

# Invertebrate Fauna of Korea

Volume 21, Number 23

Arthropoda: Arachnida: Araneae:

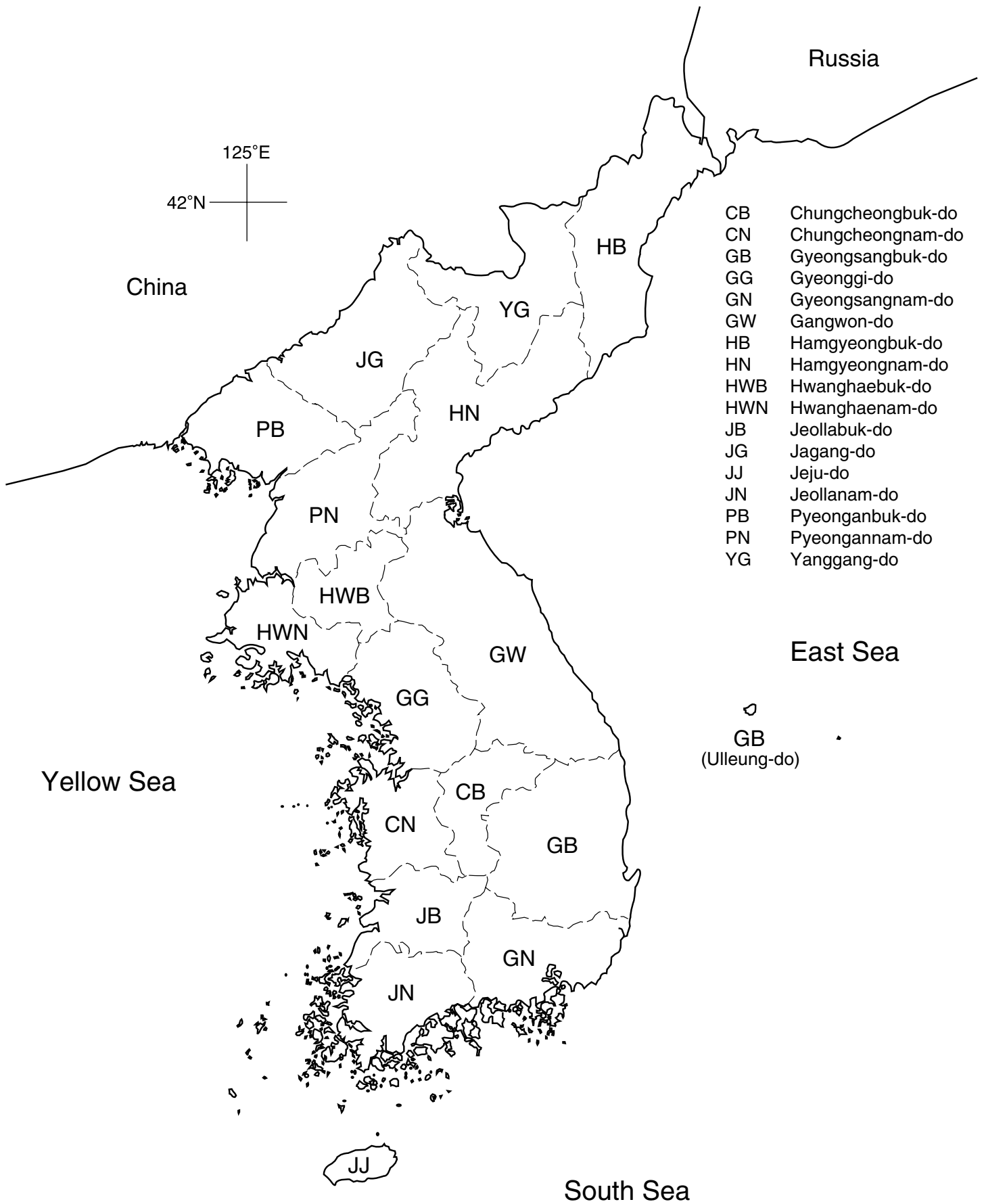
Mimetidae, Uloboridae, Theridiosomatidae,  
Tetragnathidae, Nephilidae, Pisauridae, Gnaphosidae

## Spiders



Flora and Fauna of Korea

National Institute of Biological Resources  
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- CN Chungcheongnam-do
- GB Gyeongsangbuk-do
- GG Gyeonggi-do
- GN Gyeongsangnam-do
- GW Gangwon-do
- HB Hamgyeongbuk-do
- HN Hamgyeongnam-do
- HWB Hwanghaebuk-do
- HWN Hwanghaenam-do
- JB Jeollabuk-do
- JG Jagang-do
- JJ Jeju-do
- JN Jeollanam-do
- PB Pyeonganbuk-do
- PN Pyeongannam-do
- YG Yanggang-do

GB  
(Ulleung-do)

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Mimetidae, Uloboridae, Theridiosomatidae,  
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2013

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Arthropoda: Arachnida: Araneae:

Mimetidae, Uloboridae, Theridiosomatidae,  
Tetragnathidae, Nephilidae, Pisauridae, Gnaphosidae

Spiders

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Seoul National University

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The Flora and Fauna of Korea logo was designed to represent six major target groups of the project including vertebrates, invertebrates, insects, algae, fungi, and bacteria. The book cover and the logo were designed by Jee-Yeon Koo.

## Preface

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In 2010, the 10th Conference of the Parties of the Convention on Biological Diversity (CBD) adopted the Nagoya Protocol on access and benefit-sharing of biological resources. Since then, the national and international environment of the use and management of biological resources has been rapidly changed. Therefore, it is imperative to identify indigenous biological species in details and to build scientific data worthy of international recognition in order to take the initiative in bio-industry.

The National Institute of Biological Resources of the Ministry of Environment has been publishing the Flora and Fauna of Korea to generally manage biological resources and to enhance national competitiveness by setting the foundation for the sovereignty over biological resources. Professional research group consisting of professors of taxonomy and related experts has systematically examined a variety of and wide range of taxa for the last 6 years since 2006.

As a result, 90 issues of the Flora and Fauna of Korea, both in Korean and in English, covering a total of 8,888 species and 2 issues of World Monograph covering 216 species were published. And 30 issues of the Flora and Fauna of Korea, both in Korean and in English, covering 1,665 species of invertebrates, insects and algae are additionally published this year.

These efforts serve to identify indigenous species living in Korea, to investigate biota, to improve the quality of national biological resources management and to provide the opportunity to lay the groundwork for the biotechnological industrialization of biological resources.

I would like to express my sincere appreciation for those who spared no effort to publish the biological magazines; Dr. Seung-Tae Kim and Dr. Sue-Yeon Lee of Seoul National University. And I hope they will help to discover useful biological resources in Korea and to create high value-added activities including natural product, gene resource and medical substance development.



Sang-pal Lee  
President  
National Institute of Biological Resources



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Order Araneae Clerck, 1757

Family Mimetidae Simon, 1881

Genus *Australomimetus* Heimer, 1986

*Australomimetus japonicus* (Uyemura, 1938)

Genus *Ero* C.L. Koch, 1836

*Ero cambridgei* Kulczyn'ski, 1911

*Ero japonica* Bösenberg and Strand, 1906

*Ero koreana* Paik, 1967

Genus *Mimetus* Hentz, 1832

*Mimetus testaceus* Yaginuma, 1960

Family Uloboridae Thorell, 1869

Genus *Hyptiotes* Walckenaer, 1837

*Hyptiotes affinis* Bösenberg and Strand, 1906

Genus *Miagrammopes* O.P.-Cambridge, 1870

*Miagrammopes orientalis* Bösenberg and Strand, 1906

Genus *Octonoba* Opell, 1979

*Octonoba sinensis* (Simon, 1880)

*Octonoba sybotides* (Bösenberg and Strand, 1906)

*Octonoba varians* (Bösenberg and Strand, 1906)

*Octonoba yesoensis* (Saito, 1934)

Genus *Philoponella* Mello-Leitao, 1917

*Philoponella prominens* (Bösenberg and Strand, 1906)

Genus *Uloborus* Latreille, 1806

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Family Theridiosomatidae Simon, 1881

Genus *Ogulnius* O.P.-Cambridge, 1882

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Genus *Theridiosoma* O.P.-Cambridge, 1879

*Theridiosoma epeiroides* Bösenberg and Strand, 1906

Family Tetragnathidae Menge, 1866

Genus *Diphya* Nicolet, 1849

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*Diphya okumae* Tanikawa, 1995

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*Leucauge celebesiana* (Walckenaer, 1842)

*Leucauge subgemmea* Bösenberg and Strand, 1906

Genus *Menosira* Chikuni, 1955

*Menosira ornata* Chikuni, 1955

Genus *Meta* C.L. Koch, 1836

*Meta manchurica* Marusik and Koponen, 1992

*Meta menardi* (Latreille, 1804)

*Meta reticuloides* Yaginuma, 1958

Genus *Metleucauge* Levi, 1980

*Metleucauge chikunii* Tanikawa, 1992

*Metleucauge yunohamensis* (Bösenberg and Strand, 1906)

Genus *Pachygnatha* Sundevall, 1823

*Pachygnatha clercki* Sundevall, 1823

*Pachygnatha quadrimaculata* (Bösenberg and Strand, 1906)

*Pachygnatha tenera* Karsch, 1879

Genus *Tetragnatha* Latreille, 1804

*Tetragnatha caudicula* (Karsch, 1879)

*Tetragnatha extensa* (Linnaeus, 1758)

*Tetragnatha lauta* Yaginuma, 1959

*Tetragnatha lea* Bösenberg and Strand, 1906

*Tetragnatha maxillosa* Thorell, 1895

*Tetragnatha nitens* (Audouin, 1826)

*Tetragnatha pinicola* L. Koch, 1870

*Tetragnatha praedonia* L. Koch, 1878

*Tetragnatha squamata* Karsch, 1879

*Tetragnatha vermiformis* Emerton, 1884

*Tetragnatha yesoensis* Saito, 1934

## Family Nephilidae Simon, 1894

Genus *Nephila* Leach, 1815

*Nephila clavata* L. Koch, 1878

## Family Pisauridae Simon, 1890

Genus *Dolomedes* Latreille, 1804

*Dolomedes angustivirgatus* Kishida, 1936

*Dolomedes japonicus* Bösenberg and Strand, 1906

*Dolomedes raptor* Bösenberg and Strand, 1906

*Dolomedes sulfureus* L. Koch, 1878

Genus *Perenethis* L. Koch, 1878

*Perenethis fascigera* (Bösenberg and Strand, 1906)

Genus *Pisaura* Simon, 1885

*Pisaura ancora* Paik, 1969

*Pisaura lama* Bösenberg and Strand, 1906

## Family Gnaphosida Pocock, 1898

Genus *Callilepis* Westring, 1874

*Callilepis schuszteri* (Herman, 1879)

Genus *Cladothela* Kishida, 1928

*Cladothela oculinotata* (Bösenberg and Strand, 1906)

*Cladothela tortiembola* Paik, 1992

Genus *Coreodrassus* Paik, 1984

*Coreodrassus lancearius* Simon, 1893

- Genus *Drassodes* Westring, 1851  
*Drassodes lapidosus* (Walckenaer, 1802)  
*Drassodes serratidens* Schenkel, 1963  
*Drassodes taehadongensis* Paik, 1995
- Genus *Drassyllus* Chamberlin, 1922  
*Drassyllus biglobosus* Paik, 1986  
*Drassyllus coreanus* Paik, 1986  
*Drassyllus sanmenensis* Platnick and Song, 1986  
*Drassyllus sasakawai* Kamura, 1987  
*Drassyllus shaanxiensis* Platnick and Song, 1986  
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*Drassyllus vinealis* (Kulczyn'ski, 1897)
- Genus *Gnaphosa* Latreille, 1804  
*Gnaphosa hastata* Fox, 1937  
*Gnaphosa kansuensis* Schenkel, 1936  
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*Gnaphosa licenti* Schenkel, 1953  
*Gnaphosa muscorum* (L. Koch, 1866)  
*Gnaphosa potanini* Simon, 1895  
*Gnaphosa sinensis* Simon, 1880
- Genus *Haplodrassus* Chamberlin, 1922  
*Haplodrassus kulczynskii* Lohmander, 1942  
*Haplodrassus montanus* Paik and Sohn, 1984  
*Haplodrassus pargongsanensis* Paik, 1992  
*Haplodrassus signifer* (C.L. Koch, 1839)  
*Haplodrassus taepaikensis* Paik, 1992
- Genus *Herpyllus* Hentz, 1832  
*Herpyllus coreanus* Paik, 1992
- Genus *Hitobia* Kamura, 1992  
*Hitobia unifascigera* (Bösenberg and Strand, 1906)
- Genus *Kishidaia* Yaginuma, 1960  
*Kishidaia coreana* (Paik, 1992)
- Genus *Micaria* Westring, 1851  
*Micaria dives* (Lucas, 1846)  
*Micaria japonica* Hayashi, 1985
- Genus *Odontodrassus* Jezequel, 1965  
*Odontodrassus hondoensis* (Saito, 1939)
- Genus *Poecilochroa* Westring, 1874  
*Poecilochroa joreungensis* Paik, 1992  
*Poecilochroa taeguensis* Paik, 1992
- Genus *Sanitubius* Kamura, 2001  
*Sanitubius anatolicus* (Kamura, 1989)
- Genus *Sergiolus* Simon, 1891  
*Sergiolus hosiziro* (Yaginuma, 1960)
- Genus *Sernokorba* Kamura, 1992  
*Sernokorba pallidipatellis* (Bösenberg and Strand, 1906)

- Genus *Shiragaia* Paik, 1992  
*Shiragaia taeguensis* Paik, 1992
- Genus *Trachyzelotes* Lohmander, 1944  
*Trachyzelotes jaxartensis* (Kroneberg, 1875)
- Genus *Urozelotes* Mello-Leitao, 1938  
*Urozelotes rusticus* (L. Koch, 1872)
- Genus *Zelotes* Gistel, 1848  
*Zelotes asiaticus* (Bösenberg and Strand, 1906)  
*Zelotes davidi* Schenkel, 1963  
*Zelotes exiguus* (Muller and Schenkel, 1895)  
*Zelotes keumjeungsanensis* Paik, 1986  
*Zelotes kimi* Paik, 1992  
*Zelotes kimwha* Paik, 1986  
*Zelotes potanini* Schenkel, 1963  
*Zelotes wuchangensis* Schenkel, 1963

## Introduction

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Spiders (order Araneae) are a ubiquitous and important predator group with high species richness and abundance among invertebrates that occur in many natural ecosystems, as well as in agricultural ecosystems (Howell and Pienkowski, 1971; Nyffeler and Benz 1987). Spiders are the largest order of arachnids and rank seventh in total species diversity among all other groups of organisms (Sebastin and Peter, 2009), with 43,678 recorded species of 3,898 genera belonging to 112 families as of 2012 (Platnick, 2013). Korean araneology was initiated by Embrik Strand (1876–1947), who was a German arachnologist. He described *Gnaphosa koreae* (current status = *Gnaphosa sinensis* Simon, 1880) in “Süd-und ostasiatisch Spinnen” as a new species based on the female specimen collected by Warburg, German minister from Korea in 1907. He described its collecting locality as only ‘von Korea’ without detail geographical information and type specimen is now deposited in the Zoological Museum Hamburg (ZMH) (Paik, 1978), and 690 species of 263 genera belonging to 46 families were recorded until now (Namkung et al., 2009; Seo, 2011a, 2011b; Lee et al., 2012; Kim and Kim, 2012).

Spiders differ from other arthropods in that the usual body segments are fused into two parts, the cephalothorax and abdomen, and joined by a small, cylindrical pedicel in anatomy. Spiders have eight legs and chelicerae with fangs that inject venom. Abdomens bear spinnerets that produce spider silk from up to six types of silk glands within their abdomen. Spiders can generally be identified by the life styles; hunting spiders with or without retreat and webbing spiders inhabiting in their own web. In webbing spiders, they construct webs with spider threads and these are vary widely in size, shape and the amount of sticky thread used.

Spiders, which have a distinct ecological niche, play several important roles in ecosystems. They are main members of biodiversity and contribute to material circulation and energy transfer through prey of higher trophic levels in the terrestrial food web system. Spiders use a wide range of strategies to capture prey, but mainly can be categorized as sit and wait foraging strategy of webbing spiders and pursue and kill foraging strategy of hunting spiders. *Bagheera kiplingi* belonging to Salticidae, herbivorous species, was described (Meehan et al., 2009), but all other known species are predators, mostly preying on insects and on other spiders. Therefore, they are considered as important natural enemy group feed on many agricultural and forest insect pests. Recently, spiders have been also used as indicator species detecting environmental change, such as global warming and environmental pollution. Besides, physiologically active substances, such as poison and thread, spiders produced have been explored in many research fields such as medicine, military affairs, agriculture and practical use.

Present study described 7 Korean families taxonomically; Mimetidae, Uloboridae, Theridiosomatidae, Tetragnathidae and Nephilidae in webbing spiders, and Pisauridae and Gnaphosidae in hunting spiders.

## Materials and Methods

---

This work describes ninety-six spiders belonging to Mimetidae, Uloboridae, Theridiosomatidae, Tetragnathidae, Nephilidae, Pisauridae and Gnaphosidae collected from Korean mainland and islands from 1989 to 2012. Examined materials were the specimens collected by the authors. Nine species of Gnaphosidae including 6 Korean endemic spiders, *Drassodes taehadongensis*, *Gnaphosa licenti*, *Haplodrassus pargongsanensis*, *Haplodrassus taepaikensis*, *Poecilochroa joreungensis*, *Poecilochroa taeguensis*, *Shiragaia taeguensis*, *Zelotes keumjeungsanensis* and *Zelotes kimi*, which were not collected by the authors or could not be loaned from research institutions, descriptions and reillustrations are made according to original description or description from Korea into the format of this work for the completion. In the case of one of the both genders collected only, descriptions were limited to the collected gender.

Spiders are collected by many of the same methods used for insects; hand picking, sweeping, beating, shifting and pitfall trapping. The spiders used in this work are preserved in 85% ethyl alcohol and most of the taxonomic and morphologic characters in the keys and descriptions were observed under stereoscopic dissecting microscope. Female and male body, female epigynum, and left palp of male with some distinctive characters are described and illustrated. Main taxonomic characters and terminology of them are shown in Fig. 1.

Keys of the genera and species was organized with easily observed taxonomic characters in which those of male and female were combined. Changes of the scientific names of each species and synonymies are listed. The present synonymies used a condensed format with reference to each paper given in the bibliography. The original name is given along with the author and initial page of taxonomic accounts. Repetition of authors is avoided and authors are chronologically arranged. In the synonymies, spiders from faunistic studies without reliable taxonomic information were excluded. The order of families, taxonomic names and Korean names mainly follow Platnick's Catalog ver. 13.5 (2013) and Bibliographic Check list of Korean Spiders (Arachnida: Araneae) ver. 2010 (Namkung et al., 2009).

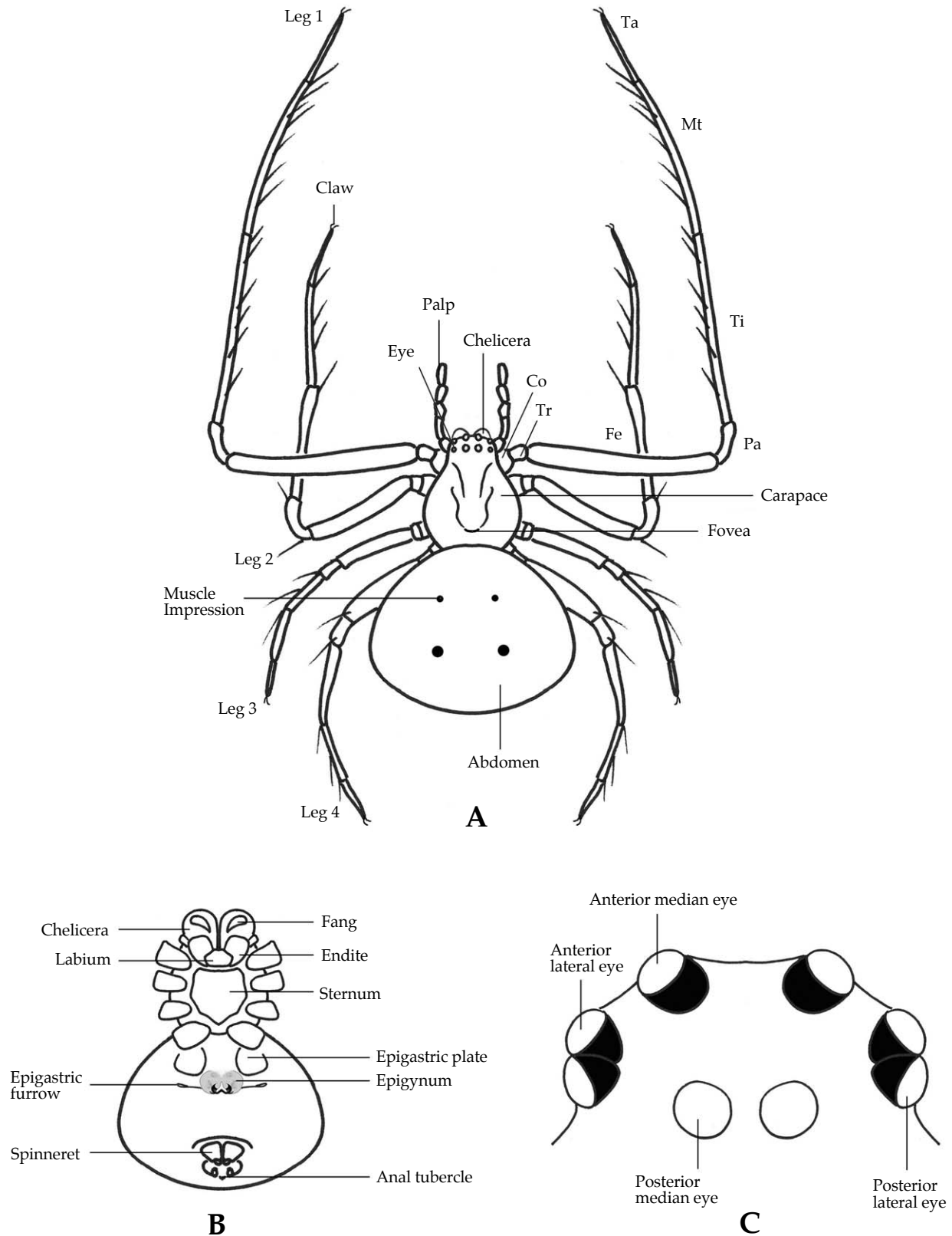


Fig. 1. External features of Mimetid spiders. A. Dorsal view. Co. coxa; Tr. Trochanter; Fe. Femur; Pa. patella; Ti. Tibia; Mt. metatarsus; Ta. tarsus; B. Ventral view, C. Eye area (from the above).

## Taxonomic Notes

---

### **Phylum Arthropoda Latreille, 1829**

Jeol-ji-dong-mul-mun (절지동물문)

An arthropod is an invertebrate animal belonging to phylum Arthropoda having an exoskeleton, a segmented body, and jointed appendages. The arthropod body plan is a bilateral symmetry and consists of repeated segments, the segments usually grouped in two or three rather distinct regions, each with paired segmented appendages. A chitinous exoskeleton, which is periodically shed and renewed as the animal grows. Phylum Arthropoda include the insects, arachnids, crustaceans, and others. Members of the Arthropoda are the most species-rich members of all ecological guilds in most environments.

### **Class Arachnida Cuvier, 1812**

Geo-mi-gang (거미강)

The arachnids that comprise the class Arachnida have bodies founded on eighteen segments or somites, often protected by tergites above and sternites below, connected by softer pleural membrane. Of these somites, six form the cephalothorax (= prosoma) and twelve the abdomen (= ophisthosoma). These two parts may be united across their whole breadth or may be jointed by a narrow waist or pedicel. The cephalothorax carries six parts of limbs or appendages. The chelicerae are the only ones in front of the mouth. They are followed by a pair of pedipalpi and four pairs of legs. Usually there are no appendages on the abdomen, but spiders (Araneae) have abdominal spinnerets. Class Arachnida is classified as eleven major orders including scorpions, spiders, and harvestmens and others. Most arachnids are predators but some mites are parasites or herbivores.

### **Order Araneae Clerck, 1757**

Geo-mi-mok (거미목)

The spiders of the order Araneae have the cephalothorax and abdomen united by a narrow cylindrical pedicel with eight legs. The carapace is uniform and bears six or eight eyes. The abdomen carries a group of six or four spinnerets. The chelicerae are pointed and contain poison glands. The pedipalpi are leg-like and carry the copulatory organ in males. Respiration is by book lungs or tracheae or both. Spiders produce silk threads and spin distinct webs which vary widely in size, shape and the amount of sticky thread used in web builders. Though hunting spiders also produce

silk threads, most of them do not spin webs like web builders. A herbivorous species was described, but all other known species are predators, mostly preying on insects and on other spiders, although a few large species also take birds and lizards.

## Family Mimetidae Simon, 1881

Hae-bang-geo-mi-gwa (해방거미과)

The spider family Mimetidae is a small family comprising more than 13 genera and 156 species occurring worldwide (Platnick 2013). Mimetid spiders are small to medium-sized (3.0–7.0 mm) araneomorph spiders with three tarsal claws belonging to entelegyne without cribellum (Fig. 2A). Carapace oval, sometimes with rows of long spines; head region varies from long, attenuated and convex near middle; thoracic region sloping, fovea weakly developed. Eight eyes, anterior median eyes the usually largest, lateral eyes equal in size, connate and raised on a small common tubercle (Fig. 2B). Chelicerae directed vertically and fused at base; cheliceral promargin with peg teeth (Fig. 2D). Sternum scutiform, widely pointed behind. Abdomen variable in shape, often broad and angular in front or provided with humeral humps, or 2 apical protuberances or 4 large humps; abdominal dorsum usually with strong setae. Legs long and slender with strong spines, tibiae and metatarsi of legs I and II with modified prolateral spination consisting of series of short spines, trichobothria on tibiae and metatarsi (Fig. 2C). Female epigyne distinct, heavily sclerotized but simple; 2 thick-walled spermathecae. Male palp fairly long with strongly developed paracymbial

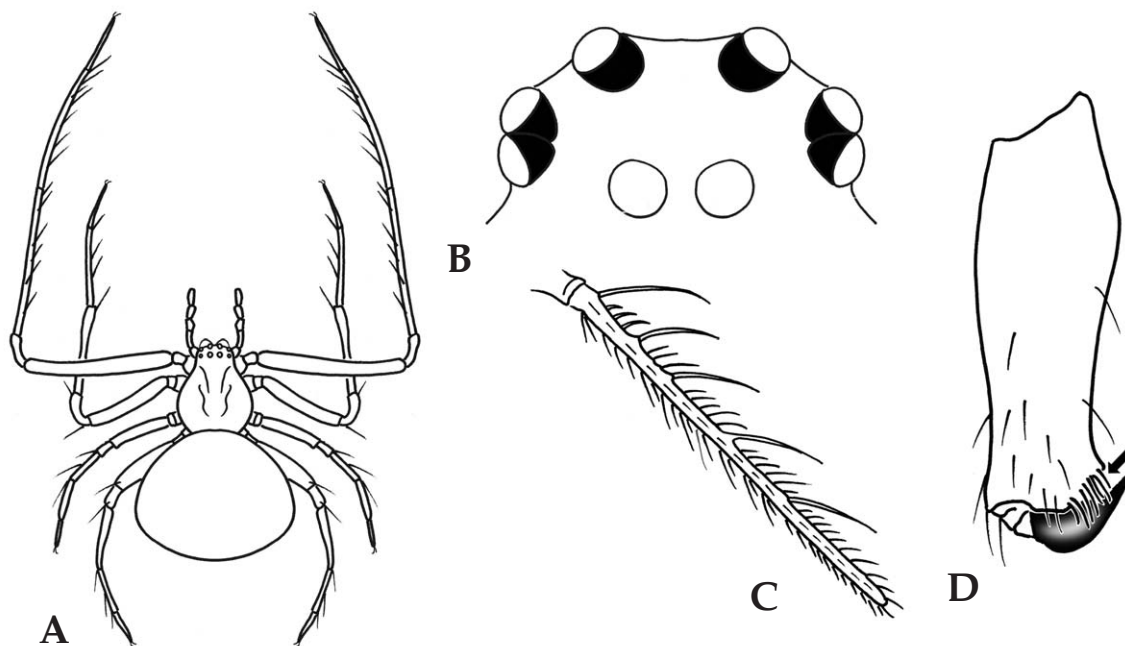


Fig. 2. Taxonomic characters of Mimetidae. A. body; B. eye area; C. spines on tarsi of leg I; D. peg teeth of chelicerae.

process; tegulum in palpal organ with strongly curved embolus. Most mimetid spiders are araneophagous and lack a web. They are founded in debris on the ground, in low vegetation or on other webbing spiders' web.

Type genus: *Mimetus* Hentz, 1832.

### Key to the genera of family Mimetidae

1. Anterior legs shorter than posterior legs, dorsally with a pair of tubercles posteriorly ..... *Australomimetus*  
 – Anterior legs hardly shorter than posterior legs, dorsally without tubercles posteriorly ..... 2
2. Legs almost equal, dorsally with 1 or 2 pairs of small tubercles anteriorly ..... *Ero*  
 – Anterior legs much longer than posterior legs, dorsally without protuberance ..... *Mimetus*

## Genus *Australomimetus* Heimer, 1986

Bae-hae-bang-geo-mi-sok (배해방거미속)

Carapace pyriform with elevated head region; basal margin of head region with two spots; clypeus almost equal or narrower than eye area. Chelicerae fused basally. Anterior legs shorter than posterior legs. Abdomen rounded triangular; dorsally with a pair of small tubercles posteriorly. Male palp with paracymbium elongated and broadly fused to cymbium. Female epigynum strongly sclerotized with two conspicuous copulatory openings.

Type species: *Mimetus maculosus* Rainbow, 1904.

### 1. *Australomimetus japonicus* (Uyemura, 1938) (Fig. 3)

Bae-hae-bang-geo-mi (배해방거미)

*Mimetus japonicus* Uyemura, 1938, p. 93; Yaginuma, 1954d, p. 16; 1986, p. 62; Namkung, 1964, p. 36; Paik, 1978, p. 288; Chikuni, 1989, p. 61; Yoshida and Tanikawa, 2009, p. 251.

*Australomimetus japonicus* Harms and Harvey, 2009, p. 244.

**Female:** Body length 5.0–5.3 mm. Carapace longer than wide; light yellowish brown; complex brown stripe situated between eye area and fovea; thoracic region with 3 pairs of black markings laterally. Chelicerae yellowish brown; 8 long bristles on the promargin. Sternum yellowish white; ovoid with straight front. Femora of legs I and II white with grayish brown speckles and black annulations distally; patellae dark brown; tibiae and metatarsi pale brown, darker distally. Abdomen wider than long; rounded triangle shaped with protuberances posteriolaterally. Dorsum gray; protuberances brown. Female epigynum; sclerotized, close to the epigastric furrow, copulatory openings separate, spermathecae visible.

**Male:** Body length 3.2–3.5 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with paracymbium and large beak shaped median apophysis.

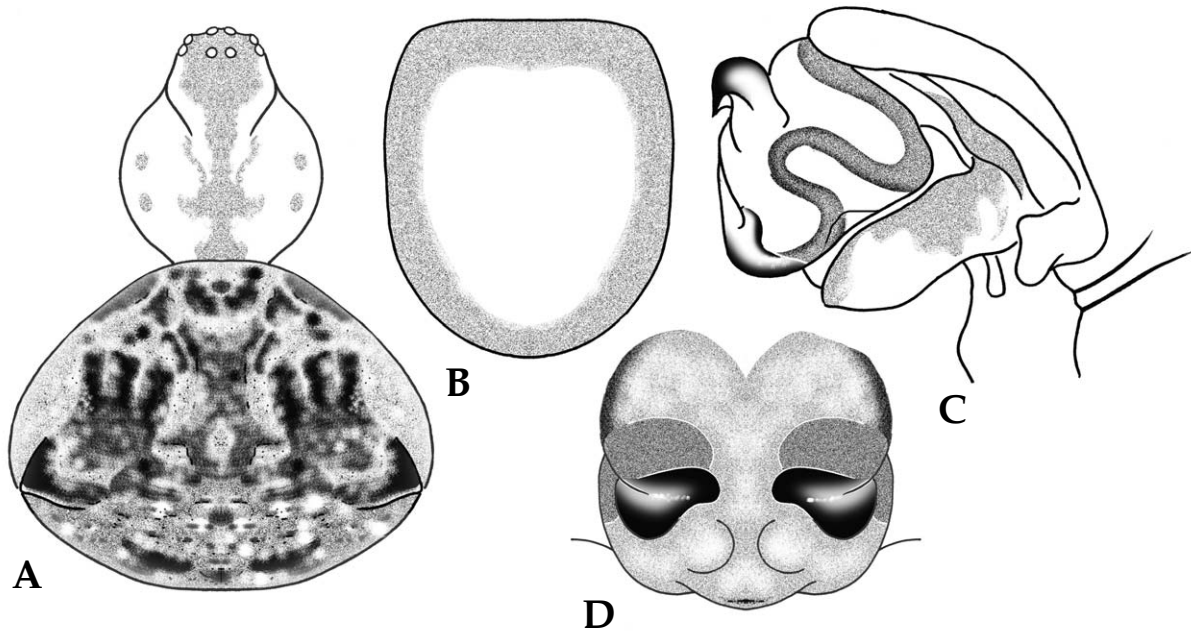


Fig. 3. *Australomimetes japonicus*. A. body; B. Sternum; C. Male palp; D. Female epigynum.

**DISTRIBUTION:** Korea, Japan.

**KOREA:** CB.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Boeun, Chungcheongbuk-do: 27.vii.1994).

**ECOLOGY:** Founded in the warm grassland of mountainous region. Hunt another webbing spiders without construct their own web.

## Genus *Ero* C.L. Koch, 1836

Hae-bang-geo-mi-sok (해방거미속)

Carapace short and convex remarkably, hairless; clypeus high, hardly narrower than the eye area. Chelicerae fused basally. Legs almost equal. Abdomen high; dorsally with 1 or 2 pairs of small tubercles anteriorly. Male palp with large paracymbium at the base of cymbium; cymbial apophysis varied. Female epigynum strongly sclerotized.

Type species: *Aranea tuberculata* De Geer, 1778.

### Key to the species of genus *Ero*

1. Abdominal dorsum with tubercles ..... 2
  - Abdominal dorsum without tubercle ..... *E. koreana*
2. Abdominal dorsum with a pair of tubercles medially ..... *E. cambridgei*
  - Abdominal dorsum with a pair of tubercles posteriolaterally ..... *E. japonica*

## 2. *Ero cambridgei* Kulczyn'ski, 1911 (Fig. 4)

Eol-ruk-hae-bang-geo-mi (얼룩해방거미)

*Ero cambridgei* Kulczyn'ski, 1911, p. 61; Simon, 1932, pp. 774, 777; Locket and Millidge, 1953, p. 32; 1974, p. 46; Palmgren, 1974, p. 57; Pakhorukov and Utochkin, 1977, p. 91; Canard, 1982, p. 77; Roberts, 1985, p. 170; Tanikawa and Tazoe, 1988, p. 30; Heimer and Nentwig, 1991, p. 92; Roberts, 1995, p. 258; 1998, p. 274; Schütt, 2000, p. 137; Namkung, 2001, p. 59; 2003, p. 61; Thaler, van Harten and Knoflach, 2004, p. 360; Almquist, 2005, p. 37; Yoshida and Tanikawa, 2009, p. 251; Le Peru, 2011, p. 314.

**Female:** Body length 2.5–3.5 mm. Carapace longer than wide; yellowish brown; eye area, both margins and longitudinal median stripe dark brown; the rest of thoracic region thick brown. Sternum dark brown with light brown markings. Legs yellowish brown with dark brown and tough annulations; tibiae and metatarsi of legs I and II covered with long and short spines. Abdomen longer than wide; yellowish brown; a pair of protuberances situated anteriomedianly. Dorsum with complex and broad dark brown stained pattern anteriorly; yellowish brown with reddish brown, white and black speckles posteriorly; covered with short spines. Female epigynum; sclerotized, close to the epigastric furrow, copulatory openings contiguous, spermathecae visible.

**Male:** Body length 2.0–2.5 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with paracymbium and pointed median apophysis, embolus short and pointed.

**DISTRIBUTION:** Korea, Japan, Russia (Palearctic).

**KOREA:** GG.

**SPECIMEN EXAMINED:** 2 ♀♀, 7 ♂♂ (Hwaseong, Gyeonggi-do: 4.iii.2002); 1 ♀ (Hwaseong, Gyeonggi-do: 20.v.2002); 2 ♀♀ (Hwaseong, Gyeonggi-do: 17.vi.2002); 1 ♀ (Hwaseong, Gyeonggi-do: 1.vii.2002);

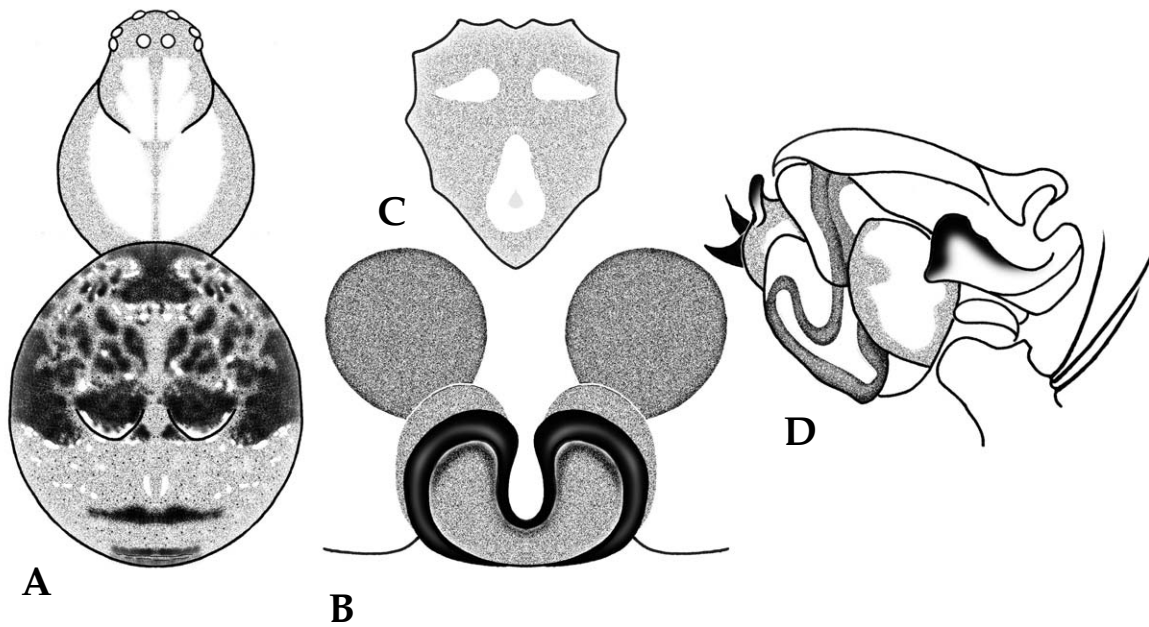


Fig. 4. *Ero cambridgei*. A. female body; B. female epigynum; C. sternum; D. male palp.

1 ♀ (Bupyeong, Gyeonggi-do: 29.v.2008).

**ECOLOGY:** Founded in the bushes or between leaf litters of coppice of mountainous regions or fields.

### 3. *Ero japonica* Bösenberg and Strand, 1906 (Fig. 5, Pl. 1)

Ppul-hae-bang-geo-mi (뿔해방거미)

*Ero japonica* Bösenberg and Strand, 1906, p. 245; Yaginuma, 1954d, p. 17; 1986, p. 62; Saito, 1959, p. 119; Namkung, 1964, p. 36; 2001, p. 57; 2003, p. 59; Paik, 1967, p. 186; 1978, p. 284; Chikuni, 1989, p. 60; Wang, 1990, p. 36; Chen and Zhang, 1991, p. 183; Song, Zhu and Chen, 1999, p. 73; Yoshida and Tanikawa, 2009, p. 251.

**Female:** Body length 4.0–4.5 mm. Carapace; longer than wide; yellowish brown; both margins and band pattern situated from eye area to fovea dark brown; fovea deep and distinct, cervical furrow and radial furrow fade. Chelicerae dark brown; 7–8 long bristles on the promargin, no bristle on the retromargin. Sternum brown with black stained pattern. Legs yellowish brown with black annulations; black speckles scattered; tibiae and metatarsi of legs I and II with long and comb shaped spines in row. Abdomen longer than wide; yellowish brown; convexoglobular with a pair of cone shaped protuberances posteriolaterally. Dorsum with dark brown stained and scale patterns; long hairs sparsely sprouted. Female epigynum; sclerotized, close to the epigastric furrow, copulatory openings separate, spermathecae visible.

**Male:** Body length 3.0–3.5 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with paracymbium and large beak shaped median apophysis.

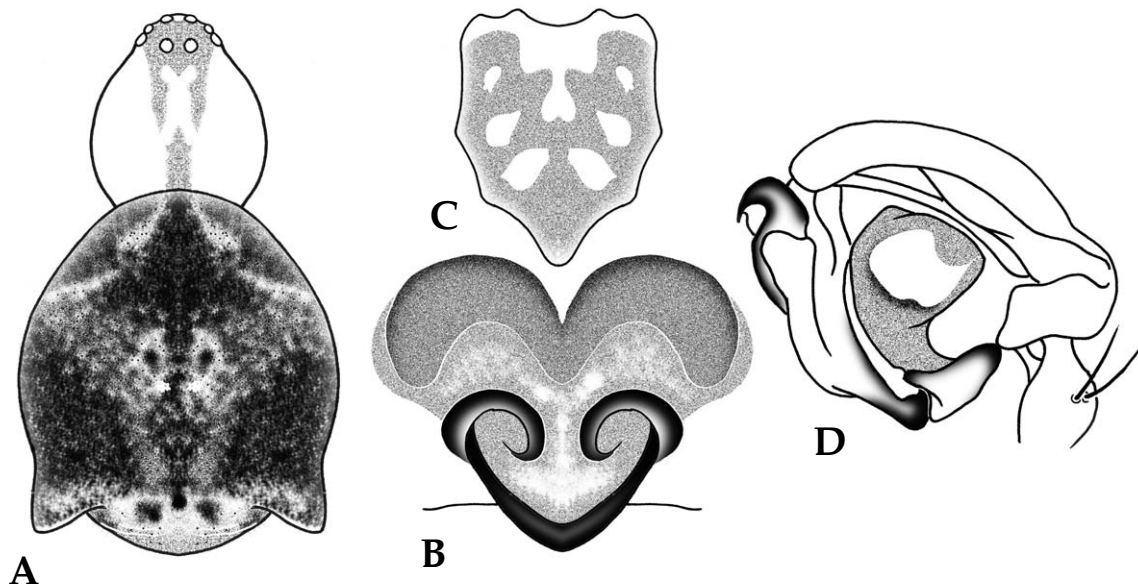


Fig. 5. *Ero japonica*. A. female body; B. female epigynum; C. sternum; D. male palp.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, CN, JB.

**SPECIMEN EXAMINED:** 1 ♂ (Hongcheon, Gangwon-do: 9.ix.1995); 1 ♀ (Kwangju, Gyeonggi-do: 13.iii.1994); 1 ♂ (Dangjin, Chungcheongnam-do: 28.vii.2008); 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 3.vii.2009).

**ECOLOGY:** Founded in the bushes and between shrubs of mountainous region. Hunt another webbing spiders without construct their own web.

#### 4. *Ero koreana* Paik, 1967 (Fig. 6)

Min-hae-bang-geo-mi (민해방거미)

*Ero koreana* Paik, 1967, p. 188; 1978, p. 286; Wang, 1990, p. 36; Ono, 1996, p. 20; Song, Zhu and Chen, 1999, p. 73; Namkung, 2001, p. 58; 2003, p. 60; Yoshida and Tanikawa, 2009, p. 251.

**Female:** Body length about 5.5 mm. Carapace longer than wide; light yellowish brown; convex, fovea roundly pitted; both margins and 3 longitudinal stripes from eye area to fovea dark brown. Chelicerae brown; 8 long bristles on the promargin, no bristle on the retromargin. Sternum brown with black markings laterally. Legs brown; 3 annulations on the femora and tibiae, 1 on the patellae. Abdomen longer than wide; rounded oval without dorsal protuberance. Dorsum thick yellowish gray with complex black pattern; covered densely with small verrucae bearing short spine. Female epigynum; sclerotized, close to the epigastric furrow, copulatory openings separate, spermathecae visible.

**Male:** Unknown.

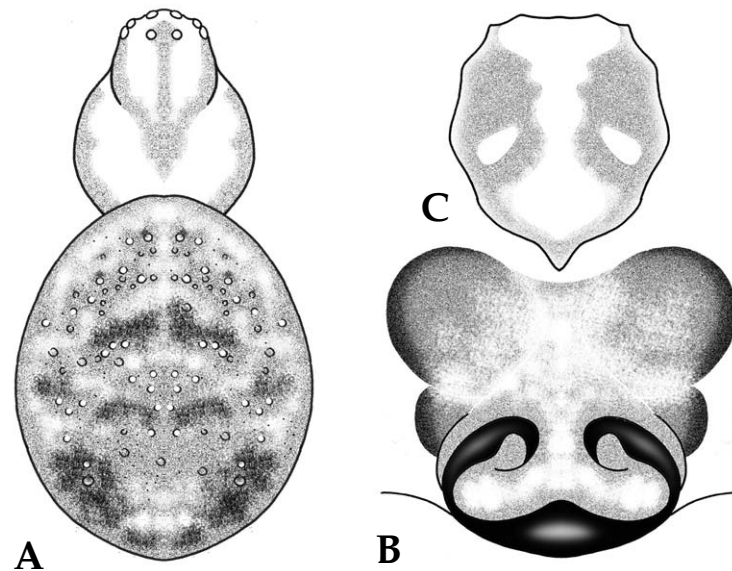


Fig. 6. *Ero koreana*. A. female body; B. female epigynum; C. sternum.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, GB, JJ.

**SPECIMEN EXAMINED:** 1 ♀ (Hoenggye, Gangwon-do: 10.viii.2009); 1 ♀ (Gumi, Gyeongsangbuk-do: 20.viii.2009).

**ECOLOGY:** Founded in any place of mountainous region. Hunt another webbing spiders without construct their own web.

## Genus *Mimetus* Hentz, 1832

Keun-hae-bang-geo-mi-sok (큰해방거미속)

Carapace long and rather flat; clypeus much narrower than eye area. Chelicerae fused basally. Legs very spiny; anterior legs much longer than posterior legs. Abdomen long, oval and convex; dorsally with dark folium without protuberance. Male palp without distinct paracymbium. Female epigynum strongly sclerotized.

Type species: *Mimetus syllepsicus* Hentz, 1832.

### 5. *Mimetus testaceus* Yaginuma, 1960 (Fig. 7, Pl. 2)

Keun-hae-bang-geo-mi (큰해방거미)

*Mimetus testaceus* Yaginuma, 1960, append. 3; 1986, p. 62; Paik, 1967, p. 190; 1978, p. 289; Nishikawa, 1977, p. 363; Chikuni, 1989, p. 61; Wang, 1990, p. 40; Chen and Zhang, 1991, p. 182; Song, Zhu and Chen, 1999, p. 74; Namkung, 2001, p. 60; 2003, p. 62; Yoshida and Tanikawa, 2009, p. 252.

**Female:** Body length 5.5–6.0 mm. Carapace longer than wide; yellowish brown; complex pattern situated from eye area to roundly pitted fovea. Chelicerae brown with black spots; 9 long bristles on the promargin, no bristle on the retromargin. Sternum yellowish brown; brown markings at coxae. Legs yellowish brown; dark brown spots scattered; tibiae and metatarsi with well developed spines. Abdomen slightly longer than wide; lozenge shaped, broad posteriorly. Dorsum brown with dusky pattern; covered densely with spines. Female epigynum; sclerotized, close to the epigastric furrow, copulatory openings contiguous, spermathecae visible.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size and darker body coloration. Male palp; tegulum heavily projected, median apophysis beak shaped.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, GB, JB, JN.

**SPECIMEN EXAMINED:** 1 ♀ (Hangye, Gangwon-do: 5.viii.1991); 1 ♀, 1 ♂ (Mt. Geonbongsan, Gangwon-do: 3.vi.1997); 1 ♀ (Mt. Bangtaesan, Gangwon-do: 25.vi.2010); 1 ♀ (Kwangju, Gyeonggi-do: 28.vi.1991); 1 ♀ (Mt. Sobaeksan, Gyeongsangbuk-do: 18.vii.2007); 1 ♀ (Woensando, Jeollanam-do: 10.vii.1994); 1 ♀, 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 10.vi.2008).

**ECOLOGY:** Founded in the bushes of mountainous region and fields. Hunt another webbing spiders without construct their own web.

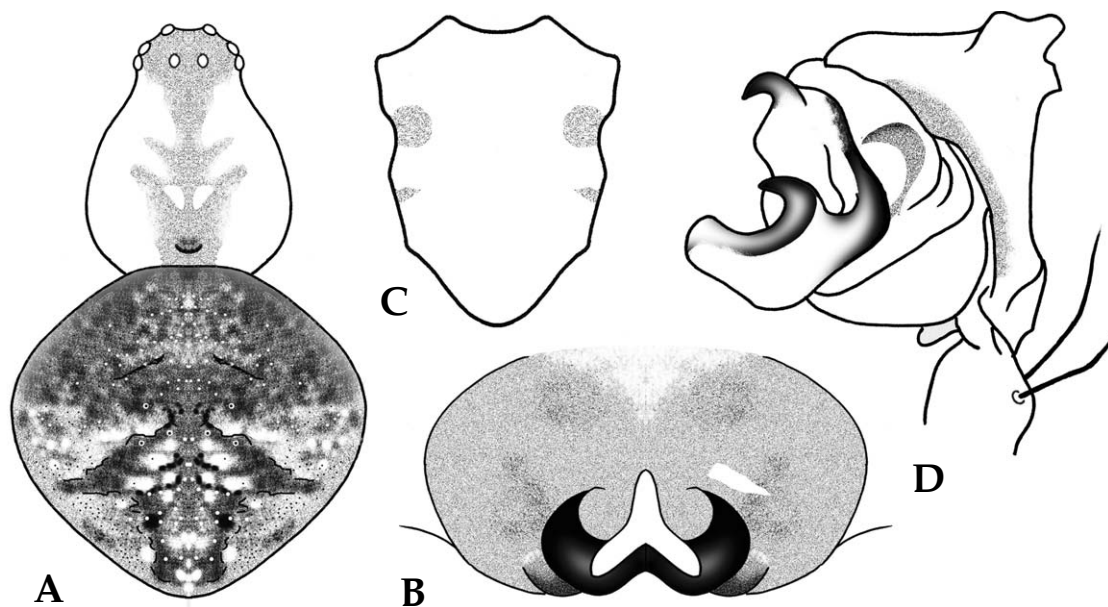


Fig. 7. *Mimetus testaceus*. A. female body; B. female epigynum; C. sternum; D. male palp.

## Family Uloboridae Thorell, 1869

Eung-dal-geo-mi-gwa (응달거미과)

The spider family Uloboridae is a small family comprising more than 18 genera and 266 species occurring worldwide (Platnick, 2013). Uloborid spiders are small to medium-sized (3.0–10.0 mm) araneomorph spiders with three tarsal claws belonging to entelegyne with cribellum (Fig. 8C). Carapace variable with a pair of lateral swellings from posterior of median to posterior lateral eyes (Fig. 8A). Eight eyes in general (Fig. 8B). Four eyes with anterior eye row reduced in *Miagrammopes*, posterior lateral eyes on tubercles in *Hyptiotes*. Chelicerae without prominent condyle; cheliceral furrow with many small teeth or with one or more large teeth; venom glands absent. Sternum long and oval to triangular but in *Miagrammopes* 2 separate sternites with coxae II and III surrounded by a sternal plate. Abdomen slender or very narrow and elongated; with 1 or 2 humps in *Hyptiotes* and *Uloborus*; anal tubercles usually large, 2 segmented. Legs usually long, sometimes short and stout, femora with rows of long trichobothria (Fig. 8D), metatarsi IV ventrally with straight and long setae (Fig. 8E), legs I and IV longer than others in *Miagrammopes* and *Uloborus*, short and stouter in *Hyptiotes*, tibiae I with many long setae in *Uloborus*, onychium present at the end of tarsi (Fig. 8F). Female epigyne with paired or unpaired projections. Male palp with modified palpal tibia, short and disc-like to conical; embolus thin, circular and coiled or a short and curved spine; cymbium with 2 apical setae. Most Uloborid spiders construct complete orb webs or ranging from orb webs with reduced sections to a single thread.

Type genus: *Uloborus* Latreille, 1806.

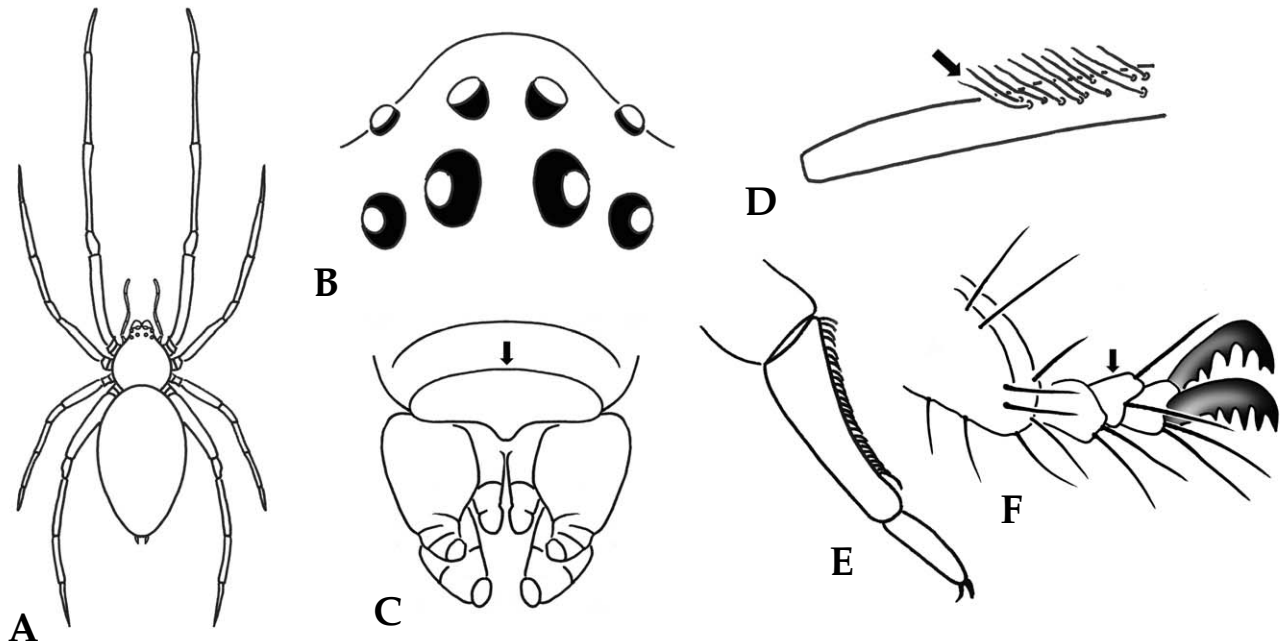


Fig. 8. Taxonomic characters of Uloboridae. A. body; B. eye area; C. cribellum; D. trichobothria of femora; E. setae of metatarsi; F. onychium.

#### Key to the genera of family Uloboridae

1. Four eyes, palp with projection ..... *Miagrammopes*
- Six or eight eyes, palp without projection ..... 2
2. Six eyes, carapace rounded triangular ..... *Hyptiotes*
- Eight eyes, carapace ovoid or round ..... 3
4. Carapace round, fovea deeply pitted transversely ..... *Philoponella*
- Carapace ovoid, fovea small and deeply pitted ..... 5
5. Abdomen ovoid, longer than wide ..... *Octonoba*
- Abdomen lanciform, much longer than wide ..... *Uloborus*

### Genus *Hyptiotes* Walckenaer, 1837

Bu-chae-geo-mi-sok (부채거미속)

Carapace angular with narrowed head region; posterior half of carapace flat or depressed. Clypeus high. Six eyes; posterior lateral eyes on tubercles. Chelicerae without boss. Legs short and stout; metatarsi IV compressed below calamistrum. Abdomen extending anteriorly over large part of carapace. Cribellum edged by short bristles anteriorly. Male palp very large; embolus very long. Female epigynum strongly sclerotized.

Type species: *Mithras paradoxus* Koch, 1834.

## 6. *Hyptiotes affinis* Bösenberg and Strand, 1906 (Fig. 9, Pl. 3)

Bu-cha-geo-mi (부채거미)

*Hyptiotes affinis* Bösenberg and Strand, 1906, p. 108; Strand, 1918, p. 90; Paik, 1978, p. 188; Yoshida, 1982, p. 18; Hu, 1984, p. 62; Yaginuma, 1986, p. 14; Song, 1987, p. 80; Chikuni, 1989, p. 24; Feng, 1990, p. 39; Chen and Gao, 1990, p. 29; Chen and Zhang, 1991, p. 45; Song, Zhu and Chen, 1999, p. 81; 2001, p. 85; Kim and Lee, 1999, p. 6; Namkung, 2001, p. 68; 2003, p. 70; Yoshida, 2009a, p. 143.

**Female:** Body length 4.0–5.0 mm. Carapace slightly longer than wide; pentagonal, yellowish brown; head region higher than thoracic region. Eight eyes with degenerated anterior lateral eyes. Chelicerae yellowish brown with 3 promarginal teeth and 2 retromarginal teeth. Sternum long triangular with long brown hairs. Legs yellowish brown; short and stout; leg IV with calamistrum on the dorsum of metatarsi. Abdomen longer than wide, scutiform; anteriomedian region very high and elevated covering thoracic region; low protuberances with long and black hairs on the shoulder. Dorsum white-yellowish brown with blackish brown irregular patterns and dusky brown hairs. Female epigynum; sclerotized, close to the epigastric furrow, copulatory openings at inner edge of transverse ridge.

**Male:** Body length 3.5–4.0 mm. Similar to females; carapace round; legs long and slender with many spines. Male palp; rather large for their body size, bulb large, basal part curved, median apophysis short and pointed, embolus filiform.

**DISTRIBUTION:** Korea, China, Japan, Taiwan.

**KOREA:** GW, GN, JB, JN.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Maebongsan, Gangwon-do: 22.viii.1997); 2 ♀ ♀, 1 ♂ (Geojedo,

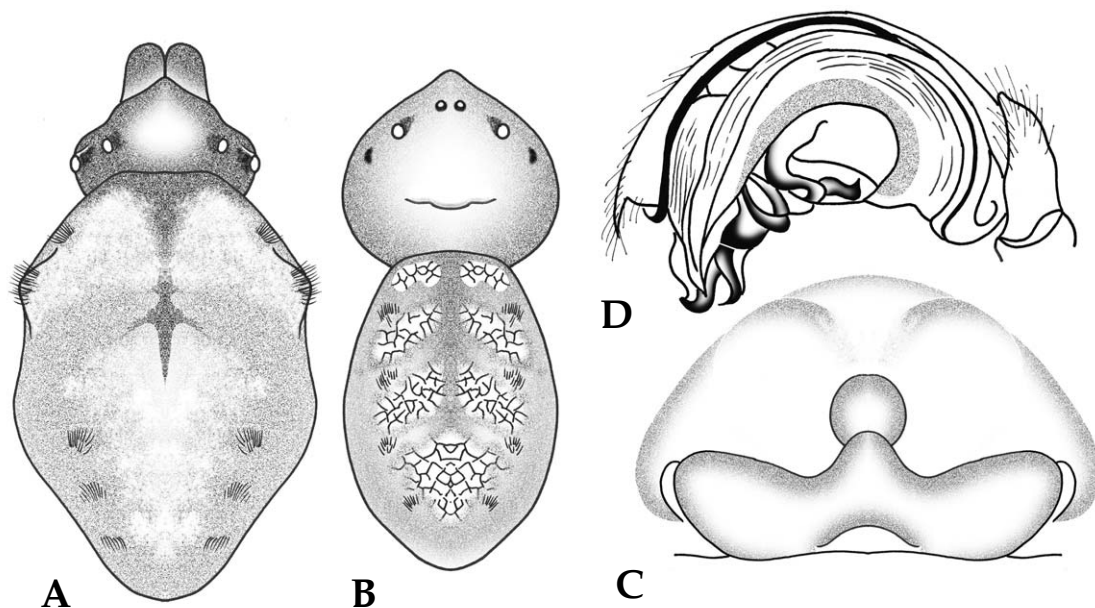


Fig. 9. *Hyptiotes affinis*. A. female body; B. male body; C. female epigynum; D. male palp.

Gyeongsangnam-do: 2.ix.2009); 2 ♀ ♀ (Changwon, Gyeongsangnam-do: 1.x.2009); 2 ♀ ♀ (Mt. Naejangsan, Jeollabuk-do: 17.ix.2010); 1 ♀ (Mt. Naejangsan, Jeollabuk-do: 11.x.2010); 1 ♀ (Damyang, Jeollanam-do: 29.viii.1999).

**ECOLOGY:** Construct triangular web in the dark and shade sites of mountainous region.

## Genus *Miagrammopes* O.P.-Cambridge, 1870

Son-jit-geo-mi-sok (손짓거미속)

Carapace quadrangle, flat and thin; about twice as long as wide. Four eyes in one row (anterior eyes reduced). Chelicerae twice as long as wide. Leg I robust and much longer than others. Abdomen cylindrical; five times longer than wide. Male palp with tibial projection; median apophysis very large. Female epigynum simple and sclerotized.

Type species: *Miagrammopes thwaitesi* O.P.-Cambridge, 1870.

