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An annotated checklist of chewing lice (Phthiraptera: Amblycera, Ischnocera) from Slovakia

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Abstract

This checklist includes taxa of chewing lice from published records, old collections, and recently collected material from birds and mammals in Slovakia. Data from established collections correspond to five different periods: (1) 1925–1939, collection of Karel Pflieger; (2) 1946–1978, collection of František Balát; (3) 1974–1985, collection of Vladimír Straka; (4) 1997–2012, collection of Ján Krištofik; and (5) 2008–2019, a collection made by the authors of this paper. A total of 255 species of feather lice—67 amblyceran species in 22 genera of families Laemobothriidae, Menoponidae and Ricinidae, and 188 ischnoceran species in 54 genera of the family Philopteridae—and 366 host-lice associations are listed from 171 bird species in 21 orders. In addition, eight species of chewing lice in five genera of the family Trichodectidae are listed from eight species of mammals. Species of chewing lice are reported from about 240 different locations throughout the territory of Slovakia. Also, 43 species of lice and 20 host-lice associations for Slovakia, as well as four host-lice associations for the world, are included as new records. A host-lice list of recorded species is also given.

Key words: Phthiraptera, Amblycera, Ischnocera, chewing lice, birds, mammals, checklist, species, host-lice associations, new records, Slovakia

Introduction

Chewing lice are common ectoparasites of birds and some groups of mammals. Together with sucking lice, they comprise the insect order Phthiraptera, which is divided in four suborders: Amblycera, Ischnocera (comprising lice from birds and mammals), Rhynchophthirina and Anoplura (comprising lice from mammals only) (Price *et al.* 2003; Durden & Musser 1994). Due to the obligate life cycle of lice in close association with their hosts, strong host specificity is traditionally expected, hence lice are very often used as models for cophylogenetic studies (Clayton *et al.* 2016). However, recent studies at lower taxonomic levels have revealed that multi-host louse species may be more common than expected, and that one genus of lice may contain species ranging from monoxenous to polyxenous in their host distributions (Martinů *et al.* 2015; Sychra *et al.* 2021).

Birds usually carry one amblyceran species and one ischnoceran species, but many hosts harbour more than two species (Price *et al.* 2003). Although the impact of chewing lice on wild animals is difficult to measure, there are reports of single hosts carrying populations numbering in the hundreds or more without any obvious negative effect on the host (Naz *et al.* 2010; Ošlejšková *et al.* 2020). However, it has been documented that some groups of lice can affect important host functions negatively, such as flight performance (Barbosa *et al.* 2002), metabolic rate (Booth *et al.* 1993), sexual selection (Kose & Mller 1999), grooming time (Cotgreave & Clayton 1994), reproductive success (Tompkins *et al.* 1996), migration (Literák *et al.* 2015), and even host survival (Brown *et al.* 1995). The relative host specificity of lice is important from a conservation viewpoint, as endangered and extinct hosts also carry endangered and extinct lice. Rózsa & Vas (2015) reported louse species which are extinct or endangered together with their hosts.

Therefore, to evaluate the impact of chewing lice on different populations of their hosts throughout their area of distribution, we first need to know the diversity of louse species and their host associations. It is well documented that some groups of lice do not occur over the entire distribution of their hosts (Clay 1949a; Bush *et al.* 2009). Hence, it is also necessary to know the geographic distribution of louse species as precisely as possible, beginning with accurate regional checklists as sources of information.

A number of checklists of chewing lice from Slovakia and neighboring countries are available, as follows: Czechoslovakia (Balát 1977), Poland (Złotorzycka 1972a,b, 1976, 1977, 1978, 1980) and Ukraine (Fedorenko 1983, 1987). In addition, there are more recent checklists from other parts of central and eastern Europe, *e.g.* Germany (Mey 2003), Bulgaria (Ilieva 2009), Hungary (Vaz *et al.* 2012a,b) and Romania (Adam 2008).

In his checklist of chewing lice from former Czechoslovakia, Balát (1977) reported 177 species of which 169 are still valid according to the taxonomy of Price *et al.* (2003). However, Balát (1977) gives no information about host associations. Overviews of host-lice associations were published by Balát (1955a, 1956), who recorded 156 species of lice from 127 hosts with a total of 211 host-lice associations from 75 locations. Subsequently, Straka (1987) recorded 105 species of lice from 81 hosts with a total of 111 host-lice associations from an additional 33 locations. Other partial reports of lice from Slovakia were published by Balát (1952, 1981a), Štefan (1977), Straka (1982), Mey (1988), Máca (1991), Lukáš *et al.* (1991, 1992), Krištofík *et al.* (1996), Krištofík (1999, 2000), Janiga & Kubašková (2000), Janiga & Mičková (2004), Goldová *et al.* (2006), Szczykutowicz *et al.* (2006), Sychra *et al.* (2008), Martinů *et al.* (2015), Bush *et al.* (2018), Janiga (2018, 2019) and Najer *et al.* (2020).

From the foregoing, it is clear that there has not been a comprehensive account of all the chewing lice recorded from Slovakia, including hosts and locations. Therefore, the aim of this paper is to list all available records of chewing lice, published and new, from the territory of Slovakia and provide annotations regarding their host-lice associations. Also, a host-lice list is given in Table 5.

Material and methods

We reviewed all available publications reporting data about chewing lice from Slovakia and examined collections held in the following institutions:

University of Veterinary Sciences, Brno, Czech Republic (VETUNI)
Moravian Museum, Brno, Czech Republic (MMBC)
National Museum, Prague, Czech Republic (NMPC)
Slovak National Museum, Bratislava, Slovakia (SNMB)
Slovak National Museum, (Andrej Kmet' Museum), Martin, Slovakia (AKMM)
Natural History Museum, London, England (NHML)

Each louse species entry contains the following information:

Genus species author/s, date of publication

Host:

Reference/s:

Location/s:

Note/s:

A louse species recorded from more than one host has as many entries as number of hosts. Most references are to papers published by Balát (1953, 1955a, 1956, 1977) and Straka (1987) who provided detailed checklists of lice, including data about hosts, locations and dates of collections. In addition, Balát (1953) provided a list of lice and their hosts from Moravia and Slovakia, but without specifying the country for each host-lice association. Balát (1977) published a checklist of chewing lice from the territory of former Czechoslovakia, noting whether the species was found in Bohemia, Moravia or Slovakia, but there are no records of hosts in this paper. Host-lice associations, but without locations, were summarised by Balát in sections *Parasites* for particular birds in Hudec & Černý (1972, 1977) and Hudec (1983). Similarly, Krištofík summarised host-lice associations in section *Parasites* for mammals

in Krištofik & Danko (2012). Many other papers dealing with small numbers of louse species are also cited in the references section.

The section “Location/s mainly refers to data from the František Balát Collection of permanent slides (Balát Coll.) deposited in the MMBC and the SNMB. These collections comprise about 300 slides with specimens collected during 1946–1978 from about 85 locations. Where possible, we recorded information from Balát’s original handwritten list of slides, which includes data about (1) louse taxa, with numbers of males, females and/or nymphs collected; (2) host taxa, their sex and/or age; (3) locality: state, detailed location and date; (4) various notes. Almost all the notes correspond with those written on slides and/or in Balát’s field diaries from 1953–1963, when available. Unless otherwise stated, all data up to 1956 were published by Balát (1956). Besides the locations taken from slide labels, some locations were taken from Balát’s publications (Balát 1952, 1955, 1956). We record slide numbers, although not all of the slides are present in the Balát Collection. Also, we corrected obvious misspellings of location names and dates, taking data from the notes of Balát Collection as correct.

In addition to published records, we identified all specimens in the slides of the Balát Collection and, with only a few exceptions, all lice were correctly determined; therefore, we accepted data from Balát’s list about missing slides as correct. In some cases, where the slides and/or specimens were in poor condition, we accepted Balát’s identification, especially if the host-lice association agreed with other known records. We are aware that the practice of identifying lice solely on their host association is not appropriate. Therefore, in some cases, we left the identification at the genus level only; most of these lice belong to the genus *Philopterus*, which is in need of a comprehensive systematic revision.

We have included data from the collection of lice made by Karel Pflieger (Pflieger Coll.) deposited in the NMPC, the MMBC and the SNMB. In total, this collection comprises about 320 slides with lice collected during 1925–1939 from about 12 locations. Another collection of lice included in this list, and collected by Vladimír Straka during 1974–1985, comprises about 2100 specimens on almost 500 slides deposited at the Slovak National Museum in Martin (Andrej Kmet Museum), Slovakia (Straka Coll.; see Straka 1987). Finally, we included a collection of lice from *Lanius excubitor* collected by Tibor Weisz (Weisz Coll.) during 1963–1964 (see Szczykutowicz *et al.* 2006).

More recent collections of lice from Slovakia are: (1) the Ján Krištofik Collection (Krištofik Coll.) made during 1997–2012 from about 52 different locations, and (2) a collection made by L. Ošlejšková, A. Trnka and O. Sychra in Gbelce (see Sychra *et al.* 2008; Martinů *et al.* 2015; Najer *et al.* 2020). All lice, slide-mounted and in alcohol, from these two collections are deposited in the VETUNI, unless otherwise stated, and their data are published for the first time in this paper.

In the Checklist, all taxa are listed in alphabetical order: families within each suborder, genera within each family, and species within each genus. Taxonomy and nomenclature of chewing lice follow Price *et al.* (2003), with updates from (1) Mey (2004) regarding the genera of the *Philopterus*-complex, (2) Grossi *et al.* (2014) on the *Anatoecus dentatus*-complex, and (3) Gustafsson & Bush (2017) regarding the *Brueelia*-complex. The taxonomy and nomenclature of birds follow IOC Bird World List ver. 10.1 (Gill *et al.* 2021), and we used the list of birds of Slovakia produced by the Slovak Ornithological Society (SOS/BirdLife Slovakia 2020), which includes 359 native species (see Table S1). We added two widespread feral species introduced by humans—*Phasianus colchicus* and *Columba livia*—and five species of captive birds—*Gallus gallus*, *Numida meleagris*, *Pavo cristatus*, *Chrysolophus pictus* and *Bubo scandiacus*—which have been found with lice. Taxonomy and nomenclature of mammals follow the list by Krištofik & Danko (2012).

Results

A total of 263 species of chewing lice from Slovakia—67 amblyceran species in 22 genera and 196 ischnoceran species in 59 genera from 171 species of birds in 21 orders, and eight species of mammals in two orders—are listed in this paper. Also, a total of 366 host-lice associations (347 as species plus 19 as genus only) are recorded (Tables 1–5). These records are from about 240 different locations throughout the territory of Slovakia.

The total of 263 species of chewing lice and 347 host-lice associations at the species level includes 43 species and 20 host-lice associations recorded for the first time from Slovakia (Tables 4, 5). In addition, we record three new host-lice associations for the world, as follows: *Holomenopon clypeilargum* from *Mergellus albellus*, *Kurodaia (Conciella) cryptostigmatia* from *Strix uralensis*, *Menacanthus eurysternus* from *Turdus iliacus* and *Myrsidea*

thoracica from *Turdus torquatus* (Table 4). Average numbers of host species per louse for different genera of lice are given in Table 4.

The proportion of native host species with at least one species of louse recorded from them is very high (95.5%), with only nine introduced and captive hosts (Table 1). At least two species of chewing lice, one from each suborder—Amblycera and Ischnocera—were recorded from 77 (42%) species of birds from a total of 182 host species. A slightly higher proportion of hosts (49%) was parasitised by ischnoceran species only, while 16 (9%) host species harboured members of Amblycera only.

TABLE 1. Numbers of host species and host-lice associations (including genus level) from birds and mammals recorded in Slovakia.

| | Number of host species | Host-lice associations | Number of louse species per host |
|----------------|------------------------|------------------------|----------------------------------|
| BIRDS | 171 | 358 | 2.1 |
| Native | 164 | 338 | 2.1 |
| Introduced | 2 | 9 | 4.5 |
| Captive | 5 | 11 | 2.2 |
| MAMMALS | 8 | 8 | 1.0 |
| Native | 6 | 6 | 1.0 |
| Introduced | 0 | 0 | – |
| Captive | 2 | 2 | 1.0 |
| TOTAL | 179 | 366 | 2.0 |

TABLE 2. Suborders and families of chewing lice with numbers of louse genera, species and host-lice associations (excluding records at genus level) recorded in Slovakia.

| | Number of louse genera | Number of louse species | Host-lice associations | Number of host species per louse |
|-------------------|------------------------|-------------------------|------------------------|----------------------------------|
| Amblycera | 22 | 67 | 108 | 1.6 |
| Laemobothriidae | 1 | 2 | 2 | 1.0 |
| Menoponidae | 20 | 60 | 95 | 1.5 |
| Ricinidae | 1 | 5 | 11 | 2.2 |
| Ischnocera | 59 | 196 | 239 | 1.3 |
| Phlopterae | 54 | 188 | 231 | 1.3 |
| Trichodectidae | 5 | 8 | 8 | 1.0 |
| TOTAL | 81 | 263 | 347 | 1.3 |

Average numbers of louse species per host, for orders and families of hosts, are given in Table 3. With seven species of lice, *Phasianus colchicus* has the highest louse diversity, followed by *Corvus frugilegus* with six, and *Coloeus monedula*, *Passer montanus* and *Turdus pilaris* with five each (Table 5). The bird orders Bucerotiformes, Caprimulgiformes, Ciconiiformes, Coraciiformes, Galliformes and Piciformes had a higher proportion of host species (80–100%) with recorded lice in comparison to host-lice associations recorded from the world. The lowest proportion (20%) was in the Charadriiformes.

Considering the host birds recorded in Slovakia and what lice are known from them elsewhere, these louse genera have the highest proportions of recorded louse species in this country: *Alcedoffula*, *Cincoecus*, *Cuculoecus*, *Damalinea*, *Eidmanniella*, *Ibidoecus*, *Gruimenopon*, *Maculinirmus*, *Meropoecus*, *Meropsiella*, *Mulcticola*, *Neophlopterus*, *Turdinirmus*, *Trinoton* and *Upupicola*. The lowest proportions (7–14%) are for *Actornithophilus*, *Austromenopon*, *Carduiceps*, *Luniceps* and *Saemundssonina* (Table 4). The highest host ranges for individual species are for *Anatoecus dentatus* (eight host species), *Menacanthus eurysternus* (eight) and *Trinoton querquedulae* (seven) (Table 5).

TABLE 3. List of host taxa with numbers of species and host-louse associations (including records at genus level) recorded in Slovakia.

| | Number of host species | Host-louse associations | Number of louse species per host | Range |
|-------------------------|------------------------|-------------------------|----------------------------------|------------|
| NATIVE BIRDS | 164 | 338 | 2.1 | 1–6 |
| Accipitriformes | 16 | 33 | 2.1 | 1–4 |
| Accipitridae | 15 | 32 | 2.1 | 1–4 |
| Pandionidae | 1 | 1 | 1.0 | |
| Anseriformes | 15 | 32 | 2.1 | 1–4 |
| Anatidae | 15 | 32 | 2.1 | 1–4 |
| Apodiformes | 1 | 1 | 1.0 | |
| Apodidae | 1 | 1 | 1.0 | |
| Bucerotiformes | 1 | 2 | 2.0 | |
| Upupidae | 1 | 2 | 2.0 | |
| Caprimulgiformes | 1 | 1 | 1.0 | |
| Caprimulgidae | 1 | 1 | 1.0 | |
| Charadriiformes | 14 | 25 | 1.8 | 1–3 |
| Charadriidae | 3 | 5 | 1.6 | 1–2 |
| Laridae | 5 | 9 | 1.8 | 1–3 |
| Scolopacidae | 6 | 11 | 1.8 | 1–3 |
| Ciconiiformes | 2 | 4 | 2.0 | 1–3 |
| Ciconiidae | 2 | 4 | 2.0 | 1–3 |
| Columbiformes | 3 | 6 | 2.0 | 1–3 |
| Columbidae | 3 | 6 | 2.0 | 1–3 |
| Coraciiformes | 3 | 5 | 1.7 | 1–3 |
| Alcedinidae | 1 | 1 | 1.0 | |
| Coraciidae | 1 | 1 | 2.0 | |
| Meropidae | 1 | 3 | 3.0 | |
| Cuculiformes | 1 | 2 | 2.0 | |
| Cuculidae | 1 | 2 | 2.0 | |
| Falconiformes | 3 | 7 | 2.3 | 1–4 |
| Falconidae | 3 | 7 | 2.3 | 1–4 |
| Galliformes | 4 | 10 | 2.5 | 1–3 |
| Phasianidae | 4 | 10 | 2.5 | 1–3 |
| Gaviiformes | 1 | 1 | 1.0 | |
| Gaviidae | 1 | 1 | 1.0 | |
| Gruiformes | 4 | 14 | 3.5 | 1–4 |
| Gruidae | 1 | 4 | 4.0 | |
| Rallidae | 3 | 10 | 3.3 | 1–4 |
| Otidiformes | 1 | 1 | 1.0 | |
| Otididae | 1 | 1 | 1.0 | |
| Passeriformes | 69 | 154 | 2.2 | 1–6 |
| Acrocephalidae | 4 | 8 | 2.0 | 1–2 |
| Aegithalidae | 1 | 1 | 1.0 | |
| Alaudidae | 2 | 5 | 2.5 | 2–3 |

.....continued on the next page

TABLE 3. (Continued)

| | Number of host species | Host-louse associations | Number of louse species per host | Range |
|-------------------------|------------------------|-------------------------|----------------------------------|------------|
| Certhiidae | 1 | 1 | 1.0 | |
| Cinclidae | 1 | 2 | 2.0 | |
| Corvidae | 7 | 24 | 3.4 | 1–6 |
| Emberizidae | 2 | 7 | 3.5 | 3–4 |
| Fringillidae | 10 | 16 | 1.6 | 1–3 |
| Hirundinidae | 3 | 8 | 2.7 | 2–3 |
| Laniidae | 3 | 8 | 2.7 | 1–3 |
| Locustellidae | 2 | 3 | 1.5 | 1–2 |
| Motacillidae | 5 | 9 | 1.8 | 1–3 |
| Muscicapidae | 4 | 6 | 1.5 | 1–2 |
| Oriolidae | 1 | 3 | 3.0 | |
| Panuridae | 1 | 2 | 2.0 | |
| Paridae | 4 | 8 | 2.3 | 1–4 |
| Passeridae | 2 | 7 | 3.5 | 2–5 |
| Phylloscopidae | 2 | 2 | 1.0 | |
| Prunellidae | 2 | 3 | 1.5 | 1–2 |
| Regulidae | 1 | 1 | 1.0 | |
| Remizidae | 1 | 2 | 2.0 | |
| Sittidae | 1 | 2 | 2.0 | |
| Sturnidae | 1 | 4 | 4.0 | |
| Sylviidae | 1 | 1 | 1.0 | |
| Troglodytidae | 1 | 2 | 2.0 | |
| Turdidae | 6 | 19 | 3.2 | 1–5 |
| Pelecaniformes | 6 | 8 | 1.3 | 1–2 |
| Ardeidae | 4 | 5 | 1.3 | 1–2 |
| Threskiornithidae | 2 | 3 | 1.5 | 1–2 |
| Piciformes | 8 | 16 | 2.0 | 1–3 |
| Picidae | 8 | 16 | 2.0 | 1–3 |
| Podicipediformes | 3 | 4 | 1.3 | 1–2 |
| Podicipedidae | 3 | 4 | 1.3 | 1–2 |
| Strigiformes | 7 | 10 | 1.4 | 1–2 |
| Strigidae | 6 | 8 | 1.3 | 1–2 |
| Tytonidae | 1 | 2 | 2.0 | |
| Suliformes | 1 | 2 | 2.0 | |
| Phalacrocoracidae | 1 | 2 | 2.0 | |
| INTRODUCED BIRDS | 2 | 9 | 4.5 | 2–7 |
| Columbiformes | 1 | 2 | 2.0 | |
| Columbidae | 1 | 2 | 2.0 | |
| Galliformes | 1 | 7 | 7.0 | |
| Phasianidae | 1 | 7 | 7.0 | |

.....continued on the next page

TABLE 3. (Continued)

| | Number of host species | Host-louse associations | Number of louse species per host | Range |
|------------------------|------------------------|-------------------------|----------------------------------|------------|
| CAPTIVE BIRDS | 5 | 11 | 2.2 | 1–5 |
| Galliformes | 4 | 10 | 2.5 | 1–5 |
| Numididae | 1 | 1 | 1.0 | |
| Phasianidae | 3 | 9 | 3.0 | 1–5 |
| Strigiformes | 1 | 1 | 1 | |
| Strigidae | 1 | 1 | 1 | |
| MAMMALS | 8 | 8 | 1.0 | |
| Carnivora | 5 | 5 | 1.0 | |
| Felidae | 1 | 1 | 1.0 | |
| Mustelidae | 4 | 4 | 1.0 | |
| Cetartiodactyla | 3 | 3 | 1.0 | |
| Bovidae | 2 | 2 | 1.0 | |
| Cervidae | 1 | 1 | 1.0 | |
| TOTAL | 179 | 366 | 2.0 | 1–7 |

TABLE 4. List of louse genera with numbers of species and their host associations (including records at genus level) recorded from Slovakia.

| | Number of louse species | Host-louse associations | Number of host species per louse | Range | New host-louse associations (** = worldwide) |
|-------------------------|-------------------------|-------------------------|----------------------------------|------------|--|
| Amblycera | 67 | 114 | 1.7 | 1–7 | |
| Laemobothriidae | 2 | 2 | 1.0 | | |
| <i>Laemobothrion</i> | 2 | 2 | 1.0 | | |
| Menoponidae | 60 | 100 | 1.6 | 1–7 | |
| <i>Actornithophilus</i> | 1 | 1 | 1.0 | | |
| <i>Amyrsidea</i> | 2 | 2 | 1.0 | | |
| <i>Ardeiphilus</i> | 1 | 1 | 1.0 | | |
| <i>Austromenopon</i> | 4 | 4 | 1.0 | | |
| <i>Ciconiphilus</i> | 2 | 2 | 1.0 | | |
| <i>Colpocephalum</i> | 7 | 13 | 1.8 | 1–2 | 2 |
| <i>Dennyus</i> | 1 | 1 | 1.0 | | |
| <i>Eidmanniella</i> | 1 | 1 | 1.0 | | |
| <i>Gruimenopon</i> | 1 | 1 | 1.0 | | |
| <i>Heleonomus</i> | 1 | 1 | 1.0 | | |
| <i>Holomenopon</i> | 2 | 1 + 1 | 1.0 | | ** <i>Holomenopon clypeilargum</i> ex <i>Mergellus albellus</i> |
| <i>Kurodaia</i> | 4 | 4 + 1 | 1.3 | 1–2 | ** <i>Kurodaia (Conciella)</i> <i>cryptostigmatia</i> ex <i>Strix uralensis</i> |
| <i>Machaerilaemus</i> | 1 | 1 | 1.0 | | |

.....continued on the next page

TABLE 4. (Continued)

| | Number of louse species | Host-lice associations | Number of host species per louse | Range | New host-lice associations (** = worldwide) |
|--------------------------|-------------------------|------------------------|----------------------------------|------------|---|
| <i>Menacanthus</i> | 14 | 35 + 1 | 2.6 | 1–8 | 8 ** <i>Menacanthus eury sternus</i> ex <i>Turdus iliacus</i> |
| <i>Menopon</i> | 2 | 2 | 1.0 | | |
| <i>Meromenopon</i> | 1 | 1 | 1.0 | | |
| <i>Myrsidea</i> | 10 | 10 + 1 | 1.0 | | ** <i>Myrsidea thoracica</i> ex <i>Turdus torquatus</i> |
| <i>Nosopon</i> | 1 | 1 | 1.0 | | |
| <i>Pseudomenopon</i> | 2 | 3 | 1.5 | 1–2 | 1 |
| <i>Trinoton</i> | 2 | 10 | 5.0 | 3–7 | 2 |
| Ricinidae | 5 | 13 | 2.6 | 1–5 | |
| <i>Ricinus</i> | 5 | 13 | 2.6 | 1–5 | 1 |
| Ischnocera | 196 | 252 | 1.3 | 1–9 | |
| Philopteridae | 188 | 244 | 1.3 | 1–9 | |
| <i>Acronirmus</i> | 1 | 2 | 2.0 | | 1 |
| <i>Alcedoffula</i> | 1 | 1 | 1.0 | | |
| <i>Anaticola</i> | 4 | 9 | 2.3 | 1–3 | |
| <i>Anatoecus</i> | 1 | 9 | 9.0 | | 1 |
| <i>Aquanirmus</i> | 3 | 3 | 1.0 | | |
| <i>Ardeicola</i> | 5 | 5 | 1.0 | | |
| <i>Brueelia</i> | 21 | 27 | 1.3 | 1–2 | |
| <i>Campanulotes</i> | 2 | 2 | 1.0 | | |
| <i>Capraiella</i> | 1 | 1 | 1.0 | | |
| <i>Carduiceps</i> | 1 | 1 | 1.0 | | |
| <i>Cincloecus</i> | 1 | 1 | 1.0 | | |
| <i>Coloceras</i> | 2 | 2 | 1.0 | | |
| <i>Columbicola</i> | 3 | 4 | 1.3 | 1–2 | |
| <i>Corvonirmus</i> | 2 | 2 | 1.0 | | |
| <i>Craspedonirmus</i> | 1 | 1 | 1.0 | | |
| <i>Craspedorrhynchus</i> | 7 | 9 | 1.3 | 1–2 | |
| <i>Cuclotogaster</i> | 2 | 3 | 1.0 | | |
| <i>Cuculicola</i> | 1 | 1 | 1.0 | | |
| <i>Cuculoecus</i> | 1 | 1 | 1.0 | | |
| <i>Cummingsiella</i> | 2 | 2 | 1.0 | | |
| <i>Degeeriella</i> | 9 | 16 | 1.8 | 1–4 | |
| <i>Esthiopterum</i> | 1 | 1 | 1.0 | | |
| <i>Falcolipeurus</i> | 2 | 2 | 1.0 | | |
| <i>Fulicoffula</i> | 3 | 3 | 1.0 | | 1 |
| <i>Goniocotes</i> | 3 | 3 | 1.0 | | |
| <i>Goniodes</i> | 6 | 6 | 1.0 | | |

.....continued on the next page

TABLE 4. (Continued)

| | Number of louse species | Host-lice associations | Number of host species per louse | Range | New host-lice associations (** = worldwide) |
|-----------------------|-------------------------|------------------------|----------------------------------|------------|---|
| <i>Guimaraesiella</i> | 2 | 2 | 1.0 | | |
| <i>Hecatrishula</i> | 1 | 2 | 2.0 | | |
| <i>Ibidoecus</i> | 2 | 2 | 1.0 | | |
| <i>Lagopoecus</i> | 4 | 4 | 1.0 | | |
| <i>Lipeurus</i> | 3 | 3 | 1.0 | | |
| <i>Luniceps</i> | 1 | 1 | 1.0 | | |
| <i>Maculinirmus</i> | 1 | 1 | 1.0 | | |
| <i>Meropoecus</i> | 1 | 1 | 1.0 | | |
| <i>Meropsiella</i> | 1 | 1 | 1.0 | | |
| <i>Mulcticola</i> | 1 | 1 | 1.0 | | |
| <i>Neophilopterus</i> | 2 | 2 | 1.0 | | |
| <i>Olivinirmus</i> | 1 | 1 | 1.0 | | |
| <i>Ornithobius</i> | 1 | 1 | 1.0 | | |
| <i>Otidoecus</i> | 1 | 1 | 1.0 | | |
| <i>Oxylipeurus</i> | 3 | 3 | 1.0 | | |
| <i>Pectinopygus</i> | 1 | 1 | 1.0 | | |
| <i>Penenirmus</i> | 8 | 12 | 1.5 | 1–4 | |
| <i>Philopterus</i> | 33 | 50 | 1.5 | 1–5 | |
| <i>Picicola</i> | 2 | 3 | 1.5 | 1–2 | |
| <i>Quadriceps</i> | 10 | 10 | 1.0 | | |
| <i>Rallicola</i> | 3 | 3 | 1.0 | | |
| <i>Rhynonirmus</i> | 1 | 1 | 1.0 | | |
| <i>Rostrinirmus</i> | 3 | 3 | 1.0 | | |
| <i>Saemundssonina</i> | 5 | 6 | 1.2 | 1–2 | |
| <i>Strigiphilus</i> | 8 | 8 | 1.0 | | |
| <i>Sturnidoecus</i> | 2 | 2 | 1.0 | | |
| <i>Turdinirmus</i> | 1 | 1 | 1.0 | | |
| <i>Upupicola</i> | 1 | 1 | 1.0 | | |
| Trichodectidae | 8 | 8 | 1.0 | | |
| <i>Bovicola</i> | 2 | 2 | 1.0 | | |
| <i>Damalinia</i> | 1 | 1 | 1.0 | | |
| <i>Felicola</i> | 1 | 1 | 1.0 | | |
| <i>Stachiella</i> | 3 | 3 | 1.0 | | |
| <i>Trichodectes</i> | 1 | 1 | 1.0 | | |
| TOTAL | 263 | 366 | 1.4 | 1–9 | 20 |

TABLE 5. List of host-lice associations of chewing lice from Slovakia.

