

Diversity of oribatid mites (Acari: Oribatida) in the Svalbard archipelago: a historical overview

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Abstract

Studies on Oribatida from Svalbard have nearly a 150-year long history. This paper reviews species diversity of Oribatida in Svalbard from a historical aspect, summarizes how often species have been found and detects erroneous reports. A list of 93 oribatid species (including Astigmata) from the Svalbard archipelago is presented. The species represent 30 families, of which Brachychthoniidae (14 spp.) and Crotoniidae (12 spp.) are particularly species-rich. The most often occurring oribatid species is *Diapterobates notatus* (Thorell, 1871), mentioned in 50% of publications, followed by *Ameronothrus lineatus* (Thorell, 1871) and *Hermannia reticulata* Thorell, 1871, mentioned in 30% papers each. About one third of the species have been found in Svalbard only once, and half of them (i.e. 15 species) were reported only in the last century, including five very old records. Acarological studies in Svalbard are heavily biased since they have concentrated on the island of Spitsbergen with limited sampling of other islands / island groups: for example, Barentsøya, Bjørnøya, Danskøya, Edgeøya, Hopen, Lågøya, Kong Karls Land, Prins Karls Forland and Sofiøya.

Key words: checklist, Sarcoptiformes, species records, faunistics, Arctic fauna

Introduction

The Svalbard archipelago is a group of islands located about 900 km north from mainland Norway (Figure 1), in the midway to the North Pole, from 74° to 81° north latitude, and from 10° to 35° east longitude. Its total area is 61,022 km², which is about 16% of Norway's total area. It is composed of nine main islands, with the largest Spitsbergen, followed by Nordaustlandet (North East Land), Edgeøya (Edge Island), Barentsøya (Barents Island), Prins Karls Forland, Kvitøya (White Island), Kong Karls Land, Bjørnøya (Bear Island), and Hopen. In addition, it includes a number of smaller islands (Encyclopaedia Britannica 2020). The climate in the archipelago is Arctic, with the annual mean air temperature -6.7°C, ranging from 15°C in the summer to -40 °C in the winter. Vegetation consists mostly of lichens and mosses, and the only tree species are tiny polar willow (*Salix polaris* Wahlenb.) and the dwarf birch (*Betula nana* L.) (Coulson 2007; Encyclopaedia Britannica 2020).

Biological investigations of Svalbard commenced in the second half of the 19th century (Coulson 2013). At the same time Thorell (1871) described four new oribatid species from northwest (Smeerenburg) and west (Bellsund and Isfjorden) Spitsbergen [*Ameronothrus lineatus* (Thorell, 1871), *Camisia borealis* (Thorell, 1871), *Diapterobates notatus* (Thorell, 1871) and *Hermannia reticulata* Thorell, 1871]. Since that time knowledge on mites from Svalbard has increased significantly and they are now the third species-richest invertebrate group, after insects and rotifers (Coulson *et al.* 2014a). The Oribatida have the highest species diversity among the mites and comprises about 50% of all mite species known from Svalbard (Coulson 2007; Bayartogtokh *et al.* 2011).

For over a century acarological investigations in Svalbard concentrated on the faunistics (except Summerhayes & Elton 1923, 1928). Later, however, ecological topics prevailed, including climatic issues (Coulson *et al.* 1993, 1995, 1996, 2000; Byzova *et al.* 1995; Hodkinson *et al.* 1996, 1998; Gwiazdowicz *et al.* 2020), population and distribution patterns of mites (Seniczak & Plichta 1978; Bale *et al.* 1997; Coulson *et al.* 2003; Søvik *et al.* 2003;

Seniczak *et al.* 2014, 2015a, b, 2017a–c), their dispersal (Coulson *et al.* 2002, 2009; Lebedeva & Krivolutsky 2003; Lebedeva *et al.* 2006, 2012; Lebedeva & Lebedev 2008; Coulson 2009), and reaction to anthropogenic impacts (Coulson *et al.* 2013a, b, 2015).

From the very beginning, knowledge on oribatid diversity in Svalbard has been continually improved, starting from the list of Thor (1934) which included 20 species, through Hammer (1946)—27 species, Karppinen (1967)—32 species, Niedbała (1971)—37 species (including one identified to genus), Karppinen & Krivolutsky (1982)—37 species, Coulson & Refseth (2004)—70 species (11 identified to genus), Lebedeva *et al.* (2006)—66 species (seven identified to genus), Coulson (2007)—72 species (eight identified to genus or family), Coulson (2008)—92 species (15 identified to genus or family), to the most recent list of Bayartogtokh *et al.* (2011) which presented 81 species.

The aim of this paper is to review the state of knowledge on Oribatida in Svalbard in historical aspect, update the list of species and show how often particular species have been collected in Svalbard—in order to draw attention of the future studies to rare species, in particular those recorded only in distant times.

Material and methods

The data on the presence of oribatid species in Svalbard were extracted from 70 papers published between 1871–2020. Only the data with identification to species were included in this review. The arrangement of families follows the classification by Schatz *et al.* (2011), but instead of Mycobatidae the name Punctoribatidae is used, according to Norton and Ermilov (2014) and Subías (2020). The species are organized alphabetically. The species nomenclature follows Subías (2004, 2020), with a few exceptions: the name *Eniochthonius minutissimus* (Berlese, 1903) is used after Norton and Ermilov (2014), *Oribatula exilis* (Nicolet, 1855)—after Seniczak and Seniczak (2012), and *Achipteria punctata* (Nicolet, 1855)—after Seniczak and Seniczak (2018), and three new species described after 2004 (Table 1). Table 1 includes all species reported in the literature from Svalbard, with a distinction made between primary species observations and reports based on previous publications. Species not occurring in Svalbard are marked with an asterisk. Figures 1–3 are based on references from Table 1.

Results

In the Svalbard archipelago, 93 species of Oribatida belonging to 30 families have been recorded (Table 1). Particularly rich in species are families Brachychthoniidae (14 spp.) and Crotoniidae (12 spp.). A rapid growth of knowledge concerning the oribatid diversity in Svalbard has taken place during the last 20 years, when 37% of the species have been added to the inventory (Figure 2).

Fifteen oribatid species new to science have been found in Svalbard and 13 of them are valid: *Liochthonius sellnicki* (Thor, 1930), *Camisia borealis* (Thorell, 1871), *Hermannia reticulata* Thorell, 1871, *Kunstidamaeus arcticus* Miko & Monson, 2013, *Ceratoppia hoeli* Thor, 1930, *Autogneta kaisilai* Karppinen, 1967, *Ameronothrus lineatus* (Thorell, 1871), *Oribatella arctica* Thor, 1930, *Ceratozetes spitsbergensis* Thor, 1934, *Diapterobates notatus* (Thorell, 1871), *Fuscozetes coulsoni* A. & S. Seniczak, 2020, *Svalbardia paludicola* Thor, 1930 and *Chamobates birulai* (Kulczynski, 1902). Two other species have been synonymized; *Belba ursina* Thor, 1930 is a synonym of *Subbelba montana* (Kulczynski, 1902) (Subías 2004) and *Brachychthonius glabra* (Thor, 1930) is a synonym of *Eobrachychthonius latior* (Berlese, 1910) (Forsslund 1957).

Studies on the oribatid fauna have concentrated on Spitsbergen (Figure 1), in particular the areas near Barentsburg, Hornsund, Longyearbyen and Ny-Ålesund, only a few other islands/ island groups are included: Barentsøya, Bjørnøya, Danskøya, Edgeøya, Hopen, Kong Karls Land, Lågøya, Prins Karls Forland and Sofiaøya. Nearly 90% of all species known from Svalbard have been found on Spitsbergen largely due to that 84% publications on Oribatida concern this largest island from the Svalbard archipelago. About 20 species are known from Bjørnøya and Edgeøya, each, while from the other islands only 1–5 species are known.

