

An Annotated Checklist of Millipedes (Myriapoda: Diplopoda) Inhabiting the Korean Peninsula

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ABSTRACT

The Korean Peninsula is geographically located in the centre of Far Eastern Asia and has complex and various climate conditions following longitudinal topology, which would expect to be result in high diversity and endemism of millipede. In this study, the millipede fauna of the Korean Peninsula consists of 68 species plus 5 subspecies from 29 genera, 15 families and 7 orders. Of these species/subspecies, 29 and 12 are endemic in South Korea and North Korea, respectively; nine are recorded in both South Korea and North Korea. Each species has been provided comprehensive information including an original report, taxonomic changes, distribution, and remarks if necessary. Moreover, unsolved taxonomic uncertainty of some species included in this checklist should be investigated through further study.

Keywords: Millipede, checklist, taxonomy, fauna, Korean Peninsula

INTRODUCTION

Millipedes (Diplopoda), which is one of the classes in the phylum Arthropoda, form a highly diverse, and ancient group in nature (Bueno-Villegas et al., 2004; Golovatch and Kime, 2009). In ecosystem, millipedes prefer moist areas or locations of high-humidity and play important role as detritivores breaking down plant debris in the process of pedogenesis (Crawford, 1992; Sierwald and Bond, 2007; Golovatch and Kime, 2009). Over 12,000 millipede species have been described (Sierwald and Bond, 2007; Alagesan, 2016), although the actual number of millipedes was estimated 80,000 species (Hoffman, 1980; Bueno-Villegas et al., 2004; Golovatch and Kime, 2009).

The Korean Peninsula is in the centre of Far Eastern Asia.

The region has complex topography, covering mountainous areas in the northern and eastern parts, and large plains in the southern and western parts (Kim, 2010; Chung et al., 2017; Qiu et al., 2020). The region connected to the rest of the Asian continent northward only, with the remaining three faces surrounded by the sea (Kim, 2010; Chung et al., 2017). Moreover, different climate conditions appear according to longitudinal topology (Kim, 2010; Qiu et al., 2020). Due to these characters, the Korean Peninsula would be expected to maintain a high diversity and endemism of millipedes.

The study of millipedes of the Korean Peninsula began in the late 19th century, and investigations continued during the 20th century. The history of diplopod research in the Korean Peninsula started with the work of Pocock in the middle of 1880 who described two species of Ko-

rean diplopods (Lim, 2001). Since the 1930s, simple systematic studies of Korean myriapods, including Diplopoda began, with the publications by Verhoeff (1936b, 1937a, 1937b, 1938) and Takakuwa (1940b). The first species list of millipedes in Korean Peninsula was presented by Takakuwa and Takashima (1940, 1944) containing 25 species. It was updated by Paik (1958) containing 27 species and later several species were added with the report of new millipede species (Paik, 1963; Murakami and Paik, 1968; Golovatch, 1978b, 1980a, 1981; Mikhaljova, 1979; Jędryczkowski, 1982). Lim (1988) summarized the list with 55 millipede species. After additional reports of new species and synonyms (Ishii and Choi, 1988; Shear, 1990; Mikhaljova and Kim, 1993; Kim and Lim, 1995a; Mikhaljova 1998, 2000; Lim and Mikhaljova, 2000; Mikhaljova and Lim, 2000; Mikhaljova et al., 2000), Lim (2001) again summarized 48 millipede species in his dissertation. Continuing recent discoveries of new species (Mikhaljova, 2001; Mikhaljova and Lim, 2001, 2006a, 2006b, 2006c, 2008; Mikhaljova and Korsós, 2003), Lim (2011) presented a list with 50 millipede species plus 2 subspecies. After that, Nguyen et al. (2016) presented the millipede species list which already contained 69 species in 31 genera, 15 families, and seven orders. The most recent millipede species list was prepared by the National Institute of Biological Resources (2019) from Ministry of Environment, South Korea, which included 68 millipede species plus 5 subspecies. However, due to taxonomic changes, it has been necessary that this list should be updated again. Thus, the main purpose of the present work is to list all reported millipede species of Korean Peninsula reflecting the taxonomic changes and including the species that need to check for future study of millipede fauna in the Korean Peninsula.

MATERIALS AND METHODS

The checklist is based on the last published lists (Lim, 2001, 2011; Nguyen et al., 2016; National Institute of Biological Resources, 2019). Taxonomy also follows the last published lists and literature published in the last 20 years (Lim, 2001; Mikhaljova and Korsós, 2003; Mikhaljova and Lim, 2006a, 2006b, 2006c, 2008; Lim, 2011; Nguyen et al., 2016; Mikhaljova and Lim, 2018; National Institute of Biological Resources, 2019). The information incorporated in this checklist includes the synonyms of each species with author(s), year(s), published journal(s) or book(s), page(s) and figure(s) (if applicable). Locality records of millipedes in the Korean Peninsula are based on the available reported information.

Appropriate citations for each species are given if they provide original records for Korean Peninsula and/or affect the taxonomy of the species, and/or provide important geographical records of the species. Remarks are also provided for species if they have taxonomic problems or that are needed to be checked.

RESULTS

Checklist of millipedes in the Korean Peninsula

¹*Subclass Penicillata Latreille, 1802

²*Order Polyxenida Lucas, 1840

³*Family Polyxenidae Lucas, 1840

⁴***Genus *Polyxenus* Latrielle, 1802**

Polyxenus Latrielle, 1802: 45 (type species: *Scolopendra lagura* Linnaeus, 1758; type locality: Sweden).

⁵****Polyxenus koreanus* Ishii and Choi, 1988**

Polyxenus koreanus Ishii and Choi, 1988: 711, figs. 1–19; Lim, 2001: 44–46; 2011: 5, 14, 15; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. Gyeonggi (Pocheon-gun), Prov. North Jeolla (Jangseong-gun, Jeongeup-si) (Ishii and Choi, 1988; Lim, 2001).

Distribution. Korea (South) (Ishii and Choi, 1988).

⁶*Subclass Pentazonia Brant, 1833

⁷*Order Glomerida Leach, 1815

⁸*Family Glomeridae Leach, 1815

⁹***Genus *Hyleoglomeris* Verhoeff, 1910**

Hyleoglomeris Verhoeff, 1910: 245 (type species: *Hyleoglomeris multilineata* Verhoeff, 1910; type locality: Republic of Indonesia, Borneo).

Nesoglomeris Carl, 1912: 100 (type species: *Nesoglomeris sarasinorum* Carl, 1912; type locality: Republic of Indonesia, Sulawesi).

Sundameris Verhoeff, 1936a: 163 (type species: *Apiomeris jacobsoni* Silvestri, 1917; type locality: Republic of Indonesia, Java).

Perkeomeris Verhoeff, 1936a: 163 (invalidly proposed, without type species designation).

Okeanomeris Verhoeff, 1942: 214, figs. 18, 19 (type species: *Hyleoglomeris nigra* Verhoeff, 1942, type locality: Japan).

Korean name: ¹*털보노래기아강, ²*털노래기목, ³*털보노래기과, ⁴*털보노래기속, ⁵*털보노래기, ⁶*오각노래기아강, ⁷*구슬노래기목, ⁸*구슬노래기과, ⁹*구슬노래기속

Zygethomeris Chamberlin, 1921: 55 (type species: *Zygethomeris lamprus* Chamberlin, 1921; type locality: Republic of Indonesia, Borneo).

^{1*}***Hyleoglomeris koreana* Golovatch, 1978**

Hyleoglomeris koreana Golovatch, 1978b: 678, figs. 1–4; 1981: 161; Lim et al., 1992: 332; Mikhailjova and Kim, 1993: 37; Yoon, 1994: 36; Kim and Lim, 1995a: 272; 1995b: 211; Mikhailjova and Lim, 2000: 148; Mikhailjova et al., 2000: 109; Lim, 2001: 48–52; 2011: 5, 16–18; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Gwangju Metropolitan City (Mt. Mudeungsan); Incheon Metropolitan city (Gilsandmyeon, Gwanghwa-gun), Jeju Island (Chocheon-eup; Mt. Hallasan, Pyoseon-eup; Sangumburi; Yeongsil), Prov. Gangwon (Chunseong-gun; Gangneung-si; Goseong-gun; Injae-gun; Mt. Kumgangsang; Sinbuk-myeon), Prov. Gyeonggi (Gapyeong-gun; Gwangju-gun; Jeongok; Mt. Ungeoksan; Silchon-myeon; Yongin-gun), Prov. North Gyeongsang (Sangju-si; Ulleung-gun; Yeongju-gun), Prov. North Jeolla (Haenam-gun; Jinan-gun; Muju-gun; Namweon-si; Gangjin-gun), Prov. North Pyongan (Mt. Myohyangsan), Prov. South Chungcheong (Asan-gun; Gongju-si; Songak-myeon; Yugu-myeon); Prov. South Gyeongsang (Geoje-gun; Hakdong-myeon), Prov. South Hwanghae (Gaeseong-si), Pyongyang Municipality (Gangser-gun, Junha-ri) (Golovatch, 1978b, 1981; Mikhailjova and Kim, 1993; Mikhailjova and Lim, 2000; Mikhailjova et al., 2000; Lim, 2001).

Distribution. Korea (South and North) (Golovatch, 1978b; Lim, 2001).

^{2*}***Hyleoglomeris unicolorata* Lim, 2006**

Hyleoglomeris unicolorata Lim, 2006 in Mikhailjova and Lim, 2006b: 47, figs. 1–6; Lim, 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. Gyeonggi (Goyang-si) (Mikhailjova and Lim, 2006b).

Distribution. Korea (South) (Mikhailjova and Lim, 2006b).

^{3*}***Hyleoglomeris buana* Lim, 2006**

Hyleoglomeris buana Lim, 2006 in Mikhailjova and Lim, 2006b: 49, figs. 7–14; Lim, 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. North Jeolla (Buan-

gun) (Mikhailjova and Lim, 2006b).

Distribution. Korea (South) (Mikhailjova and Lim, 2006b).

^{4*}***Hyleoglomeris obscura* Lim, 2006**

Hyleoglomeris obscura Lim, 2006 in Mikhailjova and Lim, 2006b: 51, figs. 15–21; Lim, 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. Gyeonggi (Jeongok) (Mikhailjova and Lim, 2006b).

Distribution. Korea (South) (Mikhailjova and Lim, 2006b).