= first record of louse species from Slovakia; § = new host-lice association for Slovakia; ** = new host-lice association worldwide. Host taxa listed in alphabetical sequence by Order.

| HOSTS | LICE | |
|--|---|---|
| AVES | | |
| Accipitriformes | | |
| Accipitridae | | |
| <i>Accipiter gentilis</i> (Linnaeus, 1758) | <i>Craspedorrhynchus haematopus</i> (Scopoli, 1763) | # |
| | <i>Degeeriella vagans</i> (Giebel, 1874) | # |
| <i>Accipiter nisus</i> (Linnaeus, 1758) | <i>Degeeriella nisus</i> (Giebel, 1866) | |
| <i>Aquila chrysaetos</i> (Linnaeus, 1758) | <i>Colpocephalum impressum</i> Rudow, 1866 | |
| | <i>Craspedorrhynchus aquilinus</i> (Denny, 1842) | |
| | <i>Degeeriella fulva</i> (Giebel, 1874) | |
| | <i>Falcolipeurus suturalis</i> (Rudow, 1869) | |
| <i>Aquila heliaca</i> Savigny, 1809 | <i>Colpocephalum</i> sp. | |
| | <i>Craspedorrhynchus</i> sp. | |
| <i>Buteo buteo</i> (Linnaeus, 1758) | <i>Colpocephalum nanum</i> Piaget, 1890 | # |
| | <i>Craspedorrhynchus platystomus</i> (Burmeister, 1838) | |
| | <i>Degeeriella fulva</i> (Giebel, 1874) | |
| | <i>Kurodaia (Kurodaia) fulvofasciata</i> (Piaget, 1880) | # |
| <i>Buteo lagopus</i> (Pontoppidan, 1763) | <i>Colpocephalum nanum</i> Piaget, 1890 | # |
| | <i>Craspedorrhynchus dilatatus</i> (Rudow, 1869) | |
| | <i>Degeeriella fulva</i> (Giebel, 1874) | |
| <i>Buteo rufinus</i> (Cretzschmar, 1829) | <i>Craspedorrhynchus platystomus</i> (Burmeister, 1838) | |
| | <i>Degeeriella fulva</i> (Giebel, 1874) | |
| <i>Circaetus gallicus</i> (Gmelin, 1788) | <i>Degeeriella leucopleura</i> (Nitzsch, 1874) | |
| <i>Circus aeruginosus</i> (Linnaeus, 1758) | <i>Colpocephalum turbinatum</i> Denny, 1842 | |
| | <i>Degeeriella fusca</i> (Denny, 1842) | |
| <i>Circus cyaneus</i> (Linnaeus, 1766) | <i>Degeeriella fusca</i> (Denny, 1842) | |
| <i>Circus macrourus</i> (Gmelin, 1770) | <i>Degeeriella fusca</i> (Denny, 1842) | |
| <i>Clanga pomarina</i> (Brehm, 1831) | <i>Colpocephalum impressum</i> Rudow, 1866 | § |
| | <i>Craspedorrhynchus naevius</i> (Giebel, 1861) | |
| | <i>Degeeriella aquilarum</i> Eichler, 1943 | |
| <i>Haliaeetus albicilla</i> (Linnaeus, 1758) | <i>Colpocephalum flavescens</i> (Haan, 1829) | |
| | <i>Craspedorrhynchus macrocephalus</i> (Nitzsch, 1874) | |
| | <i>Degeeriella discocephalus</i> (Burmeister, 1838) | |
| | <i>Falcolipeurus sulcifrons</i> (Denny, 1842) | |
| <i>Milvus migrans</i> (Boddaert, 1783) | <i>Degeeriella regalis</i> (Giebel, 1866) | |
| <i>Pernis apivorus</i> (Linnaeus, 1758) | <i>Craspedorrhynchus melittoscopus</i> (Nitzsch, 1874) | |
| Pandionidae | | |
| <i>Pandion haliaetus</i> (Linnaeus, 1758) | <i>Kurodaia (Kurodaia) haliaeeti</i> (Denny, 1842) | |
| Anseriformes | | |
| Anatidae | | |
| <i>Anas acuta</i> Linnaeus, 1758 | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | |
| <i>Anas crecca</i> Linnaeus, 1758 | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|---|---|------|
| <i>Anas platyrhynchos</i> Linnaeus, 1758 | <i>Anaticola crassicornis</i> (Scopoli, 1763) | |
| | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | |
| <i>Anser albifrons</i> (Scopoli, 1769) | <i>Anaticola anseris</i> (Linnaeus, 1758) | |
| <i>Anser brachyrhynchus</i> Baillon, 1834 | <i>Anaticola anseris</i> (Linnaeus, 1758) | |
| | <i>Anatoecus</i> sp. | |
| | <i>Ciconiphilus pectiniventris</i> (Harrison, 1916) | # |
| | <i>Trinoton anserinum</i> (J.C. Fabricius, 1805) | |
| <i>Anser fabalis</i> (Latham, 1787) | <i>Anaticola anseris</i> (Linnaeus, 1758) | |
| | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| | <i>Trinoton anserinum</i> (J.C. Fabricius, 1805) | |
| <i>Aythya ferina</i> (Linnaeus, 1758) | <i>Anatoecus dentatus</i> (Scopoli, 1763) | § |
| | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | § |
| <i>Aythya fuligula</i> (Linnaeus, 1758) | <i>Anaticola mergiserrati</i> (De Geer, 1778) | # |
| | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | § |
| <i>Branta ruficollis</i> (Pallas, 1769) | <i>Anaticola beieri</i> Eichler, 1954a | |
| | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| <i>Cygnus olor</i> (Gmelin, 1789) | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| | <i>Ornithobius bucephalus</i> (Giebel, 1874) | # |
| | <i>Trinoton anserinum</i> (J.C. Fabricius, 1805) | |
| <i>Mergellus albellus</i> (Linnaeus, 1758) | <i>Anaticola mergiserrati</i> (De Geer, 1778) | # |
| | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| | <i>Holomenopon clypeilargum</i> Eichler, 1943 | § ** |
| | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | |
| <i>Mergus merganser</i> Linnaeus, 1758 | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| <i>Spatula clypeata</i> (Linnaeus, 1758) | <i>Anaticola crassicornis</i> (Scopoli, 1763) | |
| <i>Spatula querquedula</i> (Linnaeus, 1758) | <i>Anaticola crassicornis</i> (Scopoli, 1763) | |
| | <i>Anatoecus dentatus</i> (Scopoli, 1763) | |
| | <i>Trinoton querquedulae</i> (Linnaeus, 1758) | |
| <i>Tadorna tadorna</i> (Linnaeus, 1758) | <i>Holomenopon tadornae</i> (Gervais, 1844) | |
| Apodiformes | | |
| Apodidae | | |
| <i>Apus apus</i> (Linnaeus, 1758) | <i>Dennyus hirundinis</i> (Linnaeus, 1761) | |
| Bucerotiformes | | |
| Upupidae | | |
| <i>Upupa epops</i> Linnaeus, 1758 | <i>Menacanthus fertilis</i> (Nitzsch, 1866) | |
| | <i>Upupicola upupae</i> (Schrank, 1803) | |
| Caprimulgiformes | | |
| Caprimulgidae | | |
| <i>Caprimulgus europaeus</i> Linnaeus, 1758 | <i>Mulcticola hypoleucus</i> (Denny, 1842) | |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|--|---|---|
| Charadriiformes | | |
| Charadriidae | | |
| <i>Charadrius dubius</i> Scopoli, 1786 | <i>Austromenopon aegialitidis</i> (Durrant, 1906) | # |
| | <i>Quadriceps bicuspis</i> (Nitzsch, 1874) | |
| <i>Charadrius hiaticula</i> Linnaeus, 1758 | <i>Quadriceps fissus</i> (Burmeister, 1838) | |
| <i>Vanellus vanellus</i> (Linnaeus, 1758) | <i>Actornithophilus gracilis</i> (Piaget, 1880) | |
| | <i>Quadriceps junceus</i> (Scopoli, 1763) | |
| Laridae | | |
| <i>Chlidonias leucopterus</i> (Temminck, 1815) | <i>Quadriceps anagrapsus</i> (Nitzsch [in Giebel], 1866) | |
| | <i>Saemundssonina</i> (<i>Saemundssonina</i>) <i>lobaticeps</i> (Giebel, 1874) | |
| <i>Chlidonias niger</i> (Linnaeus, 1758) | <i>Quadriceps phaeonotus</i> (Nitzsch [in Giebel], 1866) | |
| <i>Chroicocephalus ridibundus</i> (Linnaeus, 1766) | <i>Austromenopon transversum</i> (Denny, 1842) | |
| | <i>Quadriceps punctatus punctatus</i> (Burmeister, 1838) | |
| | <i>Saemundssonina</i> (<i>Saemundssonina</i>) <i>lari</i> (O. Fabricius, 1780) | |
| <i>Larus argentatus</i> Pontoppidan, 1763 | <i>Saemundssonina</i> (<i>Saemundssonina</i>) sp. | |
| <i>Sterna hirundo</i> Linnaeus, 1758 | <i>Quadriceps sellatus</i> (Burmeister, 1838) | |
| | <i>Saemundssonina</i> (<i>Saemundssonina</i>) <i>sternae</i> (Linnaeus, 1758) | |
| Scolopacidae | | |
| <i>Actitis hypoleucos</i> (Linnaeus, 1758) | <i>Quadriceps ravus</i> (Kellogg, 1899) | |
| <i>Calidris pugnax</i> (Linnaeus, 1758) | <i>Carduiceps scalaris</i> (Piaget, 1880) | |
| | <i>Saemundssonina</i> (<i>Saemundssonina</i>) <i>tringae</i> (O. Fabricius, 1780) | # |
| | | # |
| <i>Numenius arquata</i> (Linnaeus, 1758) | <i>Austromenopon crocatum</i> (Nitzsch [in Giebel], 1866) | |
| | <i>Cummingsiella ovalis</i> (Scopoli, 1763) | |
| | <i>Luniceps numenii</i> (Denny, 1842) | |
| <i>Scolopax rusticola</i> Linnaeus, 1758 | <i>Cummingsiella aurea</i> Hopkins, 1949 | |
| | <i>Rhynonirmus helvolus</i> (Burmeister, 1838) | |
| <i>Tringa erythropus</i> (Pallas, 1764) | <i>Austromenopon decorosum</i> Złotorzycka, 1968 | # |
| | <i>Quadriceps furvus</i> (Burmeister, 1838) | |
| <i>Tringa ochropus</i> Linnaeus, 1758 | <i>Quadriceps ochropi</i> (Denny, 1842) | |
| Ciconiiformes | | |
| Ciconiidae | | |
| <i>Ciconia ciconia</i> (Linnaeus, 1758) | <i>Ardeicola ciconiae</i> (Linnaeus, 1758) | |
| | <i>Colpocephalum zebra</i> Burmeister, 1838 | |
| | <i>Neophilopterus incompletus</i> (Denny, 1842) | |
| <i>Ciconia nigra</i> (Linnaeus, 1758) | <i>Neophilopterus tricolor</i> (Burmeister, 1838) | |
| Columbiformes | | |

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TABLE 5. (Continued)

| HOSTS | LICE |
|--|--|
| Columbidae | |
| <i>Columba livia</i> Gmelin, 1789—introduced species | <i>Campanulotes compar</i> (Burmeister, 1838) <i>Columbicola columbae</i> (Linnaeus, 1758) |
| <i>Columba palumbus</i> Linnaeus, 1758 | <i>Campanulotes bidentatus</i> (Scopoli, 1763) # <i>Coloceras damicorne</i> (Nitzsch, 1866) <i>Columbicola claviformis</i> (Denny, 1842) # |
| <i>Streptopelia decaocto</i> (Frisvaldszky, 1838) | <i>Coloceras piageti</i> (Johnston & Harrison, 1912) <i>Columbicola bacillus</i> (Giebel, 1866) |
| <i>Streptopelia turtur</i> (Linnaeus, 1758) | <i>Columbicola bacillus</i> (Giebel, 1866) |
| Coraciiformes | |
| Alcedinidae | |
| <i>Alcedo atthis</i> (Linnaeus, 1758) | <i>Alcedoffula alcedinis</i> (Denny, 1842) |
| Coraciidae | |
| <i>Coracias garrulus</i> Linnaeus, 1758 | <i>Capraiella subcuspidata</i> (Burmeister, 1838) <i>Laemobothrion</i> sp. (accidental straggler) |
| Meropidae | |
| <i>Merops apiaster</i> Linnaeus, 1758 | <i>Meromenopon meropis</i> Clay & Meinertzhagen, 1941 <i>Meropoecus meropis</i> (Denny, 1842) <i>Meropsiella apiastri</i> (Denny, 1842) |
| Cuculiformes | |
| Cuculidae | |
| <i>Cuculus canorus</i> Linnaeus, 1758 | <i>Cuculicola latirostris</i> (Burmeister, 1838) <i>Cuculoecus latifrons</i> (Denny, 1842) |
| Falconiformes | |
| Falconidae | |
| <i>Falco cherrug</i> Gray, 1834 | <i>Colpocephalum</i> sp. <i>Degeeriella rufa</i> (Burmeister, 1838) |
| <i>Falco tinnunculus</i> Linnaeus, 1758 | <i>Colpocephalum</i> sp. <i>Degeeriella rufa</i> (Burmeister, 1838) <i>Laemobothrion (Laemobothrion) tinnunculi</i> (Linnaeus, 1758) <i>Nosopon lucidum</i> (Rudow, 1869) # |
| <i>Falco vespertinus</i> Linnaeus, 1766 | <i>Degeeriella rufa</i> (Burmeister, 1838) |
| Galliformes | |
| Numididae | |
| <i>Numida meleagris</i> (Linnaeus, 1758)—captive bird | <i>Lipeurus numidae</i> (Denny, 1842) |
| Phasianidae | |
| <i>Chrysolophus pictus</i> (Linnaeus, 1758)—captive bird | <i>Oxylipeurus mesopelios</i> (Nitzsch [in Giebel], 1866) |
| <i>Gallus gallus</i> (Linnaeus, 1758)—captive bird | <i>Cuclotogaster heterographus</i> (Nitzsch [in Giebel], 1866) # |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|--|--|---|
| | <i>Goniocotes gallinae</i> (De Geer, 1778) | # |
| | <i>Goniodes dissimilis</i> Denny, 1842 | |
| | <i>Menacanthus stramineus</i> (Nitzsch, 1818) | # |
| | <i>Menopon gallinae</i> (Linnaeus, 1758) | # |
| <i>Lyrurus tetrrix</i> (Linnaeus, 1758) | <i>Goniodes tetraonis</i> (Linnaeus, 1761) | |
| | <i>Lagopoecus lyrurus</i> Clay, 1938 | |
| <i>Pavo cristatus</i> Linnaeus, 1758—captive bird | <i>Amyrsidea phaeostoma</i> (Nitzsch [in Giebel], 1866) | |
| | <i>Goniodes pavonis</i> (Linnaeus, 1758) | |
| | <i>Lipeurus pavo</i> Clay, 1938 | |
| <i>Perdix perdix</i> (Linnaeus, 1758) | <i>Cuclotogaster heterogrammicus</i> (Nitzsch [in Giebel], 1866) | |
| | <i>Goniodes dispar</i> Burmeister, 1838 | # |
| | <i>Menopon pallens</i> Clay, 1949 | |
| <i>Phasianus colchicus</i> Linnaeus, 1758—introduced species | <i>Amyrsidea perdicis</i> (Denny, 1842) | |
| | <i>Cuclotogaster heterographus</i> (Nitzsch [in Giebel], 1866) | # |
| | <i>Goniocotes chrysocephalus</i> Giebel, 1874 | |
| | <i>Goniodes colchici</i> Denny, 1842 | |
| | <i>Lagopoecus colchicus</i> Emerson, 1949 | |
| | <i>Lipeurus maculosus</i> Clay, 1938 | |
| | <i>Oxylipeurus colchicus</i> Clay, 1938 | |
| <i>Tetrao urogallus</i> Linnaeus, 1758 | <i>Goniodes bituberculatus</i> Rudow, 1869 | |
| | <i>Lagopoecus pallidovittatus</i> (Grube, 1851) | |
| | <i>Oxylipeurus tetraonis</i> (Grube, 1851) | |
| <i>Tetrastes bonasia</i> (Linnaeus, 1758) | <i>Goniocotes megaloccephalus</i> Uchida, 1916 | # |
| | <i>Lagopoecus tetrastei</i> Bechet, 1963 | |
| Gaviiformes | | |
| Gaviidae | | |
| <i>Gavia arctica</i> (Linnaeus, 1758) | <i>Craspedonirmus colymbinus</i> (Denny, 1842) | |
| Gruiformes | | |
| Gruidae | | |
| <i>Grus grus</i> (Linnaeus, 1758) | <i>Esthiopterum gruis</i> (Linnaeus, 1758) | |
| | <i>Gruimenopon longum</i> (Giebel, 1874) | |
| | <i>Heleonomus macilentus</i> (Nitzsch [in Giebel], 1866) | |
| | <i>Saemundssonina</i> (<i>Saemundssonina</i>) <i>integer</i> (Nitzsch [in Giebel], 1866) | |
| Rallidae | | |
| <i>Fulica atra</i> Linnaeus, 1758 | <i>Fulicoffula lurida</i> (Nitzsch, 1818) | |
| | <i>Laemobothrion</i> (<i>Eulaemobothrion</i>) <i>atrum</i> (Nitzsch, 1818) | |
| | <i>Pseudomenopon pilosum</i> (Scopoli, 1763) | § |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|--|--|---|
| | <i>Rallicola (Rallicola) fulicae</i> (Denny, 1842) | |
| <i>Gallinula chloropus</i> (Linnaeus, 1758) | <i>Fulicoffula gallinula</i> Carriker, 1953 | # |
| | <i>Pseudomenopon pilosum</i> (Scopoli, 1763) | |
| | <i>Rallicola (Rallicola) minutus</i> (Nitzsch [in Giebel], 1866) | # |
| <i>Rallus aquaticus</i> Linnaeus, 1758 | <i>Fulicoffula</i> sp. | § |
| | <i>Rallicola (Rallicola) cuspidatus</i> (Scopoli, 1763) | # |
| Otidiformes | | |
| Otididae | | |
| <i>Otis tarda</i> Linnaeus, 1758 | <i>Otidoecus turmalis</i> (Denny, 1842) | |
| Passeriformes | | |
| Acrocephalidae | | |
| <i>Acrocephalus arundinaceus</i> (Linnaeus, 1758) | <i>Philopterus fedorenkoe</i> (Mey, 1983) | |
| <i>Acrocephalus melanopogon</i> (Temminck, 1823) | <i>Philopterus acrocephalus</i> Carriker, 1949 | |
| <i>Acrocephalus schoenobaenus</i> (Linnaeus, 1758) | <i>Brueelia vaneki</i> Balát, 1981 | # |
| | <i>Menacanthus curuccae</i> (Schrank, 1776) | |
| | <i>Philopterus</i> sp. | |
| <i>Acrocephalus scirpaceus</i> (Hermann, 1804) | <i>Brueelia</i> sp. | |
| | <i>Menacanthus curuccae</i> (Schrank, 1776) | |
| | <i>Philopterus</i> sp. | |
| Aegithalidae | | |
| <i>Aegithalos caudatus</i> (Linnaeus, 1758) | <i>Penenirmus pari</i> (Denny, 1842) | |
| Alaudidae | | |
| <i>Alauda arvensis</i> Linnaeus, 1758 | <i>Brueelia parviguttata</i> (Blagoveshtchensky, 1940) | |
| | <i>Menacanthus alaudae</i> (Schrank, 1776) | § |
| | <i>Philopterus stadleri</i> (Eichler, 1959) | # |
| <i>Galerida cristata</i> (Linnaeus, 1758) | <i>Philopterus alexanderkoenigi</i> (Eichler, 1953b) | # |
| | <i>Ricinus serratus</i> (Durrant, 1906) | # |
| Certhiidae | | |
| <i>Certhia familiaris</i> Linnaeus, 1758 | <i>Penenirmus gulosus</i> (Nitzsch, 1866) | |
| Cinclidae | | |
| <i>Cinclus cinclus</i> (Linnaeus, 1758) | <i>Cincloecus cincli</i> (Denny, 1842) | |
| | <i>Myrsidea franciscoi</i> Conci, 1942 | |
| Corvidae | | |
| <i>Coloeus monedula</i> (Linnaeus, 1758) | <i>Hecatrishula varia</i> (Burmeister, 1838) | # |
| | <i>Menacanthus eurysternus</i> (Burmeister, 1838) | § |
| | <i>Menacanthus gonophaeus</i> (Burmeister, 1838) | |
| | <i>Myrsidea anathorax</i> (Nitzsch, 1866) | # |
| | <i>Philopterus guttatus</i> (Denny, 1842) | |
| <i>Corvus corax</i> Linnaeus, 1758 | <i>Colpocephalum fregili</i> Denny, 1842 | |
| | <i>Menacanthus gonophaeus</i> (Burmeister, 1838) | § |

.....continued on the next page

TABLE 5. (Continued)

| HOSTS | LICE |
|---|---|
| | <i>Philopterus corvi</i> (Linnaeus, 1758) |
| <i>Corvus cornix</i> Linnaeus, 1758 | <i>Corvonirmus uncinosus</i> (Burmeister, 1838) |
| | <i>Menacanthus eurysternus</i> (Burmeister, 1838) |
| | <i>Myrsidea cornicis</i> (De Geer, 1778) |
| | <i>Philopterus ocellatus</i> (Scopoli, 1763) |
| <i>Corvus frugilegus</i> Linnaeus, 1758 | <i>Colpocephalum fragili</i> Denny, 1842 § |
| | <i>Corvonirmus tasniemae</i> (Ansari, 1957) |
| | <i>Hecatrishula varia</i> (Burmeister, 1838) # |
| | <i>Menacanthus gonophaeus</i> (Burmeister, 1838) |
| | <i>Myrsidea isostoma</i> (Nitzsch, 1866) # |
| | <i>Philopterus atratus</i> (Nitzsch, 1818) |
| <i>Garrulus glandarius</i> (Linnaeus, 1758) | <i>Olivinirmus glandarii</i> (Denny, 1842) |
| | <i>Philopterus garruli</i> Boisduval & Lacordaire, 1935 |
| <i>Nucifraga caryocatactes</i> (Linnaeus, 1758) | <i>Menacanthus merisuoi</i> Eichler, 1953c # |
| | <i>Philopterus crassipes</i> (Burmeister, 1838) |
| <i>Pica pica</i> (Linnaeus, 1758) | <i>Myrsidea picae</i> (Linnaeus, 1758) |
| | <i>Philopterus picae</i> (Denny, 1842) |
| Emberizidae | |
| <i>Emberiza citrinella</i> Linnaeus, 1758 | <i>Brueelia delicata</i> (Nitzsch [in Giebel], 1866) |
| | <i>Philopterus citrinellae</i> (Schrank, 1776) |
| | <i>Ricinus fringillae</i> De Geer, 1778 |
| <i>Emberiza schoeniclus</i> (Linnaeus, 1758) | <i>Brueelia blagovescenskyi</i> Balát, 1955b # |
| | <i>Menacanthus chrysophaeus</i> (Kellogg, 1896) |
| | <i>Philopterus citrinellae</i> (Schrank, 1776) |
| | <i>Ricinus fringillae</i> De Geer, 1778 |
| Fringillidae | |
| <i>Carduelis carduelis</i> (Linnaeus, 1758) | <i>Menacanthus alaudae</i> (Schrank, 1776) |
| <i>Carpodacus erythrinus</i> (Pallas, 1770) | <i>Rostrinirmus carpodaci</i> Balát, 1981 |
| <i>Chloris chloris</i> (Linnaeus, 1758) | <i>Brueelia breueri</i> Balát, 1955b |
| | <i>Philopterus citrinellae</i> (Schrank, 1776) |
| <i>Coccothraustes coccothraustes</i> (Linnaeus, 1758) | <i>Brueelia junco</i> (Giebel, 1874) |
| <i>Fringilla coelebs</i> Linnaeus, 1758 | <i>Brueelia kluzi</i> Balát, 1955 |
| | <i>Philopterus fortunatus</i> (Złotorzycka, 1964) |
| | <i>Ricinus fringillae</i> De Geer, 1778 |
| <i>Fringilla montifringilla</i> Linnaeus, 1758 | <i>Philopterus rapax</i> (Złotorzycka, 1964) |
| <i>Linaria cannabina</i> (Linnaeus, 1758) | <i>Brueelia stadleri</i> Eichler, 1954b |
| <i>Loxia curvirostra</i> Linnaeus, 1758 | <i>Philopterus curvirostrae</i> (Schrank, 1776) |
| <i>Pyrrhula pyrrhula</i> (Linnaeus, 1758) | <i>Brueelia pyrrhularum</i> Eichler, 1954b |
| | <i>Philopterus citrinellae</i> (Schrank, 1776) |
| | <i>Philopterus fringillae</i> (Scopoli, 1772) |
| <i>Spinus spinus</i> (Linnaeus, 1758) | <i>Brueelia chrysomytris</i> (Blagoveshtchenky, 1940) |
| | <i>Philopterus citrinellae</i> (Schrank, 1776) |
| Hirundinidae | |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|---|--|---|
| <i>Delichon urbicum</i> (Linnaeus, 1758) | <i>Acronirmus gracilis</i> (Burmeister, 1838) | |
| | <i>Philopterus excisus</i> Nitzsch, 1818 | |
| <i>Hirundo rustica</i> Linnaeus, 1758 | <i>Acronirmus gracilis</i> (Burmeister, 1838) | § |
| | <i>Myrsidea rustica</i> (Giebel, 1874) | # |
| | <i>Philopterus microsomaticus</i> Tandan, 1955 | |
| <i>Riparia riparia</i> (Linnaeus, 1758) | <i>Machaerilaemus clayae</i> (Balát, 1966) | # |
| | <i>Myrsidea latifrons</i> (Carriker [in Carriker & Shull], 1910) | # |
| | <i>Philopterus microsomaticus</i> Tandan, 1955 | |
| Laniidae | | |
| <i>Lanius collurio</i> Linnaeus, 1758 | <i>Menacanthus camelinus</i> (Nitzsch, 1874) | § |
| | <i>Philopterus coarctatus</i> (Scopoli, 1763) | |
| <i>Lanius excubitor</i> Linnaeus, 1758 | <i>Brueelia imponderabilica</i> Eichler, 1954b | |
| | <i>Menacanthus camelinus</i> (Nitzsch, 1874) | |
| | <i>Philopterus coarctatus</i> (Scopoli, 1763) | |
| <i>Lanius minor</i> Gmelin, 1788 | <i>Brueelia</i> sp. | |
| | <i>Menacanthus camelinus</i> (Nitzsch, 1874) | |
| | <i>Philopterus coarctatus</i> (Scopoli, 1763) | |
| Locustellidae | | |
| <i>Locustella fluviatilis</i> (Wolf, 1810) | <i>Sturnidoecus tulackovae</i> (Balát, 1981) | |
| <i>Locustella luscinioides</i> (Savi, 1824) | <i>Brueelia locustellae</i> Fedorenko, 1975 | # |
| | <i>Menacanthus obrteli</i> Balát, 1981 | |
| Motacillidae | | |
| <i>Anthus spinoletta</i> (Linnaeus, 1758) | <i>Menacanthus pusillus</i> (Nitzsch, 1866) | |
| | <i>Ricinus fringillae</i> De Geer, 1778 | |
| | <i>Philopterus hanzaki</i> Balát, 1955a | |
| <i>Anthus trivialis</i> (Linnaeus, 1758) | <i>Philopterus</i> sp. | |
| <i>Motacilla alba</i> Linnaeus, 1758 | <i>Brueelia kratochvili</i> Balát, 1958 | |
| | <i>Philopterus passerinus</i> (Denny, 1842) | |
| <i>Motacilla cinerea</i> Tunstall, 1771 | <i>Menacanthus pusillus</i> (Nitzsch, 1866) | |
| <i>Motacilla flava</i> Linnaeus, 1758 | <i>Brueelia kratochvili</i> Balát, 1958 | |
| | <i>Menacanthus pusillus</i> (Nitzsch, 1866) | § |
| Muscicapidae | | |
| <i>Erithacus rubecula</i> (Linnaeus, 1758) | <i>Ricinus rubeculae</i> (Schrank, 1776) | |
| <i>Ficedula parva</i> (Bechstein, 1792) | <i>Philopterus markevichi</i> Fedorenko & Volkov, 1977 | |
| <i>Oenanthe oenanthe</i> (Linnaeus, 1758) | <i>Ricinus</i> sp. | |
| <i>Saxicola rubetra</i> (Linnaeus, 1758) | <i>Brueelia</i> sp. | |
| | <i>Penenirmus nirmoideus</i> (Nitzsch, 1874) | |
| | <i>Philopterus</i> sp. | |
| Oriolidae | | |
| <i>Oriolus oriolus</i> (Linnaeus, 1758) | <i>Maculinirmus mundus</i> (Nitzsch [in Giebel], 1866) | |
| | <i>Philopterus ornatus</i> (Nitzsch, 1866) | |
| | <i>Ricinus dolichocephalus</i> (Scopoli, 1763) | |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|--|--|---|
| Panuridae | | |
| <i>Panurus biarmicus</i> (Linnaeus, 1758) | <i>Menacanthus</i> sp. | # |
| | <i>Penenirmus visendus</i> (Złotorzycka, 1964) | # |
| Paridae | | |
| <i>Cyanistes caeruleus</i> (Linnaeus, 1758) | <i>Menacanthus sinuatus</i> (Burmeister, 1838) | |
| <i>Parus major</i> Linnaeus, 1758 | <i>Menacanthus sinuatus</i> (Burmeister, 1838) | |
| | <i>Philopterus thuringiacus</i> (Mey, 1988) | |
| | <i>Rostrinirmus hudeci</i> Balát, 1981 | |
| <i>Periparus ater</i> (Linnaeus, 1758) | <i>Menacanthus sinuatus</i> (Burmeister, 1838) | |
| | <i>Philopterus peripariphilus</i> (Mey, 1988) | |
| <i>Poecile palustris</i> (Linnaeus, 1758) | <i>Menacanthus sinuatus</i> (Burmeister, 1838) | |
| | <i>Philopterus pallescens</i> (Denny, 1842) | |
| Passeridae | | |
| <i>Passer domesticus</i> (Linnaeus, 1758) | <i>Brueelia cyclothorax</i> (Burmeister, 1838) | |
| | <i>Philopterus fringillae</i> (Scopoli, 1772) | |
| <i>Passer montanus</i> (Linnaeus, 1758) | <i>Brueelia cyclothorax</i> (Burmeister, 1838) | |
| | <i>Menacanthus eurysternus</i> (Burmeister, 1838) | |
| | <i>Myrsidea quadrifasciata quadrifasciata</i> (Piaget, 1880) | |
| | <i>Philopterus fringillae</i> (Scopoli, 1772) | |
| | <i>Rostrinirmus ruficeps</i> (Nitzsch [in Giebel], 1866) | |
| Phylloscopidae | | |
| <i>Phylloscopus collybita</i> (Vieillot, 1817) | <i>Menacanthus agilis</i> (Nitzsch, 1866) | # |
| <i>Phylloscopus trochilus</i> (Linnaeus, 1758) | <i>Menacanthus agilis</i> (Nitzsch, 1866) | # |
| Prunellidae | | |
| <i>Prunella collaris</i> (Scopoli, 1769) | <i>Philopterus emiliae</i> Balát, 1955a | |
| | <i>Ricinus fringillae</i> De Geer, 1778 | |
| <i>Prunella modularis</i> (Linnaeus, 1758) | <i>Philopterus modularis</i> (Denny, 1842) | |
| Regulidae | | |
| <i>Regulus regulus</i> (Linnaeus, 1758) | <i>Philopterus gustafssoni</i> Najer et al., 2020 | # |
| Remizidae | | |
| <i>Remiz pendulinus</i> (Linnaeus, 1758) | <i>Brueelia balati</i> (Krištofik, 1999) | |
| | <i>Menacanthus eurysternus</i> (Burmeister, 1838) | |
| Sittidae | | |
| <i>Sitta europaea</i> Linnaeus, 1758 | <i>Brueelia conocephalus</i> (Blagoveshtchensky, 1940) | |
| | <i>Philopterus sittae</i> Fedorenko, 1978 | |
| Sturnidae | | |
| <i>Sturnus vulgaris</i> Linnaeus, 1758 | <i>Brueelia nebulosa</i> (Burmeister, 1838) | |
| | <i>Menacanthus eurysternus</i> (Burmeister, 1838) | |
| | <i>Myrsidea cucullaris</i> (Nitzsch, 1818) | |
| | <i>Sturnidoecus sturni</i> (Schrank, 1776) | |
| Sylviidae | | |
| <i>Sylvia nisoria</i> (Bechstein, 1792) | <i>Brueelia rosickyi</i> Balát, 1955b | |
| Troglodytidae | | |

