

## In memoriam of František Balát on the centenary of his birth

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### Abstract

This paper is dedicated to the memory of the prominent Czechoslovak ornithologist and phthirapterist František Balát (22 July 1925–20 April 1992), who would have celebrated his centenary this year. Both published and unpublished data, and memories from his colleagues and friends are included. In particular, we discuss his work in the field of chewing lice (Phthiraptera) as a leading world expert. His intensive louse collecting and knowledge of their avian hosts, made a great contribution to knowledge of distribution and biology of many European chewing louse species. The origins and a brief description of Balát's louse collection is given.

**Key words:** Balát, centenary, phthirapterist, ornithologist, chewing lice, collection, host-louse associations, colleagues, conferences

### František Balát's scientific career

We remember the prominent Czechoslovak ornithologist and phthirapterist Doctor of Natural Sciences, František Balát, CSc. (22 July 1925–20 April 1992) (Figs 5, 17), who would have celebrated his centenary this year. He was a modest person, dedicating his entire life to his great interest in all fields of ornithology. In this memoriam, we have included both published and unpublished data, as well as memories from his colleagues and friends, who had the honour of knowing him (Píkula 1976; Škopek & Formánek 1992; Folk 1993; Hudec 1993, 1999; Štollmann 2005).

František Balát was born on Wednesday 22 July 1925 in Hodonín, a town in the South Moravian Region of Czechoslovakia (now Czechia), in a glazier's family. From an early age, he was very interested in nature, especially birds. Balát's interest in nature began to develop while spending most days outdoors in the company of two friends, Zdeněk Kux (28 September 1923–8 January 1990) (Fig. 2) and Stanislav Svoboda (28 March 1925–17 March 2003) (Hudec 1993). As high school students, he and his friend Stanislav Svoboda had already completely photographed the Hodonín environs, including the ponds that were being built around the Kyjovka River at the time (Šimeček 2004). These ponds were one of the main locations for his later ornithological and parasitological research. In 1942, at age 17 (Fig. 1), he became a member of the Czechoslovak Ornithological Society and published his first professional articles (Píkula 1976). At the same time, as a member of the Ringing Station, he also began trapping and ringing birds, an activity which he actively pursued for the rest of his life. The last entry in his "ringing book" is from 15 June 1991 (Rác 2011).

After graduating from high school in Hodonín in 1944, when universities were closed due to the German occupation, he worked as a forest worker for a year. In 1945, Balát went to Brno, where he enrolled to study zoology at the Faculty of Science of Masaryk University, majoring in bird chewing lice. He wrote in his Master's thesis dissertation: "I occasionally encountered ectoparasites of the order Mallophaga during my ornithological activities because, as a ringer, I had a large number of birds in my hands every year. However, I did not have the opportunity to identify them." (Balát 1949). That opportunity arrived at the Institute of Zoology of the Masaryk University, led by Prof. Sergej Hrabě (16 July 1899–29 March 1984). Soon, Balát became acquainted with the available literature



**FIGURES 1–8.** 1, František Balát in 1942, age 17, as a member of the Czechoslovak Ornithological Society and the Ringing Station. 2, Balát as a soldier (right) in 1950 or 1951 at Mlýnský rybník pond, south Moravia with his friends Vladimír Elsner (left) and Zdeněk Kux (center). 3, Balát, with his first camera (before 1950). 4, Balát sailing with Jozef Somogyi (left) and ranger Kováč (centre) to a cormorant colony near the village of Biskupice on Žitný ostrov, an island on the Danube River, Slovakia, on 29 June 1946. 5, Balát as student of Zoology at the Masaryk University Brno (1947). 6, Balát in the field collecting ectoparasites, Zohor, Slovakia, 1947. 7, Balát examining a reed warbler (*Acrocephalus* sp.) with a mosquito net, according to Pavlovský (1965). 8, Enlarged detail of fig. 7. (Photos 1–3, 5–8: from the estate of F. Balát; photo 4: by J. Brtek, Jr)





