Acta Arachnologica, 59(2): 73–86, December 31, 2010

Distribution and diversity of millipedes of the Ryukyu Archipelago, with the Senkaku and Daito Island Groups: A literature review (Arthropoda: Diplopoda)

Yasuyuki Nakamura[1]* & Zoltán Korsós[1,2]

[1] *Tropical Biosphere Research Center, University of the Ryukyus, Senbaru 1, Nishihara, Okinawa, 903–0213 Japan*
[2] *Department of Zoology, Hungarian Natural History Museum, Baross u. 13, H-1088 Budapest, Hungary*
* *Correspondence, E-mail: k068557@eve.u-ryukyu.ac.jp*

Abstract — Distributional data for the millipedes occurring in the Ryukyu Archipelago and adjacent islets (Senkaku and Daito Groups) are summarized based on an extensive literature survey. There are at least 58 species and one subspecies of millipedes known from the Ryukyu Archipelago (50 of these are native and 8 introduced), 5 species in the Senkaku Group, and 7 species in the Daito Group. Of these, the greatest diversity of indigenous millipede species (32 species) occurs in Okinawa-jima Island. Our results contribute to the knowledge of the millipede fauna in the region beyond the limited account presented in the previous reviews. The results also suggest that large portions of the Ryukyu Archipelago have been poorly sampled, and that further collections would considerably improve the present inventory.

Key words — Diplopoda, fauna, literature review, Ryukyu Archipelago.

Introduction

The Ryukyu Archipelago, southwestern part of Japan, is constituted of more than a hundred of islands comprising only a little more than 1% of Japan's total area. However, it is known to harbor a diverse and distinctive terrestrial fauna reflecting a humid subtropical climate and a unique and complex geologic history of the region (e.g. Ota 2000). Although distribution patterns shown by animals inhabiting the archipelago has intrigued biogeographers for over a century, millipedes occurring in the area have received much less attention (see for exception, Murakami 1975b; Shimojana 1979).

At present, 277 of the more than 12,000 known millipede species in the world (Sierwald & Bond 2007) have been recognized from Japan (Murakami 1993). Thirty nine of them and one subspecies are known from the Ryukyu Archipelago, according to the latest review (Omine 2002). However, although general coverage of the millipede fauna in the archipelago has been given by Omine (1962, 1965a, 1983, 1984, 2000, 2002), more detailed biogeographic treatment has been hampered by the scarcity of our knowledge of their distributional data, which are scattered and mostly written in small and sometimes obscure contributions. Furthermore, unfortunately, serious shortcomings of the previous compilations became evident, as it is discussed below. It seems appropriate to prepare an up-to-date literature review at this time to make the current state of information available for the general community home and abroad, as well as for some research projects proposed or under way.

The purpose of the present contribution is to provide a comprehensive list of, and a complete bibliography on, the millipede species previously recorded from the Ryukyu Archipelago and from two adjacent clusters of islets (Senkaku and Daito Groups). Our compilation will help to fill in the gap in our knowledge on the millipede fauna in the area, and should provide a basis for future biodiversity research.

Materials and methods

The primary database we used for the present paper, consisting of a list of all the native or naturalized species of millipedes ever documented for the Ryukyu Archipelago and Senkaku and Daito Island Groups, has been derived from published literature involving scientific name and locality data. Additionally, a few selected literature without scientific names (Shimojana 1980; Omine et al. 1983) as well as an unpublished one (Shiraishi & Arai 1980) were consulted.

As a result of the literature survey, we basically produced two lists: one about the species lists of each islands, and one taxonomical millipede species list, with their occurrence data on the islands. As it is obvious, the basic geographical units for the study are islands. The geographical division and grouping of the islands in the area are shown in Figure 1. In the English spelling of the island names we accepted the Hepburn romanization. It should be mentioned here, that the words "-jima" and "-shima" in Japanese mean literally "island", so it may seem tautological to say, e.g.

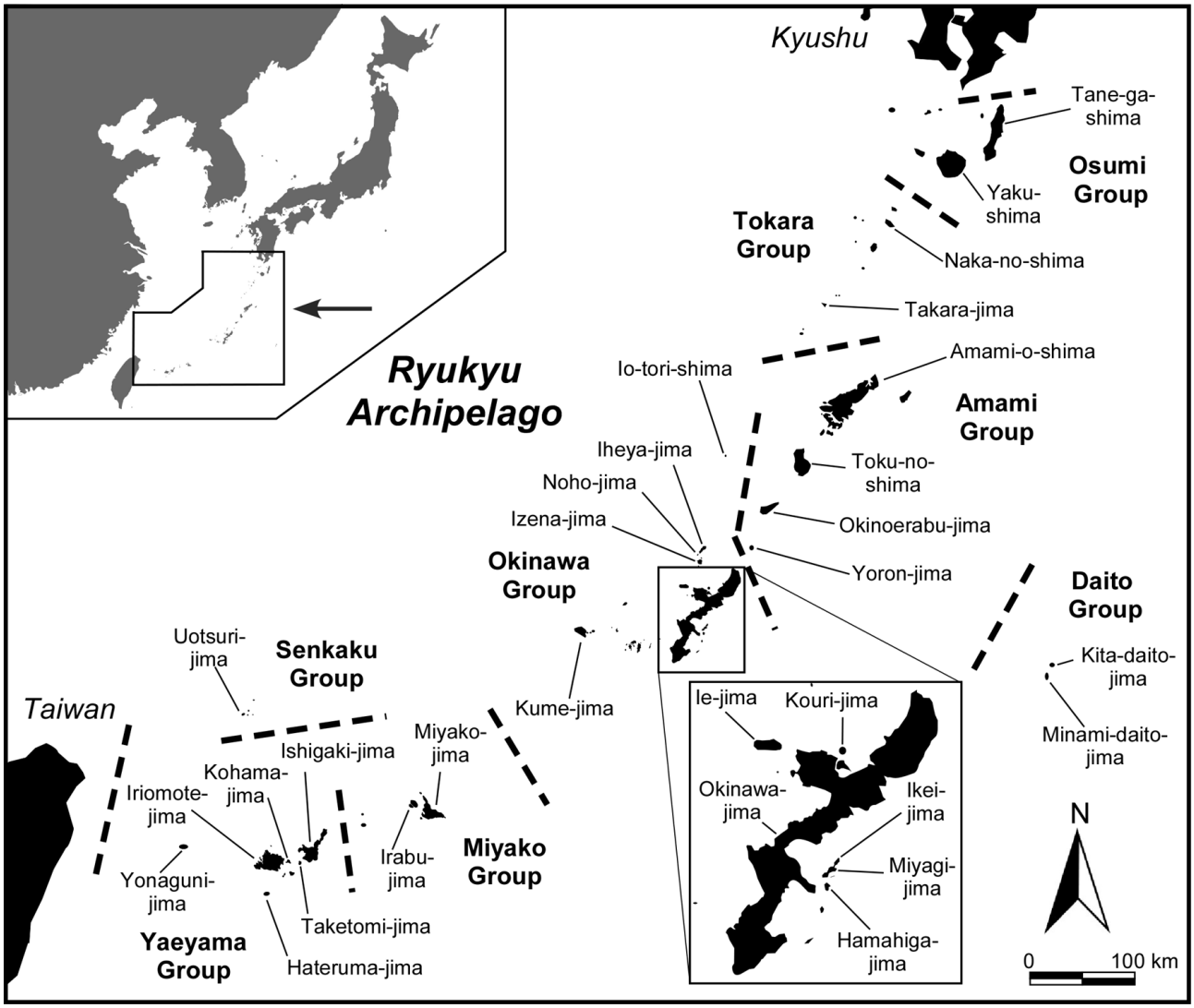

Fig. 1. Map of the Ryukyu Archipelago showing locations of islands where distributional record of millipede exists. Broken lines represent borders between each island group.

"Yaku-shima Island". However, it is the nature of the Japanese language that when an adjective or other word is included in the name of an island, this is the only way to express the name properly. For example, "Amami-o-shima Island" is acceptable but "Amami-o Island" would sound very strange or even meaningless.

Islands are listed in their geographical order from north to south. Millipede species according to each island are listed in the systematic order (under family level, in alphabetical order), whereas their distribution records follow the chronology of publications.

Although all records and identifications based on citation in literature alone, and not supported by voucher specimens, should be viewed with suspicion; we tentatively left these records unquestioned because otherwise almost all records could have been rejected. Also, no attempt has been made to confirm presence or absence of the voucher specimen for each record. However, because part of the data is a mixture of original collections and secondary citations of historical records, the cumulative lists required some interpretation of the collected data. We attached greater importance to the records which are based on firsthand collection. We distinguished them from others by mentioning presence or absence statements, drawings, detailed morphological descriptions, or photographs in the original articles. When making a clear distinction was difficult, we accepted the record if data on the particular collected locality and date (including a specific term: less than two years) existed in the identical or related article. The accepted records are denoted with asterisk in the list, to set them apart as "good" records, and species and localities supported by this kind of records are shown in boldface. Detailed information on the type locality of some species provided by Murakami (1975a) was also allocated to this category.

Some apparent secondary citations that we were unable to locate the original record of were considered as dubious,

and were distinguished by a dagger. Some records doubted by certain literature have never been treated as in the accepted category, even if these records are based on firsthand collections.

In the section of the species lists of each islands, synonym names used in the original records were attached after each record if necessary, with the purpose to help to trace an accepted name by its earlier usage. No synonymy, however, was added for spelling mistakes.

An additional remark, species believed to be introduced by obvious human activity are indicated by [I]. This is to help to exclude them in further possible zoogeographical analyses.

For taxonomy and nomenclature, we followed recent reference works (Shinohara & Tanabe 1999; Jeekel 2001; Korsós 2004; Tanabe 2005; Golovatch et al. 2007, 2010). For classification of millipedes, the system by Shelley (2003) was adopted.

Results

Quick key to symbols

Boldface type—Accepted species (e.g. ***Riukiaria holstii***) and localities (e.g. **Okinawa-jima Is**.).

*—Records considered to be supported by original collection.

†—Species and records considered to be dubious based only on our literature survey (see Materials and methods).