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TABLE 5. (Continued)

| HOSTS | LICE | |
|---|--|------|
| <i>Troglodytes troglodytes</i> (Linnaeus, 1758) | <i>Penenirmus albiventris</i> (Scopoli, 1763) <i>Philopterus</i> sp. | |
| Turdidae | | |
| <i>Turdus iliacus</i> Linnaeus, 1758 | <i>Menacanthus eurysternus</i> (Burmeister, 1838) | § ** |
| <i>Turdus merula</i> Linnaeus, 1758 | <i>Guimaraesiella amsel</i> (Eichler, 1951b) <i>Philopterus turdi</i> (Denny, 1842) <i>Ricinus elongatus</i> (Olfers, 1816) <i>Turdinirmus merulensis</i> (Denny, 1842) | |
| <i>Turdus philomelos</i> Brehm, 1831 | <i>Menacanthus eurysternus</i> (Burmeister, 1838) <i>Philopterus turdi</i> (Denny, 1842) | |
| <i>Turdus pilaris</i> Linnaeus, 1758 | <i>Brueelia antimarginalis</i> Eichler, 1951b <i>Guimaraesiella marginata</i> (Burmeister, 1838) <i>Menacanthus eurysternus</i> (Burmeister, 1838) <i>Philopterus bischoffi</i> (Eichler, 1951b) <i>Ricinus elongatus</i> (Olfers, 1816) | § |
| <i>Turdus torquatus</i> Linnaeus, 1758 | <i>Brueelia intermedia</i> (Nitzsch [in Giebel], 1866) <i>Myrsidea thoracica</i> (Giebel, 1874) <i>Philopterus</i> sp. <i>Ricinus elongatus</i> (Olfers, 1816) | § ** |
| <i>Turdus viscivorus</i> Linnaeus, 1758 | <i>Myrsidea thoracica</i> (Giebel, 1874) <i>Philopterus vernus</i> (Złotorzycka, 1964) <i>Ricinus elongatus</i> (Olfers, 1816) | # |
| Pelecaniformes | | |
| Ardeidae | | |
| <i>Ardea alba</i> Linnaeus, 1758 | <i>Ardeicola expallidus</i> Blagoveshtchensky, 1940 | |
| <i>Ardea cinerea</i> Linnaeus, 1758 | <i>Ardeicola ardeae</i> (Linnaeus, 1758) | |
| <i>Botaurus stellaris</i> (Linnaeus, 1758) | <i>Ardeiphilus trochioxus</i> (Burmeister, 1838) <i>Ardeicola stellaris</i> (Denny, 1842) | |
| <i>Egretta garzetta</i> (Linnaeus, 1766) | <i>Ciconiphilus decimfasciatus</i> (Boisduval & Lacordaire, 1835) | # |
| Threskiornithidae | | |
| <i>Platalea leucorodia</i> Linnaeus, 1758 | <i>Ibidoecus plataleae</i> (Denny, 1842) | |
| <i>Plegadis falcinellus</i> (Linnaeus, 1766) | <i>Ardeicola raphidius</i> (Nitzsch [in Giebel], 1866) <i>Ibidoecus bisignatus</i> (Nitzsch [in Giebel], 1866) | |
| Piciformes | | |
| Picidae | | |
| <i>Dendrocopos leucotos</i> (Bechstein, 1802) | <i>Brueelia straminea</i> (Denny, 1842) <i>Penenirmus auritus</i> (Scopoli, 1763) | |
| <i>Dendrocopos major</i> (Linnaeus, 1758) | <i>Brueelia straminea</i> (Denny, 1842) <i>Menacanthus pici</i> (Denny, 1842) <i>Penenirmus auritus</i> (Scopoli, 1763) | § |

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TABLE 5. (Continued)

| HOSTS | LICE |
|--|--|
| <i>Dendrocopos syriacus</i> (Hemprich & Ehrenberg, 1833) | <i>Menacanthus</i> sp. |
| <i>Dendrocoptes medius</i> (Linnaeus, 1758) | <i>Penenirmus auritus</i> (Scopoli, 1763) |
| <i>Dryobates minor</i> (Linnaeus, 1758) | <i>Picicola superciliosa</i> (Nitzsch [in Giebel], 1866) |
| <i>Dryocopus martius</i> (Linnaeus, 1758) | <i>Penenirmus auritus</i> (Scopoli, 1763) |
| <i>Picus canus</i> Gmelin, 1788 | <i>Colpocephalum inaequale</i> Burmeister, 1838 |
| <i>Picus viridis</i> Linnaeus, 1758 | <i>Penenirmus heteroscelis</i> (Nitzsch, 1866) # |
| | <i>Penenirmus pici</i> (J.C. Fabricius, 1798) |
| | <i>Picicola candidus</i> (Nitzsch, 1866) |
| | <i>Menacanthus pici</i> (Denny, 1842) |
| | <i>Penenirmus pici</i> (J.C. Fabricius, 1798) |
| | <i>Picicola candidus</i> (Nitzsch, 1866) |
| Podicipediformes | |
| Podicipedidae | |
| <i>Podiceps auritus</i> (Linnaeus, 1758) | <i>Aquanirmus colymbinus</i> (Scopoli, 1763) |
| <i>Podiceps cristatus</i> (Linnaeus, 1758) | <i>Pseudomenopon dolium</i> (Rudow, 1869) |
| <i>Tachybaptus ruficollis</i> (Pallas, 1764) | <i>Aquanirmus podiceps</i> (Denny, 1842) |
| | <i>Aquanirmus bahli</i> Tandan, 1951 |
| Strigiformes | |
| Strigidae | |
| <i>Asio flammeus</i> (Pontoppidan, 1763) | <i>Strigiphilus cursor</i> (Burmeister, 1838) |
| <i>Asio otus</i> (Linnaeus, 1758) | <i>Strigiphilus barbatus</i> (Osborn, 1902) |
| <i>Athene noctua</i> (Scopoli, 1769) | <i>Kurodaia (Conciella) cryptostigmatia</i> (Nitzsch, 1861) |
| <i>Bubo bubo</i> (Linnaeus, 1758) | <i>Strigiphilus cursitans</i> (Nitzsch, 1861) |
| <i>Bubo scandiacus</i> (Linnaeus, 1758)—captive bird | <i>Strigiphilus strigis</i> (Pontoppidan, 1763) |
| <i>Strix aluco</i> Linnaeus, 1758 | <i>Strigiphilus celebrachys</i> (Denny, 1842) |
| <i>Strix uralensis</i> Pallas, 1771 | <i>Strigiphilus portigi</i> Eichler, 1952 |
| | <i>Kurodaia (Conciella) cryptostigmatia</i> (Nitzsch, 1861) § ** |
| | <i>Strigiphilus heterocerus</i> (Grube, 1851) |
| Tytonidae | |
| <i>Tyto alba</i> (Scopoli, 1769) | <i>Kurodaia (Conciella) subpachygaster</i> (Piaget, 1880) |
| | <i>Strigiphilus rostratus</i> (Burmeister, 1838) |
| Suliformes | |
| Phalacrocoracidae | |
| <i>Phalacrocorax carbo</i> (Linnaeus, 1758) | <i>Eidmanniella pellucida</i> (Rudow, 1869) # |
| | <i>Pectinopygus gyricornis</i> (Denny, 1842) |
| MAMMALIA | |
| Cetartiodactyla | |
| Bovidae | |
| <i>Capra hircus</i> Linnaeus, 1758—captive | <i>Bovicola (Bovicola) caprae</i> (Gurlt, 1843) |

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TABLE 5. (Continued)

| HOSTS | LICE |
|---|--|
| <i>Rupicapra rupicapra</i> (Linnaeus, 1758) | <i>Bovicola (Bovicola) alpinus</i> Kéler, 1942 |
| Cervidae | |
| <i>Capreolus capreolus</i> (Linnaeus, 1758) | <i>Damalinia (Cervicola) meyeri</i> (Taschenberg, 1882) |
| Carnivora | |
| Felidae | |
| <i>Felis catus</i> Linnaeus, 1758—captive | <i>Felicola (Felicola) subrostratus</i> (Burmeister, 1838) |
| Mustelidae | |
| <i>Meles meles</i> (Linnaeus, 1758) | <i>Trichodectes melis</i> (J.C. Fabricius, 1805) |
| <i>Mustela erminea</i> Linnaeus, 1758 | <i>Stachiella ermineae</i> Hopkins, 1941 |
| <i>Mustela nivalis</i> Linnaeus, 1758 | <i>Stachiella mustelae</i> (Schrank, 1803) |
| <i>Mustela putorius</i> Linnaeus, 1758 | <i>Stachiella jacobi</i> Eichler, 1941b |

Checklist of chewing lice

Order Phthiraptera Haeckel, 1896

Suborder Amblycera Kellogg, 1896a

Family Laemobothriidae Mjöberg, 1910

Laemobothrion (Eulaemobothrion) atrum (Nitzsch, 1818)

Host: *Fulica atra* Linnaeus, 1758.

Ref.: Balát (1953) as *Eulaemobothrion atrum* (Nitzsch, 1818); Balát (1956, 1977).

Locations: Senec, 20 Nov. 1949; Bratislava—Rača, 16 Mar. 1952 (Balát 1956).

Laemobothrion (Laemobothrion) tinnunculi (Linnaeus, 1758)

Host: *Falco tinnunculus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); this paper.

Locations: Trávnica, formerly Fíš, 2 May 1948 (Balát Coll., MMBC slide number 82); Bratislava, 3 Apr. 1951 (Balát 1956); Bratislava, 26 Jun. 2000 (Krištofik Coll., VETUNI).

Laemobothrion sp.

Host: *Coracias garrulus* Linnaeus, 1758.

Ref.: Balát (1953, 1956).

Location: Svätý Jur, Summer of 1948 (Balát Coll., MMBC slide numbers 43, 44).

Notes: There are only two lice, one on each slide, a third instar nymph and a teneral female. Since no species of *Laemobothrion* is known from any member of the family Coraciidae (Price *et al.* 2003: 311), we consider these lice as likely accidental stragglers on *C. garrulus*.

Family Menoponidae Mjöberg, 1910

Actornithophilus gracilis (Piaget, 1880)

Host: *Vanellus vanellus* (Linnaeus, 1758).

Ref.: Balát (1953) as *Actornithophilus svobodae*; Balát (1956, 1977) as *Actornithophilus svobodai* [sic]; Straka (1987) as *Actornithophilus svobodai* [sic].

Locations: Plavecké Podhradie, 29 Apr. 1951; Turňa nad Bodvou, 2 Nov. 1953 (Balát 1956); Kláštor pod Znievom, 2 and 20 Mar. 1978; Martin, 13 May 1982 (Straka Coll., AKMM).

***Amyrsidea perdicis* (Denny, 1842)**

Host: *Phasianus colchicus* Linnaeus, 1758.

Ref.: Balát (1956) as *Amyrsidea* sp. ?*megalosoma*; Balát (1977) as *Amyrsidea megalosoma*; Straka (1987) as *Amyrsidea* sp. ?*megalosoma*; Goldová *et al.* (2006).

Locations: Bratislava—Rača, 31 Dec. 1950 (Balát Coll., MMBC slide number 569); Trnava, 22 Nov. 1950; Bratislava, 3 Dec. 1950; Gabčíkovo, 21 Oct. 1954 (Balát 1956); Nové Zámky, 1 Apr. 1978 (Straka Coll., AKMM); Game Management Centre, Rozhanovce, 2000–2004 (Goldová *et al.* 2006).

Note: Straka (1987) recorded the date of collection as 15 Jan. 1982 but, according to Straka's notes on labels of all three available slides, the correct date is probably 1 Apr. 1978.

***Amyrsidea phaeostoma* (Nitzsch [in Giebel], 1866)**

Host: *Pavo cristatus* Linnaeus, 1758—captive bird.

Ref.: Straka (1987), this paper.

Location: Dražkovce, 14 Jan. 1985, Turčianská Štiavnička, 26 May 1979 (Straka Coll., AKMM).

***Ardeiphilus trochioxus* (Burmeister, 1838)**

Host: *Botaurus stellaris* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Location: Slovakia, May 1948 (Balát Coll., MMBC slide number 86).

***Austromenopon aegialitidis* (Durrant, 1906)**

Host: *Charadrius dubius* Scopoli, 1786.

Ref.: Straka (1987) as *Actornithophilus perrarus* Blagoveshtchensky, 1948.

Location: Kláštor pod Znievom, 17 Apr. 1981 (Straka Coll., AKMM).

Notes: There is single slide with two females of *A. aegialitidis* labelled as *Actornithophilus perrarus* in Straka's collection. Straka (1987) reported these females as *A. perrarus* from *Philomachus pugnax* (Linnaeus, 1758), but host is given as "kulík riečny = *Charadrius dubius* on the available slide. It is in accordance with host-lice association, despite louse genus was misidentified, because according to Emerson (1972: 19) *A. perrarus* is a junior synonym of *Actornithophilus ochraceus* (Nitzsch, 1818), a parasite that is known from 20 species of plovers of the genera *Charadrius* and *Pluvialis*. (Price *et al.* 2003: 84). This is the first record of *Austromenopon aegialitidis* from Slovakia.

***Austromenopon crocatum* (Nitzsch [in Giebel], 1866)**

Host: *Numenius arquata* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Location: Senné, 16 Apr. 1950 (Balát Coll., MMBC slide number 458).

***Austromenopon decorosum* Złotorzycka, 1968**

Host: *Tringa erythropus* (Pallas, 1764).

Ref.: this paper.

Location: Senné, 20 Apr. 1950 (Balát Coll., MMBC slide number 456).

Note: This is the first record of *Austromenopon decorosum* from Slovakia.

***Austromenopon transversum* (Denny, 1842)**

Host: *Chroicocephalus ridibundus* (Linnaeus, 1766).

Ref.: Balát (1953, 1956) as *Austromenopon ridibundus*; Balát (1977) as *Austromenopon transversum ridibundum*; Straka (1987) as *Austromenopon transversum ridibundum*; this paper.

Locations: Bratislava—Petržalka, 2 Nov. 1949 (Balát 1956); Jakubov-rybník, 20 Apr. 1997; Čunovo, 24 Apr. 1997; Gabčíkovo, 31 Jul. 1997 (Krištofik Coll., VETUNI); Sučany, 26 Nov. 1979; Kláštor pod Znievom 19 Jan. 1984 (Straka Coll., AKMM).

***Ciconiphilus decimfasciatus* (Boisduval & Lacordaire, 1835)**

Host: *Egretta garzetta* (Linnaeus, 1758).

Ref.: this paper.

Locations: Kravany—Moča, 30 Jun. 2012 (Krištofik Coll., VETUNI).

Note: This is the first record of *Ciconiphilus decimfasciatus* from Slovakia.

***Ciconiphilus pectiniventris* (Harrison, 1916)**

Host: *Anser brachyrhynchus* Baillon, 1834.

Ref.: Balát (1956) as *Holomenopon* sp.; this paper.

Location: Svätøjurský Šúr, 24 Oct. 1953 (Balát Coll., MMBC slide numbers 44/e/10, 44/e/11).

Notes: Balát (1956) recorded *Holomenopon* sp. from this host. In the collection, there are two slides with *Ciconiphilus pectiniventris* from this host with the same data as in Balát (1956). We assume that Balát's (1956) record was based on these lice, and that he determined them incorrectly as *Holomenopon*. This is the first record of *Ciconiphilus pectiniventris* from Slovakia.

***Colpocephalum flavescens* (Haan, 1829)**

Host: *Haliaeetus albicilla* (Linnaeus, 1758).

Ref.: Balát (1953) as *Neocolpocephalum flavescens* (Haan, 1829); Balát (1956, 1977).

Locations: Košice, Jan. 1949 (Balát Coll., MMBC slide number 310); Šaľa, 19 Mar. 1951; Šamorín, 9 Dec. 1952 (Balát 1956).

***Colpocephalum fregili* Denny, 1842**

Host: *Corvus corax* Linnaeus, 1758.

Ref.: Straka (1987) as *Colpocephalum subequale* Burmeister, 1838.

Location: Ďanová, 1 Nov. 1977 (Straka Coll., AKMM).

***Colpocephalum fregili* Denny, 1842**

Host: *Corvus frugilegus* Linnaeus, 1758.

Ref.: this paper.

Location: Kravany, 9 Jun. 1998 (Krištofik Coll., VETUNI).

Note: This is a new host-lice association for Slovakia.

***Colpocephalum impressum* Rudow, 1866**

Host: *Aquila chrysaetos* (Linnaeus, 1758).

Ref.: Balát (1956, 1977); this paper.

Locations: Čachtice, 1 Feb. 1949 (Balát Coll., MMBC slide number 418); Volovské vrchy, Aug. 2020 (VETUNI).

Notes: Lice from Volovské vrchy were collected by ornithologist Milan Olekšák from a dead fledging bird. While handling this bird, he noticed that there were hundreds of lice, and collected some feathers with them. Later on, he felt itchy and then realised that dozens of lice were on his body (I. Literák & M. Olekšák, pers. comm.).

***Colpocephalum impressum* Rudow, 1866**

Host: *Clanga pomarina* (Brehm, 1831).

Ref.: this paper.

Location: Štrba, 2 Sep. 1938 (Pfleger Coll., SNMB).

Note: This is a new host-lice association for Slovakia.

***Colpocephalum inaequale* Burmeister, 1838**

Host: *Dryocopus martius* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); this paper.

Locations: Bratislava, 10 Oct. 1948 (Balát Coll., MMBC slide number 354); Bratislava, 7 Jun. 2010 (Krištofik Coll., VETUNI).

***Colpocephalum nanum* Piaget, 1890**

Host: *Buteo buteo* (Linnaeus, 1758).

Ref.: this paper.

Locations: Farná, 13 Feb. 2001; Moravský Svätý Ján, 17 Dec. 2009; Závod, 11 Mar. 2010; Malé Leváre, 16 Mar. 2010 (Krištofik Coll., VETUNI).

Note: This is the first record of *Colpocephalum nanum* from Slovakia (see below).

***Colpocephalum nanum* Piaget, 1890**

Host: *Buteo lagopus* (Pontoppidan, 1763).

Ref.: Balát (1956) as *Colpocephalum* sp. ?*flavescens*; Straka (1987) as *Coplocephalum* sp.; this paper.

Locations: Myslenice, 4 Feb. 1951; Bratislava, 12 Dec. 1952 (Balát 1956); Martin, 24 Jan. 1977 (Straka Coll., AKMM); Trnava, 15–28 Feb. 1939 (Pfleger Coll., SNMB).

Notes: Balát (1956) recorded *Colpocephalum* sp. from this host, noting that it may have been *C. flavescens*. Unfortunately, we cannot verify it, because there is no slide with *Colpocephalum* from *Buteo lagopus* in Balát's Collection. Considering that *C. flavescens* is a parasite of eagles of the genera *Aquila* and *Haliaeetus* (Price *et al.* 2003: 98), we believe that Balát's tentative identification is incorrect and that these lice are most likely *C. nanum*, a common parasite of *B. lagopus* (Price *et al.* 2003: 100). Furthermore, the Pfleger Collection includes slides with *C. nanum* from *B. lagopus*. Therefore, we can confirm that this is a valid host-lice association for Slovakia, as well as the first record of *Colpocephalum nanum* from Slovakia.

***Colpocephalum turbinatum* Denny, 1842**

Host: *Circus aeruginosus* (Linnaeus, 1758).

Ref.: Balát (1953) as *Neocolpocephalum bicinctum* (Nitzsch [in Giebel] 1861); Balát (1956, 1977) as *Colpocephalum bicinctum*.

Location: Bratislava—Rača, 4 Sep. 1948 (Balát Coll., MMBC slide number 302).

***Colpocephalum zebra* Burmeister, 1838**

Host: *Ciconia ciconia* (Linnaeus, 1758).

Ref.: Balát (1977); Straka (1987).

Locations: Veškovce, 5 Aug. 1959 (Balát Coll., MMBC slide number 1157); Martin, 17 Feb. 1977; Socovce, 30 Apr. 1980; Krpeľany, 3 Sep. 1982 (Straka Coll., AKMM).

***Colpocephalum* sp.**

Host: *Aquila heliaca* Savigny, 1809.

Ref.: Balát (1956) as *Colpocephalum* sp. ?*flavescens* (Haan, 1829).

Location: Slovakia, 18 Sep. 1950 (Balát 1956).

Notes: Balát (1956) recorded *Colpocephalum* sp. ?*flavescens* from *Aquila heliaca*. *Colpocephalum imperialis* Martín-Mateo, 1981 was described from *Aquila heliaca adalberti* Brehm, 1861. However, as there is no specimen with the above data in the Balát Collection, we cannot confirm to which louse species this record refers.

***Colpocephalum* sp.**

Host: *Falco cherrug* Gray, 1834.

Ref.: Balát (1956).

Location: Slovakia (Balát 1956).

Notes: Rak *et al.* (1975) reported *Colpocephalum* sp. from *Falco cherrug* in Iran. Further louse collections from this host are needed to confirm this host-lice association in Slovakia, as well as to identify the species.

***Colpocephalum* sp.**

Host: *Falco tinnunculus* Linnaeus, 1758.

Ref.: Balát (1956) as *Colpocephalum* sp.

Location: Trávnica, formerly Fiš, May 1948 (Balát 1956).

Notes: According to Price *et al.* (2003: 102), *Falco tinnunculus* is parasitised by *Colpocephalum subzerafae* Ten-

deiro, 1988. However, we cannot confirm this record to species level because there is no specimen of *Colpocephalum* from this host in the Balát Collection.

***Dennyus hirundinis* (Linnaeus, 1761)**

Host: *Apus apus* (Linnaeus, 1758).

Ref.: Straka (1987); this paper.

Locations: Martin, 7 Aug. 1979, 18 May 1996 (Straka Coll., AKMM); Bratislava, 15–19 Aug. 2002, 30 Jun. 2006, 27 Jul. 2007 and 18 Jul. 2010 (Krištofik Coll., VETUNI).

***Eidmanniella pellucida* (Rudow, 1869a)**

Host: *Phalacrocorax carbo* (Linnaeus, 1758).

Ref.: this paper.

Locations: Slovakia, May 1948 (Balát Coll., MMBC slide number 89).

Note: This is the first record of *Eidmanniella pellucida* from Slovakia.

***Gruimenopon longum* (Giebel, 1874)**

Host: *Grus grus* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Locations: Senné, Spring of 1955 (Balát Coll., MMBC slide numbers 1005–3x; 1006—not present in the collection); Šamorín, 9 Dec. 1952 (Balát 1956).

***Heleonomus macilentus* (Nitzsch [in Giebel], 1866)**

Host: *Grus grus* (Linnaeus, 1758).

Ref.: Balát (1977).

Location: Slovakia (Balát 1977).

Notes: Balát (1977) recorded *Heleonomus macilentus* from Slovakia without a host association. Considering that *Grus grus* is the only host for this louse species in Europe (Price *et al.* 2003: 110), we believe that Balát's (1977) record is also from this species of crane in Slovakia.

***Holomenopon clypeilargum* Eichler, 1943a**

Host: *Mergellus albellus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956) as *Holomenopon* sp.; this paper.

Locations: Čílistov, 23 Mar. 1950 (Balát Coll., MMBC slide number 481); Senné, Spring of 1955 (Balát 1956).

Note: This is the first record of *Holomenopon clypeilargum* from Slovakia. Also, it is a new host-louse association worldwide (Price *et al.* 2003: 112).

***Holomenopon tadornae* (Gervais, 1844)**

Host: *Tadorna tadorna* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Location: Senné, no date (Balát 1956).

***Kurodaia (Conciella) cryptostigmatia* (Nitzsch [in Giebel], 1861)**

Host: *Athene noctua* (Scopoli, 1769).

Ref.: Balát (1956, 1977).

Location: Plavecký Mikuláš, 14 Jan. 1951 (Balát Coll., MMBC slide number 582).

***Kurodaia (Conciella) cryptostigmatia* (Nitzsch [in Giebel], 1861)**

Host: *Strix uralensis* Pallas, 1771.

Ref.: Hudec (1983) as *Kurodaia* sp.; this paper.

Location: Košice, 1 Dec. 1952 (Balát Coll., MMBC slide number 789).

Notes: Hudec (1983) recorded *Kurodaia* sp. from this host, but without giving a location. This record was probably made on the basis of slide 789 from the Balát Coll., because there is no other *Kurodaia* from this host in the collection. This is a new host-louse association worldwide (Price *et al.* 2003: 114).

Kurodaia (Conciella) subpachygaster (Piaget, 1880)

Host: *Tyto alba* (Scopoli, 1769).

Ref.: Balát (1953, 1977).

Location: Gabčíkovo, 16 Sep. 1951 (Balát Coll., MMBC slide number 623).

Notes: Balát (1953) did not mention an exact location, and Balát (1977) recorded *Kurodaia subpachygaster* from Slovakia but without a host association. This record was probably made on the basis of slide 623 from the Balát Coll., because there is no other *Kurodaia* from this host in the collection.

Kurodaia (Kurodaia) fulvofasciata (Piaget, 1880)

Host: *Buteo buteo* (Linnaeus, 1758).

Ref.: this paper.

Location: Farná, 13 Feb. 2001 (Krištofik Coll., VETUNI).

Note: This is the first record of *Kurodaia (Kurodaia) fulvofasciata* from Slovakia.

Kurodaia (Kurodaia) haliaeeti (Denny, 1842)

Host: *Pandion haliaetus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Location: Bratislava—Devín, 16 May 1949 (Balát Coll., MMBC slide number 548).

Machaerilaemus clayae (Balát, 1966)

Host: *Riparia riparia* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 28 Apr. 2008, 20 Apr. 2009 (VETUNI).

Note: This is the first record of *Machaerilaemus clayae* from Slovakia.

Menacanthus agilis (Nitzsch, 1866)

Host: *Phylloscopus collybita* (Vieillot, 1817).

Ref.: Hudec (1983) as *Menacanthus phylloscopi* (Nitzsch [in Giebel], 1866); this paper.

Location: Sklené Teplice, 18 Apr. 1953 (Balát Coll., MMBC slide number 1461).

Notes: Hudec (1983) recorded *Menacanthus phylloscopi* from this host, but without giving a location. This record was probably made on the basis of slide 1461 from the Balát Coll., because there is no other *Menacanthus agilis* from this host from Slovakia in the collection. This is one of two first records of *Menacanthus agilis* from Slovakia (see below).

Menacanthus agilis (Nitzsch, 1866)

Host: *Phylloscopus trochilus* (Linnaeus, 1758).

Ref.: this paper.

Location: Nízké Tatry—Čertovica, 28 Jun. 1960 (Balát Coll., MMBC slide number 1412).

Note: This is one of two first records of *Menacanthus agilis* from Slovakia (see above).

Menacanthus alaudae (Schrank, 1776)

Host: *Alauda arvensis* Linnaeus, 1758.

Ref.: this paper.

Location: Malé Kosihy, 11 May 1997 (Krištofik Coll., VETUNI).

Note: This is a new host-louse association for Slovakia.

Menacanthus alaudae (Schrank, 1776)

Host: *Carduelis carduelis* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977) as *Menacanthus carduelis* (Denny, 1842); Straka (1987) as *M. carduelis*.

Locations: Gabčíkovo, 22 Mar. 1954 (Balát 1956); Martin, 15 May 1982 (Straka Coll., AKMM).

***Menacanthus camelinus* (Nitzsch [in Giebel], 1874)**

Host: *Lanius collurio* Linnaeus, 1758.

Ref.: this paper.

Locations: Vojka nad Dunajom, 27 Aug. 1997; Medveďov, 17–18 Jul. 2000; Dvory nad Žitavou, 21 Jul. 2000 (Krištofik Coll., VETUNI).

Note: This is a new host-louse association for Slovakia.

***Menacanthus camelinus* (Nitzsch [in Giebel], 1874)**

Host: *Lanius excubitor* Linnaeus, 1758.

Ref.: Balát (1977); Hudec (1983); Szczykutowicz *et al.* (2006) as *Lanicanthus camelinus*.

Locations: Slovakia (Balát 1977); NE Slovakia (Szczykutowicz *et al.* 2006).

Notes: Balát (1977) recorded *Menacanthus camelinus* from Slovakia without a host association. Balát (1977) also mentioned *Menacanthus brevidentatus*—now a junior synonym of *M. camelinus* (see below). Considering that the name *M. brevidentatus* was traditionally used for lice associated with *Lanius minor* only, and that *Lanius excubitor* is the type host of *M. camelinus*, we can assume that the host of Balát's record is *Lanius excubitor*. Furthermore, Szczykutowicz *et al.* (2006) confirm this host-louse association for Slovakia.

***Menacanthus camelinus* (Nitzsch [in Giebel], 1874)**

Host: *Lanius minor* Gmelin, 1788.

Ref.: Balát (1977) as *Menacanthus brevidentatus* Blagoveshtchensky, 1948.

Location: Zemplínska Široká—Rebrín, 6 Aug. 1959 (Balát Coll., MMBC slide numbers 1491, 1492-5x).

Notes: Balát (1977) recorded *Menacanthus brevidentatus*—now a junior synonym of *M. camelinus* (see Price 1977: 210)—from Slovakia without a host association. Considering that *Lanius minor* is the type host of *M. brevidentatus* and that Balát's Coll. contains specimens from this host, we can safely assume that the host of Balát's record is *Lanius minor*.

***Menacanthus curuccae* (Schrank, 1776)**

Host: *Acrocephalus scirpaceus* (Hermann, 1804).

Ref.: Sychra *et al.* (2008); Martinů *et al.* (2015); this paper.

Location: Gbelce, 14 Apr.–2 May 2008, 18 Apr.–1 May 2009, 18 Apr. 2016 (VETUNI).

***Menacanthus curuccae* (Schrank, 1776)**

Host: *Acrocephalus schoenobaenus* (Linnaeus, 1758).

Ref.: Martinů *et al.* (2015); this paper.

Location: Gbelce, 15 Apr.–3 May 2008, 20 Apr.–1 May 2009 (VETUNI).

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Coloeus monedula* (Linnaeus, 1758).

Ref.: this paper.

Location: Pavlovce nad Uhom, 9 Apr. 1956 (Balát Coll., MMBC slide number 1186).

Note: This is a new host-louse association for Slovakia.

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Corvus cornix* Linnaeus, 1758.

Ref.: Balát (1956, 1977) as *Menacanthus cornicis* Blagoveshtchensky, 1948.

Location: Bratislava—Petržalka, 19 Feb. 1950 (Balát 1956).

Note: Although we could not find any specimens with the above data, we follow Price (1975: 619) regarding *Menacanthus cornicis* as a junior synonym of *M. eurysternus*.

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Passer montanus* (Linnaeus, 1758).

Ref.: Balát (1956) as *Menacanthus annulatus* (Giebel, 1874).

Location: Gabčíkovo, 25 Mar. 1954 (Balát 1956).

Note: Although we could not find any specimens with the above data, we follow Price (1975: 617) regarding *Menacanthus annulatus* as a junior synonym of *M. eurysternus*.

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Remiz pendulinus* (Linnaeus, 1758).

Ref.: Krištofik (2000).

Location: Gbelce, 1 Aug. 1984; Devinské jazero, 26 Apr. 1994; Vysoká pri Morave, 18 May 1994; Dolný Štál, 31 Jul. 1994 (Krištofik 2000).

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Sturnus vulgaris* Linnaeus, 1758.

Ref.: Martinů *et al.* (2015); this paper.

Location: Gbelce, 13 Apr.–1 May 2008, 17 Apr. 2016, 2 Oct. 2019 (VETUNI).

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Turdus iliacus* Linnaeus, 1758.

Ref.: Straka (1987) as *Myrsidea iliaca* [sic].

Location: Turany-Trusalová, 30 Sep. 1982 (Straka Coll., AKMM).