### 7. *Miagrammopes orientalis* Bösenberg and Strand, 1906 (Fig. 10, Pl. 4)

Son-jit-geo-mi (손짓거미)

*Miagrammopes orientalis* Bösenberg and Strand, 1906, p. 109; Paik, 1978, p. 191; Shi and Zhu, 1982, p. 64; Yoshida, 1982, p. 18; Hu, 1984, p. 63; Opell, 1984, p. 231; Zhu et al., 1985, p. 60; Yaginuma, 1986, p. 15; Song, 1987, p. 82; Chikuni, 1989, p. 24; Chen and Zhang, 1991, p. 47; Song, Chen and Zhu, 1997, p. 1705; Song, Zhu and Chen, 1999, p. 81; 2001, p. 86; Kim and Lee, 1999, p. 8; Namkung, 2001, p. 69; 2003, p. 71; Kim and Cho, 2002, p. 240; Yoshida, 2009a, pp. 142, 655.

*Miagrammopes coreensis* Yamaguchi, 1953, p. 7.

*Ranguma orientalis* Lehtinen, 1967, p. 262.

**Female:** Body length 12.0–15.0 mm. Carapace longer than wide; long cylinder shaped, black with grayish brown margins. Four eyes; slightly elevated. Chelicerae light yellowish brown. Sternum long and black. Leg I longest and thickest; dorsum black or blackish gray, the rest yellowish brown. Abdomen much longer than wide; long cylinder shaped; widest at 1/4 from front. Dorsum grayish brown with black longitudinal stripe accompanied by 3 pairs of light yellowish brown spots. Female epigynum; close to the epigastric furrow, sclerotized and rather protruded, internal organ invisible.

**Male:** Body length 5.0–6.0 mm. Similar to females, smaller size and black body coloration. Male palp; median apophysis large and curved.

**DISTRIBUTION:** Korea, China, Japan, Taiwan.

**KOREA:** GW, GN, JB, JN.

**SPECIMEN EXAMINED:** 1 ♀ (Cheolwon, Gangwon-do: 7.vii.1997); 1 ♀ (Mt. Daeseongsan, Gangwon-do: 16.viii.1997); 1 ♀, 1 ♂ (Mt. Geumhaksan, Gangwon-do: 7.vii.1998); 1 ♀ (Milyang, Gyeongsangnam-do: 23.iv.2009); 1 ♀ (Jeonju, Jeollabuk-do: 10.iv.2008); 3 ♀ ♀ (Mt. Naejangsan, Jeollabuk-do:

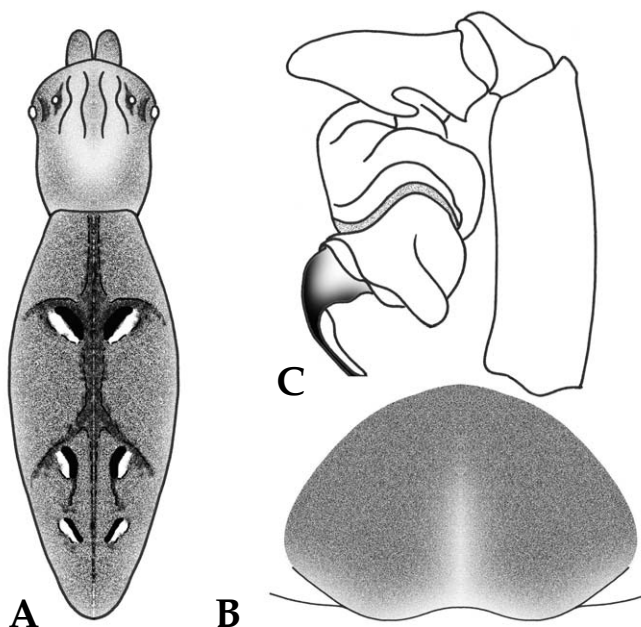


Fig. 10. *Miagrammopes orientalis*. A. female body; B. female epigynum; C. male palp.

18.vi.2010); 1 ♀ (Mt. Naejangsan, Jeollabuk-do: 17.vi.2011); 1 ♀ (Goheung, Jeollanam-do: 8.vi.1993).

**ECOLOGY:** Construct thread web between shrubs and bushes in mountainous region, and cling to the edge of web.

## Genus *Octonoba* Opell, 1979

Jung-gug-eung-dal-geo-mi-sok (중국응달거미속)

Carapace oval and slightly convex. Leg I more robust and longer than others. Abdomen oval; dorsally elevated in basal third. Male palp with median apophysis that concaved or rolled inwardly; embolus thin spiniform largely encircling. Female epigynum with a pair of projections.

Type species: *Uloborus sinensis* Simon, 1880.

### Key to the species of genus *Octonoba*

1. Female epigynum with projections ..... 2
  - Female epigynum without projections ..... 3
2. Epigynal projections curved inward ..... *O. sinensis*
  - Epigynal projections parallel forward ..... *O. varians*
3. Copulatory openings of epyginum exposed laterally ..... *O. sybotides*
  - Copulatory openings of epyginum hidden ..... *O. yesoensis*

## 8. *Octonoba sinensis* (Simon, 1880) (Fig. 11, Pl. 5)

Jung-gug-eung-dal-geo-mi (중국응달거미)

*Uloborus sinensis* Simon, 1880, p. 111; Song, 1980, p. 88; Wen, Zhao and Huang, 1981, p. 27; Hu, 1984, p. 64; Guo, 1985, p. 60; Yaginuma, 1986, p. 13; Chikuni, 1989, p. 23; Zhao, 1993, p. 221.

*Uloborus tokyoensis* Kishida, 1927, p. 960; Yaginuma, 1960, p. 25; 1971, p. 25; Paik, 1978, p. 196.

*Uloborus octonarius* Muma, 1945, p. 91; Muma and Gertsch, 1964, p. 38.

*Zosis sinensis* Lehtinen, 1967, p. 277.

*Octonoba octonaria* Opell, 1979, p. 512; Roth, 1982, pp. 50–52; 1985, B46-3.

*Octonoba sinensis* Yoshida, 1980, p. 58; Zhu et al., 1985, p. 61; Song and Li, 1986, p. 229; Song, 1987, p. 82; Zhang, 1987, p. 54; Hu and Wu, 1989, p. 72; Feng, 1990, p. 40; Chen and Gao, 1990, p. 32; Chen and Zhang, 1991, p. 48; Yoshida, 1991, p. 24; Zhao, 1993, p. 223; Roth, 1994, p. 192; Song, Zhu and Chen, 1999, p. 81; 2001, p. 87; Kim and Lee, 1999, p. 10; Hu, 2001, p. 427; Namkung, 2001, p. 70; 2003, p. 72; Kim and Cho, 2002, p. 249; Kim, Shin and Park, 2008, p. 67; Yoshida, 2009a, p. 145.

*Uloborus sinensis* Wang, 1981, p. 93.

**Female:** Body length 4.0–5.5 mm. Carapace slightly longer than wide; dark brown, margin of thoracic region and behind median region white. Chelicerae yellowish brown with 6 promarginal teeth and 4 retromarginal teeth. Sternum dusky, scutiform. Leg I longest; pale yellowish brown with black annulations. Abdomen longer than wide, ovoid; anterior region rather high with several elevations. Dorsum grayish white or yellowish white; dark brown longitudinal stripe situated medianly showing color and pattern variations. Female epigynum; sclerotized and slightly protruded, a pair of projections curved inward.

**Male:** Body length 3.5–4.5 mm. Similar to females, smaller size and dorsal elevation indistinct. Male palp; bulb globular, embolus long and thick, curved.

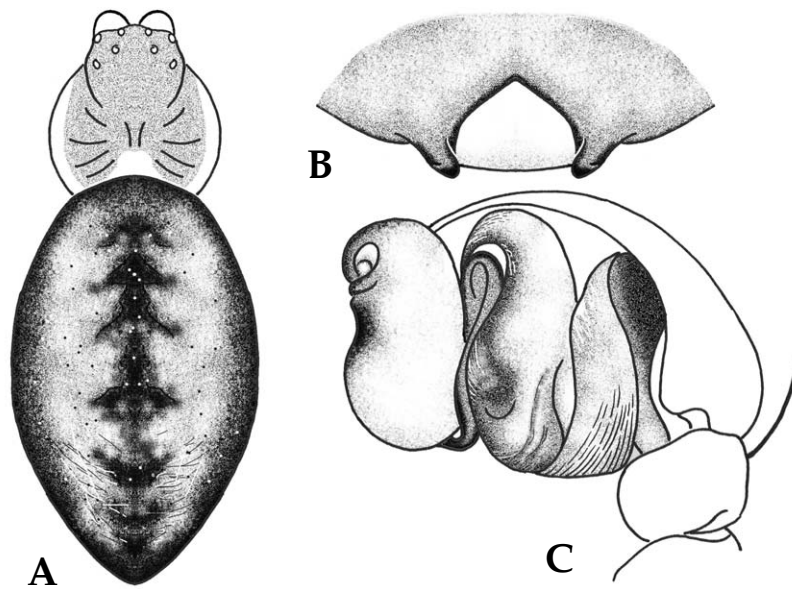


Fig. 11. *Octonoba sienensis*. A. female body; B. female epigynum; C. male palp.

**DISTRIBUTION:** Korea, China, Japan, North America.

**KOREA:** JB.

**SPECIMEN EXAMINED:** 2 ♀♀, 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 17.viii.2008).

**ECOLOGY:** Founded in dark sites at the corner of buildings and under the roof. Construct large orb web decorated with spiral stablimentum.

### 9. *Octonoba sybotides* (Bösenberg and Strand, 1906) (Fig. 12, Pl. 6)

Kkob-chu-eung-dal-geo-mi (꼭추응달거미)

*Uloborus sybotides* Bösenberg and Strand, 1906, p. 104; Yaginuma, 1954c, p. 15; 1960, p. 25; 1971, p. 25; 1986, p. 13; Paik, 1978, p. 195; Chikuni, 1989, p. 23.

*Zosis sybotides* Lehtinen, 1967, p. 277.

*Octonoba sybotides* Yoshida, 1980, p. 62; Hu, 1983, p. 12; Song, Zhu and Chen, 1999, p. 84; Kim and Lee, 1999, p. 11; Namkung, 2001, p. 71; 2003, p. 73; Kim and Cho, 2002, p. 250; Yoshida, 2009a, p. 145.

**Female:** Body length 5.0–6.0 mm. Carapace slightly longer than wide; yellowish brown; black thick band pattern situated at median region and margin of thoracic region. Chelicerae brown with 3 promarginal teeth and 4 retromarginal teeth. Sternum dusky yellowish brown, long triangular; brown long hairs sparsely sprouted. Legs thick yellowish brown with annulations. Abdomen longer than wide, ovoid; anterior region rather high with several elevations. Dorsum yellowish brown with black longitudinal stripe at middle accompanied by white reticulated patterns. Female epigynum; surrounded with sclereotized rim, a pair of copulatory openings laterally.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size, darker body coloration and legs

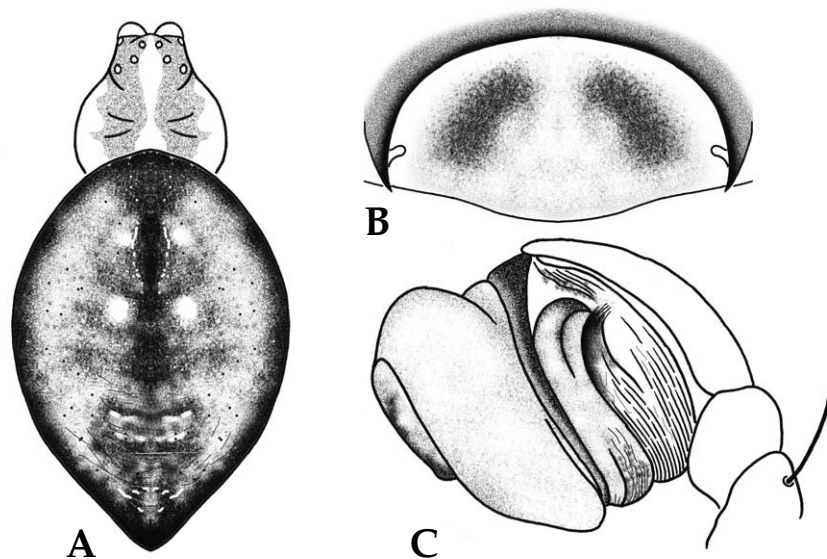


Fig. 12. *Octonoba sybotides*. A. female body; B. female epigynum; C. male palp.

with many spines. Male palp; bulb globular, embolus long and thick, curved.

**DISTRIBUTION:** Korea, China, Japan.

**KOREA:** GN, JN.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Changwon, Gyeongsangnam-do: 1.x.2009); 1 ♀ (Geojedo, Gyeongsangnam-do: 2.ix.2009); 3 ♀ ♀ (Wando, Jeollanam-do: 2.x.1992); 1 ♀ (Wando, Jeollanam-do: 2.ix.2009).

**ECOLOGY:** Founded in the bushes of mountainous region or entrance of cave. Construct large orb web decorated with spiral stablimentum.

## 10. *Octonoba varians* (Bösenberg and Strand, 1906) (Fig. 13)

Ul-do-eung-dal-geo-mi (울도응달거미)

*Uloborus varians* Bösenberg and Strand, 1906, p. 102; Yaginuma, 1954c, p. 16; 1960, p. 25; 1962a, p. 67; 1971, p. 25; 1986, p. 13; Paik, 1978, p. 198; Hu, 1984, p. 65; Chikuni, 1989, p. 23.

*Uloborus defectus* Bösenberg and Strand, 1906, p. 103; Yaginuma, 1954c, p. 15.

*Uloborus dubius* Bösenberg and Strand, 1906, p. 105; Yaginuma, 1954b, p. 15.

*Uloborus incognitus* Dönitz and Strand, in Bösenberg and Strand, 1906, p. 374.

*Zosis varians* Lehtinen, 1967, p. 277.

*Octonoba varians* Yoshida, 1980, p. 59; 1983, p. 37; 2009a, p. 145; Hu, 1983, p. 12; Zhu et al., 1985, p. 62; Chen and Gao, 1990, p. 32; Chen and Zhang, 1991, p. 49; Song, Zhu and Chen, 1999, p. 84; 2001, p. 88; Kim and Lee, 1999, p. 11; Namkung, 2001, p. 72; 2003, p. 74.

*Octonoba incognitus* Yoshida, 1980, p. 61.

**Female:** Body length 5.0–6.0 mm. Carapace slightly longer than wide; yellowish brown; black

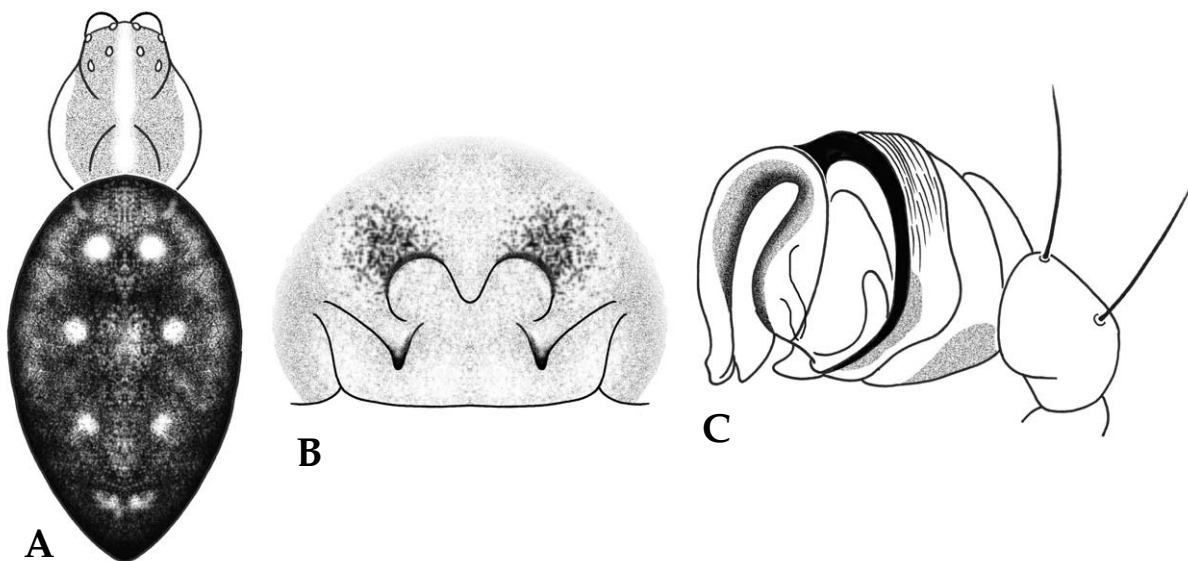


Fig. 13. *Octonoba varians*. A. female body; B. female epigynum; C. male palp.

thick band pattern situated at median region and margin of thoracic region. Chelicerae yellowish brown with 5 promarginal teeth and 4 retromarginal teeth. Sternum dusky yellowish brown, scutiform; brown long hairs sparsely sprouted. Legs yellowish brown or black with brown annulations. Abdomen longer than wide, oviform; anterior region rather high with several elevations. Dorsum yellowish brown with black longitudinal stripe medianly accompanied by black or dusky brown complex patterns showing color and pattern variations. Female epigynum; rather sclerotized, a pair of projections paralell.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size and black body coloration. Male palp; bulb globular, embolus long and thick, curved.

**DISTRIBUTION:** Korea, China, Japan.

**KOREA:** GW.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Daewha, Gangwon-do: 17.vi.1993).

**ECOLOGY:** Founded in the bushes of mountainous region and fields, streamsides or entrance of cave. Construct horizontal large orb web decorated with spiral stablimentum.

## 11. *Octonoba yesoensis* (Saito, 1934) (Fig. 14)

Bug-eung-dal-geo-mi (북응달거미)

*Argyrodes yesoensis* Saito, 1934b, p. 303; 1959, p. 69.

*Zosis yesoensis* Lehtinen, 1967, p. 277.

*Uloborus yesoensis* Namkung, Paik and Yoon, 1971, p. 50; Yaginuma, 1986, p. 13; Chikuni, 1989, p. 23.

*Zosis hyrcana* Brignoli, 1979, p. 278.

*Octonoba yesoensis* Yoshida, 1980, p. 62; 2009a, p. 145; Wang and Zhu, 1983, p. 164; Marusik, 1987, p. 613; Song, Zhu and Chen, 1999, p. 84; Kim and Lee, 1999, p. 12; Namkung, 2001, p. 73; 2003, p. 75.

**Female:** Body length 4.5–6.0 mm. Carapace slightly longer than wide; blackish brown; brown stripes at the margin of thoracic region. Chelicerae brown. Sternum brown. Legs yellowish brown with dark brown annulations. Abdomen longer than wide, ovoid; anterior region rather high with several elevations. Dorsum yellowish brown mixed with white, yellow and dark brown showing color and pattern variations. Female epigynum; rather protruded with sclerotized semicircular rim at upper part.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size and dusky yellowish brown body coloration. Male palp; bulb globular, embolus long and thick, curved.

**DISTRIBUTION:** Korea, China, Japan, Russia, Iran.

**KOREA:** GW, JN.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Cheolwon, Gangwon-do: 2.viii.2006).

**ECOLOGY:** Founded in the bushes of mountainous region and cliffs, or entrance of cave. Construct large horizontal orb web decorated with spiral or vertical stablimentum.

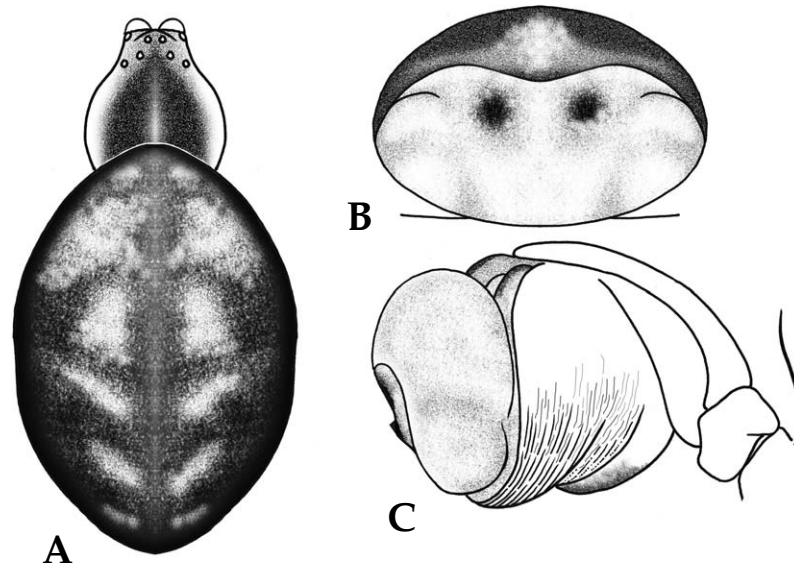


Fig. 14. *Octonoba yesoensis*. A. female body; B. female epigynum; C. male palp.

### Genus *Philoponella* Mello-Leitao, 1917

Wang-gwan-eung-dal-geo-mi-sok (왕관응달거미속)

Carapace almost round; head region slightly elevated from a deeply pitted semicircular fovea to eye area. Eight eyes; anterior median eyes on a anteriorly directed mound. Abdomen oval and very high. Male palp with a grooved conductor. Female epigynum; strongly sclerotized with a large deep, central atrium bordered by precipitous rims.

Type species: *Uloborus republicanus* Simon, 1891.

#### 12. *Philoponella prominens* (Bösenberg and Strand, 1906) (Fig. 15, Pls. 7, 8)

Wang-gwan-eung-dal-geo-mi (왕관응달거미)

*Uloborus prominens* Bösenberg and Strand, 1906, p. 106; Yaginuma, 1954c, p. 15; Paik, 1978, p. 193.

*Philoponella prominens* Yoshida, 1980, p. 63; 1991, p. 26; 2009a, p. 144; Hu, 1983, p. 12; Feng, 1990, p. 41; Chen and Gao, 1990, p. 33, Song, Zhu and Chen, 1999, p. 84; Kim and Lee, 1999, p. 13; Namkung, 2001, p. 74; 2003, p. 76; Kim and Cho, 2002, p. 251.

*Philoponella prominens* Chen and Zhang, 1991, p. 50.

**Female:** Body length 4.0–6.0 mm. Carapace longer than wide; dusky brown with black and white hairs; fovea transversely pitted. Chelicerae yellowish brown with 6 promarginal teeth and 3 retromarginal teeth. Sternum blackish brown with black and white hairs. Legs yellowish brown with blackish brown annulations. Abdomen longer than wide, ovoid; very high. Dorsum black

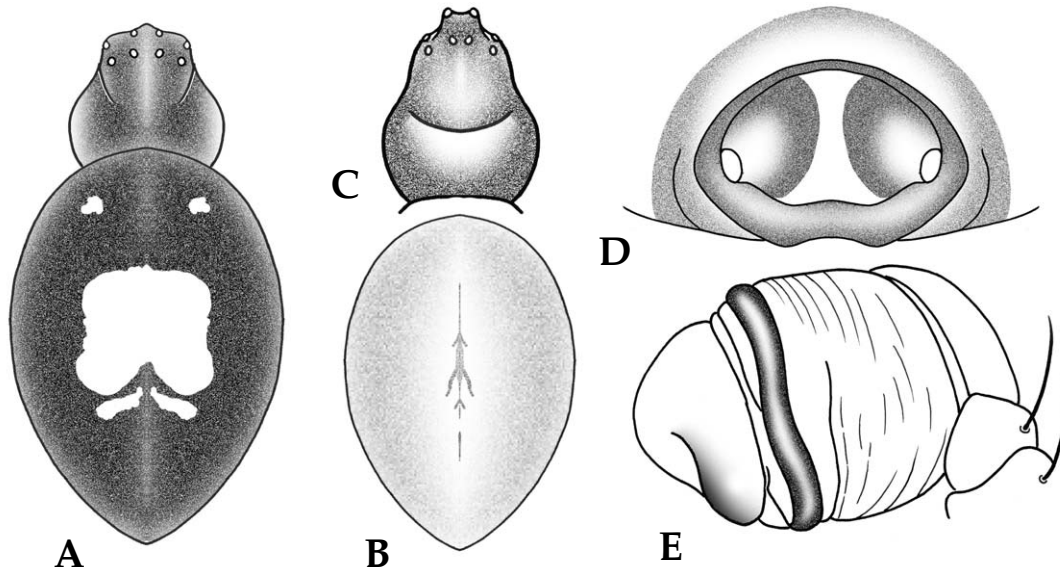


Fig. 15. *Philoponella prominens*. A. female body; B. female abdomen (variation); C. male carapace; D. female epigynum; E. male palp.

with butterfly shaped marking showing color and pattern variations, e.g., yellowish brown covered reticulated patterns. Female epigynum; slightly protruded, surrounded with sclerotized rim, copulatory openings laterally.

**Male:** Body length 3.0–4.5 mm. Similar to females, smaller size and dusky yellowish brown body coloration; carapace round and black; eye tubercle protruded. Male palp; bulb globular, embolus long and thick, curved.

**DISTRIBUTION:** Korea, China, Japan.

**KOREA:** GG, CB, GN, JB.

**SPECIMEN EXAMINED:** 1♂ (Icheon, Gyeonggi-do: 29.v.2009); 1♂ (Goesan, Chungcheongbuk-do: 29.ix.1998); 1♀ (Changwon, Gyeongsangnam-do: 27.viii.2010); 2♀♀ (Mt. Naejangsan, Jeollabuk-do: 10.vi.2008); 1♀ (Mt. Naejangsan, Jeollabuk-do: 30.vii.2008); 1♀ (Mt. Baekryeonsan, Seoul: 5.vii.1997).

**ECOLOGY:** Social spiders. Founded in the bushes or shrubs of mountainous region. Construct irregular and humble orb web without stablimentum.

## Genus *Uloborus* Latreille, 1806

Eung-dal-geo-mi-sok (응달거미속)

Carapace oval. Eight eyes subequal; anterior eyes on tubercles, posterior eyes without tubercles. Leg I much longer and more robust than others; metatarsi IV not compressed below calamistrum. Abdomen lanciform; dorsally hunch-backed. Male palp with a well developed median apophysis. Female epigynum with 2 lateral lobes extend from posterior margin.

Type species: *Uloborus walckenaerius* Latreille, 1806.

### 13. *Uloborus walckenaerius* Latreille, 1806 (Fig. 16, Pl. 9)

Yu-reob-eung-dal-geo-mi (유럽응달거미)

*Uloborus walckenaerius* Latreille, 1806, p. 110; Hahn, 1833a, p. 122; Walckenaer, 1841, p. 228; C.L. Koch, 1844, p. 161; Simon, 1874, p. 170; 1892, p. 214; O.P.-Cambridge, 1881, p. 285; Becker, 1896, p. 70; Bösenberg, 1901, p. 54; Berland, 1913, p. 28; Drensky, 1939, p. 242; Locket and Millidge, 1951, p. 71; Wiehle, 1953, p. 114; Namkung, 1964, p. 33; 2001: p.75; 2003, p. 77; Yaginuma, 1967, p. 92; Fuhn and Niculescu-Burlacu, 1969, p. 81; Loksa, 1969, p. 57; Miller, 1971, p. 72; Brignoli, 1978, p. 288; 1979, p. 277; Paik, 1978, p. 199; Hu, 1983, p. 11; Dunin, 1984, p. 145; Roberts, 1985, p. 56; 1995, p. 90; 1998, p. 93; Zhu et al., 1985, p. 63; Yaginuma, 1986, p. 13; Zhang, 1987, p. 5; Chen and Gao, 1990, p. 36; Chen and Zhang, 1991, p. 51; Heimer and Nentwig, 1991, p. 56; Song, Zhu and Chen, 1999, p. 84; 2001, p. 89; Kim and Lee, 1999, p. 14; Hu, 2001, p. 428; Yoshida, 2009a, p. 143; Le Peru, 2011, p. 336.

*Dysdera fasciata* Risso, 1826, p. 162.

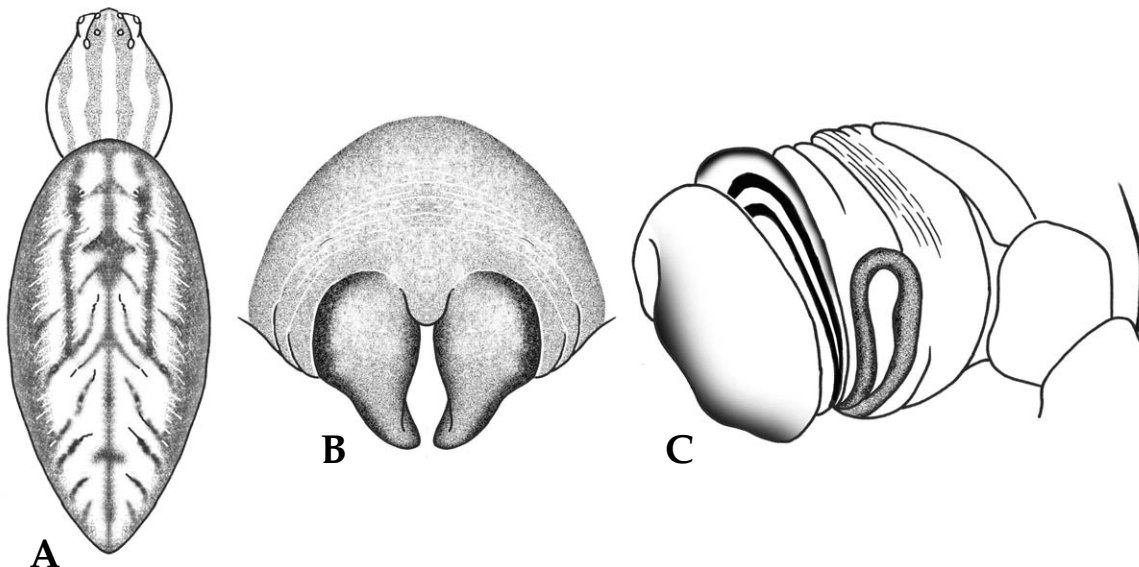


Fig. 16. *Uloborus walckenaerius*. A. female body; B. female epigynum; C. male palp.

*Veleda lineata* Blackwall, 1859, p. 96; 1861, p. 150.

*Veleda pallens* Blackwall, 1862, p. 372.

*Uloborus walckenaerii* Chyzer and Kulczyn'ski, 1891, p. 147.

**Female:** Body length 4.0–6.0 mm. Carapace longer than wide; yellowish brown with black and white hairs; 2 pairs of longitudinal blackish brown stripes at both margins. Chelicerae yellowish brown with one promarginal teeth and no tooth on retromargin. Sternum brown with black and white hairs. Legs yellowish brown with fade annulations. Abdomen much longer than wide, ovoid; highest at 1/3 from front. Dorsum yellowish white with black longitudinal stripe medianly accompanied by 3 longitudinal stripes. Female epigynum; sclerotized and slightly protruded with a pair of long and thick projections.

**Male:** Body length 3.0–4.5 mm. Similar to females, smaller size and thick brown body coloration; head region narrow. Male palp; bulb globular, embolus long and thick, curved.

**DISTRIBUTION:** Korea, China, Japan, Russia, Europe (Palearctic).

**KOREA:** GW, GG.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Seolaksan, Gangwon-do: 2.viii.1992); 1 ♀, 1 ♂ (Jeongok, Gyeonggi-do: 15.viii.1997).

**ECOLOGY:** Founded in the bushes and shrubs of mountainous region. Construct orb web decorated with stablimentum.

## Family Theridiosomatidae Simon, 1881

Al-mang-geo-mi-gwa (알망거미과)

The spider family Theridiosomatidae is a small family comprising more than 16 genera and 89 species occurring worldwide (Platnick, 2013). Theridiosomatid spiders are very small (< 3.0 mm) araneomorph spiders with three tarsal claws belonging to entelegyne without cribellum (Fig. 17A). Carapace pear-shaped, hairless or with setae sparsely. Eight eyes in 2 rows, posterior eye row straight or procurved and anterior eye row recurved (Fig. 17B). Chelicerae robust without lateral condyle; with cheliceral teeth. Sternum with pit organs on promargin in both sexes (Fig. 17C). Abdomen ovoid and globular, sometime with tubelcles in variable positions. Legs with trichobothria on tibiae (Fig. 17D). Female epigyne usually flat or a domed sclerotized plate; spermathecae fused along the midline. Male palp without paracymbium but a simple hook at base on the lateral margin; median apophyses varies in shape; embolus a single long, robust sclerite. Most Theridiosomatid spiders construct orb webs in variable shapes in dark, shaded and humid places.

Type genus: *Theridiosoma* O.P.-Cambridge, 1879.

### Key to the genera of family Theridiosomatidae

1. Head region flat, distance between posterior median eyes wider than diameter of posterior median eyes ..... *Ogulnius*
- Head region convex, distance between posterior median eyes narrower than diameter of posterior median eyes ..... *Theridiosoma*

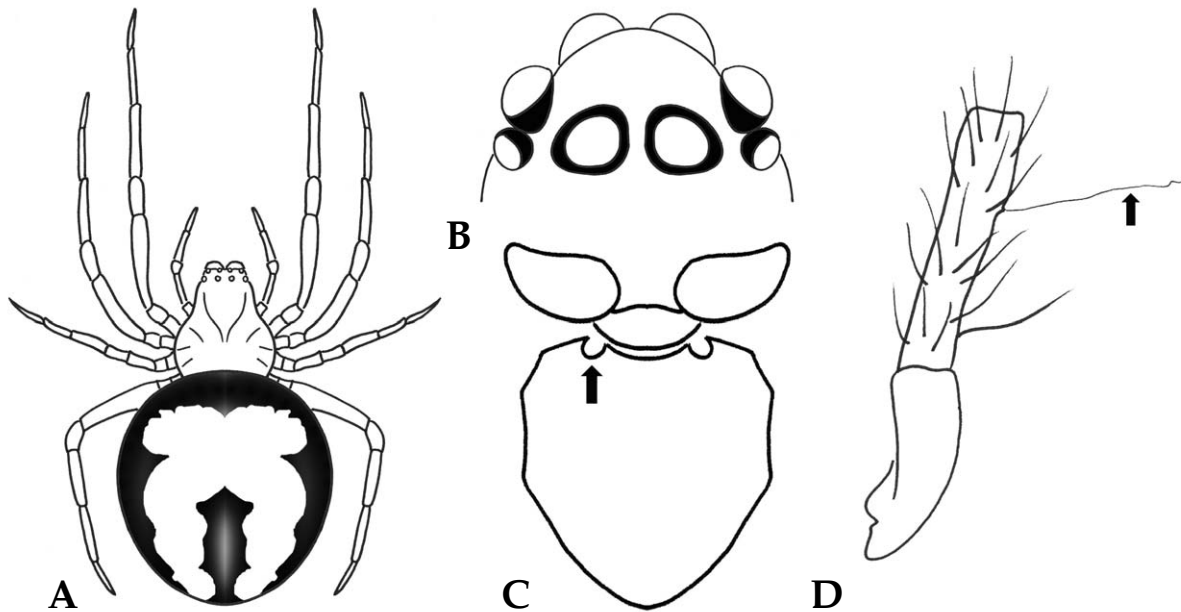


Fig. 17. Taxonomic characters of Theridiosomatidae (A. body; B. eye area; C. pit organ of sternum; D. trichobothria of tibiae)

### Genus *Ogulnius* O.P.-Cambridge, 1882

San-gil-al-mang-geo-mi-sok (산길알망거미속)

Carapace oval and relatively small to abdomen; head region flat; eye area high. Eight eyes; distance between posterior median eyes wider than diameter of posterior median eye. Legs short and stout. Abdomen globular. Body coloration yellowish red in general. Male palp with large embolus. Female epigynum less sclerotized.

Type species: *Ogulnius obtectus* O.P.-Cambridge, 1882.

#### 14. *Ogulnius pullus* Bösenberg and Strand, 1906 (Fig. 18)

San-gil-al-mang-geo-mi (산길알망거미)

*Ogulnius pullus* Bösenberg and Strand, 1906, p. 244; Yaginuma, 1960, p. 40; 1971, p. 40; 1986, p. 61; Brignoli, 1981, p. 13; Chikuni, 1989, p. 89; Namkung, 2001, p. 141; 2003, p. 143; Ono and Shinkai, 2009, p. 394.

*Ogulnius agnoscus* Strand, 1918, p. 81; Shinkai, 1981, p. 58.

**Female:** Body length 1.5–2.0 mm. Carapace longer than wide; brown; head region narrow and convex posteriorly. Chelicerae brown without boss. Sternum reddish brown; reverse trapezoid shaped with truncated front and rear. Legs light brown; blunted without annulation. Abdomen

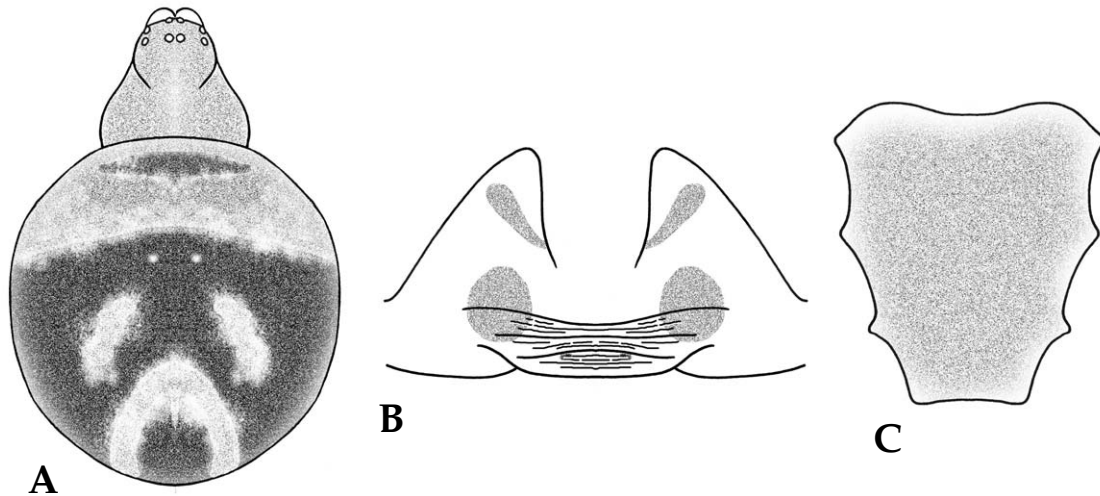


Fig. 18. *Ogulnius pullus*. A. female body; B. female epigynum; C. sternum.

length and width subequal or slightly longer than wide, globular; covered thoracic region. Dorsum with transverse yellowish white pattern on the shoulder; dark brown with light brown markings posteriorly. Female epigynum; triangular, wrinkled at lower part, spermathecae visible.

**Male:** Described by Ono and Shinkai (2009).

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GW.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Seolaksan, Gangwon-do: 15.vii.2004).

**ECOLOGY:** Founded in the bushes and shrub stumps of mountainous region. Construct horizontal orb web.

## Genus *Theridiosoma* O.P.-Cambridge, 1879

Al-mang-geo-mi-sok (알망거미속)

Carapace short and wide; head region slightly convex. Eight eyes; distance between posterior median eyes narrower than diameter of posterior median eye. Legs without spines. Abdomen globular and high; projecting over posterior part of carapace; body coloration blackish brown in general. Male palp with small and slightly sclerotized median apophysis; embolus almost unsighted by large conductor. Female epigynum with angled plate covering copulatory opening.

Type species: *Theridion gemmosum* Koch, 1877.

15. *Theridiosoma epeiroides* Bösenberg and Strand, 1906 (Fig. 19, Pls. 10, 11)  
Al-mang-geo-mi (알망거미)

*Theridiosoma epeiroides* Bösenberg and Strand, 1906, p. 243; Saito, 1959, p. 109; Yaginuma, 1960, p. 40; 1971, p. 40; 1986, p. 61; Paik, 1978, p. 295; Brignoli, 1981, p. 15; Marusik, 1989, p. 46; Chikuni, 1989, p. 89; Namkung, 2001, p. 140; 2003, p. 142; Ono and Shinkai, 2009, p. 394.

**Female:** Body length 1.8–2.3 mm. Carapace longer than wide; yellowish brown; head region elevated with dark brown stripes at both margins. Chelicerae yellowish brown without boss; 3 promarginal teeth and no tooth on retromargin. Sternum grayish brown with black margins, scuti-form. Legs yellowish brown without annulation. Abdomen slightly longer than wide, globular. Dorsum yellowish gray with broad lateral patterns by silver reticulated patterns. Female epigynum; sclerotized and slightly protruded, surrounded with a pair of sclerotized projections, median septum visible faintly.

**Male:** Body length 1.4–1.7 mm. Similar to females, smaller size and darker body coloration. Male palp; tegulum largely developed, median apophysis hook shaped, embolus inconspicuous and hidden in conductor.

**DISTRIBUTION:** Korea, Japan, Russia.

**KOREA:** JB.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Mt. Naejongsan, Jeollabuk-do: 18.vi.2010).

**ECOLOGY:** Founded in the bushes and between rocks of mountainous region. Construct cone shaped orb web vertically.

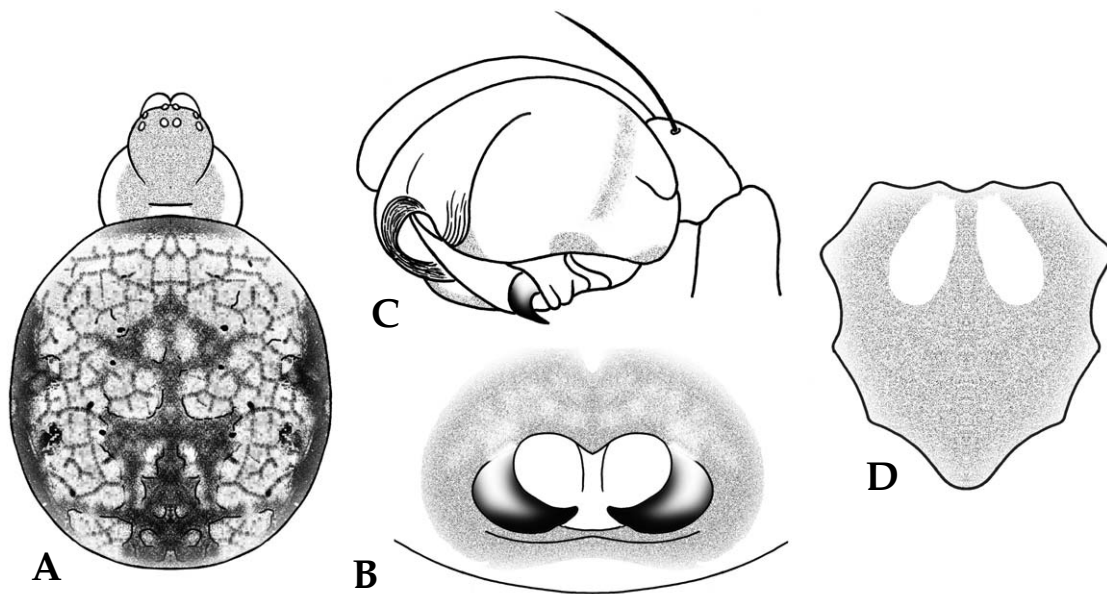


Fig. 19. *Theridiosoma epeiroides*. A. female body; B. female epigynum; C. male palp; D. sternum.

## Family Tetragnathidae Menge, 1866

### Gal-geo-mi-gwa (갈거미과)

The spider family Tetragnathidae is a medium-sized family comprising more than 47 genera and 957 species occurring worldwide (Platnick, 2013). Tetragnathid spiders are small to very large (2.0–23.0 mm) araneomorph spiders with three tarsal claws belonging to entelegyne without cribellum (Fig. 20A). Carapace longer than wide, almost rectangular. Eight eyes, lateral eyes contiguous or apart, sometimes on tubercle (Fig. 20B). Chelicerae variable, short or long and well developed with rows of large teeth and strong projecting spurs (Fig. 20C). Endite broad and long (Fig. 20D). Sternum pointed posteriorly. Abdomen variable in shape, elongate and cylindrical or ovoid, epigastric furrow almost straight. Legs with a row of straight tichobothria often branched on tibiae, femora often with dorsal trichobothria (Fig. 20E). Female epigyne sometimes indistinct; spermathecae ovoid. Male palp with distally broadened tibiae; paracymbium separate and movable or fused to cymbium, digitiform; tegulum spherical with coiled embolus wrapped by conductor at distal tip; median apophysis absent. Most Tetragnathid spiders construct orb webs vertically or horizontally in a variety of habitats.

Type genus: *Tetragnatha* Latreille, 1804.

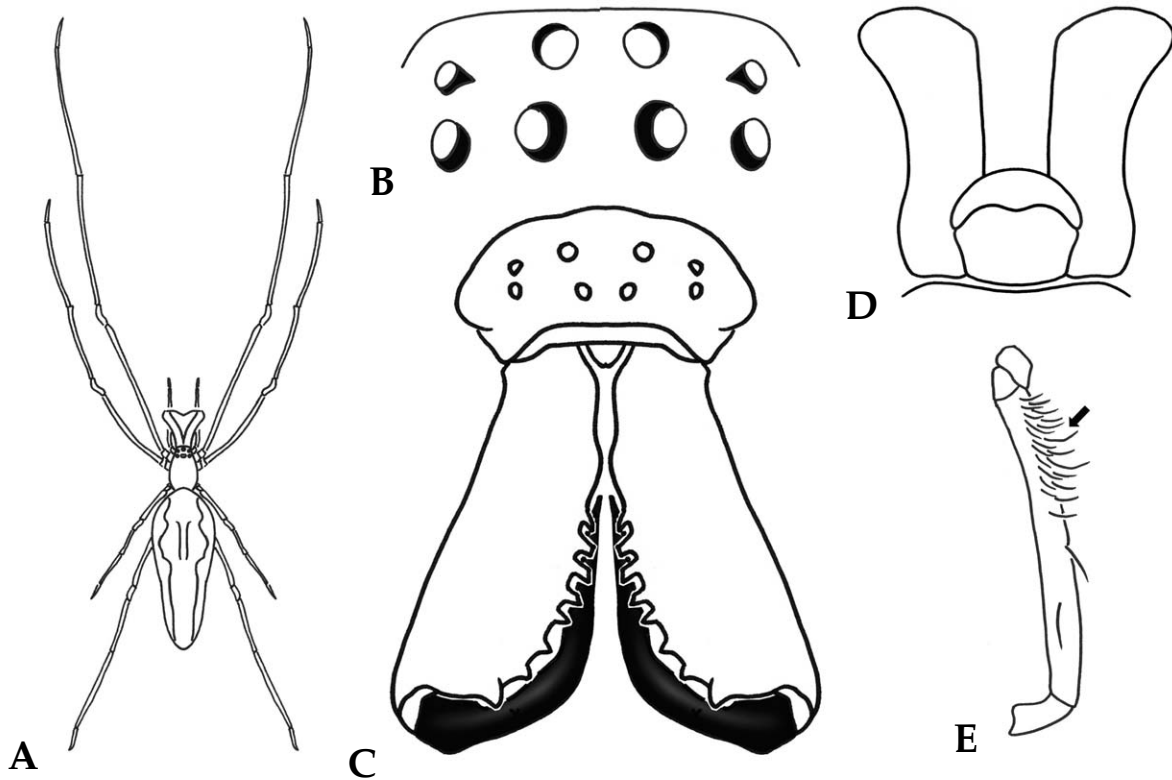


Fig. 20. Taxonomic characters of Tetragnathidae. A. body; B. eye area; C. chelicerae; D. endite and labium; E. trichobothria of femora.

**Key to the genera of family Tetragnathidae**

1. Abdomen elongated cylinder shaped ..... 2
  - Abdomen ovoid or globular ..... 3
2. Chelicerae largely developed, legs with normal spines ..... *Tetragnatha*
  - Chelicerae normal, legs covered with well developed spines ..... *Menosira*
3. Body length < 6 mm ..... 4
  - Body length > 6 mm ..... 5
4. Abdominal dorsum without distinct pattern ..... *Diphya*
  - Abdominal dorsum with distinct pattern ..... *Pachygnatha*
5. Abdominal dorsum covered with scale patterns ..... *Leucauge*
  - Abdominal dorsum without scale pattern ..... 6
6. Abdominal dorsum with large folium ..... *Metleucauge*
  - Abdominal dorsum with mottled patterns ..... *Meta*

**Genus *Diphya* Nicolet, 1849**

Gak-si-eo-ri-gal-geo-mi-sok (각시어리갈거미속)

Carapace longer than wide. Eight eyes; anterior median eye much smaller than others. Legs I and II prolaterally with a row of spines. Abdomen globular. Male palp simple; cymbium with retrolateral projection; tegulum spherical; large embolus largely curved. Female epigynum complex relatively compared to other tetragnathid spiders.

Type species: *Diphya macrophthalma* Nicolet, 1849.

**Key to the species of genus *Diphya***

1. Chelicerae with 4 retromarginal teeth, eye area black, legs short and slender ..... *D. okumae*
  - Chelicerae with 2 retromarginal teeth, eye area not black, legs short and stout ..... *D. albula*

**16. *Diphya albula* (Paik, 1983) (Fig. 21)**

Huin-bae-gom-bo-gal-geo-mi (흰배곰보갈거미)

*Lophomma albulum* Paik, 1983, p. 31; Namkung, 2001, p. 199; 2003, p. 201.

*Diphya albulum* Marusik, Gnelitsa and Koponen, 2007, p. 161.

**Male:** Body length about 2.5 mm. Carapace dark reddish brown, oviform; covered with round granules; head region rather narrow. Chelicerae light yellow with 3 promarginal teeth and 2 retromarginal teeth. Sternum yellowish brown with many granules, triangular. Legs yellowish brown with darker distal end; stout and well developed. Abdomen ovoid. Dorsum dark gray; 4 muscle impressions distinct; 3–4 pairs of slant patterns posteriorly. Male palp; cymbium with pointed projection at upper part and spoon shaped paracymbium, embolus long and thick.

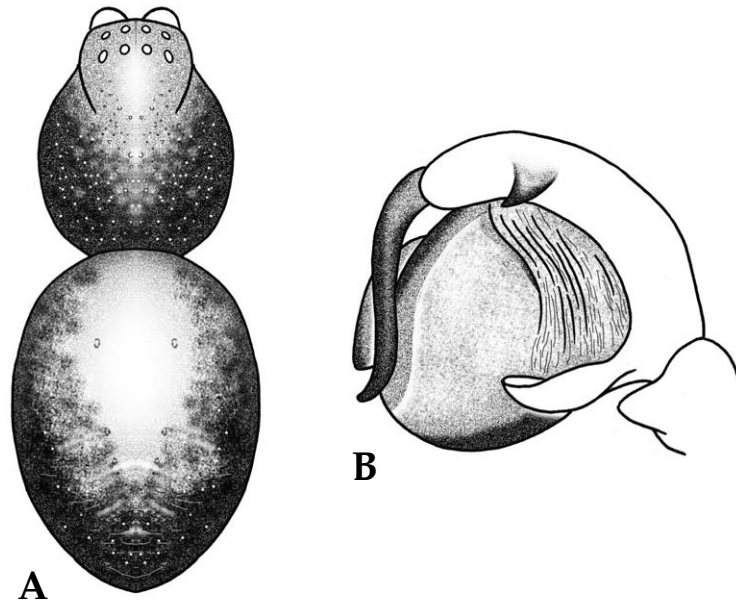


Fig. 21. *Diphya albula*. A. male body; B. male palp.

**Female:** Described by Namkung (2001, 2003).

**DISTRIBUTION:** Korea.

**KOREA:** GB.

**SPECIMEN EXAMINED:** 1♂ (Chilgok, Gyeongsangbuk-do: 20.viii.2008).

**ECOLOGY:** Founded in the bushes of mountainous region and grasslands.

### 17. *Diphya okumae* Tanikawa, 1995 (Fig. 22)

Gak-si-eo-ri-gal-geo-mi (각시어리갈거미)

*Diphya okumae* Tanikawa, 1995, p. 102; 2007, p. 96; 2009, p. 406; Zhu, Song and Zhang, 2003, p. 56; Namkung, 2003, p. 239; Kim, Kim and Lee, 2008, p. 44.

**Female:** Body length 3.5–4.0 mm. Carapace dark orange; many speckles scattered; cervical furrow and radial furrow indistinct; eye area black, anterior median eyes smallest. Chelicerae orange with 3 promarginal teeth and 4 retromarginal teeth. Legs yellowish brown; short and slender; legs I and II with long spines on the tibiae and metatarsi. Abdomen globular. Dorsum light brown with dark stained laterally; 4 muscle impressions distinct. Female epigynum; slightly sclerotized and rather protruded, surrounded with thick rim.

**Male:** Described by Tanikawa (1995).

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GW.

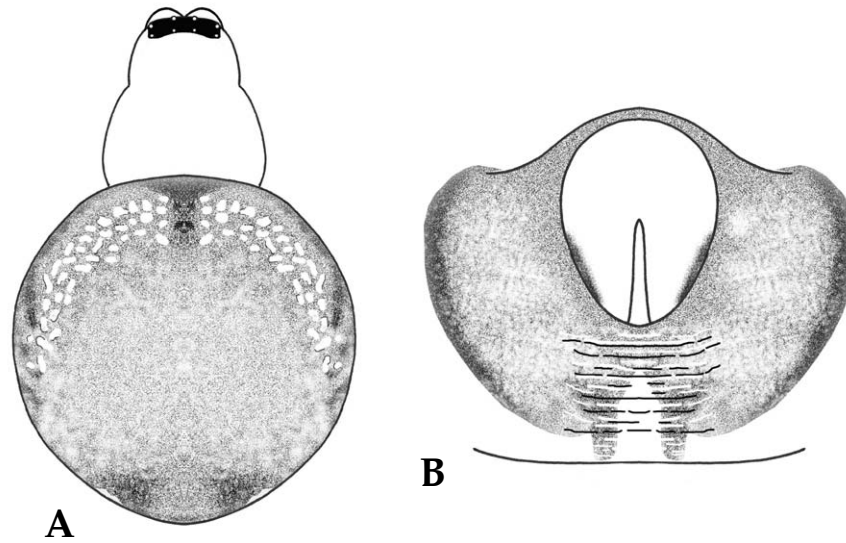


Fig. 22. *Diphya okumae*. A. female body; B. female epigynum.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Chiaksan, Gangwon-do: 20.v.2004).

**ECOLOGY:** Founded in the bushes of mountainous region and grasslands.

## Genus *Leucauge* White, 1841

Baek-geum-geo-mi-sok (백금거미속)

Carapace truncate anteriorly; fovea deeply pitted. Legs I and II long and slender; femora IV with a double fringe of tricothoria on the prolateral surface of the basal half. Abdomen long ovoid; longer than wide; silvery coloration; epigastric furrow indistinct. Male palp with paracymbium that small and digitiform. Female epigynum with median septum.

Type species: *Epeira venusta* Walckenaer, 1841.

### Key to the species of genus *Leucauge*

1. Body color gold, abdomen without anterior protuberance ..... *L. subgemmea*
- Body color silver, abdomen with anterior protuberance ..... 2
2. Abdomen with distinct blackish anterior protuberance ..... *L. blanda*
- Abdomen with indistinct anterior protuberance ..... *L. celebesiana*

### 18. *Leucauge blanda* (L. Koch, 1878) (Fig. 23)

Jung-baek-geum-geo-mi (중백금거미)

*Meta blanda* L. Koch, 1878a, p. 743.

*Meta japonica* Thorell, 1881, p. 126.

*Leucauge blanda* Bösenberg and Strand, 1906, p. 182; Nakatsudi, 1942, p. 309; Yaginuma, 1953, p. 28; Yaginuma, 1954a, p. 2; 1960, p. 70; 1971, p. 70; 1986, p. 127; Saito, 1959, p. 111; Lee, 1966, p. 55; Chu and Okuma, 1970, p. 72; Yin, 1976, p. 120; Song, 1980, p. 114; 1987, p. 181; Hu, 1984, p. 136; Chikuni, 1989, p. 91; Feng, 1990, p. 104; Chen and Gao, 1990, p. 77; Chen and Zhang, 1991, p. 120; Zhao, 1993, p. 266; Barrion and Litsinger, 1994, p. 328; Kim, Kim and Lee, 1999, p. 46; Song, Zhu and Chen, 1999, p. 213; Hu, 2001, p. 591; Namkung, 2001, p. 223; 2003, p. 225; Zhu, Song and Zhang, 2003, p. 220; Tanikawa, 2007, p. 101; 2009, p. 410; Kim, Kim and Lee, 2008, p. 35.

*Leucauge blanda japonica* Bösenberg and Strand, 1906, p. 184.

*Leucauge szechuensis* Schenkel, 1936, p. 93.

**Female:** Body length 9.0–12.0 mm. Carapace longer than wide; yellowish brown with dark brown margin; head region high; cervical furrow and radial furrow distinct. Chelicerae dark brown. Sternum brown. Legs yellowish brown; long and well developed; leg IV with 2 rows of trichobothria on the femora. Abdomen longer than wide, ovoid. Dorsum gold-silvery white with 3 dark brown branch patterns that partitioned anteriorly and tapered posteriorly; a pair of protuberances on the shoulder. Venter dark green with silver scale pattern scattered; a pair of yellow spots at the front spinneret and 3 pairs of yellow spots behind spinnerets. Female epigynum; sclerotized with median septum; copulatory openings situated longitudinally juxtaposed.

**Male:** Body length 6.0–8.0 mm. Similar to females, smaller size and lighter body coloration; dorsum thick brown with indistinct band pattern. Male palp; cymbium with big toe shaped paracymbium.

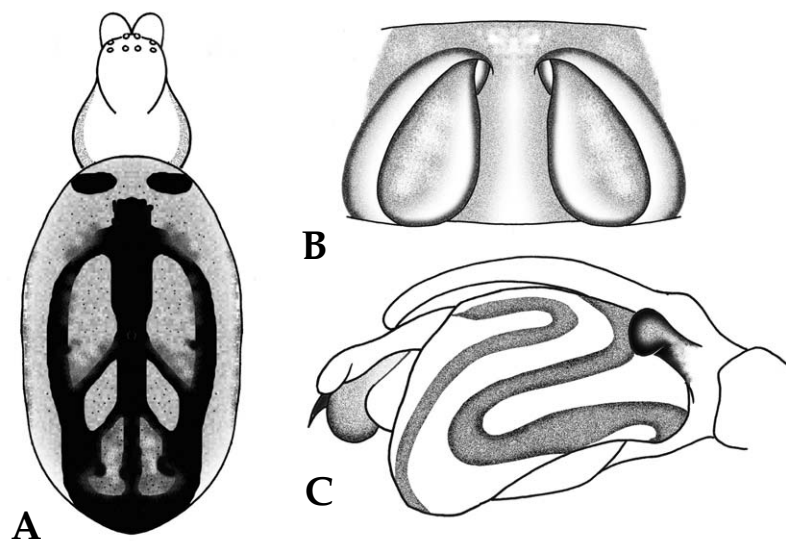


Fig. 23. *Leucauge blanda*. A. female body; B. female epigynum; C. male palp.

**DISTRIBUTION:** Korea, China, Japan, Taiwan, Russia.

**KOREA:** JN, JJ.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Wando, Jeollanam-do: 3.viii.2010); 5 ♀ ♀, 2 ♂ ♂ (Mt. Hallasan, Jeju-do: 7.ix.1998); 2 ♀ ♀, 3 ♂ ♂ (Mt. Hallasan, Jeju-do: 2.viii.2006).

**ECOLOGY:** Founded in the warm places of mountainous region and plains. Construct horizontal orb web.

## 19. *Leucauge celebesiana* (Walckenaer, 1842) (Fig. 24, Pl. 12)

Kko-ma-baek-geum-geo-mi (꼬마백금거미)

*Tetragnatha celebesiana* Walckenaer, 1841, p. 222.

*Epeira nigro-trivittata* Doleschall, 1859, p. 39.

*Meta celebesiana* Simon, 1885, p. 38.

*Meta nigrotrivittata* Simon, 1885, p. 38.

*Argyropeira nigrotrivittata* Thorell, 1890, p. 198; Simon, 1894, p. 728.

*Argyropeira celebesiana* Simon, 1894, p. 730.

*Leucauge nigrotrivittata* Simon, 1905c, p. 61.

*Leucauge celebesiana* Hogg, 1919, p. 89; Gravely, 1921, p. 454; Sherriffs, 1936, p. 111; Roewer, 1938, p. 46; Nakatsudi, 1943, p. 161; Tikader, 1966, p. 12; 1970, p. 42; 1982, p. 83; Chrysanthus, 1975, p. 23; Song and Zhu, 1992, p. 112; Barrion and Litsinger, 1994, p. 328; 1995, p. 545; Song, Chen and Zhu, 1997, p. 1708; Song, Zhu and Chen, 1999, p. 213; Kim and Cho, 2002, p. 315; Zhu, Song and Zhang, 2003, p. 223; Namkung, 2003, p. 227; Kim, Kim and Lee, 2008, p. 35; Yoshida, 2009b, p. 12.

*Leucauge retracta* Chamberlin, 1924a, p. 13; Song, 1988, p. 127.

*Leucauge veterascens* Chamberlin, 1924a, p. 13.

(illustrated, no Latin name) Kayashima, 1943, pl. 3.

*Leucauge magnifica* Yaginuma, 1954a, p. 2; Yaginuma, 1960, p. 70; 1971, p. 70; 1986, p. 127; Lee, 1966, p. 55; Yin, 1976, p. 120; Hikichi, 1977, p. 154; Song, 1980, p. 116; Wang, 1981, p. 85; Hu, 1984, p. 138; Song, 1987, p. 181; Chikuni, 1989, p. 91; Kim, 1990, p. 149; Feng, 1990, p. 105; Chen and Gao, 1990, p. 78; Chen and Zhang, 1991, p. 120; Song, Zhu and Li, 1993, p. 867; Zhao, 1993, p. 267; Kim, Kim and Lee, 1999, p. 47; Song, Zhu and Chen, 1999, p. 216; Hu, 2001, p. 593; Namkung, 2001, p. 224; 2003, p. 226; Kim and Cho, 2002, p. 315; Zhu, Song and Zhang, 2003, p. 231; Tanikawa, 2007, p. 101; 2009, p. 410; Kim, Kim and Lee, 2008, p. 35.

*Leucauge tuberculata* Wang, 1991, p. 156; Song, Zhu and Chen, 1999, p. 216.

**Female:** Body length 8.0–11.0 mm. Carapace longer than wide; light brown with black margins; head region narrow; fovea and cervical furrow distinct. Chelicerae dark brown. Sternum brown with black margins. Abdomen longer than wide, ovoid. Dorsum silvery white with black, thick and slender branch pattern longitudinally; a pair of weak protuberances on the shoulder. Venter blackish brown with longitudinal stripe and several silver scale patterns. Female epigynum; sclerotized with median septum, copulatory openings situated longitudinally juxtaposed.