[I]—Species known or believed to be naturalized aliens in the area.

List of distribution records

Osumi Group

Tane-ga-shima Is.

†*Oxidus gracilis*[I] — †Shinohara 1964

Yaku-shima Is.

Anaulaciulus yamashinai — Miyosi 1959 (as *Fusiulus yamashinai*)

Riukiaria jamila — Tanabe 1990*, Tanabe 2002

Riukiaria puella — Tanabe 1988*, Tanabe 2002

Xystodesmus nikkoensis — Tanabe & Shinohara 1996*, Tanabe 2002

Cryptocorypha japonica — Omine 2000

Kiusiunum nodulosum — Omine 2000

Kiusiunum sekii — Miyosi 1958*, Miyosi 1959

Niponia nodulosa — Omine 2000

Tokara Group

Naka-no-shima Is.

Eudigraphis sp. — Omine 1977* (as *Monographis* sp.), Omine 2000

Hyleoglomeris uenoi — Omine 1977*

Anaulaciulus yamashinai — Omine 2000

Riukiaria sp. — Omine 1977* (as *Rhysolus* sp.)

Oxidus gracilis[I] — Miyosi 1955* (as *Orthomorpha gracilis*), Miyosi 1959

Cryptocorypha japonica — Omine 1977* (as *Archandrodesmus japonicus*)

Niponia nodulosa — Omine 1977*

Takara-jima Is.

Eudigraphis sp. — Omine 1977* (as *Monographis* sp.), Omine 2000

Anaulaciulus yamashinai — Omine 2000

Xystodesmus sp. — Yoshigou & Tamura 2006*

Helicorthomorpha trilobata — Miyosi 1955* (as *Helicorthomorpha holstii trilobata*), Miyosi 1959 (as *Helicorthomorpha holstii trilobata*), Omine 1977* (as *Helicorthomorpha holstii trilobata*)

Nedyopus sp. — Miyosi 1955*

Oxidus gracilis[I] — Miyosi 1955* (as *Orthomorpha gracilis*), Miyosi 1959

Cryptocorypha japonica — Omine 1977* (as *Archandrodesmus japonicus*)

From the Tokara Group in general, in addition to the species listed above, Omine et al. (1982) recorded *Eudigraphis takakuwai* (as *Monographis takakuwai*); Omine (2000) recorded *Hyleoglomeris* sp., *Hyleoglomeris yamashinai* and *Kiusiunum nodulosum*; and Omine (2002) listed occurrences and/or records of *Rhinotus okabei, Symphyopleurium hirsutum* (as "*B. nodulosa*"), *Symphyopleurium roseum* (as "*Symphyopleurium* sp."), *Helicorthomorpha holstii, Riukiaria semicircularis, Riukiaria holstii, Epanerchodus simplex*, and *Kiusiunum nodulosum*.

Amami-o-shima Is.

Siphonotidae sp. n. — Minato 1992*

Anaulaciulus yamashinai — Takakuwa 1954 (as *Fusiulus yamashinai*), Miyosi 1959 (as *Fusiulus yamashinai*)

Anaulaciulus sp. — Omine 2000*

Nipponothrix yuwandake — Shear & Tanabe 1994*

Riukiaria bifida — Takakuwa 1942* (as *Rhysodesmus bifidus*), Takakuwa 1954 (as *Rhysodesmus bifidus*), Omine 1962 (as *Rhysodesmus bifidus*), Omine 2000*

Riukiaria pugionifera — Omine 2000*

Riukiaria scutata — Takakuwa 1942* (as *Rhysodesmus scutata*), Jeekel 1952* (as *Riukiaria hoffmani*), Takakuwa 1954 (as *Rhysodesmus scutata*), Omine 1962 (as *Rhysodesmus scutata*), Omine 2000*, Tanabe 2002

Chamberlinius hualienensis[I] — Takahara et al. 1997, Omine 2000, Yamaguchi et al. 2000*

Helicorthomorpha trilobata — Takakuwa 1954 (as *Helicorthomorpha holstii trilobata*), Miyosi 1959 (as *Helicorthomorpha holstii trilobata*), Omine 2000*

Nedyopus patrioticus patrioticus — Omine 2000*

Oxidus gracilis[I] — Miyosi 1959, Omine 2000*

Cryptocorypha japonica — Omine 2000

Kiusiunum nodulosum — Omine 2000

Kiusiunum sp. n. — Minato 1996*

Niponia nodulosa — Omine 2000

Epanerchodus sp. — Omine 2000*

Toku-no-shima Is.
Riukiaria pugionifera — Omine 2002
Chamberlinius hualienensis[I] — Takahara et al. 1997, Omine 2000, Yamaguchi et al. 2000
Corypholophus ryukyuensis — Murakami 1975a*
Kiusiunum sp. n. — Minato 1996*
Epanerchodus sp. — Omine 2000

Okinoerabu-jima Is.
Glyphiulus granulatus[I] — Yoshigou et al. 2005* (as *Glyphiulus septentrionalis*)
Riukiaria pugionifera — Omine 1995
Chamberlinius hualienensis[I] — Yoshigou et al. 2005*
Nedyopus sp. — Yoshigou et al. 2005*
Oxidus gracilis[I] — Murakami 1975a*, Yoshigou et al. 2005*
Corypholophus ryukyuensis — Murakami 1975a*
Polydesmus tanakai — Murakami 1970*

Yoron-jima Is.
Corypholophus ryukyuensis — Murakami 1975a*

From the Amami Group in general, in addition to the species listed above, Omine (2000) recorded *Eudigraphis* sp., *Hyleoglomeris* sp., and *Hyleoglomeris yamashinai*; and Omine (2002) listed occurrences and/or records of *Eudigraphis* sp., *Hyleoglomeris* sp., *Symphyopleurium hirsutum* (as "*B. nodulosa*"), *Symphyopleurium roseum* (as "*Symphyopleurium* sp."), *Dolichoglyphius asper asper, Helicorthomorpha holstii, Riukiaria semicircularis, Riukiaria holstii, Epanerchodus simplex*, and *Epanerchodus subterraneus*.

Okinawa Group
Io-tori-shima Is.
Eudigraphis sp. — Omine et al. 1983*
Rhinotus okabei — Omine et al. 1983*
Oxidus gracilis[I] — Omine et al. 1983*
Cryptocorypha japonica — Omine et al. 1983*

Iheya-jima Is.
Hyleoglomeris stuxbergi — Omine 1963*
Yamasinaium noduligerum — Omine 1963*, Omine 1965a
†*Pterozonium spinosum* — †Omine 1965a (as *Siphonophora spinosa*), †Tanabe 2005 (as Siphonophorida indet.)
Anaulaciulus yamashinai — Omine 1963* (as *Fusiulus yamashinai*)
Riukiaria falcifera — Omine 1963*, Omine 1965a
Helicorthomorpha holstii[I] — Omine 1963* (as *Helicorthomorpha holstii holstii*), Omine 1965a (as *Helicorthomorpha holstii holstii*)
Helicorthomorpha trilobata — Omine 1963* (as *Helicorthomorpha holstii trilobata*)
Oxidus gracilis[I] — Omine 1965a
Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*), Omine 1965b* (as *Archandrodesmus japonicus*)
Niponia nodulosa — Omine 1963* (as *Onomatoplanus nodulosus*), Omine 1965a, Omine 1965b
Epanerchodus subterraneus — Omine 1963*

Noho-jima Is.
Pterozonium spinosum — Omine 1963* (as *Siphonophora spinosa*), Omine 1965b* (as *Siphonophora spinosa*)

Izena-jima Is.
Monographis kraepelini — Omine 1965a (doubted by Ishii 1988)
†*Riukiaria spiralipes* — †Omine 1965a
Oxidus gracilis[I] — Omine 1965a
Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*), Omine 1965b* (as *Archandrodesmus japonicus*)
Niponia nodulosa — Omine 1965a

Ie-jima Is.
Eudigraphis takakuwai — Omine 1965b* (as *Monographis takakuwai*)
Monographis kraepelini — Omine 1965a (doubted by Ishii 1988)
Pterozonium spinosum — Omine 1965a* (as *Siphonophora spinosa*), Omine 1965b* (as *Siphonophora spinosa*)
†*Riukiaria spiralipes* — †Omine 1965a
Oxidus gracilis[I] — Omine 1965a
Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*)
Niponia nodulosa — Omine 1965a

Kume-jima Is.
Eudigraphis takakuwai — Omine 1965a (as *Monographis takakuwai*), Omine 1982 (as *Monographis takakuwai*)
Monographis kraepelini — Omine 1965a* (doubted by Ishii 1988)
Hyleoglomeris sp. — Tanabe 1992*
Anaulaciulus yamashinai — Tanabe 1992*
Dolichoglyphius asper brevipes — Murakami 1975a*, Shimojana 1979*, Tanabe 2005
Riukiaria spiralipes — Takakuwa 1942* (as *Rhysodesmus spiralipes*), Takakuwa 1954 (as *Rhysodesmus spiralipes*), Omine 1962 (as *Rhysodesmus spiralipes*), Tanabe 2005
†*Yaetakaria neptuna* — †Omine 1962 (as *Rhysodesmus neptunus*)
Xystodesmus sp. n. — Tanabe 1992* (as Xystodesmid sp.), Tanabe & Shinohara 1996*
Chamberlinius hualienensis[I] — Takahara et al. 1997
Helicorthomorpha holstii[I] — Omine 1965a (as *Helicorthomorpha holstii holstii*)
Nedyopus sp. — Tanabe 1992*

Oxidus gracilis[I] — Omine 1965a, Murakami 1975a*
†*Cryptocorypha japonica* — †Omine 1965a (as *Archandrodesmus japonicus*)
Niponia nodulosa — †Omine 1965a, Shimojana 1973*, Murakami 1975a* (as *Niponia* sp. cf. *nodulosa*)

Kouri-jima Is.
Hyleoglomeris yamashinai — Uejyou 1991*
Anaulaciulus yamashinai — Uejyou 1991* (as *Fusiulus yamashinai*)
Kronopolites sp. — Uejyou 1991*