Notes: Despite both available slides from this host, location and date are labelled as *Menacanthus* sp. Straka (1987) wrongly mentioned these lice as *Myrsidea*. *Myrsidea iliaci* Eichler, 1951a was described from one female from *Turdus musicus* (now *Turdus iliacus*). Clay (1966: 385) noted that: “This species is quite unrecognizable from the description ... the type is lost and ... nothing further can be said about this name.” We assume that Straka (1987) misidentified this species only according to its host. This is a new host-lice association for Slovakia, and it is also a new host-lice association for *Menacanthus eurysternus* worldwide (Price *et al.* 2003: 132, Martinů *et al.* 2015).

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Turdus philomelos* Brehm, 1831.

Ref.: Balát (1977) as *Menacanthus minusculus* Blagoveshtchensky, 1940; this paper.

Location: Pavlovce nad Uhom, 9 Apr. 1956 (Balát Coll., MMBC slide number 1204).

***Menacanthus eurysternus* (Burmeister, 1838)**

Host: *Turdus pilaris* Linnaeus, 1758.

Ref.: this paper.

Location: Štrbské pleso, 25 Jan. 1938 (Pfleger Coll., SNMB).

Note: This is a new host-lice association for Slovakia.

***Menacanthus fertilis* (Nitzsch, 1866)**

Host: *Upupa epops* Linnaeus, 1758.

Ref.: Balát (1956, 1977).

Location: Bojnice, 18 Jun. 1953 (Balát 1956).

***Menacanthus gonophaeus* (Burmeister, 1838)**

Host: *Corvus corax* Linnaeus, 1758.

Ref.: Balát (1977); Hudec (1983); this paper.

Locations: Slovakia (Balát 1977); Veľké Blahovo, 1 Jun. 2005 (Krištofik Coll., VETUNI).

Notes: Balát (1977) recorded *Menacanthus gonophaeus* from Slovakia without a host association. Considering that *Corvus corax* is the type host of *M. gonophaeus*, we assume that this is the host of Balát’s record. Furthermore, we can confirm this host-lice association with our recent material. This is a new host-lice association for Slovakia.

***Menacanthus gonophaeus* (Burmeister, 1838)**

Host: *Corvus frugilegus* Linnaeus, 1758.

Ref.: Balát (1977); Straka (1987) as *Menacanthus laticeps* Blagoveshtchensky, 1948; this paper.

Locations: Stará Bystrica, 5 Jan. 1982 (Straka Coll., AKMM); Zlatná na Ostrove, 20 Jan. 2001 (Krištofik Coll., VETUNI).

Notes: Balát (1977) recorded *Menacanthus laticeps*—now a junior synonym of *M. gonophaeus* (see Price 1977: 208)—from Slovakia without a host association. However, based on other associations of *Menacanthus gonophaeus* with *Corvus frugilegus*, we can assume that this is the host of Balát's record. Furthermore, we confirm this host-lice association as recorded by Straka (1987) and from our recent material. Straka (1987) recorded the location as “Krpel'any”, but it is most likely an error, because in Straka's note on label of an available slide the location is given as “Stará Bystrica”.

***Menacanthus gonophaeus* (Burmeister, 1838)**

Host: *Coloeus monedula* (Linnaeus, 1758).

Ref.: Balát (1956, 1977) as *Menacanthus monedulae* Blagoveshtchensky, 1951.

Location: Bratislava, 10 Oct. 1948 (Balát Coll., MMBC slide number 352).

Notes: Balát (1977) recorded *Menacanthus monedulae*—now a junior synonym of *M. gonophaeus* (see Price 1977: 208)—from Slovakia without a host association. However, based on other *Menacanthus* associations with *Coloeus monedula*, we can assume that this is the host of Balát's record.

***Menacanthus chrysophaeus* (Kellogg, 1896b)**

Host: *Emberiza schoeniclus* (Linnaeus, 1758).

Ref.: Martinů *et al.* (2015); this paper.

Location: Gbelce, 12–15 Apr. 2008, 19 Apr. 2009 (VETUNI).

***Menacanthus merisuoii* Eichler, 1953c**

Host: *Nucifraga caryocatactes* (Linnaeus, 1758).

Ref.: this paper.

Locations: Martin, 3 Dec. 1981 (Straka Coll., AKMM).

Note: This is the first record of *Menacanthus merisuoii* from Slovakia.

***Menacanthus obrteli* Balát, 1981b**

Host: *Locustella luscinioides* (Savi, 1824).

Ref.: Martinů *et al.* (2015); this paper.

Location: Gbelce, 12 Apr.–1 May 2008, 19 Apr.–1 May 2009, 17 Apr. 2016 (VETUNI).

***Menacanthus pici* (Denny, 1842)**

Host: *Dendrocopos major* (Linnaeus, 1758).

Ref.: this paper.

Location: Malženice, 11 Nov. 2006 (Krištofik Coll., VETUNI).

Note: This is a new host-lice association for Slovakia.

***Menacanthus pici* (Denny, 1842)**

Host: *Picus viridis* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977).

Locations: Bratislava, 10 Oct. 1948 (Balát Coll., MMBC slide number 353); Bratislava, 20 Dec. 1951; Žiar nad Hronom, formerly Svätý Kríž nad Hronom, 10 Oct. 1953 (Balát 1956).

***Menacanthus pusillus* (Nitzsch, 1866)**

Host: *Anthus spinoletta* (Linnaeus, 1758).

Ref.: Balát (1955a, 1956) as *Menacanthus* sp.

Locations: Beliansk Tatry—Bujačí vrch, 29 Apr. 1952; Belianské Tatry—šafránová louka/pašienok pod Bujačím vrchom, 3 May 1952 (Balát Coll., MMBC slide numbers 642, 703).

***Menacanthus pusillus* (Nitzsch, 1866)**

Host: *Motacilla cinerea* Tunstall, 1771.

Ref.: Balát (1956) as *Menacanthus* sp.

Locations: Košice, 5 Nov. 1953; Sklené Teplice, 14 Apr. 1953 (Balát Coll., MMBC slide numbers 451-3x, 749, 1489).

***Menacanthus pusillus* (Nitzsch, 1866)**

Host: *Motacilla flava* Linnaeus, 1758.

Ref.: this paper.

Location: Veľké Kapušany, 17 Apr. 1959, 18 Apr. 1959 (Balát Coll., MMBC slide numbers 1175, 1220-5x, 1221-2x, 1483, 1484).

Note: This is a new host-louse association for Slovakia.

***Menacanthus sinuatus* (Burmeister, 1838)**

Host: *Cyanistes caeruleus* (Linnaeus, 1758).

Ref.: Balát (1956) as *Menacanthus* sp.

Locations: Sklené Teplice, 14–18 Apr. 1953; Šaca, 4 Nov. 1953; Gabčíkovo, 16 Mar. 1954 (Balát 1956).

Note: Although we could not find any specimens with the above data, we follow Price (1977: 217) who recorded specimens of *Menacanthus sinuatus* from *C. caeruleus* (as *Parus caeruleus*).

***Menacanthus sinuatus* (Burmeister, 1838)**

Host: *Parus major* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Straka (1987) as *Menacanthus sinuatus sinuatus*; Martinů *et al.* (2015); this paper.

Locations: Gabčíkovo, 18 Mar. 1954 (Balát Coll., MMBC slide number 1196); Sklené Teplice, 14–18 Apr. 1953, 6–7 Oct. 1953; Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 9 Oct. 1953; Gabčíkovo, 15–16 Mar. 1954 (Balát 1956); Vrúcko, 15 Nov. 1982; (Straka Coll., AKMM); Bratislava—Mlynská Dolina, 1 Mar. 1999 (Krištofik Coll., VETUNI); Gbelce, 17 Apr. 2008 (VETUNI).

Note: Straka (1987) recorded data on collections of *Menacanthus sinuatus* from *Parus major* and *Periparus ater*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Menacanthus sinuatus* (Burmeister, 1838)**

Host: *Periparus ater* (Linnaeus, 1758).

Ref.: Balát (1956) as *Menacanthus* sp. ?*sinuatus*; Balát (1977) as *Menacanthus bussei* Złotorzycka, 1965; Straka (1987) as *Menacanthus sinuatus bussei*.

Locations: Ihráč, 18 Apr. 1953 (Balát Coll., MMBC slide number 748); Kláštor pod Znievom, 11 Mar. 1985 (Straka Coll., AKMM).

Notes: Balát (1956) recorded the date of collection as (18 Apr. 1954) but, according to Balát's notes, the correct date is 18 Apr. 1953. Straka (1987) recorded data on collections of *Menacanthus sinuatus* from *Parus major* and *Periparus ater*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Menacanthus sinuatus* (Burmeister, 1838)**

Host: *Poecile palustris* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Locations: Sklené Teplice, 21 Apr. & 6 Oct. 1953; Jablonov, 3 Nov. 1953; Košice, 5 Nov. 1953 (Balát 1956).

***Menacanthus stramineus* (Nitzsch, 1818)**

Host: *Gallus gallus* (Linnaeus, 1758)—captive bird.

Ref.: Straka (1987) as *Menacanthus* sp.

Location: Kláštor pod Znievom, 25 Apr. 1977 (Straka Coll., AKMM).

Note: This is the first record of *Menacanthus stramineus* from Slovakia.

***Menacanthus* sp.**

Host: *Dendrocopos syriacus* (Hemprich & Ehrenberg, 1833).

Ref.: Balát (1956) as *Menacanthus* sp. ?*dryobates* (Eichler, 1953c).

Location: Gabčíkovo, 21 Oct. 1954 (Balát 1956).

Notes: Balát (1956) recorded *Menacanthus* cf. *dryobates* from *Dendrocopos syriacus*, but this louse species is a junior synonym of *Menacanthus pici* and there has not been any further record of *Menacanthus* from *D. syriacus* (see Price *et al.* 2003: 366). This may be a new host-louse association for *M. pici*, a species that occurs on other 26 species of woodpeckers (Price *et al.* 2003: 124), or it may be an accidental straggler. Unfortunately, there are no specimens of *Menacanthus* from *D. syriacus* in the Balát Collection to confirm this record at the species level.

***Menacanthus* sp.**

Host: *Panurus biarmicus* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 19–24 Apr. 2009, 19 Apr. 2016, 8–11 Jul. & 1 Oct. 2019 (VETUNI).

Notes: *Menacanthus brelihi* was described from *Panurus biarmicus* by Balát (1981b) on the basis of material from the Czech Republic. Subsequently, it was synonymised under *M. eurysternus* by Krištofik (2000). Our examination of the type specimens of *M. brelihi* deposited at MMBC and other material from Gbelce confirms that lice from *Panurus biarmicus* belong to a valid species different from *M. eurysternus* (Ošlejšková & Sychra, unpublished data). However, we list this record as *Menacanthus* sp. until the resurrection of *M. brelihi* is formalised. This is a new host-louse association for Slovakia.

***Menopon gallinae* (Linnaeus, 1758)**

Host: *Gallus gallus* (Linnaeus, 1758)—captive bird.

Ref.: this paper.

Location: Kláštor pod Znievom, 25 Apr. 1977 (Straka Coll., AKMM).

Note: Although the occurrence of this louse species is probably well known among veterinarians and hen breeders, this is the first record of *Menopon gallinae* from Slovakia. Specimens in the Straka's collection are mounted partially together with *Menacanthus stramineus* and *Gonicocotes gallinae* on the same slides reported by Straka (1987) as *Menacanthus* sp.

***Menopon pallens* Clay, 1949b**

Host: *Perdix perdix* (Linnaeus, 1758).

Ref.: Balát (1956, 1977); Straka (1987).

Locations: Trnava, 7 Oct. 1951 (Balát Coll., MMBC slide number 618); Martin, 20 Jan. 1977 (Straka Coll., AKMM).

***Meromenopon meropis* Clay & Meinertzhagen, 1941**

Host: *Merops apiaster* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); Krištofik *et al.* (1996); this paper.

Locations: Radošovce—Vieska, 25 Jul. 1949; Sereď, 4 Sep. 1948 (Balát Coll., MMBC—slide numbers 213, 453, SNMB slide number 452); Jurský Chlm, Malá nad Hronom, Pavlová, Sikenička, May–Jul. 1995 for all locations (Krištofik *et al.* 1996); Virt, 19 Jul. 1998 (Krištofik Coll., VETUNI).

***Myrsidea anathorax* (Nitzsch, 1866)**

Host: *Coloeus monedula* (Linnaeus, 1758).

Ref.: this paper.

Locations: Bratislava, 10 Oct. 1948; Palín, 7 Apr. 1956; Pavlovce nad Uhom, 15 Apr. 1959 (Balát Coll., MMBC slide numbers 352, 1166, 1188).

Note: This is the first record of *Myrsidea anathorax* from Slovakia.

***Myrsidea cornicis* (De Geer, 1778)**

Host: *Corvus cornix* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); Straka (1987).

Locations: Bratislava—Petržalka, 19 Feb. 1950; Žihárec/Zsigárd, 17 Sep. 1953 (Balát Coll., MMBC slide number 526, B287); Zlaté Moravce, 12 Oct. 1953; Tatranská Lomnica, 8 Jun. 1955 (Balát 1956); Martin, 27 Jan. 1977 (Straka Coll., AKMM).

***Myrsidea cucullaris* (Nitzsch, 1818)**

Host: *Sturnus vulgaris* Linnaeus, 1758.

Ref.: Balát (1956, 1977); this paper.

Locations: Banská Štiavnica—Počúvadla, 23 Apr. 1953 (Balát Coll., MMBC slide number 1125); Gbelce, 2 Oct. 2019 (VETUNI).

***Myrsidea franciscoloi* Conci, 1942**

Host: *Cinclus cinclus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Žarnovica, 7 Jan. 1952; Sklené Teplice, 11 Oct. 1953 (Balát 1956).

***Myrsidea isostoma* (Nitzsch, 1866)**

Host: *Corvus frugilegus* Linnaeus, 1758.

Ref.: this paper.

Location: Kravany, 9 Jun. 1998 (Krištofík Coll., VETUNI).

Note: This is the first record of *Myrsidea isostoma* from Slovakia.

***Myrsidea latifrons* (Carriker [in Carriker & Shull], 1910)**

Host: *Riparia riparia* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 28 Apr. 2008, 27 Apr. 2009 (VETUNI).

Note: This is the first record of *Myrsidea latifrons* from Slovakia.

***Myrsidea picae* (Linnaeus, 1758)**

Host: *Pica pica* (Linnaeus, 1758).

Ref.: Balát (1956, 1977); Straka (1987).

Locations: Veľké Topoľníky, 14 Feb. 1951; Šaca, 1 Nov. 1953 (Balát 1956); Blatnica, 31 Jan. 1977 (Straka Coll., AKMM).

***Myrsidea quadrifasciata quadrifasciata* (Piaget, 1880)**

Host: *Passer montanus* (Linnaeus, 1758).

Ref.: Sychra *et al.* (2021).

Locations: Gabčíkovo, 22 Jul. 1953 (Balát Coll., MMBC slide number 1380); Gbelce, (4751'N 1830'E), 10 Jul. 2019 (VETUNI).

Note: Sychra *et al.* (2021) have recognised several subspecies of *Myrsidea quadrifasciata*, with the population from *Passer montanus* belonging to the nominate subspecies.

***Myrsidea rustica* (Giebel, 1874)**

Host: *Hirundo rustica* Linnaeus, 1758.

Ref.: this paper.

Location: Gbelce, 17 Apr.–2 May 2008, 19–30 Apr. 2009 (VETUNI).

Note: This is the first record of *Myrsidea rustica* from Slovakia.

***Myrsidea thoracica* (Giebel, 1874)**

Host: *Turdus torquatus* Linnaeus, 1758.

Ref.: Hudec (1983) as *Myrsidea* sp.; this paper.

Location: Nízke Tatry—Čertovica, 29 Jun. 1960 (Balát Coll., MMBC slide number 1211).

Notes: Hudec (1983) recorded *Myrsidea* sp. from this host, but without giving a location. This record was probably made on the basis of slide 1211 from the Balát Coll., because there is no other *Myrsidea* from this host in the collection. This is a first record of *Myrsidea thoracica* from Slovakia, and it is also a new host-lice association for *Myrsidea thoracica* worldwide (Price *et al.* 2003: 132).

***Myrsidea thoracica* (Giebel, 1874)**

Host: *Turdus viscivorus* Linnaeus, 1758.

Ref.: Hudec (1983) as *Myrsidea* sp.; this paper.

Location: Nízke Tatry—Čertovica, 29 Jun. 1960 (Balát Coll., MMBC slide number 1210-2x).

Notes: Hudec (1983) recorded *Myrsidea* sp. from this host, but without giving a location. This record was probably made on the basis of slide 1210-2x from the Balát Coll., because there is no other *Myrsidea* from this host in the collection. Together with the above, this is a new record of *Myrsidea thoracica* from Slovakia.

***Nosopon lucidum* (Rudow, 1869a)**

Host: *Falco tinnunculus* Linnaeus, 1758.

Ref.: this paper.

Location: Kráľovičove Kračany, 26 May 2003 (Krištofik Coll., VETUNI).

Note: This is the first record of *Nosopon lucidum* from Slovakia.

***Pseudomenopon dolium* (Rudow, 1869a)**

Host: *Podiceps cristatus* (Linnaeus, 1758).

Ref.: Balát (1953) as *Pseudomenopon tridens* (Burmeister, 1838); Balát (1956, 1977).

Location: Gabčíkovo, 22 Jul. 1953 (Balát 1956).

Note: Although we could not find any specimens with the above data, we follow Balát (1956, 1977) who recorded *Pseudomenopon dolium* from *Podiceps cristatus*.

***Pseudomenopon pilosum* (Scopoli, 1763)**

Host: *Fulica atra* Linnaeus, 1758.

Ref.: this paper.

Location: Bratislava—Kopáč, 19 Feb. 1997 (Krištofik Coll., VETUNI).

Note: This is a new host-lice association for Slovakia.

***Pseudomenopon pilosum* (Scopoli, 1763)**

Host: *Gallinula chloropus* (Linnaeus, 1758).

Ref.: Balát (1956) as *Pseudomenopon tridens* (Burmeister, 1838), this paper.

Locations: Cífer, 2 May 1951 (Balát Coll., MMBC slide number 796-6x); Komárno, 1953 (Balát 1956); Martin, 6 Apr. 1982 (Straka Coll., AKMM).

***Trinoton anserinum* (J.C. Fabricius, 1805)**

Host: *Anser brachyrhynchus* Baillon, 1834.

Ref.: Balát (1956) as *Trinoton* sp. ?*anserinum*; Balát (1977); Straka (1987).

Locations: Svätějurský Šúr, 24 Oct. 1953 (Balát 1956); Lipovec, 22 Dec. 1981 (Straka Coll., AKMM).

Notes: Balát (1956) recorded *Trinoton* cf. *anserinum* from *Anser brachyrhynchus*, but there is no available specimen of *Trinoton* from this host in the Balát Collection; therefore, we can not confirm his record to species level. However, Straka (1987) confirmed that *Anser brachyrhynchus* is parasitised by *T. anserinum*, a host-lice association that was not listed by Price *et al.* (2003: 138).

***Trinoton anserinum* (J.C. Fabricius, 1805)**

Host: *Anser fabalis* (Latham, 1787).

Ref.: Balát (1956) as *Trinoton* sp. ?*anserinum*; Balát (1977).

Location: Čilistov, 5 Nov. 1949 (Balát Coll., MMBC slide number 1362).

Notes: We confirm that Balát's records refer to *Trinoton anserinum*. This host-louse association was not listed by Price *et al.* (2003: 138).

***Trinoton anserinum* (J.C. Fabricius, 1805)**

Host: *Cygnus olor* (Gmelin, 1789).

Ref.: Straka (1987) as *Trinoton cygni* Eichler, 1943b.

Location: Ďanová, 1 Mar. 1977 (Straka Coll., AKMM)

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Anas acuta* Linnaeus, 1758.

Ref.: Balát (1956) as *Trinoton* sp.

Location: Senné, Jun. 1951 (Balát Coll., MMBC slide number 598).

Note: We confirm that Balát's record refers to *Trinoton querquedulae*.

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Anas crecca* Linnaeus, 1758.

Ref.: Balát (1956) as *Trinoton* sp.; Straka (1987).

Locations: Bratislava, 20 Nov. 1951 (Balát 1956); Martin, 18 Nov. 1982 (Straka Coll., AKMM).

Note: Straka (1987) recorded data about collections of *Trinoton querquedulae* from *Anas crecca* and *Spatula querquedula*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Anas platyrhynchos* Linnaeus, 1758.

Ref.: Balát (1953); Balát (1956) as *Trinoton* sp.; Straka (1987) as *Trinoton* sp., this paper.

Locations: Bratislava, 28 Dec. 1948; Sládkovičovo, 16 Oct. 1951 (Balát 1956); Martin, 19 Nov. 1976, 20 Oct. & 3 Dec. 1977, Kláštor pod Znievom, 1. Nov. 1978 (Straka Coll., AKMM)

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Aythya ferina* (Linnaeus, 1758).

Ref.: this paper.

Location: Jakubovské rybníky, no data (Krištofik Coll., VETUNI).

Note: This is a new host-louse association for Slovakia.

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Aythya fuligula* (Linnaeus, 1758).

Ref.: this paper.

Location: Jakubov, 13 Jul. 1997 (Krištofik Coll., VETUNI).

Note: This is a new host-louse association for Slovakia.

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Mergellus albellus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977) as *Trinoton lituratum* Burmeister, 1838.

Locations: Čilistov, 23 Mar. 1950; Šaľa, 26 Jan. 1951 (Balát Coll., MMBC slide numbers 481, 584); Gabčíkovo, 17–24 Mar. 1954 (Balát 1956).

Note: *Trinoton lituratum* is a junior synonym of *Trinoton querquedulae* (see Price *et al.* 2003: 138).

***Trinoton querquedulae* (Linnaeus, 1758)**

Host: *Spatula querquedula* (Linnaeus, 1758).

Ref.: Straka (1987).

Location: Dražkovec, 20 Apr. 1981 (Straka Coll., AKMM).

Note: Straka (1987) recorded data about collections of *Trinoton querquedulae* from *Anas crecca* and *Spatula querquedula*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

Family Ricinidae Neumann, 1890

Ricinus dolichocephalus (Scopoli, 1763)

Host: *Oriolus oriolus* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Location: Járók u Nitry, 16 Jun. 1953 (Balát Coll., MMBC slide number 1055).

Ricinus elongatus (Olfers, 1816)

Host: *Turdus merula* Linnaeus, 1758.

Ref.: Balát (1952, 1953); Balát (1956) as *Ricinus elongatus ernstlangi* Eichler, 1941a; Balát (1977); Straka (1987) as *R. ernstlangi*.

Locations: Čilistov, 26 Mar. 1950 (Balát Coll., MMBC slide number 449—not present in the collection); Kláštor pod Znievom, 2 Mar. 1978 (Straka Coll., AKMM).

Ricinus elongatus (Olfers, 1816)

Host: *Turdus pilaris* Linnaeus, 1758.

Ref.: Balát (1952, 1956); Straka (1987); Bush *et al.* (2018).

Locations: Štrbské pleso, 25 Jan. 1938 (Balát 1952, 1956); Vrícko, 17 Jan. 1979 (Straka Coll., AKMM); Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018).

Note: Straka (1987) recorded the location and date as “Ležiachov, 17 Jan. 1974, but it is most likely an error, because in Straka's note on label of an available slide the location and date are given as “Vrícko, 17 Jan. 1979.

Ricinus elongatus (Olfers, 1816)

Host: *Turdus torquatus* Linnaeus, 1758.

Ref.: this paper.

Locations: Martin, 5 May 1982 (Straka Coll., AKMM).

Note: This is a new host-louse association for Slovakia.

Ricinus elongatus (Olfers, 1816)

Host: *Turdus viscivorus* Linnaeus, 1758.

Ref.: Balát (1956).

Locations: Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 16 Apr. 1953 (Balát Coll., MMBC slide number 739-4x).

Note: Balát (1956) recorded the location as Sklené Teplice, but it is most likely an error, because in Balát's notes the location is given as “dolina Kľak”.

Ricinus fringillae De Geer, 1778

Host: *Anthus spinoletta* (Linnaeus, 1758).

Ref.: Balát (1955a, 1956) as *Ricinus japonicus* Uchida, 1915.

Locations: Belianské Tatry—šafránová louka/pašienok pod Bujačím vrchom, 2–3 May 1952; Nízke Tatry—hotel Srdiečko, 30 Jun. 1960; Vysoké Tatry—Skalnaté pleso, 15 Jun. 1955 (Balát Coll., MMBC slide numbers 655, 699, 701, 1163); Beliansk Tatry—šafránov louka/pašienok pod Bujačím vrchom, 29 Apr. 1952 (Balát 1955a).

Note: We identified the material in the Balát Collection as *Ricinus fringillae*, the senior synonym of *R. japonicus*.

Ricinus fringillae De Geer, 1778

Host: *Emberiza citrinella* Linnaeus, 1758.

Ref.: Balát (1953, 1956); Straka (1987).

Locations: Gabčíkovo, Apr. 1954; Járok u Nitry, 16 Mar. 1953; Krišovská Liesková—Křížany, 14 Apr. 1959; Plášťovce, 27 Apr. 1956; Banská Štiavnica—Počúvadla, 23 Apr. 1953; Senné, 16 Apr. 1950; Sklené Teplice, 14 Apr. 1953; Slovakia, 21 Jun. 1953; Svätøjurský Šúr, 13 Feb. 1951; Veškovce, 16 Apr. 1959 (Balát Coll., MMBC slide numbers 507, 644, 1101, 1329, 1330, 1332, 1333, 1334, 1336, 1337); Banská Štiavnica—Počúvadla, 21 Jun. 1953; Podunajsk Biskupice, 21 Jul. 1953; Gabčíkovo, 15 Mar., 24 Mar. & 6 May 1954; Járok u Nitry, 16 Jun. 1953 (Balát 1956); Kláštor pod Znievom, 9 Feb. & 13 Mar. 1981; (Straka Coll., AKMM).

Notes: Balát (1956) recorded a location and date as Járok u Nitry (16 Jun. 1953) but, according to Balát's notes there are two dates 16 Mar. 1953 and 16 Jun. 1953. Straka (1987) recorded data on collections of *Ricinus fringillae* from *Emberiza citrinella* and *E. schoenichus*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Ricinus fringillae* De Geer, 1778**

Host: *Emberiza schoenichus* (Linnaeus, 1758).

Ref.: Balát (1952, 1956); Straka (1987); this paper.

Locations: Senné, 16 Apr. 1950 (Balát Coll., MMBC slide numbers 504, 573a; SNMB slide number 573b); ŠPR Kláštorské lúky pri Klástore pod Znievom, 25 Apr. 1978, 10 May 1982 (Straka Coll., AKMM); Gbelce, 23 Apr. 2008 (VETUNI).

Note: Straka (1987) recorded data on collections of *Ricinus fringillae* from *Emberiza citrinella* and *E. schoenichus*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Ricinus fringillae* De Geer, 1778**

Host: *Fringilla coelebs* Linnaeus, 1758.

Ref.: Balát (1952, 1953, 1956) as *Ricinus irascens* (Burmeister, 1838); Balát (1977).

Locations: Sklené Teplice, 20 Apr. 1953 (Balát Coll., MMBC slide number 1056); Podunajsk Biskupice, 16 Apr. 1951; Banská Štiavnica—Počúvadla, 23 Apr. 1953; Gabčíkovo, 23–24 Mar. 1954 (Balát 1952, 1956).

Note: We identified the material in the Balát Collection as *Ricinus fringillae*, the senior synonym of *R. irascens*.

***Ricinus fringillae* De Geer, 1778**

Host: *Prunella collaris* (Scopoli, 1769).

Ref.: Balát (1955a, 1956, 1977); Janiga & Kubašková (2000) as *Ricinus subpallidus* Blagoveshtchensky, 1951.

Locations: Vysoké Tatry – Skalnaté pleso, 15 Jun. 1955 (Balát Coll., MMBC slide number 697); Vysok Tatry, Nízke Tatry, 1988–1999 (Janiga & Kubašková 2000).

Note: *Ricinus subpallidus* is a junior synonym of *R. fringillae* (see Price *et al.* 2003: 251).

***Ricinus rubeculae* (Schränk, 1776)**

Host: *Erithacus rubecula* (Linnaeus, 1758).

Ref.: Balát (1952, 1953, 1956, 1977); Straka (1987).

Locations: Čilistov, 26 Mar. 1950; Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 16 Apr. 1953; Holíč, 27 Mar. 1948; Podunajsk Biskupice, 20 Jul. 1953; Sklené Teplice, 20 Apr. 1953, 20 Jun. 1953, 24 Apr. 1953 (Balát Coll., MMBC slide numbers 13-2x, 14, 448, 1048, 1071, 1109-2x, 1110, 1111); Podunajsk Biskupice, 16 Apr. 1951; Sklené Teplice, 18 Apr. & 6 Oct. 1953 (Balát 1952, 1956); Kláštor pod Znievom, 2–3 Apr. 1979 (Straka Coll., AKMM).

***Ricinus serratus* (Durrant, 1906)**

Host: *Galerida cristata* (Linnaeus, 1758).

Ref.: this paper.

Location: Krišovská Liesková—Křížany, 15 Apr. 1959 (Balát Coll., MMBC slide number 1338).

Note: This is the first record of *Ricinus serratus* from Slovakia.

***Ricinus* sp.**

Host: *Oenanthe oenanthe* (Linnaeus, 1758).

Ref.: Balát (1955a, 1956).

Location: Vysoké Tatry – Skalnaté pleso, 15 Jun. 1955 (Balát 1955a, 1956).

Notes: This is the only published record of *Ricinus* from *Oenanthe oenanthe*. However, considering that we could neither find material in the Balát Collection, nor any other specimen from *O. oenanthe*, we are not able to confirm if *Ricinus* is a natural and regular parasite of this host.

Suborder Ischnocera Kellogg, 1896a

Family Philopteridae Burmeister, 1838

Acronirmus gracilis (Burmeister, 1838)

Host: *Delichon urbicum* (Linnaeus, 1758).

Ref.: Balát (1953, 1955b, 1956, 1977) as *Brueelia gracilis*; Straka (1987) as *Brueelia gracilis*; this paper.

Locations: Bojnice, 23 Apr. 1954 (Balát Coll., MMBC slide number 684); Nový Smokovec, 18 Apr. 1955 (Balát 1955a); Martin, 11 Sep. 1980 (Straka Coll., AKMM); Malacky—Vinohradok, 12 Feb. 2002 (Krištofik Coll., VETUNI).

Note: We follow Gustafsson & Bush (2017: 60) in placing this louse species in the genus *Acronirmus*.

Acronirmus gracilis (Burmeister, 1838)

Host: *Hirundo rustica* Linnaeus, 1758.

Ref.: this paper.

Location: Gbelce, 19 Apr.–2 May 2008, 19 Apr.–1 May 2009 (VETUNI).

Note: This is a new host-louse association for Slovakia.

Alcedoffula alcedinis (Denny, 1842)

Host: *Alcedo atthis* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Radošovce—Vieska (Balát, 1956 recorded only Vieska, district Senica), 10 Jul. 1949; Sklené Teplice, 11 Oct. 1953; Humenné, 25 Jul. 1954 (Balát 1956).

Anaticola anseris (Linnaeus, 1758)

Host: *Anser albifrons* (Scopoli, 1769).

Ref.: Balát (1956, 1977) as *Anaticola serratus* (Nitzsch [in Giebel], 1866); Straka (1987) as *A. serratus*.

Locations: Šurany, 11 Nov. 1950 (Balát 1956); Sučany, 5 and 10 Oct. 1977 (Straka Coll., AKMM)

Anaticola anseris (Linnaeus, 1758)

Host: *Anser brachyrhynchus* Baillon, 1834.