**Male:** Body length 6.0–8.0 mm. Similar to females, smaller size and lighter body coloration; dorsum with thick brown band pattern. Male palp; cymbium with big toe shaped paracymbium.

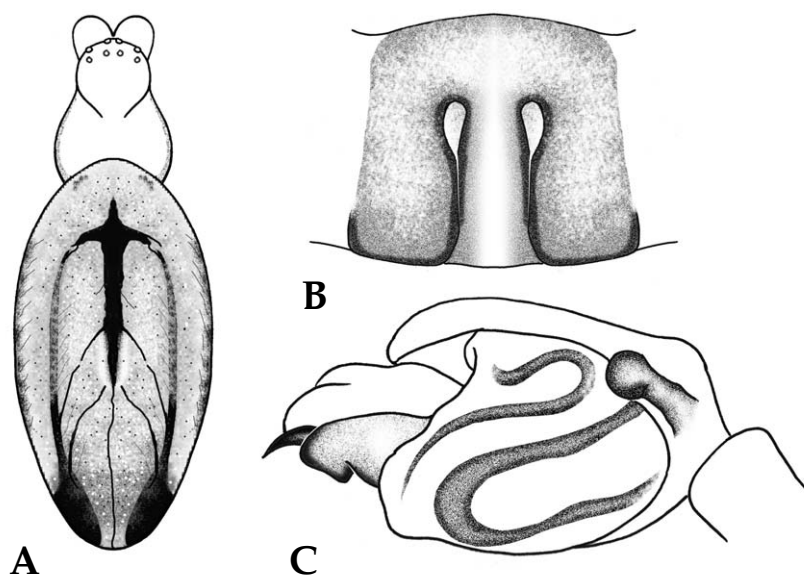


Fig. 24. *Leucauge celebesiana*. A. female body; B. female epigynum; C. male palp.

**DISTRIBUTION:** Korea, China, Japan, Russia, Indonesia, New Guinea.

**KOREA:** GW, GG, CB, GB, JB.

**SPECIMEN EXAMINED:** 2 ♀♀ (Mt. Maebongsan, Gangwon-do: 20.ix.1998); 1 ♀ (Paju, Gyeonggi-do: 20.v.1997); 4 ♀♀ (Baran, Gyeonggi-do: 18.vii.2001); 1 ♂ (Hwaseong, Gyeonggi-do: 26.vii.2002); 1 ♀, 1 ♂ (Goesan, Chungcheongbuk-do: 6.ix.2006); 1 ♂ (Mungyeong, Gyeongsangbuk-do: 11.vi.1990); 1 ♀ (Changwon, Gyeongsangnam-do: 1.x.2009); 18 ♀♀, 10 ♂♂ (Mt. Naejongsan, Jeollabuk-do: 10.vi.2008); 4 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 3.vii.2009); 9 ♀♀, 3 ♂♂ (Mt. Naejongsan, Jeollabuk-do: 18.vi.2010); 1 ♂ (Mt. Naejongsan, Jeollabuk-do: 20.v.2011); 2 ♂♂ (Busan, Daeyeon port: 23.vii.1996).

**ECOLOGY:** Founded in the coppice of mountainous region. Construct horizontal orb web.

## 20. *Leucauge subgemmea* Bösenberg and Strand, 1906 (Fig. 25)

Geum-bit-baek-geum-geo-mi (금빛백금거미)

*Leucauge subgemmea* Bösenberg and Strand, 1906, p. 185; Yaginuma, 1960, p. 71; 1971, p. 71 1986, p. 128; Chikuni, 1989, p. 92; Zhu and Wang, 1993, p. 92; Chang, Gao and Guan, 1995, p. 45; Song, Chen and Zhu, 1997, p. 1709; Kim, Kim and Lee, 1999, p. 49; Song, Zhu and Chen, 1999, p. 216; Namkung, 2001, p. 226; 2003, p. 228; Kim and Cho, 2002, p. 316; Zhu, Song and Zhang, 2003, p. 239; Tanikawa, 2007, p. 102; 2009, p. 412; Kim, Kim and Lee, 2008, p. 36; Zhu and Zhang, 2011, p. 161.

*Leucauge subgemmea* Yaginuma, 1954a, p. 2.

**Female:** Body length 7.0–9.0 mm. Carapace longer than wide; light brown; head region narrow; fovea and cervical furrow dark brown. Chelicerae brown. Sternum brown. Legs light brown; long

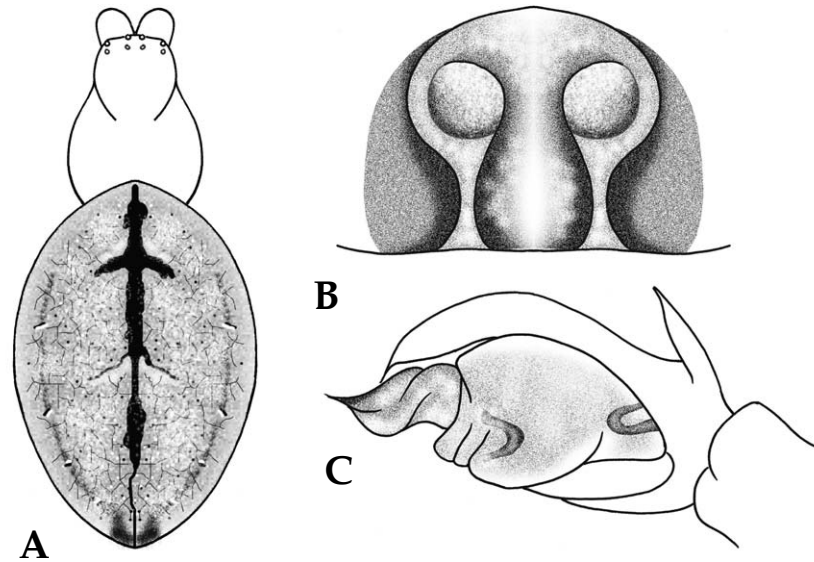


Fig. 25. *Leucauge subgemmea*. A. female body; B. female epigynum; C. male palp.

and well developed. Abdomen longer than wide, ovoid. Dorsum gold and lustrous with short longitudinal stripe; no tubercle on the shoulder. Venter with short and broad longitudinal stripe. Female epigynum; sclerotized with median septum; copulatory opening situated at center.

**Male:** Body length 5.0–7.0 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with long and pointed paracymbium.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, JB, JN.

**SPECIMEN EXAMINED:** 3 ♀♀ (Mt. Godaesan, Gangwon-do: 14.viii.1997); 1 ♀ (Gimwha, Gangwon-do: 16.viii.1997); 2 ♀♀ (Inje, Gangwon-do: 17.viii.1997); 1 ♀ (Mt. Maebongsan, Gangwon-do: 21.viii.1997); 1 ♂ (Mt. Bangtaesan, Gangwon-do: 25.vi.2010); 4 ♀♀, 1 ♂ (Icheon, Gyeonggi-do: 21.vi.1993); 1 ♀ (Mt. Naejongsan, Jeollabuk-do: 10.vi.2008); 2 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 20.viii.2008); 2 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 17.ix.2008); 2 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 23.ix.2008); 2 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 18.vi.2010); 2 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 30.vii.2010); 2 ♀♀ (Mt. Naejongsan, Jeollabuk-do: 17.ix.2010); 1 ♀, 1 ♂ (Boseong, Jeollanam-do: 29.ix.2012).

**ECOLOGY:** Founded in the bushes and shrubs of mountainous region. Construct horizontal orb web and change body color as dark brown when disturbed.

## Genus *Menosira* Chikuni, 1955

Ga-si-da-ri-geo-mi-sok (가시다리거미속)

Carapace longer than wide. Legs I and II long and slender; long spines on the femora, tibiae and metatarsus. Abdomen long oval; epigastric plate indistinct. Male palp with well developed para-

cymbium. Female epigynum flat and less sclerotized.

Type species: *Menosira ornata* Chikuni, 1955.

## 21. *Menosira ornata* Chikuni, 1955 (Fig. 26, Pl. 13)

Ga-si-da-ri-geo-mi (가시다리거미)

*Menosira ornata* Chikuni, 1955, p. 31; 1989, p. 92; Namkung, Paik and Yoon, 1972, p. 93; Yaginuma, 1986, p. 129; Kim, Kim and Lee, 1999, p. 51; Namkung, 2001, p. 227; 2003, p. 229; Kim and Cho, 2002, p. 317; Zhu, Song and Zhang, 2003, p. 60; Tanikawa, 2007, p. 96; 2009, p. 406; Kim, Kim and Lee, 2008, p. 36.

**Female:** Body length 8.0–10.0 mm. Carapace longer than wide; yellowish brown; head region narrow; fovea and cervical furrow dark brown resembling ‘Y’. Chelicerae yellowish brown. Sternum yellowish brown. Legs yellow; long and well developed; long and thick spines on the femora, tibiae and metatarsi. Abdomen longer than wide, ovoid. Dorsum reddish brown with yellow pattern at the front and mid-rear part. Venter reddish brown; 3–4 pairs of yellow spots on either side of spinnerets. Female epigynum; sclerotized, copulatory opening situated downward.

**Male:** Body length 6.0–7.0 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with largely extended paracymbium.

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GW, GG, CB, JB.

**SPECIMEN EXAMINED:** 1 ♀ (Whacheon, Gangwon-do: 19.viii.1997); 4 ♀ ♀, 4 ♂ ♂ (Mt. Jeombong, Gangwon-do: 27.viii.1999); 1 ♀ (Mt. Yongmun, Gyeonggi-do: 10.ix.1991); 1 ♂ (Cheongju, Chung-

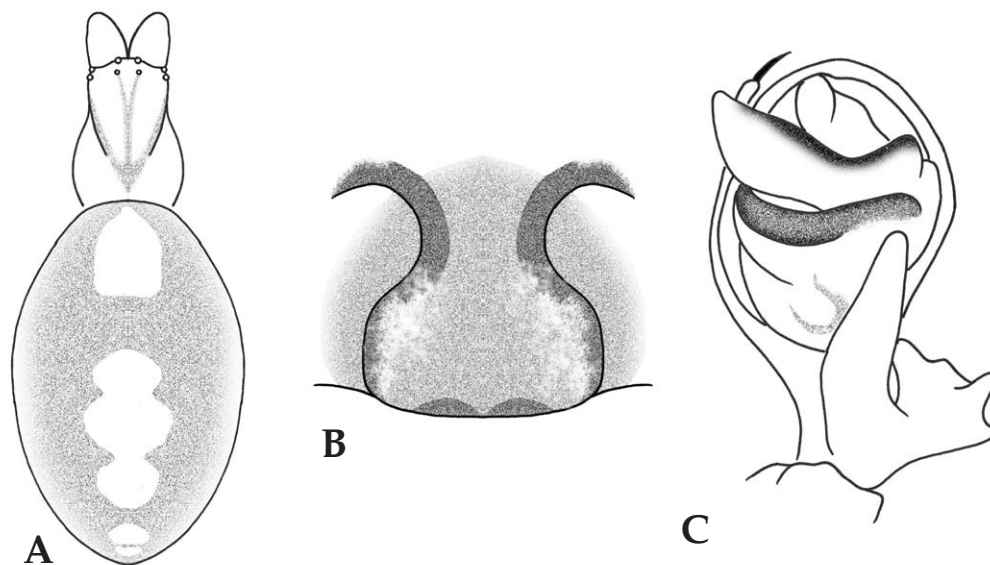


Fig. 26. *Menosira ornata*. A. female body; B. female epigynum; C. male palp.

cheongbuk-do: 6.x.1991), 1♂ (Mt. Naejangan, Jeollabuk-do: 23.ix.2008); 1♀ (Gyeonggi-do, Yangpyeong: 10.ix.1991); 4♀♀, 2♂♂ (Mt. Naejangan, Jeollabuk-do: 23.ix.2009); 3♀♀, 4♂♂ (Mt. Naejangan, Jeollabuk-do: 17.ix.2010); 6♀♀, 2♂♂ (Mt. Naejangan, Jeollabuk-do: 11.x.2010).

**ECOLOGY:** Founded in the bushes and shrubs of mountainous region. Construct simple orb web.

## Genus *Meta* C.L. Koch, 1836

Si-nae-geo-mi-sok (시내거미속)

Carapace longer than wide; fovea deeply pitted; clypeus low. Chelicerae dark and strong; condyles weakly developed. Femora without trichobothria. Abdomen globular. Male palp with large sclerotized paracymbium. Female epigynum flat and less sclerotized.

Type species: *Aranea menardii* Latreille, 1804.

### Key to the species of genus *Meta*

1. Head region dark brown, Legs with annulations ..... *M. manchurica*  
– Head region with dark brown margin, Legs III and Leg IV with annulations ..... *M. reticuloides*

### 22. *Meta manchurica* Marusik and Koponen, 1992 (Fig. 27)

Man-ju-gul-si-nae-geo-mi (만주굴시내거미)

*Meta menardi* Paik, Yaginuma and Namkung, 1969, p. 823.

*Meta manchurica* Marusik and Koponen, 1992, p. 138; Namkung, 2001, p. 228; 2003, p. 230.

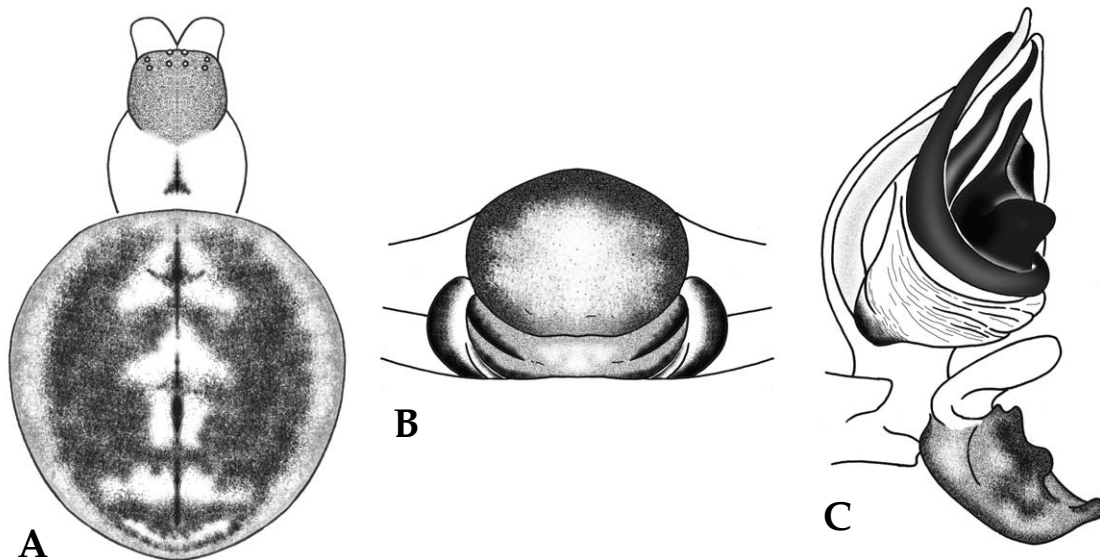


Fig. 27. *Meta manchurica*. A. female body; B. female epigynum; C. male palp.

**Female:** Body length 11.0–14.0 mm. Carapace longer than wide; yellowish brown; head region, margins of thoracic region and median region dark reddish brown; fovea deeply pitted. Chelicerae dark reddish brown. Sternum brown with dark brown hairs sparsely. Legs yellowish brown with dark brown annulations; long and well developed. Abdomen rounded oval. Dorsum yellowish brown with dark brown pattern on the shoulder and 3–4 pairs of dark brown stripes posteriorly. Female epigynum; heavily sclerotized and remarkably protruded.

**Male:** Body length 10.0–11.0 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with very large and blunted paracymbium.

**DISTRIBUTION:** Korea, Russia.

**KOREA:** CB.

**SPECIMEN EXAMINED:** 3 ♀♀, 1 ♂ (Mt. Sokrisan, Chungcheongbuk-do: 25.ix.1990).

**ECOLOGY:** Founded in the dark and wet places of cave. Construct orb web.

### 23. *Meta menardi* (Latreille, 1804)

Gul-si-nae-geo-mi (굴시내거미)

*Aranea menardii* Latreille, 1804, p. 266.

*Aranea novem-maculata* Martini and Goeze, in Lister, 1778, p. 293.

*Aranea novemmaculata* Panzer, 1804, p. 148.

*Epeira menardii* Latreille, 1806, p. 108.

*Meta fusca* C.L. Koch, 1841, p. 118.

*Meta menardi* Thorell, 1856, p. 98; 1870, p. 38; Westring, 1861, p. 78; Hansen, 1882, p. 25; Chyzer and Kulczyn'ski, 1891, p. 139; McCook, 1894, p. 246; Keyserling, 1893, p. 313; Simon, 1894, p. 735; 1929, pp. 656, 751; Becker, 1896, p. 60; Bösenberg, 1901, p. 47; Reimoser, 1929, p. 62; Wiehle, 1931, p. 128; Komatsu, 1942, p. 65; 1961, p. 29; Drensky, 1943, p. 247; Browning and Tams, 1944, p. 94; Locket and Millidge, 1953, p. 119; Miller, 1971, p. 202; Loksa, 1972, p. 72; Locket, Millidge and Merrett, 1974, p. 61; Roberts, 1985, p. 202; 1995, p. 309; 1998, p. 323; Coddington, 1990, p. 16; Heimer, 1990, p. 119; Heimer and Nentwig, 1991, p. 62; Marusik and Koponen, 1992, p. 140; Terhivuo, 1993, p. 55; Hormiga, Eberhard and Coddington, 1995, p. 337; Scharff and Coddington, 1997, p. 374; Bellmann, 1997, p. 100; Kim, Kim and Lee, 1999, p. 53; Trotta, 2005, p. 174; Almquist, 2005, p. 111; Jäger, 2006, p. 3; Álvarez-Padilla et al., 2009, p. 140; Wunderlich, 2011, p. 206; Isaia et al., 2011, p. 146; Álvarez-Padilla and Hormiga, 2011, p. 773.

*Epeira fusca* Blackwall, 1864, p. 349.

This species was described firstly by Paik, Yaginuma and Namkung (1969) from Korea. Namkung (2001, 2003), however, reexamined the collections and determined this species as misidentification of *Meta manchurica*. Platnick (2013) recorded that this species is distributed in Korea and Europe based on the Kim, Kim and Lee (1999). They simply described this species (p. 53) with illustration of rough female epigynum (p. 97, fig. 55) without collection information. Their identification is unreliable and there is no way to reexamine the specimens. This species is distributed in Europe and has never been described from anywhere of Northeastern Asia except Korea. So, it requires a close reexamination for certification of its exist in Korea and has to be deleted from the Korean spider fauna for the time being.

**DISTRIBUTION:** Korea (?), Europe.

**24. *Meta reticuloides* Yaginuma, 1958 (Fig. 28, Pl. 14)**

Eol-ruk-si-nae-geo-mi (얼룩시내거미)

*Meta reticuloides* Yaginuma, 1958, p. 26; 1960, p. 69; 1971, p. 69; 1986, p. 124; Chikuni, 1989, p. 89; Kim, Kim and Lee, 1999, p. 54; Namkung, 2001, p. 229; 2003, p. 231; Tanikawa, 2007, p. 97; 2009, p. 407.

**Female:** Body length 6.0–10.0 mm. Carapace longer than wide; yellowish brown; black pattern situated from the front of head region and lateral eyes to cervical furrow; head region narrow with dark brown margins; blackish brown longitudinal stripe situated at the front of fovea; thoracic region with blackish brown margins. Chelicerae dark brown. Sternum dark brown. Legs light yellow; long and well developed; legs I and II with black speckles on the femora and tibiae; legs III and IV with dark brown annulations on each segment. Abdomen globular and bulged. Dorsum grayish yellow with several blackish brown spots forming folium. Venter black with white stripes laterally. Female epigynum slightly sclerotized and protruded, a pair of thick and hook shaped projections laterally.

**Male:** Body length 4.0–6.0 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with very large and pointed paracymbium.

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GG, JN, JJ.

**SPECIMEN EXAMINED:** 3 ♀♀, 1 ♂ (Mt. Mugapsan, Gyeonggi-do: 27.ix.1994); 2 ♀♀, 1 ♂ (Mt. Jirisan,

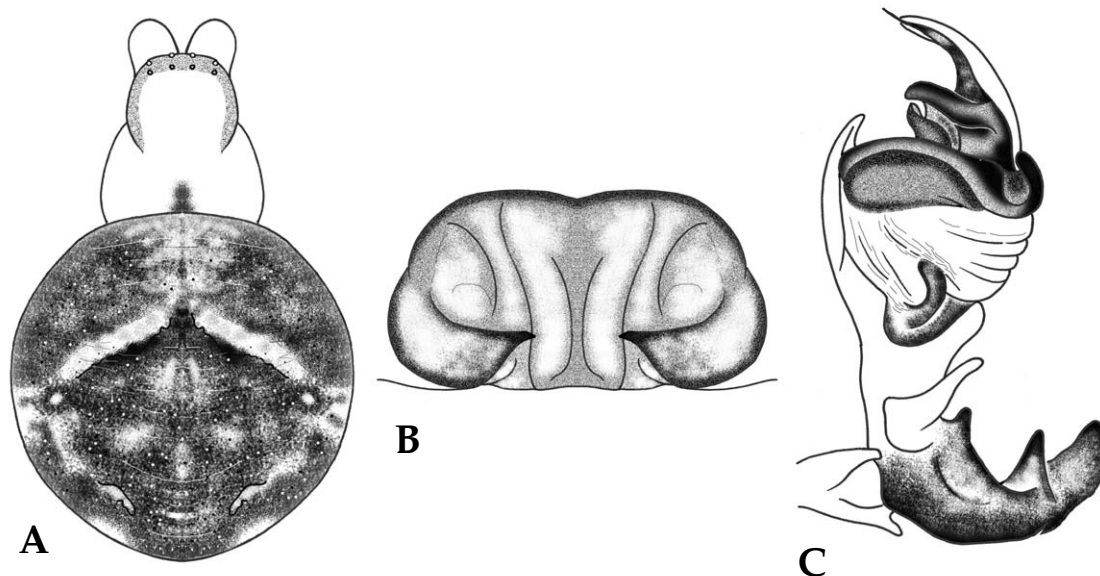


Fig. 28. *Meta reticuloides*. A. female body; B. female epigynum; C. male palp.

Jeollanam-do: 4.viii.2006); 1 ♂ (Mt. Hallasan, Jeju-do: 29.x.1992).

**ECOLOGY:** Founded dark and wet places under the rocks and cliffs of mountainous region. Construct horizontal orb web.

## Genus *Metleucauge* Levi, 1980

Mu-nui-si-nae-geo-mi (무늬시내거미속)

Carapace longer than wide. Legs strongly developed. Abdomen oval and widest at about the middle. Male palp is rather long; trochanter with a distal spur; paracymbium small. Female epigynum rather flat with pockets on the sides.

Type species: *Metleucauge eldorado* Levi, 1980.

### Key to the species of genus *Metleucauge*

1. Head region without distinct pattern, abdominal dorsum with horseshoe shaped pattern accompanied by folium ..... *M. chikunii*
- Head region with a pair of white markings, abdominal dorsum with large folium .....  
..... *M. yunohamensis*

### 25. *Metleucauge chikunii* Tanikawa, 1992 (Fig 29)

Byeong-mu-nui-si-nae-geo-mi (병무늬시내거미)

*Metleucauge kompirensis* Chikuni, 1989, p. 88.

*Metleucauge chikunii* Tanikawa, 1992, p. 169; Namkung, 2001, p. 230.

*Metleucauge chikuni* Song, Zhu and Chen, 1999, p. 216; Kim and Cho, 2002, p. 317; Zhu, Song and Zhang, 2003, p. 267; Namkung, 2003, p. 232; Tanikawa, 2007, p. 98; 2009, p. 408.

**Female:** Body length 11.0–14.0 mm. Carapace longer than wide; yellowish brown with reddish brown margins; 2 reddish brown stripes from eye area to thoracic region. Chelicerae reddish brown; long and well developed. Sternum blackish brown. Legs brown and darker distally with blackish brown annulations and spines. Abdomen long cylinder shaped. Dorsum grayish white with large brown horseshoe shaped pattern on the shoulder accompanied by yellowish brown or yellowish white folium, rarely founded yellowish white individual without pattern. Female epigynum; heavily sclerotized, median plate slightly elevated and separated with laterals.

**Male:** Body length 8.0–10.0 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with thick thumb shaped paracymbium bearing rounded tip; embolus slender and conductor large.

**DISTRIBUTION:** Korea, China, Japan, Taiwan, Russia.

**KOREA:** JB, JJ.

**SPECIMEN EXAMINED:** 2 ♀ ♀, 3 ♂ ♂ (Mt. Naejangsan, Jeollabuk-do: 30.vii.2010); 2 ♀ ♀ (Mt. Hallasan,

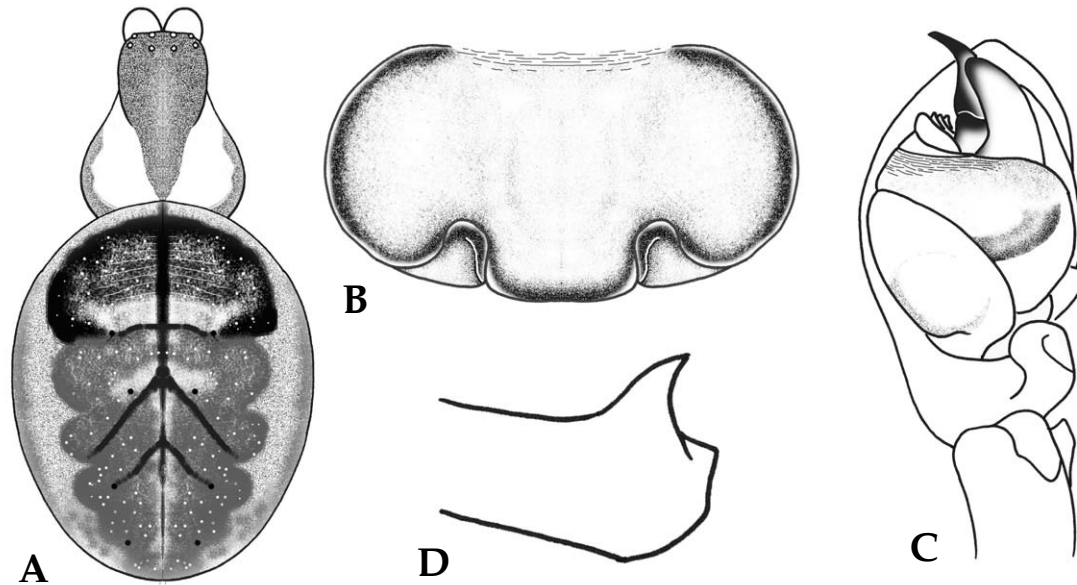


Fig. 29. *Metleucauge chikunii*. A. female body; B. female epigynum; C. male palp; D. distal end of coxa.

Jeju-do: 1.ix.1990).

**ECOLOGY:** Founded near the stream of mountainous region. Construct orb web horizontally or slantly.

## 26. *Metleucauge yunohamensis* (Bösenberg and Strand, 1906) (Fig. 30, Pl. 15)

An-gyeong-mu-nui-si-nae-geo-mi (안경무늬시내거미)

*Meta yunohamensis* Bösenberg and Strand, 1906, p. 180; Saito, 1933, p. 48; 1939, p. 9; 1959, p. 100; Nakatsudi, 1942, p. 308; Yaginuma, 1958, p. 28; 1960, p. 69; 1971, p. 69; Lee, 1966, p. 53; Hikichi, 1977, p. 154; Hu, 1984, p. 118; Zhu et al., 1985, p. 85.

*Meta sinensis* Schenkel, 1953, p. 30.

*Metleucauge yunohamensis* Levi, 1980, p. 46; Yaginuma, 1986, p. 125; Chikuni, 1989, p. 88; Tanikawa, 1992, p. 164; 2007, p. 100; 2009, p. 408; Kim, Kim and Lee, 1999, p. 56; Song, Zhu and Chen, 1999, p. 217; 2001, p. 165; Namkung, 2001, p. 231; 2003, p. 233; Zhu, Song and Zhang, 2003, p. 274.

*Meta segmentata* Hu and Wu, 1989, p. 103.

**Female:** Body length 10.0–13.0 mm. Carapace longer than wide; yellowish brown; longitudinal stripe with a pair of yellow round patterns at center. Chelicerae brown; well developed. Sternum black. Legs yellowish brown with brown or dark brown annulations and spines. Abdomen long cylinder shaped. Dorsum white or light yellowish brown; cover with brown folium. Venter dark brown with a pair of white stripes. Female epigynum; heavily sclerotized, median plate unseparated with laterals.

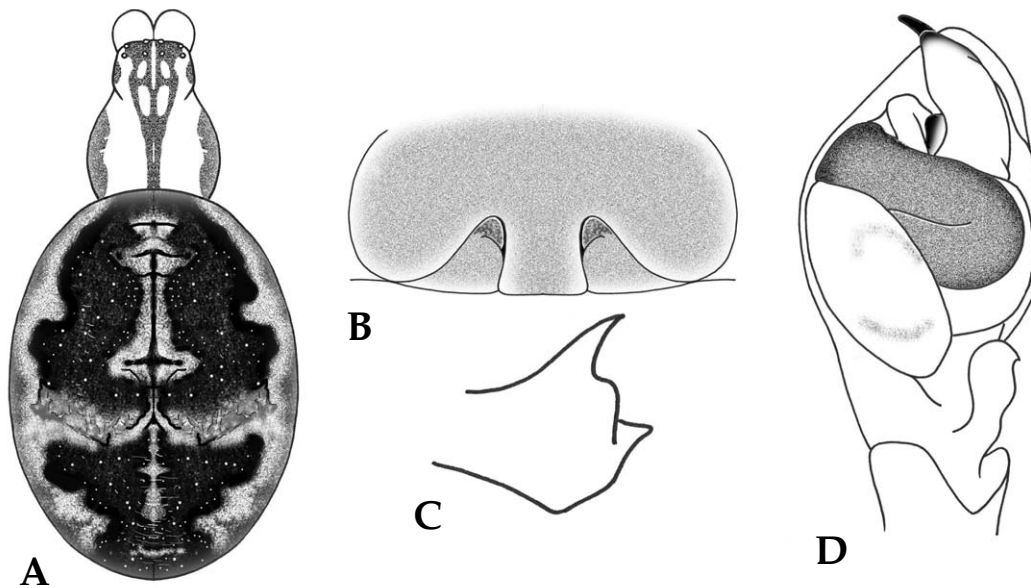


Fig. 30. *Metleucauge yunohamensis*. A. female body; B. female epigynum; C. male palp; D. distal end of coxa.

**Male:** Body length 8.0–10.0 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with thick thumb shaped paracymbium bearing rounded tip, embolus slender and conductor large.

**DISTRIBUTION:** Korea, China, Japan, Taiwan, Russia.

**KOREA:** GW, JN.

**SPECIMEN EXAMINED:** 3 ♀♀ (Daejin, Gangwon-do: 6.vi.1992); 1 ♀ (Mt. Bangtaesan, Gangwon-do: 19.vi.2010); 1 ♂ (Gogeumdo, Jeollanam-do: 19.vi.1992).

**ECOLOGY:** Founded near the stream or between trees of mountainous region. Construct large orb web horizontally or slantly.

## Genus *Pachygnatha* Sundevall, 1823

Teok-geo-mi-sok (턱거미속)

Carapace glossy; no spines or thick hairs; head region high. Eight eyes subequal in size; lateral eyes contiguous. Chelicerae large and divergent; condyle often narrow. Legs short without spine except patellae; femora with some trichobothria proximally and dorsally; dorsal tibiae with 2 rows of trichobothria; metatarsi with one trichobothrium each. Abdomen oval; epigastric furrow strongly procurved. Male palp with some trichobothria on tibiae; paracymbium free from cymbium. Female lack epigyne; genital opening situated near the center of abdomen.

Type species: *Pachygnatha clerckii* Sundevall, 1823.

### Key to the species of genus *Pachygnatha*

1. Body length >3 mm, abdominal dorsum with stripe patterns ..... 2  
 – Body length <3 mm, abdominal dorsum with folium ..... *P. clercki*
2. Abdominal dorsum with dark brown stripes accompanied by 2 pair of black spots .....  
 ..... *P. quadrimaculata*  
 – Abdominal dorsum with interrupted black stripes accompanied by scale patterns ..... *P. tenera*

## 27. *Pachygnatha clercki* Sundevall, 1823 (Fig. 31, Pl. 16)

Teok-geo-mi (턱거미)

*Pachygnatha clerckii* Sundevall, 1823, p. 16.

*Theridion maxillosum* Hahn, 1826, pl. 15; 1834, p. 37.

*Manduculus ambiguus* Blackwall, 1833, p. 111; 1834, p. 359.

*Linyphia maxillosa* Walckenaer, 1841, p. 267.

*Linyphia clercki* Walckenaer, 1841, p. 270.

*Pachygnatha maxillosa* Doleschall, 1852, p. 636.

*Pachygnatha listeri* C.L. Koch, 1845, p. 142.

*Pachygnatha clercki* Blackwall, 1864, p. 318; Menge, 1866, p. 95; Thorell, 1870, p. 75; Hansen, 1882, p. 28; Chyzer and Kulczyn'ski, 1891, p. 141; Simon, 1894, p. 716; 1929, pp. 644, 748; Becker, 1896, p. 68; Bösenberg, 1901, p. 56; Engelhardt, 1910, p. 53; Reimoser, 1932, p. 62; Drensky, 1943, p. 248; Locket and Millidge, 1953, p. 106; Chrysanthus, 1955, p. 56; Wiehle, 1963, p. 61; Namkung, 1964, p. 40; 2001, p. 234; 2003, p. 236; Azheganova, 1968, p. 92; Tyschchenko, 1971, p. 202; Palmgren, 1974, p. 52; Punda, 1975, p. 12; Brignoli, 1978, p. 288; Paik and Namkung, 1979, p. 51; Song, 1980, p. 132; Levi, 1980, p. 59; Heimer, 1982, p. 46; Hu, 1984, p. 139; Roberts, 1985, p. 199; 1995, p. 300; 1998, p. 314; Guo, 1985, p. 82; Wunderlich, 1985, p. 327; Yaginuma, 1986, p. 129; Chikuni, 1989, p. 90; Hu and Wu, 1989, p. 111; Heimer and Nentwig, 1991, p. 58; Barrion and Litsinger, 1994, p. 322; Mcheidze, 1997, p. 285; Kim, Kim and Lee, 1999, p. 60; Hu, 2001, p. 594; Dondale et al., 2003, p. 94; Zhu, Song and Zhang, 2003, p. 91; Almquist, 2005, p. 117; Jäger, 2006, p. 3; Tanikawa, 2007, p. 104; 2009, p. 419.

*Pachygnatha sewardi* Chamberlin and Ivie, 1947, p. 64.

**Female:** Body length 5.0–6.0 mm. Carapace longer than wide, oviform; yellowish brown with brown margins; median stripe, cervical furrow and margins of thoracic region brown; covered with small and concaved speckles. Chelicerae yellowish brown; strong and well developed; protruded forward. Sternum light brown with reddish brown margins; small and concaved speckles scattered. Legs yellow; stout and well developed with spines; no annulation. Abdomen longer than wide, bulged oval. Dorsum yellowish brown with light brown band pattern. Female epigynum; less sclerotized and slightly elevated, copulatory openings situated downward.

**Male:** Body length 4.5–5.5 mm. Similar to females, smaller size and darker body coloration. Male palp; cymbium with paracymbium separated with cymbium; embolus spiniform, slightly twisted.

**DISTRIBUTION:** Korea, China, Japan, Russia, Europe.

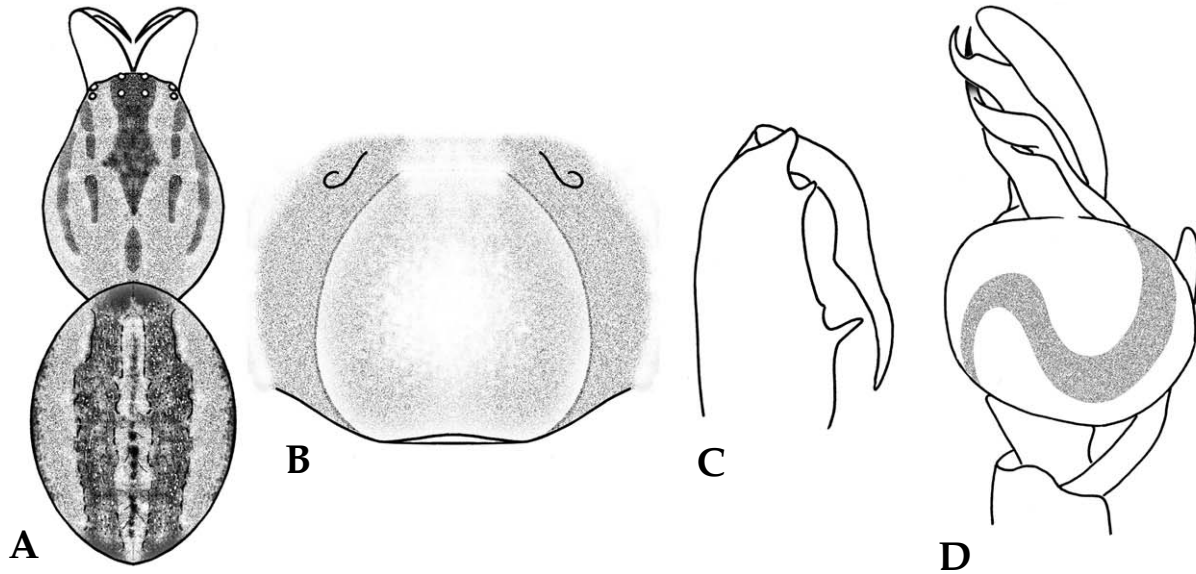


Fig. 31. *Pachygnatha clercki*. A. female body; B. female epigynum; C. male chelicera; D. male palp.

**KOREA:** GW, GG, CB, CN, GN, JB, JN.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Hongcheon, Gangwon-do: 19.ix.1995); 1 ♀, 2 ♂♂ (Chuncheon, Gangwon-do: 6.x.2012); 1 ♂ (Yeoncheon, Gyeonggi-do: 9.vii.1996); 1 ♂ (Suwon, Gyeonggi-do: 30.vi.1999); 2 ♀♀, 1 ♂ (Hwaseong, Gyeonggi-do: 15.iv.2002); 6 ♀♀, 3 ♂♂ (Suwon, Gyeonggi-do: 15.ix.2009); 10 ♀♀, 3 ♂♂ (Gimpo, Gyeonggi-do: 25.ix.2009); 4 ♀♀, 2 ♂♂ (Gyeonggi-do, Icheon: 8.x.2009); 1 ♀, 2 ♂♂ (Yesan, Chungcheongnam-do: 25.ix.2008); 1 ♀ (Mungyeong, Gyeongsangbuk-do: 19.v.2009); 14 ♀♀, 8 ♂♂ (Punggi, Gyeongsangbuk-do: 13.x.1995); 5 ♀♀, 6 ♂♂ (Changnyeong, Gyeongsangnam-do: 25.vii.2008); 2 ♀♀, 2 ♂♂ (Gimje, Jeollabuk-do: 2.vii.2009); 3 ♀♀, 4 ♂♂ (Jeongeup, Jeollabuk-do: 10.x.2012); 1 ♀ (Haenam, Jeollanam-do: 2.vii.2009); 3 ♀♀, 3 ♂♂ (Gokseong, Jeollanam-do: 27.ix.2012).

**ECOLOGY:** Founded in the plants of marsh lands or between rice plants of rice fields. Important natural enemy against rice insect pests.

## 28. *Pachygnatha quadrimaculata* (Bösenberg and Strand, 1906) (Fig. 32)

Jeom-bag-i-ga-rang-gal-geo-mi (점박이가랑갈거미)

*Dyschiriognatha quadrimaculata* Bösenberg and Strand, 1906, p. 175; Yin, 1976, p. 126; Paik and Namkung, 1979, p. 50; Song, 1980, p. 129; Yaginuma, in Brignoli, 1983, p. 220; Hu, 1984, p. 135; Guo, 1985, p. 78; Yaginuma, 1986, p. 136; Zhang, 1987, p. 91; Chikuni, 1989, p. 90; Feng, 1990, p. 103; Chen and Gao, 1990, p. 75; Chen and Zhang, 1991, p. 121; Okuma, 1991, p. 15; Barrion and Litsinger, 1994, p. 322; Kim, Kim and Lee, 1999, p. 43; Song, Zhu and Chen, 1999, p. 213; Namkung, 2001, p. 235; 2003, p. 237; Kim, Kim and Lee, 2008, p. 34.

*Glenognatha nipponica* Kishida, 1936a, p. 65.

*Pachygnatha quadrimaculata* Zhu, Song and Zhang, 2003, p. 101, Tanikawa, 2007, p. 103; 2009, p. 412.

**Female:** Body length 2.5–3.0 mm. Carapace longer than wide, lozenge shaped; reddish brown; head region stretched to thoracic region; fovea situated much farther part from the center; cervical furrow dark brown; many small and concaved speckles on the head region and radial furrow. Chelicerae reddish brown with small and concaved speckles; stout and strong; not protruded forward. Sternum light yellow with small and concaved speckles. Legs yellowish brown with spines sparsely; long and annulations indistinct. Abdomen slightly longer than wide, slightly bulged oval. Dorsum yellowish brown with dark brown stripes laterally and 2 pairs of black spots medianly. Female epigynum; less sclerotized and slightly protruded, copulatory openings situated downward.

**Male:** Body length 2.0–2.5 mm. Similar to females, smaller size and darker body coloration. Male palp; paracymbium separated with cymbium; embolus spiniform.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, CB, CN, JB, JN.

**SPECIMEN EXAMINED:** 1♂ (Mt. Samaksan, Gangwon-do: 15.xi.1997); 1♀ (Goseong, Gangwon-do: 2.vi.1998); 1♂ (Yeoncheon, Gyeonggi-do: 15.x.1997); 3♀♀, 5♂♂ (Hwaseong, Gyeonggi-do: 4.vi.2001); 3♀♀, 1♂ (Gimpo, Gyeonggi-do: 15.ix.2009); 1♂ (Cheongju, Chungcheongbuk-do: 28.viii.2006); 2♀♀, 1♂ (Seosan, Chungcheongnam-do: 23.vi.1995); 6♀♀, 3♂♂ (Jeongeup, Jeollabuk-do: 10.x.2012); 2♀♀ (Gokseong, Jeollanam-do: 6.x.2012); 1♂ (Seoul, Mojindong: 20.iii.1998).

**ECOLOGY:** Founded in the plants of marsh lands or between rice plants of rice fields.

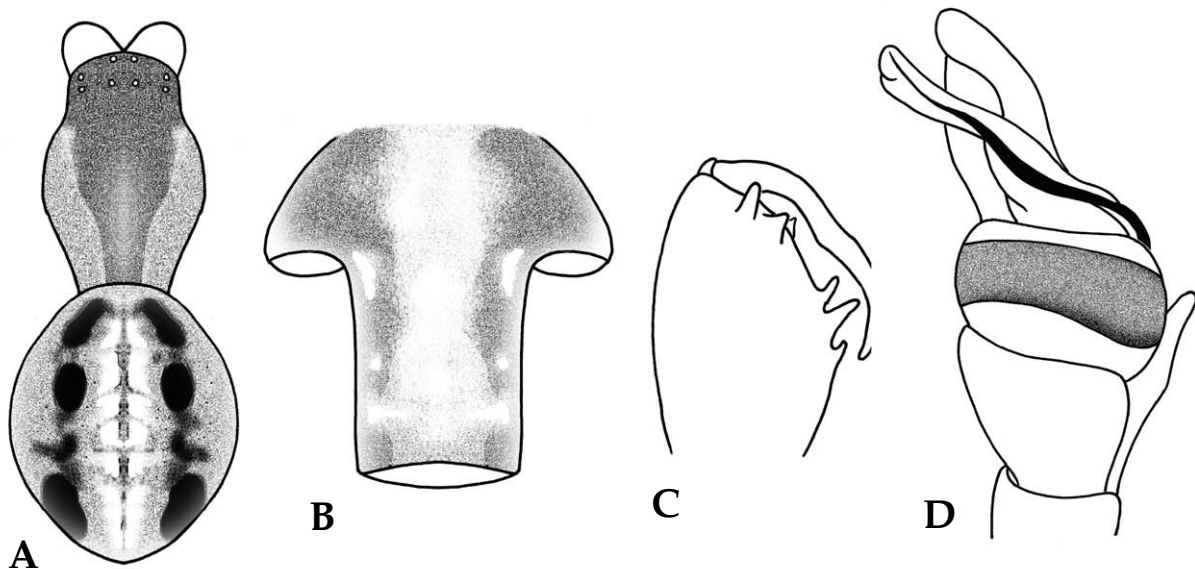


Fig. 32. *Pachygnatha quadrimaculata*. A. female body; B. female epigynum; C. male chelicera; D. male palp.

## 29. *Pachygnatha tenera* Karsch, 1879 (Fig. 33)

Ae-ga-rang-gal-geo-mi (애가랑갈거미)

*Pachygnatha tenera* Karsch, 1879, p. 64; Zhu, Song and Zhang, 2003, p. 104; Tanikawa, 2007, p. 104; 2009, p. 412.

*Dyschiriognatha tenera* Bösenberg and Strand, 1906, p. 174; Yin, 1976, p. 126; Paik and Namkung, 1979, p. 50; Song, 1980, p. 130; Hu, 1984, p. 135; Guo, 1985, p. 77; Yaginuma, 1986, p. 136; Zhang, 1987, p. 92; Chikuni, 1989, p. 90; Chen and Gao, 1990, p. 76; Okuma, 1991, p. 15; Zhao, 1993, p. 265; Barrion and Litsinger, 1994, p. 322; Kim, Kim and Lee, 1999, p. 44; Song, Zhu and Chen, 1999, p. 213; Namkung, 2001, p. 236; 2003, p. 238; Kim, Kim and Lee, 2008, p. 34.

**Female:** Body length 2.5–3.0 mm. Carapace longer than wide, lozenge shaped; head region higher than thoracic region; head region and anterior part of thoracic region reddish brown; cervical furrow and thoracic region dark reddish brown. Chelicerae reddish brown with small and concaved speckles; stout and strong; opened on either sides. Sternum reddish brown with black margins. Legs yellowish brown with spines sparsely; long and annulations indistinct. Abdomen slightly longer than wide, ovoid. Dorsum thick grayish yellow with black stripe and silver scale patterns. Female epigynum; less sclerotized and slightly elevated, copulatory openings situated downward.

**Male:** Body length 2.0–2.5 mm. Similar to females, smaller size and darker body coloration. Male palp; paracymbium separated with cymbium; embolus spiniform.

**DISTRIBUTION:** Korea, China, Japan, Mongolia, Russia.

**KOREA:** GW, GG, CB, JN.

**SPECIMEN EXAMINED:** 1 ♀ (Goseong, Gangwon-do: 2.vi.1998); 1 ♀, 1 ♂ (Hwaseong, Gyeonggi-do: 14.x.2001); 3 ♀ ♀, 1 ♂ (Gimpo, Gyeonggi-do: 11.ix.2009); 1 ♂ (Cheongju, Chungcheongbuk-do: 28.viii.2006); 3 ♀ ♀ (Haenam, Jeollanam-do: 28.ix.2009); 1 ♂ (Seoul, Mojindong: 20.iii.1998).

**ECOLOGY:** Founded in the plants of marsh lands. Construct small orb web.

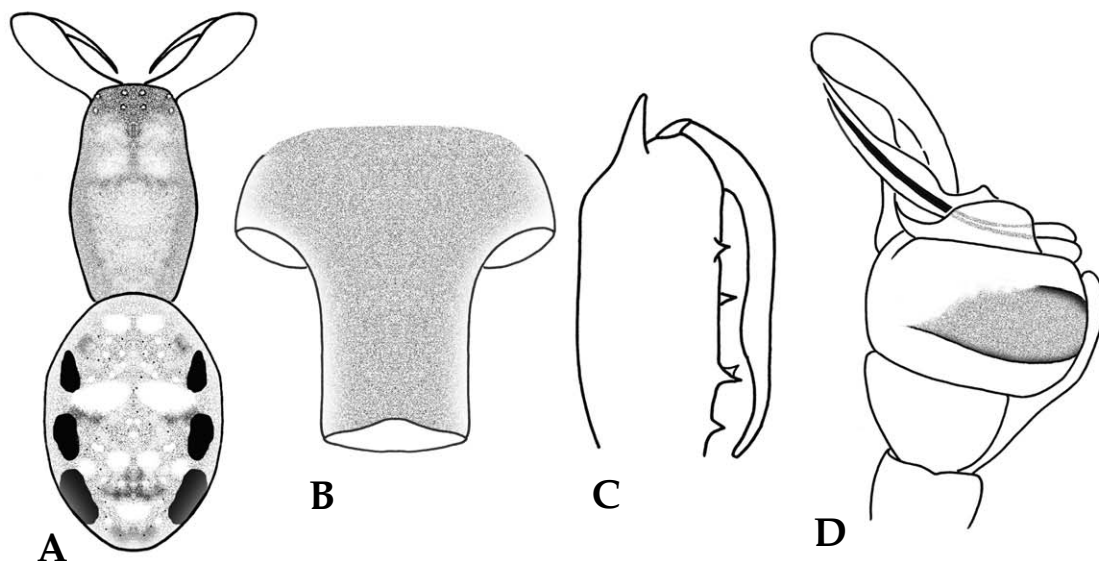


Fig. 33. *Pachygnatha tenera*. A. female body; B. female epigynum; C. male chelicera; D. male palp.

## Genus *Tetragnatha* Latreille, 1804

Gal-geo-mi-sok (갈거미속)

Carapace oval and longer than wide. Eight eyes on black spots; lateral eyes not contiguous. Chelicerae elongate, divergent with 2 rows of large teeth. Legs very long and weak; spines and trichobothria on femur and tibiae. Abdomen cylindrical and much longer than wide. Male palp with free paracymbium; palp with embolus in complex pleated conductor. Female lack epigyne; genital opening at distal end of epigastric furrow.

Type species: *Aranea extensa* Linnaeus, 1758.

### Key to the species of genus *Tetragnatha*

1. Abdominal end tail shaped ..... *T. caudicula*  
– Abdominal end blunt ..... 2
2. Abdomen elongated ellipse shaped, longer than wide ..... 3  
– Abdomen elongated cylinder shaped, much longer than wide ..... 4
3. Abdominal dorsum with branch pattern ..... *T. squamata*  
– Abdominal dorsum with irregular spots ..... *T. yesoensis*
4. Abdominal dorsum with long stripe pattern ..... *T. lauta*  
– Abdominal dorsum with long folium ..... 5
5. Abdomen yellowish white, chelicerae normal and not project forward ..... *T. vermiformis*  
– Abdomen yellowish brown, chelicerae largely developed and project forward ..... 6
6. Male chelicerae with 3 outer spur ..... *T. nitens*  
– Male chelicerae with 1 outer spur ..... 7
7. Male chelicerae with bifurcated spur ..... 8  
– Male chelicerae without bifurcated spur ..... 9
8. Abdominal venter with broad black band pattern ..... *T. praedonia*  
– Abdominal venter with broad black band pattern accompanied by silver laterals ..... *T. extensa*
9. Male chelicerae with straight outer spur bearing curved tip ..... *T. pinicola*  
– Male chelicerae with roundly curved outer spur ..... *T. maxillosa*

### 30. *Tetragnatha caudicula* (Karsch, 1879) (Fig. 34)

Kko-ri-gal-geo-mi (꼬리갈거미)

*Eugnatha caudicula* Karsch, 1879, p. 66.

*Eucta caudicula* Simon, 1881, p. 7; Crome, 1954, p. 427; Saito, 1959, p. 110.

*Tetragnatha caudicula* Bösenberg and Strand, 1906, p. 179; Paik and Namkung, 1979, p. 52; Hu, 1984, p. 140; Hu and Wu, 1985, p. 96; 1989, p. 112; Okuma, 1988a, p. 167; Chikuni, 1989, p. 94; Chen and Gao, 1990, p. 79; Kurenschikov, 1994, p. 58; Chen, 1997, p. 115; Kim, Kim and Lee, 1999, p. 63; Song, Zhu and Chen, 1999, p. 221; Hu, 2001, p. 595; Zhu et al., 2002, p. 80; Namkung, 2001, p. 222; 2003, p. 224; Zhu, Song and Zhang, 2003, p. 122; Tanikawa, 2007, p. 105; 2009, p. 414; Kim, Kim and Lee, 2008, p. 37.

*Tetragnatha javana* Hu, 1984, p. 145; Guo, 1985, p. 86.

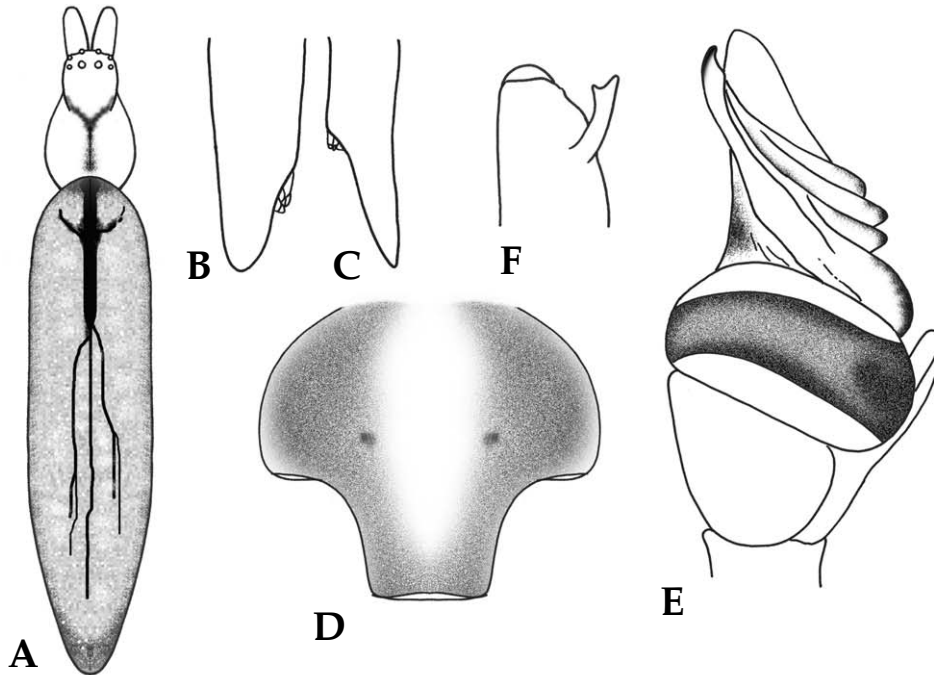


Fig. 34. *Tetragnatha caudicula*. A. female body; B. abdominal end of female; C. abdominal end of male; D. female epigynum; E. male palp; F. outer spur of male chelicera.

**Female:** Body length 12.0–15.0 mm. Carapace longer than wide; yellowish brown; fovea, cervical furrow and radial furrow distinct. Chelicerae yellowish brown; well developed; not protruded forward. Sternum yellowish brown. Legs yellow with short spines. Abdomen much longer than wide; slender and tail shaped with slightly rounded tip. Dorsum covered with yellowish white scale patterns with branch pattern stretched longitudinally. Venter with slender black stripe and yellowish white margins. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 10.0–12.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with outer spur curved roundly bearing bifurcated tip. Male palp; paracymbium separated with cymbium, embolus inconspicuous, conductor with 3 wrinkles.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GG.

**SPECIMEN EXAMINED:** 1 ♀ (Ipo, Gyeonggi-do: 10.vi.1993); 1 ♀, 1 ♂ (Yeoju, Gyeonggi-do: 4.vii.1997); 2 ♀ ♀, 2 ♂ ♂ (Suwon, Gyeonggi-do: 17.vii.2001); 2 ♀ ♀, 1 ♂ (Icheon, Gyeonggi-do: 10.vi.1993).

**ECOLOGY:** Founded in the bushes of marsh lands or between rice plants and upland crops of rice fields and uplands. Construct horizontal orb web.

### 31. *Tetragnatha extensa* (Linnaeus, 1758) (Fig. 35)

Keun-bae-gal-geo-mi (큰배갈거미)

*Aranea extensa* Linnaeus, 1758, p. 621; 1761, p. 489; Fabricius, 1775, p. 431; De Geer, 1783, p. 236; Olivier, 1789, p. 204.

*Aranea solandri* Scopoli, 1763, p. 397.

*Aranea mouffeti* Scopoli, 1763, p. 398.

*Tetragnatha rubra* Risso, 1826, p. 168.

*Tetragnatha extensa* Sundevall, 1833, p. 256; Hahn, 1834, p. 43; Blackwall, 1864, p. 367; Keyserling, 1865, p. 844; Hansen, 1882, p. 25; Emerton, 1884, p. 333; Chyzer and Kulczyn'ski, 1891, p. 144; McCook, 1894, p. 259; Becker, 1896, p. 62; Bösenberg, 1901, pp. 57, 59; Emerton, 1902, p. 201; Kulczyn'ski, 1903, p. 647; Lessert, 1910, p. 288; Engelhardt, 1910, p. 50; Fedotov, 1912, p. 75; Reimoser, 1928, p. 105; Seeley, 1928, p. 113; Simon, 1929, pp. 648, 651, 749; Wiehle, 1939, p. 376; 1963, p. 12; 1967b, p. 186; Braendegaard, 1946, p. 54; Chamberlin and Ivie, 1947, p. 65; Tullgren, 1947, p. 130; Chrysanthus, 1949, p. 353; Locket and Millidge, 1953, p. 100; Locket, Millidge and La Touche, 1958, p. 140; Saito, 1959, p. 117; Azheganova, 1968, p. 94; Palmgren, 1974, p. 47; Locket, Millidge and Merrett, 1974, p. 61; Yin, 1976, p. 123; Levi, 1981, p. 298; Hu, 1984, p. 142; Roberts, 1985, p. 198; 1995, p. 302; 1998, p. 316; Guo, 1985, p. 83; Zhu et al., 1985, p. 89; Zhang, 1987, p. 93; Okuma, 1988a, p. 177; 1989, p. 53; Chikuni, 1989, p. 95; Chen and Gao, 1990, p. 80; Heimer and Nentwig, 1991, p. 60; Wunderlich, 1992, p. 363; 2011, p. 214; Zhao, 1993, p. 270; Kurenshchikov, 1994, p. 58; Agnarsson, 1996, p. 57; Mcheidze, 1997, p. 289; Kim, Kim and Lee, 1999, p. 65; Song, Zhu and Chen, 1999, p. 221; Zhu et al., 2002, p. 81; Namkung, 2001, p. 216; 2003, p. 218; Kim and Cho, 2002, p. 319; Paquin and Dupèrre, 2003, p. 208; Dondale et al., 2003, p. 71; Zhu, Song and Zhang, 2003, p. 134; Agnarsson, 2004, p. 607; Almquist, 2005, p. 122; Jäger, 2006, p. 3; Tanikawa, 2007, p. 107; 2009, p. 416; Kim, Kim and Lee, 2008, p. 38; Russell-Smith, 2011, p. 23.

*Tetragnatha gibba* C.L. Koch, 1837, p. 5.

*Tetragnatha chrysochlora* Walckenaer, 1841, p. 208.

*Tetragnatha arundinis* Bremsi-Wolff, 1849, pp. 1-16.

*Tetragnatha fluviatilis* Keyserling, 1865, p. 852.

*Tetragnatha nowickii* L. Koch, 1870, p. 13.

*Tetragnatha groenlandica* Thorell, 1872, p. 151.

*Tetragnatha solandri* Bösenberg, 1901, pp. 57, 59; Engelhardt, 1910, p. 46; Lessert, 1910, p. 292.

*Tetragnatha extensa maderiana* Schenkel, 1938, p. 28.

*Tetragnatha manitoba* Chamberlin and Ivie, 1942, p. 61.

*Tetragnatha rusticana* Chickering, 1959, p. 489.

*Tetragnatha potanini* Schenkel, 1963, p. 123; Zhu et al., 1985, p. 94.

*Tetragnatha maderiana* Wunderlich, 1987, p. 128.

**Female:** Body length 10.0-12.0 mm. Carapace longer than wide; yellowish brown; both margins and furrows dark brown. Chelicerae yellowish brown; well developed; protruded forward. Sternum dark brown with light yellow stripe longitudinally. Legs yellowish brown with short spines; long and well developed. Abdomen much longer than wide, cylinder shaped. Dorsum covered with silver scale patterns with branch pattern stretched longitudinally. Venter with broad black band pattern accompanied by silver laterals. Female epigynum broad and slightly bulged; copulatory openings wide transversely.

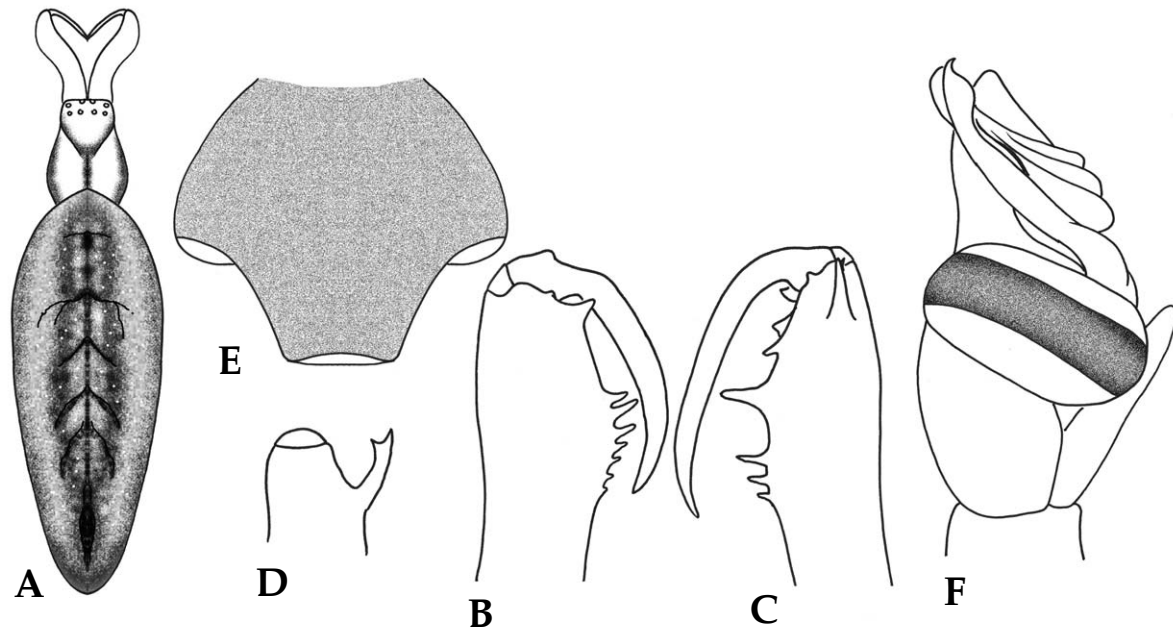


Fig. 35. *Tetragnatha extensa*. A. female body; B. female chelicera; C. male chelicera; D. outer spur of male chelicera; E. female epigynum; F. male palp.