^{5*}***Hyleoglomeris confragosa* Mikhailjova and Lim, 2006**

Hyleoglomeris confragosa Mikhailjova and Lim, 2006b: 53, figs. 22–29; Lim, 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. Gyeonggi (Jeongok) (Mikhailjova and Lim, 2006b).

Distribution. Korea (South) (Mikhailjova and Lim, 2006b).

^{6*}***Hyleoglomeris alutacea* Mikhailjova and Lim, 2006**

Hyleoglomeris alutacea Mikhailjova and Lim, 2006b: 55, figs. 30–37; Lim, 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Jeju Island (Gyorye) (Mikhailjova and Lim, 2006b).

Distribution. Korea (South) (Mikhailjova and Lim, 2006b).

***Hyleoglomeris dodongiensis* Mikhailjova and Lim, 2018**

Hyleoglomeris dodongiensis Mikhailjova and Lim, 2018: 3–5, figs. 1–8; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. North Gyeongsang (Dodong-ri) (Mikhailjova and Lim, 2018).

Distribution. Korea (South) (Mikhailjova and Lim, 2018).

^{7*}Subclass Helminthomorpha Pocock, 1887

^{8*}Order Platydesmida De Saussure, 1850

^{9*}Family Andrognathidae Cope, 1869

^{10*}**Genus *Yamasinaium* Verhoeff, 1939**

Yamasinaium Verhoeff, 1939b: 120 (type species: *Yamasinaium noduligerum* Verhoeff, 1939b; type locality: Japan, Okinawa).

Korean name: ^{1*}노랑구슬노래기, ^{2*}단색구슬노래기, ^{3*}부안구슬노래기, ^{4*}갈색구슬노래기, ^{5*}등근구슬노래기, ^{6*}줄무늬구슬노래기, ^{7*}긴노래기아강, ^{8*}넓적노래기목, ^{9*}장님노래기과, ^{10*}장님노래기속

1Yamasinaium koreanum* Golovatch, 1981**

Yamasinaium koreanum Golovatch, 1981: 161, figs. 5–9; Mikhailjova et al., 2000: 112; Mikhailjova and Lim, 2000: 149; Lim, 2001: 101–103; 2011: 5, 62, 63; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. North Jeolla (Muju-gun; Namwon-gun; Jinan-gun), Prov. North Pyongan (Mt. Myohyangsan) (Golovatch, 1981; Mikhailjova et al., 2000; Mikhailjova and Lim, 2000).

Distribution. Korea (South and North) (Golovatch, 1981; Lim, 2001).

2*Genus *Brachycybe* Wood, 1864

Brachycybe Wood, 1864: 187 (type species: *Brachycybe leconitii* Wood, 1864; type locality: USA).

Bazillozonium Verhoeff, 1935: 64 (type species: *Bazillozonium nodulosum* Verhoeff, 1935; type locality: Japan, Beppu).

3Brachycybe nodulosa* (Verhoeff, 1935)**

Bazillozonium nodulosum Verhoeff, 1935: 64, figs. 1–8; Takakuwa and Takashima, 1944: 31; Takakuwa, 1954: 215; Paik, 1958: 354; Miyosi, 1959: 160; Lim, 1988: 29.

Brachycybe nodulosa - Yoon, 1994: 36; Lim, 2001: 5, 104–106; 2011: 64, 65; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Incheon Metropolitan city (Ganghwa-gun), Prov. Gangwon (Chuncheon-si; Chunseong-gun; Myeongju-gun; Yangyang-gun), Prov. North Jeolla (Buan-gun; Gochang-gun; Iksan-gun; Imsil-gun; Jeonju-si; Muju-gun; Namweon-si; Wanju-gun), Prov. South Chungcheong (Asan-gun; Gongju-si), Prov. South Gyeongsang (Geogje-gun) (Takakuwa and Takashima, 1944; Lim, 2001).

Distribution. Korea (South), Japan (Takakuwa and Takashima, 1944; Lim, 2001).

^{4*}Order Polyzoiiida Newport, 1844

^{5*}Family Polyzoiiidae Newport, 1844

6*Genus *Angarozonium* Shelly, 1998

Angarozonium Shelly, 1998: 29 (type species: *Polyzonium bonum* Mikhailjova, 1979; type locality: Russia, Primorsky).

7Angarozonium munsunum* Mikhailjova, Golovatch and Wyter, 2000**

Angarozonium munsunum Mikhailjova, Golovatch and Wyter,

2000: 110–112, figs. 1–4; Lim, 2001: 58, 59; Mikhailjova, 2001: 147; Mikhailjova and Korsós, 2003: 216; Mikhailjova and Lim, 2006a: 64–67; Lim, 2011: 5, 23, 24; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Polyzonium bonum Mikhailjova, 1979: 1592, figs. A–G; Golovatch, 1980a: 58; 1981: 167, 168; Mikhailjova and Kim, 1993: 37.

Records from Korean peninsula. Prov. Chagang (Mt. Myohyangsan), Pyongyang Municipality (Mt. De Sang-san), Prov. Gangwon (Injae-gun), Pyongyang Municipality (town Maram), (Mikhailjova et al., 2000; Mikhailjova and Lim, 2006a).

Distribution. Korea (South and North) (Mikhailjova et al., 2000; Mikhailjova and Lim, 2006a).

^{8*}Family Hirudisomatidae Silvestri, 1896

9*Genus *Kiusiozonium* Verhoeff, 1941

Kiusiozonium Verhoeff, 1941a: 112 (type species: *Kiusiozonium japonicum* Verhoeff, 1941a; type locality: Istanbul).

Saraminozonium Takakuwa and Miyosi, 1949: 27 (type species: *Saraminozonium okai* Takakuwa and Miyosi, 1949; type locality: Japan).

10Kiusiozonium okai* (Takakuwa and Miyosi, 1949)**

Saraminozonium okai Takakuwa and Miyosi, 1949: 28–32, fig. 1; Miyosi, 1953: 23.

Kiusiozonium okai - Miyosi, 1959: 55; Nishikawa and Murakami, 1991: 293; Mikhailjova and Lim, 2006a: 65; Lim, 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. North Jeolla (Iksan-si) (Mikhailjova and Lim, 2006a).

Distribution. Korea (South), Japan (Mikhailjova and Lim, 2006a).

^{11*}Order Julida Leach, 1814

^{12*}Family Nemasomatidae Bollman, 1893

13*Genus *Antrokoreana* Verhoeff, 1938

Antrokoreana Verhoeff, 1938: 85 (type species: *Antrokoreana gracilipes* Verhoeff, 1938; type locality: Korea, Gangdong).

14Antrokoreana gracilipes* Verhoeff, 1938**

Antrokoreana gracilipes Verhoeff, 1938: 85, figs. 8–10; Takakuwa and Takashima, 1940: 173, 180; 1944: 23; Taka-

Korean name: ^{1*}장님노래기, ^{2*}주홍늪적노래기속, ^{3*}주홍늪적노래기, ^{4*}땅노래기목, ^{5*}땅노래기과, ^{6*}땅노래기속, ^{7*}만주땅노래기, ^{8*}좁땅노래기과, ^{9*}좁땅노래기속, ^{10*}좁땅노래기, ^{11*}갈퀴노래기목, ^{12*}실노래기과, ^{13*}굴노래기속, ^{14*}등줄굴노래기

kuwa, 1954: 161; Paik, 1958: 363; Murakami and Paik, 1968: 363; Mikhailjova and Lim, 2000: 148; Lim, 2001: 62; 2011: 5, 25, 26; Woo et al., 2007: 182–191; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. Gangwon (Biryong-gul Cave; Goyangi-gul Cave; Hwaam-gul Cave; Kosigul Cave; Kwangchenon-seon-gul Cave; Naghwaam-gul Cave; Yeoryang Cave; Yongyeon-gul Cave), Prov. North Gyeongsang (Daeryong-gul Cave, Hogye-hangtigi-gul Cave, Mosan-gul Cave), Prov. North Chungcheong (Koesan-gun, Simbog-gul Cave), Prov. South Pyongan (Chernggae-gul Cave) (Verhoeff, 1938; Murakami and Paik, 1968; Mikhailjova and Lim, 2000).

Distribution. Korea (South and North) (Verhoeff, 1938; Mikhailjova and Lim, 2000).

¹*Family Mongoliulidae Pocock, 1903

²*Genus *Skleroprotopus* Attems, 1901

Skleroprotopus Attems, 1901a: 296 (type species: *Skleroprotopus confucius* Attems, 1901; type locality: China).

Ansiulus Takakuwa, 1940c: 118 (type species: *Ansiulus matumotoi* Takakuwa, 1940; type locality: Korea, Anju).

³**Skleroprotopus aberrans* (Mikhailjova and Korsós, 2003)

Ansiulus aberrans Mikhailjova and Korsós, 2003: 230–233, figs. 42–49; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Skleroprotopus aberrans - Mikhailjova, 2019b: 518, 519.

Records from Korean peninsula. Prov. North Pyongan (Mt. Myohyangsan), Prov. Yanggang (Mt. Paekdusan) (Mikhailjova and Korsós, 2003).

Distribution. Korea (North) (Mikhailjova and Korsós, 2003).

⁴**Skleroprotopus coreanus* (Pocock, 1895)

Paraiulus coreanus Pocock, 1895: 365, figs. 1–8.

Mongoliuslus coreanus - Pocock, 1903: 522; Takakuwa and Takashima, 1940: 180; 1944: 24; Takakuwa, 1954: 152; Paik, 1958: 363; Jędryczkowski, 1982: 375; Mikhailjova, 1982b: 1265; Lim, 1988: 28.

Skleroprotopus similiserratus - Golovatch, 1979: 906; 1980a: 50; Mikhailjova, 1993: 15; 1998: 66.

Skleroprotopus coreanus - Mikhailjova, 1982b: 1266; Mikhailjova and Kim, 1993: 36; Mikhailjova and Lim, 2000: 148; Lim, 2001: 65, 66; 2011: 5, 27, 28; Mikhailjova, 2001: 148;

Mikhailjova and Korsós, 2003: 220; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. Gangwon (Mt. Kum-gangsan; Mt. Seolaksan), Prov. North Pyongan (Mt. Myohyangsan), Prov. South Hamgyong (Hamheung-si), Prov. Ryanggang, (Taehangdan; Mt. Paekdusan) (Mikhailjova and Kim, 1993; Mikhailjova and Lim, 2000; Mikhailjova and Korsós, 2003).

Distribution. Korea (North), Russia (Pocock, 1895; Mikhailjova and Korsós, 2003).