Diapterobates notatus is the most often reported oribatid from Svalbard (Figure 3). It is mentioned in half of the publications and has been found on nearly all studied islands. Ten other species have been reported at least in 10 publications: *Liochthonius sellnicki*—10 papers, *Hermannia reticulata*—20 papers, *Ceratoppia hoeli*—10 papers, *C. sphaerica* (L. Koch, 1879)—11 papers, *Oppiella neerlandica* (Oudemans, 1900)—10 papers,

B

Svalbard



A

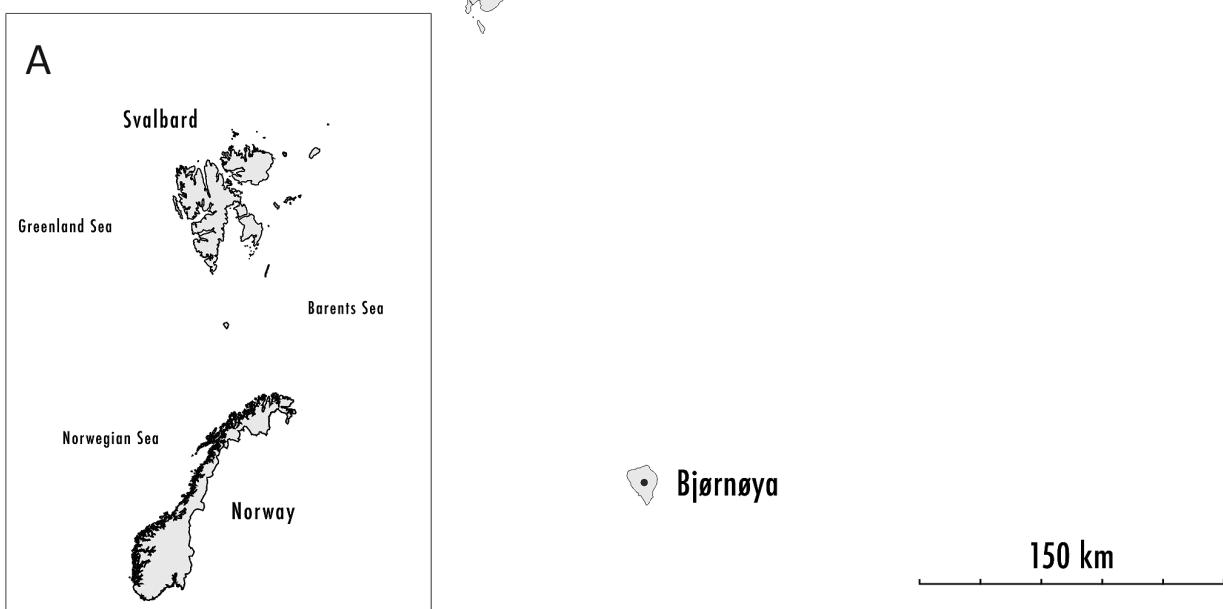


FIGURE 1. (A) Location of the Svalbard archipelago relative to mainland Norway, (B) islands in Svalbard where Oribatida have been found.

O. nova (Oudemans, 1902)—10 papers, *O. translamellata* (Willmann, 1923)—12 papers, *Tectocepheus velatus* (Michael, 1880)—12 papers, *Ameronothrus lineatus* (Thorell, 1871)—21 papers and *Mycobates sarekensis* (Trägårdh, 1910)—10 papers. About one third of species have been found in Svalbard only once, and half of them (15 species), only in the last century, including five very old records (before 1950): *Camisia spinifer* (C.L. Koch, 1836), *Subbelba montana* (Kulczynski, 1902), *Lauroppia fallax* (Paoli, 1908), *Edwardzetes edwardsi* (Nicolet, 1855) and *Sancasania mycophagus* (Mégnin, 1874).

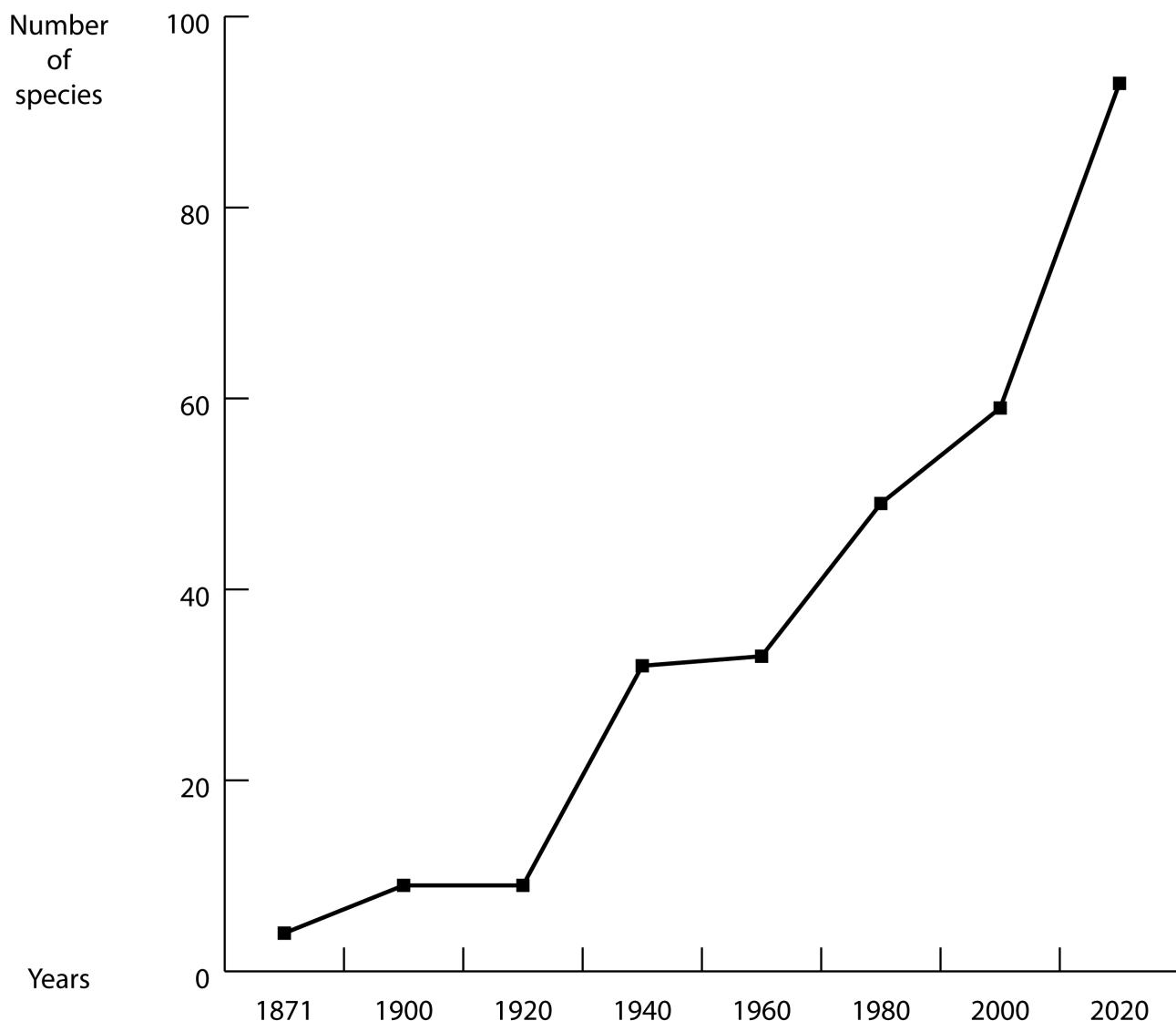


FIGURE 2. Number of oribatid species known from Svalbard in the years 1871–2020.