**Male:** Body length 6.0–9.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with outer spur curved roundly bearing bifurcated tip. Male palp; paracymbium separated with cymbium, embolus slender filiform, conductor with 3 wrinkles.

**DISTRIBUTION:** Korea, China, Japan, Russia, Europe.

**KOREA:** GG, CN, JB.

**SPECIMEN EXAMINED:** 2 ♀♀ (Icheon, Gyeonggi-do: 21.vi.1993); 1 ♀ (Yeoncheon, Gyeonggi-do: 15.viii.1997); 2 ♀♀, 1 ♂ (Boryeong, Chungcheongnam-do: 22.ix.1995); 1 ♀ (Mt. Naejangsan, Jeollabuk-do: 17.ix.2010).

**ECOLOGY:** Founded in the bushes of streams of mountainous region. Construct horizontal orb web.

### 32. *Tetragnatha lauta* Yaginuma, 1959 (Fig. 36)

Bi-dan-gal-geo-mi (비단갈거미)

*Tetragnatha lauta* Yaginuma, 1959, p. 11; Paik and Namkung, 1979, p. 53; Yaginuma, 1986, p. 131; Okuma, 1988b, p. 200; Chikuni, 1989, p. 93; Kim, Kim and Lee, 1999, p. 66; Song, Zhu and Chen, 1999, p. 221; Zhu, Song and Zhang, 2003, p. 152; Tanikawa, 2007, p. 108; 2009, p. 416.

**Female:** Body length 5.0–6.0 mm. Carapace longer than wide; reddish brown with lighter margins; fovea and cervical furrow deep and distinct. Chelicerae reddish brown; well developed;

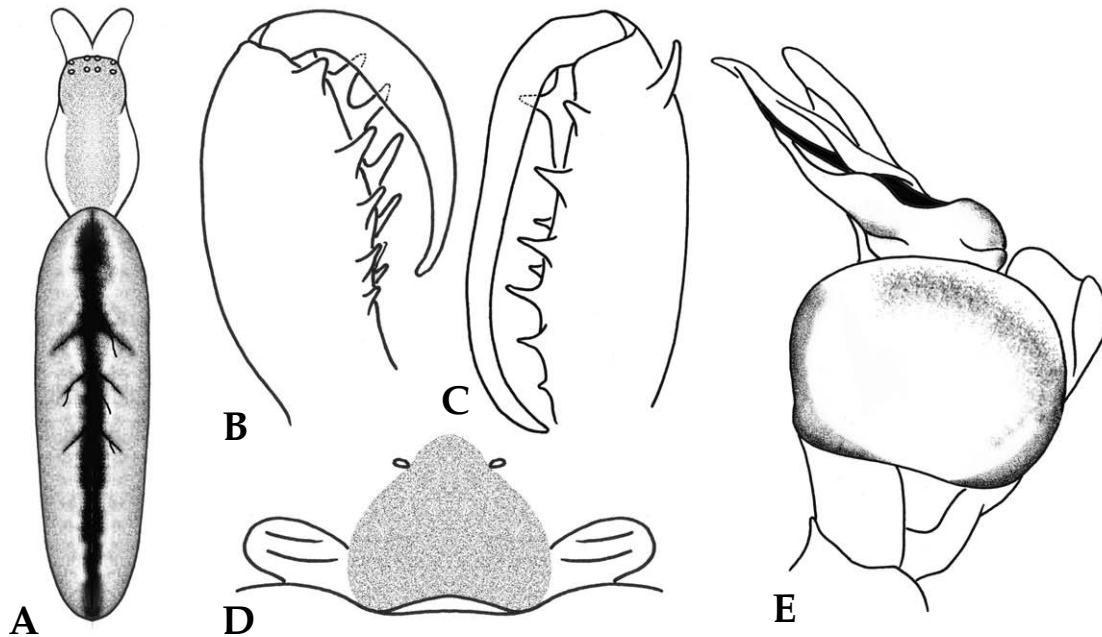


Fig. 36. *Tetragnatha lauta*. A. female body; B. female chelicera; C. male chelicera; D. female epigynum; E. male palp.

protruded forward. Sternum dark yellowish brown. Legs blackish brown with many spines; well developed. Abdomen much longer than wide, cylinder shaped. Dorsum yellowish brown; covered with silver scale patterns and reddish brown branch pattern stretched longitudinally. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with outer spur short bearing pointed tip. Male palp; paracymbium separated with cymbium, embolus long filiform surrounded with conductor.

**DISTRIBUTION:** Korea, Japan, Taiwan, Laos, Hong Kong.

**KOREA:** GW, GG, JB.

**SPECIMEN EXAMINED:** 1 ♀, 2 ♂♂ (Mt. Bangtaesan, Gangwon-do: 25.vi.2010); 1 ♀ (Mt. Mugapsan, Gyeonggi-do: 11.ix.1991); 1 ♂ (Mt. Naejangan, Jeollabuk-do: 20.v.2011).

**ECOLOGY:** Founded in the bushes of streams of mountainous region. Construct tringular or pentagonal orb web horizontally.

### 33. *Tetragnatha lea* Bösenberg and Strand, 1906

Pul-gal-geo-mi (풀갈거미)

*Tetragnatha lea* Bösenberg and Strand, 1906, p. 178; Kim, Kim and Lee, 1999, p. 67.

Platnick (2013) recorded that this species is distributed in Korea and Europe based on the Kim,

Kim and Lee (1999). They simply described this species (p. 67) with illustration of rough female epigynum (p. 98, fig. 65) without collection information. Their identification is unreliable and there is no way to reexam the specimens. This species is distributed in Europe and has never been described from anywhere of Northeastern Asia except Korea. So, it requires a close reexamination for certification of its exist in Korea and has to be deleted from the Korean spider fauna for the time being.

**DISTRIBUTION:** Korea (?), Europe.

### 34. *Tetragnatha maxillosa* Thorell, 1895 (Fig. 37)

Min-gal-geo-mi (민갈거미)

*Tetragnatha maxillosa* Thorell, 1895, p. 139; Gravely, 1921, p. 430; Chrysanthus, 1975, p. 8; Okuma, 1983, p. 72; 1987, p. 83; 1988b, p. 206; Yaginuma, 1986, p. 130; Song, 1987, p. 184; 1988, p. 124; Zhang, 1987, p. 95; Okuma and Dippenaar-Schoeman, 1988, p. 231; Chikuni, 1989, p. 95; Hu and Wu, 1989, p. 113; Feng, 1990, p. 106; Chen and Gao, 1990, p. 81; Chen and Zhang, 1991, p. 125; Vungsilabutr, 1988, p. 73; Song, Zhu and Li, 1993, p. 868; Okuma et al., 1993, p. 37; Zhao, 1993, p. 273; Barrion and Litsinger, 1994, p. 326; 1995, p. 509; Song, Chen and Zhu, 1997, p. 1710; Kim, Kim and Lee, 1999, p. 67; Song, Zhu and Chen, 1999, p. 221; 2001, p. 171; Hu, 2001, p. 598; Zhu et al., 2002, p. 84; Namkung, 2001, p. 215; 2003, p. 217; Kim and Cho, 2002, p. 319; Zhu, Song and Zhang, 2003, p. 153; Tanikawa, 2007, p. 110; 2009, p. 419; Kim, Kim and Lee, 2008, p. 38.

*Tetragnatha maxillosa insignita* Strand, 1911, p. 138.

*Tetragnatha japonica* Bösenberg and Strand, 1906, p. 177; Saito 1933b, p. 46; 1939, p. 57; 1959, p. 118; Lee, 1966, p. 57; Okuma, 1968b, p. 100; Yin, 1976, p. 122; Song et al., 1976, p. 38; Paik and Namkung, 1979, p. 52; Song, 1980, p. 118; Zhu, 1983, p. 39; Hu, 1984, p. 143; Guo, 1985, p. 86; Zhu et al., 1985, p. 90

*Tetragnatha listeri* Gravely, 1921, p. 443.

*Tetragnatha conformans* Chamberlin, 1924a, p. 9.

*Tetragnatha propioides* Schenkel, 1936, p. 89.

*Tetragnatha cliens* Yin, 1976, p. 122; Hu, 1984, p. 141; Guo, 1985, p. 83.

*Tetragnatha diensens* Zhao, 1993, p. 267.

**Female:** Body length 10.0–13.0 mm. Carapace longer than wide; light yellowish brown; fovea and cervical furrow distinct. Chelicerae longer than carapace; well developed; protruded forward. Sternum dark yellowish brown. Legs yellowish brown with long spines; long and well developed. Abdomen much longer than wide, slender cylinder shaped. Dorsum yellowish white with silvery white scale patterns and longitudinal stripe accompanied by 4–5 pairs of dark brown wave patterns. Female epigynum; long and broad, copulatory openings slightly curved and wide transversely.

**Male:** Body length 7.0–10.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with outer spur curved roundly bearing pointed tip. Male palp; paracymbium separated with cymbium, embolus long filiform surrounded with conductor.

**DISTRIBUTION:** Korea, China, Japan, Russia, Banagladesi, Philippine, South Africa.

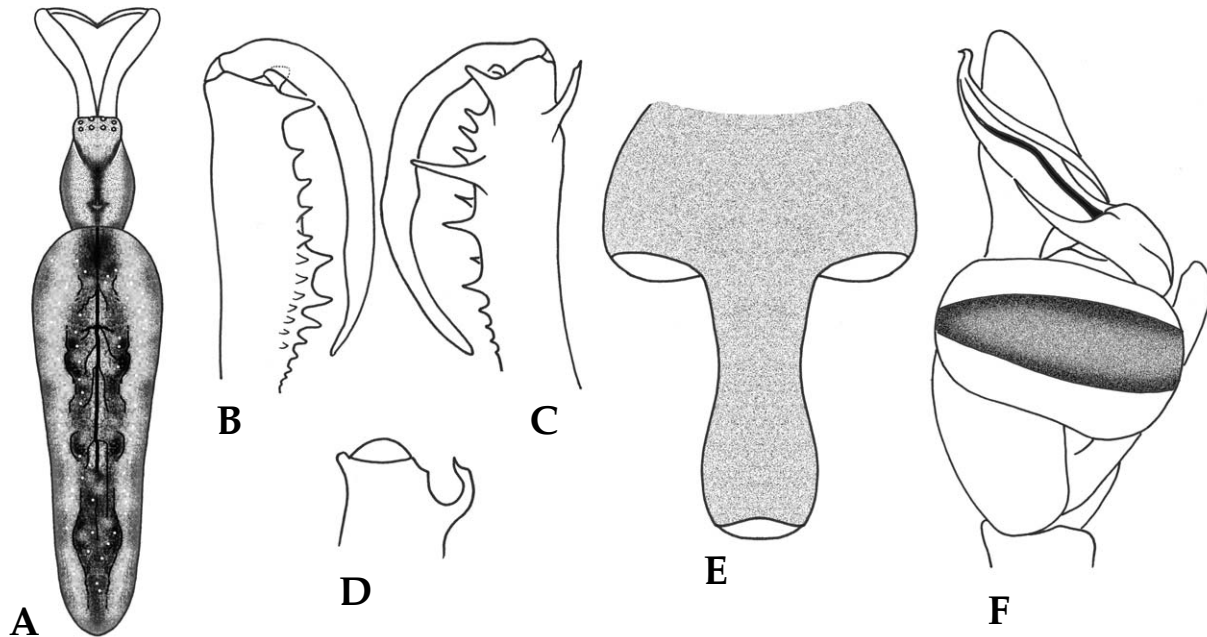


Fig. 37. *Tetragnatha maxillosa*. A. female body; B. female chelicera; C. male chelicera; D. outer spur of male chelicera; E. female epigynum; F. male palp.

**KOREA:** GW, GG, CB, CN, GB, JB, JN.

**SPECIMEN EXAMINED:** 3 ♀♀, 2 ♂♂ (Hongcheon, Gangwon-do: 27.vi.1995); 1 ♀ (Mt. Maebongsan, Gangwon-do: 21.viii.1997); 1 ♀ (Yangpyeong, Gyeonggi-do: 29.v.1989); 6 ♀♀ (Ipo, Gyeonggi-do: 21.vi.1993); 1 ♀ (Goyang, Gyeonggi-do: 5.vi.1997); 1 ♀ (Hwaseong, Gyeonggi-do: 14.x.2001); 14 ♀♀, 9 ♂♂ (Suwon, Gyeonggi-do: 4.ix.2009); 8 ♀♀, 2 ♂♂ (Danyang, Chungcheongbuk-do: 11.x.2012); 3 ♀♀, 1 ♂ (Boryeong, Chungcheongnam-do: 22.ix.1995); 20 ♀♀, 6 ♂♂ (Yesan, Chungcheongnam-do: 18.vii.2007); 3 ♀♀ (Punggi, Gyeongsangbuk-do: 28.viii.1995); 2 ♀♀, 1 ♂ (Uiseong, Gyeongsangbuk-do: 25.vii.2008); 5 ♀♀, 3 ♂♂ (Jeonju, Jeollabuk-do: 10.vi.2008); 6 ♀♀, 3 ♂♂ (Mt. Naejangsan, Jeollabuk-do: 10.vi.2008); 3 ♀♀, 3 ♂♂ (Gokseong, Jeollanam-do: 27.ix.2012).

**ECOLOGY:** Founded in the bushes near the streams or between rice plants of rice fields. Construct horizontal orb web. Important natural enemy against large rice insect pests.

### 35. *Tetragnatha nitens* (Audouin, 1826) (Fig. 38)

Se-ppul-gal-geo-mi (세뿔갈거미)

*Eugnatha nitens* Audouin, 1826, p. 323.

*Eugnatha pelusia* Audouin, 1826, p. 325.

*Tetragnatha gracilis* Lucas, 1838, p. 43.

*Tetragnatha nitens* Walckenaer, 1841, p. 209; Keyserling, 1865, p. 845; Simon, 1929, pp. 646, 748; Parrott, 1946, p. 82; Wiehle, 1962, p. 377; Okuma, 1968a, p. 40; 1968b, p. 102; 1983, p. 75; 1987, p.

84; 1988b, p. 207; 1992, p. 235; Yin, 1976, p. 123; Song et al., 1976, p. 39; Song, 1980, p. 122; Levi, 1981, p. 291; Hu, 1984, p. 146; Guo, 1985, p. 89; Yaginuma, 1986, p. 135; Song, 1987, p. 185; Zhang, 1987, p. 96; Davies, 1988, p. 282; Okuma and Dippenaar-Schoeman, 1988, p. 231; Feng, 1990, p. 107; Chen and Gao, 1990, p. 83; Chen and Zhang, 1991, p. 127; Vungsilabutr, 1988, p. 72; Wunderlich, 1992, p. 365; Okuma et al., 1993, p. 45; Zhao, 1993, p. 276; Barrion and Litsinger, 1994, p. 324; 1995, p. 518; Song, Zhu and Chen, 1999, p. 222; 2001, p. 172; Zhu et al., 2002, p. 84; Yoo and Kim, 2002, p. 25; Namkung, 2001, p. 218; 2003, p. 220; Zhu, Song and Zhang, 2003, p. 164; Tanikawa, 2007, p. 111; 2009, p. 419; Kim, Kim and Li, 2008, p. 44; Wunderlich, 2011, p. 210.

*Tetragnatha pelusia* Walckenaer, 1841, p. 210.

*Tetragnatha deinognatha* Walckenaer, 1841, p. 478.

*Deinagnatha dandridgei* White, 1846, p. 180.

*Tetragnatha ferox* L. Koch, 1872a, p. 173.

*Tetragnatha gulosa* L. Koch, 1872a, p. 176.

*Tetragnatha molesta* O.P.-Cambridge, 1872, p. 295.

*Tetragnatha ejuncida* Simon, 1874, p. 160.

*Tetragnatha andina* Taczanowski, 1878, p. 144.

*Tetragnatha typica* Urquhart, 1890, p. 251.

*Tetragnatha antillana* Simon, 1897b, p. 868; F.O.P.-Cambridge, 1903, p. 433; Seeley, 1928, p. 105; Petrunkevitch, 1930, p. 281; Chickering, 1957a, p. 2; 1957b, p. 306; 1962, p. 428; Bücherl, 1959, p. 293.

*Tetragnatha vicina* Simon, 1897b, p. 869.

*Tetragnatha peninsulana* Banks, 1898, p. 246.

*Tetragnatha galapagoensis* Banks, 1902, p. 61.

*Tetragnatha ferox crossae* Hogg, 1911, p. 300.

*Tetragnatha aptans* Chamberlin, 1920, p. 41.

*Tetragnatha eremita* Chamberlin, 1924b, p. 645.

*Cyrtognatha producta* Franganillo, 1930, p. 17.

*Tetragnatha seminola* Gertsch, 1936, p. 10.

*Tetragnatha steckleri* Gertsch and Ivie, 1936, p. 19.

*Tetragnatha elmora* Chamberlin and Ivie, 1942, p. 62.

*Tetragnatha festina* Bryant, 1945, p. 407.

*Tetragnatha haitiensis* Bryant, 1945, p. 408.

*Tetragnatha nitens kullmanni* Wiehle, 1962, p. 379.

*Tetragnatha hotingchiehi* Schenkel, 1963, p. 127.

*Tetragnatha fuerteventurensis* Wunderlich, 1992, p. 363.

**Female:** Body length 9.5–13.0 mm. Carapace longer than wide; yellowish brown; head region slightly narrow; fovea lunulate. Chelicerae yellowish brown; well developed; protruded forward. Sternum yellowish brown with brown margins, triangular. Legs yellow; slender and long. Abdomen much longer than wide, cylinder shaped. Dorsum yellowish white with silvery white scale patterns and dark brown longitudinal stripe. Female epigynum; long and narrow; copulatory openings situated downward.

**Male:** Body length 6.0–10.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with 3 large outer spur bearing pointed tip. Male palp; paracymbium separated with cymbium, embolus long filiform surrounded with conductor.

**DISTRIBUTION:** Korea, China, Japan, Philippine, Europe.

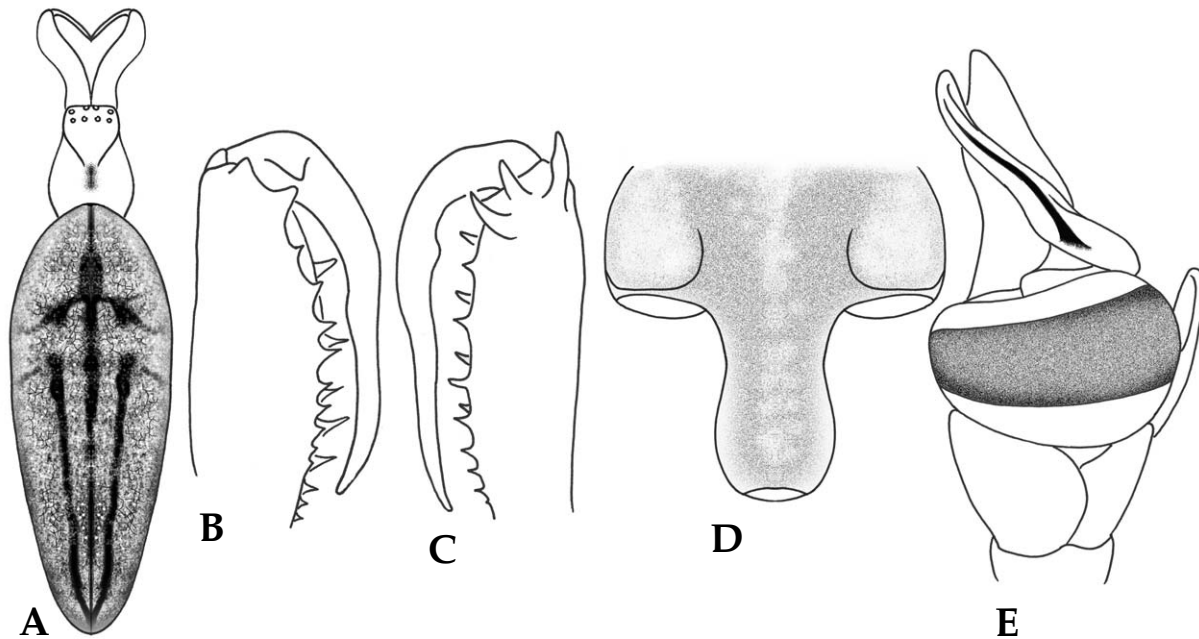


Fig. 38. *Tetragnatha nitens*. A. female body; B. female chelicera; C. male chelicera; D. female epigynum; E. male palp.

KOREA: CB.

SPECIMEN EXAMINED: 2 ♀♀, 1 ♂ (Boeun, Chungcheongbuk-do: 28.vii.1997).

ECOLOGY: Founded in the bushes near the streams of marsh lands or mountainous region. Construct horizontal orb web.

### 36. *Tetragnatha pinicola* L. Koch, 1870 (Fig. 39)

Baek-geum-gal-geo-mi (백금갈거미)

*Tetragnatha pinicola* L. Koch, 1870, p. 11; Chyzer and Kulczyn'ski, 1891, p. 144; Bösenberg, 1901, p. 61; Kulczyn'ski, 1903, p. 647; Lessert, 1910, p. 291; Wiehle, 1939, p. 376; Tullgren, 1947, p. 130; Locket and Millidge, 1953, p. 102; Saito, 1959, p. 118; Wiehle, 1963, p. 18; Azheganova, 1968, p. 94; Palmgren, 1974, p. 48; Punda, 1975, p. 50; Hu, 1984, p. 147; Roberts, 1985, p. 198; 1995, p. 303; 1998, p. 317; Zhu et al., 1985, p. 92; Yaginuma, 1986, p. 131; Okuma, 1988a, p. 179; Chikuni, 1989, p. 93; Heimer and Nentwig, 1991, p. 60; Kurenschikov, 1994, p. 61; Mcheidze, 1997, p. 289; Kim, Kim and Lee, 1999, p. 69; Song, Zhu and Chen, 1999, p. 222; 2001, p. 173; Zhu et al., 2002, p. 88; Namkung, 2001, p. 217; 2003, p. 219; Kim and Cho, 2002, p. 320; Zhu, Song and Zhang, 2003, p. 168; Almquist, 2005, p. 137; Tanikawa, 2007, p. 108; 2009, p. 416; Kim, Kim and Lee, 2008, p. 39; Marusik, 2010, p. 199; Wunderlich, 2011, p. 214; Russell-Smith, 2011, p. 23.

*Eugnatha picta* Lendl, 1886, p. 129.

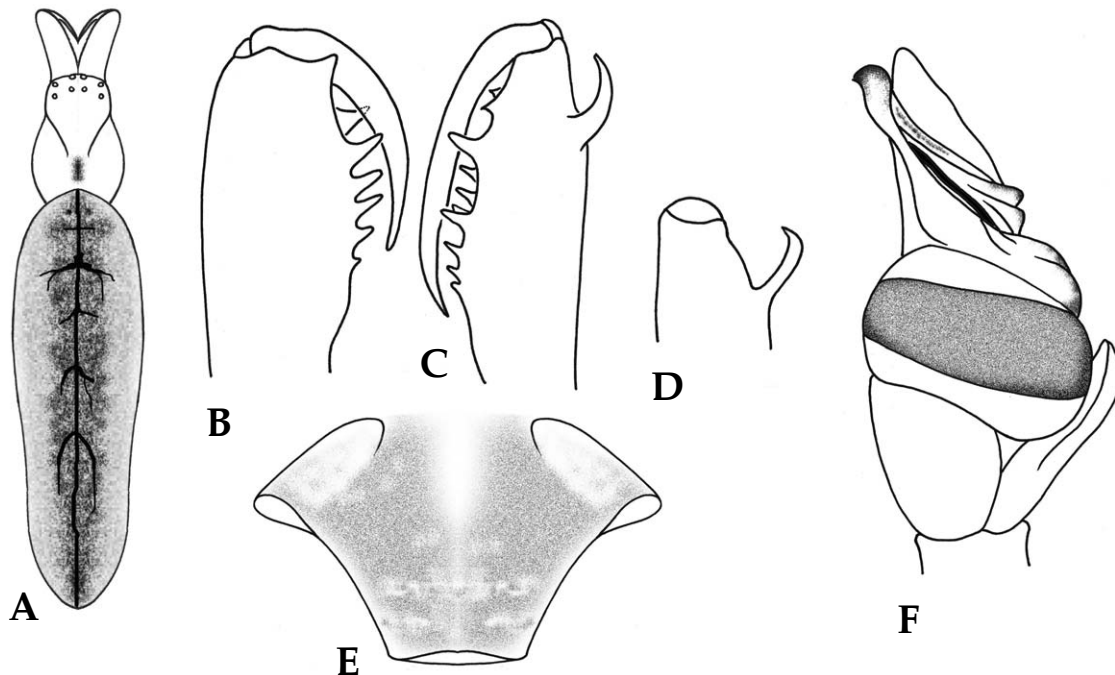


Fig. 39. *Tetragnatha pinicola*. A. female body; B. female chelicera; C. male chelicera; D. outer spur of male chelicera; E. female epigynum; F. male palp.

**Female:** Body length 8.0–10.0 mm. Carapace longer than wide; light yellowish brown; fovea and cervical furrow black. Chelicerae yellowish brown; well developed; protruded forward. Sternum blackish brown with yellowish white medianly, long triangular. Legs yellowish brown with spines sparsely; no distinct patterns. Abdomen much longer than wide, cylinder shaped. Dorsum silvery green and lustrous with several pairs of black spots medianly. Venter dark brown with silvery white speckles and yellowish brown stripe longitudinally. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 5.0–6.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with outer spur bearing hook shaped tip. Male palp; paracymbium separated with cymbium, embolus slender filiform, conductor with 3 wrinkles.

**DISTRIBUTION:** Korea, China, Japan, Russia, Europe.

**KOREA:** GW, CN.

**SPECIMEN EXAMINED:** 2 ♀♀ (Mt. Odaesan, Gangwon-do: 7.viii.1999); 1 ♀, 1 ♂ (Mt. Gariwangsan, Gangwon-do: 1.vii.2009); 9 ♀♀, 8 ♂♂ (Yesan, Chungcheongnam-do: 18.vii.2007).

**ECOLOGY:** Founded in the bushes of mountainous region or hillocks. Construct horizontal orb web.

### 37. *Tetragnatha praedonia* L. Koch, 1878 (Fig. 40, Pl. 17)

Jang-su-gal-geo-mi (장수갈거미)

*Tetragnatha praedonia* L. Koch, 1878a, p. 744; Bösenberg and Strand, 1906, p. 177; Saito, 1933, p. 47; 1939, p. 58; 1959, p. 118; Yin, 1976, p. 121; Hikichi, 1977, p. 154; Paik and Namkung, 1979, p. 53; Song, 1980, p. 120; Ono, 1981, p. 5; Hu, 1984, p. 148; Yaginuma, 1986, p. 130; Zhang, 1987, p. 98; Okuma, 1988a, p. 174; Chikuni, 1989, p. 95; Feng, 1990, p. 109; Chen and Gao, 1990, p. 85; Logunov, 1992, p. 63; Kurenschikov, 1994, p. 61; Barrion and Litsinger, 1994, p. 326; Kim, Kim and Lee, 1999, p. 70; Hu, 2001, p. 599; Song, Zhu and Chen, 2001, p. 175; Zhu et al., 2002, p. 88; Namkung, 2001, p. 214; 2003, p. 216; Kim and Cho, 2002, p. 320; Zhu, Song and Zhang, 2003, p. 175; Tanikawa, 2007, p. 106; 2009, p. 414; Kim, Kim and Lee, 2008, p. 39.

*Tetragnatha nigrita niccensis* Bösenberg and Strand, 1906, p. 179.

**Female:** Body length 13.0–15.0 mm. Carapace longer than wide; reddish brown; rear of the head region and margins darker; fovea and cervical furrow deep and distinct. Chelicerae reddish brown; well developed; protruded forward. Sternum yellowish brown with black margins. Legs reddish brown with many spines; well developed. Abdomen much longer than wide, cylinder shaped. Dorsum yellowish brown with silvery white scale patterns and dark brown longitudinal stripe accompanied by light center. Venter with broad black band pattern. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 10.0–12.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with outer spur bearing bifurcated tip. Male palp; paracymbium separated with cymbium, embolus slender filiform, conductor with 2 wrinkles.

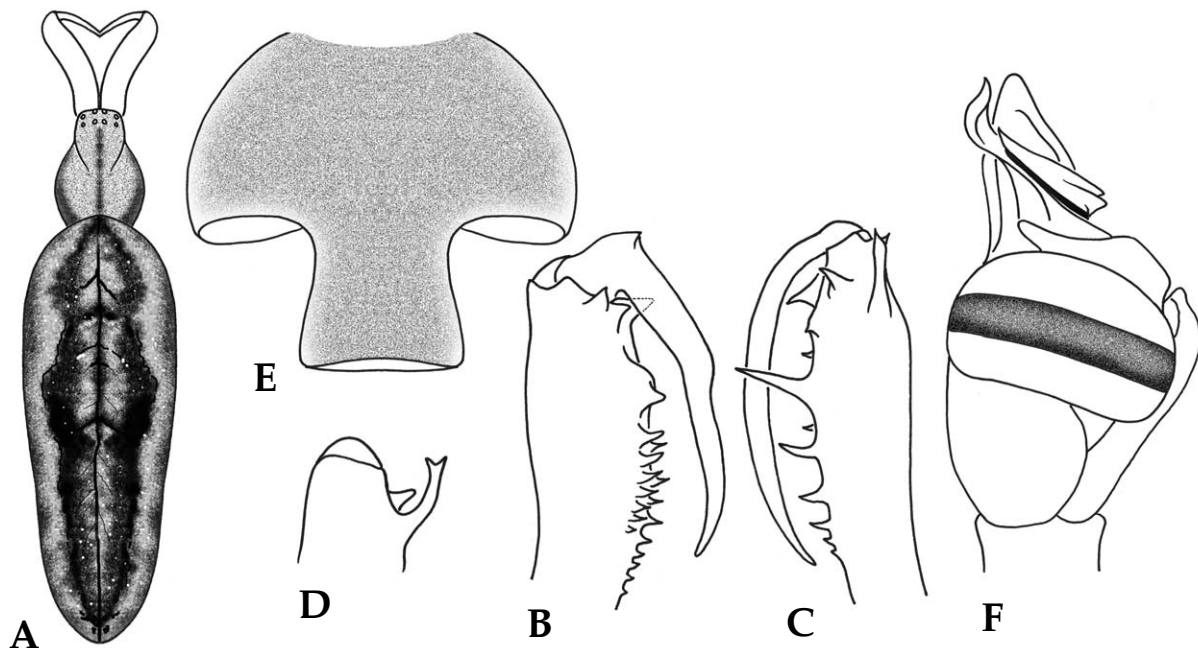


Fig. 40. *Tetragnatha praedonia*. A. female body; B. female chelicera; C. male chelicera; D. outer spur of male chelicera; E. female epigynum; F. male palp.

**DISTRIBUTION:** Korea, China, Japan, Taiwan, Russia.

**KOREA:** GW, GG, CB, GB, JB, JN.

**SPECIMEN EXAMINED:** 2 ♀ ♀, 2 ♂ ♂ (Gimwha, Gangwon-do: 22.vi.1997); 2 ♀ ♀, 1 ♂ (Goseong, Gangwon-do: 21.viii.1998); 2 ♀ ♀ (Jeongok, Gyeonggi-do: 15.viii.1997); 3 ♀ ♀, 1 ♂ (Suwon, Gyeonggi-do: 5.viii.2010); 1 ♀, 1 ♂ (Mt. Sokrisan, Chungcheongbuk-do: 29.vii.1995); 3 ♂ ♂ (Mt. Sobaeksan, Gyeongsangbuk-do: 18.vii.2007); 2 ♀ ♀, 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 20.viii.2008); 2 ♀ ♀ (Gokseong, Jeollanam-do: 27.ix.2012); 7 ♀ ♀, 1 ♂ (Damyang, Jeollanam-do: 28.ix.2012); 1 ♀ (Mt. Baekryeonsan, Seoul: 5.x.1997).

**ECOLOGY:** Founded in the bushes near the streams of mountainous region. Construct horizontal orb web.

### 38. *Tetragnatha squamata* Karsch, 1879 (Fig. 41)

Bi-neul-gal-geo-mi (비늘갈거미)

*Tetragnatha squamata* Karsch, 1879, p. 65; Strand, 1918, p. 95; Bösenberg and Strand, 1906, p. 176; Saito, 1934a, p. 338; 1934b, p. 333; 1939, p. 59; 1959, p. 118; Lee, 1966, p. 57; Yin, 1976, p. 124; Paik and Namkung, 1979, p. 55; Song, 1980, p. 126; Hu, 1984, p. 150; Guo, 1985, p. 92; Yaginuma, 1986, p. 135; Zhang, 1987, p. 100; Okuma, 1988b, p. 188; Chikuni, 1989, p. 94; Chen and Gao, 1990, p. 85; Chen and Zhang, 1991, p. 130; Zhao, 1993, p. 293; Barrion and Litsinger, 1994, p. 324; Kim, Kim and Lee, 1999, p. 72; Song, Zhu and Chen, 1999, p. 223; Zhu et al., 2002, p. 94; Yoo and Kim, 2002, p. 26; Namkung, 2001, p. 220; 2003, p. 222; Zhu, Song and Zhang, 2003, p. 183; Tanikawa, 2007, p. 108; 2009, p. 416; Kim, Kim and Lee, 2008, p. 40.

*Tetragnatha recurva* Schenkel, 1936, p. 85; Hu and Li, 1987, p. 269; Kurenshchikov, 1994, p. 61; Hu, 2001, p. 600.

*Tetragnatha sguamata* Feng, 1990, p. 108.

**Female:** Body length 7.0–9.0 mm. Carapace longer than wide; yellowish brown; fovea and cervical furrow distinct. Chelicerae yellowish brown; well developed; protruded forward. Sternum brown with fine hairs sparsely. Legs yellowish green with long spines. Abdomen longer than wide, cylinder shaped. Dorsum yellowish green or green with silvery white patterns. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 5.0–7.0 mm. Similar to females, smaller size and darker body coloration; dorsum with red pattern at the front and rear. Chelicerae with short outer spur bearing pointed tip; larger than females. Male palp; paracymbium separated with cymbium, embolus long filiform surrounded with conductor.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, GB, GN, JB, JN, JJ.

**SPECIMEN EXAMINED:** 1 ♀ (Whacheon, Gangwon-do: 3.vi.1997); 2 ♀ ♀ (Goseong, Gangwon-do: 7.vii.1998); 1 ♀, 1 ♂ (Mt. Gariwangsan, Gangwon-do: 1.vii.2009); 2 ♂ ♂ (Mt. Myeongjisan, Gyeonggi-do: 19.vi.1992); 1 ♀ (Jeongok, Gyeonggi-do: 15.x.1997); 2 ♂ ♂ (Seongju, Gyeongsangbuk-do: 4.vi.2009); 1 ♀, 2 ♂ ♂ (Tongyeong, Gyeongsangnam-do: 21.vii.1993); 1 ♀, 2 ♂ ♂ (Jeonju, Jeollabuk-do: 22.vii.2008); 1 ♀ (Mt. Naejangsan, Jeollabuk-do: 3.vii.2009); 1 ♀ (Mt. Hallasan, Jeju-do: 6.vi.2001); 3 ♀ ♀ (Daegu,

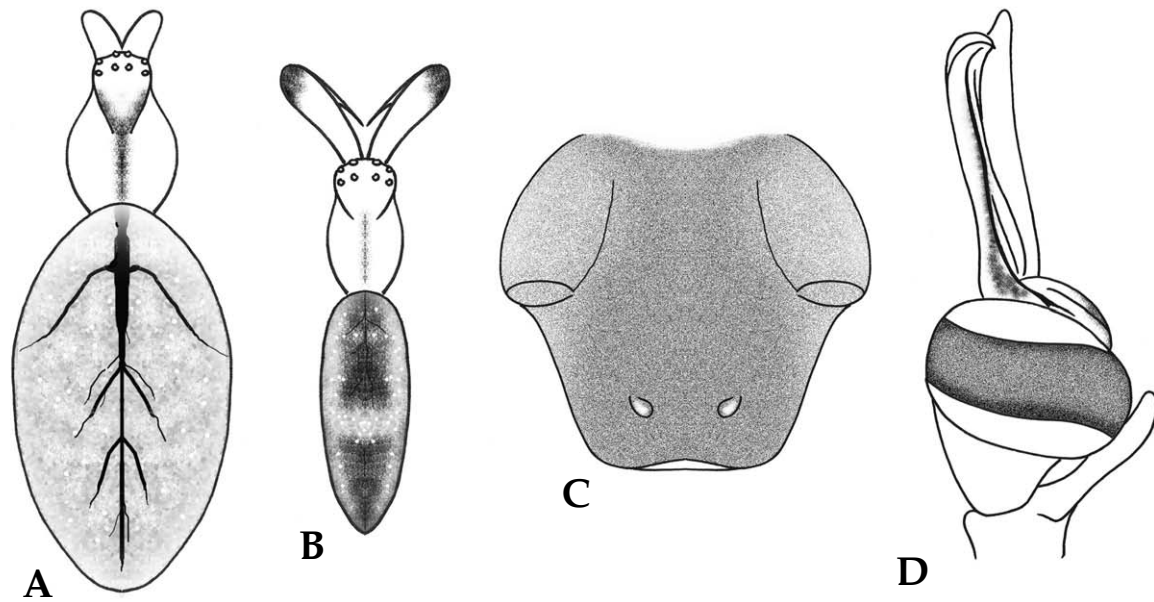


Fig. 41. *Tetragnatha squamata*. A. female body; B. male body; C. female epigynum; D. male palp.

Pagyesa: 5.vi.1991).

**ECOLOGY:** Founded near the houses, between the rice plants of rice fields or between the tree leaves of mountainous region. Construct small orb web horizontally.

### 39. *Tetragnatha vermiformis* Emerton, 1884 (Fig. 42, Pl. 18)

Non-gal-geo-mi (논갈거미)

*Tetragnatha vermiformis* Emerton, 1884, p. 333; 1909, p. 201; Seeley, 1928, p. 138; Kaston, 1948, p. 272; Chickering, 1957b, p. 349; 1959, p. 495; Levi, 1981, p. 316; Okuma, 1983, p. 77; 1988b, p. 192; Yaginuma, 1986, p. 131; Song, 1987, p. 187; Zhang, 1987, p. 101; Okuma and Dippenaar-Schoeman, 1988, p. 222; Chikuni, 1989, p. 96; Hu and Wu, 1989, p. 116; Feng, 1990, p. 110; Chen and Gao, 1990, p. 86; Chen and Zhang, 1991, p. 129; Vungsilabutr, 1988, p. 69; Okuma et al., 1993, p. 40; Zhao, 1993, p. 286; Kurenshchikov, 1994, p. 63; Barrion and Litsinger, 1995, p. 503; Kim, Kim and Lee, 1999, p. 74; Song, Zhu and Chen, 1999, p. 223; 2001, p. 178; Hu, 2001, p. 601; Zhu et al., 2002, p. 94; Namkung, 2001, p. 219; 2003, p. 221; Dondale et al., 2003, p. 62; Zhu, Song and Zhang, 2003, p. 189; Tanikawa, 2007, p. 108; 2009, p. 416; Kim, Kim and Lee, 2008, p. 40.

*Eugnatha vermiformis* McCook, 1894, p. 264.

*Eucta vermiformis* Simon, 1894, p. 725.

*Tetragnatha mackenziei* Gravely, 1921, p. 438.

*Tetragnatha shikokiana* Yaginuma, 1960, append. 5; Song et al., 1976, p. 38; Paik and Namkung, 1979, p. 54; Song, 1980, p. 125; Hu, 1984, p. 149; Guo, 1985, p. 91; Zhu et al., 1985, p. 96.

*Tetragnatha mackenziei* Okuma, 1968b, p. 101.

*Tetragnatha coreana* Seo and Paik, 1981, p. 88; Kim, Kim and Lee, 1999, p. 64; Hu, 2001, p. 597.

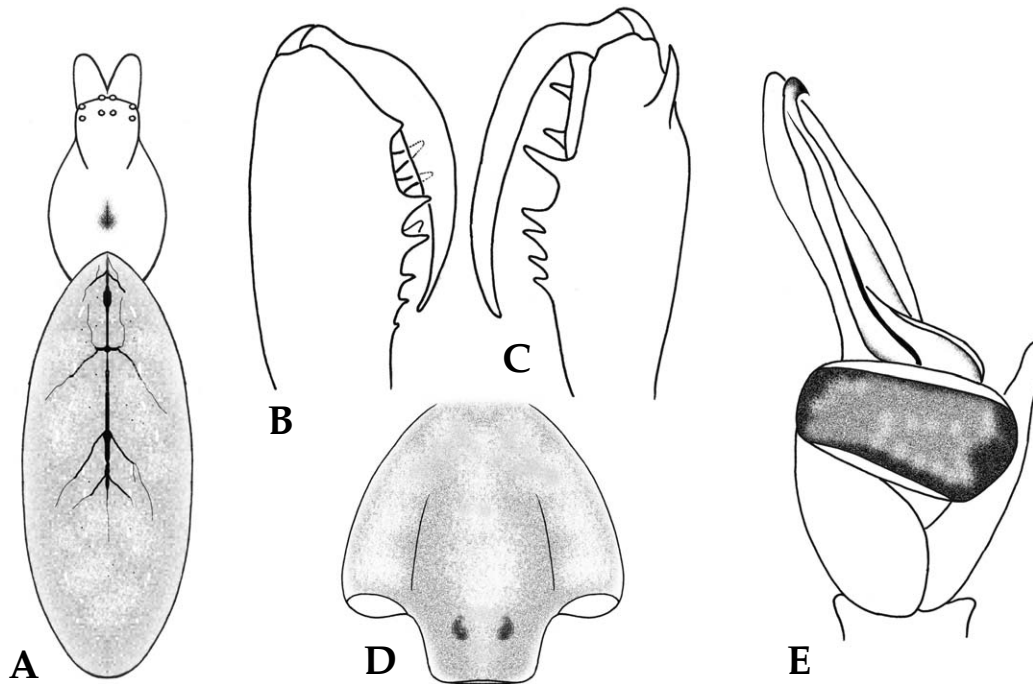


Fig. 42. *Tetragnatha vermiformis*. A. female body; B. female chelicera; C. male chelicera; D. female epigynum; E. male palp.

**Female:** Body length 7.0–9.0 mm. Carapace longer than wide; yellowish brown; head region darker and margin of thoracic region dark brown. Chelicerae yellowish brown; well developed; protruded forward. Sternum light yellowish brown with pointed tip posteriorly. Legs yellowish brown with several short spines. Abdomen much longer than wide, cylinder shaped. Dorsum yellowish white; silver scale patterns and two longitudinal stripes with blunted distally. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 6.0–8.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with short and slender outer spur bearing pointed tip. Male palp; paracymbium separated with cymbium, embolus long filiform surrounded with conductor.

**DISTRIBUTION:** Korea, China, Japan, Russia, Philippine, Indonesia.

**KOREA:** GG, GB, GN, JN.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Gimpo, Gyeonggi-do: 27.vi.2009); 1 ♀, 1 ♂ (Uiseong, Gyeongsangbuk-do: 25.vii.2008); 2 ♀ ♀, 12 ♂ ♂ (Changwon, Gyeongsangnam-do: 25.vii.2008); 1 ♂ (Damyang, Jeollanam-do: 28.ix.2012).

**ECOLOGY:** Founded near the streams of grassland or between the rice plants of rice fields. Construct horizontal orb web.

#### 40. *Tetragnatha yesoensis* Saito, 1934 (Fig. 43, Pl. 19)

Buk-bang-gal-geo-mi (북방갈거미)

*Tetragnatha yesoensis* Saito, 1934b, p. 334; 1959, p. 119; Yaginuma, 1986, p. 135; Okuma, 1988b, p. 185; 1989, p. 53; Chikuni, 1989, p. 94; Logunov, 1992, p. 63; Kurenschikov, 1994, p. 63; Chang, Gao and Guan, 1995, p. 45; Kim, Kim and Lee, 1999, p. 73; Yoo and Kim, 2002, p. 26; Namkung, 2001, p. 221; 2003, p. 223; Tanikawa, 2007, p. 108; 2009, p. 416; Kim, Kim and Lee, 2008, p. 41.

**Female:** Body length 7.0–10.0 mm. Carapace longer than wide; yellowish brown; fovea, cervical and radial furrows distinct. Chelicerae yellowish brown; well developed. Sternum yellowish brown with brown margin. Legs yellowish brown with black spines; slender and long. Abdomen longer than wide, cylinder shaped. Dorsum yellowish green with silver scale patterns. Female epigynum; broad and slightly bulged, copulatory openings wide transversely.

**Male:** Body length 6.0–8.0 mm. Similar to females, smaller size and darker body coloration. Chelicerae with thick outer spur bearing pointed tip; larger than females. Male palp; paracymbium separated with cymbium, embolus slender filiform, conductor with 3 wrinkles.

**DISTRIBUTION:** Korea, Japan, Russia.

**KOREA:** JB, JJ.

**SPECIMEN EXAMINED:** 2 ♀♀, 2 ♂♂ (Mt. Naejangan, Jeollabuk-do: 10.vi.2008); 1 ♀ (Mt. Naejangan, Jeollabuk-do: 15.vii.2009); 1 ♀, 1 ♂ (Mt. Hallasan, Jeju-do: 9.vi.2001).

**ECOLOGY:** Founded between the bushes or shrubs in the coppice of mountainous region. Construct small orb web horizontally.

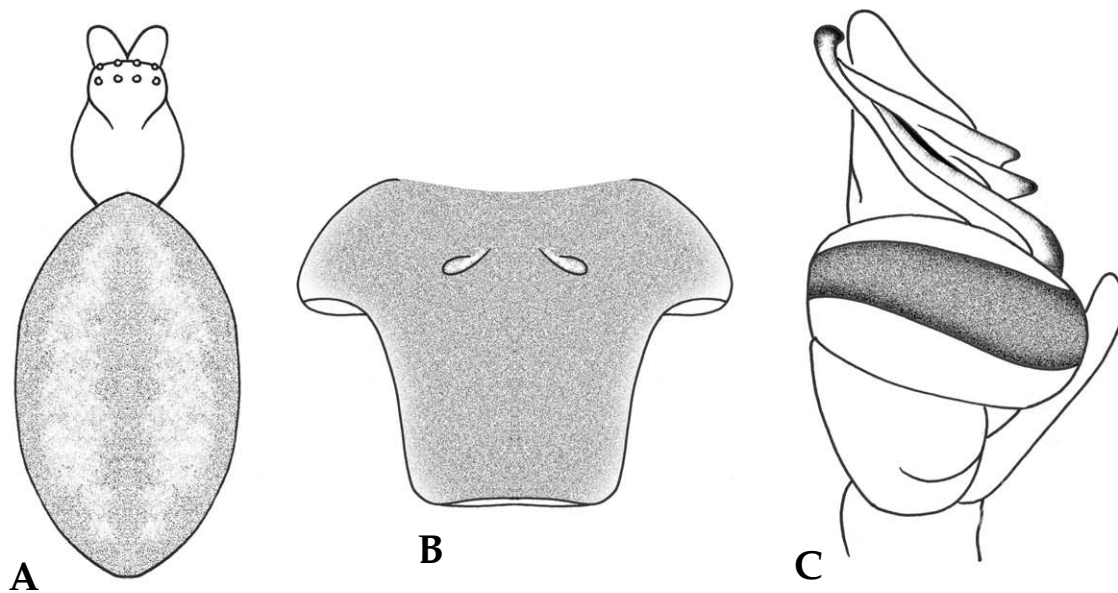


Fig. 43. *Tetragnatha yesoensis*. A. female body; B. female epigynum; C. male palp.

## Family Nephilidae Simon, 1894

Mu-dang-geo-mi-gwa (무당거미과)

The spider family Nephilidae is a small family comprising more than 4 genera and 61 species occurring worldwide (Platnick, 2013). Nephilid spiders are medium to very large (3.0–40.0 mm) araneomorph spiders with three tarsal claws belonging to entelegyne without cribellum (Fig. 44A). Carapace wide with a high head region, a pair of carapace tubercles present dorsally (Fig. 44C). Eight eyes in 2 rows (Fig. 44B). Chelicerae strong with finely striated lateral condyle (Fig. 44D); cheliceral furrow with 2 rows of teeth and many denticles in between. Sternum wide. Abdomen varies, elongate and tapered, cylindrical or flat and rounded. Legs long with numerous spines, tarsi IV with sustentaculum, trichobothria present on tibiae. Female epigyne simple, completely or partially sclerotized. Male palp fairly simple; paracymbium usually flat and rectangular; tegulum large and globular; embolus elongate usually with well developed embolic conductor; median apophysis absent. Most Nephilid spiders construct huge and sticky orb webs with golden threads triply.

Type genus: *Nephila* Leach, 1815.

### Genus *Nephila* Leach, 1815

Mu-dang-geo-mi-sok (무당거미속)

Carapace longer than wide; head region convex and high; a pair of tubercles posteriorly. Cheli-

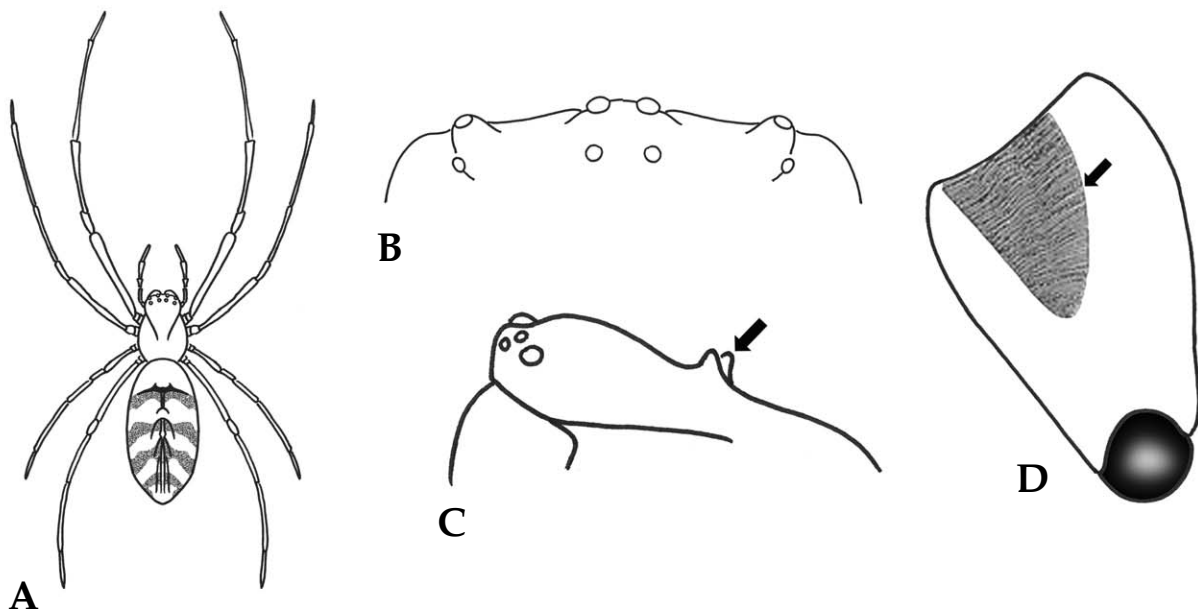


Fig. 44. Taxonomic characters of Nephilidae. A. body; B. eye area; C. carapace tubercle; D. boss of chelicerae.

cerae strong and well developed. Legs very long and strongly developed with spines; metatarsi and tarsi together longer than patella and tibia together; annulated thickly. Male palp with very long embolus that enveloped in thick conductor. Female epigynum heavily sclerotized.

Type species: *Aranea maculata* Fabricius, 1793.

#### 41. *Nephila clavata* L. Koch, 1878 (Fig. 45, Pls. 20, 21)

Mu-dang-geo-mi (무당거미)

*Nephila clavata* L. Koch, 1878a, p. 741; Bösenberg and Strand, 1906, p. 190; Dahl, 1912, pp. 35, 73; Hikichi, 1977, p. 154; Tikader, 1982a, p. 102; Hu, 1984, p. 119; Zhu et al., 1985, p. 84; Chikuni, 1989, p. 80; Feng, 1990, p. 96; Chen and Gao, 1990, p. 69; Chen and Zhang, 1991, p. 110; Kim, Kim and Lee, 1999, p. 58; Song, Zhu and Chen, 1999, p. 217; 2001, p. 167; Namkung, 2001, p. 232; 2003, p. 234; Kim and Cho, 2002, p. 318; Zhu, Song and Zhang, 2003, p. 75; Tanikawa, 2007, p. 94; 2009, p. 403; Kim, Ki and Park, 2008, p. 183.

*Nephila clavata cavaleriei* Schenkel, 1963, p. 134; Brignoli, 1983, p. 241.

*Nephila limbata* Thorell, 1898, p. 335.

*Nephila obnubila* Simon, 1906, p. 308.

*Nephila clavatoides* Schenkel, 1953, p. 27.

**Female:** Body length 20.0–30.0 mm. Carapace longer than wide, quadrangle; brown and covered with silvery white and short hairs. Chelicerae blackish brown; strong and well developed. Sternum blackish brown with yellow pattern anterior and posteriomedianly. Legs blackish brown; femora and tibiae with yellow annulations. Abdomen longer than wide, cylinder shaped. Dorsum yellow with 4–5 greenish blue band pattern and large red pattern posteriolaterally. Venter pale dark brown

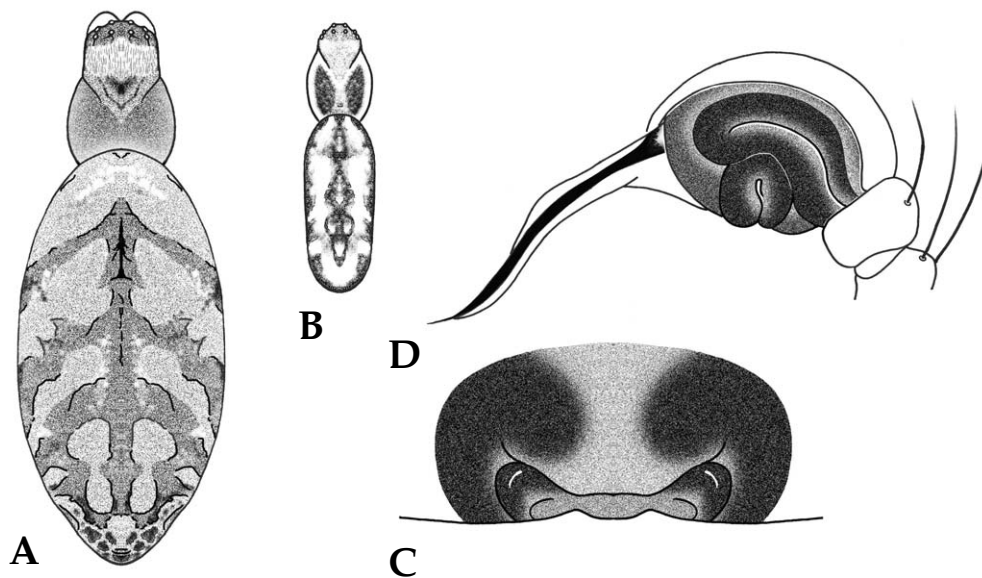


Fig. 45. *Nephila clavata*. A. female body; B. male body; C. female epigynum; D. male palp.

with large red pattern at the front of spinnerets. Female epigynum; much sclerotized and simple.

**Male:** Body length 6.0–10.0 mm. Similar to females, much smaller size and darker body coloration; carapace yellowish white with 2 brown stripes longitudinally. Male palp; embolus very long, wrapped by long and thick conductor.

**DISTRIBUTION:** Korea, China, Japan, Taiwan, Indonesia.

**KOREA:** GW, GG, CB, GB, GN, JB.

**SPECIMEN EXAMINED:** 2 ♀♀ (Daejin, Gangwon-do: 11.x.1991); 2 ♂♂ (Inje, Gangwon-do: 17.viii.1997); 3 ♀♀, 2 ♂♂ (Mt. Maebongsan, Gangwon-do: 22.viii.1997); 1 ♀ (Cheolwon, Gangwon-do: 14.x.1997); 3 ♂♂ (Yeoncheon, Gyeonggi-do: 30.ix.1996); 1 ♀, 1 ♂ (Paju, Gyeonggi-do: 1.x.1997); 3 ♀♀ (Yeoncheon, Gyeonggi-do: 12.x.1997); 3 ♂♂ (Geojedo, Gyeongsangnam-do: 2.ix.2009); 1 ♀, 3 ♂♂ (Changwon, Gyeongsangnam-do: 1.x.2009); 4 ♀♀, 3 ♂♂ (Chungju, Chungcheongbuk-do: 3.x.2012); 1 ♀, 1 ♂ (Goesan, Chungcheongbuk-do: 20.ix.2012); 3 ♀♀ (Yesan, Chungcheongnam-do: 19.x.2009); 4 ♀♀ (Mungyeong, Gyeongsangbuk-do: 11.x.2012); 1 ♀, 3 ♂♂ (Changwon, Gyeongsangnam-do: 1.x.2009); 6 ♀♀, 10 ♂♂ (Mt. Naejangsan, Jeollabuk-do: 23.ix.2008); 1 ♀♀, 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 23.ix.2009); 1 ♀ (Mt. Naejangsan, Jeollabuk-do: 11.x.2010); 2 ♀♀, 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 17.ix.2010).

**ECOLOGY:** Founded between the bushes or shrubs of mountainous region, fields, houses or constructions. Construct huge triple orb web with golden threads.

## Family Pisauridae Simon, 1890

Dat-geo-mi-gwa (닷거미과)

The spider family Pisauridae is a medium family comprising more than 49 genera and 331 species occurring worldwide (Platnick, 2013). Pisaurid spiders are medium to very large (8.0–30.0 mm) araneomorph spiders with three tarsal claws belonging to entelegyne without cribellum (Fig. 46A). Carapace long with and covered with plumose setae. Eight eyes in 2 (4-4), 3 (4-2-2) or 4 (2-2-2-2) rows (Fig. 46B). Chelicerae strong with teeth on the cheliceral furrow. Sternum long, apex blunt. Lorum of pedicel smoothly notched behind (Fig. 46C). Abdomen elongate, tapering towards back; usually with plumose setae. Legs long with setae on femora, patellae, tibiae and metatarsi; tarsi with trichobothria in 2 rows or scattered, and pseudosegments; trochanters deeply notched. Female epigyne consists of 2 integumental folds, forming 2 lateral elevations with a median area. Male palp complex with tibial apophysis; cymbium usually elongated anteriorly; tegulum oval, longitudinal axis frequently inclined; median apophysis present; embolus varies, simple and short to long and curved. Most Pisaurid spiders either free-living hunters. They occupy various habitats and are found on the ground, on plants or in association with water. Egg sac is carried with chelicerae. Female construct a nursery web for the spiderlings.

Type genus: *Pisaura* Simon, 1885.

### Key to the genera of Pisauridae

1. Median ocular quadrangle wider than long ..... *Dolomedes*
- Median ocular quadrangle longer than wide ..... 2

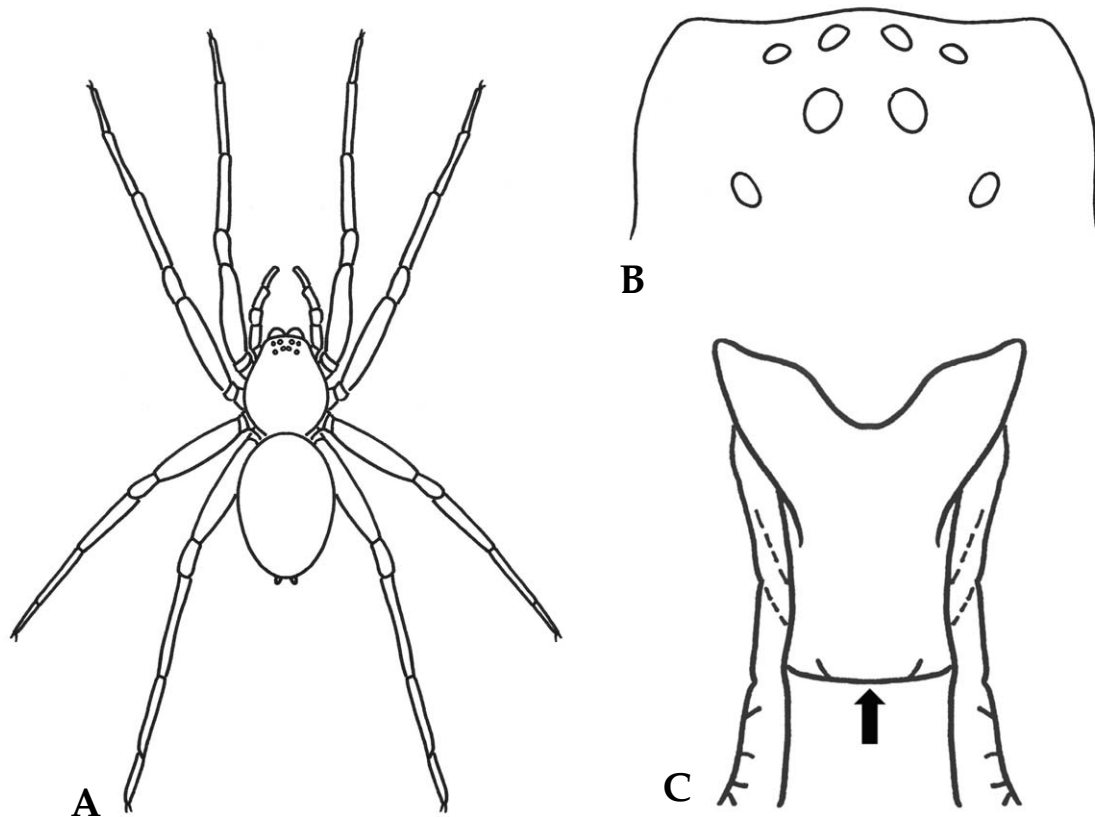


Fig. 46. Taxonomic characters of Pisauridae. A. body; B. eye area; C. lorum of pedicel.