Ikei-jima Is.
Dolichoglyphius asper asper — Shimojana 1979*, Shimojana 1980
Oxidus gracilis[I] — Shimojana 1979*

Miyagi-jima Is.
Eudigraphis takakuwai — Shimojana 1979* (as *Monographis takakuwai*), Shimojana 1980
Dolichoglyphius asper asper — Shimojana 1979*, Shimojana 1980
Oxidus gracilis[I] — Shimojana 1979*, Shimojana 1980
Epanerchodus subterraneus — Shimojana 1979*, Shimojana 1980

Hamahiga-jima Is.
Dolichoglyphius asper asper — Murakami 1975a* (as *Dolichoglyphius asper*), Shimojana 1979* (as *Dolichoglyphius asper*), Shimojana 1980

Okinawa-jima Is.
Lophoturus okinawai — Nguyen Duy-Jacquemin & Condé 1982* (as *Lophoturus obscurus okinawai*), Ishii 1988*, Tanabe 2005 (as *Lophoturus obscurus okinawai*)
Eudigraphis takakuwai — Shimojana 1979* (as *Monographis takakuwai*), Shimojana 1980
Eudigraphis sp. — Murakami 1975a* (as *Monographis* sp.), Omine 1987*, Omine 1995* (as *Monographis* sp.), Omine & Ito 1998*
Monographis kraepelini — Takakuwa & Takashima 1942*, Takakuwa 1954, Omine 1962 (all the records have been doubted by Ishii 1988)
Hyleoglomeris japonica — Omine 1995*, Omine & Ito 1998*
Hyleoglomeris stuxbergi — Omine 1962*
Hyleoglomeris uenoi — Omine et al. 1984*
Hyleoglomeris yamashinai — Verhoeff 1937* (as *Hyleoglomeris (Perkeomeris) yamashinai*), Omine 1962, Omine 1965a, Murakami 1975a*, Shimojana 1979*, Shimojana 1980, Karasawa et al. 2008*
Hyleoglomeris sp. — Omine 1987*
Yamasinaium noduligerum — Verhoeff 1939c*, Takakuwa 1954 (as *Yamashinaium noduligerum*), Omine 1962*, Omine 1987*, Omine et al. 1984*, Tanabe 2005
Trichozonium sp. — Omine 1962*
Rhinotus okabei — Omine 1965a (as *Boninozonium okabei*), Omine 1965b* (as *Boninozonium okabei*), Omine 1995*
Pterozonium spinosum — Omine 1965b* (as *Siphonophora spinosa*)
Siphonophorida sp. — Karasawa et al. 2008*
Sinostemmiulus sp. — Karasawa et al. 2008*
Anaulaciulus okinawaensis — Shinohara 1990*, Kikunaga 1993*
Anaulaciulus pinetorum — Omine 1995*, Omine & Ito 1998*
Anaulaciulus yamashinai — Verhoeff 1939c* (as *Fusiulus yamashinai*), Takakuwa 1954 (as *Fusiulus yamashinai*), Miyosi 1959 (as *Fusiulus yamashinai*), Omine 1962 (as *Fusiulus yamashinai*), Omine 1965a (as *Fusiulus yamashinai*), Murakami 1975a* (as *Anaulaciulus* cf. *yamashinai*), Shimojana 1979* (as *Fusiulus yamashinai*), Shimojana 1980, Omine et al. 1984* (as *Fusiulus yamashinai*), Omine 1987*, Omine 1995*, Omine & Ito 1998*, Karasawa et al. 2008*
Japanioiulus lobatus — Omine 1965a, Omine 1987* (as *Amblyiulus lobatus*)
Trichopachyiulus (Japanopachyiulus) niponicus[I] — Takahara et al. 1997*
Julida sp. — Karasawa et al. 2008*
Paraspirobolus lucifugus[I] — Shinohara & Higa 1997* (as *Spirobolellus takakuwai*)
Trigoniulus corallinus[I] — Higa et al. 1993* (as *Trigoniulus lumbricinus*), Takahara et al. 1997* (as *Trigoniulus lumbricinus*)
Glyphiulus granulatus[I] — Omine 1965a (as *Formosoglyphius tuberculatus*), Omine 1965b* (as *Formosoglyphius tuberculatus*), Murakami 1975a* (as *Glyphiulus septentrionalis*), Shimojana 1979* (as *Glyphiulus septentrionalis*), Shimojana 1980 (as *Glyphiulus septentrionalis*), Tanabe 2005 (as *Glyphiulus septentrionalis*)
Glyphiulus sp. — Omine & Ito 1998*
Dolichoglyphius asper asper — Takakuwa 1954* (as *Dolichoglyphius asper*), Omine 1962 (as *Dolichoglyphius asper*), Omine 1965a (as *Dolichoglyphius asper*), Murakami 1975a*, Shimojana 1978* (as *Dolichoglyphius asper*), Shimojana 1979*, Shimojana 1980, Tanabe 2005
Dolichoglyphius sp. — Omine 1995*
Riukiaria falcifera — Verhoeff 1936*, Takakuwa 1954, Omine 1962, Omine 1965a, Tanabe 2002
Riukiaria holstii — Pocock 1895* (as *Fontaria holstii*), Omine 1962 (as *Rhysodesmus holstii*), Omine 1965a (as *Rhysodesmus holstii*), Tanabe 2002*, Yahata 2005*
Riukiaria pugionifera — Verhoeff 1936*, Hoffman 1949*, Takakuwa 1954*, Omine 1962, Omine 1965a, Omine et al. 1984*, Omine 1987*, Kikunaga et al. 1993*, Omine 1995*, Omine & Ito 1998*
Riukiaria semicircularis — Omine et al. 1982 (as *Rhysolus semicircularis*)

†*Riukiaria spiralipes* — †Omine 1962 (as *Rhysodesmus spiralipes*), †Omine 1965a (as *Rhysodesmus spiralipes*)

Riukiaria variata — Pocock 1895* (as *Fontaria variata*), Omine 1962 (as *Rhysodesmus variatus*), Omine 1965a (as *Rhysodesmus variatus*), Omine et al. 1984* (as *Rhysodesmus variatus*), Omine 1987*, Tanabe 2005

Yaetakaria neptuna — Pocock 1895* (as *Fontaria neptunus*), Hoffman 1949* (as *Yaetakaria youngi*), Omine 1965a (as *Rhysodesmus neptunus*), Tanabe 2005

Aponedyopus maculatus — Omine & Ito 1998*

Asiomorpha coarctata[I] — Omine 1962 (as *Orthomorpha coarctata*), Omine 1987* (as *Orthomorpha coarctata*)

Chamberlinius hualienensis[I] — Higa & Kishimoto 1987*, Omine 1987*, Higa & Kishimoto 1989*, Kikunaga et al. 1993*, Omine 1995*, Takahara et al. 1997, Omine & Ito 1998*, Karasawa et al. 2008*

Helicorthomorpha holstii[I] — Pocock 1895* (as *Strongylosoma holstii*), Omine 1962, Omine 1965a (as *Helicorthomorpha holstii holstii*)

Helicorthomorpha trilobata — Verhoeff 1936* (as *Kochliopus trilobatus*), Takakuwa 1954 (as *Helicorthomorpha holstii trilobata*), Miyosi 1959 (as *Helicorthomorpha holstii trilobata*), Omine 1962 (as *Helicorthomorpha holstii trilobata*), Omine 1987* (as *Helicorthomorpha holstii trilobata*), Omine et al. 1984* (as *Helicorthomorpha holstii trilobata*)

Nedyopus patrioticus patrioticus — Omine 1965a* (as *Nedyopus patrioticus*), Omine 1965b* (as *Nedyopus patrioticus*)

Nedyopus sp. — Karasawa et al. 2008*

Oxidus gracilis[I] — Pocock 1895* (as *Orthomorpha gracilis*), Omine 1965a, Murakami 1975a*, Shimojana 1978*, Shimojana 1979*, Shimojana 1980, Omine et al. 1984*, Omine 1987*, Omine 1995*, Omine & Ito 1998*

Oxidus riukiaria — Omine 1962* (as *Orthomorpha (O.) riukiaria*), Omine 1965a, Tanabe 2005

Ampelodesmus sp. — Karasawa et al. 2008*

Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*), Omine 1965b* (as *Archandrodesmus japonicus*), Shimojana 1979* (as *Archandrodesmus japonicus*), Omine 1987* (as *Archandrodesmus japonicus*), Omine & Ito 1998*

Eutrichodesmus nodulosus — Takakuwa 1954 (as *Kylindogaster nodulosa*), Omine 1965a (as *Kylindogaster nodulosa*), Omine & Ito 1998* (as *Kylindogaster nodulosa*), Tanabe 2005 (as *Kylindogaster nodulosa*)

Eutrichodesmus sp. — Omine & Ito 1998* (as *Eucondylodesmus* sp.), Karasawa et al. 2008* (as *Thelodesmus* sp.)

Corypholophus ryukyuensis — Murakami 1975a*, Shimojana 1980, Tanabe 2005

Kiusiunum nodulosum — Omine 1987* (doubted by Minato 1996)

Niponia nodulosa — Omine 1965a, Omine 1965b*, Shimojana 1979*, Shimojana 1980, Omine 1987*, Nishikawa & Murakami 1994*

Cryptodesmidae sp. — Karasawa et al. 2008*

Epanerchodus simplex — Omine et al. 1984*, Omine 1987*

Epanerchodus subterraneus — Omine 1965a, Murakami 1975a*, Shimojana 1978*, Shimojana 1979*, Shimojana 1980, Tanabe 2005

Epanerchodus sp. — Omine & Ito 1998*, Karasawa et al. 2008*

Polydesmida spp. — Karasawa et al. 2008*

From Okinawa Group in general, Omine (2002) also listed occurrences and/or records of *Symphyopleurium roseum* (as "*Symphyopleurium* sp.") and *Kopidoiulus* sp.

Miyako Group

Miyako-jima Is.

Eudigraphis takakuwai — Omine et al. 1982 (as *Monographis takakuwai*)

Eudigraphis sp. — Murakami 1975a* (as *Monographis* sp.)