⁵**Skleroprotopus deminutus* (Mikhailjova, 2001)

Ansiulus deminutus Mikhailjova in Mikhailjova and Lim, 2001: 25, 26, figs. 40–48; National Institute of Biological Resources, 2019: 598.

Skleroprotopus deminutus Mikhailjova, 2019b: 521.

Records from Korean peninsula. Prov. North Gyeongsang (Goryeong-gun) (Mikhailjova and Lim, 2001).

Distribution. Korea (South) (Mikhailjova and Lim, 2001).

⁶**Skleroprotopus hakui* Takakuwa, 1940

Skleroprotopus hakui Takakuwa, 1940b: 21, figs. 1–5; 1954: 146; Takakuwa and Takashima, 1940: 173; 1944: 24; Paik, 1958: 363; Lim, 1988: 28; 2001: 68, 69; 2011: 5, 2, 30; Mikhailjova and Lim, 2000: 148; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. Gangwon (Mt. Odaesan); Prov. Gyeonggi (Yeongjong-gun); Prov. North Gyeongsang (Goryeong-gun); Prov. North Chungcheong (Chanyong-gun); Prov. North Jeolla (Jinan-gun; Gwangyang-eup); Prov. South Gyeongsang (Samrangjin-eup, Goseong-gun) (Mikhailjova and Lim, 2000; Lim, 2001).

Distribution. Korea (South) (Takakuwa, 1940b).

⁷**Skleroprotopus laticoxalis laticoxalis* Takakuwa, 1942

Skleroprotopus laticoxalis Takakuwa, 1942a: 45, figs. 10–13; 1954: 145; Lim, 1988: 28; Mikhailjova and Lim, 2000: 149.

Skleroprotopus laticoxalis laticoxalis - Lim, 2001: 69, 70; 2011: 5, 31, 32; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. North Gyeongsang (Goryeong-gun), Prov. South Gyeongsang (Hamyang-gun), Prov. South Pyongan (Anju) (Takakuwa, 1942a; Mikhailjova and Lim, 2000).

Distribution. Korea (South and North), China (Takakuwa, 1942a; Lim, 2001).

Korean name: ¹*몽고노래기과, ²*삼당노래기속, ³*언흥노래기, ⁴*몽고노래기, ⁵*작은생식지뱀노래기, ⁶*삼당노래기, ⁷*넓적다리삼당노래기

^{1*}*Skleroprotopus laticoxalis longus* Murakami and Paik, 1968

Skleroprotopus laticoxalis longus Murakami and Paik, 1968: 377, figs. A–K; Lim, 2001: 70–72; 2011: 5; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. Gangwon (Daeyagul Cave, Goyangi-gul Cave; Kwangcheonseon-gul Cave, Seoghang-pinan-gul Cave, Youngdam-gul Cave), Prov. North Chungcheong (Soryoung gul-Cave) (Murakami and Paik, 1968).

Distribution. Korea (South) (Murakami and Paik, 1968).

^{2*}*Skleroprotopus legitimus* (Golovatch, 1980)

Ansiulus legitimus Golovatch, 1980a: 52, figs. 3–8; Jędrzycki, 1982: 377; Lim, 2001: 76–79; 2011: 5, 38–40; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.
Skleroprotopus legitimus Mikhaljova, 2019b: 519, 520.

Records from Korean peninsula. Prov. North Hwanghae (Sinpyong-gun), Pyongyang multicpality (Moran-bong) (Golovatch, 1980a).

Distribution. Korea (North) (Golovatch, 1980a).

^{3*}*Skleroprotopus matumotoi* (Takakuwa, 1940)

Ansiulus matumotoi Takakuwa, 1940c: 118, figs. 1–5; 1954: 148; Takakuwa and Takashima, 1940: 182; Paik, 1958: 363; Lim, 1988: 28; 2001: 75, 76; 2011: 5, 36, 37; Mikhaljova, 2001: 147; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.
Skleroprotopus matumotoi Mikhaljova, 2019b: 521.

Records from Korean peninsula. Prov. South Pyongan (Anju) (Takakuwa, 1940c).

Distribution. Korea (North) (Takakuwa, 1940c).

^{4*}*Skleroprotopus ramuliferus* Lim and Mikhaljova, 2001

Skleroprotopus ramuliferus Lim and Mikhaljova, 2000: 119, figs. 1–12; Lim, 2001: 73, 74; 2011: 5, 33–35; Mikhaljova and Korsós, 2003: 225; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. Gyeonggi (Yangpyeong), Prov. Gangwon (Mt. Kumkangsang) (Lim and Mikhaljova, 2000).

Distribution. Korea (South and North) (Lim and Mikhaljova, 2000; Mikhaljova and Korsós, 2003).

^{5*}*Skleroprotopus chollus* Mikhaljova and Korsós, 2003

Skleroprotopus chollus Mikhaljova and Korsós, 2003: 220–222, figs. 6–13; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. South Jeolla (Mt. Paekunsan) (Mikhaljova and Korsós, 2003).

Distribution. Korea (South) (Mikhaljova and Korsós, 2003).

^{6*}*Skleroprotopus costatus* Mikhaljova and Korsós, 2003

Skleroprotopus costatus Mikhaljova and Korsós, 2003: 222–224, figs. 14–25; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. South Hwanghae (Mt. Suyong-san) (Mikhaljova and Korsós, 2003).

Distribution. Korea (North) (Mikhaljova and Korsós, 2003).

^{7*}Genus *Ussuriulus* Golovatch, 1980

Ussuriulus Golovatch, 1980b: 204 (type species: *Ussuriulus pilifer* Golovatch, 1980b; type locality: Russia, Ussuri).

^{8*}*Ussuriulus pilifer* Golovatch, 1980

Ussuriulus pilifer Golovatch, 1980b: 206, figs. 1–11; Mikhaljova, 1981: 87; 1983: 87; 1993: 16; Jędrzycki, 1982: 378; Mikhaljova and Petukhova, 1983: 53; Mikhaljova and Bakurov, 1989: 40; Ganin, 1997: 121; Lim, 2001: 5, 79, 80; 2011: 41–43; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. North Korea (Jędrzycki, 1982).

Distribution. Korea (North), Russia (Jędrzycki, 1982).

^{9*}Family Julidae Leach, 1814

^{10*}Genus *Anaulaciulus* Pocock, 1895

Anaulaciulus Pocock, 1895: 366 (type species: *Anaulaciulus paludicola* Pocock, 1895; type locality: China, Woo-Lee Lake).

^{11*}*Anaulaciulus koreanus koreanus* (Verhoeff, 1937)

Fusiulus koreanus Verhoeff, 1937b: 37, figs. 7, 8; Takakuwa, 1942b: 359.

Fusiulus koreanus koreanus - Takakuwa, 1940a: 218; 1954:

Korean name: ^{1*}긴넓적다리삼당노래기, ^{2*}신평노래기, ^{3*}안주노래기, ^{4*}세갈래삼당노래기, ^{5*}전라노래기, ^{6*}굽은삼당노래기, ^{7*}우수리노래기속, ^{8*}우수리노래기, ^{9*}갈퀴노래기과, ^{10*}갈퀴노래기속, ^{11*}계림갈퀴노래기

178; Takakuwa and Takashima, 1940: 182; 1944: 24; Paik, 1958: 363; 1976a: 157; Lim, 1988: 28.

Anaulaciulus koreanus koreanus - Lim et al., 1992: 332; Kim and Lim, 1993: 151; Korsós, 1994: 43; Yoon, 1994: 36; Kim and Lim, 1995a: 273; 1995b: 212; Korsós, 1996: 37; Lim, 2001: 84–91; 2011: 5, 46–48; Nguyen et al., 2016: 45; Woo et al., 2017: 574–583; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Incheon Metropolitan city (Ganhwa-gun), Jeju Island (Jeju-si), Prov. Gangwon (Goseong-gun, Hangyeryeong, Hoengseong-gun; Hongcheon-gun; Hwachern-gun; Inje-gun, Mt. Kumgangsán; Pyeongchang-gun; Taebaek-si; Yangyang-gun;), Prov. Gyeonggi (Gapyeong-gun; Hoeseong-gun; Jeongok-gun; Pochern-gun; Suwon-si; Yangpyeong-gun), Prov. North Gyeongsang (Andong-gun; Goryeong-gun; Gyeongju-si; Hoko; Yeongdeok-gun), Prov. North Chungcheong (Eumseong-gun; Goesan-gun; Jewon-gun), Prov. North Jeolla (Buan-gun; Gimje-gun; Gochang-gun; Iksan-si; Imsil-gun; Jangsu-gun; Jeongeup-si; Jinan-gun; Muju-gun; Namweon-gun; Wanju-gun), Prov. South Gyeongsang (Changnyeong-gun; Changwon-si; Hadong-gun; Haman-gun; Hamyang-gun; Hapcheon-gun; Jinyang-gun; Sacheon-gun; Tongyeong-gun; Uiryeong-gun), Prov. South Chungcheong (Gongju-si; Dangjin-gun; Taean-eup; Yeongi-gun), Prov. South Jeolla (Boseong-gun; Gangjin-gun; Goheung-gun; Gokseong-gun; Haenam-gun; Jangseong-gun; Jangheung-gun; Naju-gun; Yeongam-gun; Yeosu-si), Seoul Special city (Keisyu) (Verhoeff, 1937b; Takakuwa, 1940a; Paik, 1976a; Lim, 1988, 2001).

Distribution. Korea (South and North) (Verhoeff, 1937b; Lim, 2001).

^{1*}*Anaulaciulus koreanus salebrosus* Mikhaljova and Kim, 1993

Anaulaciulus koreanus salebrosus Mikhaljova and Kim, 1993: 35, 36, 42: figs. 9–15; Lim, 2001: 91–93; 2011: 5, 49–51; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. North Pyongan (Mt. Myohyangsan) (Mikhaljova and Kim, 1993).

Distribution. Korea (North) (Mikhaljova and Kim, 1993).

^{2*}*Anaulaciulus koreanus boninensis* (Verhoeff, 1939)

Fusiulus koreanus boninensis Verhoeff, 1939a: 285, figs. 16, 17; Takakuwa, 1954: 179; Paik, 1958: 364; 1961: 83; 1976a: 157.

Fusiulus koreanus koreanus - Takakuwa and Takashima,

1944: 24, 31.