2. Anterior eye row recurved or almost straight ..... *Pisaura*  
 – Anterior eye row procurved ..... *Perenethis*

### Genus *Dolomedes* Latreille, 1804

Dat-geo-mi-sok (닷거미속)

Carapace broad with steeply sloping sides; fovea distinct. Eight eyes; anterior eyes small. Chelicerae with 4 retromarginal teeth and condyles. Legs well developed. Abdomen long and robust. Male palp with dorsolateral apophyses on tibiae. Female epigynum with elongate atria, bordered by lateral elevations.

Type species: *Araneus fimbriatus* Clerck, 1757.

#### Key to the species of genus *Dolomedes*

1. Abdominal dorsum with mottled patterns ..... 2  
 – Abdominal dorsum without pattern or with a pair of stripe patterns ..... 3  
 2. Carapace with line pattern at middle, legs with yellowish brown patterns on femur .....

- ..... *D. japonicus*  
 – Carapace without distinct pattern, legs with reddish brown annulations ..... *D. raptor*  
 3. Chelicerae with long hairs, boss conspicuous ..... *D. sulfureus*  
 – Chelicerae with scopulae, boss un conspicuous ..... *D. angustivirgatus*

#### 42. *Dolomedes angustivirgatus* Kishida, 1936 (Fig. 47)

Ga-neun-jul-dat-geo-mi (가는줄닷거미)

*Dolomedes hercules* Bösenberg and Strand, 1906, p. 310.

*Dolomedes angustivirgatus* Kishida, 1936b, p. 123; Paik, 1969, p. 36; 1978, p. 367; Paik and Namkung, 1979, p. 61; Hu, 1984, p. 254; Barrion and Litsinger, 1994, p. 305; Tanikawa and Miyashita, 2008, p. 24; Tanikawa and Ono, 2009, p. 218.

*Dolomedes sulfureus* Namkung, 2001, p. 346.

**Female:** Body length 14.5–22.0 mm. Carapace longer than wide, bulged; brown with blackish brown margins; blackish brown band pattern stretched medianly. Chelicerae reddish brown with 3 promarginal teeth and 4 retromarginal teeth and scopulae. Sternum broad and oval; yellow with irregular black patterns. Legs brown with many spines; long and well developed; venter of femora dark brown. Abdomen longer than wide, ovoid. Dorsum yellowish brown with blackish brown stripe accompanied by 4 pairs of white spots longitudinally; yellowish brown or grayish brown laterally. Venter yellowish white with black stripe medianly. Female epigynum; sclerotized lozenge shaped elevation covered almost all epigynum, copulatory openings at upper part.

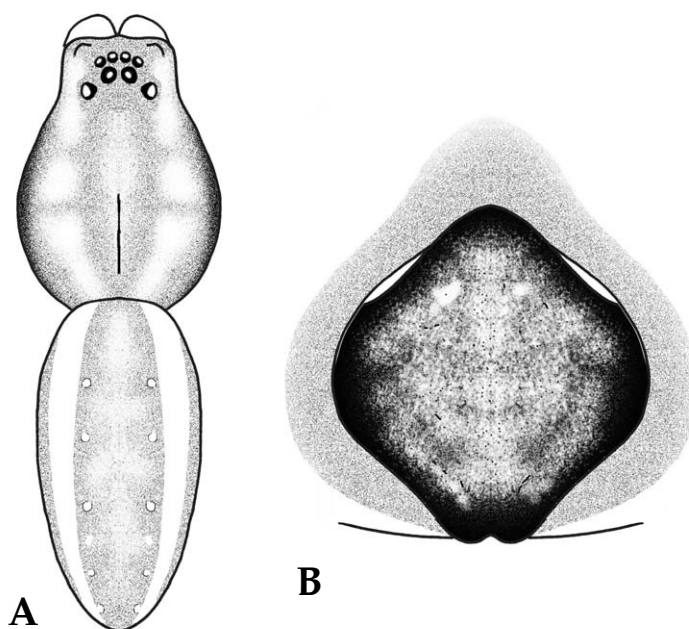


Fig. 47. *Dolomedes angustivirgatus*. A. female body; B. female epigynum.

**Male:** Described by Paik (1969).

**DISTRIBUTION:** Korea, China, Japan.

**KOREA:** GG, GB.

**SPECIMEN EXAMINED:** 1 ♀ (Sangju, Gyeongsangbuk-do: 1.vii.2008).

**ECOLOGY:** Founded on the leaves or between bushes of mountainous region.

### 43. *Dolomedes japonicus* Bösenberg and Strand, 1906 (Fig. 48)

Jul-dat-geo-mi (줄닷거미)

*Dolomedes japonicus* Bösenberg and Strand, 1906, p. 313; Tanikawa and Miyashita, 2008, p. 19; Tanikawa and Ono, 2009, p. 216.

*Dolomedes stellatus* Kishida, 1936b, p. 121; Paik, 1969, p. 39; 1978, p. 371; Hu, 1984, p. 259; Song, 1987, p. 207; Chen and Gao, 1990, p. 134; Chen and Zhang, 1991, p. 223; Song, Zhu and Chen, 1999, p. 347; 2001, p. 267; Namkung, 2001, p. 347; 2003, p. 349; Zhang, Zhu and Song, 2004, p. 378.

**Female:** Body length 19.0–26.0 mm. Carapace longer than wide; reddish brown with yellow margins; median stripe and radial pattern yellow; fovea distinct. Chelicerae dark brown with long yellowish brown hairs; 3 promarginal teeth 4 retromarginal teeth and scopulae. Sternum grayish brown with long black hairs sparsely and pointed posteriorly. Legs dark brown; well developed; femora with yellowish brown patterns and long spines. Abdomen longer than wide, ovoid. Dorsum yellowish brown with black stained patterns. Female epigynum; median septum at upper

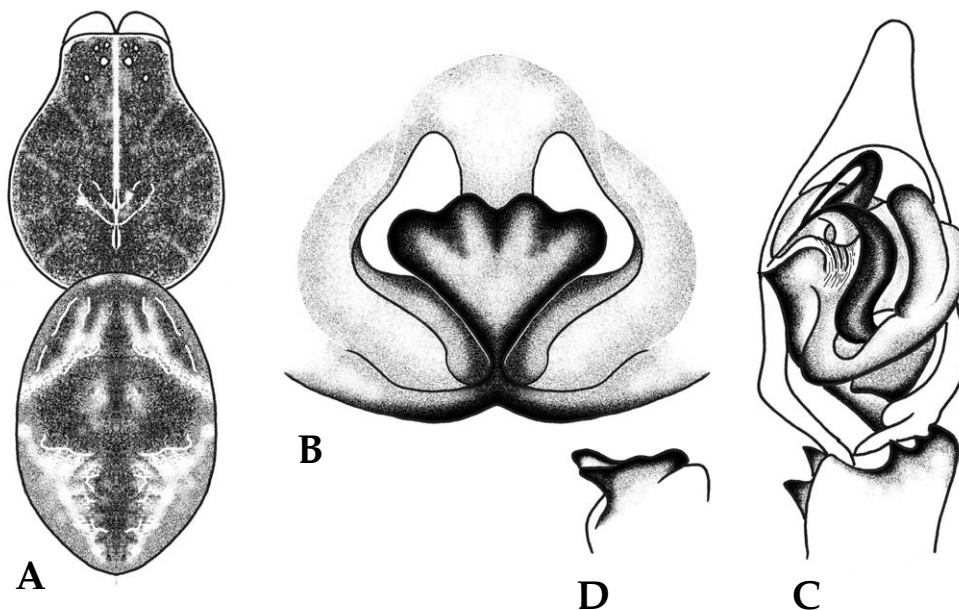


Fig. 48. *Dolomedes japonicus*. A. female body; B. female epigynum; C. male palp; D. tibial dorso-lateral apophysis of male palp.

part, sclerotized shell shaped elevation at lower part, copulatory openings at upper part.

**Male:** Body length about 16.5 mm. Similar to females, smaller size and darker body coloration. Male palp; tibial dorsolateral apophysis short and serrated, embolus bend sharply, conductor retro-laterally membranous.

**DISTRIBUTION:** Korea, China, Japan.

**KOREA:** JJ.

**SPECIMEN EXAMINED:** 3 ♀♀, 1 ♂ (Mt. Hallasan, Jeju-do: 1.ix.1998).

**ECOLOGY:** Founded at the crevice of rocks near the stream or in dark and wet places of cave.

#### 44. *Dolomedes raptor* Bösenberg and Strand, 1906 (Fig. 49)

Meok-dat-geo-mi (먹닷거미)

*Dolomedes raptor* Bösenberg and Strand, 1906, p. 309; Yaginuma, 1960, p. 80; 1971, p. 80; 1986, p. 172; Paik, 1969, p. 42; 1978, p. 370; Chikuni, 1989, p. 107; Namkung, 2001, p. 348; 2003, p. 350; Tanikawa, 2003, p. 38; Zhang, Zhu and Song, 2004, p. 373; Tanikawa and Miyashita, 2008, p. 20; Tanikawa and Ono, 2009, p. 216.

**Female:** Body length 22.0–25.0 mm. Carapace longer than wide; dark brown with pale margins. Fovea, cervical and radial furrows black and distinct. Chelicerae reddish brown with long yellowish brown hairs; 3 promarginal teeth 4 retromarginal teeth; boss distinct. Sternum grayish brown and pointed posteriorly; length and width subequal. Legs dark brown with reddish brown

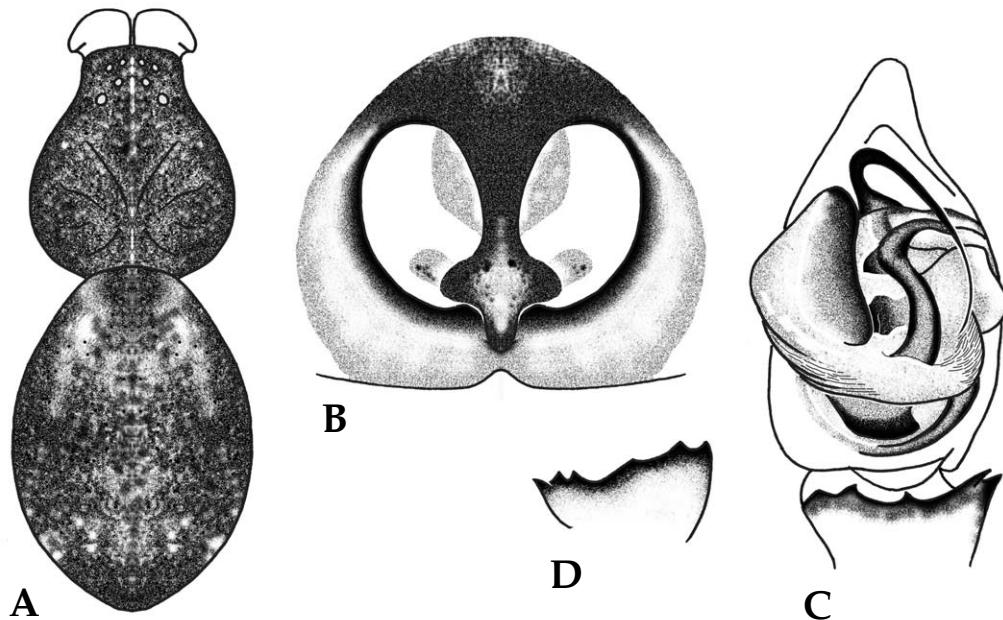


Fig. 49. *Dolomedes raptor*. A. female body; B. female epigynum; C. male palp; D. tibial dorsolateral apophysis of male palp.

annulations and many spines. Abdomen longer than wide, ovoid. Dorsum dark brown with black stripe accompanied by mottled, yellow and white spots showing color variation. Venter yellowish brown or dark brown with 2 rows of spot patterns. Female epigynum; round with sclerotized nose shaped median septum.

**Male:** Body length 12.0–15.0 mm. Similar to females, smaller size and darker body coloration. Male palp; tibial dorsolateral apophysis short and serrated, embolus bend sharply.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GG, JJ.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Andeok, Jeju-do: 19.viii.1992).

**ECOLOGY:** Founded in the dark and wet places of mountainous region, near the streams or caves.

#### 45. *Dolomedes sulfureus* L. Koch, 1878 (Fig. 50, Pls. 22–25)

Hwang-dat-geo-mi (황닷거미)

*Dolomedes sulfureus* L. Koch, 1878b, p. 778; Bösenberg and Strand, 1906, p. 311; Strand, 1918, p. 97; Saito 1934b, p. 349; 1939, p. 69; 1959, p. 45; Kishida, 1936b, p. 118; Uyemura, 1937, p. 64; Yaginuma, 1960, p. 80; 1962b, p. 36; 1971, p. 80; 1985, p. 125; 1986, p. 171; Paik, 1969, p. 29; 1978, p. 373; Nakahira, 1977, p. 45; Paik and Namkung, 1979, p. 62; Hu, 1984, p. 258; Song, 1987, p. 208; Chikuni,

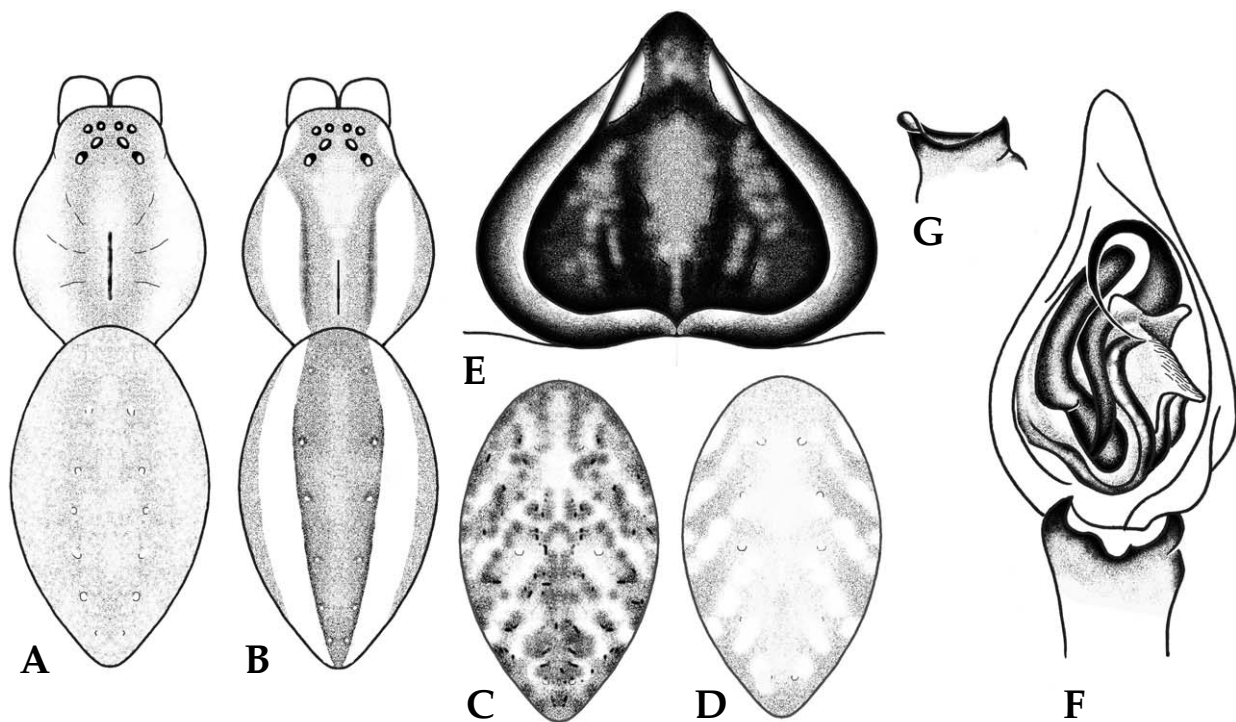


Fig. 50. *Dolomedes sulfureus*. A. female body; B. female body (variation); C. female abdomen (variation); D. female abdomen (variation); E. female epigynum; F. male palp; G. tibial dorsolateral apophysis of male palp.

1989, p. 107; Feng, 1990, p. 160; Chen and Gao, 1990, p. 135; Chen and Zhang, 1991, p. 224; Song, Zhu and Li, 1993, p. 874; Zhao, 1993, p. 306; Barrion and Litsinger, 1994, p. 307; Song, Zhu and Chen, 1999, p. 347; Yoo and Kim, 2002, p. 27; Namkung, 2001, p. 346; 2003, p. 348; Kim and Cho, 2002, p. 190; Zhang, Zhu and Song, 2004, p. 378; Yoo, Park and Kim, 2007, p. 25; Tanikawa and Miyashita, 2008, p. 25; Tanikawa and Ono, 2009, p. 218.

*Caripeta japonica* Bösenberg and Strand, 1906, p. 307.

*Dolomedes fimbriatoides* Bösenberg and Strand, 1906, p. 308; Saito, 1959, p. 46.

*Dolomedes hercules* Bösenberg and Strand, 1906, p. 310; Saito, 1939, p. 68; Saito, 1959, p. 47; Yaginuma, 1960, p. 80; 1971, p. 80; Paik, 1969, p. 33; 1978, p. 369; Paik and Namkung, 1979, p. 61.

*Dolomedes oviger* Dönitz and Strand, in Bösenberg and Strand, 1906, p. 389.

*Dolomedes annulatus* Kishida, 1936b, p. 121.

*Dolomedes xanthum* Saito, 1939, p. 69; Saito, 1959, p. 46.

*Dolomedes hinoi* Kayashima, 1952, p. 265.

**Female:** Body length 20.0–28.0 mm. Carapac longer than wide, bulged; yellowish brown with grayish brown stripe medianly according to individuals. Chelicerae reddish brown with long hairs; 3 promarginal teeth and 4 retromarginal teeth; boss distinct. Sternum broad and oval; yellow with 2 fade stripes at margins. Legs yellowish brown with many spines; long and well developed; no annulation. Abdomen longer than wide, ovoid. Dorsum yellowish brown with fade grayish brown or black stripe longitudinally, or without pattern showing serious pattern and color variations. Venter grayish yellow with stripe formed by 2 pairs of black spots. Female epigynum; triangular elevation covered whole epigynum, copulatory openings at upper part.

**Male:** Body length 14.0–20.0 mm. Similar to females, smaller size and darker body coloration. Male palp; tibial dorsolateral apophysis minute and blunt, embolus bend sharply.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, JB, JN, JJ.

**SPECIMEN EXAMINED:** 1 ♀ (Cheolwon, Gangwon-do: 13.vi.1997); 1 ♂ (Yeoncheon, Gyeonggi-do: 6.vi.1997); 1 ♀, 1 ♂ (Suwon, Gyeonggi-do: 30.vi.1999); 1 ♀ (Mt. Chilbosan, Gyeonggi-do: 19.ix.2002); 2 ♀ ♀ (Mt. Naejangsan, Jeollabuk-do: 20.viii.2008); 1 ♀ (Whasun, Jeollanam-do: 2.x.2008); 5 ♀ ♀ (Mt. Jirisan, Jeollanam-do: 30.viii.2006); 1 ♂ (Mt. Hallasan, Jeju-do: 19.viii.1992).

**ECOLOGY:** Founded on the leaves or in the bushes of mountainous region. Construct nursery web and cling eggsac in the web.

## Genus *Perenethis* L. Koch, 1878

Beon-gae-dat-geo-mi-sok (번개땃거미속)

Carapace broad and relatively flat. Eight eyes; anterior eyes subequal in size, smaller than posterior median eyes. Chelicerae with 2 retromarginal teeth. Legs well developed. Abdomen long and pointed posteriorly. Male palp with dorsolateral apophyses on tibiae. Female epigynum sclerotized.

Type species: *Perenethis venusta* L. Koch, 1878.

**46. *Perenethis fascigera* (Bösenberg and Strand, 1906) (Fig. 51)**

Beon-gae-dat-geo-mi (번개닷거미)

*Tetragonophthalma fascigera* Bösenberg and Strand, 1906, p. 306; Yaginuma, 1960, p. 81; Paik, 1970, p. 87.

*Perenethis fascigera* Yaginuma, 1971, p. 81; 1986, p. 173; Paik, 1978, p. 375; Song, 1980, p. 177; 1987, p. 209; Hu, 1984, p. 260; Chikuni, 1989, p. 106; Chen and Gao, 1990, p. 136; Chen and Zhang, 1991, p. 225; Song, Zhu and Chen, 1999, p. 348; Namkung, 2001, p. 349; 2003, p. 351; Zhang, Zhu and Song, 2004, p. 387; Tanikawa and Ono, 2009, p. 220.

**Female:** Body length 10.0–11.0 mm. Carapace longer than wide; yellowish brown with fine yellowish brown stripe at margin; broad longitudinal band with black hairs in row. Chelicerae brown with 3 promarginal teeth and 2 retromarginal teeth and scapulae; boss distinct. Sternum yellowish brown with dark gray margin, cordiform. Legs yellowish brown with many spines; no annulation. Abdomen longer than wide, ovoid. Dorsum yellowish brown with brown stripe surrounded by white band pattern medianly. Female epigynum; sclerotized median septum at middle, copulatory openings situated beside median septum.

**Male:** Body length 9.0–10.0 mm. Similar to females, smaller size and darker body coloration. Male palp; tibial dorsolateral apophysis long with pointed tip, embolus bend sharply, median apophysis distinct and hook shaped.

**DISTRIBUTION:** Korea, China, Japan.

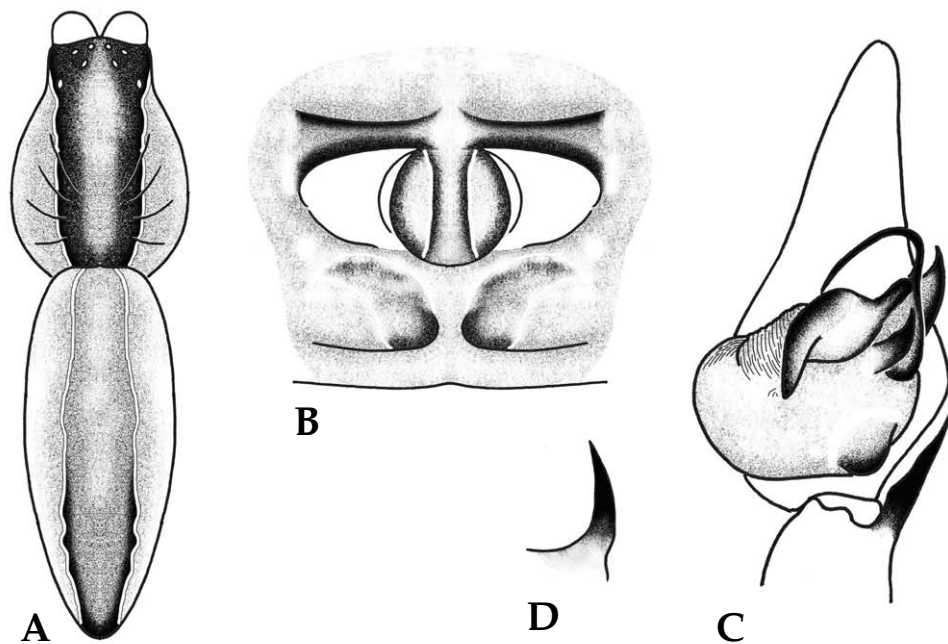


Fig. 51. *Perenethis fascigera*. A. female body; B. female epigynum; C. male palp; D. tibial dorsolateral apophysis of male palp.

KOREA: JJ.

SPECIMEN EXAMINED: 1 ♀, 1 ♂ (Seongeup, Jeju-do: 17.viii.1992).

ECOLOGY: Founded in the bushes, grounds or leaf litters of mountainous region.

## Genus *Pisaura* Simon, 1885

Seo-seong-geo-mi-sok (서성거미속)

Carapace broad and relatively flat; clypeus high. Eight eyes; anterior eyes subequal in size, smaller than posterior median eyes. Chelicerae with 3-4 retromarginal teeth. Legs long and well developed with scopulae; trichobothria on tarsi, metatarsi, and tibiae. Abdomen long and robust, pointed posteriorly. Male palp with dorsolateral apophyses on tibiae. Female epigynum sclerotized.

Type species: *Araneus mirabilis* Clerck, 1757.

### Key to the species of genus *Pisaura*

1. Sternum with longitudinal stripe pattern, female epigynum bifurcated anchor shaped ..... *P. ancora*
- Sternum with longitudinal stripe pattern and 3 pairs of spots, female epigynum anchor shaped ..... *P. lama*

### 47. *Pisaura ancora* Paik, 1969 (Fig. 52)

Dat-pyo-neup-seo-seong-geo-mi (달표늪서성거미)

*Pisaura ancora* Paik, 1969, p. 49; 1978, p. 377; Song and Zheng, 1982, p. 155; Hu, 1984, p. 261; Guo, 1985, p. 134; Zhu et al., 1985, p. 147; Song, 1987, p. 210; Zhang, 1987, p. 167; Logunov, 1990, p. 37; Feng, 1990, p. 162; Chen and Gao, 1990, p. 137; Chen and Zhang, 1991, p. 227; Song, Zhu and Chen, 1999, p. 348; 2001, p. 268; Zhang, 2000, p. 2; Hu, 2001, p. 217; Namkung, 2001, p. 350; 2003, p. 352; Kim and Cho, 2002, p. 191; Zhang, Zhu and Song, 2004, p. 391; Marusik and Kovblyuk, 2011, p. 219.

**Female:** Body length 10.0–12.0 mm. Carapace longer than wide; yellowish brown with a pair of thick and white stripes at margin and white stripe medianly. Chelicerae brown with 3 promarginal teeth and retromarginal teeth each and pale brown scopulae. Sternum yellowish brown, cordiform with pointed tip posteriorly and median yellow stripe. Legs yellowish brown; venter of femora black. Abdomen longer than wide, elliptical. Dorsum yellowish brown with several comb pattern showing variation. Venter yellowish brown without distinct patterns; colulus distinct. Female epigynum; thick anchor shaped with bifurcated upper part, copulatory openings situated laterally at middle.

**Male:** Body length 9.0–10.0 mm. Similar to females, smaller size and darker body coloration. Male palp; tibial dorsolateral apophysis long with pointed tip, embolus small and curved, median apophysis distinct and beak shaped.

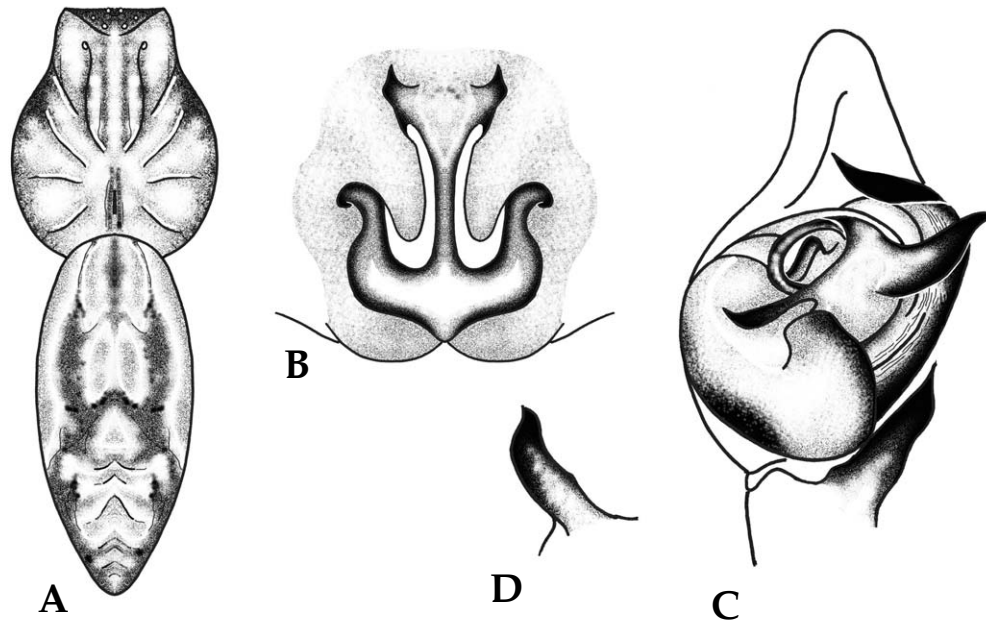


Fig. 52. *Pisaura ancora*. A. female body; B. female epigynum; C. male palp; D. tibial dorsolateral apophysis of male palp.

**DISTRIBUTION:** Korea, China, Russia.

**KOREA:** GW, GG, CN.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Gariwangsan, Gangwon-do: 1.vii.2009); 2 ♀ ♀ (Mt. Bangtaesan, Gangwon-do: 25.vi.2010); 1 ♀ (Imjin River, Gyeonggi-do: 19.iv.1996); 1 ♀, 1 ♂ (Hwaseong, Gyeonggi-do: 6.v.2002); 1 ♀ (Geumsan, Chungcheongnam-do: 8.v.1995).

**ECOLOGY:** Founded in the bushes or shrubs of mountainous region and fields.

#### 48. *Pisaura lama* Bösenberg and Strand, 1906 (Fig. 53, Pls. 26, 27)

A-gi-neup-seo-seong-geo-mi (아기늪서성거미)

*Pisaura lama* Bösenberg and Strand, 1906, p. 306; Saito, 1939, p. 67; 1959, p. 45; Yaginuma, 1960, p. 81; 1971, p. 81; 1974, p. 170; 1986, p. 174; Paik, 1969, p. 44; 1978, p. 379; Arita and Yaginuma, 1975, p. 29; Song and Zheng, 1982, p. 156; Hu, 1984, p. 262; Guo, 1985, p. 135; Song, 1987, p. 210; Zhang, 1987, p. 168; Chikuni, 1989, p. 105; Logunov, 1990, p. 37; Feng, 1990, p. 163; Chen and Gao, 1990, p. 137; Chen and Zhang, 1991, p. 227; Barrion and Litsinger, 1994, p. 305; Song, Zhu and Chen, 1999, p. 348; 2001, p. 269; Namkung, 2001, p. 351; 2003, p. 353; Kim and Cho, 2002, p. 192; Zhang, Zhu and Song, 2004, p. 393; Tanikawa and Ono, 2009, p. 220; Marusik and Kovblyuk, 2011, p. 219.

*Pisaura clarivittata* Dönitz and Strand, in Bösenberg and Strand, 1906, p. 389.

*Pisaura strandi* Kishida, 1914, p. 127; Yaginuma, 1960, p. 81; 1971, p. 81.

*Pisaura flavistriata* Yaginuma, 1960: append. 6; 1971, p. 81.

*Pisaura laura* Qiu, 1981, p. 14.

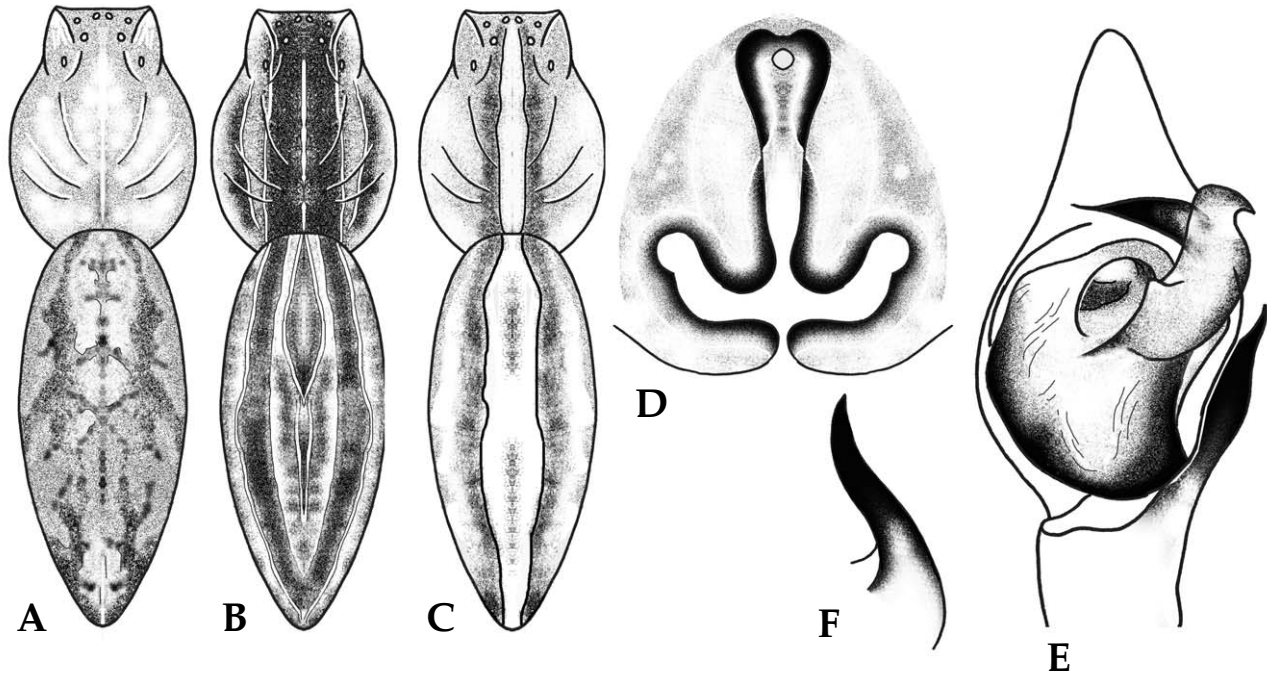


Fig. 53. *Pisaura lama*. A. female body; B. female body (variation); C. female body (variation); D. female epigynum; E. male palp; F. tibial dorsolateral apophysis of male palp.

*Pisaura ancora* Hu, 1984, p. 261.

**Female:** Body length 10.0–13.0 mm. Carapace yellowish brown with yellow median stripe; broad and black stripe laterally and black patterns at margin; fovea reddish brown, cervical and radial furrows black. Chelicerae yellowish brown with 3 promarginal teeth and retromarginal teeth each and brown scapulae. Sternum dark gray with yellow longitudinal stripe and 3 pairs of spots. Legs brown; venter of femora black. Abdomen longer than wide, long elliptical; yellowish brown with black comb pattern laterally showing variation. Female epigynum thick anchor shaped, copulatory openings situated laterally at middle.

**Male:** Body length 7.0–11.0 mm. Similar to females, smaller size and darker body coloration. Male palp; tibial dorsolateral apophysis long with pointed tip, embolus inconspicuous, median apophysis distinct and bird shaped.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, GN, JB, JN, JJ.

**SPECIMEN EXAMINED:** 2 ♀♀ (Mt. Maebongsan, Gangwon-do: 9.v.1997); 3 ♀♀, 1 ♂ (Gimwha, Gangwon-do: 22.vi.1997); 3 ♀♀, 2 ♂♂ (Inje, Gangwon-do: 24.vi.1997); 2 ♀♀ (Mt. Godaesan, Gangwon-do: 6.vi.1997); 1 ♀ (Mt. Geumhaksan, Gangwon-do: 7.vii.1998); 1 ♀ (Goseong, Gangwon-do: 7.vii.1998); 1 ♀ (Yeoncheon, Gyeonggi-do: 6.vii.1997); 1 ♀ (Geochang, Gyeongsangnam-do: 5.vi.1995); 1 ♂ (Mt. Naejangan, Jeollabuk-do: 17.vi.2011); 4 ♀♀, 2 ♂♂ (Boseong, Jeollanam-do: 21.v.1989); 2 ♂♂ (Mt. Hallasan, Jeju-do: 6.vi.2001).

**ECOLOGY:** Founded in the bushes or shrubs of mountainous region and fields.

## Family Gnaphosidae Pocock, 1898

Su-ri-geo-mi-gwa (수리거미과)

The spider family Gnaphosidae is a large family comprising more than 118 genera and 2,134 species occurring worldwide (Platnick, 2013). Gnaphosid spiders are small to medium (3.0–17.0 mm) araneomorph spiders with two tarsal claws belonging to entelegyne without cribellum (Fig. 54A). Carapace ovoid, smoothly convex, usually with distinct fovea. Eight eyes in 2 rows, anterior eyes round, posterior median eyes conspicuously flattened or irregular in shape (Fig. 54B). Chelicerae short and robust, with teeth on the cheliceral furrow; usually with a carina (Fig. 54C). Sternum flat and ovoid, apex pointed. Abdomen elongated to oval, erect and curved setae clustered on anterior edge, anterior scuta present in some males. Legs usually short and stout, tarsi I and II often with dense scopulae. Spinnerets cylindrical (Fig. 54D). Female epigyne with cuticular margins. Male palp usually with a stout, pointed, retrolateral tibial apophysis; tegulum large, subtegulum smaller; embolus slender and varied in length. Most Gnaphosid spiders either free-living hunters. They are found mainly on the soil surface or under the stones.

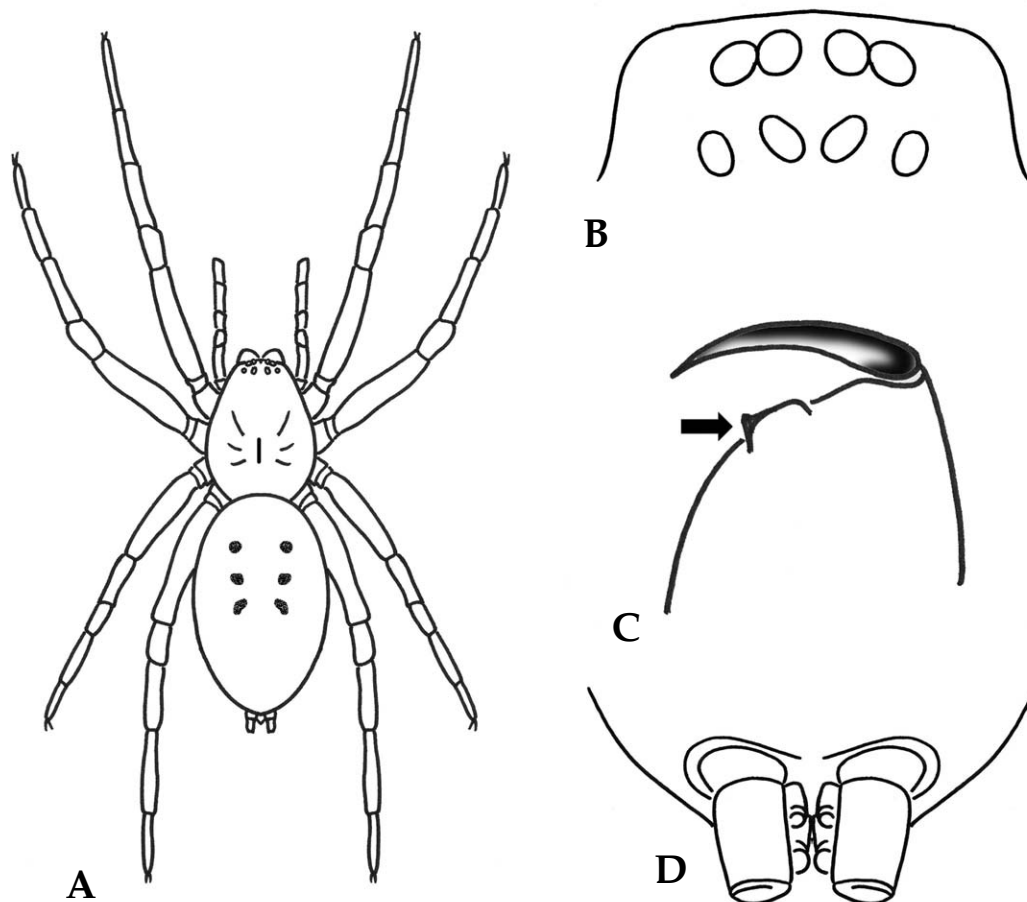


Fig. 54. Taxonomic characters of Gnaphosidae. A. body; B. eye area; C. carina of chelicerae; D. spinnerets.

Type genus: *Gnaphosa* Latreille, 1804.

### Key to the genera of family Gnaphosidae

1. Anterior spinnerets widened outward ..... *Micaria*
- Anterior spinnerets almost parallel ..... 2
2. Cheliceral retromargin with carina ..... 3
- Cheliceral retromargin without carina ..... 7
3. Cheliceral retromargin with serrated carina ..... 4
- Cheliceral retromargin with unserrated carina ..... 5
4. Cheliceral promargin with teeth, no tooth on retromargin ..... *Gnaphosa*
- Cheliceral retromargin with teeth, no tooth on promargin ..... *Sernokorba*
5. Cheliceral retromargin with one tooth and carina ..... *Poecilochroa*
- Cheliceral retromargin with carina only ..... 6
6. Cheliceral promargin with one tooth ..... *Callilepis*
- Cheliceral promargin with one tooth and small denticles ..... *Kishidaia*
7. Cheliceral margin without tooth ..... *Shiragaia*
- Cheliceral margin with tooth ..... 8
8. Chelicerae with distinct boss ..... 9
- Chelicerae without distinct boss ..... 10
9. Female epigynum with transverse rim ..... *Haplodrassus*
- Female epigynum with semicircled rim ..... *Urozelotes*
10. Legs with ventral notch of trochanter ..... *Cladothela*
- Legs without ventral notch of trochanter ..... 11
11. Abdominal dorsum with distinct patterns ..... 12
- Abdominal dorsum without distinct patterns ..... 14
12. Abdominal dorsum with a pair of spots at 2/3 of abdomen ..... *Sergiolus*
- Abdominal dorsum with transverse stripe pattern ..... 13
13. Abdominal dorsum with one transverse stripe pattern ..... *Hitobia*
- Abdominal dorsum with 3 transverse stripe patterns ..... *Herpyllus*
14. Male palpal organ without median apophysis ..... 15
- Male palpal organ with median apophysis ..... 16
15. Male palp with very long tibial retrolateral apophysis bearing curved tip ..... *Sanitubius*
- Male palp with short tibial retrolateral apophysis bearing pointed tip ..... *Odontodrassus*
16. Male palpal organ with terminal apophysis at middle part ..... *Drassyllus*
- Male palpal organ with terminal apophysis at upper part ..... 17
17. Male dorsum without scutum ..... *Drassodes*
- Male dorsum with scutum ..... 18
18. Eyes subequal ..... *Coreodrassus*
- Eyes different ..... 19
19. Chelicerae with short and thick spines prolaterally, anterior median eye > anterior lateral eye ..... *Trachyzelotes*
- Chelicerae without spine prolaterally, anterior median eye < anterior lateral eye ..... *Zelotes*

## Genus *Callilepis* Westring, 1874

Do-kki-geo-mi-sok (도끼거미속)

Carapace oval; head region narrow; thoracic region broad and oval; clypeus high. Anterior eye row strongly procurved, posterior eye row slightly procurved from in front; lateral eyes larger than median eyes. Chelicerae covered with small spines; promargin with one tooth; retromargin with translucent carina without serrated edge. Abdomen oval; anteriodorsally scutum in male. Male palp without tibial apophysis; embolus long and slender; conductor large. Female epigynum with broad and flat mesa area; copulatory openings situated anteriolaterally.

Type species: *Aranea nocturna* Linnaeus, 1758.

### 49. *Callilepis schuszteri* (Herman, 1879) (Fig. 55)

Ssang-byeol-do-kki-geo-mi (쌍별도끼거미)

*Gnaphosa schuszteri* Herman, 1879, p. 199.

*Pythonissa flavitarsis* Simon, 1880, p. 120.

*Callilepis schuszteri* Chyzer and Kulczyn'ski, 1897, p. 191; Miller, 1947, p. 61; Machado, 1949, p. 18; Wiehle, 1967a, p. 14; Miller, 1971, p. 76; Platnick, 1975, p. 19; Paik, 1978, p. 412; Song and Hubert, 1983, p. 16; Grimm, 1985, p. 96; Kamura, 1986, p. 16; Yaginuma, 1986, p. 188; Song, 1987, p. 334; Chikuni, 1989, p. 118; Heimer and Nentwig, 1991, p. 416; Song, Zhu and Chen, 1999, p. 448; 2001, p. 334; Namkung, 2001, p. 460; 2003, p. 463; Kim and Cho, 2002, p. 75; Song, Zhu and Zhang, 2004, p. 35; Jung et al., 2005, p. 166; Kamura, 2009, p. 490.

*Callilepis bipunctata* Yaginuma, 1960: append. 7; 1971, p. 122.

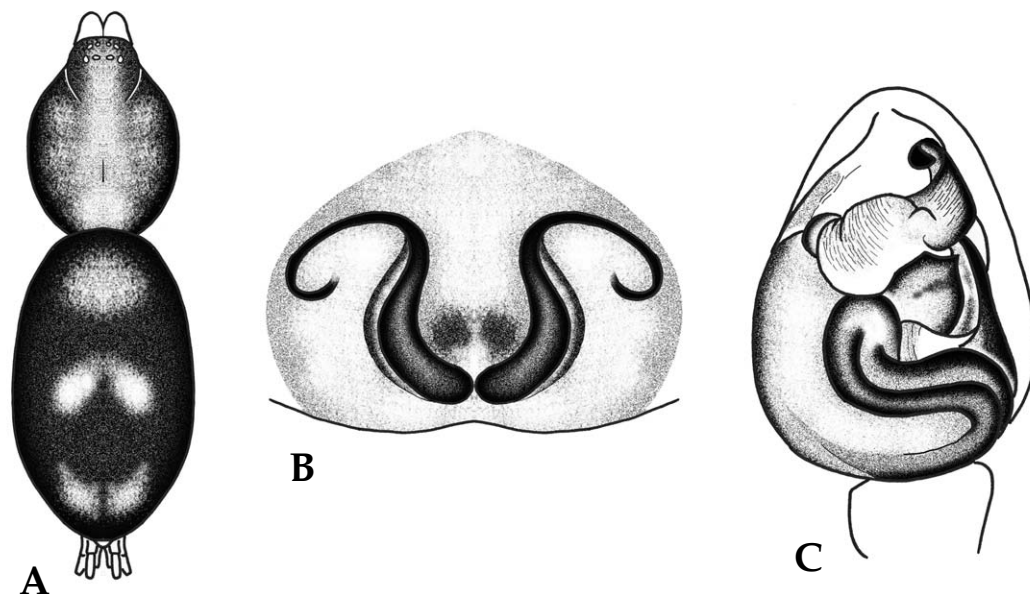


Fig. 55. *Callilepis schuszteri*. A. female body; B. female epigynum; C. male palp.

**Female:** Body length 5.5–7.0 mm. Carapace longer than wide, oval; brown or dark brown with short white hairs; fovea reddish brown, spiniform; cervical and radial furrows distinct. Chelicerae dark brown without boss; securiform; carina on the retromargin. Sternum blackish brown, heart shaped. Legs dark brown; yellowish brown below patellae with lighter end. Abdomen longer than wide, elliptical; blackish brown or grayish brown. Dorsum with a pair of white patterns medianly, grayish yellow transverse pattern anteriorly, white transeverse pattern posteriorly. Spinnerets black; anterior spinnerets thicker and longer than posterior spinnerets. Female epigynum; sclerotized with a pair of curved rims laterally.

**Male:** Body length 4.5–5.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis absent, bulb protruded, embolus slender and long, conductor large with curved tip.

**DISTRIBUTION:** Korea, China, Japan, Russia, Europe.

**KOREA:** GW, GG.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Taebaeksan, Gangwon-do: 23.v.1993); 1 ♀ (Cheolwon, Gangwon-do: 20.v.1997); 1 ♂ (Mt. Maebongsan, Gangwon-do: 20.ix.1998); 1 ♂ (Mt. Mugapsan, Gyeonggi-do: 31.v.1998).

**ECOLOGY:** Founded in the leaf litters or on the grounds of mountainous region.

## **Genus *Cladothela* Kishida, 1928**

Gal-rae-kkok-ji-geo-mi-sok (갈래꼭지거미속)

Carapace oval; longitudinal fovea distinct. Both eye rows slightly recurved in front. Chelicerae with distinct long bristles along promargin; some teeth on promargin only. Legs with scopulae on tarsi I and II and sometimes on metatarsi I and II; trochanters without ventral notch; metatarsi III and IV with dense bristles on ventrodiscal part. Abdomen oval; anteriodorsally scutum in male. Male palp without tibial retrolateral apophysis and median apophysis; embolus long; conductor large and twisted; palpal femora with a large spine on retrolateral side. Female epigynum with copulatory openings situated anteriorly.

Type species: *Cladothela boninensis* Kishida, 1928.

### **Key to the species of genus *Cladothela***

1. Male palpal organ with long and slender embolus, large conductor twisted ..... *C. tortiembola*
- Male palpal organ with long and slender embolus, large conductor untwisted ..... *C. oculinotata*

### **50. *Cladothela oculinotata* (Bösenberg and Strand, 1906) (Fig. 56)**

Heuk-gal-gal-rae-kkok-ji-geo-mi (흑갈갈래꼭지거미)

*Drassodes oculinotatus* Bösenberg and Strand, 1906, p. 119; Paik, 1978, p. 414; Yaginuma, 1986, p. 189.  
*Drassodes oculinotatum* Yaginuma, 1960, p. 120; 1971, p. 120.

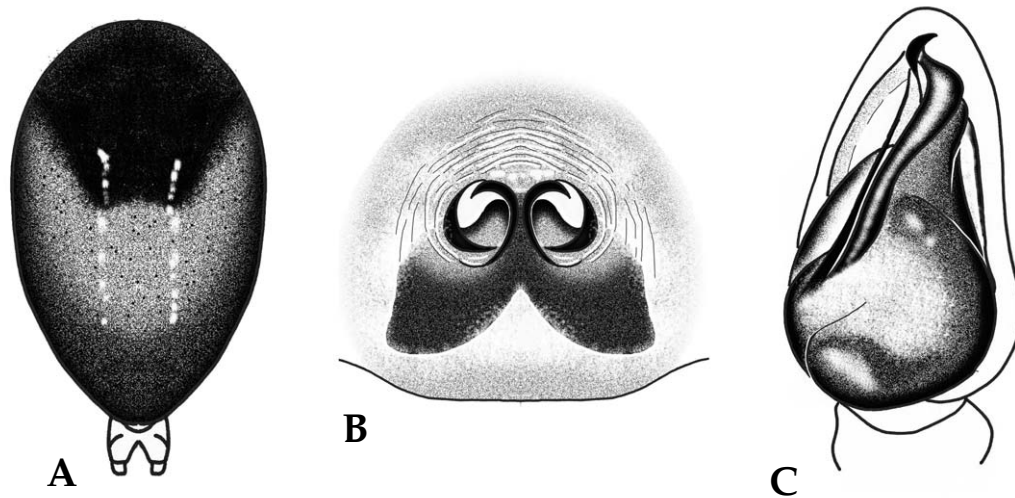


Fig. 56. *Cladothela oculinotata*. A. male abdomen; B. female epigynum; C. male palp.

*Cladothela oculinotata* Kamura, 1991, p. 51; Paik, 1992g, p. 36; Namkung, 2001, p. 461; 2003, p. 464; Song, Zhu and Zhang, 2004, p. 40; Jung et al., 2005, p. 167; Kamura, 2009, p. 489.

**Female:** Body length 7.5–9.0 mm. Carapace longer than wide, oval; dark brown with lighter head region; fovea black, spiniform; cervical and radial furrows distinct. Chelicerae reddish brown with 3 promarginal teeth and retromarginal teeth each. Sternum reddish brown with light brown margin, heart shaped. Legs reddish brown; stout and well developed; metatarsi and tarsi lighter; many spines on the metatarsi and tarsi of legs III and IV. Abdomen longer than wide, ovoid; dusky. Spinnerets relatively short. Female epigynum; slightly elevated with a pair of round depressions.

**Male:** Body length 7.0–7.5 mm. Similar to females, smaller size and darker body coloration; broad dorsal scutum present. Male palp; tibial retrolateral apophysis absent, embolus long and slender, large conductor untwisted.

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GG, GN, JB, JN.

**SPECIMEN EXAMINED:** 1♂ (Hwaseong, Gyeonggi-do: 17.vi.2002); 1♀, 1♂ (Jeongeup, Jeollabuk-do: 23.vii.2008); 1♂ (Mt. Naejongsan, Jeollabuk-do: 17.ix.2008); 1♀ (Gwangyang, Jeollanam-do: 26.vii.2008); 1♂ (Jinyeong, Gyeongsangnam-do: 25.vi.2008).

**ECOLOGY:** Founded in the leaf litters or grasslands of mountainous region.

### 51. *Cladothela tortiembola* Paik, 1992 (Fig. 57)

Na-sa-gal-rae-kkok-ji-geo-mi (나사갈래꼭지거미)

*Cladothela tortiembola* Paik, 1992g, p. 38; Jung et al., 2005, p. 168.

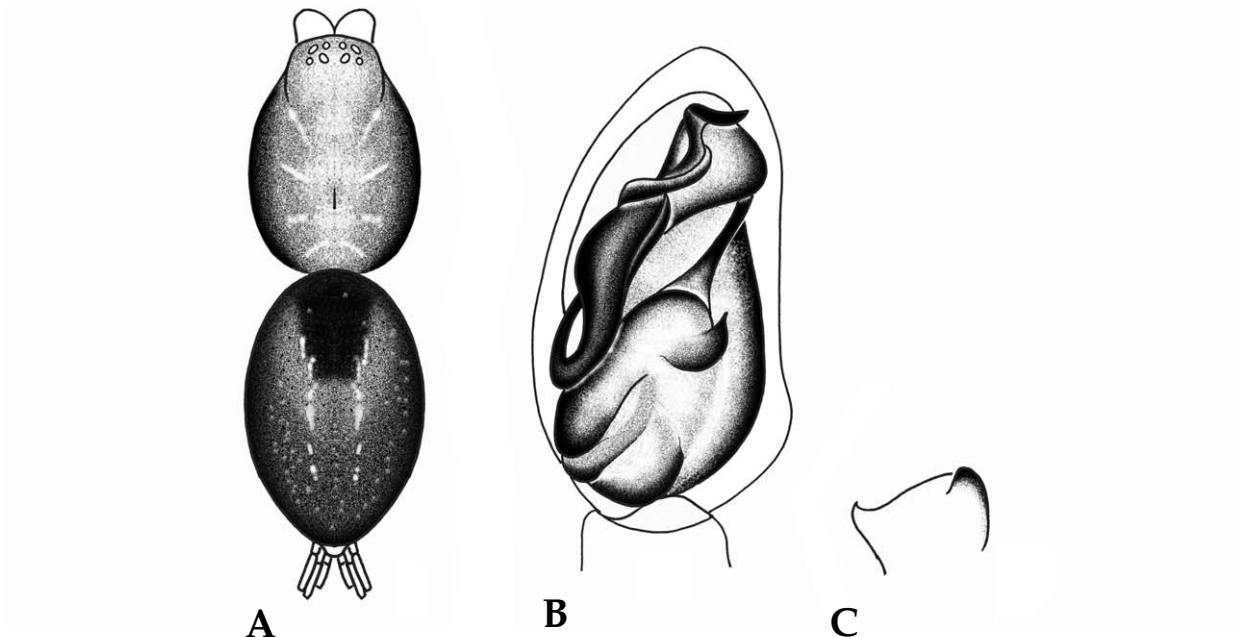


Fig. 57. *Cladothela tortiembola*. A. male abdomen; B. female epigynum; C. process of male palpal tibia.

**Male:** Body length 4.0–5.0 mm. Carapace longer than wide, oval; yellowish brown; cervical furrow reddish brown and distinct. Chelicerae yellowish brown with 3 promarginal teeth and no retromarginal teeth. Sternum light yellowish brown with brown margin, heart shaped. Legs yellowish brown; stout and well developed. Abdomen longer than wide, ovoid; dark grayish yellow; 2 pairs of muscle impressions distinct; broad dorsal scutum present anteriorly. Spinnerets long and protruded. Male palp; tibial retrolateral apophysis absent, retrolateral small process on the tibia, embolus long and slender, large conductor twisted.

**Female:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GG, GB, JB.

**SPECIMEN EXAMINED:** 1♂(Hwaseong, Gyeonggi-do: 4.vi.2001); 1♂(Sangju, Gyeongsangbuk-do: 23.iv.2009); 1♂(Mt. Naejangsan, Jeollabuk-do: 15.vii.2011).

**ECOLOGY:** Founded in the leaf litters or grasslands of mountainous region.

### Genus *Coreodrassus* Paik, 1984

Han-guk-su-ri-geo-mi-sok (한국수리거미속)

Carapace long oval. Anterior eye row slightly recurved, posterior eye row strongly recurved in front. Chelicerae with 3 promarginal teeth and 2 retromarginal teeth. Legs with scopulae on meta-

tarsi. Abdomen long elliptical; anteriodorsally scutum in male. Male palp with retrolateral tibial apophysis; large projection on patellae retrolaterally. Female epigynum with copulatory openings situated mediolaterally.

Type species: *Drassodes lancearius* Simon, 1893.

## 52. *Coreodrassus lancearius* Simon, 1893 (Fig. 58)

Han-guk-su-ri-geo-mi (한국수리거미)

*Drassodes lancearius* Simon, 1893, p. 362.

*Drassodes potanini* Schenkel, 1963, p. 41; Song, Yu and Shang, 1981, p. 89; Zhang and Zhu, 1983, p. 165; Hu, 1984, p. 277; Guo, 1985, p. 142; Song, 1987, p. 337; Zhang, 1987, p. 173; Zhao, 1993, p. 120; Hu, 2001, p. 237.

*Coreodrassus coreanus* Paik, 1984, p. 50.

*Coreodrassus lancearius* Song, Zhu and Chen, 1999, p. 446, C. 1.; 2001, p. 335; Namkung, 2001, p. 462; 2003, p. 465; Song, Zhu and Zhang, 2004, p. 46; Kamura, 2004, p. 46; 2009, p. 487; Jung et al., 2005, p. 169; Murphy, 2007, p. 58; Zhang and Zhu, 2008, p. 32.

**Female:** Body length 9.0–9.5 mm. Carapace longer than wide, bulged oval; yellowish brown; head region dark and thoracic region light; fovea longitudinal; cervical and radial furrows distinct. Chelicerae brown with 3 promarginal teeth and 2 retromarginal teeth. Sternum yellowish brown, scutiform.

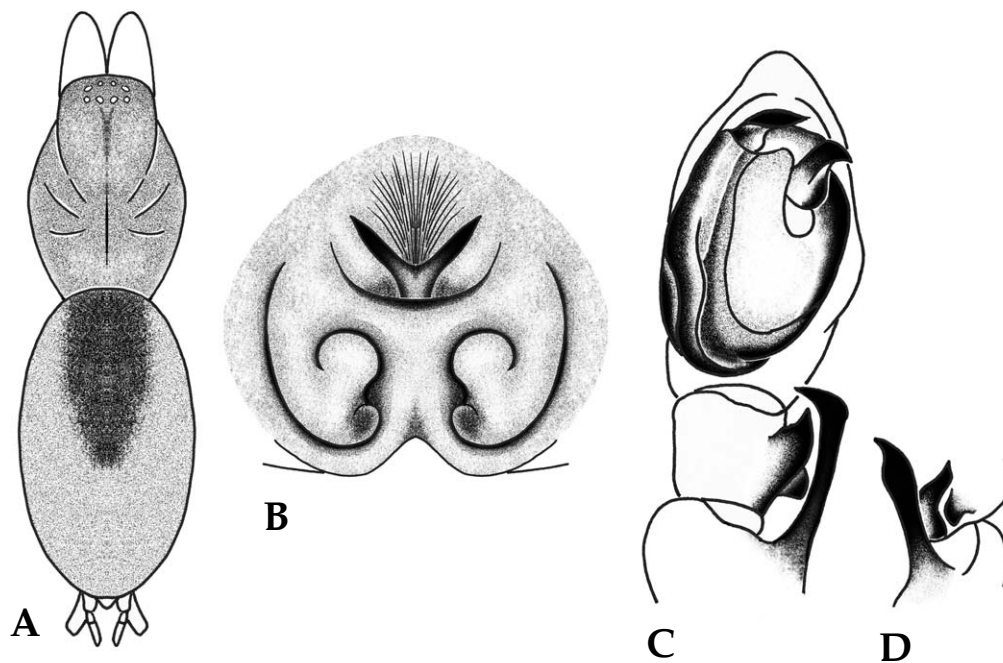


Fig. 58. *Coreodrassus lancearius*. A. female abdomen; B. female epigynum; C. male palp; D. tibial retrolateral apophysis and projection of patella of male palp.

Legs yellowish brown; scapulae on metatarsi. Abdomen longer than wide, elliptical. Dorsum yellowish brown; covered with short grayish brown hairs. Spinnerets long and protruded. Female epigynum; slightly elevated with semicircled depression bearing 'V' shaped process at upper part and 2 pairs of large and small depressions at middle and lower part.

**Male:** Body length 7.5–8.0 mm. Similar to females, smaller size and darker body coloration; broad dorsal scutum present. Male palp; tibia with retrolateral apophysis with one small process, long and thick hook shaped projection on patella.

**DISTRIBUTION:** Korea, China, Japan, Kazakhstan.

**KOREA:** CB.

**SPECIMEN EXAMINED:** 2 ♀♀, 1 ♂ (Boeun, Chungcheongbuk-do: 22.viii.1991).

**ECOLOGY:** Founded in the leaf litters or grasslands of mountainous region or hillocks.

## Genus *Drassodes* Westring, 1851

Su-ri-geo-mi-sok (수리거미속)

Carapace flat and covered with fine pubescence, broad anteriorly; clypeus narrow. Both eye rows procurved in front. Chelicerae strong; vertical in female, divergent in male; usually with 3 promarginal teeth and 2 small retromarginal teeth. Legs long and stout. Abdomen long elliptical; no dorsal scutum in male. Male palp with retrolateral tibial apophysis; tibia very long. Female epigynum with copulatory openings situated posteriolaterally.