Hyleoglomeris stuxbergi — Omine 1962*

Hyleoglomeris yamashinai — Shimojana 1980*

Trichozonium sp. — Omine 1962*

†*Polyconoceras callosus* — †Omine 1965a

Glyphiulus sp. — Omine 1962*, Shimojana 1980*

Riukiaria chelifera — Omine 1965a (as *Rhysodesmus chelifer*)

†*Yaetakaria neptuna* — †Omine 1962 (as *Rhysodesmus neptunus*)

Aponedyopus montanus — Omine et al. 1982

Asiomorpha coarctata[I] — Omine 1962* (as *Orthomorpha coarctata*), Omine et al. 1982 (as *Orthomorpha coarctata*)

Chamberlinius hualienensis[I] — Takahara et al. 1997

Helicorthomorpha holstii[I] — Omine 1965a (as *Helicorthomorpha holstii holstii*)

Helicorthomorpha trilobata — Omine 1962 (as *Helicorthomorpha holstii trilobata*)

Oxidus gracilis[I] — Omine 1965a, Shinohara 1969*, Murakami 1975a*, Shimojana 1980*

Riukiupeltis jamashinai — Verhoeff 1939a*, Takakuwa 1954, Omine 1962, Omine 1965a, Murakami 1975a* (with "?"), Tanabe 2005

Riukiupeltis sp. — Omine et al. 1982

Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*), Omine et al. 1982 (as *Archandrodesmus japonicus*)

Corypholophus ryukyuensis — Murakami 1975a*, Shimojana 1980, Tanabe 2005

Niponia nodulosa — Omine 1962* (as *Onomatoplanus nodulosus*), Omine 1965b*

Irabu-jima Is.

Hyleoglomeris sp. — Yoshigou et al. 2003*

Chamberlinius hualienensis[I] — Yoshigou et al. 2003*

From the Miyako Group in general, in addition to the species listed above, Omine (2002) listed occurrences and/or records of *Rhinotus okabei, Yamasinaium noduligerum, Dolichoglyphius asper asper*, and *Anaulaciulus yamashinai.*

Yaeyama Group

Ishigaki-jima Is.

Eudigraphis takakuwai — Omine 1965a (as *Monographis takakuwai*), Omine et al. 1982 (as *Monographis takakuwai*)

Monographis kraepelini — Omine 1965a, Omine 1965b* (all the records has been doubted by Ishii 1988)

Anaulaciulus yamashinai — Omine 1965a (as *Fusiulus yamashinai*)

Japanioiulus lobatus — Omine 1965a

Spirobolus sp. — Omine 1962 (as *Polyconoceras* sp.), Omine 1965a (as *Polyconoceras callosus*), Omine 1965b* (as *Polyconoceras* sp.), Ikehara et al. 1974* (as *Spirobolus joannisi*), Omine et al. 1982 (as *Acladocricus* sp.), Takano 1989*, Tanabe 2005

Glyphiulus granulatus[I] — Omine 1965b* (as *Formosoglyphius tuberculatus*)

Riukiaria chelifera — Takakuwa 1941* (as *Rhysodesmus chelifer*), Takakuwa 1954 (as *Rhysodesmus chelifer*), Omine 1965a (as *Rhysodesmus chelifer*), Tanabe 2002*

†*Riukiaria falcifera* — †Omine 1965a

Riukiaria semicircularis — Omine et al. 1982 (as *Rhysolus semicircularis*)

Riukiaria variata — Ikehara et al. 1974* (as *Rhysolus variatus*)

Aponedyopus montanus — Omine et al. 1982

Asiomorpha coarctata[I] — Omine et al. 1982 (as *Orthomorpha coarctata*)

Helicorthomorpha holstii[I] — Omine 1965a (as *Helicorthomorpha holstii holstii*)

Oxidus avia — Verhoeff 1937* (as *Orthomorpha avia*), Takakuwa 1954 (as *Orthomorpha (K.) avia*), Omine 1962 (as *Orthomorpha (O.) avia*), Omine 1965a, Tanabe 2005

Oxidus gracilis[I] — Omine 1965a, Shimojana 1973*, Murakami 1975a*

†*Riukiupeltis jamashinai* — †Omine 1965a

Riukiupeltis uenoi — Murakami 1975a*, Shimojana 1980, Tanabe 2005

Riukiupeltis sp. — Omine et al. 1982*

Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*)

Eutrichodesmus nodulosus — Murakami 1975a* (as *Kylindogaster nodulosa*), Omine et al. 1982 (as *Kylindogaster nodulosa*)

Corypholophus ryukyuensis — Murakami 1975a*, Shimojana 1980, Tanabe 2005

Niponia nodulosa — Omine 1965a, Omine 1965b*, Murakami 1975a* (as *Niponia* sp. cf. *nodulosa*), Shimojana 1980*

Iriomote-jima Is.

Eudigraphis takakuwai — Omine et al. 1982* (as *Monographis takakuwai*)

Hyleoglomeris uenoi — Omine et al. 1982

Anaulaciulus pinetorum — Omine et al. 1982* (as *Fusiulus pinetorum*)

Anaulaciulus yamashinai — Omine 1965a (as *Fusiulus yamashinai*), Omine et al. 1982* (as *Fusiulus yamashinai*)

Japanioiulus lobatus — Omine 1965a

Spirobolus sp. — Omine 1965a (as *Polyconoceras callosus*), Omine 1965b* (as *Polyconoceras* sp.), Ikehara et al. 1974* (as *Spirobolus joannisi*), Ikehara & Shimojana 1975* (as *Prospirobolus joannisi*), Omine et al. 1982* (as *Acladocricus* sp.), Takano 1989*, Kikunaga et al. 1993* (as *Prospirobolus joannisi*), Tanabe 2005

Trigoniulus sp. — Ikehara et al. 1974*

†*Riukiaria bifida* — †Omine 1965a (as *Rhysolus bifidus*)

†*Riukiaria chelifera* — †Omine 1965a (as *Rhysodesmus chelifer*)

†*Riukiaria falcifera* — †Omine 1965a

Riukiaria semicircularis — Omine et al. 1982 (as *Rhysolus semicircularis*)

Riukiaria variata — Ikehara et al. 1974* (as *Rhysolus variatus*), Omine et al. 1982* (as *Rhysolus variatus*)

Aponedyopus montanus — Omine et al. 1982*

Asiomorpha coarctata[I] — Omine et al. 1982* (as *Orthomorpha coarctata*)

Helicorthomorpha holstii[I] — Omine 1965a (as *Helicorthomorpha holstii holstii*)

Oxidus gracilis[I] — Omine 1965a, Shimojana 1973*, Shimojana 1980*

†*Riukiupeltis jamashinai* — †Omine 1965a

Riukiupeltis uenoi — Tanabe 2005

Riukiupeltis sp. — Omine et al. 1982*

Cryptocorypha japonica — Omine 1965a (as *Archandrodesmus japonicus*), Omine et al. 1982* (as *Archandrodesmus japonicus*)

Eutrichodesmus nodulosus — Omine et al. 1982* (as *Kylindogaster nodulosa*)

Niponia nodulosa — Omine 1965a, Shimojana 1980*

Taketomi-jima Is.

Oxidus gracilis[I] — Shimojana 1973*

Kohama-jima Is.

Eudigraphis takakuwai — Shimojana 1973* (as *Monographis takakuwai*)

Oxidus gracilis[I] — Shimojana 1973*

Hateruma-jima Is.
Lophoturus okinawai — Higa 1998*
Glyphiulus granulatus[I] — Higa 1998* (as *Glyphiulus septentrionalis*)
Asiomorpha coarctata[I] — Higa 1998* (as *Orthomorpha coarctata*)
Oxidus gracilis[I] — †Shimojana 1980, Higa 1998*

Yonaguni-jima Is.
Eudigraphis sp. — Shimojana 1973*
Riukiaria sp. n. — Tanabe 2005*
Oxidus gracilis[I] — Shimojana 1973*, Shimojana 1980*
Riukiupeltis sp. — Omine 1982*
Oniscodesmidae sp. — Murakami 1975a*
†*Eutrichodesmus nodulosus* — †Omine et al. 1982 (as *Kylindogaster nodulosa*)
Corypholophus ryukyuensis — Murakami 1975a*, Shimojana 1980, Tanabe 2005
Niponia nodulosa — Shimojana 1973*, Shimojana 1980*

In addition to the species listed above, from Yaeyama Group in general, Omine (1962) noted an occurrence and/or a record of *Yaetakaria neptuna*; and Omine (2002) listed occurrences and/or records of *Rhinotus okabei, Yamasinaium noduligerum*, and *Yaetakaria neptuna* (as *Riukiaria neptuna*),

Senkaku Group
Uotsuri-jima Is.
Anaulaciulus yamashinai — Ikehara & Shimojana 1971* (as *Fusiulus yamashinai*)
Riukiaria variata — Ikehara & Shimojana 1971* (as *Rhysodesmus variatus*), Shiraishi & Arai 1980* (as *Rhysodesmus* sp.)
Aponedyopus montanus — Ikehara & Shimojana 1971*, Shiraishi & Arai 1980*
Helicorthomorpha holstii[I] — Ikehara & Shimojana 1971* (as *Helicorthomorpha holstii holstii*)
Niponia nodulosa — Ikehara & Shimojana 1971*

Daito Group
Kita-daito-jima Is.
Eudigraphis takakuwai — Shimojana 1978* (as *Monographis takakuwai*)
Rhinotus okabei — Shimojana 1978* (as *Boninozonium okabei*), Shimojana 1980
Anaulaciulus pinetorum — Shimojana 1978* (as *Fusiulus pinetorum*)
Helicorthomorpha trilobata — Shimojana 1978* (as *Helicorthomorpha holstii trilobata*)
Oxidus avia — Shimojana 1978* (as *Oxidus (Orthomorpha) avia*), Shimojana 1980
Cryptocorypha japonica — Shimojana 1978* (as *Archandrodesmus japonicus*)
Niponia nodulosa — Shimojana 1978*, Shimojana 1980