Ref.: Balát (1956, 1977) as *Anaticola* sp. ?*anseris*; Straka (1987).

Locations: Svätějurský Šúr, 24 Oct. 1953 (Balát 1956); Lipovec, 22 Dec. 1981 (Straka Coll., AKMM).

Anaticola anseris (Linnaeus, 1758)

Host: *Anser fabalis* (Latham, 1787).

Ref.: Balát (1953, 1956, 1977).

Location: Čilistov, 5 Nov. 1949 (Balát Coll., MMBC slide number 1361).

Anaticola beieri Eichler, 1954a

Host: *Branta ruficollis* (Pallas, 1769).

Ref.: Balát (1956, 1977).

Location: Dunajská Streda, 10 Nov. 1953 (Balát 1956).

Anaticola crassicornis (Scopoli, 1763)

Host: *Anas platyrhynchos* Linnaeus, 1758.

Ref.: Balát (1953) as *Anaticola crassicornis*; Balát (1956, 1977); Straka (1987).

Locations: Bratislava, 28 Dec. 1948 (Balát 1956); Martin, 20 Oct. 1977 and 20 Dec. 1982; Kľačany, 10 Dec. 1981; (Straka Coll., AKMM).

Note: Straka (1987) recorded data about collections of *Anaticola crassicornis* from *Anas platyrhynchos* and *Spatula querquedula*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Anaticola crassicornis* (Scopoli, 1763)**

Host: *Spatula clypeata* (Linnaeus, 1758).

Ref.: Straka (1987) as *Anaticola hopkinsi* Eichler, 1954a.

Location: Michalovce, 30 Nov. 1977 (Straka Coll., AKMM)

***Anaticola crassicornis* (Scopoli, 1763)**

Host: *Spatula querquedula* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987).

Locations: Senné, 20 Apr. 1950 (Balát Coll., MMBC slide number 457); Dražkovce, 20 Apr. 1981 (Straka Coll., AKMM).

Note: Straka (1987) recorded data about collections of *Anaticola crassicornis* from *Anas platyrhynchos* and *Spatula querquedula*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides.

***Anaticola mergiserrati* (De Geer, 1778)**

Host: *Aythya fuligula* (Linnaeus, 1758).

Ref.: this paper.

Location: Jakubov, 13 Jul. 1997 (Krištofik Coll., VETUNI).

Note: This is one of two first records of *Anaticola mergiserrati* from Slovakia (see below).

***Anaticola mergiserrati* (De Geer, 1778)**

Host: *Mergellus albellus* (Linnaeus, 1758).

Ref.: this paper.

Location: Čilistov, 23 Mar. 1950 (Balát Coll., MMBC slide number 481).

Note: This is one of two first records of *Anaticola mergiserrati* from Slovakia (see above). This host-loose association was reported from the Danube Delta by Rékási *et al.* (2017), but it was not listed by Price *et al.* (2003).

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Anas platyrhynchos* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977).

Locations: Slovakia, 10 Nov. 1948 (Balát Coll., MMBC slide number 357); Bratislava, 10 Oct. 1948 and 28 Dec. 1948; Sládkovičovo, 16 Oct. 1951 (Balát 1956).

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Anser fabalis* (Latham, 1787).

Ref.: Balát (1956) as *Anatoecus* sp.

Location: Čilistov, 5 Nov. 1949 (Balát Coll., MMBC slide number 1360).

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Aythya ferina* (Linnaeus, 1758).

Ref.: this paper.

Location: Žitný ostrov, 7 May 1938 (Pfleger Coll., NMPC).

Note: This is a new host-loose association for Slovakia.

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Branta ruficollis* (Pallas, 1769).

Ref.: Balát (1956,1977) as *Anatoecus brantae* Eichler, 1946; Hudec & Černý (1972) as *Anatoecus icterodes* (Nitzsch, 1818).

Location: Dunajská Streda, 10 Nov. 1953 (Balát 1956).

Note: Although we could not find any specimens with the above data, we follow Price *et al.* (2003: 144) and Grossi *et al.* (2014: 606) regarding both *Anatoecus brantae* and *Anatoecus icterodes* as junior synonyms of *Anatoecus dentatus*.

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Cygnus olor* (Gmelin, 1789).

Ref.: Straka (1987) as *Anatoecus icterodes* (Nitzsch, 1818).

Location: Ďanová, 1 Mar. 1977 (Straka Coll., AKMM).

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Mergellus albellus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956) as *Anatoecus* sp. ?*icterodes*.

Locations: Gabčíkovo, 24 Mar. 1954 (Balát Coll., MMBC slide number 481); Gabčíkovo, 24 Mar. 1954 (Balát 1956).

Note: We follow Grossi *et al.* (2014: 606) regarding *Anatoecus icterodes* as a junior synonym of *Anatoecus dentatus*.

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Mergus merganser* Linnaeus, 1758.

Ref.: Balát (1977) as *Anatoecus bipunctatus* (Giebel, 1874).

Location: Slovakia (Balát 1977).

Notes: Balát (1977) recorded *Anatoecus bipunctatus* from Slovakia without a host association. Since *Mergus merganser* is the type host of *A. bipunctatus* (see Price *et al.* 2003: 144), we assume that Balát's record was from this host. Price *et al.* (2003: 144) synonymised this species with *Anatoecus icterodes*, which was subsequently regarded as a junior synonym of *Anatoecus dentatus* by Grossi *et al.* (2014: 606).

***Anatoecus dentatus* (Scopoli, 1763)**

Host: *Spatula querquedula* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Senné, 20 Apr. 1950 (Balát Coll., MMBC slide number 457).

***Anatoecus* sp.**

Host: *Anser brachyrhynchus* Baillon, 1834.

Ref.: Balát (1956).

Location: Svätojurský Šúr, 24 Oct. 1953 (Balát 1956).

Notes: We could not find any specimens with the above data. Therefore, this record of *Anatoecus* from *Anser brachyrhynchus* needs confirmation with other material, to determine whether *Anatoecus* is a natural parasite of this host or if that record was due to accidental straggling.

***Aquanirmus bahli* Tandan, 1951**

Host: *Tachybaptus ruficollis* (Pallas, 1764).

Ref.: Straka (1987) as *A. [runcinatus] bahli* Tandan, 1951.

Location: Turany, 11 Sep. 1983 (Straka Coll., AKMM).

***Aquanirmus colymbinus* (Scopoli, 1763)**

Host: *Podiceps auritus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Location: Pezinok, Nov.–Dec. 1948 (Balát Coll., MMBC slide number 348).

Notes: There are only two nymphs on a slide in the Balát Collection, which are not suitable for a species identifica-

tion. Therefore, considering that *Podiceps auritus* is the type host of *Aquanirmus colymbinus*, we accept Balát's identification as reported in his papers.

***Aquanirmus podiceps* (Denny, 1842)**

Host: *Podiceps cristatus* (Linnaeus, 1758).

Ref.: Balát (1953) as *A. colymbinus* (Scopoli, 1763); Balát (1956, 1977).

Location: Gabčíkovo, 22 Jul. 1953 (Balát 1956).

Notes: We could not find any specimens with the above data but, considering that *Podiceps cristatus* is the type host of *Aquanirmus podiceps*, we accept Balát's identification as reported in his papers dated 1956 and 1977.

***Ardeicola ardeae* (Linnaeus, 1758)**

Host: *Ardea cinerea* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977).

Locations: Bratislava, 18 Mar. 1949 (Balát Coll., SNMB slide number 549); Slovakia, 19 Nov. 1950 (Balát 1956).

***Ardeicola ciconiae* (Linnaeus, 1758)**

Host: *Ciconia ciconia* (Linnaeus, 1758).

Ref.: Balát (1977) as *Ardeicola ardealis* (Scopoli, 1763).

Location: Slovakia (Balát 1977).

Notes: Balát (1977) recorded *Ardeicola ardealis* from Slovakia without a host association. Considering that *Ciconia ciconia* is the type host of *A. ardealis*, we assume that this is the host of Balát's record. Although we could not find any specimens with the above data, we follow Price *et al.* (2003: 148) regarding *Ardeicola ardealis* as a junior synonym of *Ardeicola ciconiae*.

***Ardeicola expallidus* Blagoveshtchensky, 1940**

Host: *Ardea alba* Linnaeus, 1758.

Ref.: Balát (1953) as *Ardeicola* sp.; Balát (1956, 1977) as *Ardeicola albulus* Eichler, 1948.

Location: Dunajská Streda, 19 Aug. 1946 (Balát Coll., MMBC slide number 522).

Notes: Balát (1956) recorded the date as "19 Aug. 1949" but, according to Balát's notes, the correct date is "19 Aug. 1946". We follow Price *et al.* (2003: 148) regarding *Ardeicola albulus* as a junior synonym of *A. expallidus*.

***Ardeicola rhapsidius* (Nitzsch [in Giebel], 1866)**

Host: *Plegadis falcinellus* (Linnaeus, 1758).

Ref.: Straka (1987).

Location: Vrútky, 2 Oct. 1977 (Straka Coll., AKMM).

***Ardeicola stellaris* (Denny, 1842)**

Host: *Botaurus stellaris* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987).

Locations: Podunajské Biskupice, 3 Dec. 1950; Slovakia, May 1948 (Balát Coll., MMBC slide numbers 87, 556-2x); Ivánka pri Dunaji, 14 Oct. 1951 (Balát 1956); Lipovec, 10 Nov. 1980 (Straka Coll., AKMM).

Note: Balát (1956) recorded the date of "Podunajské Biskupice" as "3 Jul. 1950" but, according to Balát's notes, the correct date is "3 Dec. 1950".

***Brueelia antimarginalis* Eichler, 1951b**

Host: *Turdus pilaris* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Straka (1987).

Locations: Podhradie, 30 Oct. 1950 (Balát Coll., MMBC slide number 514); Sučianská dolina, 17 Jul. 1977 (Straka Coll., AKMM—not present in the collection).

***Brueelia balati* Krištofik, 1999**

Host: *Remiz pendulinus* (Linnaeus, 1758).

Ref.: Krištofik (1999).

Location: Jakubov, 13 Aug. 1989 (Krištofik 1999).

***Brueelia blagovescenskyi* Balát, 1955b**

Host: *Emberiza schoeniclus* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 13 Apr.–2 May 2008 (VETUNI).

Note: This is the first record of *Brueelia blagovescenskyi* from Slovakia.

***Brueelia breueri* Balát, 1955b**

Host: *Chloris chloris* (Linnaeus, 1758).

Ref.: Balát (1955b, 1956, 1977); Gustafsson & Bush (2017); Gustafsson *et al.* (2019).

Locations: Gabčíkovo, 25 Mar. 1954; Podunajské Biskupice, 20 Jul. 1953 (Balát Coll., MMBC slide numbers 676, 1118-3x, NHML slide number B.M: 1955–662-2x); Bzenica, 20 Jun. 1953 (Balát 1956).

***Brueelia chrysomytris* (Blagoveshtchenky, 1940)**

Host: *Spinus spinus* (Linnaeus, 1758).

Ref.: Balát (1955b, 1956, 1977); Bush *et al.* (2018).

Locations: Sklené Teplice, 8 Oct. 1953 (Balát Coll., MMBC slide number 1035); Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018).

***Brueelia conocephala* (Blagoveshtchensky, 1940)**

Host: *Sitta europaea* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Gustafsson *et al.* (2019).

Location: Košice, 5 Nov. 1953 (Balát Coll., MMBC slide number 1080-17x).

***Brueelia cyclothorax* (Burmeister, 1838)**

Host: *Passer domesticus* (Linnaeus, 1758).

Ref.: Balát (1956) as *Brueelia* sp.; Balát (1977).

Locations: Gabčíkovo, 22 Jul. 1953, 24 Mar. 1954; Palín, 5 Apr. 1956; Sklené Teplice, 20 Apr. 1953 (Balát Coll., MMBC slide numbers 1061, 1130, 1131, 1317, 1430-2x); Járok u Nitry, 17 Jun. 1953; Gabčíkovo, 17 Mar. 1954 (Balát 1956).

***Brueelia cyclothorax* (Burmeister, 1838)**

Host: *Passer montanus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987); this paper.

Locations: Gabčíkovo, 22 Jul. 1953; Podunajské Biskupice, 21 Jul. 1953; Járok u Nitry, 17 Jun. 1953 (Balát Coll., MMBC slide numbers 1023, 1028, 1032, NHML slide number 321/53 Brit.Mus.1954-252); Sklené Teplice, 15 Apr. 1953; Járok u Nitry, 16–17 Jun. 1953; Gabčíkovo, 16–25 Mar. 1954; Hrhov, 31 Oct. 1953; Šaca, 1 Nov. 1953 (Balát 1956); Šul'any, 24 Apr. 1997; Hronovce, 13 Feb. 2001; Kopčany, 5 Jul. 2004 (Krištofik Coll., VETUNI); Kláštor pod Znievom, 13 Mar. 1981 (Straka Coll., AKMM).

***Brueelia delicata* (Nitzsch [in Giebel], 1866)**

Host: *Emberiza citrinella* Linnaeus, 1758.

Ref.: Balát (1955b, 1956, 1977); this paper.

Locations: Košice, 29 Oct. 1953 (Balát Coll., MMBC slide number 1100); Gabčíkovo, 6 May 1954 (Balát 1956); Čunovo, 26 Jun. 2001 (Krištofik Coll., VETUNI).

***Brueelia imponderabilica* Eichler, 1954b**

Host: *Lanius excubitor excubitor* Linnaeus, 1758.

Ref.: Balát (1977); Szczykutowicz *et al.* (2006) as *Brueelia cruciata* (Burmeister, 1838); Gustafsson & Bush (2017); this paper.

Locations: Slovakia (Balát 1977); NE Slovakia (Szczykutowicz *et al.* 2006); Hniezdne, 25 Mar. 1964 (Weisz Coll., VETUNI).

Notes: Balát (1977) recorded this species from Slovakia without a host association. Since this species parasitises *Lanius excubitor* only (Price *et al.* 2003: 155), it is most likely that Balát's (1977) record refers to this host association.

***Brueelia intermedia* (Nitzsch [in Giebel], 1866)**

Host: *Turdus torquatus* Linnaeus, 1758.

Ref.: Balát (1977); Hudec (1983); Straka (1987).

Locations: Slovakia (Balát 1977); Vrúcko, 25 May 1978 (Straka Coll., AKMM).

Notes: Balát (1977) recorded this species from Slovakia without a host association. Hudec (1983) recorded this louse species from *Turdus torquatus*, but without giving a location. Gustafsson & Bush (2017: 410) resurrected *Brueelia intermedia* from synonymy regarding it as a valid species and differing from *B. marginata*. Considering that *B. intermedia* is specific to *T. torquatus* only (Gustafsson & Bush 2017: 348) and that Balát (1977) listed both *B. intermedia* and *B. marginata* (see below under *Guimaraesiella marginata*), we regard *B. intermedia* as recorded from Slovakia.

***Brueelia juno* (Giebel, 1874)**

Host: *Coccothraustes coccothraustes* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Locations: Banská Štiavnica—Počúvadla, 21 Jun. 1953; Járók u Nitry, 17 Jun. 1953 (Balát Coll., MMBC slide numbers 1115, 1116).

***Brueelia kluzi* Balát, 1955b**

Host: *Fringilla coelebs* Linnaeus, 1758.

Ref.: Bush *et al.* (2018); this paper.

Locations: Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018); Veľké Blahovo, 15 May 2010 (Krištofik Coll., VETUNI).

***Brueelia kratochvíli* Balát, 1958**

Host: *Motacilla alba* Linnaeus, 1758.

Ref.: Gustafsson *et al.* (2019).

Location: Krišovská Liesková—Křížany, 14 Apr. 1959 (Balát Coll., MMBC slide numbers 1215, 1216, 1217).

***Brueelia kratochvíli* Balát, 1958**

Host: *Motacilla flava* Linnaeus, 1758.

Ref.: Balát (1977); Gustafsson *et al.* (2019).

Location: Veľké Kapušany, 18 Apr. 1959 (Balát Coll., MMBC slide numbers 1485, 1486, 1487-3x, 1488-3x).

***Brueelia locustellae* Fedorenko, 1975**

Host: *Locustella luscinioides* (Savi, 1824).

Ref.: this paper.

Location: Gbelce, 21 Apr.–1 May 2008, 19 Apr. 2009, 17 Apr. 2016, 10 Jul. 2019 (VETUNI).

Note: This is the first record of *Brueelia locustellae* from Slovakia.

***Brueelia nebulosa* (Burmeister, 1838)**

Host: *Sturnus vulgaris* Linnaeus, 1758.

Ref.: Balát (1956, 1977); this paper.

Locations: Banská Štiavnica—Počúvadla, 23 Apr. 1953; Kláštor pod Znievom, 10 May 1956 (Balát Coll., MMBC slide numbers 832-12x, 1126); Gbelce, 13 Apr.–1 May 2008, 17 Apr. 2016, 17 Apr. & 2 Oct. 2019 (VETUNI).

***Brueelia parviguttata* (Blagoveshtchensky, 1940)**

Host: *Alauda arvensis* Linnaeus, 1758.

Ref.: Balát (1977); Straka (1987); this paper.

Locations: Gabčíkovo, 24 Mar. 1954, Slovakia (Balát 1977); Kláštor pod Znievom, 13 Mar. 1981 (Straka Coll., AKMM); Dunajská Lužná, 25 May 1997 (Krištofik Coll., VETUNI).

Note: *Brueelia parviguttata* parasitises two host species: *Alauda arvensis* and *Galerida cristata* (see Gustafsson & Bush 2017: 351), but our recent material confirms *A. arvensis* as a host for this louse species in Slovakia.

***Brueelia pyrrhularum* Eichler, 1954b**

Host: *Pyrrhula pyrrhula pyrrhula* (Linnaeus, 1758).

Ref.: Balát (1955b, 1956, 1977); Straka (1987); Gustafsson & Bush (2017); this paper.

Locations: Gabčíkovo, 24 Mar. 1954 (Balát Coll., MMBC slide number 687); Veľká Ida, 28 Oct. 1953 (Balát 1956); Martin, 2 Feb. 1981; Vrícko, 20 Feb. 1983 (Straka Coll., AKMM); Bratislava—Mudroňova, 16 Jan. 2011 (Krištofik Coll., VETUNI).

Note: Straka (1987) recorded the date of collection as “Vrícko, 22 Feb. 1983” but, according to Straka’s note on label of an available slide, the correct date is probably “20 Feb. 1983”.

***Brueelia rosickyi* Balát, 1955b**

Host: *Sylvia nisoria* (Bechstein, 1792).

Ref.: Balát (1955b, 1956, 1977); Gustafsson *et al.* (2019).

Location: Járók u Nitry, 17 Jun. 1953 (Balát Coll., MMBC slide number 1070).

***Brueelia stadleri* Eichler, 1954b**

Host: *Linaria cannabina* (Linnaeus, 1758).

Ref.: Straka (1987) as “*Brueelia (densilimba) stadleri*”.

Location: ŠPR Kláštorské lúky pri Kláštore pod Znievom, 18 Mar. 1981 (Straka Coll., AKMM).

***Brueelia straminea* (Denny, 1842)**

Host: *Dendrocopos leucotos* (Bechstein, 1802).

Ref.: Balát (1953) as *Picicola stramineus*; Balát (1956) as *Brueelia* sp.; Straka (1987) as *Picicola fixa* Złotorzycka, 1964a.

Locations: Košice, 15 Jan. 1949 (Balát Coll., MMBC slide number 378); Martin, 27 Jan. 1977 (Straka Coll., AKMM—not present in the collection).

***Brueelia straminea* (Denny, 1842)**

Host: *Dendrocopos major* (Linnaeus, 1758).

Ref.: Balát (1953) as *Picicola stramineus*; Balát (1956, 1977); Straka (1987); this paper.

Locations: Gabčíkovo, 16–20 Mar. & 10 Oct. 1954 (Balát 1956); Martin, 2 Dec. 1981; Kláštor pod Znievom, 7 Mar. 1979, 25 Jan. 1983 (Straka Coll., AKMM); Bratislava, 28 Feb. 1997 (Krištofik Coll., VETUNI).

***Brueelia vaneki* Balát, 1981a**

Host: *Acrocephalus schoenobaenus* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 16 Apr.–3 May 2008, 24 Apr.–1 May 2009 (VETUNI).

Note: This is the first record of *Brueelia vaneki* from Slovakia.

***Brueelia* sp.**

Host: *Acrocephalus scirpaceus* (Hermann, 1804).

Ref.: this paper.

Location: Gbelce, 14–23 Apr. 2008, 20–23 Apr. 2009 (VETUNI).

Notes: This is the first record of *Brueelia* from *Acrocephalus scirpaceus*. As our specimens are not suitable for a species identification, more material is necessary to confirm if *Brueelia* is a natural parasite of this host or if this record is due to contamination or straggling.

***Brueelia* sp.**

Host: *Lanius minor* Gmelin, 1788.

Ref.: this paper.

Location: Zemplínska Široká—Rebrín, 4 Aug. 1959 (Balát Coll., MMBC slide numbers 1494—not present in the collection).

Notes: According to Gustafsson & Bush (2017: 412) *Lanius minor* is host to *Brueelia minor* Lunkaschu, 1970. Since we have not found any specimens of *Brueelia* from *L. minor* in the Balát Collection, we cannot confirm this record to species level.

***Brueelia* sp.**

Host: *Saxicola rubetra* (Linnaeus, 1758).

Ref.: this paper.

Location: Velké Leváre—NPR Abrod, 18 May 1974 (Balát Coll., MMBC slide number 1473).

Notes: This is the first record of *Brueelia* from *Saxicola rubetra*. As our single specimen is not suitable for a species identification, more material is necessary to confirm if *Brueelia* is a natural parasite of this host or if this record is due to contamination or straggling.

***Campanulotes bidentatus* (Scopoli, 1763)**

Host: *Columba palumbus* Linnaeus, 1758.

Ref.: this paper.

Location: Sládkovičovo, 24 Jun. 1997 (Krištofík Coll., VETUNI).

Note: This is the first record of *Campanulotes bidentatus* from Slovakia.

***Campanulotes compar* (Burmeister, 1838)**

Host: *Columba livia* Gmelin (1789).

Ref.: Straka (1987).

Location: Martin, 24 Jan. 1977 and 15 Dec. 1976 (Straka Coll., AKMM).

Note: Straka (1987) recorded the date of collection as “15 Dec. 1977” but, according to Straka’s notes on labels of both available slides, the correct date is probably “15 Dec. 1976”.

***Capraïella subcuspidata* (Burmeister, 1838)**

Host: *Coracias garrulus* Linnaeus, 1758.

Ref.: Balát (1956, 1977).

Locations: Bratislava, Jul. 1951; Slovakia, Summer of 1952; Šamorín, 14 Sep. 1951 (Balát Coll., MMBC slide numbers 622, 708, SNMB slide number 663).

***Carduiceps scalaris* (Piaget, 1880)**

Host: *Calidris pugnax* (Linnaeus, 1758).

Ref.: this paper.

Location: Štrba, 21 Mar. 1936 (Pfleger Coll., SNMB).

Note: This is the first record of *Carduiceps scalaris* from Slovakia.

***Cinloecus cincli* (Denny, 1842)**

Host: *Cinclus cinclus* (Linnaeus, 1758).

Ref.: Balát (1953, 1955a, 1956, 1977) as *Philopterus cincli*; Straka (1987) as *Philopterus cincli*.

Locations: Trenčianské Teplice, 11 Jun., 13–18 Jun. 1950 (Balát Coll., MMBC slide numbers 529, 532a, 536, SNMB slide number 532b); Javorová dolina, 12 May 1952; Žarnovica, 7 Jan. 1952; Sklené Teplice, 14 Apr., 6–11 Oct. 1953; Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 16 Apr. 1953 (Balát 1955a, 1956); Kláštorské lúky pri Kláštore pod Znievom, 16 Jan. 1981 (Straka Coll., AKMM).

***Coloceras damicorne* (Nitzsch, 1866)**

Host: *Columba palumbus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); Straka (1987).

Locations: Gabčíkovo, 13 Mar. 1954 (Balát 1956); Martin, 5 Jul. 1979 (Straka Coll., AKMM).

***Coloceras piagetii* (Johnston & Harrison, 1912)**

Host: *Streptopelia decaocto* (Fryvaldszky, 1838).

Ref.: Straka (1987) as *Coloceras softoticus* Eichler, 1950.

Locations: Slovany, 15 Aug. 1978 (Straka Coll., AKMM).

***Columbicola bacillus* (Giebel, 1866)**

Host: *Streptopelia decaocto* (Fryvaldszky, 1838).

Ref.: Balát (1977) as *Columbicola confusissimus* Eichler, 1947; Straka (1987) as *C. confucissimus*.

Locations: Vojany, 17 Apr. 1959 (Balát Coll., MMBC slide number 1178); Slovany, 15 Aug. 1978 (Straka Coll., AKMM).

***Columbicola bacillus* (Giebel, 1866)**

Host: *Streptopelia turtur* (Linnaeus, 1758).

Ref.: Balát (1953, 1956) as *Columbicola baculus bacillus*; Balát (1977).

Location: Járók u Nitry, 16 Jun. 1953 (Balát 1956).

***Columbicola claviformis* (Denny, 1842)**

Host: *Columba palumbus* Linnaeus, 1758.

Ref.: this paper.

Locations: Sládkovičovo, 24 Jun. 1997; Štvrtek na Ostrove, 17 Jul. 2005 (Krištofik Coll., VETUNI).

Note: This is the first record of *Columbicola claviformis* from Slovakia.

***Columbicola columbae* (Linnaeus, 1758)**

Host: *Columba livia* Gmelin, 1789.

Ref.: Straka (1987).

Locations: Martin, 24 Jan. 1977, 15 Dec. 1976, 12 Jul 1977 and 5 Jul. 1979 (Straka Coll., AKMM).

Note: Straka (1987) recorded the date of collection as “15 Dec. 1977” but, according to Straka’s notes on labels of both available slides, the correct date is probably “15 Dec. 1976”. *Columba palumbus* is noted as host of *Columbicola* on the label of single slide from 5 Jul. 1979. It was determined by Straka as *C. columbae*. However, *C. palumbus* is host of *Columbicola claviformis* (Price *et al.* 2003). Unfortunately, we can not confirm if this record represents another natural occurrence of *C. claviformis* or accidental straggler of *C. columbae* on atypical host, because this specimen is in poor condition. Therefore we accept Straka’s conclusion to not mention *C. palumbus* neither as host of *C. claviformis* nor *C. columbae*.

***Corvonirmus tasniemae* (Ansari, 1957)**

Host: *Corvus frugilegus* Linnaeus, 1758.

Ref.: Balát (1977) as *Brueelia tasniemae*; Straka (1987).

Locations: Slovakia (Balát 1977); Stará Bystrica, 5 Jan. 1982; Slovany, 20 Dec. 1982 (Straka Coll., AKMM).

Notes: Balát (1977) recorded this species from Slovakia without a host association. Considering that *Corvus frugilegus* is the type host of *Corvonirmus tasniemae* (see Price *et al.* 2003: 159), we assume that *C. frugilegus* is the host of Balát’s record. Gustafsson & Bush (2017: 355) transferred *Brueelia tasniemae* to the genus *Corvonirmus*.

***Corvonirmus uncinus* (Burmeister, 1838)**

Host: *Corvus cornix* Linnaeus, 1758.

Ref.: Balát (1956, 1977) as *Brueelia (Corvonirmus) uncinosa*, this paper.

Locations: Bojnice, 4 May 1953 (Balát Coll., MMBC slide number 778); Kláštor pod Znievom, 13 Mar. 1981 (Straka Coll., AKMM).

***Craspedonirmus colymbinus* (Denny, 1842)**

Host: *Gavia arctica* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977) as *Craspedonirmus frontatus* (Nitzsch [in Giebel], 1866); Straka (1987) as *C. frontatus*.

Locations: Šúrovce, Nov.–Dec. 1948 (Balát Coll., MMBC slide number 349—not present in the collection); Martin, 23 Mar. 1977; Krpeľany, 15 Nov. 1980 (Straka Coll., AKMM—any slide from Martin, 23 Mar. 1977 is not present in the collection).

***Craspedorrhynchus aquilinus* (Denny, 1842)**

Host: *Aquila chrysaetos* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987); this paper.

Locations: Bošany, 4 Jan. 1949 (Balát Coll., MMBC slide number 415); Slovakia, May 1950 (Balát 1956); Folkušová, 17 Feb. 1977, Martin, 30 May 1977 (Straka Coll., AKMM); Jovsa, 14 Sep. 1930; Tatry, 21 Oct. 1927 (Pfleger Coll., SNMB, NMPC, MMBC).

***Craspedorrhynchus dilatatus* (Rudow, 1869b)**

Host: *Buteo lagopus* (Pontoppidan, 1763).

Ref.: Balát (1953) as *Craspedorrhynchus buteo-lagopi* Merisuo, 1945; Balát (1956, 1977); Straka (1987); this paper.

Locations: Slovakia, 18 Dec. 1946 (Balát Coll., MMBC slide number 717); Slovakia, Mar. 1947; Dunajská Streda, 3 Feb. 1949; Myslenice, 4 Feb. 1951; Bratislava, 16 Nov. & 12 Dec. 1952 (Balát 1956); Martin, 24 Jan. 1977; Ležiachov, 13 Jan. 1979 (Straka Coll., AKMM); Trnava, 15 Feb. 1939 (Pfleger Coll., SNMB).

Note: Straka (1987) recorded the location and date as “Vrúcko, 17 Jan. 1979”, but it is most likely an error, because in Straka’s note on label of an available slide the location and date are given as “Ležiachov, 13 Jan. 1979”.

***Craspedorrhynchus haematopus* (Scopoli, 1763)**

Host: *Accipiter gentilis* (Linnaeus, 1758).

Ref.: this paper.

Locations: Čabrad u Krupiny, 25 Jan. 1938 (Pfleger Coll., SNMB, NMPC).

Note: This is the first record of *Craspedorrhynchus haematopus* from Slovakia.

***Craspedorrhynchus macrocephalus* (Nitzsch [in Giebel], 1874)**

Host: *Haliaeetus albicilla* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Location: Šaľa, 19 Mar. 1951 (Balát 1956).

***Craspedorrhynchus melittoscopus* (Nitzsch [in Giebel], 1874)**

Host: *Pernis apivorus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Location: Pezinok, 5 May 1949 (Balát 1956).

***Craspedorrhynchus naevius* (Giebel, 1861)**

Host: *Clanga pomarina* (Brehm, 1831).

Ref.: Balát (1956, 1977); this paper.

Locations: Vrábľa, 24 Aug. 1952 (Balát 1956); Slovakia (Pfleger Coll., SNMB).

***Craspedorrhynchus platystomus* (Burmeister, 1838)**

Host: *Buteo buteo* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987); this paper.

Locations: Bratislava—Petržalka, 1 Sep. 1949; Košice, 16 Nov. 1948 (Balát Coll., MMBC slide numbers 339, 359, SNMB slide number 530); Budmerice, 20 Mar. 1949; Plavecké Podhradie, 5 Nov. 1950 (Balát 1956); Martin, 18 Jan. 1977; Lipovec, 6 and 28 Mar. 1977; Kláštor pod Znievom, 18 May 1978 (Straka Coll., AKMM); Váhovce,

20 Mar. 2001; Moravský Svätý Ján, 17 Dec. 2009; Závod, 11 Mar. 2010; Malé Leváre, 16 Mar. 2010 (Krištofik Coll., VETUNI).