Anaulaciulus koreanus boninensis - Golovatch, 1980a: 50; Lim et al., 1992: 332; Korsós, 1994: 43; Kim and Lim, 1995a: 273; 1995b: 212; Korsós, 1996: 37; Mikhaljova and Korsós, 2003: 225; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Jeju Island (Mt. Hallasan), Prov. Gangwon (Mt. Kumgangsán) (Takakuwa and Takashima, 1944; Korsós, 1994; Mikhaljova and Korsós, 2003).

Distribution. Korea (South and North), Japan (Takakuwa and Takashima, 1944).

^{3*}*Anaulaciulus tonggosanensis* (Paik, 1976)

Fusiulus tonggosanensis Paik, 1976a: 160, figs. 1–11; Lim, 1988: 29.

Fusiulus longus - Paik, 1963: 33; Lim, 1988: 29.

Anaulaciulus tonggosanensis - Korsós, 1994: 44; 1996: 38; Lim, 2001: 93, 94; 2011: 5, 52, 53; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. North Chungcheong (Mt. Sokkrisan), Prov. North Gyeongsang (Mt. Tonggosan) (Paik, 1963; 1976a).

Distribution. Korea (South) (Paik, 1976a).

Remarks. *Fusiulus longus* reported by Paik (1963) was treated as a synonym of this species (Lim, 2001).

^{4*}*Anaulaciulus golovatchi* Mikhaljova, 1982

Anaulaciulus golovatchi Mikhaljova, 1982a: 214, figs. A–J; 1983: 87; 1988: 70; 1993: 10; 1996: 145; 2001: 148; Mikhaljova and Petukhova, 1983: 53; Mikhaljova and Kim, 1993: 36; Korsós, 1994: 42; 1996: 37; Ganin, 1997: 22; Lim, 2001: 94–96; 2011: 5, 54–56; Mikhaljova and Korsós, 2003: 228–230; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. North Pyongan (Mt. Myohyangsan), Prov. South Hwanghae (Haeju), Prov. Yanggang (Mt. Paekdusan) (Mikhaljova and Kim, 1993).

Distribution. Korea (North), Russia (Mikhaljova and Kim, 1993; Mikhaljova and Korsós, 2003).

^{5*}*Anaulaciulus koreacolus* Jędrzyckowski, 1982

Anaulaciulus koreacolus Jędrzyckowski, 1982: 380, figs. 28–36; Korsós, 1994: 42; 1996: 37; Lim, 2001: 98, 99; 2011: 5, 60, 61; Mikhaljova, 2001: 149; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 598.

Korean name: ^{1*}묘향갈퀴노래기, ^{2*}무인갈퀴노래기, ^{3*}통고갈퀴노래기, ^{4*}해주갈퀴노래기, ^{5*}고려갈퀴노래기

Records from Korean peninsula. Prov. North Pyongan (Mt. Myohyangsan), Prov. South Pyongan (Sunchon) (Korsós, 1994; Lim, 2001).

Distribution. Korea (North) (Jędryczkowski, 1982).

¹****Anaulaciulus parvulus* Mikhaljova, 2001**

Anaulaciulus parvulus Mikhaljova in Mikhaljova and Lim, 2001: 24, 25, figs. 29–39; National Institute of Biological Resources, 2019: 598.

Records from Korean peninsula. Prov. Gangwon (Yeoryang Cave) (Mikhaljova and Lim, 2001).

Distribution. Korea (South) (Mikhaljova and Lim, 2001).

Genus *Japanioiulus* Verhoeff, 1937

Japanioiulus Verhoeff, 1937b: 35 (type species: *Japanioiulus lobatus* Verhoeff, 1937b; type locality: Japan, Abuta and Hokkaido).

²****Japanioiulus lobatus* Verhoeff, 1937**

Japanioiulus lobatus Verhoeff, 1937b: 35, figs. 2, 3; Takakuwa and Takashima, 1944: 31; Takakuwa, 1954: 182; Paik, 1958: 364; Miyosi, 1959: 156; Mikhaljova and Lim, 2018: 6, 7; National Institute of Biological Resources, 2019: 598. *Amblyiulus lobatus* - Lim, 1988: 29; 2001: 81–83; 2011: 44, 45; Nguyen et al., 2016: 45.

Records from Korean peninsula. Prov. North Gyeongsang (Dokdo-ri) (Mikhaljova and Lim, 2018).

Distribution. Korea (South), Japan (Takakuwa and Takashima, 1944).

³*Order Chordeumatida C. L. Koch, 1847

⁴*Family Megalotylidae Golovatch, 1978

⁵***Genus *Megalotyla* Golovatch, 1978**

Megalotyla Golovatch and Mikhaljova 1978: 69 (type species: *Megalotyla brevichaeta* Golovatch and Mikhaljova, 1978; type locality: Russia, Primorsky).

⁶****Megalotyla glabra* Mikhaljova, Golovatch and Wytwer, 2000**

Megalotyla glabra Mikhaljova, Golovatch and Wytwer, 2000: 113, figs. 5–8; Lim, 2001: 108, 109; 2011: 5, 66–68; Mikhaljova and Korsós, 2003: 216, 217; Nguyen et al., 2016: 45; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. Chagang (Mt.

Myohyangsan), Prov. Gangwon (Myeongju-gun), Prov. North Jeolla (Iksan-si), Prov. Yanggang (Mt. Paekdusan) (Mikhaljova et al., 2000; Lim, 2001; Mikhaljova and Korsós, 2003).

Distribution. Korea (South and North) (Mikhaljova et al., 2000; Lim, 2001).

⁷*Family Diplomaragnidae Attems, 1907

⁸***Genus *Diplomaragna* Attems, 1907**

Placodes Attems, 1899: 319 (type species: *Placodes terricolor* Attems, 1899; type locality: Russia, Vladivostock).

Diplomaragna Attems, 1907: 123 (type species: *Placodes terricolor* Attems, 1899; type locality: Russia, Vladivostock).

Syntelopodeuma Verhoeff, 1914: 364 (type species: *Syntelopodeuma gracilipes* Verhoeff, 1914; type locality: Japan, Hokkaido).

Tokyosoma Verhoeff, 1932: 515 (type species: *Tokyosoma takakuwai* Verhoeff, 1932; type locality: Japan, Shikoku).

Niponiothauma Verhoeff, 1942: 204 (type species: *Niponiothauma inflatum* Verhoeff, 1942; type locality: Japan).

Pterygostegia Miyosi 1958a: 180 (type species: *Pterygostegia kuroiwadensis* Miyosi, 1958; type locality: Japan, Shikoku).

Altajosoma Gulicka 1972: 37 (type species: *Altajosoma pine-torum* Gulicka, 1972; type locality: Mongolia, Altai Mtns).

Ancestreuma Golovatch 1977: 715 (type species: *Ancestreuma principale* Golovatch, 1977; type locality: Mongolia).

Sakhalineuma Golovatch 1976: 1489 (type species: *Sakhalineuma molodovae* Golovatch, 1976; type locality: Russia, Sakhalin Island).

⁹****Diplomaragna gracilipes* (Verhoeff, 1914)**

Syntelopodeuma gracilipes Verhoeff, 1914: 342, figs. 13, 14; Takakuwa and Takashima, 1944: 23; Takakuwa, 1954: 125; Paik, 1958: 362; Lim, 1988: 28.

Diplomaragna gracilipes - Shear, 1990: 32; Lim et al., 1992: 332; Yoon, 1994: 36; Kim and Lim, 1995a: 274; 1995b, 212; Mikhaljova and Lim, 2000: 150; Lim, 2001: 111–113; 2011: 5, 69, 70; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Jeju island (Bukjeju-gun; Cheju-si; Chocheon; Mt. Hallasan; Seogwipo-si) (Lim, 2001).

Distribution. Korea (South), Japan (Takakuwa and Takashima, 1944).

¹⁰****Diplomaragna kedrovaya* Mikhaljova, 1993**

Diplomaragna kedrovaya Mikhaljova, 1993: 24, 25, figs. 42,

Korean name: ¹*여랑굴뚝노래기, ²*어리갈퀴노래기, ³*가시노래기목, ⁴*큰가시노래기과, ⁵*큰가시노래기속, ⁶*큰가시노래기, ⁷*털노래기과, ⁸*털노래기속, ⁹*털노래기, ¹⁰*쌍털노래기

43; 2000: 174; 2004: 142–144; Ganin, 1997; Mikhailjova et al. 2000: 114; Lim, 2001: 113, 114; 2011: 5, 71, 72; Mikhailjova and Lim, 2008: 59; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. North Hamgyong (Chongjin-si) (Mikhailjova et al., 2000).

Distribution. Korea (North), Russia (Mikhailjova, 1998; Mikhailjova and Lim, 2008).

^{1*}Genus *Tokyosoma* Verhoeff, 1932

Tokyosoma Verhoeff, 1932, 515 (type species: *Tokyosoma takakuwai* Verhoeff, 1932; type locality: Japan, Shikoku).

^{2*}*Tokyosoma ronkayi* (Shear, 1990)

Diplomaragna ronkayi Shear, 1990: 35, figs. 99, 100; Mikhailjova and Lim, 2000: 150; Mikhailjova and Korsós, 2003: 219.

Tokyosoma ronkayi - Mikhailjova, 2000: 178; Lim, 2001: 115; Mikhailjova and Lim, 2008: 58; Lim, 2011: 5, 73, 74; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Busan Metropolitan City (Beomeosa), Daegu Metropolitan city (Dalseong-gun), Jeju Island (Bukjeju-gun, Mt. Hallasan), Prov. Gangwon (Mt. Kumgangsán; Jeongseon-gun), Prov. North Chungcheong (Jincheon-gun), Prov. North Gyeongsang (Cheongsong-gun; Pohang-si; Ulleung-gun), Prov. North Jeolla (Iksan-si; Namwon-si), Prov. South Gyeongsang (Changnyeong-gun; Geoje-gun; Goseong-gun; Hadong-gun; Hamyang-gun; Hapcheon-gun; Jinhae-si; Sancheong-gun; Uiryeong-gun; Yangsan-si), Ulsan Metropolitan City (Ulju-gun) (Shear, 1990; Mikhailjova and Lim, 2000; Lim, 2001).

Distribution. Korea (South and North) (Shear, 1990; Mikhailjova and Lim, 2000; Lim, 2001).

^{3*}*Tokyosoma hallum* Mikhailjova and Korsós, 2003

Tokyosoma hallum Mikhailjova and Korsós, 2003: 217–219, figs. 1–5; Mikhailjova and Lim, 2008: 57; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Tokyosoma ronkayi - Mikhailjova and Lim, 2000: 150; Lim, 2001: 116, 117; 2011: 5, 75, 76.