Minami-daito-jima Is.
Eudigraphis takakuwai — Shimojana 1978* (as *Monographis takakuwai*)
Anaulaciulus pinetorum — Shimojana 1978* (as *Fusiulus pinetorum*), Shimojana 1980
Oxidus avia — Shimojana 1978* (as *Oxidus (Orthomorpha) avia*), Shimojana 1980
Cryptocorypha japonica — Shimojana 1978* (as *Archandrodesmus japonicus*), Shimojana 1980

Species list of millipedes

POLYXENIDA
Lophoproctidae
Lophoturus okinawai Nguyen Duy-Jacquemin et Condé 1982 — **Okinawa-jima Is., Hateruma-jima Is.**

Polyxenidae
Eudigraphis takakuwai (Miyosi 1947) — **Ie-jima Is.**, Kume-jima Is., **Miyagi-jima Is., Okinawa-jima Is.**, Miyako-jima Is., Ishigaki-jima Is., **Iriomote-jima Is., Kohama-jima Is., Kita-daito-jima Is., Minami-daito-jima Is.**
Eudigraphis sp. — **Naka-no-shima Is., Takara-jima Is., Io-tori-shima Is., Okinawa-jima Is., Miyako-jima Is., Yonaguni-jima Is.**
Monographis kraepelini Attems 1907 — Izena-jima Is., Ie-jima Is., Kume-jima Is., Okinawa-jima Is., Ishigaki-jima Is. (all of the records have been doubted by Ishii 1988)

GLOMERIDA
Glomeridae
Hyleoglomeris japonica Verhoeff 1936 — **Okinawa-jima Is.**
Hyleoglomeris stuxbergi (Attems 1909) — **Iheya-jima Is., Okinawa-jima Is., Miyako-jima Is.**
Hyleoglomeris uenoi Miyosi 1955 — **Naka-no-shima Is., Okinawa-jima Is.**, Iriomote-jima Is.
Hyleoglomeris yamashinai Verhoeff 1937 — **Kouri-jima Is., Okinawa-jima Is., Miyako-jima Is.**
Hyleoglomeris sp. — **Kume-jima Is., Okinawa-jima Is., Irabu-jima Is.**

PLATYDESMIDA
Andrognathidae
Yamasinaium noduligerum Verhoeff 1939 — **Iheya-jima Is., Okinawa-jima Is.**
Trichozonium sp. — **Okinawa-jima Is., Miyako-jima Is.**

POLYZONIIDA
Siphonotidae
Rhinotus okabei (Takakuwa 1942) — **Io-tori-shima Is., Okinawa-jima Is., Kita-daito-jima Is.**
Siphonotidae sp. n. — **Amami-o-shima Is.** (see Minato 1992)

SIPHONOPHORIDA
Siphonophoridae
Pterozonium spinosum (Takakuwa 1942) — †Iheya-jima Is., **Noho-jima Is., Ie-jima Is., Okinawa-jima Is.**
Siphonophorida sp. — **Okinawa-jima Is.**

JULIDA
Nemasomatidae
Sinostemmiulus sp. — **Okinawa-jima Is.**

Julidae
Anaulaciulus okinawaensis Shinohara 1990 — **Okinawa-jima Is.**
Anaulaciulus pinetorum (Attems 1909) — **Okinawa-jima Is., Iriomote-jima Is., Kita-daito-jima Is., Minami-daito-jima Is.**
Anaulaciulus yamashinai (Verhoeff 1939) — Yaku-shima Is., Naka-no-shima Is., Takara-jima Is., Amami-o-shima Is., **Iheya-jima Is., Kume-jima Is., Kouri-jima Is., Okinawa-jima Is.**, Ishigaki-jima Is., **Iriomote-jima Is., Uotsuri-jima Is.**
Anaulaciulus sp. — **Amami-o-shima Is.**
Japanioiulus lobatus Verhoeff 1937 — **Okinawa-jima Is.**, Ishigaki-jima Is., Iriomote-jima Is.
Trichopachyiulus (Japanopachyiulus) niponicus[I] Miyosi 1957 — **Okinawa-jima Is.**
Julida sp. — **Okinawa-jima Is.**

SPIROBOLIDA
Rhinocricidae
†*Polyconoceras callosus* (Karsch 1881) — †Miyako-jima Is.

Spirobolellidae
Paraspirobolus lucifugus[I] (Gervais 1836) — **Okinawa-jima Is.**

Spirobolidae
Spirobolus sp. — **Ishigaki-jima Is., Iriomote-jima Is.**

Trigoniulidae
Trigoniulus corallinus[I] (Gervais 1842) — **Okinawa-jima Is.**
Trigoniulus sp. — **Iriomote-jima Is.**

SPIROSTREPTIDA
Cambalopsidae
Glyphiulus granulatus[I] (Gervais 1847) — **Okinoerabu-jima Is., Okinawa-jima Is., Ishigaki-jima Is., Hateruma-jima Is.**
Glyphiulus sp. — **Okinawa-jima Is., Miyako-jima Is.**
Dolichoglyphius asper asper Verhoeff 1938 — **Ikei-jima Is., Miyagi-jima Is., Hamahiga-jima Is., Okinawa-jima Is.**
Dolichoglyphius asper brevipes Murakami 1975 — **Kume-jima Is.**
Dolichoglyphius sp. — **Okinawa-jima Is.**

CHORDEUMATIDA
Metopidiotrichidae
Nipponothrix yuwandake Shear et Tanabe 1994 — **Amami-o-shima Is.**

POLYDESMIDA
Xystodesmidae
Riukiaria bifida (Takakuwa 1942) — **Amami-o-shima Is.**, †Iriomote-jima Is.
Riukiaria chelifera (Takakuwa 1941) — **Ishigaki-jima Is.**, †Iriomote-jima Is., Miyako-jima Is.
Riukiaria falcifera Verhoeff 1936 — **Iheya-jima Is., Okinawa-jima Is.**, †Ishigaki-jima Is., †Iriomote-jima Is.
Riukiaria holstii (Pocock 1895) — **Okinawa-jima Is.**
Riukiaria jamila Tanabe 1990 — **Yaku-shima Is.**
Riukiaria puella Tanabe 1988 — **Yaku-shima Is.**
Riukiaria pugionifera Verhoeff 1936 — **Amami-o-shima Is.**, Toku-no-shima Is., Okinoerabu-jima Is., **Okinawa-jima Is.**
Riukiaria scutata (Takakuwa 1942) — **Amami-o-shima Is.**
Riukiaria semicircularis (Takakuwa 1942) — Okinawa-jima Is., Ishigaki-jima Is., Iriomote-jima Is.
Riukiaria spiralipes (Takakuwa 1942) — †Izena-jima Is., †Ie-jima Is., **Kume-jima Is.**, †Okinawa-jima Is.
Riukiaria variata (Pocock 1895) — **Okinawa-jima Is., Ishigaki-jima Is., Iriomote-jima Is., Uotsuri-jima Is.**
Riukiaria sp. n. — **Yonaguni-jima Is.** (see Tanabe 2005)
Riukiaria sp. — **Naka-no-shima Is.**
Yaetakaria neptuna (Pocock 1895) — †Kume-jima Is., **Okinawa-jima Is.** †Miyako-jima Is.
Xystodesmus nikkoensis (Chamberlin et Wang 1953) — **Yaku-shima Is.**
Xystodesmus sp. n. — **Kume-jima Is.** (see Tanabe & Shinohara 1996)
Xystodesmus sp. — **Takara-jima Is.**

Paradoxosomatidae
Aponedyopus maculatus Takakuwa 1942 — **Okinawa-jima Is.**
Aponedyopus montanus Verhoeff 1939 — Miyako-jima Is., Ishigaki-jima Is., **Iriomote-jima Is., Uotsuri-jima is.**
Asiomorpha coarctata[I] (De Saussure 1860) — **Okinawa-jima Is., Miyako-jima Is.**, Ishigaki-jima Is., **Iriomote-jima Is., Hateruma-jima Is.**
Chamberlinius hualienensis[I] Wang 1956 — **Amami-o-shima Is.**, Toku-no-shima Is., **Okinoerabu-jima Is.**, Kume-jima Is., **Okinawa-jima Is.**, Miyako-jima Is., **Irabu-jima Is.**
Helicorthomorpha holstii[I] (Pocock 1895) — **Iheya-jima Is.**, Kume-jima Is., **Okinawa-jima Is.**, Miyako-jima Is., Ishigaki-jima Is., Iriomote-jima Is., **Uotsuri-jima Is.**

Helicorthomorpha trilobata (Verhoeff 1936) — **Takara-jima Is., Amami-o-shima Is., Iheya-jima Is., Okinawa-jima Is.**, Miyako-jima Is., **Kita-daito-jima Is.**

Kronopolites sp. — **Kouri-jima Is.**

Nedyopus patrioticus patrioticus (Attems 1898) — **Amami-o-shima Is., Okinawa-jima Is.**

Nedyopus sp. — **Takara-jima Is., Okinoerabu-jima Is., Kume-jima Is., Okinawa-jima Is.**

Oxidus avia (Verhoeff 1937) — **Ishigaki-jima Is., Kita-daito-jima Is., Minami-daito-jima Is.**

Oxidus gracilis[l] (Koch 1847) — †Tane-ga-shima Is., **Naka-no-shima Is., Takara-jima Is., Amami-o-shima Is., Okinoerabu-jima Is., Io-tori-shima Is.**, Iheya-jima Is., Izena-jima Is., Ie-jima Is., **Kume-jima Is., Ikei-jima Is., Miyagi-jima Is., Okinawa-jima Is., Miyako-jima Is., Ishigaki-jima Is., Iriomote-jima Is., Taketomi-jima Is., Kohama-jima Is., Haterumа-jima Is., Yonaguni-jima Is.**

Oxidus riukiaria (Verhoeff 1940) — **Okinawa-jima Is.**

Riukiupeltis jamashinai Verhoeff 1939 — **Miyako-jima Is.**, †Ishigaki-jima Is., †Iriomote-jima Is.

Riukiupeltis uenoi Murakami 1975 — **Ishigaki-jima Is.**, Iriomote-jima Is.