Type species: *Aranea lapidosa* Walckenaer, 1802.

### Key to the species of genus *Drassodes*

1. Abdomen with distinct chevron patterns posteriorly ..... *D. serratidens*  
– Abdomen without chevron pattern ..... 2
2. Chelicerae with 3 promarginal teeth and 2 retromarginal teeth, abdomen with wrinkles posteriorly ..... *D. lapidosus*  
– Chelicerae with 3 promarginal teeth and no tooth on the retromargin, abdomen covered with wrinkles ..... *D. taehadonensis*

### 53. *Drassodes lapidosus* (Walckenaer, 1802) (Fig. 59)

Bu-yong-su-ri-geo-mi (부용수리거미)

*Aranea lapidosa* Walckenaer, 1802, p. 222.

*Clubiona lapidicolens* Walckenaer, 1805, p. 44; 1830, p. 129.

*Clubiona lapidicolens signata* Walckenaer, 1837, p. 600.

*Clubiona lapidicola* Latreille, 1806, p. 91; Sundevall, 1831, p. 32; 1832, p. 139; Hahn, 1833a, p. 9.

*Drassus cinereus* Hahn, 1833a, p. 124.

*Clubiona lapidaria* Hahn, 1833b, p. 1.

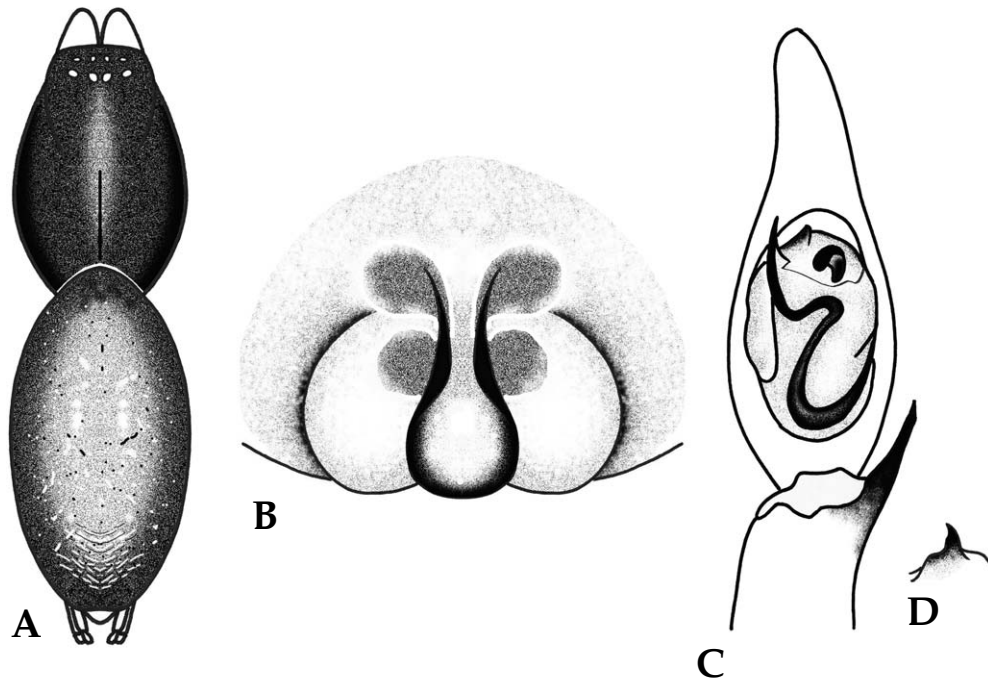


Fig. 59. *Drassodes lapidosus*. A. female abdomen; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

*Filistata incerta* Wider, 1834, p. 203.

*Drassus lapidicola* C.L. Koch, 1837, p. 18; 1839, p. 28; L. Koch, 1866, p. 126.

*Drassus incanus* C.L. Koch, 1837, p. 18.

*Clubiona oblonga* Lucas, 1846, p. 207.

*Agelena juniperina* Bremsi-Wolff, 1849.

*Drassodes lapidicola* Westring, 1851, p. 48.

*Drassus lapidicolens* Blackwall, 1861a, p. 116.

*Drassodes incanus* Thorell, 1871, p. 202.

*Drassus lapidicola* Menge, 1875, p. 384; Chyzer and Kulczyn'ski, 1897, p. 220; Bösenberg, 1902, p. 294.

*Drassus lapidosus* Simon, 1878, p. 108; Becker, 1896, p. 253.

*Drassus oblongus* Simon, 1878, p. 124.

*Drassodes lapidosus* Simon, 1893, p. 359; 1914, pp. 121, 126, 129, 206; Reimoser, 1931, p. 40; 1937a, p. 13; Palmgren, 1943, p. 92; Tullgren, 1946, p. 94; Locket and Millidge, 1951, p. 98; Loksa, 1965, p. 23; Braendegaard, 1966, p. 89; Tyschchenko, 1971, p. 95; Miller, 1971, p. 82; Locket, Millidge and Merrett, 1974, p. 5; Platnick and Shadab, 1976, p. 6; Hayashi, 1984, p. 10; Grimm, 1985, p. 116; Roberts, 1985, p. 66; 1995, p. 104; Yaginuma, 1986, p. 189; Hu and Li, 1987, p. 297; Chikuni, 1989, p. 119; Hu and Wu, 1989, p. 257; Izmailova, 1989, p. 99; Paik, 1991a: p. 47; Heimer and Nentwig, 1991, p. 418; Zhao, 1993, p. 119; Ono, 1994, p. 185; Ovtsharenko and Marusik, 1996, p. 122; Mcheidze, 1997, p. 113; Roberts, 1998, p. 107; Song, Zhu and Chen, 1999, p. 447; 2001, p. 338; Namkung, 2001, p. 463; 2003, p. 466; Hu, 2001, p. 234; Deltshv and Blagojev, 2001, p. 111; Esyunin and Tuneva, 2002, p. 170; Chatzaki, Thaler and Mylonas, 2002b, p. 613; Deltshv, 2003, p. 137; Levy, 2004, p. 4; Song, Zhu and Zhang, 2004, p. 60; Jung et al., 2005, p. 170; Bolzern and Hänggi,

2006, p. 16; Murphy, 2007, p. 54; Kovblyuk, 2008, p. 12; Wunderlich, 2011, p. 38; Zakharov and Ovtcharenko, 2011, p. 330.

*Drassodes pirini* Drensky, 1921, p. 51, 78.

**Female:** Body length 10.0–15.0 mm. Carapace longer than wide, oval; yellowish brown or reddish brown with fine hairs densely; fovea reddish brown, radial furrow dusky. Chelicerae reddish brown with 3 promarginal teeth and 2 retromarginal teeth; strong and well developed. Sternum yellowish brown with dark brown margin, scutiform. Legs yellowish brown with darker ends. Abdomen longer than wide, ovoid. Dorsum grayish brown with short hairs densely; 3 pairs of muscle impressions fade. Spinnerets long and grayish brown. Female epigynum; sclerotized with median septum, copulatory openings close to septum, spermathecae visible.

**Male:** Body length 9.0–12.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum absent. Male palp; tibial retrolateral apophysis short with pointed tip, embolus long and curved, median apophysis small and conspicuous.

**DISTRIBUTION:** Korea, China, Japan, Russia, Europe (Palearctic).

**KOREA:** GG, JJ.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Bukjeju, Jeju-do: 15.ix.1989).

**ECOLOGY:** Founded under the rocks or on the grounds of mountainous region.

#### 54. *Drassodes serratidens* Schenkel, 1963 (Fig. 60, Pl. 28)

Tob-su-ri-geo-mi (톱수리거미)

*Drassodes serratidens* Schenkel, 1963, p. 33; Hu, 1984, p. 275; Yaginuma, 1986, p. 189; Chikuni, 1989, p. 119; Hu and Wu, 1989, p. 258; Paik, 1991a, p. 49; Marusik and Logunov, 1995, p. 183; Song, Zhu and Chen, 1999, p. 447; 2001, p. 339; Hu, 2001, p. 238; Namkung, 2001, p. 464; 2003, p. 467; Song, Zhu and Zhang, 2004, p. 72; Lee et al., 2004, p. 99; Jung et al., 2005, p. 170; Kamura, 2009, p. 485.

*Scotophaeus striatus* Kishida, 1932, p. 4.

*Herpyllus striatus* Yaginuma, 1960, p. 121; 1971, p. 121.

*Drassodes pseudopubescens* Schenkel, 1963, p. 29; Paik, 1978, p. 415; Zhu et al., 1985, p. 150; Zhang, 1987, p. 175.

*Drassodes striatus* Yaginuma, 1977, p. 403; Hayashi, 1982, p. 25.

*Drassodes seratidens* Yaginuma, 1983, p. 5.

**Female:** Body length 9.0–13.0 mm. Carapace longer than wide, oval; reddish brown with darker head region and margins; fovea dark reddish brown, spiniform; cervical and radial furrows distinct. Chelicerae reddish brown with 3 promarginal teeth and 2 retromarginal teeth; strong and well developed. Sternum reddish brown with lighter median, scutiform. Legs yellowish brown without distinct pattern; 2–3 spines on the dorsum of femora. Abdomen longer than wide, elliptical. Dorsum grayish brown with white hairs densely; long heart shaped pattern anteriorly, 6–7 yellowish brown comb pattern posteriorly. Spinnerets long and yellowish brown. Female epigynum; sclerotized without median septum, copulatory openings situated laterally, spermathecae visible.

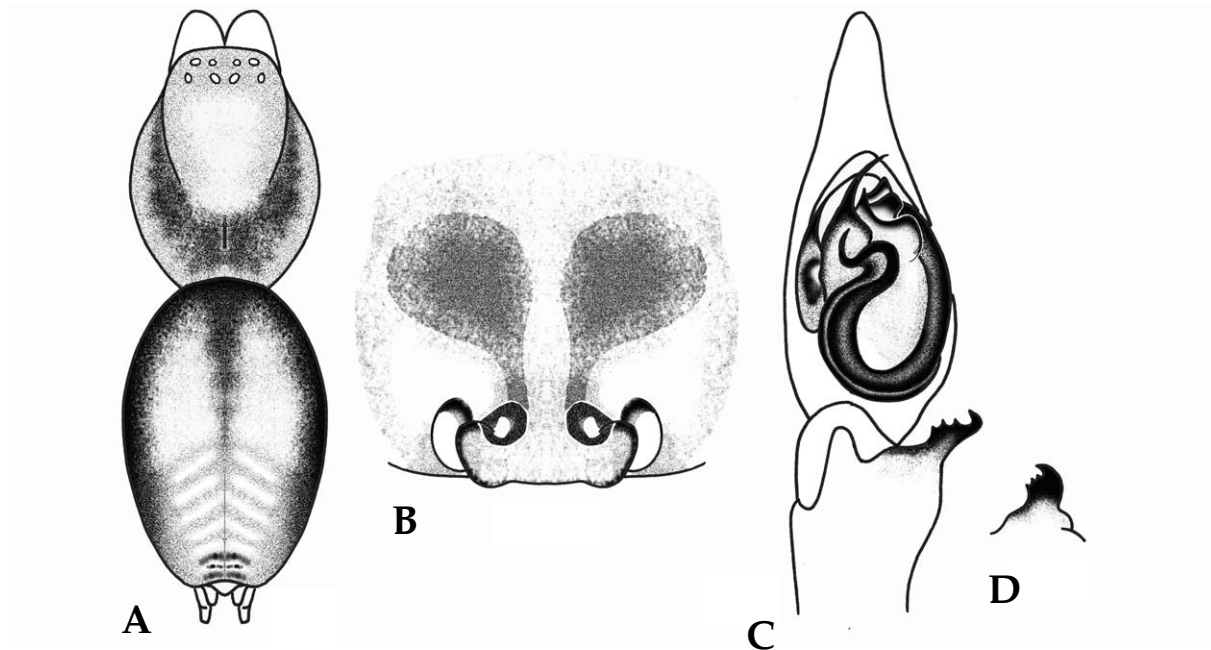


Fig. 60. *Drassodes serratidens*. A. female abdomen; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

**Male:** Body length 8.0–10.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum absent. Male palp; tibial retrolateral apophysis short and serrated, embolus long and curved, median apophysis small and conspicuous.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GW, GG, CN, GB, GN, JN.

**SPECIMEN EXAMINED:** 2 ♀♀ (Hongcheon, Gangwon-do: 27.vi.1995); 2 ♀♀ (Inje, Gangwon-do: 3.vi.1997); 1 ♀ (Whacheon, Gangwon-do: 3.vi.1997); 1 ♀ (Goseong, Gangwon-do: 2.vi.1998); 1 ♀ (Icheon, Gyeonggi-do: 29.iv.1993); 2 ♀♀ (Yeoju, Gyeonggi-do: 10.v.1997); 1 ♀, 1 ♂ (Seongnam, Gyeonggi-do: 17.vi.1997); 2 ♀♀, 1 ♂ (Hwaseong, Gyeonggi-do: 20.v.2002); 1 ♂ (Chungcheongnam-do, Dangjin: 30.vi.2008); 1 ♀ (Janghang, Chungcheongnam-do: 25.vii.2008); 1 ♀ (Chunyang, Gyeongsangbuk-do: 29.iv.1989); 2 ♀♀ (Punggi, Gyeongsangbuk-do: 4.vi.1995); 1 ♂ (Mungyeong, Gyeongsangbuk-do: 19.v.2009); 3 ♂♂ (Ulsan, Gyeongsangnam-do: 4.vi.2008); 1 ♂ (Jinyeong, Gyeongsangnam-do: 25.vi.2008); 2 ♀♀, 1 ♂ (Goheung, Jeollanam-do: 8.vi.1993); 1 ♀ (Mt. Dobongsan, Seoul: 13.vi.1998).

**ECOLOGY:** Founded in the plains of mountainous region or hillocks.

### 55. *Drassodes taehadongensis* Paik, 1995 (Fig. 61)

Tae-ha-dong-su-ri-geo-mi (태하동수리거미)

*Drassodes taehadongensis* Paik, 1995, p. 48.

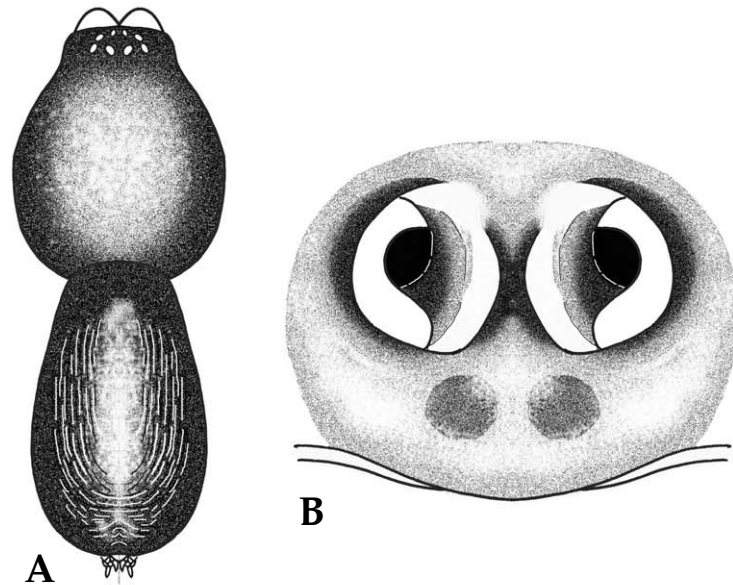


Fig. 61. *Drassodes taehadongensis*. A. female abdomen; B. female epigynum (cited from Paik, 1995).

**Female:** Body length about 5.0 mm. Carapace longer than wide, oval; yellowish brown with thick gray head region and thoracic region; fovea reddish brown, short and longitudinal. Chelicerae yellowish brown with 3 promarginal teeth and no retromarginal teeth. Sternum yellowish brown. Legs yellowish brown. Abdomen longer than wide, ovoid; grayish yellow; wrinkled; 2 pairs of muscle impressions distinct; dorsal scutum present. Spinnerets long and protruded. Female epigynum; sclerotized with median septum, a pair of round depressions present.

**Male:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GB.

**ECOLOGY:** Unknown.

## Genus *Drassyllus* Chamberlin, 1922

Cham-mae-geo-mi-sok (참매거미속)

Carapace oval; truncated posteriorly, narrowed anteriorly; clypeus low. Both eye rows procurved in front. Chelicerae with 4-5 promarginal teeth and 2-3 retromarginal teeth. Legs stout; tarsi IV with sparse scopula. Abdomen ovoid; anteriodorsally scutum in male. Male palp with retrolateral tibial apophysis; terminal apophysis situated near middle. Female epigynum usually with median septum and distinct curved anterior margin.

Type species: *Drassyllus fallens* Chamberlin, 1922.

### Key to the species of genus *Drassyllus*

1. Male palpal organ with very large median apophysis, tibial retrolateral apophysis with truncated tip ..... *D. truncatus*  
 – Male palpal organ with small median apophysis, tibial retrolateral apophysis with untruncated tip ..... 2
2. Female epigynum with distinct median septum ..... 3  
 – Female epigynum with indistinct median septum ..... 6
3. Male palpal organ with embolus basally twisted ..... *D. biglobosus*  
 – Male palpal organ with embolus basally straight ..... 4
4. Female epigynum with slender median septum, male palpal organ with terminal apophysis with truncated tip ..... *D. shaanxiensis*  
 – Female epigynum with thick median septum, male palpal organ with terminal apophysis with untruncated tip ..... 5
5. Female epigynum wider than long, male palpal organ with terminal apophysis with bifurcated tip ..... *D. sanmenensis*  
 – Female epigynum longer than wide, male palpal organ with terminal apophysis with unbifurcated tip ..... *D. sasakawai*
6. Female epigynal rim wider than long, male palpal organ with terminal apophysis with protruded tip ..... *D. coreanus*  
 – Female epigynal rim longer than wide, male palpal organ with terminal apophysis with blunt tip ..... *D. vinealis*

### 56. *Drassyllus biglobosus* Paik, 1986 (Fig. 62)

Ssang-bang-ul-cham-mae-geo-mi (쌍방울참매거미)

*Drassyllus biglobosus* Paik, 1986a, p. 6; Namkung, 2001, p. 465; 2003, p. 468; Jung et al., 2005, p. 172.

**Female:** Body length 6.5–7.0 mm. Carapace longer than wide, oval; brown; head region narrow; fovea reddish brown, spiniform; cervical and radial furrows black. Chelicerae dark brown with 4 promarginal teeth and 3 retromarginal teeth. Sternum dark brown with black margins, scutiform. Legs pale brown without annulation; 2 spines on the dorsum of femora; comb hairs at the end of metatarsi of legs III and IV. Abdomen longer than wide, ovoid. Dorsum dark grayish brown; 3 pairs of muscle impressions distinct. Female epigynum; surrounded with sclerotized rim, median septum present, spermathecae visible.

**Male:** Body length 8.0–10.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis present with pointed tip, embolus long and basally twisted, terminal apophysis with rounded tip.

**DISTRIBUTION:** Korea.

**KOREA:** GW, GG, GB, JB, JN, JJ.

**SPECIMEN EXAMINED:** 1 ♀ (Inje, Gangwon-do: 24.vi.2008); 1 ♀ (Gapyeong, Gyeonggi-do: 29.vii.2008); 1 ♀ (Mt. Sobaeksan, Gyeongsangbuk-do: 18.vii.2007); 1 ♀ (Gasan, Gyeongsangbuk-do: 9.v.2008); 1 ♂ (Mt. Naejangsan, Jeollabuk-do: 17.ix.2008); 1 ♀ (Whasun, Jeollanam-do: 23.vii.2008); 1 ♀ (Jeonju,

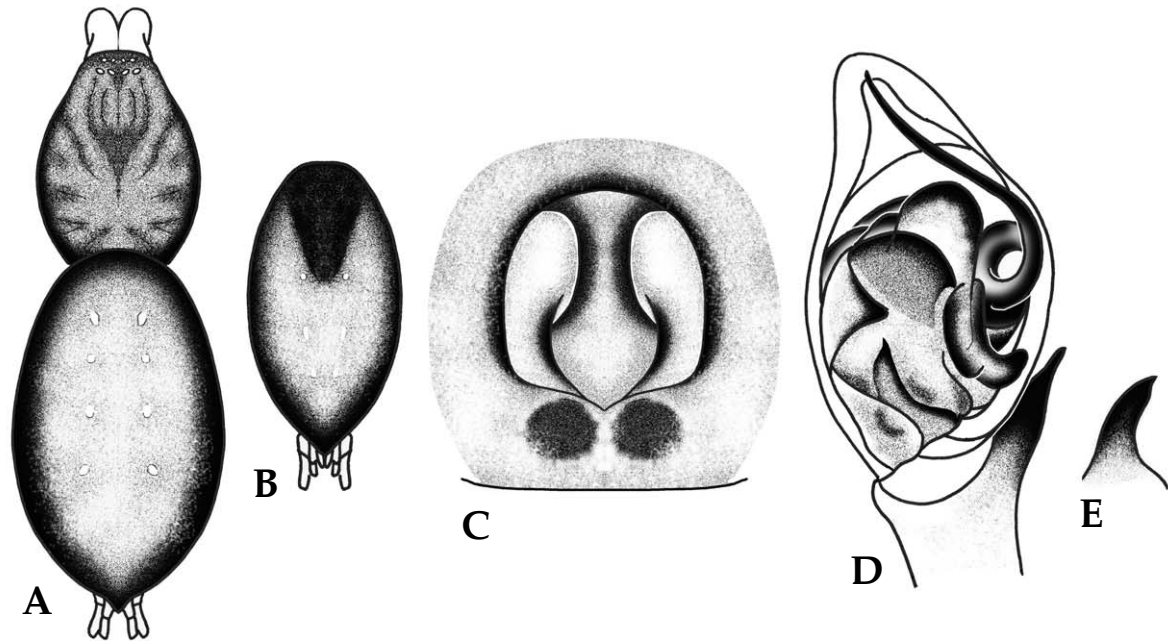


Fig. 62. *Drassyllus biglobosus*. A. female body; B. male abdomen; C. female epigynum; D. male palp; E. tibial retrolateral apophysis of male palp.

Jeollabuk-do: 22.viii.2008); 1 ♀ (Gimje, Jeollabuk-do: 2.vii.2009); 1 ♀ (Mt. Hallasan, Jeju-do: 24.vii.1993).

**ECOLOGY:** Founded under the rocks or in the leaf litters of mountainous region.

### 57. *Drassyllus coreanus* Paik, 1986 (Fig. 63)

Go-ryeo-cham-mae-geo-mi (고려참매거미)

*Drassyllus coreanus* Paik, 1986a, p. 4; 1992h, p. 68; Song, Zhu and Chen, 1999, p. 447; Song, Zhu and Zhang, 2004, p. 78; Jung et al., 2005, p. 173.

*Zelotes x-notatus* Gao and Guan, 1991, p. 55.

**Female:** Body length 6.5–7.0 mm. Carapace longer than wide, oval; brown; head region narrow; fovea reddish brown, spiniform; cervical and radial furrows black. Chelicerae dark brown with 4 promarginal teeth and 3 retromarginal teeth. Sternum dark brown with black margin, scutiform. Legs pale brown with annulations; 2 spines on the dorsum of femora of legs III and IV; comb hairs at the end of metatarsi. Abdomen longer than wide, ovoid. Dorsum dark to grayish brown; 3 pairs of muscle impressions distinct. Female epigynum; surrounded with sclerotized rim, median septum inconspicuous, spermathecae visible.

**Male:** Body length 8.0–10.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis present with pointed tip, embolus long and basally straight, terminal apophysis with protruded tip.

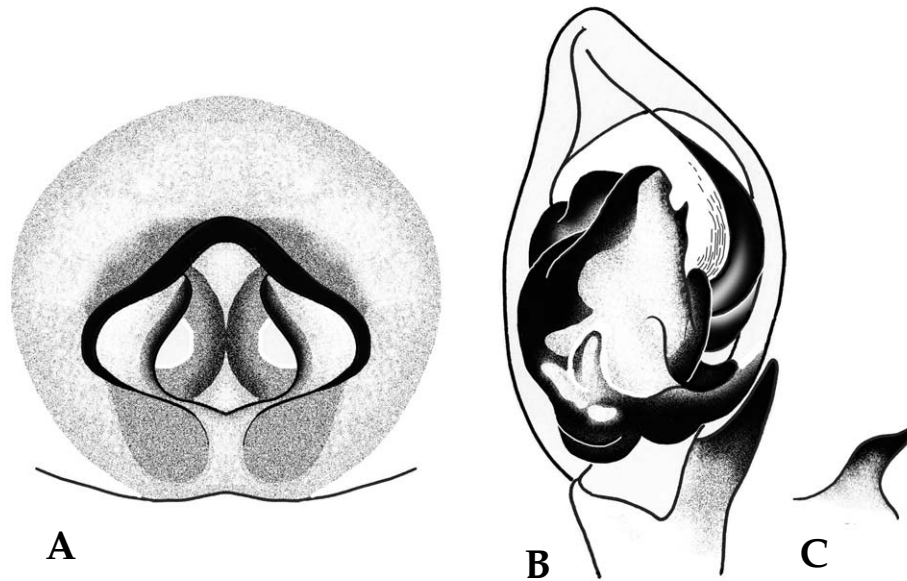


Fig. 63. *Drassyllus coreanus*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

**DISTRIBUTION:** Korea, China.

**KOREA:** GW, GG, CB, GB, JB.

**SPECIMEN EXAMINED:** 1♂ (Hongcheon, Gangwon-do: 25.vi.1995); 1♂ (Mt. Maebongsan, Gangwon-do: 9.v.1997); 1♂ (Inje, Gangwon-do: 24.vi.2008); 1♀ (Gimpo, Gyeonggi-do: 29.v.1997); 4♂♂ (Suwon, Gyeonggi-do: 17.vi.1999); 1♂ (Gapyeong, Gyeonggi-do: 29.vii.2008); 1♂ (Jecheon, Chungcheongbuk-do: 10.v.2008); 3♂♂ (Jeonju, Jeollabuk-do: 22.vii.2008); 1♂ (Punggi, Gyeongsangbuk-do: 22.vi.1995); 1♂ (Mt. Samgaksan, Seoul: 3.vii.1997).

**ECOLOGY:** Founded under the rocks or in the leaf litters of mountainous region or hillocks.

### 58. *Drassyllus sanmenensis* Platnick and Song, 1986 (Fig. 64)

Sam-mun-cham-mae-geo-mi (삼문참매거미)

*Drassyllus sanmenensis* Platnick and Song, 1986, p. 17; Kamura, 1987c, p. 79; 2009, p. 493; Xu, 1991, p. 38; Paik, 1992h, p. 70; Song, Zhu and Chen, 1999, p. 448; Namkung, 2001, p. 467; 2003, p. 470; Song, Zhu and Zhang, 2004, p. 84; Jung et al., 2005, p. 174.

*Zelotes sanmenensis* Chikuni, 1989, p. 120.

*Drassyllus sanmen* Chen and Zhang, 1991, p. 239.

**Female:** Body length 6.0–8.0 mm. Carapace longer than wide, oval; dark reddish brown; fovea dark reddish brown, spiniform; cervical and radial furrows distinct. Chelicerae dark reddish brown with 5 promarginal teeth and 2 retromarginal teeth. Sternum brown with dark brown margins, scutiform. Legs reddish brown; metatarsi and tarsi yellowish brown. Abdomen longer

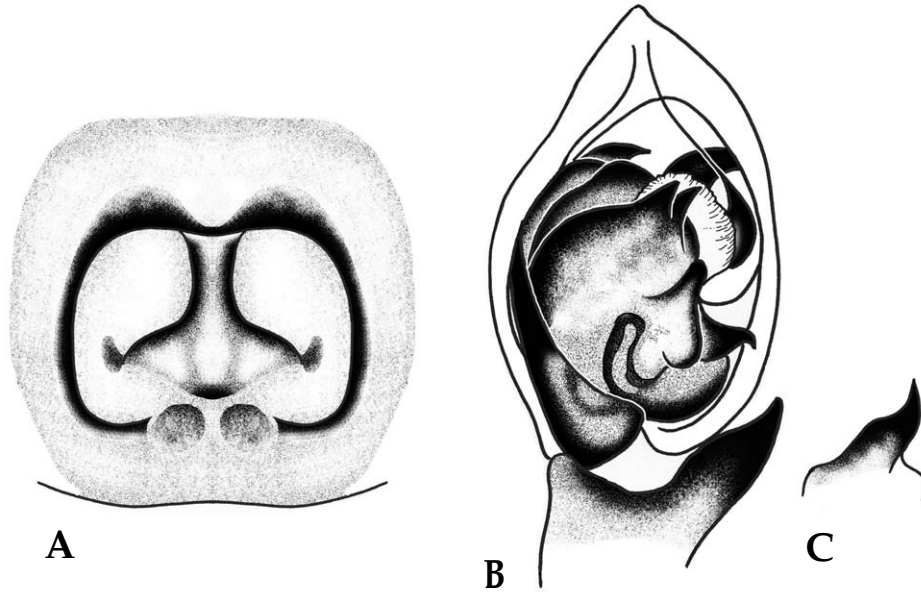


Fig. 64. *Drassyllus sanmenensis*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

than wide, ovoid. Dorsum dark brown to grayish brown. Female epigynum; wider than long, surrounded with sclerotized rim, median septum thick, spermathecae visible.

**Male:** Body length 5.5–7.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis present with pointed tip, embolus long and basally straight, terminal apophysis with bifurcated tip.

**DISTRIBUTION:** Korea, Japan, China.

**KOREA:** CN, GB, JB, JN.

**SPECIMEN EXAMINED:** 4 ♀♀ (Dangjin, Chungcheongnam-do: 28.vii.2008); 7 ♂♂ (Mt. Sobaeksan, Gyeongsangbuk-do: 30.vi.2009); 1 ♀ (Mt. Naejangsan, Jeollabuk-do: 26.viii.2011); 1 ♂ (Whasun, Jeollanam-do: 8.v.2008).

**ECOLOGY:** Founded in the the leaf litters or garsslands of mountainous region or hillocks.

### 59. *Drassyllus sasakawai* Kamura, 1987 (Fig. 65)

Moe-cham-mae-geo-mi (뫼참매거미)

*Drassyllus sasakawai* Kamura, 1987c, p. 82; 2009, p. 493; Namkung, 2001, p. 469; 2003, p. 472.

**Female:** Body length 5.5–8.0 mm. Carapace longer than wide, bulged oval; dark reddish brown; fovea deeply pitted, spiniform; cervical and radial furrows distinct. Chelicerae yellowish brown with 4 promarginal teeth and 2 retromarginal teeth. Sternum yellowish brown with dark brown margin, convex heart shaped. Legs reddish brown; long spines on the dorsum of femora and

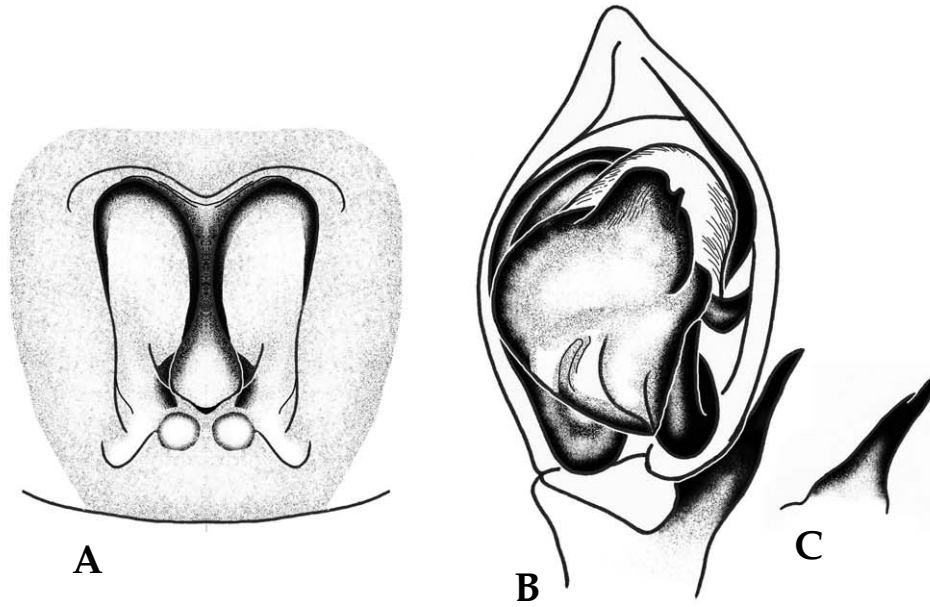


Fig. 65. *Drassyllus sasakawai*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

metatarsi; tarsi lighter with comb hairs. Abdomen longer than wide, elliptical. Dorsum dark reddish brown with long hairs densely; 3 pairs of muscle impressions distinct; 3-4 pairs of comb pattern present; wrinkled laterally and posteriorly. Female epigynum; longer than wide, surrounded with sclerotized rim, median septum thick, spermathecae visible.

**Male:** Body length 5.0-7.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis present with pointed tip, embolus long and basally straight, terminal apophysis with blunt tip.

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GG.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Pocheon, Gyeonggi-do: 29.v.2008).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region or hillocks.

## 60. *Drassyllus shaanxiensis* Platnick and Song, 1986 (Fig. 66)

Jung-guk-cham-mae-geo-mi (중국참매거미)

*Drassyllus shaanxiensis* Platnick and Song, 1986, p. 17; Hu and Wu, 1989, p. 265; Kamura, 1990, p. 34; 2009, p. 493; Song, Zhu and Chen, 1999, p. 448; Song, Zhu and Zhang, 2004, p. 85; Kim, Lee and Kwon, 2008, p. 33.

*Zelotes shaanxiensis* Chikuni, 1989, p. 121.

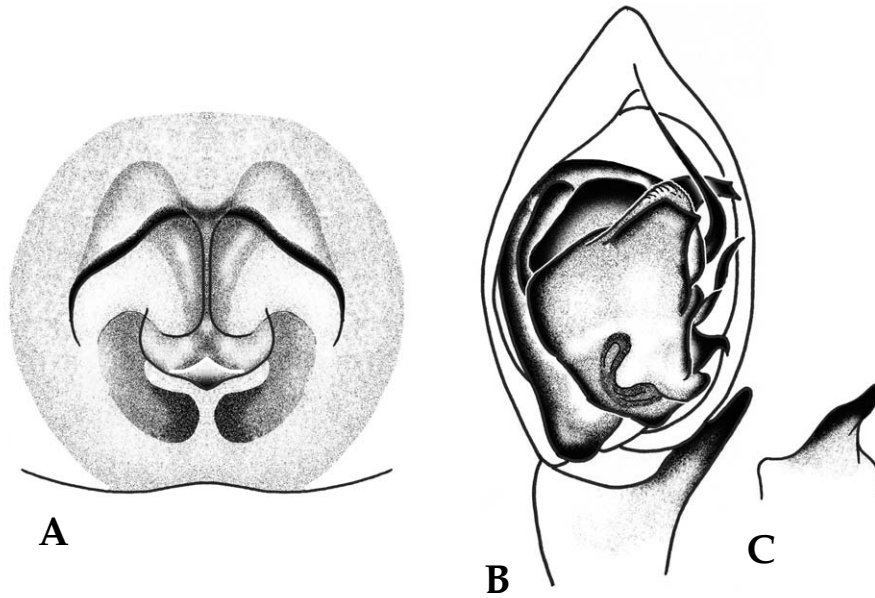


Fig. 66. *Drassyllus shaanxiensis*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

**Female:** Body length 5.0–6.0 mm. Carapace longer than wide, convex oval; reddish brown; fovea spiniform; cervical and radial furrows distinct. Chelicerae yellowish brown with 4 pro-marginal teeth 5 retromarginal teeth. Sternum yellowish brown with dark brown margin, convex scutiform. Legs yellowish brown; long trichobothria on the tibiae. Abdomen longer than wide, elliptical. Dorsum reddish brown with short hairs densely; 2 pairs of muscle impressions distinct. Female epigynum; surrounded with roof shaped sclerotized rim, median septum slender, spermathecae visible.

**Male:** Body length 4.5–5.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis present with rather blunt tip, embolus long and basally straight, terminal apophysis with truncated tip.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GG.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Mt. Chilbosan, Gyeonggi-do: 23.vi.2004); 1 ♀ (Nanjido, Seoul: 5.vi.1997).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region or hillocks.

### 61. *Drassyllus truncatus* Paik, 1992 (Fig. 67)

Jeol-du-cham-mae-geo-mi (절두참매거미)

*Drassyllus truncatus* Paik, 1992h, p. 69; Namkung, 2001, p. 468; 2003, p. 471; Jung et al., 2005, p. 175.



Fig. 67. *Drassyllus truncatus*. A. male palp; B. tibial retrolateral apophysis of male palp.

**Male:** Body length about 6.0 mm. Carapace longer than wide, oval; brown; head region narrow and eye area black; fovea dark reddish brown, spiniform; cervical and radial furrows dusky. Chelicerae thick brown with 4 promarginal teeth and 2 retromarginal teeth. Sternum thick yellowish brown with brown margin, oviform. Legs dark gray from femora to tibiae, the rest yellowish brown. Abdomen longer than wide, ovoid; dark brown; lusterous dorsal scutum present; 3 pairs of muscle impressions distinct. Male palp; tibial retrolateral apophysis present with truncated tip, embolus long and basally straight, terminal apophysis with pointed tip, median apophysis very large and curved.

**Female:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GW, GG, CB, CN, GB, GN.

**SPECIMEN EXAMINED:** 2♂♂ (Inje, Gangwon-do: 10.v.2008); 2♂♂ (Hwaseong, Gyeonggi-do: 3.vi.2002); 1♂ (Pocheon, Gyeonggi-do: 24.vi.2009); 8♂♂ (Jecheon, Chungcheongbuk-do: 4.vi.2008); 1♂ (Dangjin, Chungcheongnam-do:30.vi.2008); 1♂ (Mungyeong, Gyeongsangbuk-do: 16.vi.2009); 1♂ (Whasun, Jeollanam-do: 3.vi.2008).

**ECOLOGY:** Founded in the the leaf litters or under the rocks of mountainous region.

## 62. *Drassyllus vinealis* (Kulczyn'ski, 1897) (Fig. 68)

Po-do-cham-mae-geo-mi (포도참매거미)

*Prothesima vinealis* Kulczyn'ski, in Chyzer and Kulczyn'ski, 1897, p. 203.

*Zelotes pallidipatellis* Yaginuma, 1960, p. 121; 1971, p. 121; Paik, 1978, p. 424; Hu, 1984, p. 284; Chikuni, 1989, p. 120.

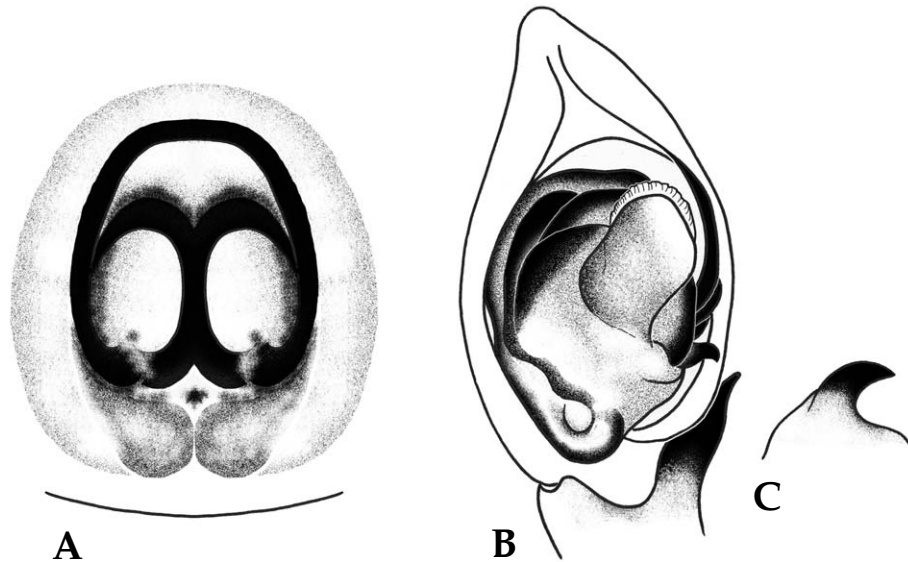


Fig. 68. *Drassyllus vinealis*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

*Zelotes vinealis* Miller, 1967, p. 266; Tyschchenko, 1971, p. 99; Miller, 1971, p. 87; Grimm, 1985, p. 263; Heimer and Nentwig, 1991, p. 442.

*Drassyllus vinealis* Platnick and Song, 1986, p. 16; Paik, 1986a, p. 8; 1992h, p. 72; Hu and Wu, 1989, p. 265; Song, Zhu and Chen, 1999, p. 448; 2001, p. 341; Hu, 2001, p. 243; Namkung, 2001, p. 466; 2003, p. 469; Song, Zhu and Zhang, 2004, p. 86; Jung et al., 2005, p. 176.

**Female:** Body length 4.5–6.0 mm. Carapace longer than wide, oval; dark brown; fovea reddish brown, spiniform; cervical and radial furrows dusky. Chelicerae grayish brown with 4 promarginal teeth and 2 retromarginal teeth. Sternum thick brown, heart shaped. Legs thick brown; metatarsi and tarsi lighter; 2 spines on the dorsum of femora; comb hairs at the end of metatarsi of legs III and IV. Abdomen longer than wide, ovoid. Dorsum grayish yellow or dark brown; 3 pairs of muscle impressions distinct. Female epigynum; surrounded with sclerotized rim, median septum inconspicuous, spermathecae visible.

**Male:** Body length 4.5–5.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis present with pointed tip, embolus long and basally straight, terminal apophysis with blunt tip.

**DISTRIBUTION:** Korea, China, Russia, Europe (Palearctic).

**KOREA:** GW, GG.

**SPECIMEN EXAMINED:** 1 ♀ (Inje, Gangwon-do: 17.iv.1997); 2 ♀ ♀ (Whacheon, Gangwon-do: 3.vi.1997); 1 ♀, 1 ♂ (Mt. Gariwangsan, Gangwon-do: 1.vi.2009); 1 ♀ (Yeoncheon, Gyeonggi-do: 6.vii.1997).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region.

## Genus *Gnaphosa* Latreille, 1804

Neolb-jeok-ni-geo-mi-sok (넓적니거미속)

Carapace rather flat; head region low. Both eye rows moderately recurved or straight in front. Chelicerae with broad serrated carina on retromargin; promargin with 1–2 teeth. Legs scopulate; usually lacking claw tufts. Abdomen oval; anteriodorsally scutum in male, but indistinct. Male palp with retrolateral tibial apophysis; embolus usually running on prolateral side; tegulum with 1–2 apophyses. Female epigynum with anterior hood and distinct lateral margins.

Type species: *Aranea lucifuga* Walckenaer, 1802.

### Key to the species of genus *Gnaphosa*

1. Female epigynal hood basally narrow ..... 2
  - Female epigynal hood basally broad ..... 3
2. Male palpal organ with small median apophysis, tibial retrolateral apophysis with almost straight tip ..... *G. hastata*
  - Male palpal organ with large median apophysis, tibial retrolateral apophysis with pointed tip ..... *G. muscorum*
3. Width of female epigynal hood, posterior part wider than anterior part ..... *G. potanini*
  - Width of female epigynal hood, subequal between anterior part and posterior part ..... 4
4. Female epigynum with thick median septum ..... 5
  - Female epigynum with inconspicuous median septum ..... 6
5. Male palpal organ with thick tibial retrolateral apophysis with pointed tip ..... *G. sinensis*
  - Male palpal organ with slender tibial retrolateral apophysis with curved tip ..... *G. lincenti*
6. Tegulum of male palpal organ with globular protuberance ..... *G. kompirensis*
  - Tegulum of male palpal organ flat ..... *G. kansuensis*

### 63. *Gnaphosa hastata* Fox, 1937 (Fig. 69)

Chang-neolb-jeok-ni-geo-mi (창넓적니거미)

*Gnaphosa hastata* Fox, 1937, p. 247; Ovtsharenko, Platnick and Song, 1992, p. 73; Song, Zhu and Chen, 1999, p. 449; Namkung, 2001, p. 473; 2003, p. 476; Song, Zhu and Zhang, 2004, p. 99; Jung et al., 2005, p. 177.

*Gnaphosa hortula* Roewer, 1955, p. 363.

*Gnaphosa koreae* Paik, 1989, p. 9.

*Gnaphosa baotianmanensis* Hu, Wang and Wang, 1991, p. 45.

**Female:** Body length 6.0–8.0 mm. Carapace longer than wide, oval; yellowish brown or chestnut; head region black; fovea dark brown, spiniform; cervical and radial furrows distinct. Chelicerae blackish brown with 2 promarginal teeth and a carina on the retromargin. Sternum yellowish brown, scutiform. Legs thick yellowish brown with lighter ends. Abdomen longer than wide, ovoid. Dorsum grayish brown; 3 pairs of muscle impressions distinct. Female epigynum; epigynal plate with curved borders laterally, anterior hood narrow posteriorly, median septum thick, sper-

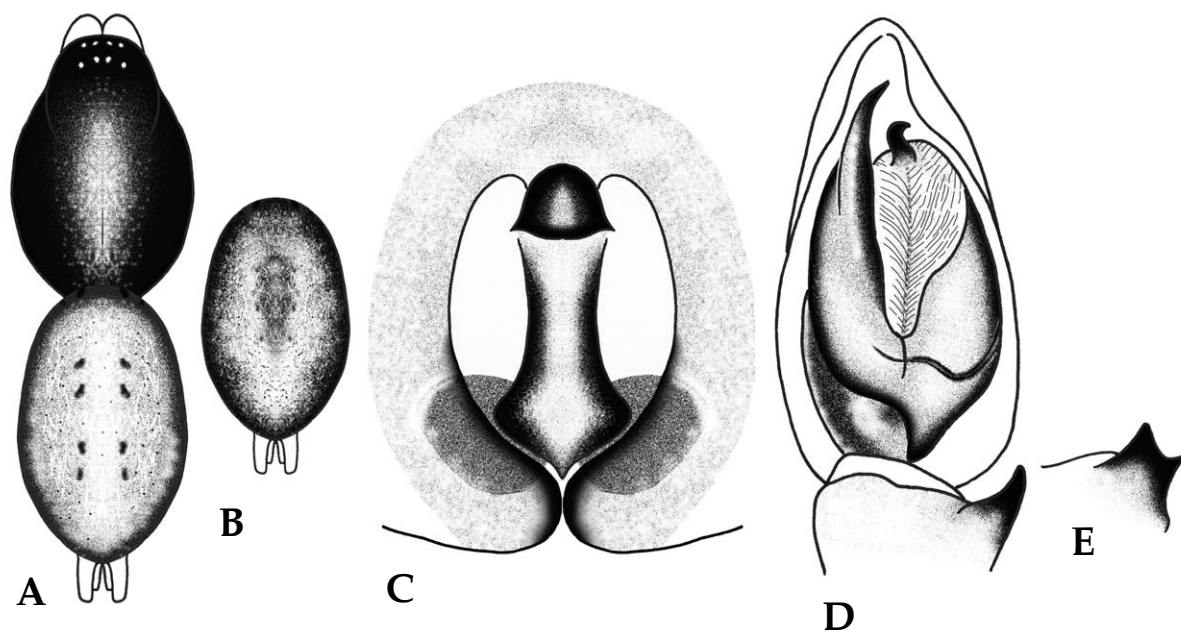


Fig. 69. *Gnaphosa hastata*. A. female body; B. male abdomen; C. female epigynum; D. male palp; E. tibial retrolateral apophysis of male palp.

mathecae visible.

**Male:** Body length 5.0–7.0 mm. Similar to females, smaller size and darker body coloration; broad dorsal scutum indistinct. Male palp; tibial retrolateral apophysis short with almost truncated tip, embolus thick and straight, median apophysis small.

**DISTRIBUTION:** Korea, China.

**KOREA:** GG.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Yeoju, Gyeonggi-do: 11.iv.1993).

**ECOLOGY:** Founded in the the leaf litters or under the rocks of mountainous region, fields, or rice fields.

#### 64. *Gnaphosa kansuensis* Schenkel, 1936 (Fig. 70, Pl. 29)

Gam-suk-neolb-jeok-ni-geo-mi (감숙넓적니거미)

*Gnaphosa kansuensis* Schenkel, 1936b, p. 26; Tang and Song, 1992, p. 248; Ovtsharenko, Platnick and Song, 1992, p. 34; Song, Zhu and Chen, 1999, p. 449; Namkung, 2001, p. 475; 2003, p. 478; Song, Zhu and Zhang, 2004, p. 102; Jung et al., 2005, p. 178.

*Gnaphosa alberti* Schenkel, 1963, p. 86; Paik, 1989, p. 6.

*Gnaphosa falculata* Schenkel, 1963, p. 92.

*Gnaphosa roeweri* Schenkel, 1963, p. 94; Tu and Zhu, 1986, p. 91.

*Gnaphosa kompirensis* Zhang, 1987, p. 177; Paik, 1989, p. 4; Chen and Gao, 1990, p. 144.

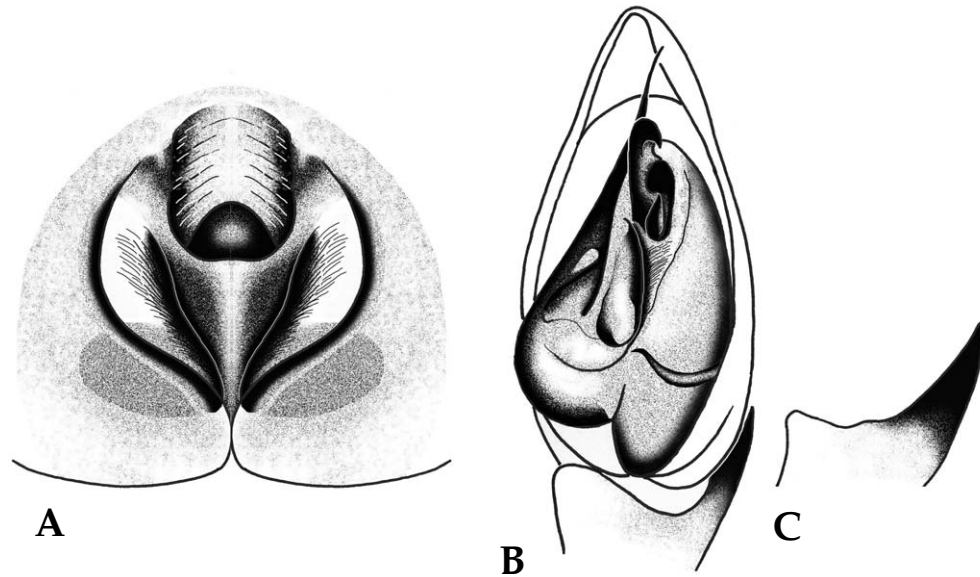


Fig. 70. *Gnaphosa kansuensis*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

**Female:** Body length 9.0–12.0 mm. Carapace longer than wide, oval; reddish brown or dark brown with blackish brown hairs densely; fovea blackish brown, spiniform; cervical and radial furrows black and distinct. Chelicerae reddish brown with 2 promarginal teeth and a carina on the retromargin. Sternum reddish brown, scutiform; truncated anteriorly. Legs yellowish brown or dark brown; 2 spines on the dorsum of femora. Abdomen longer than wide, ovoid. Dorsum grayish yellow with long dark brown hairs densely. Female epigynum; epigynal plate with curved borders laterally, width of anterior hood subequal between anterior part and posterior part, median septum inconspicuous, spermathecae visible.

**Male:** Body length 6.5–9.0 mm. Similar to females, smaller size and darker body coloration; broad dorsal scutum indistinct. Male palp; tibial retrolateral apophysis long with pointed tip, embolus slender and straight, median apophysis large.

**DISTRIBUTION:** Korea, China, Russia.

**KOREA:** CB.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Boeun, Chungcheongbuk-do: 17.ix.1999).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of hillocks.

### 65. *Gnaphosa kompirensis* Bösenberg and Strand, 1906 (Fig. 71, Pl. 30)

Neolb-jeok-ni-geo-mi (넓적니거미)

*Gnaphosa kompirensis* Bösenberg and Strand, 1906, p. 123; Yaginuma, 1960, p. 122; 1971, p. 122; 1986, p. 187; Paik, 1978, p. 419; 1989, p. 4; Hu, 1984, p. 279; Guo, 1985, p. 142; Kamura, 1988, p. 4; 2009,

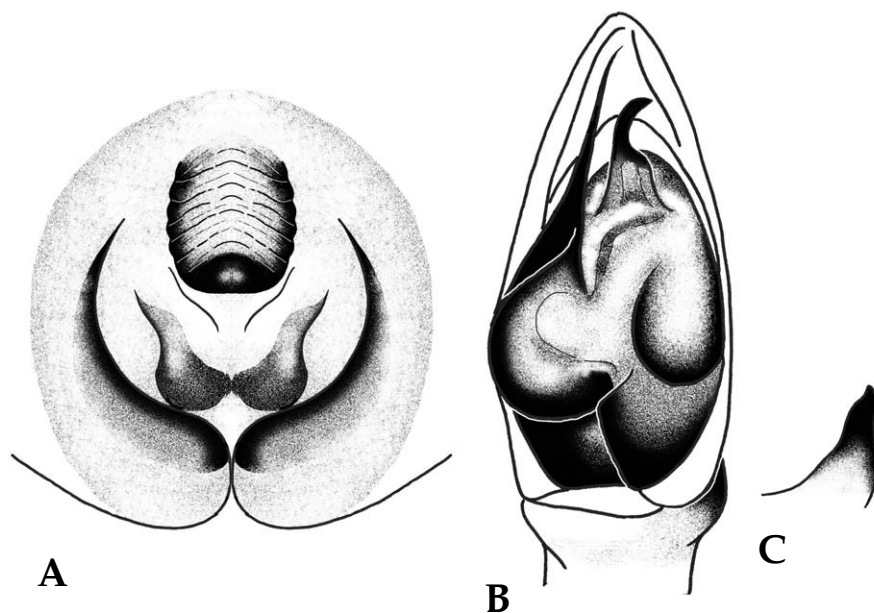


Fig. 71. *Gnaphosa kompirensis*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

p. 488; Chikuni, 1989, p. 119; Ovtsharenko, Platnick and Song, 1992, p. 35; Song, Zhu and Chen, 1999, p. 449; Namkung, 2001, p. 474; 2003, p. 477; Song, Zhu and Zhang, 2004, p. 103; Jung et al., 2005, p. 179.

*Drassus adspersus* Grube, 1861, p. 170.

*Gnaphosa aannamita* Simon, 1909, p. 78.

*Gnaphosa suchuana* Chamberlin, 1924a, p. 4.

*Gnaphosa compirensis* Saito, 1939, p. 5; Saito, 1959, p. 120.

*Gnaphosa davidi* Schenkel, 1963, p. 87.

**Female:** Body length 8.0–11.0 mm. Carapace longer than wide, oval; dark brown; head region with grayish white pattern formed by hairs and black margins; fovea dark reddish brown, spiniform; cervical and radial furrows distinct. Chelicerae reddish brown with 2 promarginal teeth and a serrated carina on the retromargin. Sternum reddish brown, heart shaped. Legs reddish brown with black spines. Abdomen longer than wide, ovoid. Dorsum grayish brown with black hairs densely; 3 pairs of small muscle impressions distinct. Female epigynum; epigynal plate with curved borders laterally, width of anterior hood subequal between anterior part and posterior part, median septum inconspicuous, spermathecae visible.

**Male:** Body length 6.0–8.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis with rather blunt tip, embolus slender and straight, median apophysis large.

**DISTRIBUTION:** Korea, China, Japan, Viet Nam, Russia.

**KOREA:** GW, GG, GB, GN, JB.

**SPECIMEN EXAMINED:** 1 ♀ (Daewha, Gangwon-do: 17.vi.1993); 1 ♀ (Whacheon, Gangwon-do: 3.vi.

1997); 1 ♀ (Goseong, Gangwon-do: 5.viii.1998); 1 ♀, 1 ♂ (Inje, Gangwon-do: 29.v.2008); 1 ♀, 2 ♂♂ (Cheolwon, Gangwon-do: 30.v.2009); 1 ♀ (Mt. Bangtaesan, Gangwon-do: 10.ix.2010); 1 ♀ (Paju, Gyeonggi-do: 20.v.1997); 1 ♀ (Hwaseong, Gyeonggi-do: 18.vii.2001); 1 ♀, 1 ♂ (Gapyeong, Gyeonggi-do: 24.vi.2008); 1 ♀ (Bupyeong, Gyeonggi-do: 29.vi.2008); 1 ♀ (Geochang, Gyeongsangnam-do: 5.vi.1995); 2 ♀♀ (Gasam, Gyeongsangbuk-do: 9.v.2008); 1 ♂ (Mungyeong, Gyeongsangbuk-do: 19.v.2009); 1 ♀, 3 ♂♂ (Mt. Sobaeksan, Gyeongsangbuk-do: 30.vi.2009); 1 ♀, 5 ♂♂ (Jeonju, Jeollabuk-do: 22.vii.2008); 1 ♀ (Gimje, Jeollabuk-do: 2.vii.2009).

**ECOLOGY:** Founded in the the leaf litters or under the rocks of mountainous region or caves.

## 66. *Gnaphosa licenti* Schenkel, 1953 (Fig. 72)

Ri-sen-teu-neolb-jeok-ni-geo-mi (리센트넓적니거미)

*Gnaphosa licenti* Schenkel, 1953, p. 21; Ovtsharenko, Platnick and Song, 1992, p. 53; Esyunin and Efimik, 1997, p. 107; Song, Zhu and Chen, 1999, p. 449; 2001, p. 343; Song, Zhu and Zhang, 2004, p. 106; Jung et al., 2005, p. 179.

*Gnaphosa sinensis* Simon, 1880, p. 121.

*Gnaphosa denisi* Schenkel, 1963, p. 64; Hu, 1984, p. 279; Zhu et al., 1985, p. 150; Song, 1987, p. 338; Hu and Li, 1987, p. 301; Chen and Gao, 1990, p. 144; Zhao, 1993, p. 122; Marusik and Logunov, 1995, p. 187; Hu, 2001, p. 246.

*Gnaphosa acuaria* Schenkel, 1963, p. 66; Mao and Zhu, 1983, p. 161; Zhang, 1987, p. 176.

*Gnaphosa aeditua* Schenkel, 1963, p. 67.

*Gnaphosa montana* Hu and Wu, 1989, p. 269.

*Gnaphosa taegensis* Paik, 1989, p. 11.



Fig. 72. *Gnaphosa licenti*. A. male palp; B. tibial retrolateral apophysis of male palp (cited from Paik, 1989).

Male: Body length 8.0–11.0 mm. Carapace longer than wide, oval; yellowish brown; fovea reddish brown, spiniform; cervical and radial furrows distinct. Chelicerae yellowish brown with 2 promarginal teeth and a serrated carina on the retromargin. Sternum reddish brown, heart shaped. Legs thick yellowish brown; Abdomen longer than wide, ovoid. Dorsum yellowish brown with irregular grayish brown pattern and 3–4 chevron patterns posteriorly; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis slender with curved tip, embolus slender and straight, median apophysis large.

**Female:** Described by Ovtsharenko, Platnick and Song (1992).

**DISTRIBUTION:** Korea, China, Russia, Mongolia, Kazakhstan.

**KOREA:** CB.

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region or hillockss.

### 67. *Gnaphosa muscorum* (L. Koch, 1866) (Fig. 73)

Mu-po-neolb-jeok-ni-geo-mi (무포늪적니거미)

*Pythonissa muscorum* L. Koch, 1866, p. 14.

*Gnaphosa muscorum* Thorell, 1871, p. 190; Lessert, 1910, p. 75; Simon, 1914, pp. 197, 200, 223; Gertsch, 1935, p. 28; Reimoser, 1937a, p. 8; Palmgren, 1943, p. 86; Tullgren, 1946, p. 80; Kaston, 1948, p. 344; Buchar, 1961, p. 95; Beer, 1964, p. 525; Tyschchenko, 1971, p. 93; Ubick and Roth, 1973, p. 3; Platnick and Shadab, 1975a, p. 34; Grimm, 1985, p. 74; Ovtsharenko and Marusik, 1988, p. 207; 1996, p. 116; Wesolowska, 1988, p. 411; Hu and Wu, 1989, p. 271; Izmailova, 1989, p. 103; Heimer and Nentwig, 1991, p. 422; Platnick and Dondale, 1992, p. 174; Ovtsharenko, Platnick and

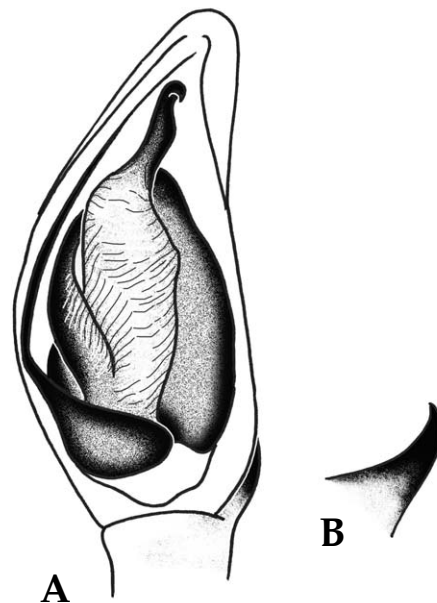


Fig. 73. *Gnaphosa muscorum*. A. male palp; B. tibial retrolateral apophysis of male palp.

Song, 1992, p. 42; Marusik and Logunov, 1995, p. 189; Mcheidze, 1997, p. 111; Song, Zhu and Chen, 1999, p. 250; Marusik and Koponen, 2000, p. 59; Hu, 2001, p. 249; Namkung, 2001, p. 477; 2003, p. 480; Paquin and Dupérré, 2003, p. 77; Song, Zhu and Zhang, 2004, p. 114; Almquist, 2006, p. 402; Marusik and Kovblyuk, 2011, p. 156.

*Gnaphosa conspersa* Thorell, 1877, p. 489; Emerton, 1890, p. 176; 1902, p. 2.

*Gnaphosa tigrina* Simon, 1878, p. 181.

*Gnaphosa gigantea* Keyserling, 1887, p. 424; Comstock, 1912, p. 320; 1940, p. 334.

*Gnaphosa similis* Kulczynski, 1926, p. 42; Marusik and Koponen, 2000, p. 59; Marusik and Kovblyuk, 2011, p. 40.

