
as wide as long, with evenly distributed punctures. Apical
margin of clypeus simple, without a median apical tubercle,
apicolateral margin forming an angle of approximately 40º.
Malar space with subocular sulcus, 0.6X as long as basal
mandibular width. Mandible slender and very strongly
tapered so apex is needle-like; dorsal tooth conspicuously
longer and broader than ventral tooth; axis of mandible
twisted about 90º, so the ventral tooth is not visible when
mandibles closed. Maxillary palp with five segments, and
labial palp with four segments.

Mesosoma. Pronotum in profile moderately long, 0.8X as
long as high; pronotal flange low; epomiae complete, for-
ing a weak ridge shaped. Mesoscutum coarsely and close-
yly punctate, centrally glabrous; notauli distinct. Scutellum
moderately convex; lateral longitudinal carinae more or less
complete to center. Mesopleura simple; epicnemial carinae
complete, turned anteriorly to touch anterior mesopleural
margin; mesopleural sulcus more or less straight. Postscu-
tellum evenly convex, axillary trough of metanotum with
low or reduced longitudinal ridge. Propodeum elongated,
without apophyses; propodeal spiracles elongate elliptical,
more than 4.0X as long as wide (Fig. 1E). Areola wider
apically than basally, well-defined by carinae (Fig. 1D). All
propodeal carinae complete. First lateral area of propodeum
with uniformly distributed punctures. Metapleurum with con-
fluent punctures, rugae absent; pleural and juxtacoxal cari-
nae complete.

Legs. Fore femora with weak longitudinal concavity; fore
tibiae simple; fore tarsomere 2 elongate and slender, 3.5X
as long as broad; fore tarsomere 3 elongate and slender,
2.5X as long as broad; fore tarsomere 4 short, subquadrate
to transverse, 1.2X as long as broad; fore tarsomere 5
slender, of similar thickness to other tarsomeres. Hind co-
xae elongate and slender, 1.5X as long as high, without sco-
pa; hind tibial spurs long and slender, normal dimensions,
pointed apically; apex of tarsal claw simply pointed.

Wing. 2 m-cu of fore wing with two bullae separated by
an absissa of the vein that is longer than either bulla; Cell

*네점무늬맵시벌
1+2Rs (areolet) anteriorly truncate, vein 2Rs as long as vein 3r-m, vein 2m-cu interception at midpoint of posterior margin. Hind wing with M+Cu only curved proximally, distal abscissa of Cu tubular, vein 2-CU 3.5X as long as vein CU-a.

Metasoma. Postpetiole without distinct median field, with fine and dense punctures, no trace of rugae. Gastrocoeli 0.7X as broad as distance between them, and with distinctly impressed thyridium (Fig. 1F). Second tergite as long as width of its apex, third tergite nearly 0.6X as long as width of its apex. Tergites 2-4 without longitudinal rugae, with coarsely punctate. Sternites 2-5 divided. Hypopygium short, exposing most of ovipositor (oxypygous). Ovipositor sheath centrally with short hairs, the longest hairs being shorter than the breadth of the ovipositor sheath.

Male. Unknown.

Distribution. Korea, Japan.

Genus Ctenichneumon Thomson, 1894
Ctenichneumon Thomson, 1894: 2082. Type Species: Ichneumon funereus Geoffroy, 1785.

1*Ctenichneumon albomaculatus (Uchida, 1956) (Fig. 2)
Naenaria (Neonaenaria) albomaculata Uchida, 1956: 59.

Type: female; Type Locality: Hyogo, Japan; Type Depository: SEHU.