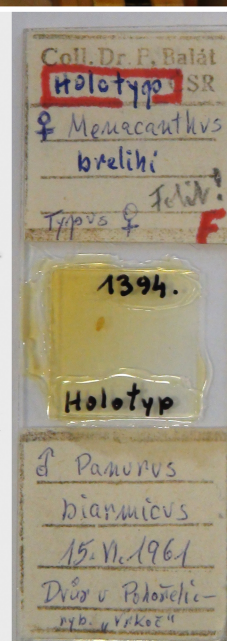
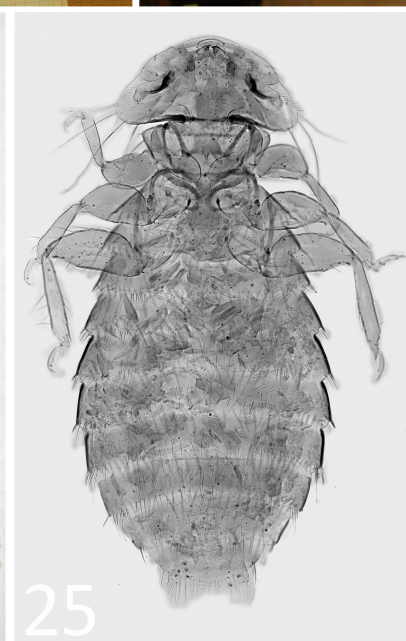
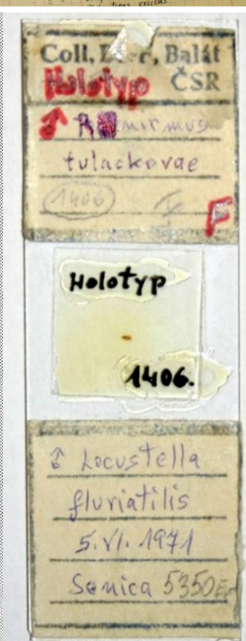
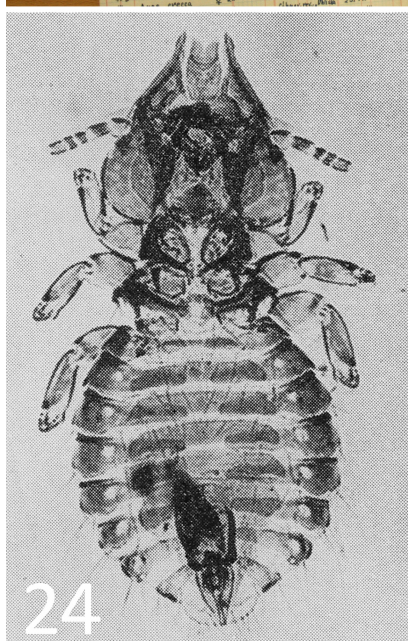
**FIGURES 9–15.** 9, František Balát with his colleagues of the Institute for Vertebrate Research of the Czechoslovak Academy of Science in 1956 (FB = F. Balát, JP = Jaroslav Pelikán, KH = Karel Hudec). 10, Balát catching domestic geese as part of his waterfowl research near the village of Hlohovec (ca. 1965). 11, Balát as a photographer (1965). 12, Balát with members of zoological expedition to Bulgaria in 1957 (from left: Jaroslav Pelikán, Josef Kratochvíl, Mr Trčka, F. Balát). 13, Balát dressed in Rococo attire as W.A. Mozart, after playing a favourite violin piece during the celebration of the International Women's Day at the Institute for Vertebrate Research of the C.A.S., Brno in 1977 (the costume was from the theatre department of the Moravian Museum). 14, Balát on an ornithological trip with his colleague Miroslav Bouchner and ornithologists Gerhard Creutz and András Keve in Essen, Germany, 1964. 15, Balát as an ornithological “ghost” (unknown location, 1980s). (Photos 9–12, 14: from the estate of F. Balát; photo 13: by M. Opluštil; photo 15: by J. Slechan).