*Gnaphosa lesserti* Schenkel, 1963, p. 80.

*Gnaphosa mongolica* Savelyeva, 1972, p. 1238.

**Male:** Body length 8.0–9.5 mm. Carapace longer than wide, oval; reddish brown; fovea dark reddish brown, spiniform; cervical and radial furrows brown, a pair of blackish brown water drop patterns situated inside of cervical furrow. Chelicerae blackish brown with 2 promarginal teeth and a serrated carina on the retromargin. Sternum reddish brown with dark brown hairs, heart shaped. Legs pale reddish brown; 2–3 pairs of spines on the dorsum of femora. Abdomen longer than wide, ovoid. Dorsum thick yellowish brown with long blackish brown hairs and grayish brown speckles; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis long with pointed tip, embolus slender and straight, median apophysis large.

**Female:** Described by Ovtsharenko, Platnick and Song (1992).

**DISTRIBUTION:** Korea, China, Mongolia, Russia, Europe, North America (Holarctic).

**KOREA:** JB.

**SPECIMEN EXAMINED:** 1 ♂ (Gunsan, Jeollabuk-do: 28.vi.2004).

**ECOLOGY:** Founded in the the leaf litters or under the rocks of mountainous region.

## 68. *Gnaphosa potanini* Simon, 1895 (Fig. 74)

Po-ta-nin-neolb-jeok-ni-geo-mi (포타닌넓적니거미)

*Gnaphosa potanini* Simon, 1895, p. 333; Ovtsharenko, Platnick and Song, 1992, p. 32; Song, Zhu and Chen, 1999, p. 450; Namkung, 2001, p. 476; 2003, p. 479; Song, Zhu and Zhang, 2004, p. 118; Jung et al., 2005, p. 180; Kamura, 2009, p. 488.

*Gnaphosa silvicola* Kamura, 1988, p. 9; Kim et al., 1988, p. 147; Paik, 1989, p. 7.

**Female:** Body length 6.0–10.0 mm. Carapace longer than wide, oval; reddish brown; head region higher than thoracic region; fovea reddish brown, spiniform; cervical and radial furrows blackish brown. Chelicerae chestnut with 2 promarginal teeth and a serrated carina on the retromargin. Sternum brown with long black hairs densely, heart shaped. Legs pale brown or yellowish brown; 2 spines on the dorsum of femora. Abdomen longer than wide, ovoid. Dorsum grayish brown or dark brown with long hairs densely; 3 pairs of light brown muscle impressions distinct. Female epigynum; epigynal plate with curved borders laterally, anterior hood basally broad, median septum inconspicuous, spermathecae visible.

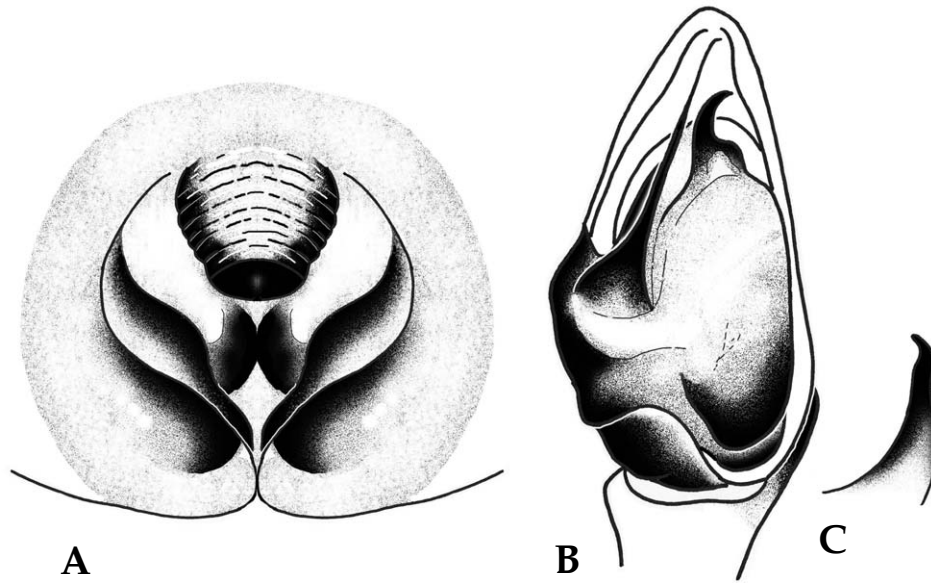


Fig. 74. *Gnaphosa potanini*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

**Male:** Body length 5.5–7.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis long with slightly curved tip, embolus slender and straight, median apophysis large.

**DISTRIBUTION:** Korea, China, Japan, Mongolia, Russia.

**KOREA:** GW, GG, CB, GB.

**SPECIMEN EXAMINED:** 1♂ (Mt. Daeseongsan, Gangwon-do: 23.vi.1997); 1♂ (Inje, Gangwon-do: 24.vi.2008); 2♂♂ (Yeoju, Gyeonggi-do: 27.iii.1997); 1♂ (Hwaseong, Gyeonggi-do: 23.v.2003); 1♂ (Bupyeong, Gyeonggi-do: 26.viii.2008); 2♂♂ (Danyang, Chungcheongbuk-do: 15.v.1992); 4♂♂ (Gasan, Gyeongsangbuk-do: 9.v.2008); 2♀♀, 1♂ (Andong, Gyeongsangbuk-do: 30.vii.2009); 2♂♂ (Mungyeong, Gyeongsangbuk-do: 9.vi.1995); 2♀♀, 1♂ (Mt. Sobaeksan, Gyeongsangbuk-do: 18.vii.2007); 1♂ (Mt. Onsusan, Seoul: 3.v.1997).

**ECOLOGY:** Founded in the the leaf litters or under the rocks of mountainous region or hillocks.

### 69. *Gnaphosa sinensis* Simon, 1880 (Fig. 75)

Jung-guk-neolb-jeok-ni-geo-mi (중국넓적니거미)

*Gnaphosa sinensis* Simon, 1880, p. 121; Saito, 1936, pp. 5, 74; Song and Hubert, 1983, p. 17; Zhu et al., 1985, p. 152; Song, 1987, p. 339; Zhang, 1987, p. 180; Chen and Gao, 1990, p. 145; Ovtsharenko, Platnick and Song, 1992, p. 71; Song, Zhu and Chen, 1999, p. 450; 2001, p. 344; Song, Zhu and Zhang, 2004, p. 119; Jung et al., 2005, p. 180.

*Gnaphosa koreae* Strand, 1907, p. 122; Paik and Kim, 1989, p. 40.

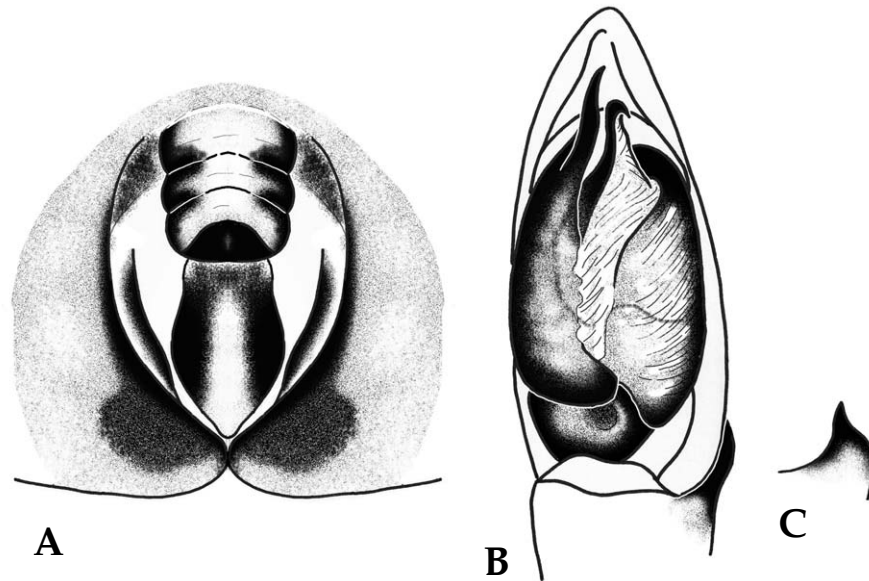


Fig. 75. *Gnaphosa sinensis*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

*Gnaphosa kratochvili* Schenkel, 1963, p. 61.

*Gnaphosa bonneti* Schenkel, 1963, p. 62.

*Gnaphosa martae* Schenkel, 1963, p. 85.

*Gnaphosa schensiensis* Schenkel, 1963, p. 90; Zhu et al., 1985, p. 151; Zhang, 1987, p. 179; Hu and Li, 1987, p. 299; Zhao, 1993, p. 124; Hu, 2001, p. 252.

**Female:** Body length 6.0–10.0 mm. Carapace longer than wide, oval; yellowish brown; head region darker than thoracic region; fovea reddish brown, spiniform; cervical and radial furrows blackish brown. Chelicerae chestnut with 2 promarginal teeth and a serrated carina on the retromargin. Sternum yellowish brown with long black hairs densely, heart shaped. Legs thick yellowish brown with lighter ends. Abdomen longer than wide, ovoid. Dorsum grayish yellow or yellowish brown; 3 pairs of muscle impressions distinct. Female epigynum; epigynal plate with curved borders laterally, width of anterior hood subequal between anterior part and posterior part, median septum thick, spermathecae visible.

**Male:** Body length 5.5–7.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis short with pointed tip, embolus thick and straight, median apophysis large.

**DISTRIBUTION:** Korea, China.

**KOREA:** GW, CB, GN, JB.

**SPECIMEN EXAMINED:** 2 ♀♀ (Daejin, Gangwon-do: 11.x.1991); 1 ♂ (Mt. Maebongsan, Gangwon-do: 20.ix.1998); 1 ♂ (Milyang, Gyeongsangnam-do: 27.vii.2009); 1 ♀ (Mt. Naejongsan, Jeollabuk-do: 17.vi.1997); 1 ♂ (Cheongju, Chungcheongbuk-do: 8.vii.1992); 1 ♂ (Yeongdong, Chungcheongbuk-do: 29.v.2009).

**ECOLOGY:** Founded in the the leaf litters or under the rocks of mountainous region or hillocks.

## **Genus *Haplodrassus* Chamberlin, 1922**

Sae-mae-geo-mi-sok (새매거미속)

Carapace elongate and relatively low; head region wide; clypeus low. Anterior eye row slightly procurved, posterior row procurved in front. Chelicerae strong with condyles; with 2–3 promarginal teeth and 2 retromarginal teeth. Legs well developed; tarsi with sparse scopulae and calw tuft. Abdomen oval; antiodorsally scutum in male. Male palp with retrolateral tibial apophysis; median apophysis and large terminal apophysis present; embolus mostly insighted. Female epigynum with large atrium; anteriorly with transverse rim or wall.

Type species: *Drassus hiemalis* Emerton, 1909.

### **Key to the species of genus *Haplodrassus***

1. Female epigynum with thick transverse rim at upper part ..... 2
  - Female epigynum without thick transverse rim at upper part ..... 3
2. Female epigynum with vestigial median septum, epigynal rim markedly projected laterally .....
  - ..... *H. taepaikensis*
  - Female epigynum without median septum, epigynal rim unprojected laterally .....
    - ..... *H. pargongsanensis*
3. Female epigynal rim projected roundly at upper part, male palp with very large tibial retrolateral apophysis with serrated dorsum ..... *H. montanus*
  - Female epigynal rim unprojected, male palp with tibial retrolateral apophysis with smooth dorsum ..... 4
4. Male palp with large and thick tibial retrolateral apophysis with truncated tip ..... *H. kulczynskii*
  - Male palp with thick tibial retrolateral apophysis with slightly blunt tip ..... *H. signifer*

### **70. *Haplodrassus kulczynskii* Lohmander, 1942 (Fig. 76)**

Keun-su-yeom-sae-mae-geo-mi (큰수염새매거미)

*Drassus microps* Chyzer and Kulczyn'ski, 1897, p. 217; Bösenberg, 1902, p. 300.

*Drassodes microps* Lessert, 1910, p. 54; Simon, 1914, p. 138; Reimoser, 1937a, p. 18.

*Haplodrassus kulczynskii* Lohmander, 1942, p. 101; Miller, 1971, p. 82; Miller and Buchar, 1977, p. 170; Grimm, 1985, p. 141; Paik and Kang, 1988, p. 63; Heimer and Nentwig, 1991, p. 426; Esyunin and Efimik, 1995, p. 83; Roberts, 1998, p. 111; Namkung, 2001, p. 471; 2003, p. 474; Song, Zhu and Zhang, 2004, p. 133; Jung et al., 2005, p. 181; Marusik et al., 2007, p. 43.

*Haplodrassus microps* Denis, 1951, p. 104; Buchar and Zdárek, 1960, p. 89; Rosca, 1968, p. 86; Tyschenko, 1971, p. 97.

*Haplodrassus magnipalpus* Paik and Sohn, 1984, p. 106.

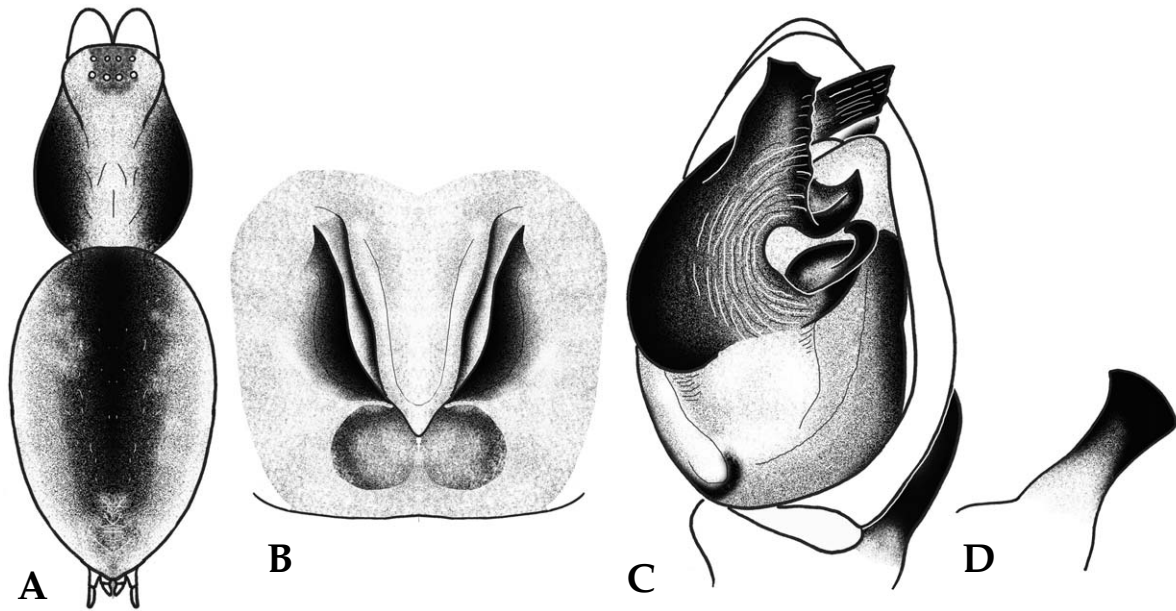


Fig. 76. *Haplodrassus kulczynskii*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

**Female:** Body length 7.0–8.5 mm. Carapace longer than wide, oval; yellowish brown with brown hairs densely; head region darker; fovea reddish brown, spiniform; cervical and radial furrows distinct. Chelicerae brown with 2 promarginal teeth and retromarginal teeth each. Sternum brown with brown hairs sparsely and darker. Legs yellowish brown without distinct patterns. Abdomen longer than wide, ovoid. Dorsum grayish yellow with black hairs densely. Female epigynum; epigynal plate with curved borders laterally, median septum inconspicuous, spermathecae visible.

**Male:** Body length 6.0–8.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis large and thick with almost truncated tip, terminal apophysis very large and widely rotated, median apophysis curved.

**DISTRIBUTION:** Korea, Russia, Europe (Palearctic).

**KOREA:** GB, JB.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Jeonju, Jeollabuk-do: 22.viii.2008).

**ECOLOGY:** Founded in the the leaf litters or bushes of fields or sands.

## 71. *Haplodrassus montanus* Paik and Sohn, 1984 (Fig. 77)

San-sae-mae-geo-mi (산새매거미)

*Haplodrassus montanus* Paik and Sohn, 1984, p. 107; Namkung, 2001, p. 470; 2003, p. 473; Jung et al., 2005, p. 182.

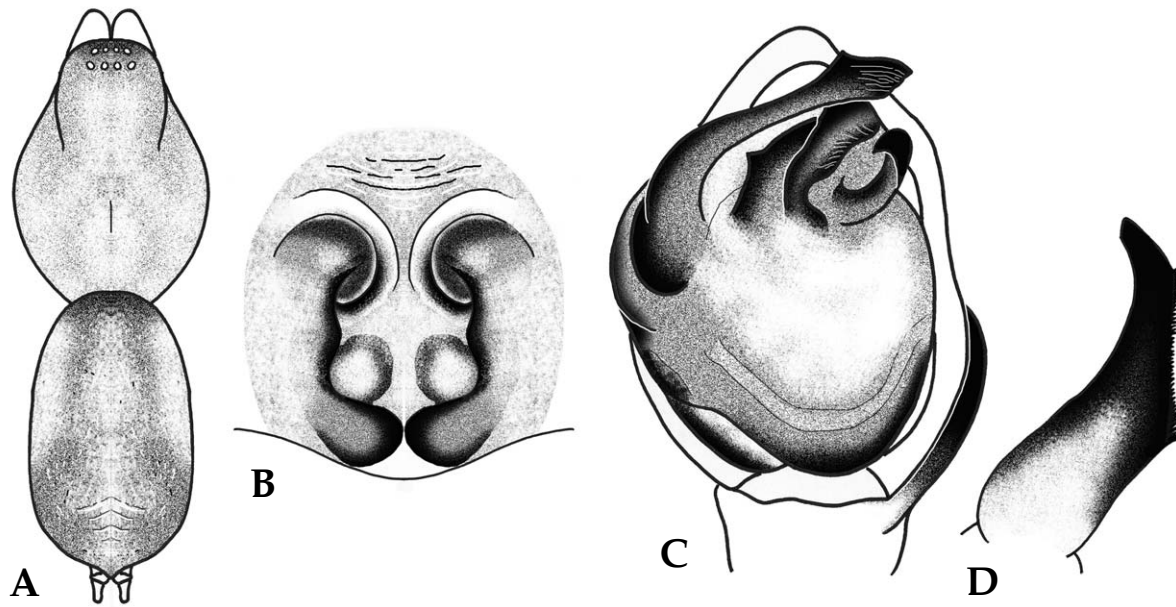


Fig. 77. *Haplodrassus montanus*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

**Female:** Body length 5.5–7.0 mm. Carapace longer than wide, oval; light chestnut; eye area black; fovea reddish brown, spiniform; cervical and radial furrows fade. Chelicerae chestnut with 3 promarginal teeth 2 retromarginal teeth. Sternum light brown, heart shaped. Legs brown without distinct pattern. Abdomen longer than wide, ovoid. Dorsum dark grayish yellow with short brown hairs densely; cardiac area and several pairs of chevron patterns posteriorly distinct. Female epigynum; epigynal plate with curved borders laterally, median septum inconspicuous, epigynal rim projected roundly at upper part, spermathecae visible.

**Male:** Body length 4.5–6.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis large and thick with serrated dorsum, terminal apophysis very large and widely rotated, median apophysis curved.

**DISTRIBUTION:** Korea.

**KOREA:** GB, JB, JN.

**SPECIMEN EXAMINED:** 4♂♂ (Gasam, Gyeongsangbuk-do: 18.iv.2008); 1♀, 3♂♂ (Whasun, Jeollanam-do: 8.v.2008); 1♀ (Mt. Naejangsan, Jeollabuk-do: 17.vii.2011).

**ECOLOGY:** Founded in the leaf litters or grasslands of mountainous region.

**72. *Haplodrassus pargongsanensis* Paik, 1992 (Fig. 78)**

Pal-gong-sae-mae-geo-mi (팔공새매거미)

*Haplodrassus pargongsanensis* Paik, 1992i, p. 88; Jung et al., 2005, p. 183.

**Female:** Body length about 9.5 mm. Carapace longer than wide, oval; brown; head region reddish brown; fovea reddish brown, spiniform; radial furrow dark gray. Chelicerae reddish brown with 3 promarginal teeth 2 retromarginal teeth. Sternum reddish brown with dark brown margin. Legs yellowish brown without distinct pattern; scapulae on the tarsi. Abdomen longer than wide, ovoid. Dorsum grayish yellow with paired spots longitudinally. Female epigynum; epigynal plate with curved borders laterally, median septum inconspicuous, thick transverse rim situated at upper part, spermathecae visible.

**Male:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GB.

**ECOLOGY:** Unknown.

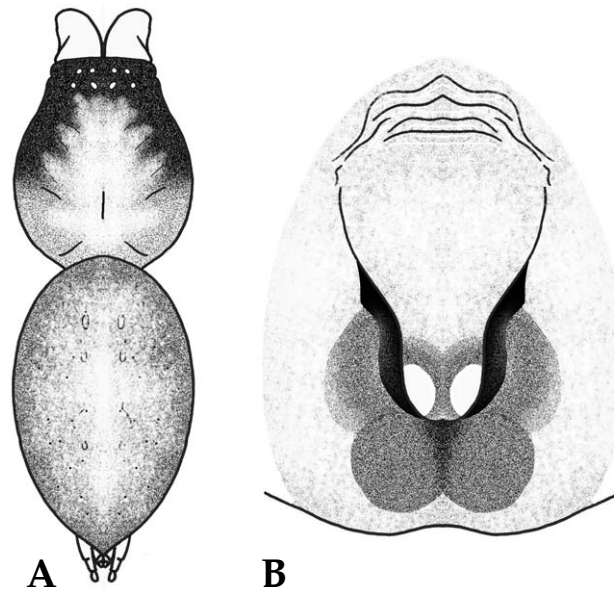


Fig. 78. *Haplodrassus pargongsanensis*. A. female body; B. female epigynum (cited from Paik, 1992i).

**73. *Haplodrassus signifer* (C.L. Koch, 1839) (Fig. 79)**

Pyo-ji-sae-mae-geo-mi (표지새매거미)

*Drassus signifer* C.L. Koch, 1839, p. 31.

*Drassus troglodytes* C.L. Koch, 1839, p. 35; L. Koch, 1866, p. 116; Menge, 1875, p. 378; Chyzer and

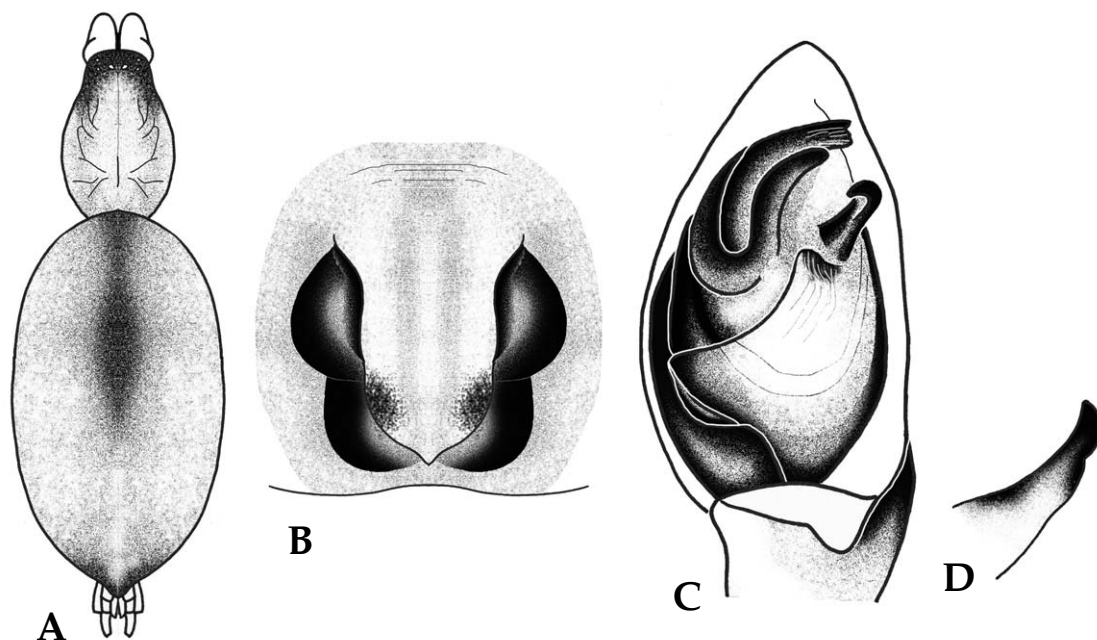


Fig. 79. *Haplodrassus signifer*. A. female body; B. female epigynum; C. male palp; D. tibial retro-lateral apophysis of male palp.

Kulczyn'ski, 1897, p. 217; Bösenberg, 1902, p. 298; Becker, 1896, p. 257; Spassky, 1925, p. 35.

*Clubiona troglodytes* Walckenaer, 1841, p. 480.

*Drassus clavator* O.P.-Cambridge, 1860, p. 171; Blackwall, 1861a, p. 109.

*Drassus robustus* Emerton, 1890, p. 179.

*Drassus mysticus* O.P.-Cambridge, 1894, p. 104.

*Teminius nigriceps* Banks, 1895, p. 421.

*Drassus placidus* Banks, 1896, p. 63.

*Drassodes ferrum-equinum* F.O.P.-Cambridge, 1899, p. 60.

*Prothesima decepta* Banks, 1900, p. 531.

*Drassodes robustus* Bryant, 1908, p. 7.

*Drassodes troglodytes* Lessert, 1910, p. 52; Simon, 1914, pp. 122, 140, 209.

*Zelotes decepta* Petrunkevitch, 1911, p. 149.

*Syrisca nigriceps* Petrunkevitch, 1911, p. 514.

*Drassodes signifer* Comstock, 1912, p. 313; Braendegaard, 1946, p. 55; Locket and Millidge, 1951, p. 101; Jia and Zhu, 1983, p. 167; Hu, 2001, p. 240.

*Drassodes beaufortensis* Strand, 1916, p. 95.

*Haplodrassus signifer* Chamberlin, 1922, p. 163; Reimoser, 1937a, p. 17; Comstock, 1940, p. 326; Palmgren, 1943, p. 95; Tullgren, 1946, p. 98; Kaston, 1948, p. 350; Braendegaard, 1966, p. 94; Tyschchenko, 1971, p. 97; Miller, 1971, p. 82; Platnick and Shadab, 1975b, p. 11; Miller and Buchar, 1977, p. 168; Paik, 1978, p. 417; 1992i, p. 89; Thaler, 1984, p. 189; Grimm, 1985, p. 146; Roberts, 1985, p. 66; 1995, p. 106; 1998, p. 109; Heiss and Allen, 1986, p. 57; Izmailova, 1989, p. 107; Heimer and Nentwig, 1991, p. 426; Platnick and Dondale, 1992, p. 215; Noordam, 1992, p. 6; Marusik, Hippa and Koponen, 1996, p. 26; Ovtsharenko and Marusik, 1996, p. 121; Agnarsson, 1996, p. 31; Mcheidze, 1997,

p. 114; Bellmann, 1997, p. 170; Chatzaki, Thaler and Mylonas, 2002a, p. 587; Paquin and Dupérré, 2003, p. 78; Levy, 2004, p. 19; Song, Zhu and Zhang, 2004, p. 139; Almquist, 2006, p. 411.

*Haplodrassus dystactus* Chamberlin and Gertsch, 1940, p. 8.

*Haplodrassus aeneus* Hu and Li, 1987, p. 301; Hu, 2001, p. 255.

**Female:** Body length 6.0–7.0 mm. Carapace longer than wide, oval; yellowish brown with brown hairs sparsely; fovea reddish brown, spiniform; cervical and radial furrows darker and distinct. Chelicerae dark brown with 3 promarginal teeth 2 retromarginal teeth. Sternum dark brown, scutiform; truncated anteriorly and posterior part protrude roundly. Legs yellowish brown without distinct pattern. Abdomen longer than wide, ovoid. Dorsum grayish yellow without distinct pattern. Female epigynum; epigynal plate with curved borders laterally, median septum inconspicuous, spermathecae visible.

**Male:** Body length 4.5–6.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis large and thick with slightly blunt tip, terminal apophysis very large and widely rotated, median apophysis curved.

**DISTRIBUTION:** Korea, Europe, North America (Holarctic).

**KOREA:** GG, JN.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Whasun, Jeollanam-do: 9.iv.2008).

**ECOLOGY:** Founded in the leaf litters and grasslands, or on the ground of mountainous region.

#### 74. *Haplodrassus taepaikensis* Paik, 1992 (Fig. 80)

Tae-baek-sae-mae-geo-mi (태백새매거미)

*Haplodrassus taepaikensis* Paik, 1992i, p. 86; Jung et al., 2005, p. 184; Marusik et al., 2007, p. 43; Marusik and Kovblyuk, 2011, p. 156.

**Female:** Body length 6.0–7.0 mm. Carapace longer than wide, oval; yellowish brown with brown hairs sparsely; fovea reddish brown, spiniform; cervical and radial furrows darker and distinct. Chelicerae dark brown with 3 promarginal teeth 2 retromarginal teeth. Sternum dark brown, scutiform; truncated anteriorly and posterior part protrude roundly. Legs yellowish brown without distinct pattern. Abdomen longer than wide, ovoid. Dorsum grayish yellow without distinct pattern. Female epigynum; epigynal plate with curved borders laterally, median septum vestigial at lower part, thick transverse rim situated at upper part, epigynal rim markedly projected laterally, spermathecae visible.

**Male:** Described by Marusik et al. (2007).

**DISTRIBUTION:** Korea, Russia.

**KOREA:** GW.

**ECOLOGY:** Founded in the leaf litters and grasslands, or on the ground of mountainous region.

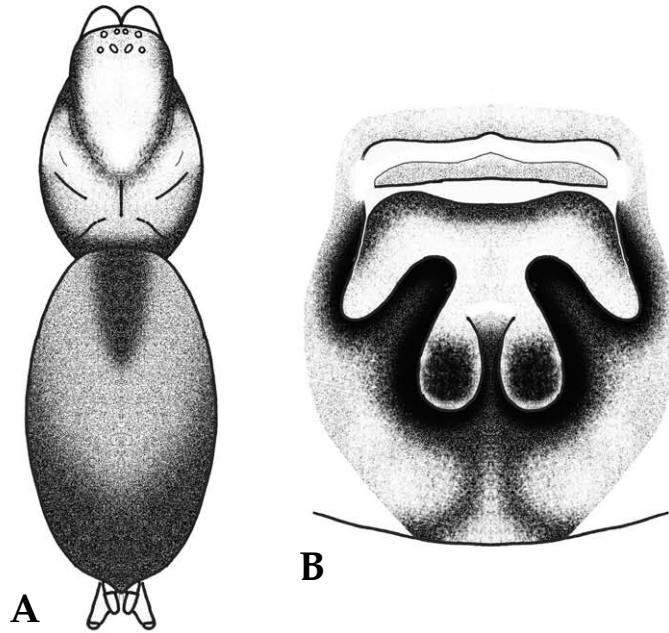


Fig. 80. *Haplodrassus taepaikensis*. A. female body; B. female epigynum (cited from Paik, 1992i).

### Genus *Herpyllus* Hentz, 1832

Jo-rong-i-geo-mi-sok (조롱이거미속)

Carapace elongated oval. Both eye rows slightly procurved in front. Chelicerae with 3–4 promarginal teeth and retromarginal denticles. Legs with scopulae. Abdomen oval; anteriodorsally scutum in male. Male palp with retrolateral tibial apophysis; median apophysis present; embolus long. Female epigynum with shallow depression bordered by lateral margins.

Type species: *Herpyllus ecclesiasticus* Hentz, 1832.

#### 75. *Herpyllus coreanus* Paik, 1992 (Fig. 81)

Han-guk-jo-rong-i-geo-mi (한국조롱이거미)

*Herpyllus coreanus* Paik, 1992b, p. 133.

**Male:** Body length 8.0–9.5 mm. Carapace longer than wide, oval; chestnut; head region high; fovea reddish brown, spiniform; cervical and radial furrows darker and distinct. Chelicerae blackish brown with 6 promarginal teeth and one denticle on the retromargin. Sternum dark brown, scutiform; truncated anteriorly and posterior part protrude roundly. Legs yellowish brown without distinct pattern; femora black. Abdomen longer than wide, ovoid; dorsal scutum present. Dorsum with 3 stripes formed by black and white hairs tranversely. Male palp; tibial retrolateral apophysis very long and thick with bifurcated tip, terminal apophysis very large.

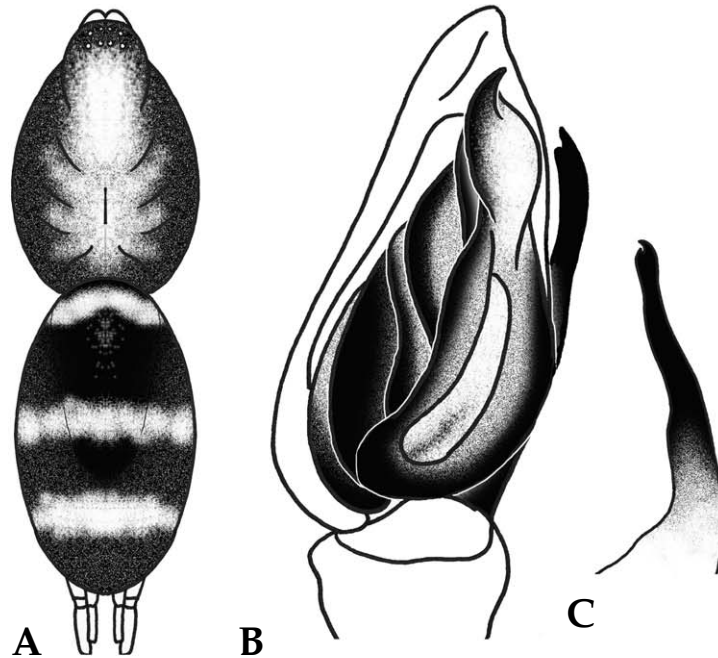


Fig. 81. *Herpyllus coreanus*. A. female body; B. male palp; C. tibial retrolateral apophysis of male palp.

**Female:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GW, GG, CB, GB.

**SPECIMEN EXAMINED:** 1♂ (Cheolwon, Gangwon-do: 27.v.1997); 1♂ (Gapyeong, Gyeonggi-do: 24.vi.2008); 1♂ (Cheongweon, Chungcheongbuk-do: 15.vi.1995); 1♂ (Gasam, Gyeongsangbuk-do: 9.v.2008); 2♂♂ (Mt. Dobongsan, Seoul: 28. iv.1997).

**ECOLOGY:** Founded in the leaf litters or on the ground of mountainous region and hillocks.

## Genus *Hitobia* Kamura, 1992

Oe-jul-sol-gae-geo-mi-sok (외줄솔개거미속)

Carapace oval. Both eye rows slightly recurved in front. Chelicera with 3 promarginal teeth and a retromarginal teeth. Legs with distinct scopulae on tarsi and metatarsi. Abdomen oval with white markings on dorsum; anteriodorsally scutum in male. Male palp with retrolateral tibial apophysis; embolus very short and conductor very small; no median apophysis. Female epigynum less sclerotized.

Type species: *Micaria un fascigera* Bösenberg and Strand, 1906.

**76. *Hitobia unifascigera* (Bösenberg and Strand, 1906) (Fig. 82)**

Oe-jul-sol-gae-geo-mi (외줄솔개거미)

*Micaria unifascigera* Bösenberg and Strand, 1906, p. 293; Strand, 1918, p. 83; Saito, 1959, p. 146.*Phrurolithus unifascigera* Yaginuma, 1962b, p. 52.*Poecilochroa unifascigera* Wunderlich, 1979, p. 309; Kamura, 1984, p. 1; Yaginuma, 1986, p. 190; Chikuni, 1989, p. 118; Chen and Zhang, 1991, p. 234; Hu, Wang and Wang, 1991, p. 46.*Hitobia unifascigera* Kamura, 1992b, p. 124; Song, Zhu and Chen, 1999, p. 452; Namkung, 2001, p. 482; 2003, p. 485; Song, Zhu and Zhang, 2004, p. 151; Murphy, 2007, p. 46; Kamura, 2009, p. 495.

**Female:** Body length 5.0–7.0 mm. Carapace longer than wide, oval; dark brown with long brown hairs and short white hairs densely. Chelicerae blackish brown with 3 promarginal teeth and one retromarginal teeth. Sternum dark brown with black hairs sparsely. Legs yellowish brown or brown; femora dark brown. Abdomen longer than wide, ovoid. Dorsum dark gray with brown hairs densely; slender white stripe situated transversely at middle. Female epigynum; slightly elevated, median septum inconspicuous, a pair of round projections at middle, spermathecae visible.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis large and thick with thumb shaped tip.

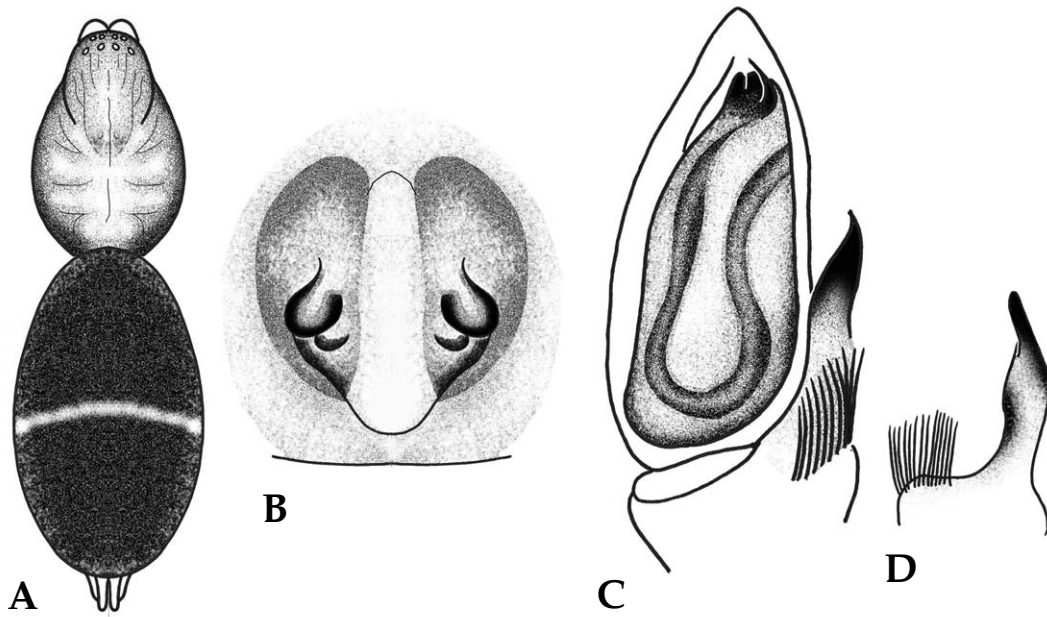
**DISTRIBUTION:** Korea, Japan, China.**KOREA:** GG.**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Mt. Onsusan, Seoul: 12.vi.1999).

Fig. 82. *Hitobia unifascigera*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

**ECOLOGY:** Founded on the leaves or on the ground of mountainous region and plains.

### Genus *Kishidaia* Yaginuma, 1960

Han-guk-sol-gae-geo-mi-sok (한국솔개거미속)

Carapace oval, head region narrow. Both eye rows slightly recurved in front. Cheliceral promargin with a minute tooth and carina not divided into distinct teeth, and retromargin with one tooth. Legs with scopulae on tarsi. Abdomen oval with white markings on dorsum; anteriodorsally scutum in male. Male palp with retrolateral tibial apophysis; embolus rather short, conductor membranous; no median apophysis; femur with a ventral projection on basal part. Female epigynum with a pair of small pockets and a shallow longitudinal furrow in anterior part.

Type species: *Castianeira albimaculata* Saito, 1934b.

#### 77. *Kishidaia coreana* (Paik, 1992) (Fig. 83, Pl. 31)

Han-guk-sol-gae-geo-mi (한국솔개거미)

*Poecilochroa coreana* Paik, 1992a, p. 118; Namkung, 2001, p. 480; 2003, p. 483.

*Kishidaia coreana* Kamura, 2001, p. 200.

**Female:** Body length 6.0–7.0 mm. Carapace longer than wide, oval; black; head region narrow and

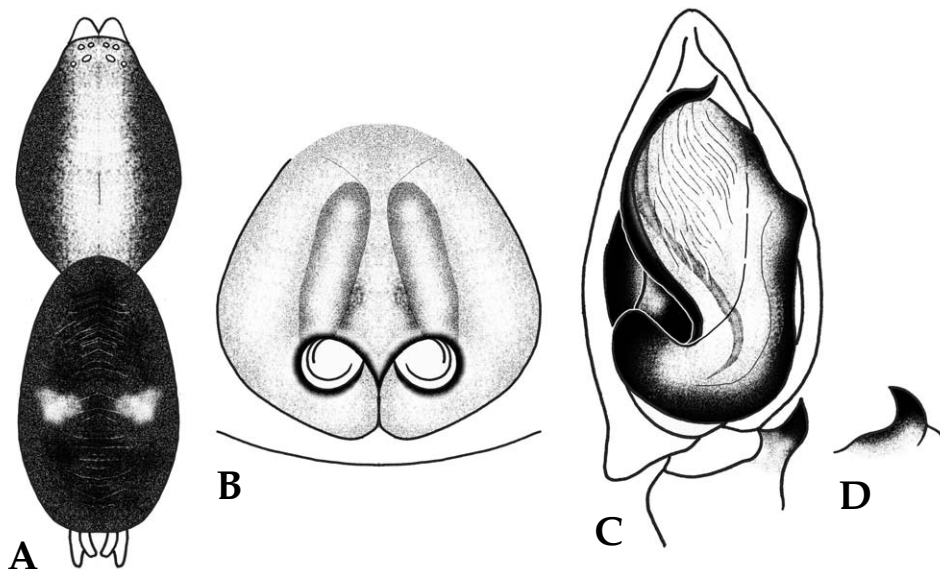


Fig. 83. *Kishidaia coreana*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

dusky; fovea dark brown, spiniform. Chelicerae dark brown with one promarginal teeth and a serrated carina on the retromargin. Sternum dark brown, long ovoid. Legs yellowish brown; femora and tibiae of legs I and II dark brown; patellae yellow. Abdomen longer than wide, ovoid. Dorsum black with fade anterior part; a pair of white spots medianly. Female epigynum; slightly elevated with a pair of sclerotized round rims at lower part.

**Male:** Body length 5.0–6.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum indistinct. Male palp; tibial retrolateral apophysis short with pointed tip present.

**DISTRIBUTION:** Korea.

**KOREA:** GB.

**SPECIMEN EXAMINED:** 2 ♀♀, 1 ♂ (Mt. Palgongsan, Gyeongsangbuk-do: 19.viii.2006).

**ECOLOGY:** Founded in the bushes or leaf litters of mountainous region.

## Genus *Micaria* Westring, 1851

Yeong-rong-geo-mi-sok (영롱거미속)

Carapace elongate and oval. Both eye rows procurved in front. Chelicerae small; usually with 2 promarginal teeth and a retromarginal tooth. Legs I and II with scopulate on tarsi and metatarsi; legs III and IV with scopulate only on tarsi. Abdomen elongate with distinct colulus; no dorsal scutum in male. Male palp with retrolateral tibial apophysis; usually strong hooked median apophysis. Female epigynum usually with distinct anterior margin; rarely with median septum.

Type species: *Aranea fulgens* Walckenaer, 1802.

### Key to the species of genus *Micaria*

1. Chelicerae with 2 promarginal teeth, a pair of spots on abdominal dorsum ..... *M. dives*
- Chelicerae with 3 promarginal teeth, 3 transverse stripe patterns on abdominal dorsum .....  
..... *M. japonica*

### 78. *Micaria dives* (Lucas, 1846) (Fig. 84)

So-cheon-yeong-rong-geo-mi (소천영롱거미)

*Drassus dives* Lucas, 1846, p. 220.

*Pythonissa dives* Simon, 1864, p. 121.

*Micaria splendidissima* L. Koch, 1872b, p. 311.

*Micaria armata* O.P.-Cambridge, 1874, p. 401.

*Chrysothrix splendidissima* Simon, 1878, p. 30.

*Chrysothrix dives* Simon, 1878, p. 31.

*Micariolepis splendidissima* Becker, 1882, p. 35; 1896, p. 240.

*Bona dives* Chyzer and Kulczyn'ski, 1897, p. 259.

*Micariolepis dives* Simon, 1897a, p. 175; 1932, pp. 956, 977; Reimoser, 1937a, p. 95; Buchar, 1962, p. 7;

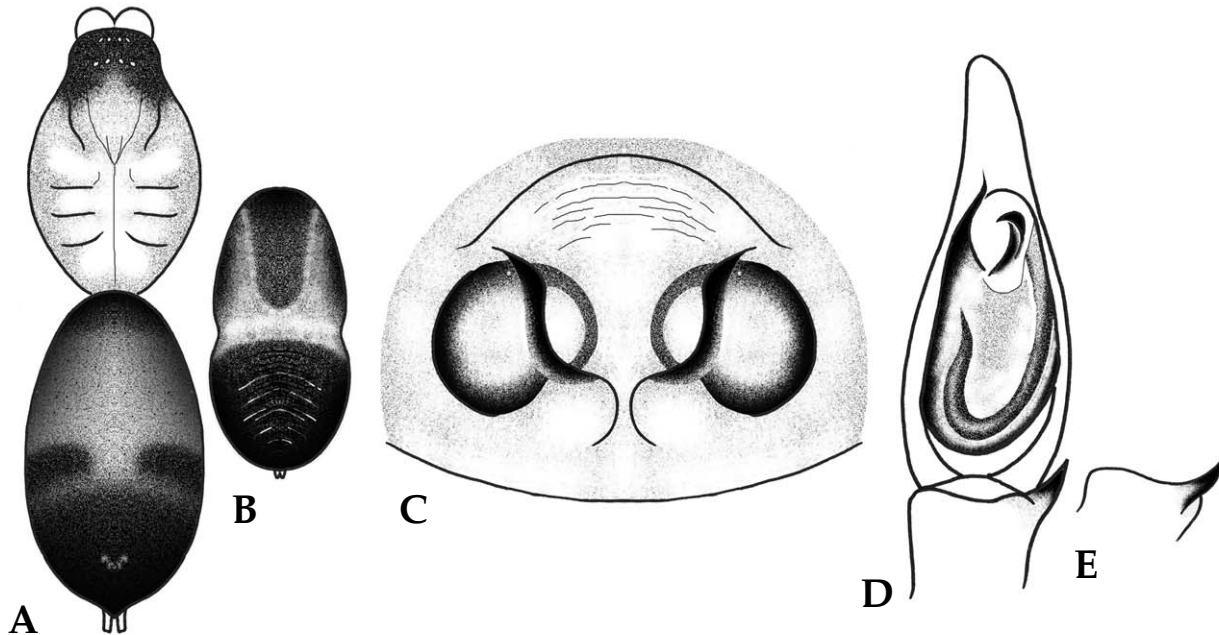


Fig. 84. *Micaria dives*. A. female body; B. male abdomen; C. female epigynum; D. male palp; E. tibial retrolateral apophysis of male palp.

Braendegaard, 1966, p. 145; Miller, 1971, p. 108; Minoranskii, Ponomarev and Gramotenko, 1980, p. 35.

*Micaria dives* Bösenberg, 1902, p. 287; Wunderlich, 1979, p. 287; Thaler, 1981, p. 113; Tu and Zhu, 1986, p. 89; Mikhailov, 1988, p. 328; Kamura, 1990, p. 35; 2009, p. 499; Heimer and Nentwig, 1991, p. 430; Paik, 1992e, p. 171; Noordam, 1992, p. 4; Roberts, 1995, p. 123; 1998, p. 130; Song, Zhu and Chen, 1999, p. 452; 2001, p. 348; Bosmans and Blick, 2000, p. 446; Hu, 2001, p. 259; Namkung, 2001, p. 478; 2003, p. 481; Chatzaki, Thaler and Mylonas, 2002a, p. 577; Levy, 2002, p. 123; Song, Zhu and Zhang, 2004, p. 169; Jung et al., 2005, p. 187; Tuneva, 2007, p. 233; Kovblyuk and Nadolny, 2008, p. 220; Rozwarka, 2011, p. 575.

*Micariolepis similis* Tyschchenko, 1965, p. 701.

*Micaria tyschchenkoi* Brignoli, 1983c, p. 583.

**Female:** Body length 2.5–4.0 mm. Carapace longer than wide, elliptical; brown; head region narrow; fovea indistinct; cervical and radial furrows dusky. Chelicerae brown and weak with 2 promarginal teeth and a retromarginal teeth. Sternum yellowish brown, scutiform. Legs light yellow; anterior part of femora of leg I and lateral of femora of leg II dark brown; leg I with many spines. Abdomen longer than wide, elliptical with waisted median. Dorsum dull yellowish brown-anteriorly; black with lusterous scale hairs posteriorly; a pair of dark spots distinct at middle. Female epigynum; arch shaped rim situated at upper part; spermathecae visible.

**Male:** Body length 2.0–3.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male Palp; tibial retrolateral apophysis short with pointed tip, median apophysis slender and curved.

**DISTRIBUTION:** Korea, China, Japan Russia, Europe (Palearctic).

**KOREA:** GB.

**SPECIMEN EXAMINED:** 1 ♀, 1 ♂ (Gumi, Gyeongsangbuk-do: 20.viii.2009).

**ECOLOGY:** Founded under the rocks and on the ground of hillocks in shiny places.

### 79. *Micaria japonica* Hayashi, 1985 (Fig. 85)

Se-jul-bae-tti-yeong-rong-geo-mi (세줄배띠영롱거미)

*Micaria japonica* Hayashi, 1985, p. 21; Chikuni, 1989, p. 121; Namkung, Im and Kim, 1995, p. 40; Im, Namkung and Kim, 1996, p. 297; Namkung, 2001, p. 479; 2003, p. 482; Lee et al., 2004, p. 99; Jung et al., 2005, p. 189; Kamura, 2009, p. 499.

**Female:** Body length 3.0–4.0 mm. Carapace longer than wide, oval; brown; head region narrow and dark with lusterous scale hairs densely; fovea indistinct; cervical and radial furrows dusky. Chelicerae brown and weak with 3 promarginal teeth and one retromarginal teeth. Sternum brown with dark brown margin, long shield shaped. Legs yellowish brown; femora of legs I and II stout and dark brown. Abdomen longer than wide, elliptical. Dorsum dark brown with 3 yellowish white band pattern tranversely and scale hairs densely. Female epigynum; almost straight and slender rim situated at upper part; spermathecae visible.

**Male:** Body length 2.5–3.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis short with pointed tip, median

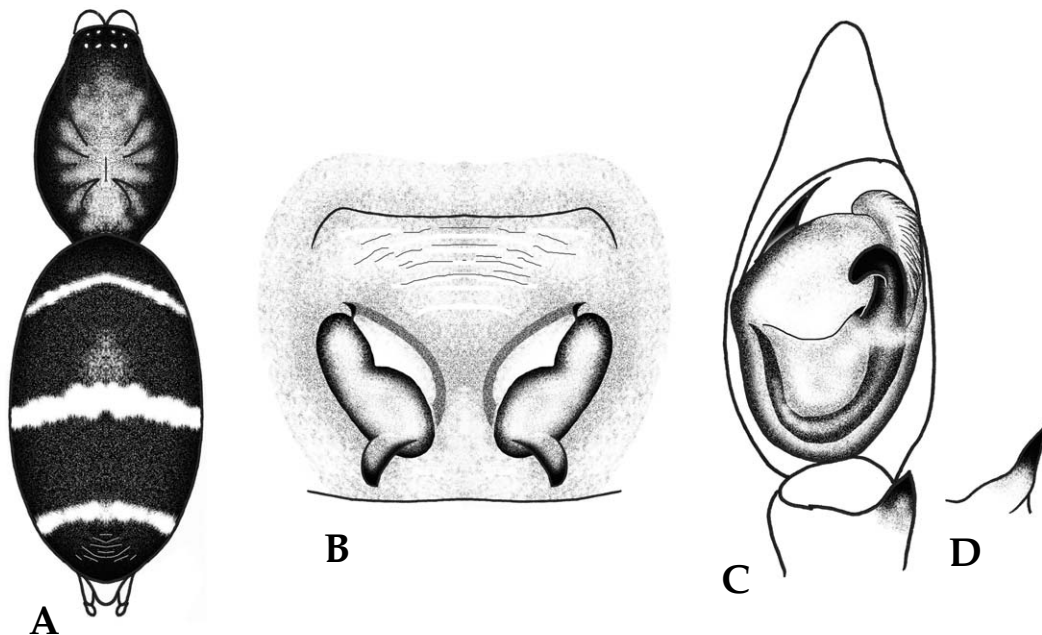


Fig. 85. *Micaria japonica*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

apophysis thick and curved.

**DISTRIBUTION:** Korea, Japan, Russia.

**KOREA:** GW.

**SPECIMEN EXAMINED:** 1 ♀ (Hongcheon, Gangwon-do: 16.vi.1989); 1 ♂ (Hongcheon, Gangwon-do: 16.viii.1989).

**ECOLOGY:** Rare species founded in the leaf litters or on the grounds of mountainous region.

## Genus *Odontodrassus* Jézéquel, 1965

I-ppal-mae-geo-mi-sok (이빨매거미속)

Carapace oval; head region narrow. Both eye rows recurved in front. Chelicerae with 3 promarginal teeth and 2 retromarginal tooth. Legs stout. Abdomen long elliptical; anteriodorsally scutum in male. Male palp with small retrolateral tibial apophysis; no median apophysis. Female epigynum less sclerotized.

Type species: *Odontodrassus nigriritibialis* Jézéquel, 1965.

### 80. *Odontodrassus hondoensis* (Saito, 1939) (Fig. 86)

Jung-ri-i-ppal-mae-geo-mi (중리이빨매거미)

*Iheringia hondoensis* Saito, 1939, p. 35; 1959, p. 44.

*Odontodrassus hondoensis* Kamura, 1987d, p. 30; 2009, p. 490; Paik, 1992d, p. 164; Song, Zhu and Chen, 1999, p. 453; Namkung, 2001, p. 472; 2003, p. 475; Song, Zhu and Zhang, 2004, p. 190; Jung et al., 2005, p. 190.

*Drassyllus pulumipes* Xu, 1991, p. 38.

**Female:** Body length 2.5–3.5 mm. Carapace longer than wide, bulged oval; thick yellowish brown; fovea reddish brown, spiniform; cervical and radial furrows indistinct. Chelicerae brown with 2 promarginal teeth and retromarginal teeth each. Sternum yellowish brown with brown margin, convex heart shaped. Legs yellowish brown; darker diatally; patellae and tibiae dusky. Abdomen longer than wide, elliptical. Dorsum grayish yellow; bristles at the end of anterior part densely; 3 pairs of muscle impressions distinct. Female epigynum; almost straight rim with small hood situated at upper part; spermathecae visible.

**Male:** Body length 2.0–3.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis short with pointed tip, terminal apophysis thick and bifurcated.

**DISTRIBUTION:** Korea, China, Japan, Russia.

**KOREA:** GG.

**SPECIMEN EXAMINED:** 1 ♀ (Hwaseong, Gyeonggi-do: 21.viii.2002); 1 ♀, 1 ♂ (Hwaseong, Gyeonggi-

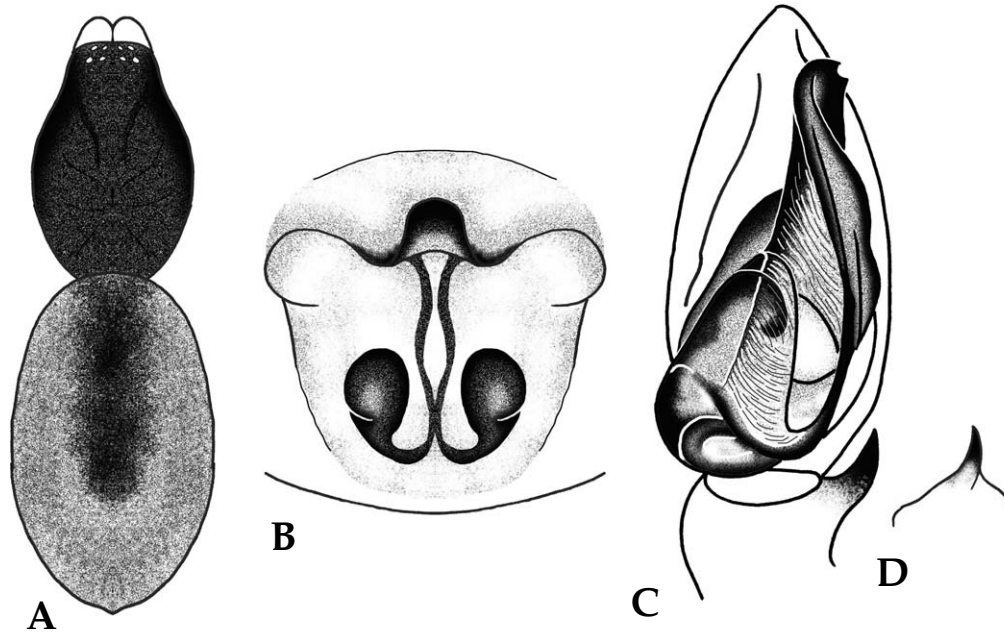


Fig. 86. *Odontodrassus hondoensis*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

do: 23.v.2003).

**ECOLOGY:** Rare species founded in the leaf litters or on the grounds of hillocks.

## Genus *Poecilochroa* Westring, 1874

Sol-gae-geo-mi-sok (솔개거미속)

Carapace narrow in front; half its largest width; head region low and wide. Anterior eye row procurved, posterior eye row nearly straight in front. Chelicerae with a promarginal and retro-marginal tooth each; a carina on promargin. Legs long and stout. Abdomen long oval; no dorsal scutum in male. Male palp with small retrolateral tibial apophysis; no median apophysis. Female epigynum less sclerotized.

Type species: *Pythonissa variana* C.L. Koch, 1839.

### Key to the species of genus *Poecilochroa*

1. Chelicerae with large and small teeth on promargin, a pair of spots on abdominal dorsum ..... *P. joreungensis*
- Chelicerae with one teeth and carina on promargin, several pair of irregular spots on abdominal dorsum ..... *P. taeguensis*

**81. *Poecilochroa joreungensis* Paik, 1992 (Fig. 87)**

Jo-ryeong-sol-gae-geo-mi (조령솔개거미)

*Poecilochroa joreungensis* Paik, 1992a, p. 121; Jung et al., 2005, p. 191.

**Female:** Body length 6.0–7.0 mm. Carapace longer than wide, oval; chestnut; eye area black. Chelicerae chestnut with one tooth and one denticle on the promargin and no tooth on the retro-margin. Sternum chestnut, long ovoid. Legs chestnut; tibiae of leg II, and tarsi and patellae of leg IV yellowish brown; Abdomen longer than wide, rounded quadrangle. Dorsum black with a pair of white spots medianly. Female epigynum; surrounded with semicircular rim, spermathecae visible.

**Male:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GB, CN.

**ECOLOGY:** Unknown.

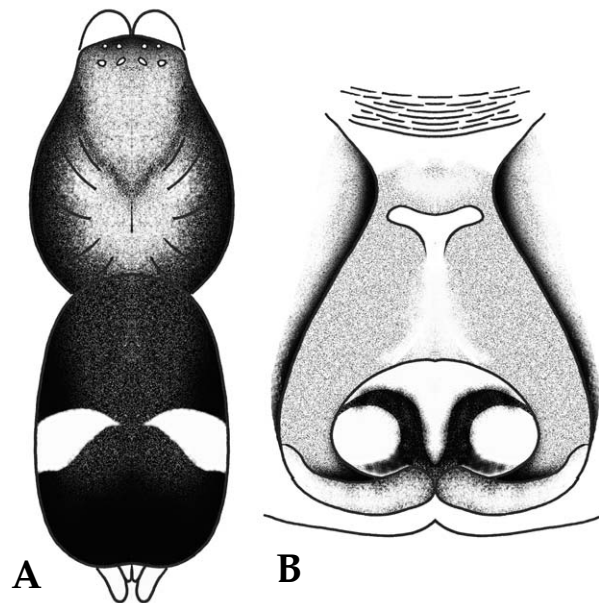


Fig. 87. *Poecilochroa joreungensis*. A. female body; B. female epigynum (cited from Paik, 1992a).

**82. *Poecilochroa taeguensis* Paik, 1992 (Fig. 88)**

Dae-gu-sol-gae-geo-mi (대구솔개거미)

*Poecilochroa taeguensis* Paik, 1992a, p. 123; Jung et al., 2005, p. 192.

**Female:** Body length 6.0–7.0 mm. Carapace longer than wide, oval; chestnut; eye area black and

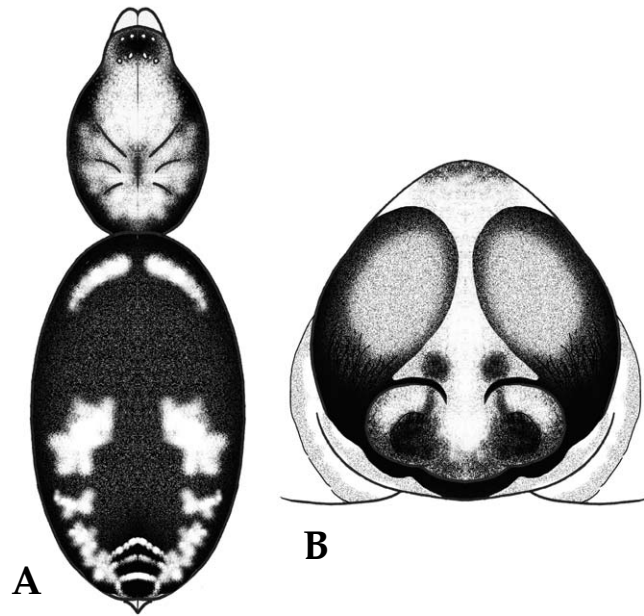


Fig. 88. *Poecilochroa taeguensis*. A. female body; B. female epigynum (cited from Paik, 1992a).

elevated. Chelicerae chestnut with one tooth and carina on the promargin and no tooth on the retromargin. Sternum brown, long ovoid with pointed tip. Legs I and II brown and legs III and IV yellowish brown; femora dusky brown; patellae yellowish white. Abdomen longer than wide, ovoid. Dorsum dark gray with a pair of white patterns on the shoulder accompanied by 3 pairs of irregular white patterns. Female epigynum; surrounded with oval rim, spermathecae visible.