Material examined. [YNUE] KOREA: Chungcheongbuk-do, Weolaksan, 21-23 Jul. 2000 (S. Cho & H.Y. Kim) 1♀; Gyeongsangnam-do, Miryang-si, Cheonhwangsan, Sajapyeong, 25 Jun. 1997 (J.W. Lee), 1♂; GN, Jirisan, Baemsagol, 11 Jun.-08 Jul. 2001 (J.W. Lee), 1♂; Jeollanam-do, Jangseong-gun, Bukha-myeon, Sajabong, 21 Jun. 2005 (J.W. Lee), 1♂; 20 Jul. 2005 (J.W. Lee), 1♂; Jeongeup-si, Tamba, Sasayama, 14 Jun. 1955 (K. Iwata), 1♀; [SEHU] JAPAN: Honshu, Tamba, Sasayama, 14 Jun. 1955 (K. Iwata), 1♀ (Holotype of Naenaria (Neonaenaria) albomaculata Uchida, 1956).

Diagnosis. This species is distinguished from the other species of this genus by long and slender body, metallic blue body color, many marks and long gatrocoeli.

Redescription. Female. Body length 22 mm. Forewing length 13 mm.

Color. Body ground plan color metallic blue. Flagella...
black, with a median white band. Following characters yellow: supra-antennal orbit, supra-clypeal area and lateral parts of clypeus, ventral area of genae, maxillary and labial palp, pronotal flange, dorsal margin of pronotum, subalar prominence, scutellum, apicoventral marks of mesopleura, apicolateral marks of propodeum, fore coxae, trochanters, ventral surface of femora and tibiae, subbasal band of tibiae, tarsus, dorsal marks of hind coxae, basal area of tibiae, tarsus except black apex, apical margin of postpetiolar, apicolateral marks of tergites 2-3 and apical margin of sternites 3-6. Median part of clypeus metallic blue. Apex of mandible and stigma dark brown. Wing light brown.

Flagella. Flagella with 44 segments, lanceolate; third flagellomere about 2.5X as long as wide; central flagellomeres transverse, wider than its length.

Head (Fig. 2C, D). Vertex with posterior section steeply declivous behind ocelli, as long as ocellar area. Genae convex, evenly receding behind eye in dorsal view, 0.8X as wide as eye in lateral view. Juncture of hypostomal and occipital carinae separated from mandibular base by 0.8X basal mandibular width. Occipital carina complete, dorsal and ventral regions with same height. Distance between median and lateral ocellus 0.5X as long as diameter of median ocellus, area between lateral ocellus and eye sparsely punctate. Ocellar area weakly convex, supra-antennal area mediately simple. Distance between eye and antennal socket narrower than distance between antennal sockets. Eye moderately large; inner margin weakly concave opposite antennal socket; surface glabrous. Supra-clypeal area simply convex, with a weak median swelling. Clypeus flat, entire, simply transverse, uniformly thick, about 2.0X as wide as long, with evenly distributed punctures; apical margin simple, without a median apical tubercle, apicolateral margin forming an angle of approximately 90°. Malar space with subocular sulcus, moderately long, 0.8X basal mandibular width. Mandible moderately large, weakly and evenly tapered; dorsal tooth conspicuously the longer, the ventral tooth small, conspicuously broader than the ventral tooth; axis of

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**Fig. 2. Ctenichneumon albomaculatus** (Uchida, 1956). A, Body in dorsal view; B, Body in lateral view; C, D, Head : C, in frontal view; D, in dorsal view; E, Spiracle of propodeum; F, Areola; G, Gastrocoeli; H, Hypopygyum. Scale bars=2.0 mm (A, B), 0.5 mm (C-H).
mandible weakly twisted 40°. Maxillary palp with five segments, and labial palp with four segments.

Mesosoma. Pronotum in profile moderately long, 0.8X as long as deep; pronotal flange low; epomiae complete, forming a weak ridge shaped. Mesoscutum finely punctate, centrally evenly pubescent, notauli distinct basally. Scutellum weakly convex; lateral longitudinal carinae absent. Mesopleura simple; epicnemial carinae complete, turned anteriorly to touch anterior mesopleural margin; mesopleural sulcus more or less straight. Postscutellum evenly convex, axillary to touch anterior mesopleural margin; mesopleural sulcus medially rounded, without a long lobe. Genital clasper large, ventral apical corner more pointed than dorsal apical corner.