Remarks

The suborder Oribatida (with Astigmata) includes worldwide 249 families, 2,399 genera and 16,197 species (Schatz *et al.* 2011). Out of this number, 93 species and 30 families are known from Svalbard (three species and three families belong to Astigmata). Higher latitudes have lower oribatid taxonomic diversity in comparison to lower latitudes (e.g. Melekhina 2011). For example, in the Russian Arctic islands 100 species and 37 families of Oribatida were recorded *vs.* 354 species and 67 families known from European North of Russia (Melekhina 2011). The number of Oribatida species known from Svalbard represents about 30% of the number of oribatid species known from Norway (Seniczak *et al.* 2019a, b), which can be explained by northern locality and isolation of Svalbard, but also its smaller area and much smaller range of environments.

In comparison to the recent checklist of Oribatida from Svalbard by Bayartogtokh *et al.* (2011), 14 species

were added and two species were removed. New species to the list include: *Liochthonius clavatus* (Forsslund, 1942) (Ávila-Jiménez *et al.* 2019), *L. tuxeni* (Forsslund 1957) (Gwiazdowicz *et al.* 2020), *Eniochthonius minutissimus* (Berlese, 1903) (Seniczak *et al.* 2014), *Kunstidamaeus arcticus* Miko & Monson, 2013 (Miko & Monson, 2013), *Conchogneta dalecarlica* (Forsslund 1947) (Gwiazdowicz *et al.* 2020), *Moritziella microdentata* Gordeeva & Grishina, 1991 (Gordeeva 2000), *Oppiella translamellata* (Willmann, 1923), *Ameronothrus nigrofemoratus* (L. Koch, 1879) (Zmudczyńska-Skarbek *et al.* 2017), *Scutozetes clavatosensillus* Ermilov, Martens & Tolstikov, 2013 (Seniczak *et al.* 2017c), *Fuscozetes coulsoni* A. & S. Seniczak, 2020 (Seniczak & Seniczak 2020), and *Mycobates bicornis* (Strenzke 1954) (Gwiazdowicz *et al.* 2020). Since Astigmata are now included in Oribatida (Schatz *et al.* 2011), three more species were added to the Svalbard list: *Sancassania mycophagus* (Mégnin, 1874) (Thor 1930), *Alloptes (Sternalloptes) stercorarii* Dubinin, 1952 and *Zachvatkinia isolata* Mironov, 1989 (Dabert *et al.* 2015).

The taxonomic status of *Oppiella translamellata* (Willmann, 1923) is discussable in the literature and requires more detailed investigations. Some authors (e.g. Subías 2004; Bayartogtokh *et al.* 2011) treat it as a synonym of *O. neerlandica* (Oudemans, 1900) while others (e.g. Weigmann 2006; Weigmann *et al.* 2015) recognize it as a valid species. Both species have been reported in the same publications about Svalbard (Thor 1934; Lebedeva *et al.* 2006; Seniczak *et al.* 2014; Coulson *et al.* 2015; Ávila-Jiménez *et al.* 2019), and four latter papers support the point of view of Weigmann (2006).

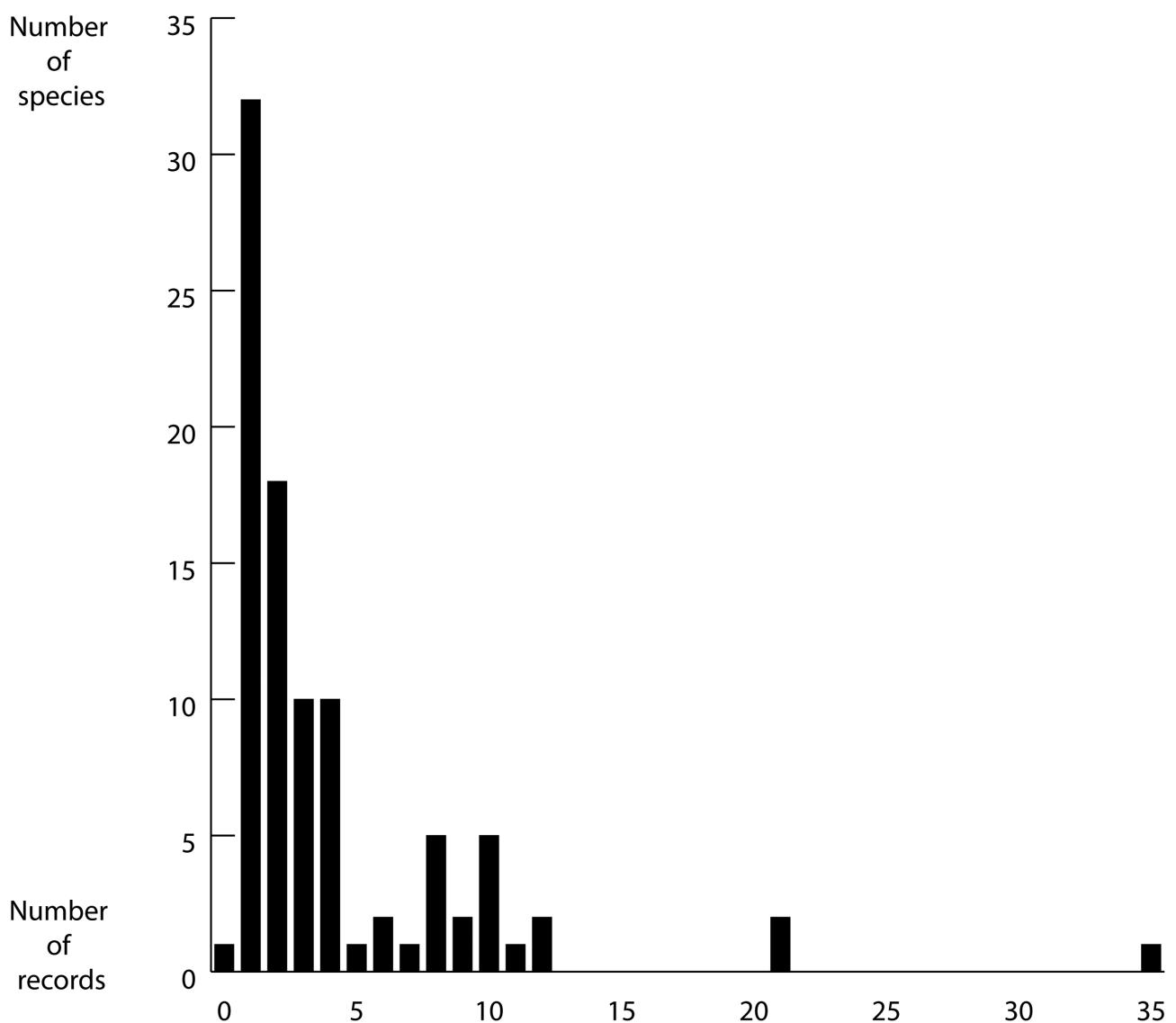


FIGURE 3. Number of oribatid species reported from Svalbard in certain number of papers (in total, 70 papers included).