Records from Korean peninsula. Jeju Island (Mt. Hallasan) (Mikhailjova and Korsós, 2003).

Distribution. Korea (South) (Mikhailjova and Korsós, 2003).

Remarks. The records of *Tokyosoma ronkayi* in Mikhailjova and Lim (2000) and Lim (2001) was a misidentification, and the species appeared to be *Tokyosoma hallum* (Mikhailjova and Korsós, 2003; Mikhailjova and Lim, 2008).

^{4*}*Tokyosoma bellum* Mikhailjova and Lim, 2008

Tokyosoma bellum Mikhailjova and Lim, 2008: 57, figs. 7–9; Lim, 2011: 5; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. South Gyeongsang (Yangsan-si) (Mikhailjova and Lim, 2008).

Distribution. Korea (South) (Mikhailjova and Lim, 2008).

^{5*}*Tokyosoma phialiferum* Mikhailjova and Lim, 2008

Tokyosoma phialiferum Mikhailjova and Lim, 2008: 57, figs. 10, 11; Lim, 2011: 5; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. North Gyeongsang (Andong-si) (Mikhailjova and Lim, 2008).

Distribution. Korea (South) (Mikhailjova and Lim, 2008).

^{6*}Genus *Pterygostegia* Miyosi, 1958

Pterygostegia Miyosi, 1958a: 180 (type species: *Pterygostegia kuroiwadensis* Miyosi, 1958; type locality: Japan, Shikoku).

^{7*}*Pterygostegia korsosi* (Shear, 1990)

Diplomaragna korsosi Shear, 1990: 35–37, figs. 97, 98; Mikhailjova and Lim, 2000: 149.

Pterygostegia korsosi - Mikhailjova, 2000: 176; Lim, 2001: 119–121; 2011: 5, 77, 78; Mikhailjova and Korsós, 2003: 219; Mikhailjova and Lim, 2008: 58; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. North Pyongan (Mt. Myohyangsan) (Shear, 1990).

Distribution. Korea (North) (Shear, 1990).

^{8*}Genus *Orientyla* Mikhailjova, 1999

Diplomaragna Attems, 1907: 123 (type species: *Diplomaragna bureyinskaya* Mikhailjova, 1997, type locality: Russia, Khabarovsk).

^{9*}*Orientyla kjongsonica* Mikhailjova, Golovatch and Wytwer, 2000

Orientyla kjongsonica Mikhailjova, Golovatch and Wytwer,

Korean name: ^{1*}동경틸노래기속, ^{2*}동경틸노래기, ^{3*}한라동경틸노래기, ^{4*}갈색점틸노래기, ^{5*}안동틸노래기, ^{6*}동굴틸노래기속, ^{7*}동굴틸노래기, ^{8*}동양틸노래기속, ^{9*}동양틸노래기

2000: 115, figs. 9–13; Mikhailjova et al., 2000: 115, 116; Lim, 2001: 121–123; 2011: 5, 79, 80; Mikhailjova and Lim, 2008: 59; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. North Hamgyong (Kwanmo-bong) (Mikhailjova et al., 2000).

Distribution. Korea (North) (Mikhailjova et al., 2000).

¹****Orietyla dahurica* (Gerstfeldt, 1859)**

Craspedosoma dahuricum Gerstfeldt, 1859: 272–274.

Diplomaragna mikhailijovae - Shear 1990: 19, 20.

Orietyla mikhailijovae - Mikhailjova, 2000: 171.

Orietyla dahurica - Mikhailjova and Korsós, 2003: 219; Mikhailjova, 2004: 121–123; 2007: 82; Mikhailjova and Marusik, 2004: 5; Mikhailjova and Lim, 2008: 59; Lim, 2011: 5; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. Yanggang (Konchang) (Mikhailjova and Korsós, 2003).

Distribution. Korea (North), Russia (Siberia, Far East) (Mikhailjova and Korsós, 2003; Mikhailjova and Lim, 2008).

²***Genus *Koreagna* Mikhailjova and Lim, 2008**

Koreagna Mikhailjova and Lim, 2008: 52 (type species: *Koreagna obtecta* Mikhailjova and Lim, 2008; type locality: Korea).

³****Koreagna obtecta* Mikhailjova and Lim, 2008**

Koreagna obtecta Mikhailjova and Lim, 2008: 53, 54, figs. 1–6; Lim, 2011: 5; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Prov. Gyeonggi (Ganghwa-gun; Goyang-si; Hwaseong-si), Prov. North Gyeongsang (Ulleung-gun) (Mikhailjova and Lim, 2008).

Distribution. Korea (South) (Mikhailjova and Lim, 2008).

⁴*Family Hoffmaneumatidae Golovatch, 1978

Genus *Hoffmaneuma* Golovatch, 1978

Hoffmaneuma Golovatch, 1978a, 57: 1009 (type species: *Hoffmaneuma exiguum* Golovatch, 1978, type locality: Russia).

⁵****Hoffmaneuma exiguum* Golovatch, 1978**

Hoffmaneuma exiguum Golovatch, 1978a: 1009; Wirkner et al., 2002: 12; Mikhailjova, 2004: 185–187; 2019a: 2, 3;

Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 597.

Records from Korean peninsula. Korea (North) (Mikhailjova, 2004).

Distribution. Korea (North), Russia (Golovatch, 1978a; Mikhailjova, 2019a).

Remarks. In North Korea only females have been found (Mikhailjova, 2004). However, in the absence of adult males it appears impossible to verify this record.

⁶*Order Polydesmida Leach, 1815

⁷*Family Xystodesmidae Cook, 1895

⁸***Genus *Riukiaria* Attems, 1938**

Riukiaria Attems, 1938: 151 (type species: *Riukiaria pugionifera* Verhoeff, 1936b; type locality: Japan, Ryukyu Island).

Rhysolus Chamberlin and Wang, 1953: 8 (type species: *Rhysolus semicircularis* (Takakuwa, 1941b); type locality: Japan, Miyajima. Northern Kii).

Sinoria Tanabe, Ishii and Yin, 1996: 13 (type species: *Sinoria tianmu* Tanabe, Ishii and Yin, 1996; type locality: China, Prov. Zhejiang).

⁹****Riukiaria semicircularis* (Takakuwa, 1941)**

Rhysodesmus semicircularis Takakuwa, 1941b: 413, fig. 1; 1954: 66; Paik, 1958: 361; 1960: 9.

Riukiaria semicircularis - Takakuwa and Takashima, 1944: 23; Takakuwa, 1954: 66; Lim et al., 1992: 332; Kim and Lim, 1995a: 274; 1995b: 212, 213; Lim, 2001: 126–128; 2011: 5, 81, 82; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 600.

Rhysolus semicircularis - Lim, 1988: 27.

Records from Korean peninsula. Jeju Island (Mt. Hallasan), Prov. South Jeolla (Gurye-gun; Wando-gun) (Lim, 2001).

Distribution. Korea (South), Japan (Takakuwa and Takashima, 1944; Lim, 2001).

¹⁰***Genus *Koreoaria* Verhoeff, 1937**

Koreoaria Verhoeff, 1937a: 319 (type species: *Koreoaria pallida* Verhoeff, 1937a, type locality: Korea, Gyeongju).

¹¹****Koreoaria pallida* Verhoeff, 1937**

Koreoaria pallida Verhoeff, 1937a: 319, figs. 8–10; Takakuwa and Takashima, 1940: 178; 1944: 23; Takakuwa, 1954: 71; Paik, 1958: 361; Lim, 1988: 27; 2001: 128, 129; 2011: 5, 83, 84; Nguyen et al., 2016: 46; National Institute

Korean name: ¹*고리털노래기, ²*한국털노래기속, ³*한국털노래기, ⁴*긴털노래기과, ⁵*긴털노래기, ⁶*띠노래기목, ⁷*키노래기과, ⁸*키노래기속, ⁹*반달노래기, ¹⁰*참노래기속, ¹¹*곶은참노래기

of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. North Gyeongsang (Gyeongju-si) (Verhoeff, 1937a).

Distribution. Korea (South) (Verhoeff, 1937a).

Remarks. Tanabe and Shinohara (1996) revised the genus *Xystodesmus*. They proposed several synonymies and described new species. According to that study, *K. pallida* is the species possibly belonging to the genus *Xystodesmus*, although they did not formally establish the synonymy. The status of Korean records of this species needs to be checked with freshly collected material.

¹****Koreoaria amoena* Takakuwa, 1942**

Koreoaria amoena Takakuwa, 1942b: 362, fig. 5; 1954: 72; Takakuwa and Takashima, 1944: 23; Paik, 1958: 361; Lim, 1988: 27; 2001: 129–131; 2011: 5, 85, 86; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Daegu Metropolitan city (Takakuwa, 1942).

Distribution. Korea (South) (Takakuwa and Takashima, 1944).

Remarks. Tanabe and Shinohara (1996) revised the genus *Xystodesmus*. They proposed several synonymies and described new species. According to that study, *K. amoena* is the species possibly belonging to the genus *Xystodesmus*, although they did not formally establish the synonymy. The status of Korean records of this species needs to be checked with freshly collected material.

²***Genus *Levizonus* Attems, 1898**

Levizonus Attems, 1931: 69 (full genus) (type species: *Levizonus thaumasius* Attems, 1898; type locality: Russia, Primorsky).

Profontaria Verhoeff, 1941b: 414, 415 (Invalidly proposed without type species).

Ezaria Takakuwa, 1941a: 8 (type species: *Ezaria montana* Takakuwa, 1941; type locality: Japan).

Hokkaidaria Verhoeff, 1941b: 414, 415 (Invalidly proposed without type species).

Ezodesmus Takakuwa, 1942a: 42 (type species: *Ezodesmus lunatus*, Takakuwa, 1942; type locality: Japan).

³****Levizonus circularis* Takakuwa, 1942**

Levizonus circularis Takakuwa, 1942a: 43, fig. 8; 1954: 74; Takakuwa and Takashima, 1944: 23, 30; Paik, 1958: 362; Golovatch, 1981: 164; Lim, 1988: 27; 2001: 131; 2011:

5, 87, 88; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Levizonus variabilis Lokšina and Golovatch, 1977: 76, figs. 1–3; Mikhaljova et al., 2000: 117; Lim, 2001: 132; 2011: 5, 89, 90; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. North Hamgyong (Ćangdzin-ho, Jueul), Prov. North Pyongan (Yeonweon-gun) (Takakuwa, 1942; Mikhaljova et al., 2000).