Riukiupeltis sp. — Miyako-jima Is., **Ishigaki-jima Is., Iriomote-jima Is., Yonaguni-jima Is.**

Oniscodesmidae

Oniscodesmidae sp. — **Yonaguni-jima Is.**

Pyrgodesmidae

Ampelodesmus sp. — **Okinawa-jima Is.**

Cryptocorypha japonica (Miyosi 1956) — Yaku-shima Is., **Naka-no-shima Is., Takara-jima Is.**, Amami-o-shima Is., **Io-tori-shima Is., Iheya-jima Is., Izena-jima Is.**, Ie-jima Is., †Kume-jima Is., **Okinawa-jima Is.**, Miyako-jima Is., Ishigaki-jima Is., **Iriomote-jima Is., Kita-daito-jima Is., Minami-daito-jima Is.**

Haplodesmidae

Eutrichodesmus nodulosus (Verhoeff 1939) — **Okinawa-jima Is., Ishigaki-jima Is., Iriomote-jima Is.**, †Yonaguni-jima Is.

Eutrichodesmus sp. — **Okinawa-jima Is.**

Opisotretidae

Corypholophus ryukyuensis Murakami 1975 — **Toku-no-shima Is., Okinoerabu-jima Is., Yoron-jima Is., Okinawa-jima Is., Miyako-jima Is., Ishigaki-jima Is., Yonaguni-jima Is.**

Cryptodesmidae

Kiusiunum nodulosum Verhoeff 1942 — Yaku-shima Is., Amami-o-shima Is., Okinawa-jima Is. (doubted by Minato 1996)

Kiusiunum sekii Miyosi 1958 — **Yaku-shima Is.**

Kiusiunum sp. n. — **Amami-o-shima Is., Toku-no-shima Is.** (see Minato 1996)

Niponia nodulosa Verhoeff 1931 — Yaku-shima Is., **Naka-no-shima Is.**, Amami-o-shima Is., **Iheya-jima Is.**, Izena-jima Is., Ie-jima Is., **Kume-jima Is., Okinawa-jima Is., Miyako-jima Is., Ishigaki-jima Is., Iriomote-jima Is., Yonaguni-jima Is., Uotsuri-jima Is., Kita-daito-jima Is.**

Cryptodesmidae sp. — **Okinawa-jima Is.**

Polydesmidae

Epanerchodus simplex Takakuwa 1954 — **Okinawa-jima Is.**

Epanerchodus subterraneus Verhoeff 1938 — **Iheya-jima Is., Miyagi-jima Is., Okinawa-jima Is.**

Epanerchodus sp. — **Amami-o-shima Is.**, Toku-no-shima Is., **Okinawa-jima Is.**

Polydesmus tanakai Murakami 1970 — **Okinoerabu-jima Is.**

Polydesmida spp. — **Okinawa-jima Is.**

Discussion

The millipede species reported from the Ryukyu Archipelago (58 species and one subspecies, excluding unidentified taxa), Senkaku Group (5), and Daito Group (7) totals 58 species (and one subspecies). Eight of these are currently considered to be introduced to the region. This assemblage represents 21 families in 10 different orders. Some species whose taxonomic statuses are unsettled will be added to the figures (e.g. *Sinostemmiulus* sp., *Spirobolus* sp., and *Ampelodesmus* sp.).

We must admit that we are aware of the fact that many of these records, in particular those not supported by voucher specimen, await confirmation of their taxonomical allocation. Part of the records might well be proved as synonym or misidentification, but this should be the subject of further studies. Thus, our lists, and especially the resultant figures shown above, must be viewed only as ephemeral efforts. To review the validity of the records listed above, further effort examining the availability of actual specimens deposited, and above all, professional and updated survey in the field are required.

Still, it is apparent that the small number reported in the latest account for the Ryukyu Archipelago (Omine 2002: 39 species and one subspecies) is a serious underestimate. Eight species described from the archipelago (*Anaulaciulus okinawaensis, Nipponothrix yuwandake, Oxidus avia, O. riukiaria, Riukiaria jamila, R. puella, Kiusiunum sekii*, and *Polydesmus tanakai*), and 14 previously recorded species missed by Omine (2002) are now incorporated into the updated inventory. On the other hand, two Platydesmida species, *Symphyopleurium hirsutum* (as "*B. nodulosa*" in the corresponding scientific name), *Symphyopleurium roseum* (as "*Symphyopleurium* sp."), and the Julida *Kopidoiulus* sp. listed in Omine (2002) are tentatively omitted here simply

because there is no other record supporting their occurrence in the region which is otherwise highly unlikely, too. Similarly, other records such as *Dolichoglyphius asper asper* from the Amami and Miyako Group, *Riukiaria bifida* and *Yaetakaria neptuna* from the Yaeyama Group, and *Riukiaria holstii* from the Tokara and Amami Groups in Omine (2002) lack the corresponding background. Also, occurrence of *Riukiaria semicircularis* in the archipelago is not supported by firsthand collection. These records are handled here as unreliable, and, in best case, require further confirmation.

The greatest number of indigenous species occurs on Okinawa-jima Island (at least 32 species) comprising more than half the total number of non-alien species recorded. The numbers of species in other islands in descending order are 14＋ (Ishigaki-jima), 12＋ (Iriomote-jima and Amami-o-shima), and 10 or less (remainders). Thus, species diversity of Okinawa-jima Island is almost twice of the following islands. However, on the basis of a comparable number of reference works from Okinawa-jima, we suppose that the lack of intensive collecting in most of islands rather than a real impoverishment of these faunas probably accounts for the disproportion of the faunal diversity among the islands, although Okinawa-jima's large area and extensive cover of humid forest cannot be ignored.

There is little doubt that additional sampling in the Ryukyu Archipelago will increase the number of species known from each island, and it also illuminates details of the distribution of species. Further comments on selected millipede orders are provided below.

POLYXENIDA

Ishii (1988) suggested that all the records of *Monographis kraepelini* from the Ryukyu Archipelago shoud be treated as a result of misidentification.

SIPHONOPHORIDA

The specific allocation of the order Siphonophorida previously reported from the Ryukyu Archipelago still remains uncertain, since the whole group is in a taxonomical mess and requires complete revision (Tanabe 2005; Read & Enghoff 2009).

SPIROSTREPTIDA

Glyphiulus septentrionalis described by Murakami (1975a) had been regarded as an endemic element to Okinawa-jima Island (e.g. Shinohara & Tanabe 1999). Recently this species has been synonymized under the widespread *Glyphiulus granulatus*, and hence it became to be considered as an introduced species to the region (Golovatch et al. 2007). The type locality of *Dolichoglyphius asper asper* was originally just given as a cave in the Ryukyu Archipelago (Verhoeff 1938). Murakami (1975a) identified it as Nisshu-do (＝Kin-do) Cave in Okinawa-jima Island.

POLYDESMIDA

Xystodesmidae

Distribution of the various xystodesmid species in the Ryukyu Archipelago are mostly unclear. Moreover, taxonomic confusion surrounding the genera (*Riukiaria, Yaetakaria*, and *Xystodesmus*) makes almost impossible to give reasonably accurate statements on the distribution of some species. All specific range records accounted here should be considered with reservations, since further investigation on distribution and taxonomy of xystodesmids occurring in this region is strongly required.

In addition, several curious records have added unnecessary confusion to the situation. For example, Omine (2002) did not include the Okinawa Group as the ranges of two *Riukiaria* species (*R. holstii* and *R. variata*) described by Pocock (1895). However, Okinawa Group should have been incorporated into their ranges since the type locality of them, Great Loo-Choo, is actually the old name of Okinawa-jima Island (see e.g. Omine 1980; Tanabe 2005). On the other hand, Chamberlin and Wang (1953) reported *Riukiaria bifida* (as *Rhysolus bifidus*) from an unknown locality "Rinkin" and noted "taken in 1933 by Takakuwa", while no locality as such was given in the original description (Takakuwa 1942). This record seems to have been unanimously accepted by Miyosi (1959) and Shinohara (1977) as "Ryukyu" (their usage implicitly indicates both the Okinawa and Yaeyama Groups). However, we suggest that there is no acceptable record of *R. bifida* other than from Amami-o-shima Island in the Amami Group.

Paradoxosomatidae

The type locality of *Oxidus riukiaria* was given as an unknown locality "Kitaoagari" of the Ryukyu Archipelago (Verhoeff 1940). Until now, occurrence of this species has been only known from Okinawa-jima Island in the archipelago (Tanabe 2005), but it has also been reported from Danjo Islands, off the western coast of Kyushu (Minato 1973).

Haplodesmidae

The genus *Kylindogaster*, as well as *Thelodesmus* Miyosi 1951, and *Eucondylodesmus* Miyosi 1956, have recently been synonymized under *Eutrichodesmus* Silvestri 1910 (Golovatch et al. 2010). The type locality of *Eutrichodesmus nodulosus* (as *Kylindogaster nodulosa*) was originally given as "a cave in Fukafuguza Island of the Ryukyu Archipelago" (Verhoeff 1939b). Murakami (1975a) specified that the type specimen was collected at "Fukafugi-iizaa Cave" of Ishigaki-jima Island.

Polydesmidae

The type locality of *Epanerchodus subterraneus* was given only as "a cave in the Ryukyu Archipelago" in the original description (Verhoeff 1938). Murakami (1975a) provided detailed information on the type locality, Nisshu-do (＝Kin-do) Cave in Okinawa-jima Island.

Acknowledgments

We thank Dr. Mamoru Toda (University of the Ryukyus) for his continuous comments and help during our survey. We also thank Prof. Hidetoshi Ota (University of Hyogo), Dr. Koji Sugio (University of the Ryukyus), Prof. Nobuo Tsurusaki (Tottori University), and the Amami Wildlife Center for literature. This study was supported partly by the Hungarian National Research Fund (OTKA No. 69235) to ZK.

References

Chamberlin, R. V. & Wang, Y. M. 1953. Records of millipeds (Diplopoda) from Japan and other Oriental areas, with descriptions of new genera and species. American Museum Novitates, 1621: 1–13.