Distribution. Korea, Japan.

Genus Diphyus Kriechbaumer, 1890
Diphyus Kriechbaumer, 1890: 184. Type species: Diphyus tricolor Kriechbaumer, 1890.

1*Diphyus salicatorius (Gravenhorst, 1820) (Fig. 3)
Ichneumon salicatorius Gravenhorst, 1820: 295. Lectotype: female; Type Locality: Poland; Type Depository: IZUP.
Ichneumon cinctorius Stephens, 1835. Homonym of Ichneumon cinctorius Fabricius, 1775.
Amblyteles indocilis Wesmael, 1845: 126. Lectotype: female; Type Locality: Belgium; Type Depository: IRSNB. Synonymized by Horstmann (1998).
Spilichneumon unipunctatus Uchida, 1926: 131. Lectotype: female; Type Locality: Sapporo, Japan; Type Depository: SEHU. Synonymized by Townes et al. (1965).
Amblyteles inacculus Pic, 1927: 2. Lectotype: male; Type Locality: France; Type Depository: BFIC. Synonymized by Hilpert et al. (1993).
Amblyteles inacculus var. nigrobinotatus Pic, 1927: 58. Type: male; Type Locality: France; Type Depository: BFIC. Synonymized by Hilpert et al. (1993).
Amblyteles indocilis: Meyer, 1933: 340.
Spilichneumon indocilis f. unipunctatus Uchida, 1936: 141.
Diphyus indocilis: Townes, Momoi & Townes, 1965: 490.
Yu and Horstmann, 1997: 570.
Diphyus salicatorius: Horstmann, 1998: 6.

Material examined. [YNUE] KOREA: Seoul, Dobongsan, 06 Nov. 1982 (M.O. Ju), 1♀; Gangwon-do, Taebaeksan, 18 Jun. 1983 (S.M. Lee), 1♀; Gyeongbukbuk-do, Gyeongsan, Yeungnam Univ., 19 Mar. 1990 (B.S. Jeong), 1♀; FINLAND: Fennia, Espoo, 16 Oct. 1977 (O. Ranin), 1♀.

Diagnosis. The female of this species is distinguished from the other species of this genus by amblypygous abdomen, weak gastrocoeli and a mark of last tergite.

Redescription. Female. Body length 17 mm. Forewing longer than vein 3RS of female. Vein 2-CU of hindwing 3.0X as long as vein CU-a.

Metasoma. Apex of aedeagus subcylindrical. Subgenital plate medially rounded, without a long lobe. Genital clasper large, ventral apical corner more pointed than dorsal apical corner.
and all tibiae with black apex. Tarsus brown. Wings light brown, stigma brown. Last tergite with apicomedian mark. Sternite 2 brown.

Flagella. Flagella with 46 segments, lanceolate. Third flagellomere about 2.0X as long as wide, central flagellomeres quadrate.

Head (Fig. 3C, D). Vertex with posterior section steeply declivous behind ocelli, surface with transverse rugae, 1.2X as long as ocellar area. Genae convex, evenly receding behind eye in dorsal view, 1.5X as wide as eye in lateral view. Juncure of hypostomal and occipital carinae separated from mandibular base by about 0.5X basal mandibular width. Distance between median and lateral ocellus 0.5X as long as diameter of median ocellus, area between lateral ocellus and eye sparsely punctate. Ocellar area weakly convex. Supra-antennal area with transverse rugae, without denticle or ridge. Distance between eye and antennal socket narrower than distance between antennal sockets. Eye moderately large; inner margin weakly concave opposite antennal socket. Supra-clypeal area simply convex, with a weak median swelling. Clypeus flat, entire, simply transverse, uniformly thick. about 2.0X as wide as long; punctures sparsely and irregularly distributed; apical margin simple, without a median apical tubercle, apicolateral margin forming an angle of approximately 40°. Malar space with subocular sulcus, moderately long, as long as basal mandibular width. Mandible moderately large, weakly and evenly tapered; dorsal tooth conspicuously the longer, conspicuously broader than the ventral tooth; axis of mandible weakly twisted 20°. Maxillary palp with five segments, and labial palp with four segments.