Note: Straka (1987) recorded data on collections of *Craspedorrhynchus platystomus* from *Buteo buteo* and *Buteo rufinus*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka's notes on relevant slides. Straka (1987) recorded one of the location and dates for this host as "Lipovec, 6 and 28 Mar. 1977", but it is most likely an error, because in Straka's notes on labels of four available slides with aforementioned dates the location is given as "Česká Lípa, Czech Republic". Despite it we also list this location, because we cannot completely exclude the possibility that material from this location is only not present in the collection.

***Craspedorrhynchus platystomus* (Burmeister, 1838)**

Host: *Buteo rufinus* (Cretzschmar, 1829).

Ref.: Straka (1987).

Location: Martin, 17 Feb. 1977 (Straka Coll., AKMM—not present in the collection).

Note: Straka (1987) recorded data on collections of *Craspedorrhynchus platystomus* from *Buteo buteo* and *Buteo rufinus*, but without mentioning which locality referred to each host species. According to Straka's notes on relevant slides lice form *Buteo rufinus* were collected on 17 Feb. 1977 in Martin. No louse with the same location and date from *Buteo buteo* is in the collection. On the other hand, all six available slides with lice from *B. rufinus* contain *Degeeriella fulva* (see below). According to Straka's notes on these slides, all these lice were identified as "*Picicola* sp.". Despite it we decide to accept Straka's record and list *C. platystomus* from *B. rufinus*, because lice of these two genera (*Craspedorrhynchus* vs. *Degeeriella*) are too different to be misidentify, and because we cannot completely exclude the possibility that material of this species is only not present in the collection. Although Price *et al.* (2003) did not list this host-lice association, Straka (1987) reported it from Slovakia, and Dik & Aydenizöz-Ozkayhan (2007) confirmed it in Turkey.

***Craspedorrhynchus* sp.**

Host: *Aquila heliaca* Savigny, 1809.

Ref.: Balát (1956) as *Craspedorrhynchus* sp.

Location: Štúrovo, 3 Feb. 1950 (Balát 1956).

Notes: According to Price *et al.* (2003: 169) *Aquila heliaca* is parasitised by *Craspedorrhynchus fraterculus* Eichler & Złotorzycka, 1975. However, as there are no specimens of *Craspedorrhynchus* from this host in the Balát Collection, we cannot confirm the identity of this species.

***Cuclotogaster heterogrammicus* (Nitzsch [in Giebel], 1866)**

Host: *Perdix perdix* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Location: Trnava, 7 Oct. 1951 (Balát Coll., MMBC slide number 618).

***Cuclotogaster heterographus* (Nitzsch [in Giebel], 1866)**

Host: *Gallus gallus* (Linnaeus, 1758)—captive bird.

Ref.: this paper.

Location: Martin, 19 Apr. 1977 (Straka Coll., AKMM).

Note: This is the first record of *Cuclotogaster heterographus* from Slovakia.

***Cuclotogaster heterographus* (Nitzsch [in Giebel], 1866)**

Host: *Phasianus colchicus* Linnaeus, 1758.

Ref.: this paper.

Location: Slovakia, 10 Nov. 1948 (Balát Coll., MMBC slide number 355).

Note: Together with the above, this is the first record of *Cuclotogaster heterographus* from Slovakia.

***Cuculicola latirostris* (Burmeister, 1838)**

Host: *Cuculus canorus* Linnaeus, 1758.

Ref.: Straka (1987); this paper.

Locations: Kevice, 4 Aug. 1982 (Straka Coll., AKMM); Žitný ostrov, 29 Apr. 1938 (Pfleger Coll., NMPC).

***Cuculoecus latifrons* (Denny, 1842)**

Host: *Cuculus canorus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); this paper.

Locations: Plavecké Podhradie, 29 Apr. & 6 May 1951 (Balát 1956); Žitný ostrov, 29 Apr. 1938 (Pfleger Coll., SNMB).

***Cummingsiella aurea* Hopkins, 1949**

Host: *Scolopax rusticola* Linnaeus, 1758.

Ref.: Straka (1987); this paper.

Locations: Bratislava, 19 Mar. 1950 (Balát Coll., MMBC slide number 533); Vrúcko, 1 May 1977; Valča, 1 May 1977; Kláštor pod Znievom, 22 Mar. 1977; Belá nad Cirochou, 4 May 1977; Bystrička, 3 Apr. 1978; Martin, 6 Apr. 1982 (Straka Coll., AKMM—any slide from Belá nad Cirochou, 4 May 1977 is not present in the collection).

***Cummingsiella ovalis* (Scopoli, 1763)**

Host: *Numenius arquata* (Linnaeus, 1758).

Ref.: Balát (1977); this paper.

Locations: Malacky, 5 Jun. 1950; Senné, 16 Apr. 1950; Zohor, 16 May 1948 (Balát Coll., MMBC slide numbers 93, 458, 501, SNMB slide number 93-2x).

***Degeeriella aquilarum* Eichler, 1943c**

Host: *Clanga pomarina* (Brehm, 1831).

Ref.: Balát (1977) as *Degeeriella discocephalus aquilarum*; this paper.

Location: Štrba, 2 Sep. 1938 (Pfleger Coll., SNMB).

Notes: Balát (1977) recorded *Degeeriella discocephalus aquilarum* from Slovakia without a host association. This louse species parasitises six species of eagles (Price *et al.* 2003: 173) of which *Aquila chrysaetos*, *A. heliaca*, *Clanga clanga* and *C. pomarina* may occur in Slovakia (Hudec & Černý 1977). No specimen of *Degeeriella* from these hosts can be found in the Balát Collection but, as Balát was in contact with Pfleger, he may have examined lice from the Pfleger Collection. Therefore, we assume that Balát' (1977) record was based on material from the Pfleger Collection.

***Degeeriella discocephalus* (Burmeister, 1838)**

Host: *Haliaeetus albicilla* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Košice, Jan. 1949 (Balát Coll., MMBC slide number 310); Šaľa, 19 Mar. 1951; Šamorín, 19 Dec. 1952 (Balát 1956).

***Degeeriella fulva* (Giebel, 1874)**

Host: *Aquila chrysaetos* (Linnaeus, 1758).

Ref.: Straka (1987).

Location: Martin, 17 Feb. 1977 (Straka Coll., AKMM).

***Degeeriella fulva* (Giebel, 1874)**

Host: *Buteo buteo* (Linnaeus, 1758).

Ref.: Balát (1956) as *Degeeriella giebeli*, Hopkins, 1947; Balát (1977); Straka (1987) as *D. giebeli*; this paper.

Locations: Bratislava—Petržalka, 1 Sep. 1949 (Balát Coll., SNMB slide number 530); Budmerice, 20 Mar. 1949; Bratislava, 11 Nov. 1951; Bojnice, 28 Apr. 1953; Košice, 28 Oct. 1953 (Balát 1956); Martin, 18 Jan. 1977; Kláštor pod Znievom, 18 May 1978; Slovany, 15 Aug. 1978 (Straka Coll., AKMM); Sap, 20 Jan. 1998; Farná, 13 Feb. 2001; Váhovce, 20 Mar. 2001; Závod, 11 Mar. 2010; Malé Leváre, 16 Mar. 2010 (Krištofik Coll., VETUNI).

***Degeeriella fulva* (Giebel, 1874)**

Host: *Buteo lagopus* (Pontoppidan, 1763).

Ref.: Balát (1956) as *Degeeriella angusta* (Giebel, 1874); Balát (1977); this paper.

Locations: Slovakia, 18 Dec. 1946 (Balát Coll., MMBC slide number 718); Myslenice, 4 Feb. 1951 (Balát 1956); Trnava, 15 Feb. 1939 (Pfleger Coll., SNMB).

***Degeeriella fulva* (Giebel, 1874)**

Host: *Buteo rufinus* (Cretzschmar, 1829).

Ref.: Balát (1956) as *Degeeriella* sp., this paper.

Locations: Slovakia, May 1948 (Balát Coll., MMBC slide number 22); Martin, 17 Feb. 1977 (Straka Coll., AKMM).

***Degeeriella fusca* (Denny, 1842)**

Host: *Circus aeruginosus* (Linnaeus, 1758).

Ref.: Balát (1953) as *Kélerinirmus fuscus* (Denny, 1842); Balát (1956, 1977).

Locations: Bratislava—Rača, 4 Sep. 1948 (Balát Coll., MMBC slide number 303); Modra, 2 Sep. 1951; Vrakuň, 31 Aug. 1952 (Balát 1956).

***Degeeriella fusca* (Denny, 1842)**

Host: *Circus cyaneus* (Linnaeus, 1766).

Ref.: Balát (1953) as *Kélerinirmus fuscus* (Denny, 1842); Balát (1956, 1977).

Locations: Bratislava, 13 Dec. 1948; Bratislava—Rača, 26 Jan. 1951; Gabčíkovo, 15 Oct. 1951; Lehnice, 2 Mar. 1952; Šaľa, 28 Jan. 1951; Velký Žitný Ostrov, 4 Jan. 1951 (Balát Coll., MMBC slide numbers 570, 585; 350, 588—not present in the collection, SNMB slide numbers 606, 631); Číčov, 7 Oct. 1951 (Balát 1956).

***Degeeriella fusca* (Denny, 1842)**

Host: *Circus macrourus* (Gmelin, 1770).

Ref.: Balát (1956, 1977).

Location: Slovakia, Oct. 1951 (Balát Coll., MMBC slide number 632).

***Degeeriella leucopleura* (Nitzsch [in Giebel], 1874)**

Host: *Circaetus gallicus* (Gmelin, 1788).

Ref.: Balát (1953) as *Kélerinirmus leucopleurus* (Nitzsch [in Giebel], 1874); Balát (1956, 1977).

Location: Eastern Slovakia, Sep. 1949 (Balát 1956).

***Degeeriella nisus* (Giebel, 1866)**

Host: *Accipiter nisus* (Linnaeus, 1758).

Ref.: Balát (1956, 1977); this paper.

Locations: Trnava, 28 Dec. 1950; Plavecký Mikuláš, 12 Aug. 1951 (Balát 1956); Bratislava, 2 Mar. 1997 (Krištofík Coll., VETUNI).

***Degeeriella regalis* (Giebel, 1866)**

Host: *Milvus migrans* (Boddaert, 1783).

Ref.: Balát (1977); Hudec & Černý (1977).

Location: Slovakia (Balát 1977).

Notes: Balát (1977) recorded *Degeeriella regalis* from Slovakia without a host association. This species parasitises ten species of raptors (Price *et al.* 2003: 175) of which *Milvus migrans* and *Milvus milvus* occur in Slovakia (Hudec & Černý, 1977). Although, Hudec & Černý (1977) recorded *D. regalis* from *M. migrans*, they gave no location.

***Degeeriella rufa* (Burmeister, 1838)**

Host: *Falco cherrug* Gray, 1834.

Ref.: Balát (1953) as *Kélerinirmus rufus* (Burmeister, 1838); Balát (1956, 1977); this paper.

Locations: Plavecké Podhradie, 17 Jun. 1950 (Balát 1956); Devínske jazero, 3 Jul. 2000 (Krištofík Coll., VETUNI).

***Degeeriella rufa* (Burmeister, 1838)**

Host: *Falco tinnunculus* Linnaeus, 1758.

Ref.: Balát (1953) as *Kélerinirmus rufus* (Burmeister, 1838); Balát (1956, 1977); Straka (1987); this paper.

Locations: Čilistov, 19 Mar. 1950; Klenovec, 4 Feb. 1951; Trávnica, formerly Fíš, 2 May 1948 (Balát Coll., MMBC slide numbers 84—not present in the collection, 430, SNMB slide number 621); Trávnica, formerly Fíš, May 1948; Bratislava, 3 Apr. 1951 and Sep. 1952 (Balát 1956); Martin, 14 Jun. 1978 (Straka Coll., AKMM); Malacky, 13 May 2001; Kráľovičove Kračany, 26 May 2003 (Krištofík Coll., VETUNI).

***Degeeriella rufa* (Burmeister, 1838)**

Host: *Falco vespertinus* Linnaeus, 1766.

Ref.: Balát (1953) as *Kélerinirmus quadraticollis* (Rudow, 1870); Balát (1956) as *Degeeriella quadraticollis*; this paper.

Locations: Zlatná na Ostrove, 24 Aug. 1950 (Balát Coll., MMBC slide number 547); Senné, Jun. 1955 (Balát 1956); Šamorín, 10 Apr. 1925 (Pfleger Coll., SNMB, NMPC).

***Degeeriella vagans* (Giebel, 1874)**

Host: *Accipiter gentilis* (Linnaeus, 1758).

Ref.: this paper.

Locations: Čabrad u Krupiny, 25 Jan. 1938 (Pfleger Coll., NMPC); Kľačno, 10 Sep. 1985 (Straka Coll., AKMM).

Note: This is the first record of *Degeeriella vagans* from Slovakia.

***Esthiopterum gruis* (Linnaeus, 1758)**

Host: *Grus grus* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Locations: Senné, Spring of 1955 (Balát Coll., MMBC slide number 1003); Čilistov, 23 Mar. 1950 (Balát 1956).

***Falcolipeurus sulcifrons* (Denny, 1842)**

Host: *Haliaeetus albicilla* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); this paper.

Locations: Senné, Spring of 1955 (Balát 1956); Žitný ostrov, no date (Pfleger Coll., SNMB, NMPC, MMBC).

***Falcolipeurus suturalis* (Rudow, 1869b)**

Host: *Aquila chrysaetos* (Linnaeus, 1758).

Ref.: Balát (1953) as *Falcolipeurus* sp.; Balát (1956, 1977).

Location: Čachtice, 1 Feb. 1949 (Balát Coll., MMBC slide numbers 416, 417).

***Fulicoffula gallinula* Carriker, 1953**

Host: *Gallinula chloropus* (Linnaeus, 1758).

Ref.: this paper.

Location: Cífer, 2 May 1951 (Balát Coll., MMBC slide number 795).

Note: This is the first record of *Fulicoffula gallinula* from Slovakia.

***Fulicoffula lurida* (Nitzsch, 1818)**

Host: *Fulica atra* Linnaeus, 1758.

Ref.: Straka (1987); this paper.

Locations: Krpeľany, 5 Jan. 1982 (Straka Coll., AKMM); Bratislava—Kopáč, 19 Feb. 1997 (Krištofík Coll., VETUNI).

***Fulicoffula* sp.**

Host: *Rallus aquaticus* Linnaeus, 1758.

Ref.: this paper.

Location: Gbelce, 27 Apr. 2009 (VETUNI).

Notes: Although we only examined nymphs collected from one ralliform bird, we are confident that they are not contaminants from another bird species. Therefore, we believe they are likely *Fulicoffula rallina* (Denny, 1842), with the type and only host, *Rallus aquaticus* (see Price *et al.* 2003: 181). This is a new host-louse association for Slovakia.

***Goniocotes chrysocephalus* Giebel, 1874**

Host: *Phasianus colchicus* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Goldová *et al.* (2006); this paper.

Locations: Bratislava—Rača, 31 Dec. 1950 (Balát Coll., MMBC slide number 568); Gabčíkovo, 21 Oct. 1954 (Balát 1956); Game Management Centre, Rozhanovce, 2000–2004 (Goldová *et al.* 2006); Studené, 27 Jul. 1998 (Krištofik Coll., VETUNI).

***Goniocotes gallinae* (De Geer, 1778)**

Host: *Gallus gallus* (Linnaeus, 1758)—captive bird.

Ref.: this paper.

Location: Kláštor pod Znievom, 25 Apr. 1977 (Straka Coll., AKMM).

Note: Although the occurrence of this louse species is probably well known among veterinarians and hen breeders, this is the first record of *Goniocotes gallinae* from Slovakia. Specimens in the Straka's collection are mounted partially together with *Menopon gallinae* and *Menacanthus stramineus* on the same slides reported by Straka (1987) as *Menacanthus* sp.

***Goniocotes megalcephalus* Uchida, 1916**

Host: *Tetrastes bonasia* (Linnaeus, 1758).

Ref.: this paper.

Location: Blatnica, 4 May 1979 (Straka Coll., AKMM).

Note: This is the first record of *Goniocotes megalcephalus* from Slovakia.

***Goniodes bituberculatus* Rudow, 1869b**

Host: *Tetrao urogallus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); Straka (1987).

Locations: Brezno, 20 Apr. 1949; Čierny Balog, 9 May 1956 (Balát Coll., MMBC slide numbers 1324, 1325); Brezno, 17 Apr. 1949 (Balát 1956); Martin, 29 Oct. 1981, Martinské hole, 12 May 1987 (Straka Coll., AKMM).

***Goniodes colchici* Denny, 1842**

Host: *Phasianus colchicus* Linnaeus, 1758.

Ref.: Straka (1987); Goldová *et al.* (2006); this paper.

Locations: Martin, 7 Dec. 1977 (Straka Coll., AKMM); Game Management Centre, Rozhanovce, 2000–2004 (Goldová *et al.* 2006); Studené, 27 Jul. 1998 (Krištofik Coll., VETUNI).

Note: Straka (1987) reported *Goniodes colchici* from *Phasianus colchicus* from “Martin, 20 Jan. 1977”, but it is most likely an error, because in Straka's notes on labels of two available slides with aforementioned date and location host is given as “jarabica poľná = *Perdix perdix*” (see below). Although we only examined one nymph from the Krištofik Collection, it is most likely *Goniodes colchici*, with the type and only host *Phasianus colchicus* (see Price *et al.* 2003: 183).

***Goniodes dispar* Burmeister, 1838**

Host: *Perdix perdix* Linnaeus, 1758

Ref.: this paper.

Location: Martin, 20 Jan. 1977 (Straka Coll., AKMM).

Notes: Straka (1987) reported *Goniodes colchici* from *Phasianus colchicus* from “Martin, 20 Jan. 1977”, but it is most likely an error, because in Straka’s notes on labels of two available slides with aforementioned date and location host is given as “jarabica poľná = *Perdix perdix*”. According to Straka’s notes on labels lice on these two slides were misidentified as “*Goniodes colchici*”. This is the first record of *Goniodes dispar* from Slovakia.

***Goniodes dissimilis* Denny, 1842**

Host: *Gallus gallus* (Linnaeus, 1758)—captive bird.

Ref.: Straka (1987).

Location: Martin, 19 Apr. 1979 (Straka Coll., AKMM).

***Goniodes pavonis* (Linnaeus, 1758)**

Host: *Pavo cristatus* Linnaeus, 1758—captive bird.

Ref.: Straka (1987).

Locations: Drážkovce, 14 Jan. 1985, Turčianská Štiavnička, 26 May 1979 (Straka Coll., AKMM).

***Goniodes tetraonis* (Linnaeus, 1761)**

Host: *Lyrurus tetrrix* (Linnaeus, 1758).

Ref.: Straka (1987).

Locations: Oravská priehrada pri Námestove, 1 May 1977; Oravský Podzámok, 1 May 1977; Sučany, 2 May 1977; Ratkovo, 6 May 1977 (Straka Coll., AKMM).

Notes: Straka (1987) recorded *Tetrao urogallus* and a hybrid between *T. urogallus* and *Lyrurus tetrrix* as hosts of *Goniodes tetraonis*. It is known that *T. urogallus* and *L. tetrrix* can produce hybrids in wild populations (Kleven *et al.* 2020), so finding lice on such a hybrid is both unusual and interesting. However, considering that *T. urogallus* is a natural host of *Goniodes bituberculatus* Rudow, 1869 (Price *et al.* 2003: 331; see above), the association between *Goniodes tetraonis* and *T. urogallus* is, in our opinion, questionable and most likely the result of contamination or straggling.

***Guimaraesiella amsel* (Eichler, 1951b)**

Host: *Turdus merula* Linnaeus, 1758.

Ref.: Balát (1953) as *Brueelia marginata*; (Burmeister, 1838); Balát (1956, 1977) as *Brueelia amsel*; Bush *et al.* (2018).

Locations: Bratislava, 10 Feb. 1952 (Balát Coll., MMBC slide number 609); Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018).

***Guimaraesiella marginata* (Burmeister, 1838)**

Host: *Turdus pilaris* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977) as *Brueelia marginata*; Bush *et al.* (2018); Straka (1987) as *Brueelia* (*Allobrueelia marginata*); this paper.

Locations: Bratislava—Petržalka, 9 Mar. 1952; Plavecké Podhradie, Jan. 1951; Plavecký Mikuláš, 31 Dec. 1950 (Balát Coll., MMBC slide numbers 566, 620; 591—not present in the collection); Necpaly, 25 Feb. 1967; Martin, 19 Apr. and 28 May 1979 (Straka Coll., AKMM); Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018); Štrbské pleso, 25 Jan. 1938 (Pfleger Coll., SNMB, NMPC).

***Hecatrishula varia* (Burmeister, 1838)**

Host: *Coloeus monedula* (Linnaeus, 1758).

Ref.: this paper.

Location: Pavlovce nad Uhom, 9 Apr. 1956 (Balát Coll. Balát Coll., MMBC slide number 1186).

Notes: This is one of two first records of *Hecatrishula varia* from Slovakia (see below). This species was placed in the genus *Brueelia* Kéler, 1936, but Gustafsson & Bush (2017: 88) transferred it to their new genus *Hecatrishula*.

***Hecatrishula varia* (Burmeister, 1838)**

Host: *Corvus frugilegus* Linnaeus, 1758.

Ref.: this paper.

Locations: Rohovce, 16 Mar. 1955 (Balát Coll. Balát Coll., MMBC slide number 780); Kravany, 9 Jun. 1998; Zlatná na Ostrove, 20 Jan. 2001 (Krištofík Coll., VETUNI).

Notes: This is one of two first records of *Hecatrishula varia* from Slovakia (see above). This species was placed in the genus *Brueelia* Kéler, 1936, but Gustafsson & Bush (2017: 88) transferred it to their new genus *Hecatrishula*.

***Ibidoecus bisignatus* (Nitzsch [in Giebel], 1866)**

Host: *Plegadis falcinellus* (Linnaeus, 1758).

Ref.: Straka (1987).

Location: Vrútky, 2 Oct. 1977 (Straka Coll., AKMM).

Note: Straka (1987) recorded the date of collection as “5 Oct. 1977” but, according to Straka’s note on label of an available slide, the correct date is probably “2 Oct. 1977”.

***Ibidoecus plataleae* (Denny, 1842)**

Host: *Platalea leucorodia* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); this paper.

Locations: Zlatná na Ostrove, 24 Aug. 1950 (Balát 1956); Šarluky, 18 Aug. 1929 (Pfleger Coll., SNMB, NMPC).

***Lagopoecus colchicus* Emerson, 1949**

Host: *Phasianus colchicus* (Linnaeus, 1758).

Ref.: Straka (1987).

Locations: Martin, 6 Jan. 1977; Kremnica, 17 May 1978 (Straka Coll., AKMM).

***Lagopoecus lyrurus* Clay, 1938**

Host: *Lyrurus tetrax* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Location: Slovakia, May 1948 (Balát Coll., MMBC slide number 105).

***Lagopoecus pallidovittatus* (Grube, 1851)**

Host: *Tetrao urogallus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977).

Locations: Brezno, 20 Apr. 1949; Čierny Balog, 9 May 1956 (Balát Coll., MMBC slide numbers 1324, 1325); Brezno, 17 Apr. 1949 (Balát 1956).

***Lagopoecus tetrastei* Bechet, 1963**

Host: *Tetrastes bonasia* (Linnaeus, 1758).

Ref.: Balát (1977); this paper.

Location: Slovakia (Balát 1977); Blatnica, 4 May 1979 (Straka Coll., AKMM).

Notes: Balát (1977) recorded this species from Slovakia without a host association. Considering that *Tetrastes bonasia* is the type and only host of *Lagopoecus tetrastei* (see Price *et al.* 2003: 194), we assume that this is the host of Balát’s record. Furthermore, the Straka Collection includes slide with *L. tetrastei*. Therefore, we can confirm that this is a valid host-lice association for Slovakia.

***Lipeurus maculosus* Clay, 1938**

Host: *Phasianus colchicus* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Straka (1987); Goldová *et al.* (2006).

Locations: Bratislava—Rača, 31 Dec. 1950 (Balát Coll., MMBC slide number 567); Bratislava, 10 Nov. 1948 and 3 Dec. 1950; Trnava, 22 Nov. 1950; Gabčíkovo, 21 Oct. 1954 (Balát 1956); Martin, 7 Dec. 1977; Nové Zámky, 1 Apr. 1978 (Straka Coll., AKMM); Game Management Centre, Rozhanovce, 2000–2004 (Goldová *et al.* 2006).

***Lipeurus numidae* (Denny, 1842)**

Host: *Numida meleagris* (Linnaeus, 1758)—captive bird.

Ref.: Straka (1987).

Location: Martin, 3 Apr. 1979 (Straka Coll., AKMM).

***Lipeurus pavo* Clay, 1938**

Host: *Pavo cristatus* Linnaeus, 1758—captive bird.

Ref.: Straka (1987).

Location: Martin, 19 Apr. 1979 (Straka Coll., AKMM—not present in the collection).

***Lunaceps numenii* (Denny, 1842)**

Host: *Numenius arquata* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Malacky, 5 Jun. 1950; Senné, 16 Apr. 1950 (Balát Coll., MMBC slide numbers 92, 458, 501); Zohor, 16 May 1948 (Balát 1956).

***Maculinirmus mundus* (Nitzsch [in Giebel], 1866)**

Host: *Oriolus oriolus* (Linnaeus, 1758).

Ref.: Balát (1953, 1955b, 1956, 1977) as *Brueelia munda*.

Location: Járók u Nitry, 16 Jun. 1953.

Note: This species was placed in the genus *Brueelia* Kéler, 1936, but Gustafsson & Bush (2017: 125) resurrected the genus *Maculinirmus* Złotorzycka, 1964a.

***Meropoecus meropis* (Denny, 1842)**

Host: *Merops apiaster* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Krištofík *et al.* (1996); this paper.

Locations: Radošovce—Vieska, 25 Jul. 1949; Sered', 4 Sep. 1948 (Balát Coll., MMBC slide numbers 215, 452, 454); Chotín, Mudroňovo, Jurský Chlm, Malá nad Hronom, Pavlová, Sikenička, May–Jul. 1995 for all locations (Krištofík *et al.* 1996); Virt, 19 Jul. 1998; Orechová potôň, 15 Aug. 2002 (Krištofík Coll., VETUNI).

***Meropsiella apiastri* (Denny, 1842)**

Host: *Merops apiaster* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977) as *Brueelia apiastri*; Gustafsson & Bush (2017); this paper.

Locations: Radošovce—Vieska, 25 Jul. 1949; Sered', 4 Sep. 1948 (Balát Coll., MMBC slide number 214, 452); Orechová potôň, 15 Aug. 2002 (Krištofík Coll., VETUNI).

***Muldicula hypoleucus* (Denny, 1842)**

Host: *Caprimulgus europaeus* Linnaeus, 1758.

Ref.: Straka (1987).

Location: Blatnica, 5 Aug. 1982 (Straka Coll., AKMM).

***Neophilopterus incompletus* (Denny, 1842)**

Host: *Ciconia ciconia* (Linnaeus, 1758).

Ref.: Balát (1977); Straka (1987); this paper.

Locations: Veškovce, 5 Aug. 1959 (Balát Coll., MMBC slide number 1158); Martin, 17–18 Feb. 1977; Socovce, 30 Apr. 1980; Krpeľany, 3 Sep. 1982 (Straka Coll., AKMM); Nové Zámky, 17 Sep. 1930 (Pfleger Coll., SNMB, NMPC).

***Neophilopterus tricolor* (Burmeister, 1838)**

Host: *Ciconia nigra* (Linnaeus, 1758).

Ref.: Straka (1987); this paper.

Locations: Martin, 17 Feb. 1977 (Straka Coll., AKMM); Moravský Svätý Ján, 12 Oct. 1927 (Pfleger Coll., SNMB, NMPC).

***Olivinirmus glandarii* (Denny, 1842)**

Host: *Garrulus glandarius* (Linnaeus, 1758).

Ref.: Balát (1953) as *Corvonirmus glandarii*; Balát (1956, 1977); Straka (1987) as *Brueelia* (*Corvonirmus*) *glandarii*.

Locations: Járok u Nitry, 17 Jun. 1953; Slovakia, 12 Nov. 1948 (Balát Coll., MMBC slide numbers 358, 1132); Ťarchová pri Žit., 21 May 1950; Jablonica, 18 Mar. 1951; Podunajské Biskupice, 27 Oct. 1955 (Balát 1956); Martin, 10 Feb. 1978; Blatnica, 29 Mar. 1978 (Straka Coll., AKMM).

Note: This species was placed in the genus *Brueelia* Kéler, 1936, but Gustafsson & Bush (2017: 199) resurrected the genus *Olivinirmus* Złotorzycka, 1964a.

***Ornithobius bucephalus* (Giebel, 1874)**

Host: *Cygnus olor* (Gmelin, 1789).

Ref.: this paper.

Location: Dolný Štál, 13 Apr. 1997 (Krištofík Coll., VETUNI).

Note: This is the first record of *Ornithobius bucephalus* from Slovakia.

***Otidoecus turmalis* (Denny, 1842)**

Host: *Otis tarda* Linnaeus, 1758.

Ref.: Balát (1953) as *Otilipeurus turmale*; Balát (1956, 1977); this paper.

Locations: Dunajská Streda, 23 Apr. 1949 (Balát Coll., MMBC slide number 550); Parkaň, 1 Jun. 1934 (Pfleger Coll., SNMB).

Note: The year of collection recorded by Balát (1956) and in his handwritten notes is “1948”, but the label on his slide 550 reads “1949”.

***Oxylipeurus colchicus* Clay, 1938**

Host: *Phasianus colchicus* Linnaeus, 1758.

Ref.: Straka (1987).

Location: Martin, 6 Jan. 1977 (Straka Coll., AKMM).

***Oxylipeurus mesopelios* (Nitzsch [in Giebel], 1866)**

Host: *Chrysolophus pictus* (Linnaeus, 1758)—captive bird.

Ref.: Straka (1987).

Location: Martin, 5 May 1982 (Straka Coll., AKMM).

***Oxylipeurus tetraonis* (Grube, 1851)**

Host: *Tetrao urogallus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977); Straka (1987).

Locations: Brezno, 20 Apr. 1949; Čierny Balog, 9 May 1956 (Balát Coll., MMBC slide numbers 1324, 1325); Brezno, 17 Apr. 1949 (Balát 1956); Oravská priehrada pri Námestove, 1 May 1977; Sučany, 2 May 1977; Ratkovo, 6 May 1977; Martin, 29 Oct. 1981 (Straka Coll., AKMM).

Notes: Straka (1987) recorded *Lyrurus tetrrix* and a hybrid between *T. urogallus* and *Lyrurus tetrrix* as hosts of *Oxylipeurus tetraonis*. It is known that *T. urogallus* and *L. tetrrix* can produce hybrids in wild populations (Kleven *et al.* 2020), so finding lice on such a hybrid is both unusual and interesting. However, considering that *Lyrurus tetrrix* is a natural host of *Oxylipeurus minor* (Złotorzycka, 1966) (Price *et al.* 2003: 204), the association between *Oxylipeurus tetraonis* and *L. tetrrix* is most likely the result of a contamination or straggling.