Golovatch, S. I., Geoffroy, J.-J., Mauriès, J.-P. & Van den Spiegel, D. 2007. Review of the millipede genus *Glyphiulus*, Gervais, 1847, with descriptions of new species from Southeast Asia (Diplopoda, Spirostreptida, Cambalopsidae). Part 1: the *granulatus*-group. Zoosystema, 29(1): 7–49.

Golovatch, S. I., Mikhaljova, E. V., Korsós, Z. & Chang, H.-W. 2010. The millipede family Haplodesmidae (Diplopoda, Polydesmida) recorded in Taiwan for the first time, with the description of a new species. Tropical Natural History, Bangkok, 10(1): 27–36.

Higa, Y. 1998. Small animals of Hateruma-jima Island. pp. 32–64. In: Okinawa Prefectural Museum (ed.) Report on the General Survey of Hateruma-jima Island. Okinawa Prefectural Museum, Naha, 291 pp. (in Japanese)

Higa, Y. & Kishimoto, T. 1987 "1986". Unusual outbreak and control of millipede, *Chamberlinius haulienensis* Wang in Okinawa [sic]. Annual Report of Okinawa Prefectural Institute of Public Health, 20: 62–72. (in Japanese)

Higa, Y. & Kishimoto, T. 1989. Expansion of distribution area of millipede, *Chamberlinius haulienensis* Wang in Okinawa [sic]. Annual Report of Okinawa Prefectural Institute of Public Health, 23: 72–76. (in Japanese)

Higa, Y., Kishimoto, T. & Shinohara, K. 1993. The outbreak of the millipede, *Trigoniulus lumbricinus* (Gerstaecker, 1873) and control in Okinawa Islands. Annual Report of Okinawa Prefectural Institute of Public Health, 27: 33–40.

Hoffman, R. L. 1949. A new genus of xystodesmid millipeds from the Riu Kiu Archipelago with notes on related Oriental genera. Natural History Miscellanea, 45: 1–6.

Ikehara, S., Omine, T., Shimojana, M. & Abe, T. 1974. Outline of the studies on the terrestrial animal communities in the forests of Iriomote and Ishigaki Island. pp. 51–61, one table. In: Ikehara, S. (ed.) Ecological Studies of Nature Conservation of the Ryukyu Islands (I). University of the Ryukyus, Naha, 275 pp. (in Japanese)

Ikehara, S. & Shimojana, M. 1971. The terrestrial animals of Senkaku Islands. pp. 85–114, pls. Z1-Z6. In: Ikehara, S. (ed.) Survey Report on the Senkaku Islands. University of the Ryukyus, Naha, 140 pp. 36 pls. (in Japanese with English summary) [Myriapods were identified by Tetsuo Omine]

Ikehara, S. & Shimojana, M. 1975. Terrestrial Animals of Okinawa. Fudokisha, Naha, 143 pp. (in Japanese)

Ishii, K. 1988. On the significance of the mandible as a diagnostic character in the taxonomy of penicillate diplopods (Diplopoda: Polyxenidae). Can. Entomol., 120: 955–963.

Jeekel, C. A. W. 1952. Milliped miscellany. Entomologische Berichten, 14(323): 71–77.

Jeekel, C. A. W. 2001. A bibliographic catalogue of the Siphonophorida (Diplopoda). Myriapod Memoranda, 3: 44–71.

Karasawa, S., Beaulieu, F., Sasaki, T., Bonato, L., Hagino, Y., Hayashi, M., Itoh, R., Kishimoto, T., Nakamura, O., Nomura, S., Nunomura, N., Sakayori, H., Sawada, Y., Suwa, Y., Tanaka, S., Tanabe, T., Tanikawa, A. & Hijii, N. 2008. Bird's nest ferns as reservoirs of soil arthropod biodiversity in a Japanese subtropical rainforest. Edaphologia, 83: 11–30.

Kikunaga, T., Kinjyo, H. & Kuniyoshi, M. 1993. Studies on the constituents of smells from some Okinawan local millipedes. Bulletin of the College of Science, University of the Ryukyus, 56: 91–112. (in Japanese with English abstract)

Korsós, Z. 2004. Checklist and bibliography of millipedes (Diplopoda) of Taiwan. Collection and Research, 17: 11–32.

Minato, H. 1973. Myriapods of the Danjo Islands. pp. 127–128. In: Nagasaki Biological Society (ed.) Fauna and flora of the Danjo Islands (Reports of the Nagasaki Biological Society Expedition to the Danjo Islands). Nagasaki Biological Society, Nagasaki, 224 pp. (in Japanese)

Minato, H. 1992. On a siphonotid species collected in Amami-o-shima Island. Takakuwaia, 24: 81-83. (in Japanese)

Minato, H. 1996. An undescribed species of *Kiusiunum* (Diplopoda, Cryptodesmidae) from the Amami Islands. Nanki-Seibutsu, 38(1): 35–36. (in Japanese with English abstract)

Miyosi, Y. 1955. The Tokara Group as seen by a myriapodologist. Collecting and Breeding, 17(11): 335–336, 338. (in Japanese)

Miyosi, Y. 1958. Beiträge zur Kenntnis japanischer Myriopoden 26. Aufsatz: Über zwei neue Arten von *Kiusiunum* (Diplopoda). Zool. Sci., 67(10): 301–303. (in Japanese with German abstract)

Miyosi, Y. 1959. Über Japanische Diplopoden. Arachnological Society of East Asia, Osaka, 223 pp. 19 pls. (in Japanese)

Murakami, Y. 1970. Two new cave-dwelling millipeds from Japan. Annot. Zool. Japon., 43(2): 105–111.

Murakami, Y. 1975a. The cave myriapods of the Ryukyu Islands (I). Bull. Natn. Sci. Mus., Tokyo, Ser. A, 1(2): 85–113.

Murakami, Y. 1975b. The cave myriapods of the Ryukyu Islands (II). Bull. Natn. Sci. Mus., Tokyo, Ser. A, 1(3): 157–167.

Murakami, Y. 1993. Diplopoda, Pauropoda, Chilopoda, and Symphyla. pp. 95–106. In: Wildlife Division, Nature Conservation Bureau, Ministry of the Environment, Government of Japan (ed.) Catalogue of Japanese Wildlife (Invertebrates I). Japan Wildlife Research Center, Tokyo, 106 pp. (in Japanese)

Nguyen Duy-Jacquemin, M. & Condé, B. 1982. Lophoproctidés insulaires de l'océan Pacifique (Diplopodes Pénicillates). Bulletin du Muséum national d'histoire naturelle, Paris, Série 4, Section A, Zoologie, biologie et écologie animals, 4(1–2): 95–118. (in French with English abstract)

Nishikawa, Y. & Murakami, Y. 1994. Distributional records on Japanese millipeds (III). Faculty of Letters Review, Otemon Gakuin University, 29: 207–225. (in Japanese)

Omine, T. 1962. List of Diplopa of Okinawa Islands [sic]. Okidai Ronso, 2(1): B1-B6. (in Japanese with English abstract)

Omine, T. 1963. Materials for the Myriapoda and the Mollusca on the island (Symposium on the Iheya Islands). Okidai Ronso, 3(2): 86–103. pls. 18–19. (in Japanese)

Omine, T. 1965a. A fauna of Diplopoda on Okinawa. Okidai Ronso, 6(1): A1-A15, one table. (in Japanese)

Omine, T. 1965b. Some new additions to the Diplopods fauna of Okinawa. Biol. Mag. Okinawa, 2(4): 45–49. (in Japanese)

Omine, T. 1977. An outline of myriapoda fauna in Takara-jima and Nakano-shima, the Tokara Islands. pp. 151–162. In: Ikehara S. (ed.) Ecological Studies of Nature Conservation of the Ryukyu Islands-(III). University of the Ryukyus, Naha. 202 pp.

Omine, T. 1980. Centipedes and millipedes of Okinawa. Nature and Animals, 10(8): 24–30. (in Japanese)

Omine, T. 1983. Millipedes. pp. 727–728. In: Okinawa Encyclopedia Publishing Office (ed.) Okinawa Encyclopedia (Volume 3). Okinawa Times, Naha, 1010 pp. (in Japanese)

Omine, T. 1984. Myriapods of the Ryukyu Archipelago. pp. 321–335. In: Life of Okinawa Edditing Comitee (ed.) Life of Okinawa. Okinawa Association of Biology Education, Naha, 408 pp. (in Japanese)

Omine, T. 1987. Millipedes of Kunigami Area. pp. 40–42. In: Board of Education, Okinawa Prefecture (ed.) Special Animals of