Distribution. Korea (North), Russia (Takakuwa and Takashima, 1944; Mikhaljova et al., 2000; Lim, 2001).

⁴***Genus *Parafontaria* Verhoeff, 1936**

Japonaria Verhoeff, 1936a: 155 (Invalidly proposed without designation of type species).

Parafontaria Verhoeff, 1936b: 300 (type species: *Fontaria (Parafontaria) armigera*; type locality: Japan, Tokyo).

Japonaria Attems, 1938: 174 (Invalidly proposed without designation of type species).

Grayaria Chamberlin, 1943: 16 (type species: *Grayaria attemsii* Chamberlin, 1943; type locality: Japan).

⁵****Parafontaria koreana* (Paik, 1963)**

Japonaria koreana Paik, 1963: 39, figs. 7a–c; Lim, 1988: 28.

Parafontaria koreanus - Paik, 1963: 36; Lim et al., 1992: 332.

Parafontaria koreana - Lim, 2001: 134; 2011: 5, 91, 92; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 600.

Records from Korean peninsula. Prov. North Chungcheong (Boeun-gun), Prov. North Jeolla (Iksan-si; Jeongeup-si) (Paik, 1963; Lim, 2001).

Distribution. Korea (South) (Paik, 1963).

⁶***Genus *Pachydesmus* Cook, 1895**

Pachydesmus Cook and Collins, 1895: 5 (type species: *Pachydesmus crassicutis* Wood, 1864; type locality: USA, Mississippi).

⁷****Pachydesmus bazanensis* Takakuwa, 1942**

Pachydesmus bazanensis Takakuwa, 1942b; Takakuwa and Takashima, 1944: 23–26; Lim, 2011: 5, 129, 130; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. South Gyeongsang (Masan) (Takakuwa, 1942b).

Korean name: ¹*남시참노래기, ²*산노래기속, ³*상남산노래기, ⁴*속리키노래기속, ⁵*속리키노래기, ⁶*큰노래기속, ⁷*마산큰노래기

Distribution. Korea (Takakuwa, 1942b; Lim, 2011).

Remarks. In fact, *Pachydesmus* is a North American genus of the family Xystodesmidae (Hoffman, 1958; Marek et al., 2014), comprising only two species. The East Asian “*P. bazanensis*” according to Tanabe and Shinohara (1996) possibly belongs to the genus *Xystodesmus*, although they did not formally establish the synonymy. The status of Korean records of this species needs to be checked with freshly collected material.

¹*Family Paradoxosomatidae Daday, 1889

²*Genus *Orthomorphella* Hoffman, 1963

Orthomorphella Hoffman, 1963:588 (type species: *Polydesmus (Paradesmus) pekuensis* Karsch, 1881; type locality: China, Beijing).

³**Orthomorphella pekuensis* (Karsch, 1881)

Polydesmus (Paradesmus) pekuensis Karsch, 1881: 39, fig. 10.

Orthomorphella pekuensis - Attems, 1898: 336; Hoffman, 1963: 589; Golovatch, 1980a: 54; 1981: 164; Jeekel, 1988: 98; Mikhailjova and Kim, 1993: 33; Kim and Lim, 1995b: 213; Mikhailjova and Lim, 2000: 150; Mikhailjova et al., 2000: 119; Lim, 2001: 136–139; 2011: 5, 93, 94; Mikhailjova and Korsós, 2003: 239; Chung and Moon, 2006: 183–189; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Orthomorpha circofera circofera Takakuwa and Takashima, 1940: 177; 1944: 40; Paik, 1958: 360.

Oxidus circofera - Verhoeff, 1931: 448; Chamberlin and Wang, 1953; Miyosi, 1959: 69.

Oxidus circoferus circoferus - Paik, 1961: 82; Lim, 1988: 27.

Oxidus circofera affinis - Lim, 1988: 22.

Orthomorpha circofera affinis - Verhoeff, 1936a: 161; Takakuwa and Takashima, 1940: 176; Takakuwa, 1954: 40; Paik, 1958: 360.

Records from Korean peninsula. Daejeon Metropolitan City (Biramsa Temple), Jeju-Island (Jocheon-eup, Jeju-si), Prov. Gangwon (Mt. Kumgangsan), Prov. Gyeonggi (Suwon-si), Prov. North Chungcheng (Cheongwon-gun), Prov. North Jeolla (Iksan-si; Jeonju-si; Namwon-si; Wanju-gun; Yeosu-si), Prov. South Chungcheng (Boryeong-gun), Prov. South Hwanghae (Gaseong-si, Haeju-si), Prov. South Pyongan (Anju) (Takakuwa and Takashima, 1940), Pyongyang municipality (Mt. Daeseongsan, Mt. Yeongaksan, Ponghwa-ri) (Golovatch, 1981; Mikhailjova and Kim, 1993; Mikhailjova and Lim, 2000; Lim, 2001; Mikhailjova and Korsós, 2003).

Distribution. Korea (South and North), China, Japan (Takakuwa and Takashima, 1940; Mikhailjova and Korsós, 2003).

⁴*Genus *Oxidus* Cook, 1911

Oxidus Cook, 1911: 628 (type species: *Fontaria gracilis* C. L. Koch, 1847; type locality: Puloloz).

Kalorthomorpha Attems, 1914: 191 (type species: *Kalorthomorpha gracilis* C. L. Koch, 1847; type locality: Puloloz).

Remarks. In this list, the genus *Oxidus* is revised to contain two Korean species: *O. gracilis*, and *O. obtusus*. In Lim (2001), *O. obtusus* was synonymized with *O. gracilis* because the author thought of the number of postfemoral branches that separate two species as a minor difference. But in Nguyen et al. (2017), the character was described as important for species delimitation taking another species of the same genus as an example, and the authors considered *O. obtusus* as a valid species. So, in this study, *O. obtusus* was added in the species list. However, as mentioned by Nguyen et al. (2017), investigation of this species using fresh material is needed to confirm the situation.

⁵**Oxidus gracilis* (C. L. Koch, 1847)

Fontaria gracilis C. L. Koch, 1847: 142, fig. 9.

Oxidus gracilis - Chamberlin and Wang, 1953: 7; Miyosi, 1959: 68; Paik, 1961: 82; 1963: 39; 1976b: 86; Murakami and Paik, 1968: 367; Golovatch, 1978b: 678; 1980a: 53; 1981: 164; Lim, 1988: 27; 2001: 139–143; 2011: 5, 95, 96; Lim et al., 1992: 332; Mikhailjova and Kim, 1993: 33; Kim and Lim, 1995a: 275; 1995b: 213; Mikhailjova and Lim, 2000: 151; Mikhailjova et al., 2000: 119; Mikhailjova and Korsós, 2003: 239; Chung and Moon, 2011: 53–61; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Orthomorpha gracilis - Attems, 1937: 82; Takakuwa and Takashima, 1940: 175; 1944: 23; Takakuwa, 1954: 37; Paik, 1958: 360; 1960: 9.

Orthomorpha obtusus - Takakuwa, 1942b: 363; 1954:43; Takakuwa and Takashima, 1944: 23; Chamberlin and Wang, 1953: 6; Paik, 1958: 360; Jeekel, 1963: 20.

Oxidus obtusus - Chamberlin and Wang, 1953: 6; Miyosi, 1959: 70; Lim, 1993.

Records from Korean peninsula. Jeju Island (Mt. Hallasan), Prov. Gangwon (Mt. Kumgangsan; Yeongweol-gun, Chuncheon-si), Prov. North Chungcheng (Seosan-gun, Danyang-gun), Prov. North Gyeongsang (Ulleung-gun, Sangju-gun), Prov. North Jeolla (Buan-gun; Gunsan-si; Iksan-si; Jeonju-si; Jinan-gun), Prov. South Gyeongsang (Geochang-gun; Jin-

Korean name: ¹*무당노래기과, ²*황주까막노래기속, ³*황주까막노래기, ⁴*까막노래기속, ⁵*고운까막노래기

yang-gun; Sacheon-gun), Prov. South Hwanghae (Haeju), Prov. South Jeolla (Yeosu-si, Sinan-gun), Pyongyang Municipality (Mt. Daeseongsan, Moran-bong, Mt. Ryongaksan) (Golovatch, 1981; Mikhailjova and Kim, 1993; Mikhailjova and Lim, 2000).

Distribution. Cosmopolitan species (Lim, 2001; Nguyen et al., 2017).

***Oxidus obtusus* (Takakuwa, 1942)**

Orthomorpha obtusus - Takakuwa, 1942a: 363.

Oxidus obtusus - Cook, 1911: 628; Chamberlin and Wang, 1953: 6; Takakuwa, 1954: 37; Jeekel, 1963: 20; Nguyen and Sierwald, 2013: 1295; Nguyen et al., 2016: 46; 2017: 15.

Records from Korean peninsula. Korea (South) (Takakuwa, 1942a; Nguyen et al., 2016, 2017).

Distribution. Korea (South) (Takakuwa, 1942a).

¹*Genus *Sichotanus* Attems, 1914

Sichotanus Attems, 1914: 216 (type species: *Strongylosoma eurygaster* Attems, 1898; type locality: Russia, Primorsky).

²Sichotanus eurygaster* (Attems, 1898)**

Strongylosoma eurygaster Attems, 1898: 303, figs. 22, 38.

Sichotanus eurygaster - Attems, 1914: 216; 1937: 154; Takakuwa and Takashima, 1940: 172; 1944: 23; Paik, 1958: 361; Golovatch, 1980a: 54; 1981: 164; Mikhailjova, 1982b: 1265; Jeekel, 1988: 99; Lim et al., 1992: 332; Lim, 1993: 22; 2001: 143–146; 2011: 5, 97, 98; Mikhailjova and Kim, 1993: 33; Mikhailjova and Lim, 2000: 151; Mikhailjova et al., 2000: 120; Mikhailjova and Korsós, 2003: 238; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Sichotanus mandshuricus Golovatch, 1980a: 54.

Sichotanus longipes Verhoeff, 1936b: 305; Takakuwa and Takashima, 1940: 178; Takakuwa, 1954: 54; Paik, 1958: 361; Lim, 1988: 27.