***Pectinopygus gyricornis* (Denny, 1842)**

Host: *Phalacrocorax carbo* (Linnaeus, 1758).

Ref.: Balát (1953) as *Philichthyophaga longicornis* (Piaget, 1880); Balát (1956, 1977); this paper.

Locations: Podunajské Biskupice, 13 Apr. 1951; Slovakia, May 1948 (Balát Coll., MMBC slide numbers 89, 612); Šamorín, 12–17 Sep. 1935 (Pfleger Coll., SNMB, NMPC).

***Penenirmus albiventris* (Scopoli, 1763)**

Host: *Troglodytes troglodytes* (Linnaeus, 1758).

Ref.: Balát (1953, 1955a, 1956, 1977); Sychra *et al.* (2014).

Locations: Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 16 Apr. 1953; Ihráč, 19 Apr. 1953; Járok u Nitry, 13 Oct. 1953; Žarnovica—Rychňava, 21 Jun. 1953; Sklené Teplice, 10 Oct. 1953, 18 Apr. 1953 (Balát Coll., MMBC slide numbers 674-2x, 690-2x; 801, 803, 805, 806); Starý Smokovec, 14 Jun. 1955; Sklené Teplice, 17 Apr. 1953; Ihráč, 18 Apr. 1953 (Balát 1955a, 1956); Gbelce, 13 Apr. 2008 (Sychra *et al.* 2014).

Note: Balát (1956) incorrectly recorded the date of this collection as “Járok u Nitry (13 Oct. 1943)”.

***Penenirmus auritus* (Scopoli, 1763)**

Host: *Dendrocopos leucotos* (Bechstein, 1802).

Ref.: Balát (1956) as *Penenirmus* sp.; Balát (1977).

Location: Sološnica, 9 May 1948 (Balát Coll., MMBC slide number 351).

***Penenirmus auritus* (Scopoli, 1763)**

Host: *Dendrocopos major* (Linnaeus, 1758).

Ref.: Balát (1953) as *Philoptyerus auritus*; Balát (1956, 1977); Straka (1987).

Locations: Sklené Teplice, 7 Oct. 1953 (Balát Coll., MMBC slide number 1065—not present in the collection); Sklené Teplice, 20 Apr. 1953; Gabčíkovo, 16 Mar. 1954; Rohovce, 16 Mar. 1955 (Balát 1956); Kláštor pod Znievom, 25 Jan. 1983 (Straka Coll., AKMM).

***Penenirmus auritus* (Scopoli, 1763)**

Host: *Dendrocopos syriacus* (Hemprich & Ehrenberg, 1833).

Ref.: Balát (1956, 1977) as *Penenirmus peusi* Eichler, 1953a; this paper.

Locations: Voderady, 10 Mar. 1953; Gabčíkovo, 22 Jul. 1953, 21 Mar. & 21 Oct. 1954 (Balát 1956); Gbelce, 30 Apr.–1 May 2009 (VETUNI).

***Penenirmus auritus* (Scopoli, 1763)**

Host: *Dryobates minor* (Linnaeus, 1758).

Ref.: Balát (1956) as *Penenirmus* sp.; Balát (1977); Straka (1987) as *Penenirmus* sp.

Locations: Gabčíkovo, 19 Mar. 1954 (Balát 1956); Slovany, 22 Nov. 1983 (Straka Coll., AKMM); Malženice, 11 Nov. 2006 (Krištofík Coll., VETUNI).

***Penenirmus gulosus* (Nitzsch 1866)**

Host: *Certhia familiaris* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Straka (1987).

Locations: Rohožník, Malé Karpaty, 16 Dec. 1951 (Balát Coll., MMBC slide number 649); Vrícko, 15 Nov. 1982 (Straka Coll., AKMM).

***Penenirmus heteroscelis* (Nitzsch, 1866)**

Host: *Dryocopus martius* (Linnaeus, 1758).

Ref.: this paper.

Location: Bratislava, 7 Jun. 2010 (Krištofík Coll., VETUNI).

Note: This is the first record of *Penenirmus heteroscelis* from Slovakia.

***Penenirmus nirmoideus* (Nitzsch [in Giebel], 1874)**

Host: *Saxicola rubetra* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Locations: Nízke Tatry—Čertovica, 1 Jul. 1960; Plavecké Podhradie, 29 Apr. 1951; Velké Leváre—NPR Abrod, 11 May 1974, 18 May 1974 (Balát Coll., MMBC slide numbers 1379, 1452; 673, 1246, 1472).

***Penenirmus pari* (Denny, 1842)**

Host: *Aegithalos caudatus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Holíč, 27 Mar. 1948 (Balát Coll., MMBC slide numbers 3, 4); Sklené Teplice, 21 Apr. 1953; Banská Štiavnica—Počúvadla, 23 Apr. 1953 (Balát 1956).

***Penenirmus pici* (J.C. Fabricius, 1798)**

Host: *Picus canus* Gmelin, 1788.

Ref.: Balát (1956, 1977).

Locations: Podunajské Biskupice, 20 Jul. 1953; Gabčíkovo, 21 Mar. 1954 (Balát 1956).

***Penenirmus pici* (J.C. Fabricius, 1798)**

Host: *Picus viridis* Linnaeus, 1758.

Ref.: Balát (1956, 1977).

Locations: Bratislava, 10 Oct. 1948 (Balát Coll., MMBC slide number 353); Bratislava, 11 Nov. 1951 (Balát 1956).

***Penenirmus visendus* (Złotorzycka, 1964a)**

Host: *Panurus biarmicus* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 14 Apr.–3 May 2008, 18 Apr.–1 May 2009, 17–21 Apr. 2016, 8–11 Jul. & 1–2 Oct. 2019 (VETUNI)

Note: This is the first record of *Penenirmus visendus* from Slovakia.

***Phlopterus acrocephalus* Carriker, 1949**

Host: *Acrocephalus melanopogon* (Temminck, 1823).

Ref.: Najer *et al.* (2020).

Location: Gbelce, 13–30 Apr. 2008, 18 Apr.–1 May 2009, 18–20 Apr. 2016, 17 Apr. & 9 Jul. 2019 (VETUNI; slides SK21–25 MMBC).

***Phlopterus alexanderkoenigi* (Eichler, 1953b)**

Host: *Galerida cristata* (Linnaeus, 1758).

Ref.: this paper.

Location: Štúrovo, 7 Jun. 1999 (Krištofik Coll., VETUNI).

Note: This is the first record of *Phlopterus alexanderkoenigi* from Slovakia.

***Phlopterus atratus* (Nitzsch, 1818)**

Host: *Corvus frugilegus* Linnaeus, 1758.

Ref.: Balát (1953) as *Phlopterus corvi* (Linnaeus, 1758); Balát (1956, 1977); Straka (1987); this paper.

Locations: Rohovce, 16 Mar. 1955, 19 May 1948; Šúrovce, 21 May 1950 (Balát Coll., MMBC slide numbers 35, 524, 781); Bratislava, 20 Feb. 1952 (Balát 1956); Martin, 3 Jan. 1977; Blatnica, 9 Mar. 1977; Ďanová, 1 Nov. 1977; Stará Bystrica, 5 Jan. 1982 (Straka Coll., AKMM—any slide from Ďanová, 1 Nov. 1977 is not present in the collection); Kravany, 9 Jun. 1998; Zlatná na Ostrove, 20 Jan. 2001 (Krištofik Coll., VETUNI).

Note: Balát (1956) recorded the date of this collection as “Rohovce (16 Mar. 1956)”, but the correct date is 1955. Straka (1987) recorded the location as “Krpel’any (5 Jan. 1982)”, but it is most likely an error, because in Straka’s note on label of an available slide the location is given as “Stará Bystrica”.

***Phlopterus bischoffi* (Eichler, 1951b)**

Host: *Turdus pilaris* Linnaeus, 1758.

Ref.: Balát (1953, 1956) as *Phlopterus* sp.; Balát (1977); Bush *et al.* (2018); this paper.

Locations: Bratislava—Petržalka, 9 Mar. 1952; Plavecké Podhradie, Jan. 1951; Plavecký Mikuláš, 31 Dec. 1950 (Balát Coll., MMBC slide numbers 565—not present in the collection, 592, 619); Tatranská Javorina, Jun.–Jul.

2015 (Bush *et al.* 2018); Štrbské pleso, 25 Jan. 1938 (Pfleger Coll., NMPC); Vrútky, 17 Apr. 1979; Blatnica, 1 Dec. 1980 (Straka Coll., AKMM).

***Philopterus citrinellae* (Schrank, 1776)**

Host: *Emberiza citrinella* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956, 1977) as *Philopterus citrinellae citrinellae*; Straka (1987); this paper.

Locations: Košice, 29 Oct. 1953; Sklené Teplice, 14 Apr. 1953; Svätajurský Šúr, 13 Feb. 1951 (Balát Coll., MMBC slide numbers 1099, 1475; 1102—not present in the collection, SNMB slide number 645); Banská Štiavnica—Počúvadla, 23 Apr. & 21 Jun. 1953; Járók u Nitry, 16 Apr. 1953; Vtáčnik, 19 Jun. 1953; Podunajské Biskupice, 21 Jul. 1953; Šaca, 4 Nov. 1953; Gabčíkovo, 15–24 Mar. & 6 May 1954; Humenné, 9 May 1954 (Balát 1956); Kláštor pod Znievom, 9 Feb. 1981; ŠPR Kláštorské lúky pri Kláštore pod Znievom, 4 Nov. 1982; Vädžer, 2 Mar. 1983; Vrútko, 20 Mar. 1983 (Straka Coll., AKMM); Pataš, 28 Apr. 1999; Čunovo, 26 Jul. 1999 and 26 Jun. 2001 (Krištofik Coll., VETUNI).

Note: Straka (1987) recorded data on collections of *Philopterus citrinellae* from *Emberiza citrinella* and *E. schoenichlus*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka’s notes on relevant slides. Straka (1987) recorded one of the location and date for this host as “Blatnica, 11 Aug. 1977”, but it is most likely an error, because in Straka’s note on label of an available slide the host from this location and date is given as “*Pyrrhula pyrrhula*” (see below). Straka (1987) recorded the dates of collections as “Kláštor pod Znievom, 9 Feb. 1982” and “Vrútko, 20 Feb. 1983” but, according to Straka’s notes on labels of relevant slides, the correct dates are probably “Kláštor pod Znievom, 9 Feb. 1981” and “Vrútko, 20 Mar. 1983”.

***Philopterus citrinellae* (Schrank, 1776)**

Host: *Emberiza schoenichlus* (Linnaeus, 1758).

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956) as *P. citrinellae citrinellae*; Balát (1977) as *Philopterus residuus* (Złotorzycka, 1964b); Straka (1987); this paper.

Locations: Senné, 16 Apr. 1950 (Balát Coll., MMBC slide number 503, SNMB slide number 572); Gabčíkovo, 22 Mar. 1954 (Balát 1956); Kláštor pod Znievom, 13 Mar. 1981; ŠPR Kláštorské lúky pri Kláštore pod Znievom, 25 Apr. 1978, 18 Mar. 1981, 10 May 1982; (Straka Coll., AKMM); Gbelce, 10 Jul. 2019 (VETUNI).

Note: Straka (1987) recorded data on collections of *Philopterus citrinellae* from *Emberiza citrinella* and *E. schoenichlus*, but without mentioning which locality referred to each host species. Here we mention locations separately according to Straka’s notes on relevant slides. Straka (1987) recorded one of the location and date for this host as “Blatnica, 11 Aug. 1977”, but it is most likely an error, because in Straka’s note on label of an available slide the host from this location and date is given as “*Pyrrhula pyrrhula*” (see below).

***Philopterus citrinellae* (Schrank, 1776)**

Host: *Chloris chloris* (Linnaeus, 1758).

Ref.: Balát (1956, 1977) as *Philopterus citrinellae citrinellae*; Hudec (1983) as *Docophorus chloridis* (Schrank, 1776); this paper.

Locations: Gabčíkovo, 25 Mar. 1954 (Balát Coll., MMBC slide number 676); Sklené Teplice, 20 Apr. 1953 (Balát 1956); Gbelce, 19 Apr.–2 May 2008, 20 Apr. 2009 (VETUNI).

***Philopterus citrinellae* (Schrank, 1776)**

Host: *Pyrrhula pyrrhula* (Linnaeus, 1758).

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956, 1977) as *Philopterus citrinellae citrinellae*; Hudec (1983) as *Docophorus pyrrhulae* (Schrank, 1776); this paper.

Locations: Starý Smokovec, 11 Jun. 1955 (Balát 1956); Blatnica, 11 Aug. 1977; Kláštor pod Znievom, 4 Apr. 1979 (Straka Coll., AKMM); Bratislava—Mudroňova, 16 Jan. 2011 (Krištofik Coll., VETUNI).

Note: Although Straka (1987) listed “Blatnica, 11 Aug. 1977” as one the location and date for *P. citrinellae*, he probably mistakenly omitted *P. pyrrhula* as one of host.

***Philoaterus citrinellae* (Schrank, 1776)**

Host: *Spinus spinus* (Linnaeus, 1758)

Ref.: Bush *et al.* (2018) as *Philoaterus* sp.

Location: Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018).

***Philoaterus coarctatus* (Scopoli, 1763)**

Host: *Lanius collurio* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philoaterus subflavescens*”; Balát (1956, 1977) as *P. coarctatus coarctatus*; Straka (1987).

Locations: Gabčíkovo, 9 Sep. 1949, 22 Jul. 1953; Járok u Nitry, 16 Jun. 1953; Vtáčnik, 19 Jun. 1953; Žarnovica, 20 Jun. 1953; Kečovo, 27 Jul. 1954 (Balát 1956); Martin, 16 May 1977 (Straka Coll., AKMM—not present in the collection).

***Philoaterus coarctatus* (Scopoli, 1763)**

Host: *Lanius excubitor* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philoaterus subflavescens*”; Balát (1956, 1977) as *Philoaterus coarctatus fuscicollis* (Burmeister, 1838); Szczykutowicz *et al.* (2006) as *Docophorus coarctatus*; this paper.

Locations: Rohožník, Malé Karpaty, 5 Dec. 1951 (Balát Coll., MMBC slide number 607a, SNMB slide numbers 607b, c); Bardejov, 29 Feb. 1950; Šaca, 30 Oct. 1953; Šamorín, 16 Mar. 1955; Podunajské Biskupice, 26 Oct. 1955 (Balát 1956); NE Slovakia (Szczykutowicz *et al.* 2006); Andrejová, 9 Oct. 1963; Bardejov, 15 Dec. 1963; Chmeľová, 5 Jun. 1964; Dubová, 28 May 1963, 2 Nov. 1963; Fulianka, 15 Mar. 1964; Gaboltov, 24 Jul. 1963, 13 Sep. 1963; Hlinné, 1964; Hniezdne, 25 Mar. 1964; Kľušov, 36 Mar. 1964; Kolbovce, 16 Nov. 1963; Komarov, 19 Mar. 1964; Kružľová, 17 and 23 Jun. 1964; Kurima, 20 Sep. 1963; Kurimka, 28 May 1963; Ladomirova, 6 Nov. 1963; Lukavica, 28 Feb. 1964; Oľšavce, 30 Mar. 1964; Plávnica pri Poprade, 16 Jul. 1964; Raslavice, 11 Oct. 1963, 10 Nov. 1963, 11 Sep. 1964; Roztoky, 28 and 31 May 1963; Smilno, 3 Jan. 1964, 6–7 Aug. 1964, 12 Sep. 1964; Sveržov, 31 Mar. 1964; Tarnov, 20 Jun. 1963; Vyšný Orлік, 6 Nov. 1963; Vyšná Voľa, 20 Jul. 1963, 17 Nov. 1963 (Weisz Coll., VETUNI).

Note: Balát (1956) recorded incorrectly the date of collection as “Rohožník, Malé Karpaty (5 Nov. 1951)”.

***Philoaterus coarctatus* (Scopoli, 1763)**

Host: *Lanius minor* Gmelin, 1788.

Ref.: Balát (1977) as *Philoaterus coarctatus coarctatus*.

Location: Zemplínska Široká—Rebrín, 4 Aug. 1959, 6 Aug. 1959 (Balát Coll., MMBC slide numbers 1490, 1493—not present in the collection).

***Philoaterus corvi* (Linnaeus, 1758)**

Host: *Corvus corax* Linnaeus, 1758.

Ref.: Straka (1987), this paper.

Location: Ďanová, 1 Sep. 1977, 1 Nov. 1977 (Straka Coll., AKMM).

***Philoaterus crassipes* (Burmeister, 1838)**

Host: *Nucifraga caryocatactes* (Linnaeus, 1758).

Ref.: Balát (1953, 1955a, 1956, 1977); Straka (1987) as *Philoaterus (Corvodocophorus) crassipes*.

Locations: Starý Smokovec, 11 Jun. 1955 (Balát 1955a, 1956); Martin, 23 Mar. 1977, 15 Nov. 1980; Belá, 11 Sep. 1978 (Straka Coll., AKMM).

Note: “*Corvodocophorus*” was used as a subgenus by Balát (1955a) and Straka (1987) but, as there is no description, it is a *nomen nudum*.

***Philoaterus curvirostrae* (Schrank, 1776)**

Host: *Loxia curvirostra* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philoaterus subflavescens*”; Balát (1956, 1977) as *Philoaterus citrinellae curvirostrae*.

Locations: Čachtice, 20 Mar. 1949; Tatranská Lomnica, 21 Mar. 1958 (Balát Coll., MMBC slide numbers 1426; 1431—not present in the collection).

***Philopterus emiliae* Balát, 1955a**

Host: *Prunella collaris* (Scopoli, 1769).

Ref.: Balát (1955a, 1956, 1977); Straka (1987); Janiga & Kubašková (2000); Janiga & Mičková (2004).

Locations: Vysoké Tatry—Skalnaté Pleso, 15 Jun. 1955 (Balát Coll., MMBC slide numbers 698, 709; 707—not present in the collection); Lazany, 1 Feb. 1981 (Straka Coll., AKMM); Vysoké Tatry—Vysoké Tatry—Malá Studená dolina, Velická dolina, Skalnatá dolina, Poľský hrebeň, Rysy, Belianské Tatry, Batizovské pleso; Nízke Tatry—Ďumbier – dolina Štiavnica, Poľana, Chopok-Konské; Veľká Fatra—Malinô Brdo, 1988–2000 (Janiga & Kubašková 2000; Janiga & Mičková 2004).

***Philopterus excisus* Nitzsch, 1818**

Host: *Delichon urbicum* (Linnaeus, 1758).

Ref.: Balát (1953, 1955a, 1956, 1977); Hudec (1983) as *Cypseloecus excisus*; Straka (1987); this paper.

Locations: Bojnice, 23 Apr. 1954; Bratislava, 14 Sep. 1948 (Balát Coll., MMBC slide numbers 191, 683); Nový Smokovec, 18 Jun. 1955 (Balát 1955a, 1956); Martin, 23 May 1978 (Straka Coll., AKMM); Dunajský Klátov, 2 Jun. 1998; Trávnik, 14 Jun. 1998 (Krištofik Coll., VETUNI).

***Philopterus fedorenkoae* (Mey, 1983)**

Host: *Acrocephalus arundinaceus* (Linnaeus, 1758).

Ref.: Najer *et al.* (2020).

Location: Jakubov, 1 Sep. 1978 (Balát Coll., MMBC slide number 1501).

***Philopterus fortunatus* (Złotorzycka, 1964b)**

Host: *Fringilla coelebs* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956) as *Philopterus* sp.); Bush *et al.* (2018); this paper.

Locations: Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 9 Oct. 1953 (Balát Coll., MMBC slide number 1104); Sklené Teplice, 20 Apr. 1953; Banská Štiavnica—Počúvadla, 23 Apr. & 21 Jun. 1953; Podunajské Biskupice, 20 Jul. 1953; Gabčíkovo, 22 Jul. 1953 and 19 Mar. 1954 (Balát 1956); Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018); Veľké Blahovo, 15 May 2010 (Krištofik Coll., VETUNI).

Note: Balát (1956) incorrectly recorded the dates of these collections as “Sklené Teplice (20 Apr. 1943) and “Banská Štiavnica—Počúvadla (23 Apr. & 21 Jun. 1943)”.

***Philopterus fringillae* (Scopoli, 1772)**

Host: *Passer domesticus* (Linnaeus, 1758).

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956, 1977); this paper.

Locations: Gabčíkovo, 22 Jul. 1953; Palín, 5 Apr. 1956; Sklené Teplice, 20 Apr. 1953 (Balát Coll., MMBC slide numbers 1060—not present in the collection, 1129, 1317); Járok u Nitry, 17 Jun. 1953; Podunajské Biskupice, 21 Jul. 1953; Banská Štiavnica—Počúvadla, 23 Apr. 1953; Gabčíkovo, 16 Mar. 1954 (Balát 1956); Čunovo, 19 Jul. 2000; Láb, 28 Jun. 2001; Plavecký Štvrtok, 19 Jun. 2001 and 12 Jun. 2002 (Krištofik Coll., VETUNI).

Note: Balát (1956) incorrectly recorded the date of this collection as “Gabčíkovo (22 Apr. 1953)”.

***Philopterus fringillae* (Scopoli, 1772)**

Host: *Passer montanus* (Linnaeus, 1758).

Ref.: Balát (1956) as *Philopterus* sp.; Hudec (1983) as *Docophorus fringillae*.

Locations: Gabčíkovo, 16 Mar. 1954; Hrhov, 31 Oct. 1953; Járok u Nitry, 16 Jun. 1953 (Balát Coll., MMBC slide numbers 967, 1019, 1025; 1476—not present in the collection); Gabčíkovo, 17 Mar. 1954 (Balát 1956); Hronovce, 13 Feb. 2001 (Krištofik Coll., VETUNI).

Note: Contrary to Price *et al.* (2003: 215), we agree with Macháček (1977) who regarded *Philopterus montani* (Złotorzycka, 1964b)—described from *Passer montanus*—as a junior synonym of *Philopterus fringillae*.

***Philopterus fringillae* (Scopoli, 1772)**

Host: *Pyrrhula pyrrhula* (Linnaeus, 1758).

Ref.: Bush *et al.* (2018).

Location: Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018).

Notes: *Pyrrhula pyrrhula* is parasitised by *Philopterus citrinellae* (see Price *et al.* 2003: 213; also see above). Considering that Bush *et al.* (2018: 44) did not discuss the unusual host-lice association they recorded for *Philopterus fringillae*, we can only speculate if their record is the result of a natural host switching or an contamination during or after collecting the lice.

***Philopterus garruli* Boisduval & Lacordaire, 1835**

Host: *Garrulus glandarius* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987) as *Philopterus (Corvodocophorus) garruli*.

Locations: Slovakia, 12 Nov. 1948 (Balát Coll., MMBC slide number 358); Ťarchová pri Žit., 21 May 1950; Sklené Teplice, 24 Apr. 1953 (Balát 1956); Košťany nad Turcom, 3 Dec. 1982; Martin, 10 Feb. 1978; Krpeľany, 5 Jan. 1982 (Straka Coll., AKMM).

Note: “*Corvodocophorus*” was used as a subgenus by Straka (1987) but, as there is no description, it is a *nomen nudum*.

***Philopterus gustafssoni* Najer *et al.*, 2020**

Host: *Regulus regulus* (Linnaeus, 1758).

Ref.: this paper.

Location: Kláštor pod Znievom, 2 Apr. 1979 (Straka Coll., AKMM).

Note: This is the first record of *Philopterus gustafssoni* from Slovakia.

***Philopterus guttatus* (Denny, 1842)**

Host: *Coloeus monedula* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Bratislava, 10 Oct. 1948; Pavlovce nad Uhom, 15 Apr. 1959, 9 Apr. 1956; Vojany, 20 Apr. 1959 (Balát Coll., MMBC slide numbers 352, 1165, 1168, 1186); Gabčíkovo, 16–20 Mar. & 19 Oct. 1954 (Balát 1956).

***Philopterus hanzaki* Balát, 1955a**

Host: *Anthus spinoletta* (Linnaeus, 1758).

Ref.: Balát (1955a, 1956, 1977).

Location: Belianské Tatry—šafránová louka/pašienok pod Bujačím vrchom, 3 May 1952 (Balát Coll., MMBC slide number 702).

***Philopterus markevichi* Fedorenko & Volkov, 1977**

Host: *Ficedula parva* (Bechstein, 1792).

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956) as *Philopterus* sp.

Location: Trenčianské Teplice, 15 Jun. 1950 (Balát Coll., MMBC slide numbers 484-3x, 485).

***Philopterus microsomaticus* Tandan, 1955**

Host: *Hirundo rustica* Linnaeus, 1758.

Ref.: Balát (1956) as *Philopterus excisus* Nitzsch, 1818; Hudec (1983) as *Cypseloecus excisus microsomaticus*; this paper.

Locations: Humenné, 12 Jun. 1954 (Balát 1956); Gbelce, 24–30 Apr. 2008, 27 Apr. 2009 (VETUNI).

***Philopterus microsomaticus* Tandan, 1955**

Host: *Riparia riparia* (Linnaeus, 1758).

Ref.: Balát (1956) as *Philopterus excisus* Nitzsch, 1818; Hudec (1983) as *Cypseloecus excisus* subsp.; this paper.

Locations: Humenné, 10 Jun. 1954 (Balát Coll., MMBC slide number 997); Gbelce, 28 Apr. 2008 (VETUNI).

***Philopterus modularis* (Denny, 1842)**

Host: *Prunella modularis* (Linnaeus, 1758).

Ref.: Balát (1955a, 1956, 1977); Bush *et al.* (2018); Janiga (2018, 2019).

Locations: Tatranská Javorina, 28 Jun. 1952 (Balát Coll., MMBC slide number 650—not present in the collection); Tatranská Javorina, Jun.–Jul. 2015 (Bush *et al.* 2018); Vysoké Tatry, Nízke Tatry, Velká Fatra, Chočská vrchovina, 2007–2010 (Janiga 2018, 2019).

***Phlopterus ocellatus* (Scopoli, 1763)**

Host: *Corvus cornix* Linnaeus, 1758.

Ref.: Balát (1953, 1955a, 1956, 1977); Straka (1987) as *Phlopterus (Corvodocophorus) ocellatus*.

Locations: Bojnice, 4 May 1953; Bratislava—Petržalka, 19 Feb. 1950; Banská Štiavnica—Počúvadla, 13 May 1958 (Balát Coll., MMBC slide numbers 525; 779, 1349); Tatranská Lomnica, 8 Jun. 1955; Bratislava—Petržalka, 5 Feb. 1949 and 4 Feb. 1950; Gabčíkovo, 20 Mar. 1954; Humenné, 5 Jun. 1954 (Balát 1955, 1956); Martin (27 Jan. 1977; Kláštor pod Znievom, 13 Mar. 1981 (Straka Coll., AKMM).

Note: “*Corvodocophorus*” was used as a subgenus by Balát (1955a) and Straka (1987) but, as there is no description, it is a *nomen nudum*.

***Phlopterus ornatus* (Nitzsch, 1866)**

Host: *Oriolus oriolus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Michalovce, May 1949 (Balát Coll., SNMB slide number 479); Plavecké Podhradie, 6 May 1951; Járok u Nitry, 16 Jun. 1953 (Balát 1956).

***Phlopterus pallescens* (Denny, 1842)**

Host: *Poecile palustris* (Linnaeus, 1758).

Ref.: Balát (1956, 1977); Mey (1988).

Location: Podunajské Biskupice, 27 Oct. 1955 (Balát Coll., MMBC slide number 1551).

Notes: We agree with Mey (1988) in that *Phlopterus pallescens* only parasitises *Poecile palustris* (see note under *Phlopterus thuringiacus* from *Parus major*).

***Phlopterus passerinus* (Denny, 1842)**

Host: *Motacilla alba* Linnaeus, 1758.

Ref.: Balát (1953) as “*Phlopterus subflavescens*”; Balát (1956, 1977).

Locations: Sklené Teplice, 24 Apr. & 17 Apr. 1953; Žarnovica—Rychňava, 21 Jun. 1953 (Balát 1956).

***Phlopterus peripariphilus* (Mey, 1988)**

Host: *Periparus ater* (Linnaeus, 1758).

Ref.: Hudec (1983) as *Docophorus* sp.; Mey (1988) as *Docophorus hercynicus peripariphilus*; this paper.

Location: Sklené Teplice, 24 Apr. 1953 (Balát Coll., MMBC slide number 1147).

Notes: Although the Balát Collection contains only three nymphs of *Phlopterus* from *Periparus ater*, we follow Mey (1988) in that these specimens most likely belong to *Ph. peripariphilus*.

***Phlopterus picae* (Denny, 1842)**

Host: *Pica pica* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977); Straka (1987) as *Phlopterus (Corvodocophorus) picae*; this paper.

Locations: Gabčíkovo, 24 Mar. 1954 (Balát Coll., MMBC slide number 848-3x); Velké Topoľníky, 14 Feb. 1951; Gabčíkovo, 16 Mar. 1954 (Balát 1956); Blatnica, 31 Jan. 1977, 12 May 1977, 24 Jan. 1978; Belá, 18 Apr. 1978 (Straka Coll., AKMM); Bratislava, 23 May 1999 (Krištofík Coll., VETUNI).

Note: “*Corvodocophorus*” was used as a subgenus by Straka (1987) but, as there is no description, it is a *nomen nudum*.

***Phlopterus rapax* (Zlotoryzcka, 1964b)**

Host: *Fringilla montifringilla* Linnaeus, 1758.

Ref.: Balát (1956) as *Phlopterus* sp.

Locations: Cabaj u Nitry, 15 Oct. 1953; Šaca, 4 Nov. 1953 (Balát 1956).

***Philopterus sittae* Fedorenko, 1978**

Host: *Sitta europaea* Linnaeus, 1758

Ref.: Balát (1956) as *Philopterus* sp.; this paper.

Locations: Sklené Teplice, 18 Apr. 1953 (Balát Coll., MMBC slide numbers 786-4x, 1149); Banská Štiavnica—Počúvadla, 23 Apr. & 21 Jun. 1953; Gabčíkovo, 17–23 Mar. 1954; Podunajské Biskupice, 27 Oct. 1955 (Balát 1956); Svätý Jur, 20 Mar. 1998 (Krištofik Coll., VETUNI).

***Philopterus stadleri* (Eichler, 1959)**

Host: *Alauda arvensis* Linnaeus, 1758.

Ref.: this paper.

Location: Kláštor pod Znievom, 13 Mar. 1981; ŠPR Kláštorské lúky pri Kláštore pod Znievom, 13 Mar. 1983 (Straka Coll., AKMM); Dunajská Lužná, 25 May 1997 (Krištofik Coll., VETUNI).

Note: This is the first record of *Philopterus stadleri* from Slovakia.

***Philopterus thuringiacus* (Mey, 1988)**

Host: *Parus major* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956, 1977) as *Philopterus pallescens* (Denny, 1842); Straka (1987) as *Philopterus pallescens*; Mey (1988).

Locations: Rohovce, 16 Mar. 1955; Sklené Teplice, 15 Apr. 1953 (Balát Coll., MMBC slide numbers 1052, 1553, 1554, 1555); Sklené Teplice, 7 Oct. 1953 (Balát 1956); Vrícko, 12 Aug. 1982, 15 Nov. 1982 (Straka Coll., AKMM—any slide from Vrícko, 12 Aug. 1982 is not present in the collection).