TABLE 1. Oribatid species reported in the literature on Svalbard; only taxa identified to species level are included; ●—species sampled, ○—report based on previous result; species new to science are underlined, ■—erroneous record; *—species not occurring in Svalbard (explanation under Table)

| Family / Species | |
|---|--|
| Brachychthoniidae | |
| <i>Brachychthonius laetepictus</i> Berlese, 1910 ¹ | |
| <i>Eobrachychthonius borealis</i> Forsslund, 1942 | |
| <i>E. latior</i> (Berlese, 1910) ² | |
| <i>E. oudemansi</i> Hammen, 1952 | |
| <i>Liochthonius alpestris</i> (Forsslund, 1958) | |
| <i>L. brevis</i> (Michael, 1888) ³ | |
| <i>L. clavatus</i> (Forsslund, 1942) | |
| <i>L. laponicus</i> (Trägårdh, 1910) ⁴ | |
| <i>L. muscorum</i> Forsslund, 1964 | |
| <i>L. neglectus</i> Moritz, 1976 | |
| <i>L. sellnicki</i> (Thor, 1930) | |
| <i>L. strenzekei</i> Forsslund, 1963 | |
| <i>L. tuxeni</i> (Forsslund 1957) | |
| <i>Neoliochthonius piluliferus</i> (Forsslund, 1942) | |
| Eniochthoniidae | |
| <i>Eniochthonius minutissimus</i> (Berlese, 1903) | |

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TABLE 1. (Continued)
Family / Species

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TABLE 1. (Continued)

| Family / Species | |
|--|---------------------------------|
| Nanhermanniidae | |
| <i>Nanhermannia sellnickii</i> Forsslund, 1958 | Hodkinson <i>et al.</i> (1996) |
| Nothridae | |
| <i>Nothrus palustris</i> C.L. Koch, 1839 | Coulson <i>et al.</i> (1995) |
| Damaeidae | |
| <i>Damaeus onustus</i> (C.L. Koch, 1844) | Byzova <i>et al.</i> (1995) |
| Kunstdamnaeus arcticus Miko & Monson, 2013 | Behan-Pellitter (1985) |
| <i>Subbelba montana</i> (Kulczynski, 1902) ¹⁰ | Karppinen & Kirovolutsky (1982) |
| Peloppiidae | |
| <i>Ceratoppia bipilis</i> (Hermann, 1804) | Seniczak & Pilichtha (1978) |
| <i>C. hoeli</i> Thor, 1930 | Sohrey (1976) |
| <i>C. sphaerica</i> (L. Koch, 1879) | Niedbala (1971) |
| Carabodidae | |
| <i>Carabodes labyrinthicus</i> (Michael, 1879) | Karppinen (1967) |
| <i>C. marginatus</i> (Michael, 1884) | Bloch (1966) |
| Autognetidae | |
| <i>Autogneta kaisilai</i> Karppinen, 1967 | Hammer (1946) |
| Conchogneta dalecarlica (Forsslund 1947) | Forslund (1957) |
| Oppiidae | |
| <i>Diissorhina ornata</i> (Oudemans, 1900) | Forslund (1964) |
| | Forsslund (1967) |
| | Haarlev (1942) |
| | Thor (1937) |
| | Thor (1934) |
| | Thor (1931) |
| | Thor (1930) |
| | Summerhayes & Elton (1923) |
| | Hull (1922) |
| | Trägårdh (1904) |
| | Trägårdh (1900) |
| | Kulczyński (1902) |
| | Trouessart (1895) |
| | Trouessart (1893) |
| | Thorell (1871) |
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TABLE 1. (Continued)

Family / Species

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TABLE 1. (Continued)
Family / Species

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TABLE 1. (Continued)

| Family / Species | <i>Dianpterobates notatus</i> (Thorell, 1871) | <i>Edwardzetes edwardsi</i> (Nicolet, 1855) | <i>Fuscozetes coulsoni</i> A. & S. Seniczak, 2020 | <i>Iugoribates gracilis</i> Selhnick, 1944 | <i>Oromurcia bicuspidata</i> Thor 1930* ¹⁶ | <i>Oromurcia lucens</i> (L. Koch, 1879) | <i>Sphaerozetes piriformis</i> (Nicolet, 1855)* ¹⁷ | <i>Sphaerozetes tricuspidatus</i> Willmann, 1923* ¹⁸ | <i>Svalbardia paludicola</i> Thor, 1930 | <i>Trichoribates berlesei</i> Jacot, 1929 ^{19,20} | <i>T. novus</i> (Selhnick, 1928) | <i>T. setiger</i> (Trägårdh, 1910) | Chamobatidae | <i>Chamobates birulai</i> (Kulczynski, 1902) | <i>C. borealis</i> (Trägårdh 1902) | <i>C. cuspidatus</i> (Michael 1884)* ²¹ | Punctoribatidae | <i>Mycobates bicornis</i> (Strenzke 1954) | <i>M. parmeliae</i> (Michael, 1884) | <i>M. sarekensis</i> (Trägårdh, 1910) ²² |
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TABLE 1. (Continued)