**FIGURES 16–20.** 16, František Balát: next to the pond embankment of the Hlohovecký rybník, south Moravia, during an excursion as part of the symposium on Rational use of Waterfowl Resources organized by the International Waterfowl Research Bureau on 25–29 September 1972 in Brno. Balát (right) shows Geoffrey V.T. Matthews (left) the type locality of *Ornithobius matthewsi* Balát, 1974—the species of chewing louse that Balát was going to dedicate to Matthews, for providing him the type material for this species. Also, Jaroslav Pelikán (middle) and Eugeniusz Nowak (back). (Photo: P. Harrison). 17, Balát on his fiftieth birthday, 1975 (from the estate of F. Balát). 18, Balát as participant of the *Symposium über Mallophaga und Anoplura* held from 5 to 7 November 1975 at the Humboldt University in Berlin (WE = Woldietrich Eichler; JR = Jozef Rékási; RD = Robert C. Dalglish; JZ = Jadwiga Złotorzycka; EM = Eberhard Mey; VČ = Vladimír Černý; FB = František Balát). (photo by Baxmann, ISoP archive). 19, Balát at the *Symposium über Mallophaga und Anoplura*, Berlin 1975, second from the left. Vladimír Černý on his left and Jan Porkert on his right. (photo by J. Rékási, ISoP Archives). 20, Balát in Café Bukarest, Berlin 1975. From left, counterclockwise: František Balát, Jan Porkert, Jozef Rékási, Robert C. Dalglish. (photo: ISoP Archives—[www.phthiraptera.info](http://www.phthiraptera.info)).





**FIGURES 21–25.** František Balát's Collection of chewing lice. **21**, building of the Department of Entomology of the Moravian Museum in Brno, where the collection is deposited. **22**, Slide box, reprints and original handwritten lists that accompany the collection. **23**, Slide boxes containing around 3000 microscopic slides. **24**, Holotype male of *Sturnidoecus tulackovae* (Balát, 1981) from *Locustella fluviatilis*, dedicated to Balát's wife, Emilia Balátová-Tulácková. **25**, Holotype female of *Menacanthus brelihi* Balát, 1981 from *Panurus biarmicus*. (Photos 21–23, 25: by O. Sychra; photo 24: by F. Balát).



and identification of chewing lice, immediately beginning his intensive louse collecting. He wrote that he had the usual beginner's luck, because in his first collections he had obtained rare species, and even later "found known species, but on previously unrecorded host birds, and among them there were also species that were completely unknown." (Balát 1949). In 1949, he defended his Master's thesis dissertation titled "Contribution to knowledge of chewing lice (Mallophaga) found on birds of Moravia, Silesia, and Slovakia". For the next two years, he completed his compulsory military training in the garrison band of Bratislava, where he had the opportunity to pursue his other passion, playing the violin (Fig. 13) (Hudec 1993).

Balát began his professional career as an assistant at the Biological Station of the Zoological Institute of the University of Agriculture in Lednice na Moravě (Píkula 1976). In 1951, he moved to Bratislava after marrying an important Czechoslovak botanist, Emilia Tuláčková (1 November 1926–21 May 2005). In Bratislava he briefly worked as a specialist at the Popular Science Film Studio and as a custodian of the Slovak National Museum. Shortly after, he gained a position to work under Prof. Josef Kratochvíl (6 January 1909–17 February 1992) (Fig. 12) at the Institute of Parasitology of the Czechoslovak Academy of Sciences (C.A.S.), located in Brno, at the University of Agriculture. In 1953, Kratochvíl founded the Laboratory, later the Institute for Vertebrate Research of the C.A.S. in Brno, of which František Balát was the first employee (Fig. 9) (Hudec 1993). In 1960, he defended his doctoral dissertation on the birds of Žitný ostrov, a large river island on the Danube in southwestern Slovakia (Fig. 4). Balát remained at this workplace, until his retirement in 1985. Later, the institute changed its name to Institute of Systematic and Ecological Biology (Sychra *et al.* 2025).