Notes: We agree with Mey (1988) in that *Philopterus thuringiacus* parasitises *Parus major* only. Hence, records of *Ph. pallescens* from *P. major* by Balát (1956, 1977) and Straka (1987) are most likely *Ph. thuringiacus*.

***Philopterus turdi* (Denny, 1842)**

Host: *Turdus merula* Linnaeus, 1758.

Ref.: Balát (1953) as “*Philopterus subflavescens*”; Balát (1956) as *Philopterus* sp.; Balát (1977) as *Philopterus merulae* (Denny, 1842); Hudec (1983) as *Docophorulus merulae*; Straka (1987) as *Philopterus* sp.

Locations: Bratislava, 10 Feb. 1952 (Balát Coll., MMBC slide number 609); Kláštor pod Znievom, 2 Apr. 1979 (Straka Coll., AKMM—not present in the collection).

***Philopterus turdi* (Denny, 1842)**

Host: *Turdus philomelos* Brehm, 1831.

Ref.: Balát (1953, 1956) as *Philopterus* sp.; Balát (1977).

Locations: Járók u Nitry, 16 Jun. 1953; Pavlovce nad Uhom, 9 Apr. 1956 (Balát Coll., MMBC slide numbers 760, 1205).

***Philopterus vernus* (Złotorzycka, 1964b)**

Host: *Turdus viscivorus* Linnaeus, 1758.

Ref.: Balát (1953, 1956) as *Philopterus* sp.; Balát (1977).

Locations: Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 16 Apr. 1953; Jablonov, 3 Nov. 1953; Veľká Ida, 28 Oct. 1953 (Balát Coll., MMBC slide numbers 740; 764, 765—not present in the collection); Sklené Teplice, 10 Oct. 1953 (Balát 1956).

Notes: Balát (1956) also recorded this location and date: “Sklené Teplice (16 Apr. 1953)” but, according to his notes, the correct location is probably “dolina Kľak”.

***Philopterus* sp.**

Host: *Anthus trivialis* (Linnaeus, 1758).

Ref.: Hudec (1983) as *Docophorulus* sp; this paper.

Location: Nízke Tatry—Čertovica, 29 Jun. 1960 (Balát Coll., MMBC slide number 1148).

Notes: According to Price *et al.* (2003: 217) *Anthus trivialis* is parasitised by *Philopterus vultuosus* (Złotorzycka, 1964b). However, we can not confirm this record to species level because the only specimen of *Philopterus* from this host available in the Balát Collection is in very poor condition.

***Philopterus* sp.**

Host: *Turdus torquatus* Linnaeus, 1758.

Ref.: Hudec (1983) as *Docophorulus* sp.; this paper.

Location: Nízke Tatry—Čertovica, 29 Jun. 1960 (Balát Coll., MMBC slide numbers 1212, 1213, 1214–4x).

Notes: According to Price *et al.* (2003: 215) *Turdus torquatus* is parasitised by *Philopterus nativus* Fedorenko, 1977. However, specimens of *Philopterus* from this host available in the Balát Collection are in such poor condition that cannot be identified to species.

***Philopterus* sp.**

Host: *Acrocephalus scirpaceus* (Hermann, 1804).

Ref.: this paper.

Location: Gbelce, 24 Apr. 2008, 18 Apr. 2009 (VETUNI).

Notes: Mey (1977) recorded an undescribed species of *Philopterus* from *Acrocephalus scirpaceus*. Since we found only one nymph and one female on this host, we cannot exclude the possibility that these lice are contaminants from another bird handled at the same time. However, as we did not examine any known host of *Philopterus* while collecting these specimens, we believe the two lice are natural and regular parasites on *A. scirpaceus*.

***Philopterus* sp.**

Host: *Acrocephalus schoenobaenus* (Linnaeus, 1758).

Ref.: this paper.

Location: Gbelce, 20 Apr. 2009 (VETUNI).

Notes: According to Price *et al.* (2003: 215), *Acrocephalus schoenobaenus* is parasitised by *Philopterus necopinatus* (Złotorzycka, 1964b). Since we found only one nymph on this host, we cannot exclude the possibility that it is a contaminant from another bird handled at the same time. However, as we did not examine any known host of *Philopterus* while collecting this specimen, we believe this louse is a natural and regular parasite on *A. schoenobaenus*.

***Philopterus* sp.**

Host: *Saxicola rubetra* (Linnaeus, 1758).

Ref.: Hudec (1983); this paper.

Location: Leles, 5 Aug. 1959 (Balát Coll., MMBC slide number 1466).

***Philopterus* sp.**

Host: *Troglodytes troglodytes* (Linnaeus, 1758).

Ref.: Hudec (1983) as *Docophorulus* sp.

Location: Žiar nad Hronom, formerly Svätý Kríž nad Hronom—dolina Kľak, 16 Apr. 1953 (Balát Coll., MMBC slide number 691—not present in the collection).

Notes: According to Price *et al.* (2003: 217), *Troglodytes troglodytes* is parasitised by *Philopterus troglodytis* Fedorenko, 1986. However, as there are no specimens of *Philopterus* from this host in the Balát Collection, we cannot confirm the identity of this species.

***Picicola candidus* (Nitzsch, 1866)**

Host: *Picus canus* Gmelin, 1788.

Ref.: Balát (1953, 1956, 1977).

Locations: Podunajské Biskupice, 20 Jul. 1953 (Balát Coll., MMBC slide number 1092); Gabčíkovo, 17–21 Mar. 1954 (Balát 1956).

Note: While Straka (1987) mentioned *P. canus* as host, there is *Picus viridis* as host on the label of available slide in the Straka collection. Similarly as in other similar cases we decided to follow note on the slide label (see below).

***Picicola candidus* (Nitzsch, 1866)**

Host: *Picus viridis* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977) as *Picicola contiguus* Złotorzycka, 1965; Straka (1987).

Locations: Bratislava, 10 Oct. 1948; Košice, 4 Nov. 1953 (Balát Coll., MMBC slide numbers 353, 1095); Bratislava, 20 Dec. 1951; Žiar nad Hronom, formerly Svätý Kríž nad Hronom, 10 Oct. 1953; Gabčíkovo, 16 Mar. & 21 Oct. 1954 (Balát 1956); Martin, 17 Nov. 1978 (Straka Coll., AKMM).

Note: While Straka (1987) mentioned *P. canus* as host, there is *Picus viridis* as host on the label of available slide in the Straka collection. Similarly as in other similar cases we decided to follow note on the slide label.

***Picicola superciliosa* (Nitzsch [in Giebel], 1866)**

Host: *Dendrocoptes medius* (Linnaeus, 1758).

Ref.: Balát (1956, 1977) as *Brueelia superciliosa*.

Location: Banská Štiavnica—Počúvadla, 21 Jun. 1953 (Balát 1956).

***Quadriceps anagrapsus* (Nitzsch [in Giebel], 1866)**

Host: *Chlidonias leucopterus* (Temminck, 1815).

Ref.: Balát (1956, 1977) as *Quadriceps pagasti* (Eichler, 1951c).

Location: Senné, 21 May 1951 (Balát 1956).

***Quadriceps bicuspis* (Nitzsch [in Giebel], 1874)**

Host: *Charadrius dubius* Scopoli, 1786.

Ref.: Balát (1953, 1956, 1977).

Locations: Stropkov, 27 Jun. 1954; Šaľa, 29 Jun. 1954 (Balát 1956).

***Quadriceps fissus* (Burmeister, 1838)**

Host: *Charadrius hiaticula* Linnaeus, 1758.

Ref.: Straka (1987).

Location: Kláštor pod Znievom, 17 Apr. 1981 (Straka Coll., AKMM).

***Quadriceps furvus* (Burmeister, 1838)**

Host: *Tringa erythropus* (Pallas, 1764).

Ref.: Balát (1953, 1956, 1977).

Location: Senné, 20 Apr. 1950 (Balát Coll., MMBC slide number 456).

***Quadriceps junceus* (Scopoli, 1763)**

Host: *Vanellus vanellus* (Linnaeus, 1758).

Ref.: Balát (1953, 1956, 1977).

Locations: Plavecké Podhradie, 29 Apr. 1951; Baka, 6 Oct. 1951; Turňa nad Bodvou, 2 Nov. 1953 (Balát 1956).

***Quadriceps ochropi* (Denny, 1842)**

Host: *Tringa ochropus* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977).

Locations: Bratislava, 27 Mar. 1951 (Balát Coll., MMBC slide number 1176); Trnava, 26 Apr. 1955 (Balát 1956).

***Quadriceps phaeonotus* (Nitzsch [in Giebel], 1866)**

Host: *Chlidonias niger* (Linnaeus, 1758).

Ref.: Balát (1953) as *Koeniginirmus phaeonotus*; Balát (1956, 1977).

Locations: Kolárovo, formerly Guta, 5 May 1949 (Balát Coll., SNMB slide number 509); Senné, 21 May 1951 (Balát 1956).

***Quadriceps punctatus punctatus* (Burmeister, 1838)**

Host: *Chroicocephalus ridibundus* (Linnaeus, 1766).

Ref.: Straka (1987) as *Quadriceps (Koeniginirmus) punctatus*; this paper.

Locations: Sučany, 26 Nov. 1979 (Straka Coll., AKMM); Gabčíkovo, 31 Jul. 1997 (Krištofik Coll., VETUNI).

***Quadriceps ravus* (Kellogg, 1899)**

Host: *Actitis hypoleucos* (Linnaeus, 1758).

Ref.: Balát (1953, 1955a, 1956, 1977) as *Quadriceps subfuscus* Blagoveshtchensky, 1948; Straka (1987) as *Quadriceps subfuscus*.

Locations: Vysoké Tatry—Javorová dolina, 12 May 1952 (Balát Coll., MMBC slide number 705-6x; SNMB slide number 705); ŠPR Kláštorské lúky pri Kláštore pod Znievom, 10 May 1982 (Straka Coll., AKMM).

***Quadriceps sellatus* (Burmeister, 1838)**

Host: *Sterna hirundo* Linnaeus, 1758.

Ref.: Balát (1953) as *Koeniginirmus sellatus*; Balát (1956, 1977).

Location: Senné, 21 May 1951 (Balát 1956).

***Rallicola (Rallicola) cuspidatus* (Scopoli, 1763)**

Host: *Rallus aquaticus* Linnaeus, 1758.

Ref.: this paper.

Location: Gbelce, 27 Apr. 2009 (VETUNI).

Note: This is the first record of *Rallicola (Rallicola) cuspidatus* from Slovakia.

***Rallicola (Rallicola) fulicae* (Denny, 1842)**

Host: *Fulica atra* Linnaeus, 1758.

Ref.: Straka (1987); this paper.

Locations: Martin, 29 Mar. 1977 (Straka Coll., AKMM—not present in the collection); Bratislava—Kopáč, 19 Feb. 1997 (Krištofik Coll., VETUNI).

***Rallicola (Rallicola) minutus* (Nitzsch [in Giebel], 1866)**

Host: *Gallinula chloropus* (Linnaeus, 1758).

Ref.: this paper.

Location: Martin, 6 Apr. 1982 (Straka Coll., AKMM).

Note: This is the first record of *Rallicola (Rallicola) minutus* from Slovakia.

***Rhynonirmus helvolus* (Burmeister, 1838)**

Host: *Scolopax rusticola* Linnaeus, 1758.

Ref.: Balát (1953, 1956, 1977).

Location: Mariánka, Mar. 1951 (Balát 1956).

***Rostrinirmus carpodaci* Balát, 1981a**

Host: *Carpodacus erythrinus* (Pallas, 1770).

Ref.: Balát (1981a).

Location: Bobrov (Oravská prehrada—Orava dam), 1 Jul. 1973 (Balát Coll., MMBC slide number 1390—not present in the collection).

Note: This species was placed in the genus *Sturnidoecus* Eichler, 1944, but Gustafsson & Bush (2017: 263) resurrected the genus *Rostrinirmus* Złotorzycka, 1964a.

***Rostrinirmus hudeci* Balát, 1981a**

Host: *Parus major* Linnaeus, 1758.

Ref.: Balát (1981a).

Location: Podunajské Biskupice, 21 Jul. 1953 (Balát Coll., MMBC slide number 804—not present in the collection).

Note: This species was placed in the genus *Sturnidoecus* Eichler, 1944, but Gustafsson & Bush (2017: 263) resurrected the genus *Rostrinirmus* Złotorzycka, 1964a.

***Rostrinirmus ruficeps* (Nitzsch [in Giebel], 1866)**

Host: *Passer montanus* (Linnaeus, 1758).

Ref.: Balát (1953) as *Penenirmus ruficeps*; Balát (1956, 1977) as *Sturnidoecus ruficeps*; this paper.

Locations: Gabčíkovo, 22 Jul. 1953; Hrhov, 31 Oct. 1953; Járok u Nitry, 16–17 Jun. 1953; Podunajské Biskupice, 21 Jul. 1953 (Balát Coll., MMBC slide numbers 1019, 1027-2x; 1022, 1031); Gabčíkovo, 17–21 Mar. 1954 (Balát 1956); Búč, 29 Jun. 1997; Zohor, 28 Jun. 2001; Malacky—Vinohrádok, 27 May 2002 (Krištofik Coll., VETUNI); Gbelce, 10 Jul. 2019 (VETUNI).

Note: This species was placed in the genus *Sturnidoecus* Eichler, 1944, but Gustafsson & Bush (2017: 263) resurrected the genus *Rostrinirmus* Złotorzycka, 1964a.

***Saemundssonina (Saemundssonina) integer* (Nitzsch [in Giebel], 1866)**

Host: *Grus grus* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Location: Senné, Spring of 1955 (Balát Coll., MMBC slide number 1004).

***Saemundssonina (Saemundssonina) lari* (O. Fabricius, 1780)**

Host: *Chroicocephalus ridibundus* (Linnaeus, 1766).

Ref.: Balát (1953) as *Saemundssonina gonothorax lari*; Balát (1956, 1977) as *Saemundssonina mülleri* = *Saemundssonina mülleri*; Straka (1987) as *S. mülleri*; this paper.

Locations: Bratislava—Petržalka, 2 Nov. 1949 (Balát 1956); Sučany, 26.11. 1979; Kláštor pod Znievom, 19 Jan. 1984 (Straka Coll., AKMM); Jakubovské rybníky, 20 Apr. 1997; Čunovo, 24 Apr. 1997; Gabčíkovo, 31 Jul. 1997 (Krištofik Coll., VETUNI).

***Saemundssonina (Saemundssonina) lobaticeps* (Giebel, 1874)**

Host: *Chlidonias leucopterus* (Temminck, 1815).

Ref.: Balát (1956, 1977).

Location: Senné, 21 May 1951 (Balát 1956).

***Saemundssonina (Saemundssonina) sterna* (Linnaeus, 1758)**

Host: *Sterna hirundo* Linnaeus, 1758.

Ref.: Balát (1956, 1977).

Location: Senné, 21 May 1951 (Balát 1956).

***Saemundssonina (Saemundssonina) tringae* (O. Fabricius, 1780)**

Host: *Calidris pugnax* (Linnaeus, 1758).

Ref.: this paper.

Location: Štrba, 21 Mar. 1936 (Pfleger Coll., SNMB).

Note: This is the first record of *Saemundssonina (Saemundssonina) tringae* from Slovakia.

Saemundssonina (Saemundssonina) sp.

Host: *Larus argentatus* Pontoppidan, 1763.

Ref.: Straka (1987).

Location: Sučany, 14 Nov. 1979 (Straka Coll., AKMM).

Notes: According to Price *et al.* (2003: 234), *Larus argentatus* is parasitised by *Saemundssonina (Saemundssonina) lari* (O. Fabricius, 1780) but, as we have not been able to check Straka's specimens, we leave this record at the genus level. The host of this record may be *Larus cachinnans* (see Discussion, below)

***Strigiphilus barbatus* (Osborn, 1902)**

Host: *Asio otus* (Linnaeus, 1758).

Ref.: Balát (1956) as *Strigiphilus asionis* (Eichler, 1949); Balát (1977); Straka (1987) as *Strigiphilus asionis*; this paper.

Locations: Komárno, 23 Apr. 1954; Podunajské Biskupice, 26 Oct. 1955 (Balát 1956); Lipovec, 2 Feb. 1977 (Straka Coll., AKMM); Dunajská Streda, 6 Dec. 1998; Dolný Štál, 16 Jun. 1999 (Krištofik Coll., VETUNI).

***Strigiphilus celebrachys* (Denny, 1842)**

Host: *Bubo scandiacus* (Linnaeus, 1758)—captive bird.

Ref.: this paper.

Location: Zoo Bojnice, 10 Nov. 1963 (Balát Coll., MMBC slide numbers 1405).

***Strigiphilus cursitans* (Nitzsch [in Giebel], 1861)**

Host: *Athene noctua* (Scopoli, 1769).

Ref.: Balát (1953) as *Neodocophorus athene* (Mjöberg, 1910); Balát (1956, 1977); Straka (1987); this paper.

Locations: Plavecký Mikuláš, 14 Jan. 1951 (Balát Coll., MMBC slide number 583); Horný Kalník, 7 Feb. 1978 (Straka Coll., AKMM); Miloslavov, 16 May 2006 (Krištofik Coll., VETUNI).

Note: Straka (1987) recorded the location as “Horné Jaseno”, but it is most likely an error, because in Straka’s note on label of an available slide the location is given as “Horný Kalník”.

***Strigiphilus cursor* (Burmeister, 1838)**

Host: *Asio flammeus* (Pontoppidan, 1763).

Ref.: Balát (1956, 1977).

Locations: Cífer, 12 Oct. 1951, 18 Oct. 1951; Šaľa, 17 Sep. 1951; Vištuk, 7 Oct. 1951 (Balát Coll., MMBC slide numbers 626, 630); Voderady, 16 Sep. 1951; Slovenský Grob, 28 Oct. 1951; Rusovce, 18 Nov. 1951 (Balát 1956).

***Strigiphilus heterocerus* (Grube, 1851)**

Host: *Strix uralensis* Pallas, 1771.

Ref.: Balát (1953) as *Neodocophorus uralensis* Eichler, 1949; Balát (1956, 1977).

Locations: Košice, 2 Dec. 1952; Kuzmice—okres Trebišov, 11 Nov. 1948; Snina, 16 Dec. 1948 (Balát Coll., MMBC slide numbers 212, 371, 790); Košice, 1 Dec. 1952; Medzilaborce, 11 Feb. 1956 (Balát 1956).

***Strigiphilus portigi* Eichler, 1952**

Host: *Strix aluco* Linnaeus, 1758.

Ref.: Balát (1956, 1977); Straka (1987).

Locations: Myslenice, 19 Oct. 1952; Rožňava, 9 Feb. 1956 (Balát 1956); Vrútky, 17 Jan. 1978; Košťany nad Turcom, 11 Oct. 1978 (Straka Coll., AKMM).

***Strigiphilus rostratus* (Burmeister, 1838)**

Host: *Tyto alba* (Scopoli, 1769).

Ref.: Balát (1953, 1956, 1977); Hudec (1983) as *Tytoniella rostrata*; this paper.

Locations: Gabčíkovo, 13 Mar. 1951, 16 Sep. 1951 (Balát Coll., MMBC slide number 602, 624a, SNMB slide number 624b, c); Šafárikovo, 27 Dec. 1949; Krupina, 24 Mar. 1951 (Balát 1956); Sládkovičovo, 1 Dec. 2002 (Krištofik Coll., VETUNI).

***Strigiphilus strigis* (Pontoppidan, 1763)**

Host: *Bubo bubo* (Linnaeus, 1758).

Ref.: Balát (1956, 1977).

Location: Šenkvice, formerly Čaníkovec, 19 Oct. 1952 (Balát Coll., MMBC slide number 797).

***Sturnidoecus sturni* (Schränk, 1776)**

Host: *Sturnus vulgaris* Linnaeus, 1758.

Ref.: Balát (1956, 1977); this paper.

Locations: Banská Štiavnica—Počúvadla, 23 Apr. 1953; Kláštor pod Znievom, 10 May 1956 (Balát Coll., MMBC slide numbers 831, 1124); Gbelce, 13 Apr.–1 May 2008, 17 Apr. 2016 (VETUNI).

***Sturnidoecus tulackovae* (Balát, 1981a)**

Host: *Locustella fluviatilis* (Wolf, 1810).

Ref.: Balát (1981a).

Location: Senica, 5 Jun. 1971 (Balát Coll., MMBC slide numbers 1406, 1407-2x, 1408-2x, 1409).

***Turdinirmus merulensis* (Denny, 1842)**

Host: *Turdus merula* Linnaeus, 1758.

Ref.: Balát (1977) as *Brueelia merulensis*; Hudec (1983) as *Brueelia turdinirmus*.

Location: Hronov, 17 Aug. 1953 (Balát Coll., MMBC slide number 763).

Note: This species was placed in the genus *Brueelia* Kéler, 1936, but Gustafsson & Bush (2017: 117) resurrected the genus *Turdinirmus* Eichler, 1951b.

***Upupicola upupae* (Schrank, 1803)**

Host: *Upupa epops* Linnaeus, 1758.

Ref.: Balát (1956, 1977).

Location: Šaľa, 29 Jun. 1954 (Balát 1956).

Family Trichodectidae Kellogg, 1896a

***Bovicola (Bovicola) alpinus* Kéler, 1942**

Host: *Rupicapra rupicapra* (Linnaeus, 1758).

Ref.: Balát (1955a, 1956, 1977) as *Damalinia alpina*; Krištofík & Danko (2012).

Location: Javorina, 18 Jun. 1955 (Balát Coll., MMBC slide number 700-2x).

***Bovicola (Bovicola) caprae* (Gurlt, 1843)**

Host: *Capra hircus* Linnaeus, 1758.

Ref.: Balát (1956, 1977) as *Damalinia caprae*; Máca (1991).

Locations: Malé Trnie, 5 Apr. 1953 (Balát Coll., MMBC slide number 794-2x); Spišská Nová Ves, 11–12 Apr. 1989 (Máca 1991).

***Damalinia (Cervicola) meyeri* (Taschenberg, 1882)**

Host: *Capreolus capreolus* (Linnaeus, 1758).

Ref.: Balát (1956, 1977); Máca (1991); Krištofík & Danko (2012).

Locations: Sklené Teplice, 9 Oct. 1953 (Balát Coll., MMBC slide number 1377); Plavecký Mikuláš, Jul. 1952 (Balát 1956).

Notes: Balát (1956) recorded the date of the sample from Plavecký Mikuláš as “Jul. 1952”, but Máca (1991) recorded it as “3 Jun. 1951”. However, we are unable to confirm which is the correct date, or if there are two different collection dates from the same locality.

***Felicola (Felicola) subrostratus* (Burmeister, 1838)**

Host: *Felis catus* Linnaeus, 1758.

Ref.: Straka (1987).

Location: Kláštor pod Znievom, 6 May 1977 (Straka Coll., AKMM).

***Stachiella ermineae* Hopkins, 1941**

Host: *Mustela erminea* Linnaeus, 1758.

Ref.: Krištofík & Danko (2012); this paper.

Locations: Slovakia (Krištofík & Danko 2012); Zohor, 11 Jun. 1998 (Krištofík Coll., VETUNI).

***Stachiella jacobi* Eichler, 1941b**

Host: *Mustela putorius* Linnaeus, 1758.

Ref.: Krištofik & Danko (2012).

Location: Slovakia (Krištofik & Danko 2012).

***Stachiella mustelae* (Schrank, 1803)**

Host: *Mustela nivalis* Linnaeus, 1758.

Ref.: Straka (1982, 1987); Krištofik & Danko (2012); this paper.

Locations: Muránska planina—Suché doly, 17 May 1979—phoresis with fly *Pollenia rudis* from the family Polleniidae (Straka 1982); Martin, 25 Sep. 1980; Blatnica, 25 Jun. 1982 (Straka Coll., AKMM); Vysoká, 10 Apr. 1998; Studené, 19 Jun. 2005 (Krištofik Coll., VETUNI).

Note: Straka (1982) recorded a case of phoresis involving *Stachiella mustelae* on *Pollenia rudis* (J.C. Fabricius, 1794), the cluster fly.

***Trichodectes melis* (J.C. Fabricius, 1805)**

Host: *Meles meles* (Linnaeus, 1758).

Ref.: Štefan (1977); Straka (1987); Lukáš *et al.* (1991, 1992); Krištofik & Danko (2012).

Locations: Žiar nad Hronom (Štefan 1977); Kláštor pod Znievom, 31 Jul. 1977; Lipovec, 2 Aug. 1977; Martin, 3 Oct. 1977 (Straka Coll., AKMM); Nové Mesto nad Váhom—Turecký vrch, 20 Oct. 1982; Čachtice, 15 Aug. 1983; Nová Bošáca, 24 Oct. 1985; Devínska Kobyla, 27 Sep. 1986; Banská Štiavnica, 16 Sep. 1988; Porúbka, 2 Aug. 1991 (Lukáš *et al.* 1991, 1992).

Discussion

From a total of 365 species of birds recorded in Slovakia (including six non-natives), there are records of chewing lice from 171 (46.8%) species (Table S3). The proportion is much lower in mammals, with only eight species (29.6%) recorded with chewing lice from a total of 27 (Table S3). Chewing lice have been recorded mainly from birds breeding in Slovakia, especially perching birds (Passeriformes; Černecký *et al.* 2020), of which 70 species are listed here, representing 19.2% of the total number of birds (Table 3). Most of 194 bird species without lice recorded from them in Slovakia are either migrants or rare, accidental visitors (Černecký *et al.* 2020; Table S5). Furthermore, there are no published reports of chewing lice anywhere in the world from 24 species of birds which occur in Slovakia (Table S5; Price *et al.* 2003).

As expected, higher proportions of bird species with recorded lice are from bird groups with smaller numbers of species, such as Bucerotiformes, Caprimulgiformes, Ciconiiformes, Coraciiformes, Galliformes and Piciformes, which have 1 to 10 members in Slovakia. The smaller proportions of recorded lice in other groups are affected by many factors, one being a large number of species in the group, *e.g.* 71 species of Charadriiformes in Slovakia, but only 14 species with recorded lice (Tables 5, S5); another important factor is collection effort, *e.g.* no lice have been recorded from common and widely distributed species, such as *Mareca strepera*, *Coturnix coturnix*, *Serinus serinus*, *Luscinia megarhynchos*, *Phoenicurus ochruros*, *Phoenicurus phoenicurus*, *Sylvia atricapilla*, *Sylvia borin*, *Sylvia communis*, *Sylvia curruca*, and only a small number of lice are reported from captive birds such as *Gallus gallus*. Chewing louse populations are not distributed uniformly across their host population (Clay 1949a; Gustafsson & Zou 2020), so it is possible that louse populations may be low on certain hosts in Slovakia, in which case, more intensive sampling may be required. Also, host migration can have an impact on the number of ectoparasites (Literák *et al.* 2015).

In this paper, we cover a period of almost 100 years of research on chewing lice in Slovakia. During this period, the species composition of the Slovakian avifauna has changed (Černecký *et al.* 2020). There are new records for species of birds occurring in this region during the last decades (*e.g.* Šrank 2010; Kvetko & FK SOS/BirdLife Slovensko 2017; SOS/BirdLife Slovakia 2020). Most of these species have not been examined for lice yet, including *Emberiza pusilla*, *Iduna pallida*, *Phylloscopus proregulus* and *Phylloscopus schwarzi*, which have no lice recorded from them worldwide (Table S5; Price *et al.* 2003). On the other hand, some species have become rare or have completely disappeared from Slovakia, *e.g.* *Circaetus gallicus*, *Coracias garrulus* and *Otis tarda* (see Černecký *et al.* 2020). Old reports of lice from these hosts are valuable, showing that ectoparasites may also have become extirpated in this area. While some species of lice from these hosts are well documented across Europe—*e.g.* *Capraiella sub-*

cuspidata ex *Coracias garrulus* reported from Finland, Germany, Hungary, Italia, Poland, Romania and Spain (Mey 2021)—information on the geographic distribution of other louse species from the same hosts is limited, e.g. *Meromenopon incisum* (Giebel, 1866) ex *Coracias garrulus* is known only from Germany and Hungary (Mey 2021), *Otidoecus turmalis* (Denny, 1842) ex *Otis tarda* from Germany, Hungary and Spain (Mey 2021), and *Degeeriella leucopleura* (Nitzsch [in Giebel], 1874) ex *Circaetus gallicus* is known only from Spain (Pérez *et al.* 1996).

Changes in the taxonomy of the hosts can also affect numbers and types of host-lice associations. One good example is *Corvus corone*, traditionally divided in two subspecies, *Corvus corone corone* and *Corvus corone cornix*, but now recognised as two separate species (Gill *et al.* 2021). It can be assumed that both taxa would harbour the same species of lice, but at present all records from Slovakia are from *Corvus cornix*. Therefore, other species recorded from *Corvus corone* cannot be regarded as present in this country. Similarly, *Larus cachinnans* Pallas, 1811 was raised to species level (Liebers *et al.* 2001) from a subspecies of *Larus argentatus*; since *Larus cachinnans* is more common in Slovakia than *Larus argentatus* (see Černecký *et al.* 2020) we can speculate that the host of *Saemundssonina* (*Saemundssonina*) sp. reported by Straka (1987) as *Larus argentatus* was most likely *Larus cachinnans*. The same scenario can be applied to the lice of *Anser fabalis* reported by Balát (1956), because Central European geese traditionally identified as *Anser fabalis* are most likely *Anser serrirostris* Gould, 1852, a taxon recently separated from *Anser fabalis* (see Sangster & Oreel 1996). More samples from hosts correctly identified are needed to know which lice parasitise these two goose species.

We regard the record of two specimens of *Laemobothrion* from *Coracias garrulus* reported by Balát (1956) as likely stragglers, because *Coracias* belongs to an order which is not known to harbour any species of *Laemobothrion* (Price *et al.* 2003: 309). However, we cannot completely exclude the possibility that they represent a natural host-lice association. The specimens are a third instar nymph and a teneral female, which differ from all *Laemobothrion* known from the area. Since examples of some well-established louse populations on unexpected hosts are known—i.e. *Myrsidea imbricata* (Neumann, 1891) on the hummingbird *Chlorostilbon swainsonii*; and *Neopsittaconirmus inexpectatus* Guimarães, 1974 on the pygmy falcon *Polihierax semitorquatus*—we believe that there could be a natural population of *Laemobothrion* on *Coracias garrulus*. Further collecting is necessary to confirm or disprove this hypothesis. Although *C. garrulus* is now very rare or even extirpated in Slovakia, it is still relatively abundant in other parts of its geographic distribution.

Considering that the territory of Slovakia is relative small, it is not surprising that most of the louse species recorded from this country were originally described elsewhere. However, nine new species were described based on material collected in Slovakia: *Brueelia balati*, *Brueelia breueri*, *Brueelia rosickyi*, *Philopterus emiliae*, *Philopterus hanzaki*, *Philopterus thuringiacus*, *Rostrinirmus carpodaci*, *Rostrinirmus hudeci* and *Sturnidoecus tulackovae*. Among these species, *Ph. emiliae*, *R. carpodaci* and *S. tulackovae* are still known from Slovakia only (Mey 2021).

To increase our knowledge of louse diversity as well as their host and geographic distributions in this country, further collecting and research are necessary, especially on hosts in the bird orders Charadriiformes and Passeriformes; these two orders together account to 60% of all the 194 bird taxa without records of lice in Slovakia (Table S3). Also, louse collecting from mammals is needed, considering that there are records of lice from only 29.6% of all the species living in Slovakia (Table S3).

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Supplementary materials

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