Kunigami District in Okinawa Island. Board of Education, Okinawa Prefecture, Naha, 61 pp. (in Japanese)
Omine, T. 1995. A study of conservation and ecosystem on the Okinawa Islands. Okinawa Daigaku Kiyo, 12: 31–78. (in Japanese)
Omine, T. 2000. Myriapods. pp. 112–125. In: Japan Wildlife Research Center (ed.) Survey Report of the Rare Wild Animals in Amami-o-shima Island. Japan Wildlife Research Center, Tokyo, total page unknown. (in Japanese)
Omine, T. 2002. Distributional characteristics of the myriapods in the Ryukyu Arc. pp. 151–162. In: Kimura, M. (ed.) The Formation of the Ryukyu Arc and Migration of Biota to the Arc. Okinawa Times, Naha, 206 pp. (in Japanese)
Omine, T. & Ito, Y. 1998. Abundance and diversity of soil macrofauna of forests in Yanbaru, northern montane part of Okinawa Island, with special reference to removal of undergrowth. Okinawa Daigaku Kiyo, 15: 131–159.
Omine, T., Nakatamari, S. & Takamine, H. 1982. Preliminary survey on the soilzoological fauna on the center of Iriomote-Island (river-side of the Itarasiki and Urauchi river).—Main collection of cryptostigmate, Myriapoda and formicidae [sic]. Okinawa Daigaku Kiyo, 2: 97–139. (in Japanese)
Omine, T., Nakatamari, S. & Takamine, H. 1983. An outline of the studies on soil animal fauna on the Iō-torishima Islands—the main fauna of Myriapoda, cryptostigmato and formicidae [sic]. Okinawa Daigaku Kiyo, 3: 11–39. (in Japanese)
Omine, T., Nakatamari, S. & Takamine, H. 1984. On the soil animals falling into the gutter of Okuni-mountain path in Kunigami-son, Okinawa Island. Preliminary report. Biol. Mag. Okinawa, 22: 71–78. (in Japanese with English abstract)
Ota, H. 2000. The current geographic faunal pattern of reptiles and amphibians of the Ryukyu Archipelago and adjacent regions. Tropics, 10: 51–62.
Pocock, R. I. 1895. Report upon the Chilopoda and Diplopoda obtained by P. W. Bassett-Smith, Esq., Surgeon R. N., and J. J. Walker, Esq., R. N., during the Cruise in the Chinese Seas of H. M. S. 'Penguin', Commander W. U. Moore commanding. Annals and Magazine of Natural History, including Zoology, Botany and Geology, Series 6, 15: 346–372. pl. 11.
Read, H. J. & Enghoff, H. 2009. The order Siphonophorida — A taxonomist's nightmare? Lessons from a Brazilian collection. Soil Organisms, 81(3): 543–556.
Shear, W. A. & Tanabe, T. 1994. Japanese chordeumatid millipeds. II. The new genus *Nipponothrix* (Diplopoda, Chordeumatida, Metopidiotrichidae). Myriapodologica, 3(6): 43–51.
Shelley, R. M. 2003 "2002". A revised, annotated, family-level classification of the Diplopoda. Arthropoda Selecta, 11(3): 187–207.
Shimojana, M. 1973. Results of the speleological survey in Yaeyama Islands. Journal of Okinawa Association of Biology Education, 6: 1–26. (in Japanese)
Shimojana, M. 1978. Cave faunas in Minami- and Kita-daito-jima Islands and the southern part of Okinawa-jima Island. pp. 75–111. In: Board of Education, Okinawa Prefecture (ed.) Survey Report on Caves in Okinawa Prefecture I. Board of Education, Okinawa Prefecture, Naha, 137 pp. (in Japanese) [identification was helped by Tetsuo Omine]
Shimojana, M. 1979. Cave animals of Okinawa Island and adjacent islands. pp. 97–153. In: Board of Education, Okinawa Prefecture (ed.), Survey Report on Caves in Okinawa Prefecture II. Board of Education, Okinawa Prefecture, Naha. 156 pp. (in Japanese)
Shimojana, M. 1980. Cave animals of Sakishima (Miyako and Yaeyama Islands). pp. 103-142. In: Board of Education, Okinawa Prefecture (ed.) Survey Report on Caves in Okinawa Prefecture III. Board of Education, Okinawa Prefecture, Naha. 142 pp. (in Japanese)
Shinohara, K. 1964. Myriapods of Kagoshima Prefecture and how to collect and study them. a supplement 1–11. In: Kagoshima Prefecture Science Education Association (ed.) Nature of Kagoshima. Kagoshima Prefecture Science Education Association, Kagoshima. 371 pp. (in Japanese)
Shinohara, K. 1969. Myriapods of the Nansei Islands. Takakuwaia, 2: 4. (in Japanese)
Shinohara, K. 1977. Revaluation on *Riukiaria* (Diplopoda). Acta Arachnol., 27 (special number): 115–119. (in Japanese with English abstract)
Shinohara, K. 1990. Three new species of the genus *Anaulaciulus* (Diplopoda: Julidae) from Japan. Edaphologia, 42: 21–25.
Shinohara, K. & Higa, Y. 1997. A new record of the luminous millipede, *Spirobolellus takakuwai* Wang, 1961 from Okinawa, Japan. Edaphologia, 59: 61–62. (in Japanese with English abstract)
Shinohara, K. & Tanabe, T. 1999. Diplopoda. pp. 647–683. In: Aoki, J. (ed.) Pictorial Keys to Soil Animals in Japan. Tokai Univ. Press, Tokyo, 39＋1076 pp. (in Japanese)
Shiraishi, A. & Arai, A. 1980. Terrestrial zoological survey (2) Mainly mammals. pp. 46-86. In: Okinawa Development Agency (ed.) Survey Report on the Senkaku Islands (Scientific Survey Edition). Okinawa Development Agency, Naha, 244 pp. (in Japanese) [Myriapods were identified by Yoshiteru Murakami]
Sierwald, P. & Bond, J. E. 2007. Current status of the myriapod class Diplopoda (millipedes): taxonomic diversity and phylogeny. Annu. Rev. Entomol., 52: 401–420.
Takahara, K., Toyama, M., Kohama, T., Kochi, Y., Chinen, M. & Higa, Y. 1997. Naturalized Animals in Okinawa. Okinawa Shuppan, Urasoe, 235 pp. (in Japanese)
Takakuwa, Y. 1941. Rhysodesmus-Arten aus Japan. Transactions of the Natural History Society of Formosa, 31(217–218): 413–415. (in German with Japanese abstract)
Takakuwa, Y. 1942. Ueber weitere japanische Rhysodesmusarten. Transactions of the Natural History Society of Formosa, 32(224): 197–203. (in German with Japanese abstract)
Takakuwa, Y. 1954. The Diplopods of Japan and Adjacent Areas. Japan Society for the Promotion of Science, Tokyo, vi＋4＋241＋10 pp. (in Japanese with some descriptions in German)
Takakuwa Y. & Takashima, H. 1942. Outline of Micronesian myriapods with a report on the discovery of a polyxenida species from Japan. Acta Arachnol., 7: 120–124. (in Japanese)
Takano, M. 1989. Investigation of a Japanese spirobolid. Takakuwaia, 21: 3–5. (in Japanese)
Tanabe, T. 1988. Two new species of the genus *Riukiaria* from Kyushu and Is. Yaku-shima, Japan (Diplopoda: Polydesmida: Xystodesmidae). Acta Arachnol., 37: 37–45.
Tanabe, T. 1990. A new millipede of the genus *Riukiaria* from Is. Yaku-shima, Japan (Diplopoda: Polydesmida: Xystodesmidae). Zool. Sci., 7: 443–447.
Tanabe, T. 1992. Millipedes on Kume-jima Island. Takakuwaia, 24: 65–66. (in Japanese)
Tanabe, T. 2002. Revision of the millipede genus *Parafontaria* Verhoeff, 1936 (Diplopoda, Xystodesmidae). J. Nat. Hist., 36: 2139–2183.
Tanabe, T. 2005. Millipedes. pp. 298, 305–310. In: Nature Conservation Division, Department of Cultural & Environmental Affairs, Okinawa Prefectural Government (ed.) Threatened Wildlife in Okinawa, second edition (Animals) —Red Data Okinawa—. Nature Conservation Division, Department of Cultural & Environmental Affairs, Okinawa Prefectural Government, Naha, 561 pp. (in Japanese).
Tanabe, T. & Shinohara, K. 1996. Revision of the millipede genus *Xystodesmus*, with reference to the status of the tribe Xystodesmini (Diplopoda: Xystodesmidae). J. Nat. Hist., 30: 1459–1494.
Uejyou, S. 1991. Diplopoda and land shells of Kouri-jima, the Okinawa Islands. Survey Report of the Okinawa Prefectural Museum, 8: 7–14. (in Japanese)
Verhoeff, K. W. 1936. Zur Kenntnis ostasiatischer Strongylosomiden und Fontariiden. 149. Diplopoden-Aufsatz. Zool. Anz., 115: 297–

311. (in German)
Verhoeff, K. W. 1937. Zur Kenntnis ostasiatischer Diplopoden. II. Zool. Anz., 119: 33–40. (in German)
Verhoeff, K. W. 1938. Ostasiatische Höhlendiplopoden (148. Diplopoden-Aufsatz.). Sonderdruck aus den Mitteilungen über Höhlen- und Karstforschung, 1938: 83–93. (in German)
Verhoeff, K. W. 1939a. Zur Kenntnis ostasiatischer Diplopoden. III. Zool. Anz., 127: 113–125. (in German)
Verhoeff, K. W. 1939b. Zur Kenntnis ostasiatischer Diplopoden. IV. Zool. Anz., 127: 273–285. (in German)
Verhoeff, K. W. 1939c. Diplopoden von der Ryukyu-Insel Okinawa. Transactions of the Biogeographical Society of Japan, 3(2): 118–122. (in German)
Verhoeff, K. W. 1940. Zur Kenntnis ostasiatischer Diplopoden V (Polydesmoidea). Zool. Anz., 131: 129–145. (in German)
Yahata, K. 2005. Geographical variations of *Riukiaria holstii* (Pocock, 1895) (Diplopoda, Polydesmida, Xystodesmidae) in Okinawa Island. Zool. Sci., 22: 1515–1516.
Yamaguchi, T., Izumi, S., Takemura, K., Torigoe, H., Matunaga, T. & Nagata, K. 2000. Annual occurrence of *Chamberlinius haulienensis* Wang on Amami-Oshima Island and possible chemicals for controlling it [sic]. Kyushu Plant Protection Research, 46: 118–122. (in Japanese)
Yoshigou, H. & Tamura, H. 2006. The cave fauna of Takara-jima Island, Tokara Group, Ryukyu Islands, Japan. Miscellaneous Reports of the Hiwa Museum for Natural History, 46: 93–113. pls 1–5. (in Japanese with English abstract)
Yoshigou, H., Tamura, H., Iwao, M. & Izumi, R. 2003. The cave fauna of Irabu-jima Island, Miyako Group, Ryukyu Islands, Japan. Hibakagaku, 210: 1–16. pls. 1–2. (in Japanese) [Myriapods were identified by Tsutomu Tanabe]
Yoshigou, H., Tamura, H., Iwao, M. & Shimada, N. 2005. The cave fauna of Okinoerabu-jima Island, Amami Group, Ryukyu Islands, Japan. Miscellaneous Reports of the Hiwa Museum for Natural History, 44: 37–59. pls. 1–5. (in Japanese with English abstract) [Myriapods were identified by Tsutomu Tanabe]

Received September 29, 2010 / Accepted November 10, 2010