Thanks to his field guide "Key to identifying our birds in nature" (Balát 1986), Balát is primarily known to bird lovers. However, Balát is also known among professional ornithologists as the author of about 130 original publications, resulting not only from his employed work, but also from his personal interest (Hudec & Kokeš 1982; Kožená *et al.* 1983, 1994). His publications are a significant contribution to Czech and world ornithology. Balát's main area of interest was field ornithology, focusing on both faunistic and ecological contexts. He devoted great part of his life to capturing and ringing birds. For example, during his career at the Czechoslovak Academy of Sciences, he participated in research on granivorous birds, cavity nesters, synanthropic birds (e.g. *Passer domesticus*, *Passer montanus*, *Hirundo rustica*, *Delichon urbicum*) (Balát 1964a, 1976, 1977b,c; Ryba & Balát 1977) and the food ecology of raptors (Balát 1965).

Other comprehensive research projects were on the common starling (*Sturnus vulgaris*) (Balát *et al.* 1959) and on the bionomics of some species of ducks and geese (Fig. 10) (Balát 1966b, 1968, 1970). A set of papers on the white-throated dipper (*Cinclus cinclus*) stands out, where he focused on nest bionomics, moulting, colouring, distribution of breeding pairs and their movements (Balát 1960, 1961, 1962, 1964b). His work reveals an excellent knowledge of birds in the field, which few professional ornithologists could compete with at the time. A unique feature was his musical ability to identify birds from their calls.

Balát participated in a number of conferences (e.g. two international ornithological congresses, 1966 in Oxford, 1982 in Moscow) and developed foreign cooperation. An example is his work with Austrian ornithologists in researching the avifauna of Lake Neusiedl on the Austrian-Hungarian border. His numerous photographs, faithfully capturing interesting aspects of bird behaviour and biology were published not only in Czech but also in foreign magazines (Sychra *et al.* 2025) (Figs 3, 11).

Thanks to his long-term work at the Institute for Vertebrate Research of the C.A.S., Balát was often involved with his beloved field ornithology and bird ringing. Also, he studied bird diseases, especially avian tuberculosis (Hejlíček & Balát 1973), and bird ectoparasites. His knowledge of birds as hosts was very useful when working on chewing lice. He could only devote time to perform these activities after regular working hours, something perceived by many colleagues as a tolerable oddity. Throughout his life, he remained faithful to his interests, sometimes bordering on obsession. Thanks to his patience and precision, he became a world expert in the field of chewing lice.

The basis for his later work on chewing lice was his Master's thesis dissertation. Between the years 1946–1949, during his studies at the Masaryk University, he collected over 540 samples of chewing lice from more than 100 species of birds. He wrote in his dissertation: "I collected Mallophaga on birds, which I obtained in various ways. I used bird traps, mostly placed on the ground, or in tree branches and reeds, as well as mist nets, tit boxes, etc. Catching live birds was particularly important because I concentrated mainly on collections from songbirds (Passeriformes), which are little studied in this respect. It was not possible or permissible for me to shoot them, especially since Mallophaga are rare on them and, if I found nothing on them, killing would have been completely unnecessary." (Balát 1949). As an excellent tree climber, he was able to inspect nests and then examine and ring the



chicks he found. He never agreed with ornithologists shooting and dissecting birds during their research. He felt sorry for those birds. Hence, he wrote in his dissertation: “Only in cases where it was impossible to catch live birds, I did hunt them with a firearm. However, I did not do so without thinking, I preferred to miss many specimens, even when I had them within shooting range.” (Balát 1949). He also collected material in taxidermy workshops, mainly at František Tesař’s in Rosice near Brno. Also, in later years as a soldier (1950–1951) (Fig. 2), Balát visited Ján Brtek’s workroom in Bratislava, often with a violin under his arm. Whenever he could, after the garrison band rehearsal, he would “jump over” to see interesting catches and collect new lice (Rác 1993). Balát was always prepared, so the violin case held the violin and also tubes for ectoparasites. When collecting from dead birds, he was well aware of possible contaminations, so he always scrupulously ensured strict separation of the specimens shot. As he himself wrote: “Let it be noted right away that I rarely had more than three bird species at the same time. I wrapped the individuals in paper and put one in a bag, the second in another bag, and the third on a bicycle rack.” (Balát 1949). The bicycle was a popular means of transportation, which, as he used to say, “could get you everywhere”.