Family / Species

| | <i>M. tridactylus</i> Willmann, 1929 | <i>Puncitoribates punctum</i> (C.L. Koch, 1839) | <i>Galumnidae</i> | <i>Pergalumna nervosa</i> (Berlese, 1914) | <i>Sancassania mycophagus</i> (Mégnin, 1874) | <i>Alloptidae</i> | <i>Alloptes (Sternalloptes) stercorarii</i> Dubinin, 1952 | <i>Avenzoariidae</i> | <i>Zachvatkinia isolata</i> Mironov, 1989 | No. of species reported | No. of species new to Svalbard | No. of species new to science | Sum of species reported from Svalbard |
|----|--------------------------------------|---|-------------------|---|--|-------------------|---|----------------------|---|-------------------------|--------------------------------|-------------------------------|---------------------------------------|
| 4 | 4 | 0 | 4 | 1 | 2 | 5 | 5 | 4 | 9 | 4 | 0 | 0 | 4 |
| 5 | 5 | 0 | 1 | 5 | 0 | 0 | 5 | 5 | 8 | 5 | 0 | 0 | 5 |
| 5 | 5 | 0 | 1 | 4 | 0 | 0 | 2 | 4 | 6 | 5 | 0 | 0 | 5 |
| 4 | 4 | 0 | 0 | 37 | 0 | 0 | 2 | 4 | 49 | 4 | 0 | 0 | 4 |
| 49 | 49 | 0 | 2 | 7 | 0 | 2 | 7 | 49 | 49 | 7 | 0 | 0 | 7 |
| 47 | 47 | 0 | 1 | 1 | 0 | 1 | 1 | 47 | 47 | 1 | 0 | 1 | 1 |
| 46 | 46 | 0 | 4 | 36 | 0 | 4 | 36 | 46 | 46 | 32 | 0 | 4 | 36 |
| 42 | 42 | 1 | 7 | 32 | 0 | 4 | 36 | 42 | 42 | 32 | 0 | 4 | 36 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 1 | 34 | 34 | 4 | 0 | 0 | 4 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 5 | 34 | 34 | 1 | 0 | 1 | 1 |
| 33 | 33 | 0 | 0 | 27 | 0 | 0 | 27 | 33 | 33 | 5 | 0 | 0 | 5 |
| 32 | 32 | 0 | 0 | 3 | 0 | 0 | 3 | 32 | 32 | 3 | 0 | 0 | 3 |
| 32 | 32 | 0 | 0 | 16 | 0 | 0 | 16 | 32 | 32 | 16 | 0 | 0 | 16 |
| 32 | 32 | 1 | 7 | 20 | 1 | 7 | 20 | 32 | 32 | 7 | 0 | 0 | 7 |
| 24 | 24 | 0 | 0 | 7 | 0 | 0 | 7 | 24 | 24 | 7 | 0 | 0 | 7 |
| 24 | 24 | 6 | 7 | 18 | 0 | 0 | 18 | 24 | 24 | 18 | 0 | 0 | 18 |
| 11 | 11 | 0 | 0 | 4 | 0 | 1 | 5 | 11 | 11 | 5 | 0 | 0 | 5 |
| 11 | 11 | 0 | 0 | 5 | 0 | 0 | 5 | 10 | 10 | 5 | 0 | 0 | 5 |
| 9 | 9 | 0 | 0 | 5 | 0 | 1 | 4 | 9 | 9 | 4 | 0 | 0 | 4 |
| 9 | 9 | 0 | 0 | 5 | 0 | 0 | 5 | 9 | 9 | 5 | 0 | 0 | 5 |
| 8 | 8 | 1 | 2 | 5 | 1 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 8 | 8 | 0 | 0 | 5 | 0 | 0 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 6 | 6 | 0 | 1 | 6 | 0 | 1 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 5 | 5 | 0 | 1 | 5 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 0 | 5 |
| 5 | 5 | 0 | 1 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 36 | 36 | 0 | 0 | 5 | 0 | 0 | 5 | 36 | 36 | 5 | 0 | 0 | 5 |
| 36 | 36 | 0 | 1 | 4 | 0 | 1 | 4 | 36 | 36 | 4 | 0 | 0 | 4 |
| 36 | 36 | 0 | 0 | 5 | 0 | 0 | 5 | 36 | 36 | 5 | 0 | 0 | 5 |
| 35 | 35 | 0 | 0 | 9 | 0 | 0 | 9 | 35 | 35 | 9 | 0 | 0 | 9 |
| 49 | 49 | 0 | 0 | 2 | 0 | 0 | 2 | 49 | 49 | 2 | 0 | 0 | 2 |
| 49 | 49 | 0 | 2 | 7 | 0 | 2 | 7 | 49 | 49 | 7 | 0 | 0 | 7 |
| 47 | 47 | 0 | 1 | 1 | 0 | 1 | 1 | 47 | 47 | 1 | 0 | 1 | 1 |
| 46 | 46 | 0 | 4 | 36 | 0 | 4 | 36 | 46 | 46 | 36 | 0 | 4 | 36 |
| 42 | 42 | 1 | 7 | 32 | 1 | 7 | 32 | 42 | 42 | 32 | 0 | 4 | 36 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 1 | 34 | 34 | 1 | 0 | 1 | 1 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 5 | 34 | 34 | 5 | 0 | 0 | 5 |
| 33 | 33 | 0 | 0 | 27 | 0 | 0 | 27 | 33 | 33 | 27 | 0 | 0 | 27 |
| 32 | 32 | 0 | 0 | 3 | 0 | 0 | 3 | 32 | 32 | 3 | 0 | 0 | 3 |
| 32 | 32 | 0 | 0 | 16 | 0 | 0 | 16 | 32 | 32 | 16 | 0 | 0 | 16 |
| 32 | 32 | 1 | 7 | 20 | 1 | 7 | 20 | 32 | 32 | 7 | 0 | 0 | 7 |
| 24 | 24 | 0 | 0 | 7 | 0 | 0 | 7 | 24 | 24 | 7 | 0 | 0 | 7 |
| 24 | 24 | 6 | 7 | 18 | 6 | 7 | 18 | 24 | 24 | 18 | 0 | 0 | 18 |
| 11 | 11 | 0 | 0 | 4 | 0 | 1 | 5 | 11 | 11 | 5 | 0 | 0 | 5 |
| 11 | 11 | 0 | 0 | 5 | 0 | 0 | 5 | 10 | 10 | 5 | 0 | 0 | 5 |
| 9 | 9 | 0 | 0 | 5 | 0 | 1 | 4 | 9 | 9 | 4 | 0 | 0 | 4 |
| 9 | 9 | 0 | 0 | 5 | 0 | 0 | 5 | 9 | 9 | 5 | 0 | 0 | 5 |
| 8 | 8 | 1 | 2 | 5 | 1 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 8 | 8 | 0 | 0 | 5 | 0 | 0 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 6 | 6 | 0 | 1 | 6 | 0 | 1 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 5 | 5 | 0 | 1 | 5 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 0 | 5 |
| 5 | 5 | 0 | 1 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 36 | 36 | 0 | 0 | 5 | 0 | 0 | 5 | 36 | 36 | 5 | 0 | 0 | 5 |
| 36 | 36 | 0 | 1 | 4 | 0 | 1 | 4 | 36 | 36 | 4 | 0 | 0 | 4 |
| 36 | 36 | 0 | 0 | 5 | 0 | 0 | 5 | 36 | 36 | 5 | 0 | 0 | 5 |
| 35 | 35 | 0 | 0 | 9 | 0 | 0 | 9 | 35 | 35 | 9 | 0 | 0 | 9 |
| 49 | 49 | 0 | 0 | 2 | 0 | 0 | 2 | 49 | 49 | 2 | 0 | 0 | 2 |
| 49 | 49 | 0 | 2 | 7 | 0 | 2 | 7 | 49 | 49 | 7 | 0 | 0 | 7 |
| 47 | 47 | 0 | 1 | 1 | 0 | 1 | 1 | 47 | 47 | 1 | 0 | 1 | 1 |
| 46 | 46 | 0 | 4 | 36 | 0 | 4 | 36 | 46 | 46 | 36 | 0 | 4 | 36 |
| 42 | 42 | 1 | 7 | 32 | 1 | 7 | 32 | 42 | 42 | 32 | 0 | 4 | 36 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 1 | 34 | 34 | 1 | 0 | 1 | 1 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 5 | 34 | 34 | 5 | 0 | 0 | 5 |
| 33 | 33 | 0 | 0 | 27 | 0 | 0 | 27 | 33 | 33 | 27 | 0 | 0 | 27 |
| 32 | 32 | 0 | 0 | 3 | 0 | 0 | 3 | 32 | 32 | 3 | 0 | 0 | 3 |
| 32 | 32 | 0 | 0 | 16 | 0 | 0 | 16 | 32 | 32 | 16 | 0 | 0 | 16 |
| 32 | 32 | 1 | 7 | 20 | 1 | 7 | 20 | 32 | 32 | 7 | 0 | 0 | 7 |
| 24 | 24 | 0 | 0 | 7 | 0 | 0 | 7 | 24 | 24 | 7 | 0 | 0 | 7 |
| 24 | 24 | 6 | 7 | 18 | 6 | 7 | 18 | 24 | 24 | 18 | 0 | 0 | 18 |
| 11 | 11 | 0 | 0 | 4 | 0 | 1 | 5 | 11 | 11 | 5 | 0 | 0 | 5 |
| 11 | 11 | 0 | 0 | 5 | 0 | 0 | 5 | 10 | 10 | 5 | 0 | 0 | 5 |
| 9 | 9 | 0 | 0 | 5 | 0 | 1 | 4 | 9 | 9 | 4 | 0 | 0 | 4 |
| 9 | 9 | 0 | 0 | 5 | 0 | 0 | 5 | 9 | 9 | 5 | 0 | 0 | 5 |
| 8 | 8 | 1 | 2 | 5 | 1 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 8 | 8 | 0 | 0 | 5 | 0 | 0 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 6 | 6 | 0 | 1 | 6 | 0 | 1 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 5 | 5 | 0 | 1 | 5 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 0 | 5 |
| 5 | 5 | 0 | 1 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 36 | 36 | 0 | 0 | 5 | 0 | 0 | 5 | 36 | 36 | 5 | 0 | 0 | 5 |
| 36 | 36 | 0 | 1 | 4 | 0 | 1 | 4 | 36 | 36 | 4 | 0 | 0 | 4 |
| 36 | 36 | 0 | 0 | 5 | 0 | 0 | 5 | 36 | 36 | 5 | 0 | 0 | 5 |
| 35 | 35 | 0 | 0 | 9 | 0 | 0 | 9 | 35 | 35 | 9 | 0 | 0 | 9 |
| 49 | 49 | 0 | 0 | 2 | 0 | 0 | 2 | 49 | 49 | 2 | 0 | 0 | 2 |
| 49 | 49 | 0 | 2 | 7 | 0 | 2 | 7 | 49 | 49 | 7 | 0 | 0 | 7 |
| 47 | 47 | 0 | 1 | 1 | 0 | 1 | 1 | 47 | 47 | 1 | 0 | 1 | 1 |
| 46 | 46 | 0 | 4 | 36 | 0 | 4 | 36 | 46 | 46 | 36 | 0 | 4 | 36 |
| 42 | 42 | 1 | 7 | 32 | 1 | 7 | 32 | 42 | 42 | 32 | 0 | 4 | 36 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 1 | 34 | 34 | 1 | 0 | 1 | 1 |
| 34 | 34 | 0 | 0 | 4 | 0 | 1 | 5 | 34 | 34 | 5 | 0 | 0 | 5 |
| 33 | 33 | 0 | 0 | 27 | 0 | 0 | 27 | 33 | 33 | 27 | 0 | 0 | 27 |
| 32 | 32 | 0 | 0 | 3 | 0 | 0 | 3 | 32 | 32 | 3 | 0 | 0 | 3 |
| 32 | 32 | 0 | 0 | 16 | 0 | 0 | 16 | 32 | 32 | 16 | 0 | 0 | 16 |
| 32 | 32 | 1 | 7 | 20 | 1 | 7 | 20 | 32 | 32 | 7 | 0 | 0 | 7 |
| 24 | 24 | 0 | 0 | 7 | 0 | 0 | 7 | 24 | 24 | 7 | 0 | 0 | 7 |
| 24 | 24 | 6 | 7 | 18 | 6 | 7 | 18 | 24 | 24 | 18 | 0 | 0 | 18 |
| 11 | 11 | 0 | 0 | 4 | 0 | 1 | 5 | 11 | 11 | 5 | 0 | 0 | 5 |
| 11 | 11 | 0 | 0 | 5 | 0 | 0 | 5 | 10 | 10 | 5 | 0 | 0 | 5 |
| 9 | 9 | 0 | 0 | 5 | 0 | 1 | 4 | 9 | 9 | 4 | 0 | 0 | 4 |
| 9 | 9 | 0 | 0 | 5 | 0 | 0 | 5 | 9 | 9 | 5 | 0 | 0 | 5 |
| 8 | 8 | 1 | 2 | 5 | 1 | 2 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 8 | 8 | 0 | 0 | 5 | 0 | 0 | 5 | 8 | 8 | 5 | 0 | 0 | 5 |
| 6 | 6 | 0 | 1 | 6 | 0 | 1 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | 6 |
| 5 | 5 | 0 | 1 | 5 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 0 | 5 |
| 5 | 5 | 0 | 1 | 4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 |
| 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | | | | |

TABLE 1. (Continued)
Family / Species

| | Total number of records |
|--|-------------------------|
| <i>Brachyethonidae</i> | |
| <i>Brachyethonius laetepictus</i> Berlese, 1910 ¹ | 2 |
| <i>Eobrachyethonius borealis</i> Forsslund, 1942 | 3 |
| <i>E. latior</i> (Berlese, 1910) ² | 4 |
| <i>E. oudemansi</i> Hammen, 1952 | 4 |
| <i>Liochthonius alpestris</i> (Forsslund, 1958) | 1 |
| <i>L. brevis</i> (Michael, 1888) ³ | 4 |
| <i>L. clavatus</i> (Forsslund, 1942) | 1 |
| <i>L. lapponicus</i> (Trägårdh, 1910) ⁴ | 8 |
| <i>L. muscorum</i> Forsslund, 1964 | 2 |
| <i>L. neglectus</i> Moritz, 1976 | 1 |
| <i>L. sellnicki</i> (Thor, 1930) | 10 |
| <i>L. strenzkei</i> Forsslund, 1963 | 2 |
| <i>L. tuxeni</i> (Forsslund 1957) | 1 |
| <i>Neoliochthonius piliferus</i> (Forsslund, 1942) | 2 |
| <i>Eniochthoniidae</i> | |
| <i>Eniochthonius minuissimus</i> (Berlese, 1903) | • |
| <i>Phthiracaridae</i> | |
| <i>Atropacarus striculus</i> (C.L. Koch, 1835) | • |
| <i>Crotoniidae</i> | |
| <i>Camisia anomia</i> Colloff, 1993 ⁵ | 9 |

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TABLE 1. (Continued)

| Family / Species | Number of records | Total number of records |
|--|-------------------|-------------------------|
| <i>Nanhermanniidae</i> | 1 | 1 |
| <i>Nanhermannia sellnickii</i> Forsslund, 1958 | 1 | 1 |
| <i>Nothridae</i> | 3 | 3 |
| <i>Nothrus palustris</i> C.I. Koch, 1839 | 3 | 3 |
| <i>Damaeidae</i> | 3 | 3 |
| <i>Hermanniidae</i> | 21 | 21 |
| <i>Hermannia reticulata</i> Thorell, 1871 ⁷ | 2 | 2 |
| <i>H. scabra</i> (L. Koch, 1879) ⁸ | 3 | 3 |
| <i>Malaconothridae</i> | 3 | 3 |
| <i>Malaconothrus monodactylus</i> (Michael, 1888) ⁹ | 3 | 3 |
| <i>Capillanothrus capillatus</i> (Berlese, 1914) | 1 | 1 |
| <i>Platynothrus peltifer</i> (C.I. Koch, 1839) | 2 | 2 |
| <i>P. punctatus</i> (L. Koch, 1879) | 5 | 5 |
| <i>C. spinifer</i> (C.L. Koch, 1836) | 1 | 1 |
| <i>C. lapponica</i> (Trägårdh, 1910) | 2 | 2 |
| <i>C. invenusta</i> (Michael, 1888) | 0 | 0 |
| <i>C. horrida</i> (Hermann, 1804) | 0 | 0 |
| <i>C. foveolata</i> Hammer, 1955 | 0 | 0 |
| <i>C. dictyna</i> Colloff, 1993 | ● | 9 |
| <i>C. borealis</i> (Thorell, 1871) ⁶ | ● | 2 |
| <i>C. biverrucata</i> (C.I. Koch, 1839) | ● | 2 |
| <i>Lebedeva & Kryvolutsky</i> (2003) | ● | ● |
| <i>Coulson & Reeseth</i> (2004) | ● | ● |
| <i>Hodkinson & Bird</i> (2004) | ● | ● |
| <i>Dolleter et al.</i> (2006) | ● | ● |
| <i>Lebedeva et al.</i> (2006) | ● | ● |
| <i>Coulson (2007)</i> | ● | ● |
| <i>Lebedeva & Lebedev</i> (2008) | ● | ● |
| <i>Coulson (2008)</i> | ● | ● |
| <i>Lebedeva et al.</i> (2012) | ● | ● |
| <i>Coulson et al.</i> (2013b) | ● | ● |
| <i>Miklo & Monson</i> (2013) | ● | ● |
| <i>Coulson et al.</i> (2014b) | ● | ● |
| <i>Semiczak et al.</i> (2014) | ● | ● |
| <i>Dabert et al.</i> (2015) | ● | ● |
| <i>Coulson et al.</i> (2015) | ● | ● |
| <i>Cheropruid et al.</i> (2017) | ● | ● |
| <i>Zmudczyńska-Skarbek et al.</i> (2017) | ● | ● |
| <i>Semiczak et al.</i> (2017c) | ● | ● |
| <i>Avila-Jimenez et al.</i> (2019) | ● | ● |
| <i>Gwiazdowicz et al.</i> (2020) | ● | ● |
| <i>Semiczak & Semiczak (2020)</i> | ● | ● |

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TABLE 1. (Continued)

| Family / Species | | Total number of records |
|--|---------|-------------------------|
| <i>Damaeus onustus</i> (C.L. Koch, 1844) | | 1 |
| <i>Kunstidameus arcticus</i> Miko & Monson, 2013 | • | 2 |
| <i>Subbelba montana</i> (Kulczynski, 1902) ¹⁰ | ○ | 1 |
| Peloppiidae | | |
| <i>Ceratoppia bipilis</i> (Hermann, 1804) | ○ | 3 |
| <i>C. hoeli</i> Thor, 1930 | ● | 10 |
| <i>C. sphaerica</i> (L. Koch, 1879) | ○ | 11 |
| Carabodidae | | |
| <i>Carabodes labyrinthicus</i> (Michael, 1879) | ○ | 1 |
| <i>C. marginatus</i> (Michael, 1884) | ○ | 1 |
| Autognathidae | | |
| <i>Autogneta kaisilai</i> Karppinen, 1967 | ● | 1 |
| <i>Conchogneta dalecarlica</i> (Forsslund 1947) | ● | 1 |
| Oppiidae | | |
| <i>Dissorrhina ornata</i> (Oudemans, 1900) | ○ ○ ○ | 6 |
| <i>Lauroppia fallax</i> (Paoli, 1908) | ○ ○ ○ | 1 |
| <i>Micropria minus</i> (Paoli, 1908) | ○ ○ ○ | 1 |
| <i>Moritzella microdentata</i> Gordeeva & Grishina, 1991 | ● | 1 |
| <i>Moritzoppia splendens</i> (C.L. Koch, 1841) | ● ○ ○ ○ | 4 |