Mesosoma. Pronotum in profile moderately long, 0.8X as long as deep; pronotal flange low; epomiae complete, forming a weak ridge shaped. Mesoscutum with more or less contiguous punctures, centrally evenly pubescent; notaui only basally distinct. Scutellum flat; lateral longitudinal carinae only discernible on extreme anterior end. Mesopleura simple. Epicnemial carinae complete, turned anteriorly to touch anterior mesopleural margin; mesopleural sulcus more or less straight. Postscutellum sharply rounded and strongly declivous posteriorly, axillary trough of metanotum with low or reduced longitudinal ridge. Propodeum
Ichneumon Linnaeus, 1758: 560. Type Species: Ichneumon kuroishiensis (Uchida, 1929) (Fig. 4)

Ichneumon kuroishiensis Uchida, 1929: 174. Lectotype: female; Type Locality: Kuroishi, Japan; Type Depository: SEHU.

Pterocormus kuroishiensis: Townes, Momoi and Townes, 1965: 470.

Ichneumon kuroishiensis: Yu and Horstmann, 1997: 604.

Material examined. [YNUE] KOREA: Gangwon-do, Seoraksan, Socheongbong, 19 Aug. 1987 (J.W. Lee), 2♂; Gyeongsangbuk-do, Sobaksan, Huibangsa, 24 Jul. 1974 (C.H. Kim), 1♂; Sobaksan, Huibangsa-Birobong, 30 Jul. 1987 (H.G. Kim), 1♂; Sobaksan, 23 Jun. 1971 (S.M. Lee), 1♂; Jeju-do, Hanrasan, Baekokdam, 31 Jul. 1972 (J.I. Kim), 1♀; [SEHU] JAPAN: Honshu, Kuroishi, 05 Aug. 1927 (T. Uchida), 1♂.

Diagnosis. This species is distinguished from the other species of this genus by orange fore- and mid legs, yellowish dorsal area of hind coxae, quadrate areola and yellow postpetiole.

Redescription. Female. Body length 17 mm. Forewing length 12 mm.

Color. Body ground plan color black. Flagella without a median white band, basal segments (1-13) yellowish brown. Margin of eye, median area of supra-clypeal area, clypeus, mandible except black apex, malar space, and maxillary and labial palp brown. Pronotal flange, dorsal margin of pronotum, scutellum, and postscutellum yellow. Legs yellowish brown; ventral area of fore trochanters and all femora black; ventral area of mid and hind coxae black. Wings and stigma yellowish brown. Apicocentral area of tergites 1-3 yellow; tergites 6-7 with yellowish apical margin.

Flagella. Flagellum lanceolate, third flagellomere about 1.5X as long as wide; central flagellomeres quadrate.

Head (Fig. 4C, D). Vertex with posterior section weakly and evenly rounded down to occipital carina, 1.8X as long as ocular area. Genae swollen, bulging out behind eye in dorsal view, 1.8X as wide as eye in lateral view. Juncture of hypostomal and occipital carinae separated from mandibular base by 0.7X basal mandibular width. Occipital carina more or less complete. Distance between median and lateral ocellus as long as diameter of median ocellus, area between lateral ocellus and eye coarsely punctate. Ocellar area weakly convex, supra-antennal area simple. Distance between eye and antennal socket as long as distance between antennal sockets. Eye small; inner margin of eye weakly concave opposite antennal socket. Supra-clypeal area simply convex, with a weak median swelling. Clypeus flat, entire, simply transverse, uniformly thick, about 2.5X as wide as long,
with sparse and irregular punctures; apical margin simple, median area weakly convex, apicolateral margin forming an angle of approximately 40°. Malar space with subocular sulcus, moderately long, 0.8X basal mandibular width. Mandible moderately large, weakly and evenly tapered; dorsal tooth conspicuously longer and broader than the ventral tooth; axis of mandible weakly twisted 40°. Maxillary palp with five segments, and labial palp with four segments.