Records from Korean peninsula. Prov. Gangwon (Goseong-gun; Inje-gun; Mt. Kumgangsan; Pyeongchang-gun), Prov. North Hamgyong (Onpho-ri), Prov. North Hwanghae (Gaseong-si); Prov. North Jeolla (Namwon-si), Prov. North Pyongan (Mt. Myohyangsan; Mt. Zamosan), Prov. North Hamgyong (Onpho-ri), Prov. Yanggang (Haesan-si), Pyongyang Municipality (Mt. Daeseongsan) (Verhoeff, 1936b; Takakuwa and Takashima, 1940, 1944; Mikhailjova and Kim, 1993; Mikhailjova and Lim, 2000; Lim, 2001).

Distribution. Korea (South and North), China, Russia (Ver-

hoeff, 1936b; Mikhailjova and Korsós, 2003).

³*Genus *Nedyopus* Attems, 1914

Nedyopus Attems, 1914: 216 (type species: *Strongylosoma eurygaster* Attems, 1898; type locality: Russia, Primorsky).

Vaulogerodesmus Brölemann, 1916: 587 (type-species: *Vaulogerodesmus pictus* Brölemann, 1916; type locality: Japan).

Nesodyopus Verhoeff, 1940: 141 (type-species: *Nedyopus boninensis* Verhoeff, 1940; type locality: Japan, Bonin Island).

Varyomorpha Wang, 1957: 104 (type-species: *Oxidus hsien-tienensis* Wang, 1957; type locality: Taiwan).

⁴Nedyopus patrioticus* (Attems, 1898)**

Strongylosoma partioticus Attems, 1898: 300, figs. 12, 13.

Nedyopus partioticus - Attems, 1914: 201; Mikhailjova et al., 2000: 119; Lim, 2001: 146–149; 2011: 5, 99, 100; Chen et al., 2006: 3998–4000; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Nedyopus partioticus partioticus - Attems, 1914: 201; Takakuwa, 1954: 48; Wang, 1955: 194; Paik, 1958: 360; Miyosi, 1959: 72; Lim, 1988: 27; 1993: 23.

Nedyopus koreanus - Verhoeff, 1936b: 307; Chen et al., 2006: 4000.

Nedyopus patrioticus koreanus - Attems, 1937: 139; Takakuwa and Takashima, 1940: 175; 1944: 23; Takakuwa, 1942b: 362; 1954: 48; Paik, 1958: 360; Miyosi, 1959: 71; Lim, 1988: 27; 1993: 23; Chen et al., 2006: 4000.

Records from Korean peninsula. Daegu Metropolitan city, Jeju Island (Gyorye-eup), Prov. North Gyeongsang (Gyeongju-si), Pyeongyang Metropolitan City (Mt. Daeseongsan), Prov. South Chungcheng (Seosan-gun) (Lim, 2001).

Distribution. Korea (South) (Verhoeff, 1936b).

Remarks. Chen et al. (2006) revised the tribe Nedyopini in Taiwan. They established several synonymies and described new species, together with clarification of several distributional records. According to that study, *N. patrioticus* proper is rather confined to the island of Taiwan. We believe that the status of Korean records should be checked by freshly collected material. It is possible that the subspecies *N. patrioticus koreanus* is in fact a separate species.

⁵*Genus *Cawjeekelia* Golovatch, 1980

Cawjeekelia Golovatch, 1980a: 55 (type species: *Cawjeekelia gloriosa* Golovatch, 1980; type locality: Korea, Samgiyeon).

Koreadesmus Mikhailjova and Korsós, 2003: 235 (type species: *Koreadesmus proprius* Mikhailjova and Korsós, 2003;

Korean name: ¹*어리구리노래기속, ²*어리구리노래기, ³*구리노래기속, ⁴*왜구리노래기, ⁵*백두노래기속

type locality: Korea, Prov. Yanggang).

Orientosoma Golovatch, 1980a: 55 (type species: *Orientosoma koreanum* Golovatch, 1980; type locality: Korea).

¹Cawjeekelia gloriosa* Golovatch, 1980**

Cawjeekelia gloriosa Golovatch, 1980a: 55, figs. 14–16; 1995: 77; Jeekel, 1988: 98; Lim, 1993: 14; 2001: 150; 2011: 5, 101–103; Mikhaljova et al., 2000: 119; Mikhaljova and Korsós, 2003: 238, 239; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. Yanggang (Samgyeong) (Golovatch, 1980a; Lim, 1993; 2001; Mikhaljova and Korsós, 2003).

Distribution. Korea (North) (Golovatch, 1980a).

²Cawjeekelia koreana* (Golovatch, 1980)**

Orientosoma koreanum Golovatch, 1980a: 56, figs. 17, 18. *Cawjeekelia koreana* - Jeekel, 1988: 98; Lim, 2001: 152–154; 2011: 5, 104–106; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. Yanggang (Samgyeong) (Golovatch, 1980a; Lim, 2001).

Distribution. Korea (North), Russia (Golovatch, 1980a; Lim, 2001).

³Cawjeekelia pyongana* Mikhaljova and Kim, 1993**

Cawjeekelia pyongana Mikhaljova and Kim, 1993: 34, figs. 5–8; Mikhaljova and Lim, 2000: 151; Lim, 2001: 154, 155; 2011: 5, 107, 108; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. Gangwon (Wonju-si; Inje-gun), Prov. Gyeonggi (Yangpyeong-gun; Yeongdong-gun), Prov. North Gyeongsang (Andong-gun; Yeongheung-gun), Prov. North Jeolla (Iksan-si), Prov. North Pyongan (Mt. Myohyangsan) (Mikhaljova and Kim, 1993; Mikhaljova and Lim, 2000).

Distribution. Korea (South and North) (Mikhaljova and Kim, 1993; Lim, 2001).

⁴Cawjeekelia iksana* Mikhaljova and Lim, 2000**

Cawjeekelia iksana Mikhaljova and Lim, 2000: 152, figs. 1A–G; Lim, 2001: 155–159; 2011: 5, 109–111; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Jeju Island (Jeju-si; Seo-

gwipo-si; Namjeju-si), Prov. Gangwon (Inje-gun, Chuncheon-si), Prov. North Jeolla (Buan-gun; Gunsan-si; Iksan-si; Jangsu-gun; Jeongeup-si; Namwon-si), Prov. South Gyeongsang (Geoje-gun; Hadong-gun), Prov. South Jeolla (Yeochong-gun; Yeongam-gun) (Mikhaljova and Lim, 2000).

Distribution. Korea (South) (Mikhaljova and Lim, 2000).

⁵Cawjeekelia propria* (Mikhaljova and Korsós, 2003)**

Koreadesmus proprius Mikhaljova and Korsós, 2003: 236, 237, figs. 50–57; National Institute of Biological Resources, 2019: 599.

Cawjeekelia propria - Golovatch, 2011: 264; Nguyen et al., 2016: 46.

Records from Korean peninsula. Prov. Yanggang (Konchang) (Mikhaljova and Korsós, 2003).

Distribution. Korea (North) (Mikhaljova and Korsós, 2003).

⁶*Family Polydesmidae Leach, 1815

⁷*Genus *Epanerchodus* Attems, 1901

Epanerchodus Attems, 1901b: 112 (type species: *Polydesmus tambanus* Attems, 1901; type locality: Japan).

⁸Epanerchodus koreanus* Verhoeff, 1937**

Epanerchodus koreanus Verhoeff, 1937a: 320, fig. 11; Takakuwa and Takashima, 1940: 175; 1944: 23; Takakuwa, 1954: 100; Paik, 1958: 362; Lim, 1988: 28; 2001: 160–162; 2011: 5, 112–114; Lim et al., 1992: 332; Mikhaljova and Lim, 2001: 22–25; 2006c: 46, 47; Mikhaljova and Korsós, 2003: 233, 234; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599; Joo et al., 2020: 3845–3847.

Epanerchodus bifidus Takakuwa, 1942a: 39; 1954: 236; Takakuwa and Takashima, 1944: 23, 25, 29; Paik, 1958: 362; 1961: 83, 85, 86, 88; 1976b: 86; Miyosi, 1959: 51, 100, 217; Golovatch, 1978b: 678; 1980a: 53; 1981: 165; Lim, 1988: 28; 2001: 162–168; 2011: 115–117; Lim et al., 1992: 332; Mikhaljova, 1993: 30; 1998: 47; Mikhaljova and Kim, 1993: 32; Kim and Lim, 1995a: 276; 1995b: 213; Mikhaljova et al., 2000: 118; Mikhaljova and Lim, 2000: 153.

Epanerchodus dichotomus Takakuwa and Takashima, 1944: 23, 25, 29; Takakuwa, 1954: 101; Paik, 1958: 362.

Records from Korean peninsula. Incheon Metropolitan city (Ganghwa-gun), Jeju Island (Jeju-si; Bukjeju-gun), Prov. Gangwon (Goseong-gun; Hwacheon-gun; Inje-gun; Mt. Kumgangsan; Samcheok-gun; Wonju-si; Wonsan-si; Yangyang-gun; Yeongwol-gun;), Prov. Gyeonggi (Anseong-gun; Ga-

Korean name: ¹*백두노래기, ²*동아노래기, ³*평안노래기, ⁴*익산노래기, ⁵*한국노래기, ⁶*띠노래기과, ⁷*띠노래기속, ⁸*외갈래띠노래기

pyeong-gun; Namyangju-gun; Paju-gun; Pocheon-gun; Yangpyeong-gun), Prov. North Gyeongsang (Geumreung-gun; Sangju-gun; Uljin-gun), Prov. North Chungcheng (Boeun-gun; Eumseong-gun; Jungwon-gun; Yeongdong-gun;), Prov. North Hwanghae (Sariwon), Prov. North Jeolla (Iksan-si; Jeonju-si; Jinan-gun), Prov. North Pyongan (Mt. Myohyangsan), Pyongyang municipality (Mt. De Sang-san; Moranbong), Prov. South Gyeongsang (Hamyang-gun; Masan-si), Prov. South Hamgyong (Gangjin-gun), Prov. South Hwanghae (Mt. Suyongsan), Prov. South Jeolla (Wando-gun), Prov. South Pyongan (Mt. Lyongaksan), Prov. Yanggang (Chong-Bong, Konchang-Bong, Mt. Paekdusan) (Lim, 2001; Mikhailjova and Korsós, 2003).

Distribution. Korea (South and North), Japan, Russia (Verhoeff, 1937a; Mikhailjova and Lim, 2006b).