**Male:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GB, GN, JJ.

**ECOLOGY:** Unknown.

### Genus *Sanitubius* Kamura, 2001

Dong-bang-jo-rong-i-geo-mi-sok (동방조롱이거미속)

Carapace oval. Both eye rows recurved in front. Chelicera with 3 promarginal teeth and a retromarginal tooth. Legs I and II with scopulae on tarsi and metatarsi; leg IV longest, the other legs subequal in length. Abdomen long oval; anteriodorsally scutum in male. Male palp with very long retrolateral tibial apophysis. Female epigynum with a pair of lateral furrows and copulatory openings situated anteriorly.

Type species: *Herpyllus anatolicus* Kamura, 1989.

### 83. *Sanitubius anatolicus* (Kamura, 1989) (Fig. 89)

Dong-bang-jo-rong-i-geo-mi (동방조롱이거미)

*Herpyllus anatolicus* Kamura, 1989, p. 112; Paik, 1992b, p. 135.

*Sanitubius anatolicus* Kamura, 2001, p. 194; 2009, p. 495; Song, Zhu and Zhang, 2004, p. 204.

**Female:** Body length 5.5–7.5 mm. Carapace longer than wide, oval; dark brown; eye area black; fovea dark brown; cervical and radial furrows dusky. Chelicerae dark brown with 3 promarginal teeth and a denticle on the retromargin. Sternum dark reddish brown, heart shaped. Legs yellowish brown; femora black; leg I with yellowish brown speckles on the lateral of femora. Abdomen longer than wide, ovoid. Dorsum dark grayish brown without distinct pattern; 3 pairs of muscle impressions distinct. Female epigynum; slightly elevated with a pair of sclerotized rims laterally, spermathecae visible.

**Male:** Body length 3.5–5.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis long with curved and pointed tip accompanied with small and blunt process, terminal apophysis large and slightly curved.

**DISTRIBUTION:** Korea, Japan, Russia.

**KOREA:** GB.

**SPECIMEN EXAMINED:** 1 ♀ 1 ♂ (Punggi, Gyeongsangbuk-do: 18.vii.1989).

**ECOLOGY:** Rare species founded in the leaf litters or on the grounds of mountainous region and hillocks.

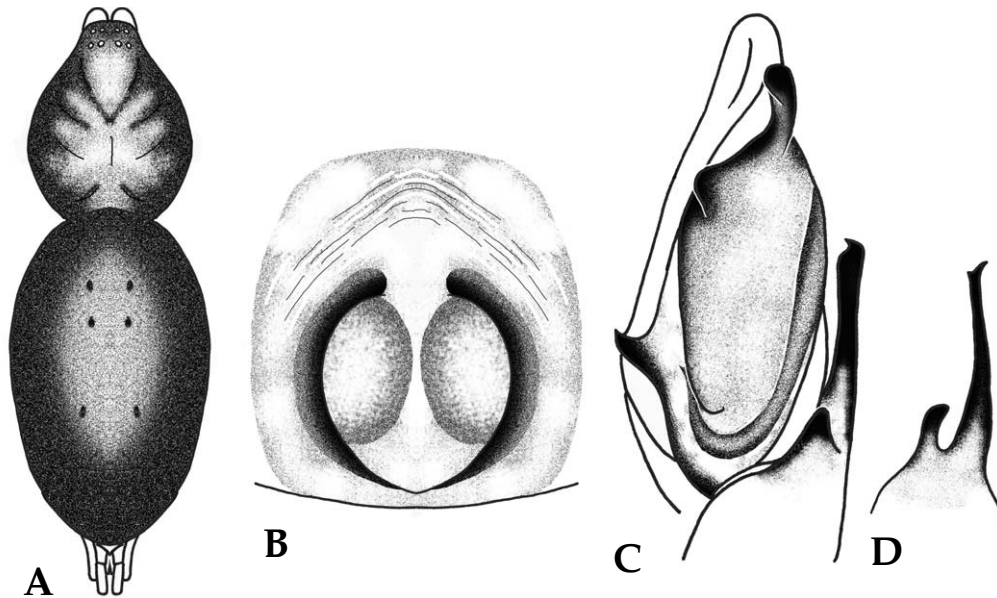


Fig. 89. *Sanitubius anatolicus*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

## Genus *Sergiolus* Simon, 1891

Huin-byeol-sol-gae-geo-mi-sok (흰별솔개거미속)

Carapace oval. Both eye rows procurved. Chelicerae with carina on promargin, no tooth on retromargin. Legs slender; tarsi with sparse scopulae. Abdomen long elliptical; anteriodorsally scutum in male. Male palp with blunt retrolateral tibial apophysis. Female epigynum shallow; rounded or angular.

Type species: *Drassus capulatus* Walckenaer, 1837.

### 84. *Sergiolus hosiziro* (Yaginuma, 1960) (Fig. 90)

Huin-byeol-sol-gae-geo-mi (흰별솔개거미)

*Poecilochroa hosiziro* Yaginuma, 1960: append. 7; 1971, p. 121; 1986, p. 191; Hu, 1984, p. 281; Kamura, 1986, p. 10; Zhang, 1987, p. 184; Chikuni, 1989, p. 118; Paik, 1991b, p. 68; Song, Zhu and Chen, 2001, p. 355.

*Sergiolus hosiziro* Kamura, 1998, p. 169; 2009, p. 497; Namkung, 2001, p. 481; 2003, p. 484; Kim and Cho, 2002, p. 76; Song, Zhu and Zhang, 2004, p. 217; Jung et al., 2005, p. 193.

**Female:** Body length 6.0–8.0 mm. Carapace longer than wide, oval; dark reddish brown with black margin; head region elevated; eye area black; fovea reddish brown; cervical and radial furrows black. Chelicerae brown with long scapulae on the promargin; no tooth on both margins. Sternum dark brown with fine hairs densely, elliptical. Legs brown; femora, patellae and tibiae

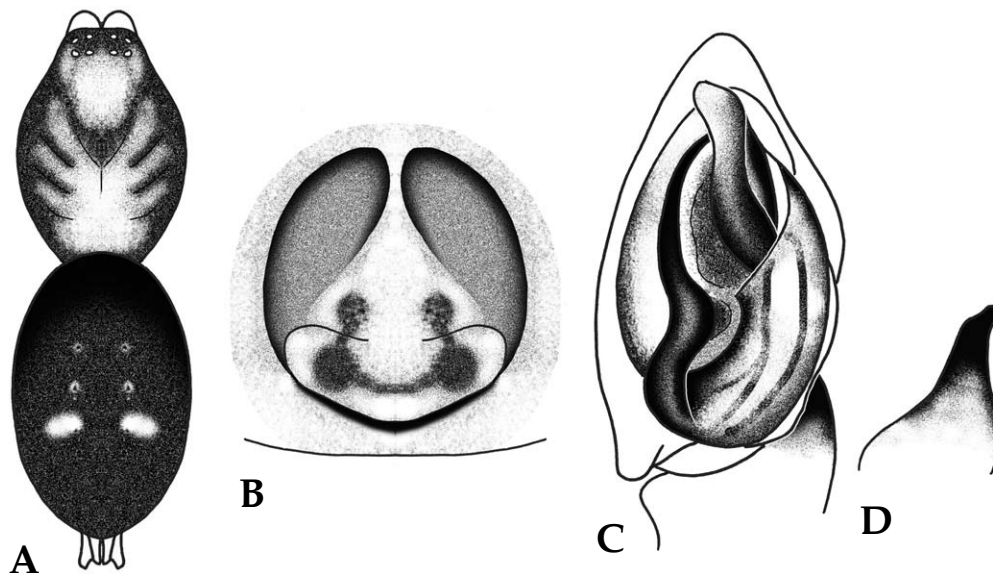


Fig. 90. *Sergiolus hosiziro*. A. female body; B. female epigynum; C. male palp; D. tibial retrolateral apophysis of male palp.

black anteriorly. Abdomen longer than wide, elliptical. Dorsum black with a pairs of white patterns at the front, middle and rear, respectively. Female epigynum; slightly elevated, spermathecae visible.

**Male:** Body length 4.5–5.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis thick with blunt tip.

**DISTRIBUTION:** Korea, Japan, China.

**KOREA:** GB.

**SPECIMEN EXAMINED:** 1 ♀ 2 ♂♂ (Gumi, Gyeongsangbuk-do: 20.viii.2009).

**ECOLOGY:** Founded on the grounds of mountainous region and plains.

## Genus *Sernokorba* Kamura, 1992

Tob-ni-mae-geo-mi-sok (톱니매거미속)

Carapace long oval; head region narrow; longitudinal fovea distinct. Anterior eye row procurved, posterior eye row nearly straight in front. Chelicerae with serrated carina on promargin and a tooth on retromargin. Legs with distinct scopulae on tarsi and metatarsi; leg IV longest and the other legs nearly equal in length. Abdomen oval with white dorsal markings; anteriodorsally scutum in male. Male palp with very long retrolateral tibial apophysis; embolus short and conductor membranous; no median apophysis. Female epigynum less sclerotized.

Type species: *Prosthesima pallidipatellis* Bösenberg and Strand, 1906.

### 85. *Sernokorba pallidipatellis* (Bösenberg and Strand, 1906) (Fig. 91, Pl. 32)

Seok-jul-tob-ni-mae-geo-mi (석줄톱니매거미)

*Prosthesima pallidipatellis* Bösenberg and Strand, 1906, p. 123.

*Zelotes pallidipatellis* Yaginuma, 1986, p. 191.

*Zelotes pallipatellis* Zhang, 1987, p. 187.

*Sernokorba pallidipatellis* Kamura, 1992b, p. 121; 2009, p. 497; Song, Zhu and Chen, 1999, p. 456; 2001, p. 356; Namkung, 2001, p. 483; 2003, p. 486; Song, Zhu and Zhang, 2004, p. 221; Lee et al., 2004, p. 99; Jung et al., 2005, p. 194; Murphy, 2007, p. 46; Marusik, 2009, p. 100.

**Female:** Body length 6.0–8.0 mm. Carapace longer than wide, oval; dark brown; head region narrow with longitudinal stripe formed by white hairs; fovea spiniform; radial furrow distinct. Chelicerae dark brown with 4 promarginal teeth and 2 retromarginal teeth. Sternum dark yellowish brown with dark brown hairs at margin, scutiform. Legs brown in general; femora dark brown; patellae yellow; tibiae and metatarsi brown; tarsi light yellowish brown. Abdomen longer than wide, elliptical. Dorsum dark brown with distinct or fade 3 white transverse bandpattern. Female epigynum; ovoid with 'x' shaped rim medianly, spermathecae appeared downward.

**Male:** Body length 5.0–7.0 mm. Similar to females, smaller size and darker body coloration;

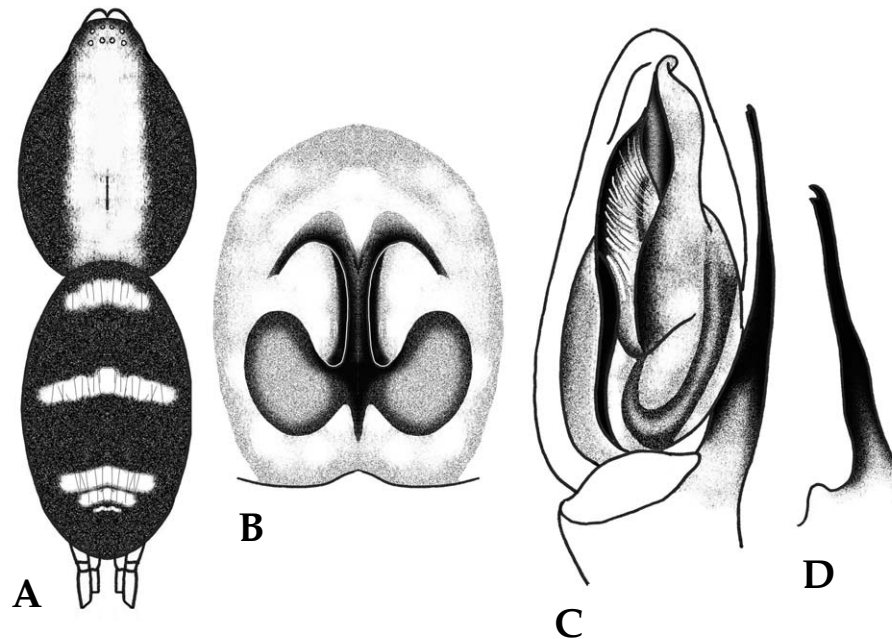


Fig. 91. *Sernokorba pallidipatellis*. A. female body; B. female epigynum; C. male palp; D. tibial retro-lateral apophysis of male palp.

dorsal scutum absent. Male Palp with very long tibial retrolateral apophysis with bifurcated tip.

**DISTRIBUTION:** Korea, Japan, China, Russia.

**KOREA:** GW, GG, CB, CN, GB, GN, JB.

**SPECIMEN EXAMINED:** 1 ♀ (Mt. Bangtaesan, Gangwon-do: 12.x.2010); 4 ♀ ♀, 6 ♂ ♂ (Hwaseong, Gyeonggi-do: 3.iv.2002); 6 ♀ ♀ (Mt. Chilbosan, Gyeonggi-do: 19.ix.2002); 1 ♀, 1 ♂ (Pocheon, Gyeonggi-do: 29.v.2008); 1 ♀ (Bupyeong, Gyeonggi-do: 29.vi.2008); 1 ♂ (Uiwang, Gyeonggi-do: 30.vi.2008); 3 ♂ ♂ (Jecheon, Chungcheongbuk-do: 26.vi.2008); 1 ♀ (Boryeong, Chungcheongnam-do: 22.vi.1995); 7 ♂ ♂ (Janghang, Chungcheongnam-do: 3.vi.2008); 4 ♀ ♀, 2 ♂ ♂ (Gasan, Gyeongsangbuk-do: 4.vi.2008); 3 ♀ ♀, 2 ♂ ♂ (Mt. Sobaeksan, Gyeongsangbuk-do: 30.vi.2009); 4 ♀ ♀, 1 ♂ (Ulsan, Gyeongsangnam-do: 4.vi.2008); 1 ♀ (Mt. Naejongsan, Jeollabuk-do: 27.ix.2011); 2 ♂ ♂ (Mt. Cheonwangsang, Seoul: 22.v.1997); 1 ♀ (Mt. Samgaksan, Seoul: 16.vi.1997).

**ECOLOGY:** Founded in the bushes, under the rocks or on the grounds of mountainous region.

## Genus *Shiragaia* Paik, 1992

Baeg-sin-geo-mi-sok (백신거미속)

Carapace pyriform, longer than wide; head region narrow; longitudinal fovea distinct. Both eye rows procurved in front. Chelicerae with teeth on both margins. Legs with two median dorsal spines on tibiae III and IV respectively; trochanters unnotched. Abdomen oval. Female epigynum with posterior bar; spermathecae widely separated.

Type species: *Shiragaia taeguensis* Paik, 1992.

**86. *Shiragaia taeguensis* Paik, 1992 (Fig. 92)**

Dae-gu-baek-sin-geo-mi (대구백신거미)

*Shiragaia taeguensis* Paik, 1992f, p. 3; Jung et al., 2005, p. 195.

**Female:** Body length about 3.2 mm. Carapace longer than wide, oval; yellowish brown; head region darker than thoracic region, thoracic region with brown margin; fovea reddish brown, spiniform. Chelicerae yellowish brown with 3 promarginal teeth and 7 retromarginal teeth. Sternum yellowish brown, scutiform; almost straight anteriorly and pointed posteriorly. Legs yellowish brown with darker ends. Abdomen longer than wide, ovoid. Dorsum thick white without distinct pattern. Female epigynum; slightly depressed downward.

**Male:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GB.

**ECOLOGY:** Unknown.

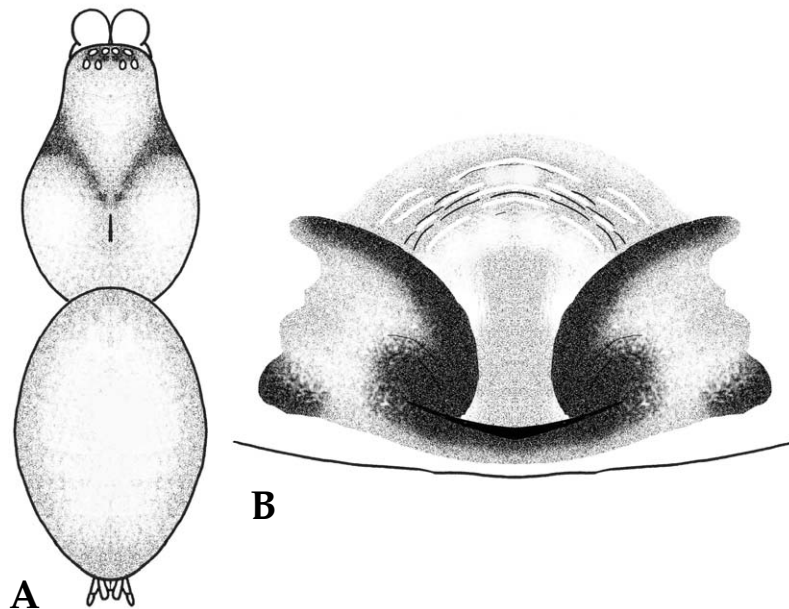


Fig. 92. *Shiragaia taeguensis*. A. female body; B. female epigynum (cited from Paik, 1992f).

## Genus *Trachyzelotes* Lohmander, 1944

Teob-seok-bu-ri-yeom-ra-geo-mi-sok (텃석부리염라거미속)

Carapace wide and low; head region narrow. Both eye rows procurved in front. Chelicerae with a tooth and a row of bristles on promargin, no tooth on retromargin. Legs stout. Abdomen long ovoid; anteriodorsally scutum in male. Male palp with blunt retrolateral tibial apophysis. Female epigynum moderately sclerotized.

Type species: *Melanophora pedestris* C.L. Koch, 1837.

### 87. *Trachyzelotes jaxartensis* (Kroneberg, 1875) (Fig. 93)

Meot-jang-i-yeom-ra-geo-mi (멧장이염라거미)

*Melanophora jaxartensis* Kroneberg, 1875, p. 23.

*Prothesima foveolata* Simon, 1880, p. 117.

*Prothesima insipiens* Simon, 1886, p. 382.

*Echemus spinibarbis* Simon, 1897b, p. 97.

*Prothesima peninsulana* Banks, 1898, p. 217.

*Prothesima iaxartensis* Kulczyn'ski, 1901, p. 323.

*Melanophora acanthognathus* Purcell, 1907, p. 333.

*Zelotes peninsulanus* Petrunkevitch, 1911, p. 150.

*Nodocion barbaranus* Chamberlin, 1922, p. 154.

*Nodocion iugans* Chamberlin, 1922, p. 154.

*Camillina acanthognathus* Tucker, 1923, p. 335.

*Camillina postrema* Tucker, 1923, p. 344.

*Nodocion barbaranus* Chamberlin, 1936a, p. 12.

*Zelotes sorex* Denis, 1945, p. 46.

*Zelotes cavaleriei* Schenkel, 1963, p. 50; Hayashi, 1983, p. 11; Zhang and Zhu, 1983, p. 166; Brignoli, 1983c, p. 578; Hu, 1984, p. 282; Guo, 1985, p. 145; Zhu et al., 1985, p. 154; Zhang, 1987, p. 186; Zhao, 1993, p. 127; Barrion and Litsinger, 1995, p. 184.

*Drassyllus peninsulanus* Ubick and Roth, 1973, p. 3.

*Scotophaeus chohanius* Patel and Patel, 1975, p. 35.

*Drassodes indraprastha* Tikader and Gajbe, 1975, p. 276; Tikader, 1982b, p. 419.

*Trachyzelotes jaxartensis* Platnick and Murphy, 1984, p. 10; Platnick and Song, 1986, p. 18; Paik, 1986b, p. 33; Song, 1987, p. 343; Hu and Wu, 1989, p. 286; Chen and Zhang, 1991, p. 238; Xu, 1991, p. 39; Platnick, 1997, p. 97; Levy, 1998, p. 107; Song, Zhu and Chen, 1999, p. 455; 2001, p. 357; Namkung, 2001, p. 484; 2003, p. 487; Song, Zhu and Zhang, 2004, p. 236; Jung et al., 2005, p. 196; Jocqué and Dippenaar-Schoeman, 2006, p. 128; Kamura, 2009, p. 493.

*Zelotes jaxartensis* Yaginuma, 1986, p. 192; Chikuni, 1989, p. 120.

**Female:** Body length 7.0–8.5 mm. Carapace longer than wide, oval; reddish brown or dark brown; fovea reddish brown, spiniform; cervical and radial furrows dark brown. Chelicerae chestnut with long bristles densely at the front, 4–5 promarginal teeth and no retromarginal teeth.

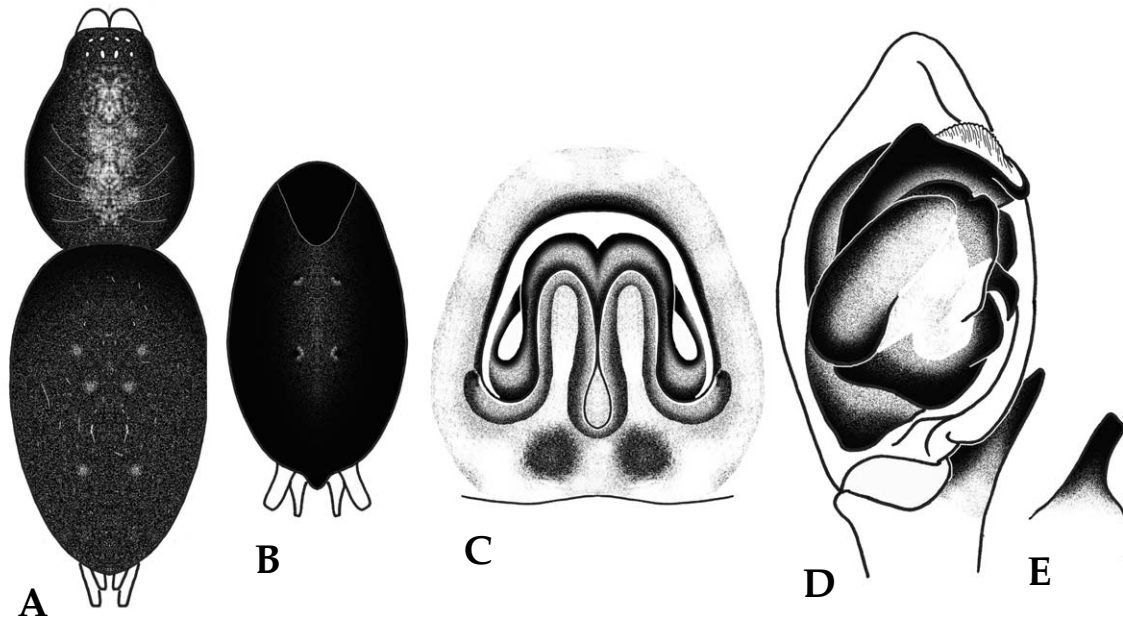


Fig. 93. *Trachyzelotes jaxartensis*. A. female body; B. male abdomen; C. female epigynum; D. male palp; E. tibial retrolateral apophysis of male palp.

Sternum reddish brown with fine brown hairs densely, heart shaped. Legs yellowish brown; scopulae on the metatarsi and tarsi. Abdomen longer than wide, elliptical; grayish brown. Dorsum grayish brown with fine black hairs densely; 3 pairs of muscle impressions and 4–5 comb patterns distinct. Female epigynum; surrounded with sclerotized arch shaped rim, 'M' shaped duct at middle and spermathecae at lower part visible.

**Male:** Body length 5.0–6.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum absent. Male palp; tibial retrolateral apophysis thick with blunt tip.

**DISTRIBUTION:** Korea, China, Japan Russia, Africa, Hawaii (Holarctic).

**KOREA:** GG, GB, JB.

**SPECIMEN EXAMINED:** 1 ♀ (Gasam, Gyeongsangbuk-do: 24.vii.2008); 1 ♀, 1 ♂ (Jeonju, Jeollabuk-do: 22.ix.2008).

**ECOLOGY:** Founded at the dikes or levees of uplands and rice fields, or on the grounds of hillocks.

## Genus *Urozelotes* Mello-Leitao, 1938

Ga-si-yeom-ra-geo-mi-sok (가시염라거미속)

Carapace oval; head region flat; truncated anteriorly and posteriorly. Both eye rows procurved in front. Chelicerae typically with 3 promarginal teeth and a retromarginal tooth; boss present anterolaterally. Legs with scopulae on tarsi and anterior metatarsi; trichobothria in two rows on tarsi,

one on metatarsi. Abdomen with two pairs of muscle impressions; anteriodorsally scutum in male. Male palp with basally thickened retrolateral tibial apophysis; usually with pointed terminal apophysis overlapping embolus; median apophysis distally situated. Female epigynum with anteriorly narrowed median plate.

Type species: *Prothesima rustica* L. Koch, 1872.

### 88. *Urozelotes rusticus* (L. Koch, 1872) (Fig. 94)

Ju-hwang-yeom-ra-geo-mi (주황염라거미)

*Melanophora rustica* Canestrini and Pavesi, 1870, p. 27.

*Prothesima rustica* L. Koch, 1872b, p. 309; Simon, 1878, p. 93; Bertkau, 1880, p. 263; Chyzer and Kulczyn'ski, 1897, p. 207; Bösenberg, 1902, p. 313.

*Drassus razoumowskyi* Pavesi, 1873, p. 123.

*Drassus cerdo* Thorell, 1875a, p. 97; Thorell, 1875b, p. 90.

*Prothesima larifuga* Simon, 1878, p. 90.

*Prothesima pallida* Keyserling, 1878, p. 602.

*Drassus agelastus* Keyserling, 1891, p. 35.

*Prothesima blanda* Banks, 1892, p. 18.

*Prothesima minima* Banks, 1892, p. 19.

*Prothesima completa* Banks, 1898, p. 219.

*Prothesima lutea* F.O.P.-Cambridge, 1899, p. 57.

*Melanophora pacifica* Simon, 1899, p. 412.

*Melanophora porteri* Simon, 1904, p. 89.

*Zelotes femoralis* Banks, 1904, p. 336.

*Drassodes pater* Bösenberg and Strand, 1906, p. 119.

*Drassodes rotundifoveatus* Bösenberg and Strand, 1906, p. 120.

*Melanophora rustica orientalis* Simon, 1909, p. 77.

*Drassodes agelastus* Petrunkevitch, 1911, p. 137.

*Zelotes blandus* Petrunkevitch, 1911, p. 148.

*Zelotes completus* Petrunkevitch, 1911, p. 148.

*Zelotes luteus* Petrunkevitch, 1911, p. 150.

*Zelotes pallidus* Petrunkevitch, 1911, p. 150.

*Zelotes porteri* Petrunkevitch, 1911, p. 151.

*Zelotes razoumowskyi* Simon, 1914, pp. 156, 165, 218.

*Scotophaeus blepharotrichus* Strand, 1915, p. 139.

*Drassyllus blandus* Chamberlin, 1922, p. 167.

*Drassyllus femoralis* Chamberlin, 1922, p. 170; Kaston, 1948, p. 360.

*Drassyllus liopus* Chamberlin, 1922, p. 170.

*Camillina amnicola* Tucker, 1923, p. 336.

*Haplodrassus magister* Chamberlin, 1933, p. 6.

*Drassyllus abdalbus* Chamberlin, 1936b, p. 15.

*Zelotes rusticus* Reimoser, 1937a, p. 36; Locket and Millidge, 1951, p. 112; Millidge and Locket, 1955, p. 171; Buchar, 1961, p. 90; Oltean, 1962, p. 576; Jézéquel, 1962, p. 603; Braendegaard, 1966, p. 113;

Tyschchenko, 1971, p. 101; Ubick and Roth, 1973, p. 8; Shinkai and Hara, 1975, p. 17; Shinkai, 1977, p. 333; 1978, p. 103; Paik, 1978, p. 425; Hayashi, 1983, p. 13; Grimm, 1985, p. 221; Roberts, 1985, p. 72; 1995, p. 112; 1998, p. 116; Yaginuma, 1986, p. 191; Zhang, 1987, p. 188; Chikuni, 1989, p. 120; Heimer and Nentwig, 1991, p. 446; Noordam, 1992, p. 9; Levy, 1998, p. 143.

*Zelotes scutatus* Platnick and Shadab, 1975a, p. 5; Mello-Leitão, 1939, p. 529.

*Urozelotes cardiogynus* Mello-Leitão, 1938, p. 111.

*Latonigena agelasta* Mello-Leitão, 1943, p. 216.

*Zelotes razoumovskiji* Denis, 1947, p. 60; 1952, p. 121.

*Zelotes keyserlingi* Roewer, 1951, p. 444.

*Zelotes paulistus* Roewer, 1951, p. 444.

*Gnaphosa scutata* Roewer, 1955, p. 369.

*Drassodes malodes* Tikader, 1962, p. 572; 1982, p. 397; Tikader and Biswas, 1981, p. 66.

*Camillina gigas* Schmidt, 1973, p. 362.

*Urozelotes rusticus* Platnick and Murphy, 1984, p. 24; Heiss and Allen, 1986, p. 52; Platnick and Song, 1986, p. 20; Paik, 1986b, p. 36; Platnick and Dondale, 1992, p. 138; Kamura, 1998, p. 169; Song, Zhu and Chen, 1999, p. 456; 2001, p. 359; Namkung, 2001, p. 485; 2003, p. 488; Song, Zhu and Zhang, 2004, p. 240; Trotta, 2005, p. 166.

**Female:** Body length 8.0–9.0 mm. Carapace longer than wide, oval; yellowish brown or reddish brown; fovea reddish brown, spiniform; cervical and radial furrows fade. Chelicerae yellowish brown or orange with 3–4 promarginal teeth 2 retromarginal teeth. Sternum reddish brown or orange with darker margin; long shield shaped. Legs yellowish brown with darker ends; scapulae on the metatarsi and tarsi. Abdomen longer than wide, ovoid. Dorsum yellowish brown or orange with fine grayish brown hairs; 2–3 pairs of muscle impressions distinct. Female epigynum; slightly

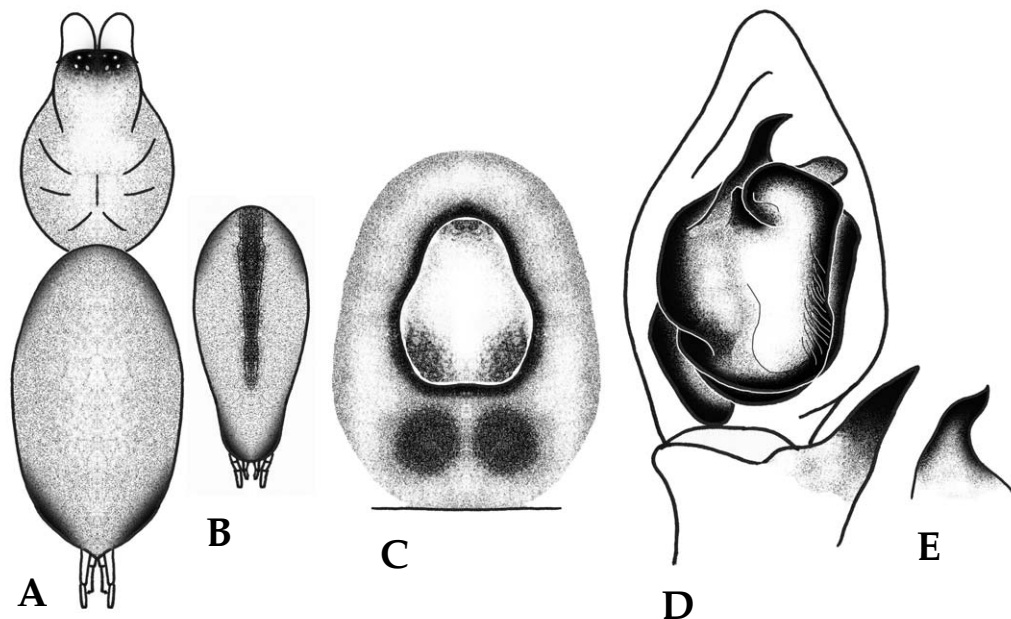


Fig. 94. *Urozelotes rusticus*. A. female body; B. male abdomen; female epigynum; C. female epigynum; D. male palp; E. tibial retrolateral apophysis of male palp.

elevated, pear-shaped rim situated medianly, spermathecae visible.

**Male:** Body length 8.0–9.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum absent. Male palp; tibial retrolateral apophysis curved with pointed tip.

**DISTRIBUTION:** Korea, China, Japan Russia, Europe, America (Cosmopolitan).

**KOREA:** GG.

**SPECIMEN EXAMINED:** 2 ♀♀, 1 ♂ (Gapyeong, Gyeonggi-do: 21.vi.2009).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region or hillocks.

## Genus *Zelotes* Gistel, 1848

Yeom-ra-geo-mi-sok (염라거미속)

Carapace oval; covered with fine hairs; narrowed in front. Anterior eye row slightly procurved, posterior eye row straight in front. Chelicerae with black hairs on prolateral side; promargin with 3–4 teeth and one row of bristles, retromargin with 1–4 denticles. Leg relatively long; tibiae and metatarsi III and IV usually with ventral spines; metatarsi with scopulae. Abdomen long oval; anteriodorsally scutum in male. Male palp with retrolateral tibial apophysis; usually with terminal apophysis and median apophysis. Female epigynum usually with distinct groove-like anterior and lateral margins.

Type species: *Melanophora subterranea* C.L. Koch, 1833.

### Key to the species of genus *Zelotes*

1. Female epigynum wider than long ..... *Z. exiguus*  
– Female epigynum longer than wide ..... 2
2. Anterior lateral epigynal margin with pocket shaped rim ..... 3  
– Anterior lateral epigynal margin without pocket shaped rim ..... *Z. potanini*
3. Width of lateral epigynal rim broad ..... 4  
– Width of lateral epigynal rim narrow ..... 5
4. Female epigynum with ‘U’ shaped rim protruded at upper part ..... *Z. wuchangensis*  
– Female epigynum without protruded rim at upper part ..... *Z. kimwoha*
5. Male palpal organ with conspicuous embolus ..... 6  
– Male palpal organ with inconspicuous embolus ..... 7
6. Male palpal organ with long tibial retrolateral apophysis with pointed tip ..... *Z. kimi*  
– Male palpal organ with long tibial retrolateral apophysis with blunt tip ..... *Z. asiaticus*
7. Male palpal organ with large conductor, median apophysis hook shaped ..... *Z. davidi*  
– Male palpal organ with small conductor, median apophysis thick spine shaped .....  
..... *Z. keumjeungsanensis*

### 89. *Zelotes asiaticus* (Bösenberg and Strand, 1906) (Fig. 95)

A-si-a-yeom-ra-geo-mi (아시아염라거미)

*Prothesima asiatica* Bösenberg and Strand, 1906, p. 121.

*Zelotes asiatica* Yaginuma, 1960, p. 121; Lee, 1966, p. 72.

*Zelotes asiaticus* Yaginuma, 1971, p. 121; Paik, 1978, p. 422; 1986b, p. 25; 1992c, p. 148; Paik and Namkung, 1979, p. 88; Chen and Zhang, 1982, p. 37; Hayashi, 1983, p. 10; Kamura, 1984, p. 4; 2009, p. 491; Hu, 1984, p. 281; Platnick and Song, 1986, p. 4; Yaginuma, 1986, p. 191; Song, 1987, p. 344; Zhang, 1987, p. 185; Chikuni, 1989, p. 120; Chen and Zhang, 1991, p. 235; Zhao, 1993, p. 126; Song, Zhu and Chen, 1999, p. 456; Hu, 2001, p. 274; Namkung, 2001, p. 486; 2003, p. 489; Song, Zhu and Zhang, 2004, p. 251; Jung et al., 2005, p. 199.

**Female:** Body length 7.0–8.5 mm. Carapace longer than wide, oval; dark brown; head region narrow; fovea black, spiniform; cervical and radial furrows black. Chelicerae dark brown with 4 promarginal teeth and 2 retromarginal teeth. Sternum dark brown with long black hairs, heart shaped. Legs with dark brown femora; patellae brown with thinner ends; scapulae on the metatarsi and tarsi of legs I and II. Abdomen longer than wide, elliptical. Dorsum dark brown with black hairs densely; several pairs of yellow muscle impressions distinct. Female epigynum; slender transeverse rim at upper part, pocket shaped rim in corner vestigial, width between sclerotized lateral rim narrow, spermathecae visible.

**Male:** Body length 5.0–6.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis long with pointed tip, median apophysis beak shaped.

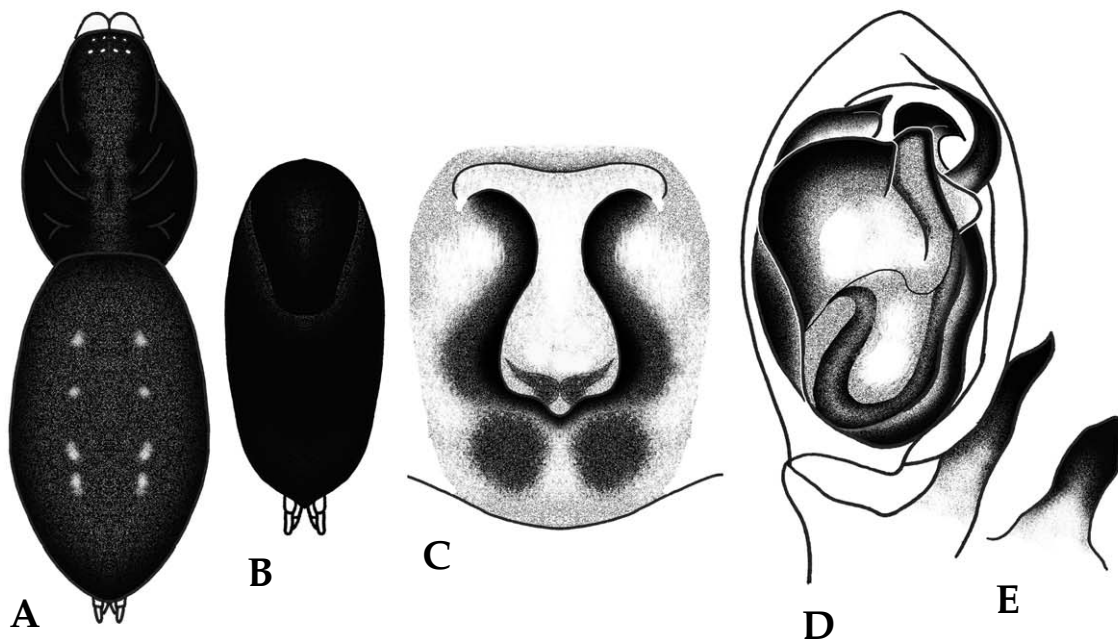


Fig. 95. *Zelotes asiaticus*. A. female body; B. male abdomen; C. female epigynum; D. male palp; E. tibial retrolateral apophysis of male palp.

**DISTRIBUTION:** Korea, China, Japan Taiwan.

**KOREA:** GW, GG, CB, CN, GB, GN, JB.

**SPECIMEN EXAMINED:** 1♂ (Mt. Maebongsan, Gangwon-do: 21.viii.1997); 4♀♀, 2♂♂ (Hwaseong, Gyeonggi-do: 21.v.2001); 1♂ (Ulsan, Gyeongsangnam-do: 17.iv.2008); 1♂ (Cheongyang, Chungcheongnam-do: 22.ix.1995); 1♂ (Goesan, Chungcheongbuk-do: 12.x.1995); 1♀ (Punggi, Gyeongsangbuk-do: 28.viii.1995); 1♀, 2♂♂ (Milyang, Gyeongsangnam-do: 23.iv.2009); 4♀♀ (Jeonju, Jeollabuk-do: 22.ix.2008).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region or hillocks.

## 90. *Zelotes davidi* Schenkel, 1963 (Fig. 96)

Da-bi-deu-yeom-ra-geo-mi (다비드염라거미)

*Zelotes davidi* Schenkel, 1963, p. 51; Zhu et al., 1985, p. 154; Platnick and Song, 1986, p. 9; Paik, 1986b, p. 26; Zhao, 1993, p. 128; Song, Zhu and Chen, 1999, p. 456; Namkung, 2001, p. 487; 2003, p. 490; Song, Zhu and Zhang, 2004, p. 258; Jung et al., 2005, p. 200.

**Female:** Carapace longer than wide, oval; blackish brown; head region narrow; fovea black, spiniform; radial furrow distinct. Chelicerae blackish brown with 3 promarginal teeth 2 retromarginal teeth. Sternum blackish brown with black hairs densely, long shield shaped. Legs dark brown; coxae, trochanters and tarsi with lighter dorsum. Abdomen longer than wide, elliptical. Dorsum blackish brown or grayish brown without distinct pattern. Female epigynum; slender tranverse rim at upper part, pocket shaped rim in corner curved inward, width between sclerotized lateral rim narrow, spermathecae visible.

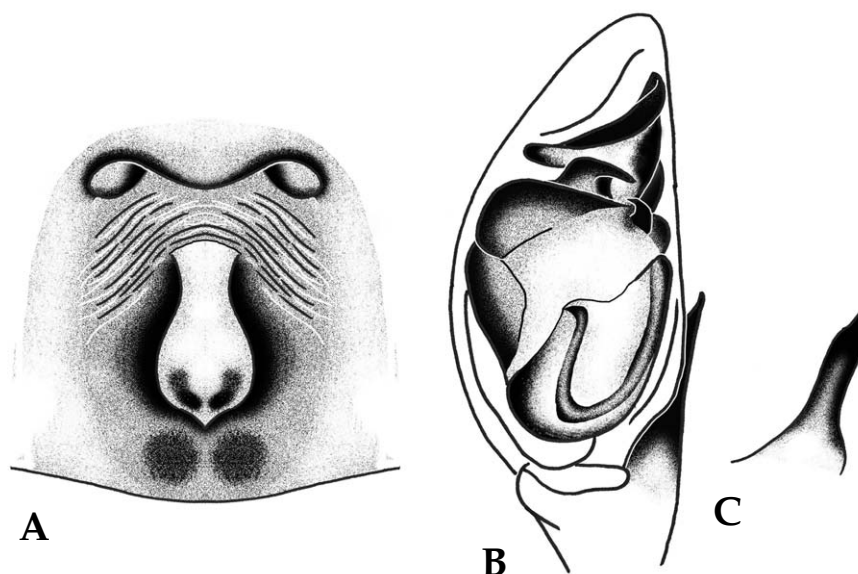


Fig. 96. *Zelotes davidi*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

**Male:** Body length about 5.2 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis long with slightly blunt tip, conductor large, median apophysis hook shaped.

**DISTRIBUTION:** Korea, China.

**KOREA:** GW, GG, GB.

**SPECIMEN EXAMINED:** 1 ♂ (Mt. Daeseongsan, Gangwon-do: 19.ix.1997); 3 ♀ ♀, 7 ♂ ♂ (Hwaseong, Gyeonggi-do: 12.xi.2001); 3 ♂ ♂ (Ansan, Gyeonggi-do: 30.vii.2004); 2 ♂ ♂ (Andong, Gyeongsangbuk-do: 15.xi.2004).

**ECOLOGY:** Founded in the the leaf litters or on the grounds of mountainous region or hillocks.

### 91. *Zelotes exiguus* (Muller and Schenkel, 1895) (Fig. 97)

Ssang-bang-ul-yeom-ra-geo-mi (쌍방울염라거미)

*Prothesima exigua* Müller and Schenkel, 1895, p. 770; Lessert, 1904, p. 291; 1910, p. 72.

*Prothesima electa* Bösenberg, 1902, p. 313.

*Zelotes exiguus* Simon, 1914, pp. 159, 171, 218; Reimoser, 1937a, p. 36; Jézéquel, 1962, p. 602; Holm, 1968, p. 203; Miller and Buchar, 1977, p. 161; Grimm, 1985, p. 197; Hu and Wu, 1989, p. 292; Heimer and Nentwig, 1991, p. 440; Paik, 1992c, p. 149; Kamura, 1992a, p. 20; 2009, p. 492; Pesarini, 2000, p. 385; Song, Zhu and Chen, 2001, p. 360; Namkung, 2001, p. 488; 2003, p. 491; Song, Zhu and Zhang, 2004, p. 261; Jung et al., 2005, p. 201; Almquist, 2006, p. 425.

**Female:** Body length 3.0–3.5 mm. Carapace longer than wide, oval; grayish brown or yellowish brown; head region elevated; eye area and both margins black; fovea reddish brown, spiniform;

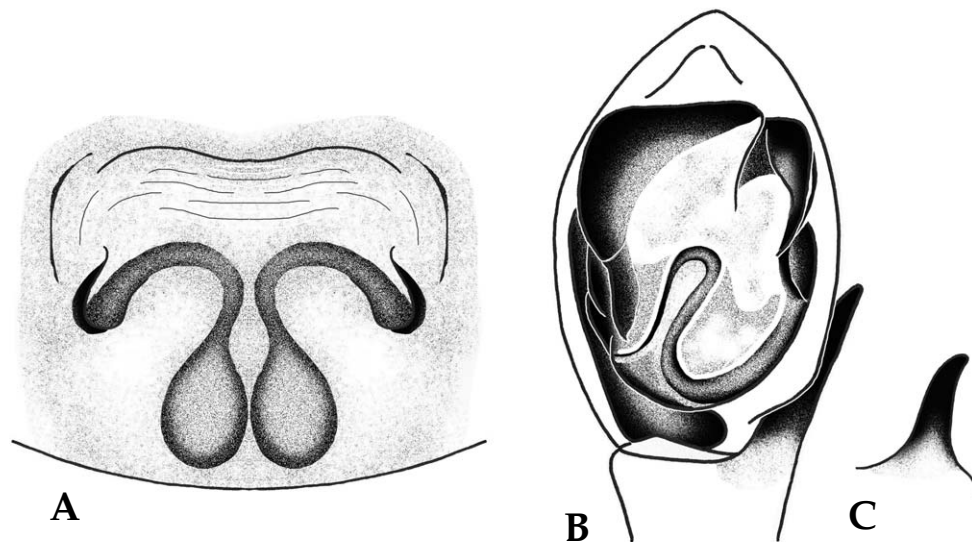


Fig. 97. *Zelotes exiguus*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

cervical and radial furrows blackish brown. Chelicerae grayish brown or yellowish brown with 4 promarginal teeth 2 retromarginal teeth. Sternum grayish brown with brown margin, heart shaped; covered with long yellowish brown hairs. Legs dark brown; tarsi yellow. Abdomen longer than wide, ovoid. Dorsum dark yellowish brown without distinct pattern; 2 pairs of muscle impressions distinct. Female epigynum; slender transeverse rim at upper part, pocket shaped rim in corner vestigial, sclerotized lateral rim absent, spermathecae and ducts visible.

**Male:** Body length 2.0–3.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis long with slightly pointed tip, embolus and median apophysis inconspicuous.

**DISTRIBUTION:** Korea, China, Japan Russia, Europe (Palearctic).

**KOREA:** GB.

**SPECIMEN EXAMINED:** 1 ♀, 2 ♂♂ (Gumi, Gyeongsangbuk-do: 20.viii.2009).

**ECOLOGY:** Founded on the grounds and grasslands or under the rocks of rice fields or uplands.

## 92. *Zelotes keumjeungsanensis* Paik, 1986 (Fig. 98)

Geum-jung-san-yeom-ra-geo-mi (금정산염라거미)

*Zelotes keumjeungsanensis* Paik, 1986b, p. 29; Tang, Song and Zhang, 2003, p. 18; Song, Zhu and Zhang, 2004, p. 268; Jung et al., 2005, p. 202.

**Male:** Body length about 4.5 mm. Carapace longer than wide, oval; chestnut; fovea reddish brown; cervical and radial furrows dusky. Chelicerae chestnut with 2 promarginal teeth and a retromarginal teeth. Sternum chestnut, heart shaped. Legs thick yellowish brown; scapulae on the

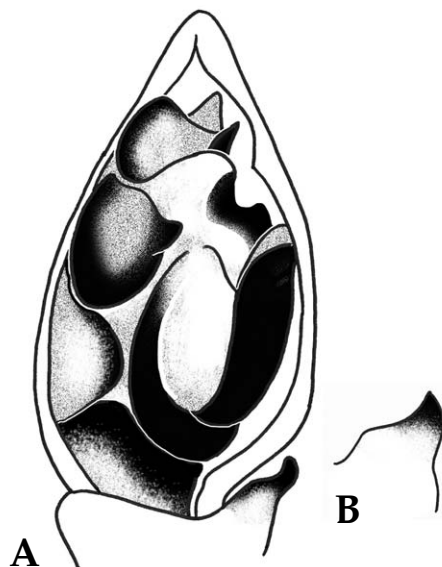


Fig. 98. *Zelotes keumjeungsanensis*. A. male palp; B. tibial retrolateral apophysis of male palp (cited from Paik, 1986b).

metatarsi and tarsi. Abdomen longer than wide, ovoid. Dorsum dark dray without distinct pattern; 3 pairs of muscle impressions distinct; dorsal scutum present. Male palp; tibial retrolateral apophysis shrot with slightly pointed tip, median apophysis thick spine shaped.

**Female:** Unknown.

**DISTRIBUTION:** Korea, China.

**KOREA:** GB.

**ECOLOGY:** Unknown.

### 93. *Zelotes kimi* Paik, 1992 (Fig. 99)

Yong-gi-yeom-ra-geo-mi (용기염라거미)

*Zelotes kimi* Paik, 1992c, p. 146.

**Male:** Body length about 4.8 mm. Carapace longer than wide, oval; dark brown; Chelicerae dark brown with 3 promarginal teeth and a retromarginal teeth. Sternum dark brown, scutiform. Legs gray-yellowish brown; coxae to tibiae dark brown. Abdomen longer than wide, ovoid. Dorsum black without distinct pattern; dorsal scutum present. Male palp; tibial retrolateral apophysis shrot with slightly pointed tip, median apophysis thick spine shaped.

**Female:** Unknown.

**DISTRIBUTION:** Korea.

**KOREA:** GW.

**ECOLOGY:** Unknown.



Fig. 99. *Zelotes kimi*. A. male palp; B. tibial retrolateral apophysis of male palp (cited from Paik, 1992c).

**94. *Zelotes kimwha* Paik, 1986 (Fig. 100)**

Gim-hwa-yeom-ra-geo-mi (김화염라거미)

*Zelotes kimwha* Paik, 1986b, p. 30; Kamura, 2000, p. 161; 2003, p. 25; 2009, p. 491; Jung et al., 2005, p. 204.

*Zelotes tintinnus* Paik, 1986b, p. 32; Namkung, 2001, p. 490; 2003, p. 493.

**Female:** Body length about 7.5 mm. Carapace longer than wide, oval; chestnut; head region narrow; eye area black; fovea dark brown, spiniform; cervical and radial furrows dusky. Chelicerae chestnut with 4 promarginal teeth 2 retromarginal teeth. Sternum chestnut, long heart shaped. Legs dark brown; yellowish brown pattern on the femora of leg I prolaterally; scapulae on the metatarsi and tarsi of legs I and II. Abdomen longer than wide, elliptical. Dorsum dark gray; 3–4 pairs of muscle impressions anteriorly; black scapulae at anterior end. Female epigynum; slender tranverse rim at upper part, pocket shaped rim in corner vestigial, sclerotized lateral rim absent, spermathecae and ducts visible.

**Male:** Body length 5.5–6.5 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis long with slightly pointed tip, embolus and median apophysis inconspicuous.

**DISTRIBUTION:** Korea, Japan.

**KOREA:** GG, CN.

**SPECIMEN EXAMINED:** 2♂♂ (Suwon, Gyeonggi-do: 20.ix.1999); 3♀♀, 1♂ (Hwaseong, Gyeonggi-do: 8.x.2001); 1♀ (Mt. Chilbosan, Gyeonggi-do: 19.ix.2002); 1♂ (Janghang, Chungcheongnam-do: 1.viii.2008).

**ECOLOGY:** Founded under the rocks of mountainous region or grasslands.

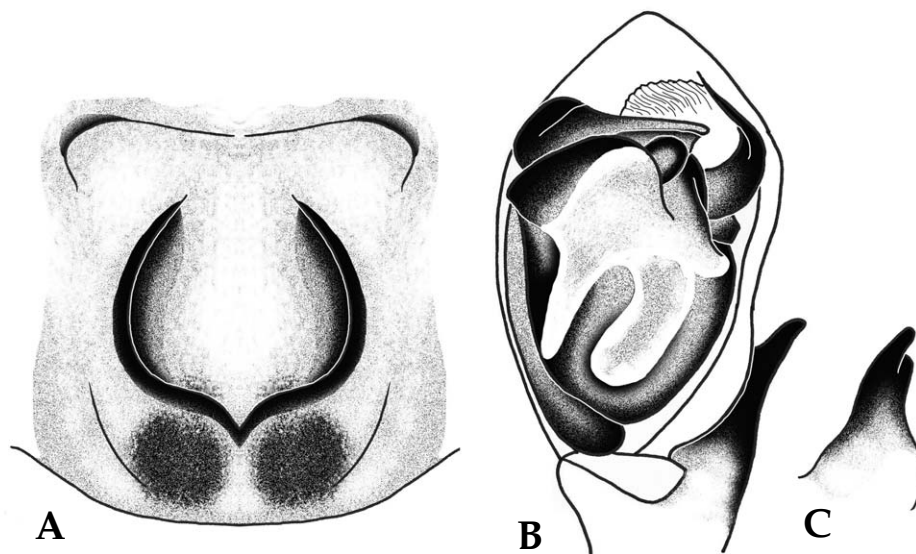


Fig. 100. *Zelotes kimwha*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

95. *Zelotes potanini* Schenkel, 1963 (Fig. 101)

Po-ta-nin-yeom-ra-geo-mi (포타닌염라거미)

*Zelotes potanini* Schenkel, 1963, p. 55; Izmailova, 1977, p. 71; 1978, p. 11; 1989, p. 109; Platnick and Song, 1986, p. 11; Kamura, 1987a, p. 4; 2009, p. 492; Ovtsharenko and Marusik, 1988, p. 205; Hu and Wu, 1989, p. 297; Paik, 1992c, p. 151; Saito, 1992, p. 952; Esyunin and Efimik, 1995, p. 84; Eskov and Marusik, 1995, p. 63; Song, Zhu and Chen, 1999, p. 464; 2001, p. 361; Hu, 2001, p. 276; Namkung, 2001, p. 489; 2003, p. 492; Song, Zhu and Zhang, 2004, p. 274; Jung et al., 2005, p. 205.

**Female:** Body length 6.0–6.5 mm. Carapace longer than wide, oval; blackish red; fovea dark reddish brown, spiniform; cervical and radial furrows dark gray. Chelicerae dark reddish brown with 3 promarginal teeth and a retromarginal teeth. Sternum reddish brown with brown bristles at margin, scutiform. Legs with dark brown femora, patellae and tibiae; the rest yellowish brown. Abdomen longer than wide, elliptical. Dorsum dark yellowish brown without distinct pattern. Female epigynum; round transeverse rim at upper part, pocket shaped rim in corner absent, width of sclerotized lateral rim narrow, spermathecae and ducts visible.

**Male:** Body length 4.0–5.0 mm. Similar to females, smaller size and darker body coloration; dorsal scutum present. Male palp; tibial retrolateral apophysis long with slightly blunt tip, median apophysis thick and pointed.

**DISTRIBUTION:** Korea, China, Japan Russia, Kazakhstan.

**KOREA:** GG.

**SPECIMEN EXAMINED:** 1 ♀, 2 ♂♂ (Yeoju, Gyeonggi-do: 4.vii.1997).

**ECOLOGY:** Founded in the crevices of the cliffs or under the rocks.

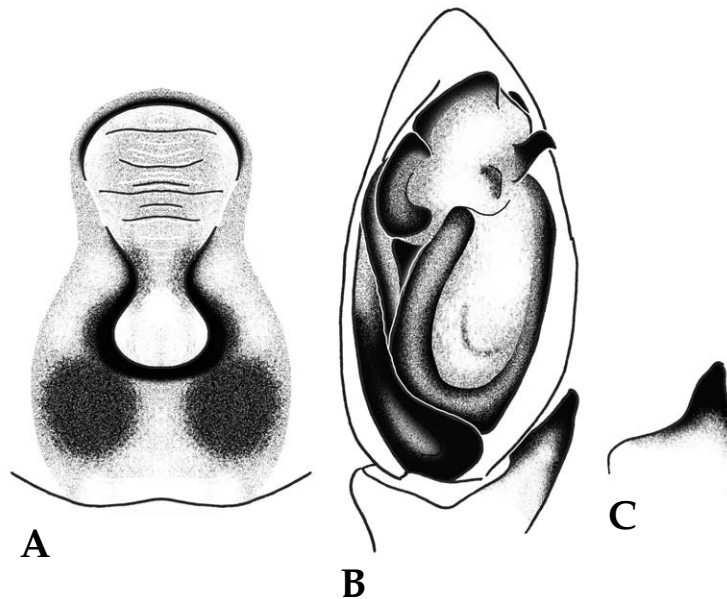


Fig. 101. *Zelotes potanini*. A. female epigynum; B. male palp; C. tibial retrolateral apophysis of male palp.

**96. *Zelotes wuchangensis* Schenkel, 1963 (Fig. 102, Pl. 33)**

Ja-gug-yeom-ra-geo-mi (자국염라거미)

*Zelotes wuchangensis* Schenkel, 1963, p. 57; Platnick and Song, 1986, p. 10; Paik, 1986b, p. 28; Chen and Zhang, 1991, p. 236; Song, Zhu and Chen, 1999, p. 464; 2001, p. 362; Namkung, 2001, p. 491; 2003, p. 494; Song, Zhu and Zhang, 2004, p. 281; Jung et al., 2005, p. 206.

**Female:** Body length 5.5–6.9 mm. Carapace longer than wide, oval; dark reddish brown with fine black hairs sparsely; fovea reddish brown, spiniform; radial furrow indistinct. Chelicerae chestnut with 4 promarginal teeth and 3 retromarginal teeth. Sternum dark brown with black bristles at margins, long ovoid. Legs dark brown; metatarsi and tarsi yellowish brown; Abdomen longer than wide, ovoid. Dorsum grayish brown with long black hairs densely; 3 pairs of muscle impressions distinct. Female epigynum; slender transeverse rim at upper part, pocket shaped rim in corner conspicuous, width of sclerotized lateral rim broad, a pair of ‘U’ shaped rims protruded at upper part, spermathecae and ducts visible.

**Male:** Described by Schenkel (1963).

**DISTRIBUTION:** Korea, China.

**KOREA:** GW, GG, GN, JN, JJ.

**SPECIMEN EXAMINED:** 2 ♀♀ (Mt. Godaesan, Gangwon-do: 12.x.1997); 1 ♀ (Mt. Maebongsan, Gangwon-do: 20.ix.1998); 1 ♀ (Kwangju, Gyeonggi-do: 10.vi.1992); 1 ♀ (Yeoju, Gyeonggi-do: 10.v.1997); 1 ♀ (Mt. Chilbosan, Gyeonggi-do: 19.x.2002); 1 ♀ (Hwaseong, Gyeonggi-do: 25.v.2003); 1 ♀ (Gapyeong, Gyeonggi-do: 29.vii.2008); 1 ♀ (Geochang, Gyeongsangnam-do: 15.x.1995); 1 ♀ (Ulsan, Gyeongsangnam-do: 8.v.2008); 1 ♀ (Gogeumdo, Jeollanam-do: 13.vi.1993); 1 ♀ (Whasun, Jeollanam-do: 8.v.2008); 1 ♀ (Mt. Hallasan, Jeju-do: 6.vi.2001).

**ECOLOGY:** Founded in the leaf litters or on the grounds of mountainous region or fields.

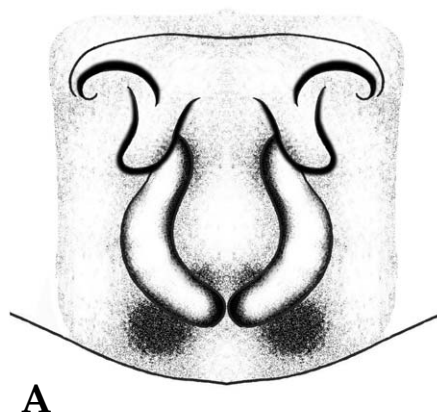


Fig. 102. *Zelotes wuchangensis*. A. female epigynum.

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## Plates

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1. *Ero japonica*, female.
2. *Mimetus testaceus*, female.
3. *Hyptiotes affinis*, female.
4. *Miagrammopes orientalis*, female.
5. *Octonoba sinensis*, female on the web with spiral stabilimentum.
6. *Octonoba sybotides*, female.
7. *Philoponella prominens*, female.
8. *Philoponella prominens*, female, color variation.
9. *Uloborus walckenaerius*, female.
10. *Theridiosoma epeiroides*, female.
11. *Theridiosoma epeiroides*, male.
12. *Leucauge celebesiana*, female.
13. *Menosira ornata*, female.
14. *Meta reticuloides*, female.
15. *Metleucauge yunohamensis*, female.
16. *Pachygnatha clercki*, female.
17. *Tetragnatha praedonia*, female.
18. *Tetragnatha vermiformis*, female.
19. *Tetragnatha yesoensis*, female.
20. *Nephila clavata*, female.
21. *Nephila clavata*, mating.
22. *Dolomodes sulfureus*, female.
23. *Dolomodes sulfureus*, female, variation.
24. *Dolomodes sulfureus*, female, egg protection.
25. *Dolomodes sulfureus*, nursery web.
26. *Pisaura lama*, female.
27. *Pisaura lama*, female, variation.
28. *Drassodes serratidens*, female.
29. *Gnaphosa kansuensis*, female.
30. *Gnaphosa kompirensis*, male.
31. *Kishidaia coreana*, male.
32. *Sernokorba pallidipatellis*, female.
33. *Zelotes wuchangensis*, female.









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