Mesosoma. Pronotum in profile moderately long, 0.8X as long as deep; pronotal flange high and with posterior face concave; epomiae complete, forming a weak ridge shaped. Mesoscutum with more or less contiguous punctures, centrally evenly pubescent; notauli distinct. Scutellum weakly convex; lateral longitudinal carinae absent. Mesopleura simple. Epicnemial carinae complete, turned anteriorly to touch anterior mesopleural margin. Postscutellum evenly convex, axillary trough of metanotum with low or reduced longitudinal ridge. Propodeum short, without apophyses, propodeal spiracles elongately elliptical more than 3.5X as long as wide (Fig. 4E); anterior margin of propodeum steeply and abruptly sloping downward from areola. Areola large, subquadrate, well-defined by carinae (Fig. 4F). Anterior transverse carina at least medially complete, costula obsolete; posterior transverse carina complete; lateral longitudinal carinae complete. First lateral area scattered and coarsed punctures; metapleura rugosopunctate; pleural and juxtaoco-
xal carinae complete.

Legs. Fore femur with a weak longitudinal concavity; fore tibiae simple, with scattered long fine spines; fore tarsomere 2 elongate and slender, 2.0X as long as broad; fore tarsomere 3 short, subquadrate to transverse, 1.2X as long as broad; fore tarsomere 4 short, subquadrate to transverse, as long as broad; fore tarsomere 5 slender, of similar thickness to other tarsomeres. Hind coxa without scopa. Apex of tarsal claw simply pointed.

Wing. 2m-cu of fore wing with two bullae separated by an abscissa of the vein that is longer than either bulla; Cell 1+2Rs (areolet) anteriorly truncate, vein 2Rs 0.8X as long as vein 3r-m, vein 2m-cu interception apicad midpoint of posterior margin. Hind wing with M+Cu only curved proximally, distal abscissa of Cu spectral, vein 2-CU 3.0X as long as vein CU-a.

Metasoma. Median longitudinal carinae of tergite 1 complete and extending to apex. Postpetiolo with distinct median field, with longitudinal rugae. Gastrocoeli 0.8X as broad as distance between them, and with distinctly impressed thyridium (Fig. 4G). Second tergite 0.6X as long as width of its apex, third tergite 0.5X as long as width of its apex. Tergites 2-4 with finely punctate. Sternites 2-5 divided. Hypopygium short, exposing most of ovipositor (oxypygous) (Fig. 4H). Ovipositor sheath centrally with short hairs, the longest hairs being shorter than the breadth of the ovipositor sheath. Ovipositor short and saw-like (Fig. 4I).

Male. as in female except following characters:

Color. Flagella without a median white band, segments 1-2 yellow. Inner margin of eye yellow. Postscutellum black. Postpetiol yellow. Apicolateral marks of tergite 2-4 yellow; tergite 5-7 completely dark brown.

Flagella. Flagella with 33 segments, with tyloids at segments 6-22; third flagellomere about 1.2X as long as wide; central flagellomeres quadrate.

Head. Clypeus about 1.8X as wide as long.

Mesosoma. Areola quadrate.

Wing. Distal abscissa of Cu tubular, vein 2-CU 3.0X as long as vein CU-a.

Metasoma. Apex of aedeagus subcylindrical. Subgenital plate medially rounded, without a long lobe. Genital clasper large, ventral apical corner more pointed than dorsal apical corner.

Distribution. Korea, Japan.