^{1*}***Epanerchodus kimi* Murakami and Paik, 1968**

Epanerchodus kimi Murakami and Paik, 1968: 368–370: figs. 1, 2; Lim, 1988: 28; 2001: 168–170; 2011: 5, 118–120; Mikhailjova and Lim, 2000: 153; 2006c: 47; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. Gangwon (Samcheok-gun, Pyeongchang-gun), Prov. North Chungcheng (Goesan-gun, Danyang-gun), Prov. North Gyeongsang (Mungyeong-gun) (Murakami and Paik, 1968).

Distribution. Korea (South) (Murakami and Paik, 1968).

^{2*}***Epanerchodus clavisetosus* Murakami and Paik, 1968**

Epanerchodus clavisetosus Murakami and Paik, 1968: 372–375, figs. 4, 5; Lim, 1988: 28; 2001: 170–172; 2011: 5, 121, 122; Kim and Lim, 1995a: 276; 1995b: 214; Mikhailjova and Lim, 2006c: 47; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Jeju Island (Hangyeongmyeon) (Murakami and Paik, 1968).

Distribution. Korea (South) (Murakami and Paik, 1968).

^{3*}***Epanerchodus polymorphus* Mikhailjova and Golovatch, 1981**

Epanerchodus polymorphus Mikhailjova and Golovatch, 1981: 1183–1189, figs. 1–3; Mikhailjova, 1983: 85–87; 1988: 70, 71; 1993: 30, 31; 1996: 145, 146; 1998: 43, 44; 2001: 150; 2004: 212–215; Mikhailjova and Petukhova, 1983: 53, 59; Mikhailjova and Bakurov, 1989: 40, 42, 45, 46; Ganin, 1997: 121, 124, 126, 128; Mikhailjova et al., 2000: 118;

Lim, 2001: 172–174; 2011: 5, 123, 124; Mikhailjova and Korsós, 2003: 234; Mikhailjova and Marusik, 2004: 10; Mikhailjova and Lim, 2006c: 47, 48; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. North Hamgyong (Chongjin-si) (Mikhailjova et al., 2000).

Distribution. Korea (North), Russia (Mikhailjova et al., 2000; Mikhailjova and Lim, 2006b).

^{4*}***Epanerchodus beroni* Mikhailjova and Kim, 1993**

Epanerchodus beroni Mikhailjova and Kim, 1993: 31, 32, 39, 40: figs. 1–4; Lim, 2001: 174, 175; 2011: 5, 125, 126; Mikhailjova and Korsós, 2003: 234; Mikhailjova and Lim, 2006c: 48; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. Gangwon (Mt. Kumgangsan) (Mikhailjova and Kim, 1993), Prov. North Pyongan (Mt. Myohyangsan) (Mikhailjova and Korsós, 2003).

Distribution. Korea (North) (Mikhailjova and Kim, 1993).

^{5*}***Epanerchodus gangwonus* Mikhailjova and Lim, 2001**

Epanerchodus gangwonus Mikhailjova and Lim, 2001: 19–21, figs. 1–8; 2006c: 48; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. Gangwon (Inje-gun) (Mikhailjova and Lim, 2001).

Distribution. Korea (South) (Mikhailjova and Lim, 2001).

^{6*}***Epanerchodus bacilliferus* Mikhailjova and Lim, 2006**

Epanerchodus bacilliferus Mikhailjova and Lim, 2006c: 48–51, figs. 1–3; Lim, 2011: 5; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. North Jeolla (Jinan-gun) (Mikhailjova and Lim, 2006b).

Distribution. Korea (South) (Mikhailjova and Lim, 2006b).

^{7*}***Epanerchodus multiprocessus* Mikhailjova, 2001**

Epanerchodus multiprocessus Mikhailjova and Lim, 2001: 21, 22, figs. 9–14; 2006c: 48; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. North Gyeongsang (Ulleung-gun) (Mikhailjova and Lim, 2001).

Distribution. Korea (South) (Mikhailjova and Lim, 2001).

Korean name: ^{1*}김띠노래기, ^{2*}곤봉털띠노래기, ^{3*}네갈래띠노래기, ^{4*}세갈래띠노래기, ^{5*}강원띠노래기, ^{6*}진안띠노래기, ^{7*}다갈래띠노래기

***Epanerchodus alienus* Mikhaljova and Lim, 2018**

Epanerchodus alienus Mikhaljova and Lim, 2018: 8, figs. 9–11; National Institute of Biological Resources, 2019: 599.

Records from Korean peninsula. Prov. North Gyeongsang (Ulleung-gun) (Mikhaljova and Lim, 2018).

Distribution. Korea (South) (Mikhaljova and Lim, 2018).

¹*Family Haplodesmidae Cook, 1895

²*Genus *Prosopodesmus* Silvestri, 1910

Prosopodesmus Silvestri, 1910: 360 (type species: *Prosopodesmus jacobsoni* Silvestri, 1910; type locality: Republic of Indonesia, Java).

Homodesmus Chamberlin, 1918: 222 (type species: *Homodesmus parvus* Chamberlin, 1918; type locality: Haiti, Puerto Rico to St. Eustatius).

Rhipidopeltis Miyosi, 1958b: 298–300 (type species: *Rhipidopeltis sinuata* Miyosi, 1958; type locality: Japan, Akiyoshi-cho).

³Prosopodesmus sinuatus* (Miyosi, 1958)**

Rhipidopeltis sinuatus Miyosi, 1958b: 297, fig. 1A–H; Mikhaljova and Lim, 2000: 155; Lim, 2001: 176, 177; 2011: 5, 127, 128; Nguyen et al., 2016: 46; National Institute of Biological Resources, 2019: 599.

Prosopodesmus sinuatus - Golovatch et al., 2009: 43.

Records from Korean peninsula. Jeju Island (Yeongsil), Prov. Gangwon (Hangryeong), Prov. North Jeolla (Jeongeup-si), Prov. South Jeolla (Yeongam-gun; Sinan-gun) (Mikhaljova and Lim, 2000).

Distribution. Korea (South), Japan (Miyosi, 1958b; Mikhaljova and Lim, 2000).

DISCUSSION

The millipede fauna of the Korean Peninsula currently consists of 68 species plus 5 subspecies of millipedes including 3 subclasses, 7 orders, 15 families and 30 genera, as presented in Table 1. In total 16 known millipede orders, only seven have been recorded in Korean Peninsula. The millipede fauna of the Korean Peninsula seems to be dominated by polydesmid and julid species (26 species and 18 plus 6 subspecies, respectively). Of the 68 species and 5 subspecies, 29 could be considered as endemic species in South Korea, and 12 could be considered as endemic species in North Korea. Nine species distributed in both South Korea and North Korea.

Table 1. Orders and families of millipedes recorded in Korean Peninsula

Order	Family	No. of genera	No. of species (Subspecies)
Polyxenida	1	1	1
Glomerida	1	1	7
Polyzoniida	2	2	2
Julida	3	5	18 (5)
Platydesmida	1	2	2
Chordeumatida	3	7	12
Polydesmida	4	12	26
Total	15	30	68 (5)

Two species was found in both South Korea and Japan, two in both South Korea and China, and eight were found in both North Korea and Russia. Especially, some species widely distributed in 3 or more countries. *Orthomorphella pekuensis* is distributed in Korean Peninsula, Japan, and China, *Sichotanus eurygaster* is distributed Korean Peninsula, China, and Russia, and *Epanerchodus koreanus* is distributed in Korean Peninsula, Japan, and Russia. *Oxidus gracilis* is widely distributed over the world including Korean Peninsula (Nguyen et al., 2017).

From 2000 to 2010, there were many records of new species of millipedes in Korean Peninsula (Mikhaljova and Lim, 2000, 2001; Mikhaljova and Korsós, 2003; Mikhaljova and Lim 2006a, 2006b, 2006c, 2008). Especially, in case of genus *Hyleoglomeris*, unique genus that recorded in the Korean Peninsula belonging to the order Glomerida, only two species were recorded in the Korean Peninsula until 2005, but currently there are 7 species reported through subsequent record of new species. Although some orders, such as Polyxenida, Polyzoniida, and Platydesmida, and fewer than five species were recorded (one, one and two species, respectively), it is expected that more species will be found in the future study. Moreover, compared to the recorded species in Japan, China, and Taiwan, some orders such as Siphonophorida, Spirobolida, and Spirostreptida were not recorded in the Korean Peninsula. In these taxa, further study should be done for the excavation of unrecorded and new species.

In the most recent millipede species list, National Institute of Biological Resources (2019), Ministry of Environment, South Korea, the number of millipede species in the Korean Peninsula was recorded 69 species plus 5 subspecies. After the list, there was no record of new millipede species, but some taxonomic changes were compared to the list of this study. First, *Anaulaciulus riedeli* Jędrzykowski, 1982 included in National Institute of Biological Resources (2019)

Korean name: ¹*흑노래기과, ²*흑노래기속, ³*흑노래기

was synonymized to *A. golovatch* Mikhailjova, 1982 (Mikhailjova, 2001). Second, the genus *Ansiulus* Takakuwa, 1940 was synonymized to *Skleroprotopus* Attems, 1901 by Mikhailjova (2019b). Therefore, four species belonging to the genus *Ansiulus* (*Ansiulus abberans*, *A. deminutus*, *A. legitimus*, *A. matumotoi*) was renamed to the genus *Skleroprotopus* (*Skleroprotopus abberans*, *S. deminutus*, *S. legitimus*, *S. matumotoi*). Third, the genus *Rhipidopeltis* Miyosi, 1958 was synonymized to *Prosopodesmus* Attems, 1901 by Golovatch et al. (2009), so *Rhipidopeltis sinuatua* was renamed to *Prosopodesmus sinuatus*. Fourth, *Levizonus variabilis* Lokšina and Golovatch, 1977 included in National Institute of Biological Resources (2019) was synonymized to *L. circularis* Takakuwa, 1942 by Mikhailjova (2021). Fifth, *Oxidus obtusus* was added in the checklist of millipede, as mentioned by Nguyen et al. (2017).

The Korean Peninsula is geographically important for speciation and evolutionary studies because of its function as bridge between the Asian continent and the Pacific Ocean (Lim, 2001). In this study, 50 millipede species were identified as endemic species in the Korean Peninsula (including South Korea and North Korea), confirming high endemism. But taxonomic uncertainty of some taxa caused by lack of samples, and morphological differences still appeared. The poor understanding of the millipede fauna has impaired our understanding of millipede speciation and evolution. Therefore, further in-depth surveys of the millipedes of the Korean Peninsula may await, and it is expected the taxonomic uncertainty that was checked in this study can be solved through future study.

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CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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