Balát published the results of his research on chewing lice in 16 scientific papers. They mainly deal with reports of chewing lice on wild songbirds of South Moravia (Balát 1950, 1966a, 1981a,b) and taxonomy of the genera *Ricinus* (see Balát 1952), *Actornithophilus* (see Balát 1953a), *Brueelia* (see Balát 1955a) and *Ornithobius* (see Balát 1974). In various lists, he summarised records of host-lice associations and occurrence of individual chewing louse species in Czechoslovakia. The lists were from Moravia and Slovakia (Balát 1953b), the Tatra National Park (Balát 1955b), birds and mammals of Slovakia (Balát 1956), and in the comprehensive checklist of chewing lice of Czechoslovakia (Balát 1977a). Balát also prepared a review of chewing lice of wild birds from Czechoslovakia included in the ornithological compendium of the *Fauna ČSSR* (Hudec & Černý 1972, 1977; Hudec 1983). In three book chapters, Balát published the biology, ecology, and host relationships of chewing lice from Czechoslovakia, including a key for the identification of Central European louse genera, and a proposal for Czech vernacular names of 30 species of chewing lice (Balát 1954, 1957b, 1959). In addition to research on wild birds in the former Czechoslovakia, Balát also participated in the capture of birds and the collection of their ectoparasites abroad, especially in Bulgaria (Fig. 12) (Balát 1958), reviewing 21 species in seven genera of amblyceran lice, and 56 species in 14 genera of ischnocerans. Also, Balát & Breuer (1954) and Balát (1957a) recorded 28 species in 15 genera of amblycerans and 94 species in 30 genera of ischnoceran lice from Hungary. In his last paper on lice, Balát described two new species, one from the great tit (*Parus major*) and another from the Eurasian chaffinch (*Fringilla coelebs*), both from Germany (Balát 1982).

## František Balát’s Legacy

During his career, František Balát described 41 new louse taxa: one subgenus and 40 species in 14 genera (Balát 1950, 1952, 1953a, 1955a, 1955b, 1958, 1966a, 1974, 1981a, 1981b, 1982), of which 32 species in 11 genera are still valid (Price *et al.* 2003; Sychra *et al.* 2008b, 2024; Gustafsson & Bush 2017). Valid taxa are 27 ischnoceran species in the genera: *Brueelia* (10 species), *Guimaraesiella* (2), *Penenirmus* (5), *Philopterus* (2), *Rostrinirmus* (5), *Saemundsonnia* (1), *Strigiphilus* (1) and *Sturnidoecus* (1), and five species of amblycerans in the genera: *Machaerilaemus* (1), *Menacanthus* (2) and *Ricinus* (2). He named most of these new species after his teachers, colleagues and friends. He also named two species after his beloved wife Emilie Balátová-Tuláčková: *Philopterus emiliae* Balát, 1955 from the alpine accentor (*Prunella collaris*) and *Sturnidoecus tulackovae* (Balát, 1981) (Fig. 24) from the river warbler (*Locustella fluviatilis*). The remaining eight species in six genera are now considered junior synonyms (see the following list).

## List of species described by František Balát

[Taxa subsequently synonymised are marked with an asterisk\*, and **not** in bold type]

**Class Insecta Linnaeus, 1758: 339.**

**Order Psocodea Hennig, 1966: 187.**



**Suborder Troctomorpha Roesler, 1944: 127.**

**Infraorder Phthiraptera Haeckel, 1896: 703.**

**Parvorder Amblycera Kellogg, 1896: 68.**

**Family Menoponidae Mjöberg, 1910: 26.**

*\*Actornithophilus svoboda* Balát, 1953: 100. Ex *Vanellus vanellus* (Linnaeus, 1758). CZECHIA.