1*Ichneumon ohtaniensis Uchida, 1926 (Fig. 5)
Ichneumon ohtaniensis Uchida, 1926: 81. Lectotype: female; Type Locality: Sakhalin, Russia; Type Depository: SEHU.

Pterocormus ohtaniensis: Townes, Momoi and Townes, 1965: 475.
Ichneumon ohtaniensis: Yu and Horstmann, 1997: 611.

Material examined. [YNUE] KOREA: Gangwon-do, Yang-gu-gun, Daemsan, 13 Jun. 1990 (J.I. Kim), 1♀.

Diagnosis. This species is distinguished from the other species of this genus by wide scutellum and dark brown apical half of 1-2 tergites.

Redescription. Female. Body length 12 mm. Forewing length 8 mm.

Color. Body ground plan color black. Flagella with a median white band, ventral area of lanceolar segments brown. Supra-antennal orbit yellow. Labrum dark brown. Mandible brown except black base and apex. Pronotal flange, and scutellum yellow. All tibiae and tarsus brown; hind tibiae with dark apex. Wings and stigma light brown. Basal margin of tergite 2 and apical half of tergite 2-3 dark brown; tergites 6-7 with apicomedian marks.

Flagella. Flagella with 36 segments, lanceolate. Third flagellomere about 1.5X as long as wide; central flagellomeres subquadrate.

Head (Fig. 5C, D). Vertex with posterior section steeply declivous behind ocelli, 1.5X as long as ocellar area. Genae convex, evenly receding behind eye in dorsal view, 1.5X as wide as eye in lateral view. Juncture of hypostomal and occipital carinae separated from mandibular base by 0.7X basal mandibular width. Occipital carina more or less complete. Distance between median and lateral ocellus as long as diameter of median ocellus; area between lateral ocellus and eye sparsely punctate. Ocellar area weakly convex. Supra-antennal area simple, with dense punctures. Distance between eye and antennal socket narrower than distance between antennal sockets. Eye moderately small; inner margin of eye weakly concave opposite antennal socket. Supraclypeal area simply convex, with a weak median swelling. Clypeus about 3.0X as wide as long, with sparsely and irregularly distributed punctures; apical margin simple, without a median apical tubercle; apicolateral margin forming an angle of approximately 40°. Malar space with subocular sulcus, moderately long, as long as basal mandibular width. Mandible moderately large, evenly tapered; dorsal tooth conspicuously longer and broader than the ventral tooth; axis of mandible weakly twisted. Maxillary palp with five segments, and labial palp with four segments.

Mesosoma. Pronotum in profile moderately long, as long as deep; pronotal flange low; epomiae complete, forming a weak ridge shaped. Mesoscutum with punctures separated inter space by about their own diameter; notauni only basal-
ly distinct. Scutellum flat; lateral longitudinal carinae absent. Mesopleura simple; epicnemial carinae complete, turned anteriorly to touch anterior mesopleural margin. Postscutellum sharply rounded and strongly declivous posteriorly, axillary trough of metanotum with low or reduced longitudinal ridges. Propodeum elongated, without apophyses, propodeal spiracles elongately elliptical more than 3.5X as long as wide (Fig. 5E); anterior margin of propodeum steeply and abruptly sloping downward from areola. Areola large and quadrate, well-defined by carinae (Fig. 5F). Anterior transverse carina at least medially complete, costula obsolete; posterior transverse carina complete; lateral longitudinal carinae complete; median longitudinal carinae present anteriad anterior transverse carina, present posteriad anterior transverse carina. First lateral area with uniformly distributed punctures. Metapleura rugosopunctate; pleural and juxtacoxal carinae complete.

Legs. Fore femur with a weak longitudinal concavity; fore tibiae simple, with stout and short conical spines; fore tarsomere 2 elongate and slender, 2.0X as long as broad; fore tarsomere 3 1.2X as long as broad; fore tarsomere 4 as long as broad; fore tarsomere 5 slender, of similar thickness to other tarsomeres. Hind coxa without scopae. Apex of tarsal claw simply pointed.