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TABLE 1. (Continued)

| Family / Species | | Total number of records |
|--|---|-------------------------|
| <i>M. unicarinata</i> (Paoli, 1908) | | 3 |
| <i>Oppiella neerlandica</i> (Oudemans, 1900) ¹¹ | ● | 10 |
| <i>O. nova</i> (Oudemans, 1902) | ● | 10 |
| <i>O. translamellata</i> (Willmann, 1923) ¹² | ● | 12 |
| Suctobelidae | | |
| <i>Suctobelba hammerae</i> Krivolutsky, 1965 | ● | 4 |
| <i>Suctobelbella sarekensis</i> (Forsslund, 1941) | ○ | 1 |
| <i>S. subcornigera</i> (Forsslund, 1941) | ○ | 6 |
| Tectocephidae | | |
| <i>Tectocephenus alatus</i> Berlese, 1913 | ○ | 1 |
| <i>T. knuellei</i> Vanek, 1960 | ○ | 2 |
| <i>T. sarekensis</i> Trägårdh, 1910 | ○ | 1 |
| <i>T. veltius</i> (Michael, 1880) | ● | 12 |
| Ameronothridae | | |
| <i>Ameronothrus lineatus</i> (Thorell, 1871) ¹³ | ● | 21 |
| <i>A. nidicola</i> Siniikova, 1975 | ○ | 1 |
| <i>A. nigrofemoratus</i> (L. Koch, 1879) | ● | 1 |
| Miceremidae | | |
| <i>Miceremus brevipes</i> (Michael, 1888) | ○ | 2 |
| Scutoverticidae | | |
| <i>Scutovertex minutus</i> (C.L. Koch, 1835) | ○ | 2 |

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TABLE 1. (Continued)

| Family / Species | Total number of records |
|---|-------------------------|
| <i>Achipteriidae</i> | |
| <i>Achipteria punctata</i> (Nicolet, 1855) | 4 |
| <i>Tegoribatidae</i> | |
| <i>Scutozetes clavatosensillatus</i> Ermilov, Martins & Tolstikov, 2013 | 1 |
| <i>Oribatellidae</i> | |
| <i>Oribatella arctica</i> Thor, 1930 ¹⁴ | 7 |
| <i>Oribatulidae</i> | |
| <i>Oribatula exilis</i> (Nicolet, 1855) | 4 |
| <i>O. tibialis</i> (Nicolet, 1855) | 8 |
| <i>O. venusta</i> Berlese, 1908 ¹⁵ | 4 |
| <i>Phallopia lucorum</i> (C.L. Koch, 1841) | 2 |
| <i>Scheloribatidae</i> | |
| <i>Liebstadia similis</i> (Michael, 1888) | 3 |
| <i>Ceratozetidae</i> | |
| <i>Ceratozetes spitbergensis</i> Thor, 1924 | 8 |
| <i>Diapterobates notatus</i> (Thorell, 1871) | 35 |
| <i>Edwardzees edwardsii</i> (Nicolet, 1855) | 1 |
| <i>Fuscozetes coulsoni</i> A. & S. Seniczak, 2020 | 1 |
| <i>Iugoribates gracilis</i> Sellnick, 1944 | 1 |
| <i>Orromuria bicuspis</i> data Thor 1930* ¹⁶ | 0 |

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TABLE 1. (Continued)

| Family / Species | |
|---|-------------------------|
| <i>Oromurcia lucens</i> (L. Koch, 1879) | |
| <i>Sphaerozetes pirliformis</i> (Nicolet, 1855)* ¹⁷ | |
| <i>Sphaerozetes tricuspidatus</i> Willmann, 1923* ¹⁸ | |
| <i>Svalbardia paludicola</i> Thor, 1930 | ● |
| <i>Trichoribates berlesii</i> Jacot, 1929 ^{19,20} | ○ |
| <i>T. torus</i> (Selnick, 1928) | ○ |
| <i>T. setiger</i> (Trägårdh, 1910) | ○ |
| Chamobatidae | |
| <i>Chamobates birulai</i> (Kulczynski, 1902) | ○ |
| <i>C. borealis</i> (Trägårdh 1902) | ○ |
| <i>C. cuspidatus</i> (Michael) 1884)* ²¹ | ○ |
| Punctoribatidae | |
| <i>Mycobates bicornis</i> (Strenzke 1954) | ● |
| <i>M. parmeliae</i> (Michael, 1884) | ● |
| <i>M. sarekensis</i> (Trägårdh, 1910) ²² | ● |
| <i>M. tridacylus</i> Willmann, 1929 | ● |
| <i>Puncoribates punctum</i> (C.L. Koch, 1839) | ● |
| Galumnidae | |
| <i>Pergalumna nervosa</i> (Berlese, 1914) | ○ |
| Acaridae | |
| | Total number of records |
| <i>Seniczak & Seniczak (2020)</i> | 2 |
| <i>Gwiadzowicz et al. (2020)</i> | 0 |
| <i>Avila-Jiménez et al. (2019)</i> | 0 |
| <i>Zmudeczyńska-Skarbek et al. (2017)</i> | 0 |
| <i>Seniczak et al. (2017c)</i> | 0 |
| <i>Chertrouard et al. (2017)</i> | 0 |
| <i>Coulson et al. (2015)</i> | 0 |
| <i>Dabert et al. (2015)</i> | 0 |
| <i>Seniczak et al. (2014)</i> | ● |
| <i>Coulson et al. (2014b)</i> | ○ |
| <i>Miko & Monsan (2013)</i> | ○ |
| <i>Coulson et al. (2013b)</i> | ○ |
| <i>Lebedeva et al. (2012)</i> | ○ |
| <i>Bayarrogolokh et al. (2011)</i> | ○ |
| <i>Coulson et al. (2009)</i> | ○ |
| <i>Lebedeva & Lebedev (2008)</i> | ○ |
| <i>Coulson (2008)</i> | ○ |
| <i>Lebedeva (2007)</i> | ○ |
| <i>Lebedeva et al. (2006)</i> | ○ |
| <i>Dollery et al. (2006)</i> | ○ |
| <i>Hodkinson & Bird (2004)</i> | ○ |
| <i>Coulson & Reffet (2004)</i> | ○ |
| <i>Lebedeva & Krivoltitsky (2003)</i> | ○ |
| <i>Coulson et al. (2003)</i> | ○ |
| <i>Gordieva (2000)</i> | ○ |
| <i>Coulson et al. (2000)</i> | ○ |
| <i>Coulson & Brinkmo (2000)</i> | ○ |
| <i>Webb et al. (1998)</i> | ○ |