Wing. 2m-cu of fore wing with two bullae separated by an abscissa of the vein that is longer than either bulla; Cell 1+2Rs (areolet) anteriorly truncate, vein 2Rs as long as 3r-m, vein 2m-cu interception apicad midpoint of posterior margin. Hind wing with M+Cu only curved proximally, distal abscissa of Cu tubular, vein 2-CU 3.0X as long as...
vein CU-a.
Metasoma. Median longitudinal carinae of tergite 1 complete and extending to apex. Postpetiole with distinct median field and longitudinal striate. Gastrocoeli as broad as distance between them, with distinctly impressed thyridium (Fig. 5G). Second tergite as long as width of its apex, third tergite 0.6X as long as width of its apex. Tergites 2-4 with densely punctate. Stermites 2-4 divided, sternite 5 entire. Hypopygium short, exposing most of ovipositor (oxypygous). Ovipositor sheath centrally with short hairs, the longest hairs being shorter than the breadth of the ovipositor sheath (Fig. 5H).

**Male**: Unknown.

**Distribution**: Korea, Russia.

**Genus Stenichneumon Thomson, 1893**

*Stenichneumon* Thomson, 1893: 1964. TS: *Ichneumon pistorius* Gravengorst, 1829 (=*Stenichneumon militarius* Thunberg, 1824).

1*Stenichneumon odaiensis* Uchida, 1932 (Fig. 6)

*Stenichneumon* (*Stenichneumon*) *odaiensis* Uchida, 1932:

29. Type: female; Type Locality: Odaigahara, Japan; Type Depository: SEHU.

**Material examined.** [YNUE] KOREA: Seoul, Achasan, 12 Jul. 1996 (H.J. Jang), 1♂; Gyeonggi-do, Gwangreung, 10 Jun. 1973 (Y.J. Yeom), 1♀; Pocheon, Jugeumsan, 28 Jun. 1998 (J.D. Yeo), 1♀; [SEHU] JAPAN: Nara, Odaigahara, 05 Jul. 1932 (C. Teranishi), 1♀.

**Diagnosis.** This species is distinguished from other *Stenichneumon* species by only black tergites 4-7.

**Redescription. Female.** Body length 16 mm. Forewing length 10.5 mm.

Color. Body ground plan color black. Flagella dark brown, with a median white band. Maxillary and labial palp brown. Pronotal flange, scutellum, and apicolateral marks of tergite 1-3 yellow. All tibiae and tarsus with brown ventral area and dark brown dorsal area. Wing clear and stigma brown. Stermites 2-3 brown.

Flagella. Flagella with 36 segments, lanceolate from 13 segment. Third flagellomere about 3.1X as long as wide; central flagellomeres elongate.

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Fig. 6. *Stenichneumon odaiensis* Uchida, 1932. A, Body in dorsal view; B, Body in lateral view; C, D, Head : C, in frontal view; D, in dorsal view; E, Spiracle of propodeum; F, Areola; G, Gastrocoeli; H, Hypopygyum; I, Ovipositor. Scale bars=2.0 mm (A, B), 0.5 mm (C-I).
Head (Fig. 6C, D). Vertex with posterior section steeply declivous behind ocelli but surface flat. Genae convex, evenly receding behind eye in dorsal view, 0.9X as wide as eye in lateral view. Juncture of hypostomal and occipital carinae separated from mandibular base by about 0.5X basal mandibular width. Occipital carina more or less complete. Distance between median and lateral ocellus 0.4X as long as diameter of median ocellus; area between lateral ocellus and eye sparsely punctate. Ocellar area weakly convex. Supra-antennal area medially with transverse rugae, no ridge. Distance between eye and antennal socket narrower than distance between antennal sockets. Eye moderately large; Inner margin of eye weakly concave opposite antennal socket. Supra-clypeal area simply convex, with a weak median swelling and corse punctures. Clypeus about 2.0X as wide as long, punctures evenly distributed, apical margin median swelling and corse punctures. Clypeus about 2.0X as broad; fore tarsomere 5 slender, of moderate length, 1.5X as long as broad; fore tarsomere 4 elongate and slender, 2.5X as long as broad; fore tarsomere 3 elongate, 3.5X as long as wide; central flagellomeres quadrate; flagellomeres posterior margin of postscutellum and apicolateral marks of dorsal hind coxae, part of hind trochanter, posterior margin of postscutellum and apicolateral marks of tergites 2-3. Sternites 2-4 divided, sternite 5 entire. Hypopygium short, exposing most of ovipositor (oxypygous) (Fig. 6H). Ovipositor sheath centrally with short hairs, the longest hairs being shorter than the breadth of the ovipositor sheath (Fig. 6I).

Male, as in female except following characters:

Color. Body ground plan color black. Following characters yellow: orbit, maxillary palp, ventral area of genae, pronotal flange, posterolateral margin of pronotum, outer side of tegula, scutellum, postscutellum, two marks of propodeum, inner surface of fore leg, inner surface of mid tibia, two marks of dorsal hind coxae, part of hind trochanter, posterior margin of postscutellum and apicolateral marks of tergites 2-3. Stermites 2-3 brown.

Flagella. Bristle shaped; third flagellomere about 1.7X as long as wide; central flagellomeres quadrate; flagellomeres with small tyloids.

Head. Genae 1.2X as wide as eye in lateral view. Malar space short, 0.5X basal mandibular width.

Mesosoma. Pronotum in profile short and deep, less than 0.6X as long as deep; pronotal flange low; epomiae complete, forming a weak ridge shaped. Mesoscutum with more or less contiguous punctures; notauli distinct. Scutellum strongly convex; lateral longitudinal carinae complete to posterior margin. Mesopleura simple; epicnemial carinae complete, turned anteriorly to touch anterior mesopleural margin. Postscutellum evenly convex, axillary trough of metanotum with low or reduced longitudinal ridges. Propodeum elongated, without apophyses; propodeal spiracles elongately elliptical more than 4.0X as long as wide (Fig. 6E). Areola quadrate, round anteriorly, large, well-defined by carinae (Fig. 6F). All propodeal carinae complete; first lateral area with uniformly distributed punctures. Meta- pleura with small and contiguous or confluent punctures, rugae absent; pleural and juxtacoxal carinae complete.

Legs. Fore tibiae simple; fore tarsomere 2 elongate and slender, 3.5X as long as broad; fore tarsomere 3 elongate and slender, 2.5X as long as broad; fore tarsomere 4 elongate, 1.5X as long as broad; fore tarsomere 5 slender, of similar thickness to other tarsomeres. Hind coxa without scopa. Apex of tarsal claw simply pointed.

Wing. 2m-cu of fore wing with two bullae separated by an abscissa of the vein that is longer than either bulla; Cell 1+2Rs (areolet) anteriorly truncate, vein 2Rs longer than vein 3r-m, vein 2m-cu interception at midpoint of posterior margin. Hind wing with M+Cu only curved proximally, distal abscissa of Cu tubular, vein 2-CU 3.0X as long as vein CU-a.

Metasoma. Median longitudinal carinae of tergite 1 apically incomplete. Postpetiole with distinct median field, rugosopunctate. Gastrocoeli 2.0X as broad as distance between them, with distinctly impressed thyridium (Fig. 6G). Second tergite 1.8X as long as width of its apex, third tergite as long as width of its apex. Tergites 2-4 with restricted longitudinal rugae at base of only tergite 2. Stermites 2-4 divided, sternite 5 entire. Hypopygium short, exposing most of ovipositor (oxypygous) (Fig. 6H). Ovipositor sheath centrally with short hairs, the longest hairs being shorter than the breadth of the ovipositor sheath (Fig. 6I).

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