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TABLE 1. (Continued)

| Family / Species | <i>Sancassania mycophagus</i> (Mégnin, 1874) | Total number of records |
|--|--|-------------------------|
| Alloptidae | | |
| <i>Allopties (Sternallopies) stercorarii</i> Dubinin, 1952 | | |
| Avenzoariidae | | |
| <i>Zachvatkinia isolata</i> Minov, 1989 | | 1 |
| No. of species reported | | |
| No. of species new to Svalbard | | |
| No. of species new to science | | |
| Sum of species reported from Svalbard | | |
| 56 | Webb <i>et al.</i> (1998) | 56 |
| 57 | Coulson & Birkenmeier (2000) | 57 |
| 58 | Gorddeeva (2000) | 58 |
| 59 | Coulson <i>et al.</i> (2003) | 59 |
| 60 | Lebedeva & Kritvolitsky (2003) | 60 |
| 61 | Hodkinson & Bird (2004) | 61 |
| 62 | Dollery <i>et al.</i> (2006) | 62 |
| 63 | Lebedeva <i>et al.</i> (2006) | 63 |
| 64 | Coulson (2007) | 64 |
| 65 | Coulson & Reffeseth (2004) | 65 |
| 66 | Lebedeva & Kritvolitsky (2003) | 66 |
| 67 | Coulson <i>et al.</i> (2003) | 67 |
| 68 | Gorddeeva (2000) | 68 |
| 69 | Coulson & Birkenmeier (2000) | 69 |
| 70 | Dollery <i>et al.</i> (2006) | 70 |
| 71 | Lebedeva <i>et al.</i> (2006) | 71 |
| 72 | Coulson (2007) | 72 |
| 73 | Lebedeva & Kritvolitsky (2003) | 73 |
| 74 | Coulson <i>et al.</i> (2003) | 74 |
| 75 | Gorddeeva (2000) | 75 |
| 76 | Coulson & Birkenmeier (2000) | 76 |
| 77 | Lebedeva <i>et al.</i> (2006) | 77 |
| 78 | Coulson (2008) | 78 |
| 79 | Lebedeva & Lebedev (2008) | 79 |
| 80 | Coulson <i>et al.</i> (2009) | 80 |
| 81 | Bayartogtokh <i>et al.</i> (2011) | 81 |
| 82 | Lebedeva <i>et al.</i> (2012) | 82 |
| 83 | Coulson <i>et al.</i> (2013b) | 83 |
| 84 | Miko & Monsen (2013) | 84 |
| 85 | Coulson <i>et al.</i> (2014b) | 85 |
| 86 | Seniczak <i>et al.</i> (2014) | 86 |
| 87 | Cheroprud <i>et al.</i> (2015) | 87 |
| 88 | Coulson <i>et al.</i> (2015) | 88 |
| 89 | Lebedeva <i>et al.</i> (2015) | 89 |
| 90 | Seinicza & Seinicza (2020) | 90 |
| 91 | Avila-Jimenez <i>et al.</i> (2019) | 91 |
| 92 | Zmudczyńska-Skarbek <i>et al.</i> (2017) | 92 |
| 93 | Seinicza <i>et al.</i> (2017c) | 93 |
| 94 | Cheroprud <i>et al.</i> (2017) | 94 |
| 95 | Seinicza & Seinicza (2020) | 95 |
| 96 | Avila-Jimenez <i>et al.</i> (2019) | 96 |
| 97 | Zmudczyńska-Skarbek <i>et al.</i> (2017) | 97 |
| 98 | Seinicza & Seinicza (2020) | 98 |

¹according to Subías (2004) *species inquirenda*.²described as *Brachychthonius glabra* (Thor, 1930) syn. *Eobrachychthonius lator* (Berlese, 1910) (Forsslund 1957).³mentioned as *Brachychthonius perpusillus* Berlese, 1910 (Forsslund 1957; Karpinnen 1967) syn. *Liochthonius brevis* (Michael, 1888) (Subías 2004).⁴also recorded by Byzova & Uvarov (1990).⁵also recorded by Coulson *et al.* (2002).⁶also recorded by Seniczak *et al.* (2017b).⁷possible syn. *Camisia horrida* (Hermann, 1804) (Seniczak *et al.* 2006).⁸also recorded by Seniczak *et al.* (2017a).⁹mentioned as *Malacothorhus eregius* (Berlese, 1904) by Lebedeva & Krivolutsky (2003), Lebedeva *et al.* (2006), Lebedeva & Lebedev (2007), Coulson (2007); according to Weigmann (2006) syn.*Malacothorhus monodactylus* (Michael, 1888).

¹⁰described as *Belba ursina* Thor, 1930, according to Subías (2004) syn. *Subbelba montana* (Kulczynski, 1902).

¹¹according to Subías (2004) syn. *Oppia translamellata* (Willmann, 1923).

¹²also recorded by Hayward *et al.* (2000).

¹³also recorded by Schubart (1975), Søvik & Leinaas (2002, 2003a,b), Søvik (2003), reported from the literature by Søvik *et al.* (2003), Søvik (2004).
¹⁴also recorded by Seniczak *et al.* (2015b).

¹⁵according to Subías (2004) syn. *Oribatula tibialis* (Nicolet, 1855).

¹⁶listed by Hammer (1946) after Thor (1930), who described it from mainland Norway.

¹⁷listed by Karppinen & Krivolutsky (1982) after Hull (1922), who meant *Diapterobates notatus* (Thorell, 1871), and after Thor (1930) who mentioned *Sphaerozetes piriformis* (Nicolet, 1855) in a broader taxonomic context, not as a finding from Svalbard.

¹⁸listed by Karppinen & Krivolutsky (1982), obvious error as it refers to Trägårdh (1904), while species was described later.

¹⁹reported as *Trichoribates trimaculatus* (C.L. Koch, 1835) syn. *T. berlesei* Jacot, 1929 (Weigmann & Norton 2009).

²⁰*Trichoribates trimaculatus* (C.L. Koch, 1835) was listed by Hammer (1946) after Trägårdh (1902) who meant *Diapterobates notatus* (Thorell, 1871) as a variety of *Trichoribates trimaculatus* (C. L. Koch, 1835); other literature followed this error, while the species was first found in Svalbard by Byzova *et al.* (1995).

²¹listed erroneously by Hammer (1946) after Trägårdh (1904), who described and illustrated *Chamobates birulai* (Kulczynski, 1902) (“*Oribatia cuspidata* var. *birulai*”).

²²also recorded by Solhøy (1997), Seniczak *et al.* (2015a).

Sphaerozetes piriformis (Nicolet, 1855) was not included in the list (Table 1) since its presence in Svalbard is doubtful, as already suggested by Coulson & Refseth (2004) and Bayartogtokh *et al.* (2011). Referring to Hull (1922) as the first author who allegedly reported this species from Svalbard leads to the name ‘*Sphaerozetes notatus*, Thor’ i.e. *Diapterobates notatus* (Thorell, 1871). Also referring to Thor (1930) is misleading; he mentioned *Sphaerozetes orbicularis* (C.L. Koch, 1835) and *S. piriformis* (Nicolet, 1855) in a broader taxonomic context, not as the species recorded from Svalbard. Another species that was removed from the list is *Chamobates cuspidatus* (Michael 1884) that has never been recorded from Svalbard, only mentioned by Hammer (1946) after Trägårdh (1904) who described and illustrated *Chamobates birulai* (Kulczynski, 1902).

The presence of *Edwardzetes edwardsi* (Nicolet, 1855) in Svalbard is not well-documented. Only one specimen was found by Thor (1934) in the material he received collected by a third party and he suspected that there had been confusion in the sampling localities so that this species originated not from Svalbard but from North Cape (mainland Norway). However, since the species is known from other parts of the Arctic region: the Russian Arctic islands (Melekhina 2011), Iceland (Gjelstrup & Solhøy 1994) and Greenland (Makarova & Behan-Pelletier 2015), it may also occur in Svalbard.

Most of the acarological research has focused on Spitsbergen, especially on the west coast with a relatively mild climate, and very few studies have concerned the colder eastern areas, so knowledge of the oribatid diversity and biogeography in Svalbard is biased (Coulson 2013), and can be improved by targeting sampling new locations. Svalbard is very diverse, geographically and climatically, and still largely unexplored and fascinating in terms of oribatid diversity; one proof of this is the large number of new species described from Svalbard, including two species found in the last decade. Since some records mentioned in previous lists were identified to genus or family, the number of oribatid species in Svalbard can be potentially higher.

Nonetheless, there are also some doubtful records, especially rare species found e.g. only once in distant times. Since older collections from Svalbard are generally no longer available, the presence of these species needs to be confirmed based on new sampling. As pointed in this review, there are also some species with debatable taxonomic status, which needs to be clarified, also using better microscopes, knowledge and molecular methods.

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