*Current status:* Junior synonym of *Actornithophilus gracilis* Piaget, 1880: 555. Synonymised by Emerson 1972b: 17.

*Etymology:* “In honor of my friend, ornithologist Dr Stanislav Svoboda from the town of Hodonín.”

*\*Actornithophilus hrabei* Balát, 1953: 98. Ex *Calidris alpina* (Linnaeus, 1758). CZECHIA.

*Current status:* Junior synonym of *Actornithophilus umbrinus* Burmeister, 1838: 438. Synonymised by Hopkins & Clay 1955: 177.

*Etymology:* “In honor of my teacher Prof. Sergej Hrabě from the Faculty of Science, Masaryk University Brno.”

*\*Diactornithophilus* Balát, 1953: 96.

*Current status:* Junior synonym of *Actornithophilus Ferris*, 1916: 303. Synonymised by Hopkins & Clay 1955: 181.

*Machaerilaemus clayae* (Balát, 1966a): 20 [in *Hirundoecus*]. Ex *Riparia riparia* (Linnaeus, 1758). CZECHIA.

*Etymology:* “Dedicated to Theresa Clay, a prominent British and world, mallophagologist, as an expression of my gratitude for all the help, advice and support she has provided me so far.”

*Menacanthus brelihi* Balát, 1981b: 273. Ex *Panurus biarmicus* (Linnaeus, 1758). CZECHIA. (Fig. 25).

*Etymology:* “Dedicated to Dr Savo Brelih, a Yugoslav mallophagologist and my good friend from Ljubljana.”

*\*Menacanthus eisenachensis* Balát, 1981b: 274. Ex *Acrocephalus scirpaceus* (Hermann, 1804). GERMANY.

*Current status:* Junior synonym of *Menacanthus curuccae* (Schrank, 1776): 113. Synonymised by Sychra *et al.* 2008a: 404.

*Menacanthus obrteli* Balát, 1981b: 274. Ex *Locustella luscinioides* (Savi, 1824). CZECHIA.

*Etymology:* “After ing. Radoslav Obrtel, colleague, entomologist from the Institute for Vertebrate Research of the Czechoslovak Academy of Sciences in Brno.”

*\*Menacanthus stiefeli* Balát, 1981b: 275. Ex *Linaria flavirostris* (Linnaeus, 1758). GERMANY.

*Current status:* Junior synonym of *Menacanthus alaudae* (Schrank, 1776): 115. Synonymised by Palma *et al.* 1998: 310.

*Etymology:* “After Dr Arnd Stiefel from Halle/Saale (German Democratic Republic), an ornithologist who first collected this species in large numbers and enabled me to describe it.”

**Family Ricinidae Neumann, 1890: 55.**

*Ricinus borin* Balát, 1952: 157. Ex *Sylvia borin* (Boddaert, 1783). CZECHIA.

*\*Ricinus inexpectatus* Balát, 1966a: 25. Ex *Riparia riparia* (Linnaeus, 1758). CZECHIA.

*Current status:* Junior synonym of *Ricinus fringillae* De Geer, 1778: 71. Synonymised by Rheinwald 1968: 203.

***Ricinus pflegeri* Balát, 1952:** 158. Ex *Ficedula albicollis* (Temminck, 1815). Unknown location.

*Etymology*: “After Dr Karel Pfleger, the owner of the type specimens, who lent me all his material of this genus for study.”

## **Parvorder Ischnocera Kellogg, 1896: 63**

### **Family Philopteridae Burmeister, 1838: 422**

***Brueelia blagovescenskyi* Balát, 1955a:** 504. Ex *Emberiza schoeniclus* (Linnaeus, 1758). CZECHIA.

*Etymology*: “After the Russian entomologist and parasitologist Dmitry Ivanovich Blagoveshtchensky, who was the only one to mention the occurrence of this genus on the mentioned host, but he could not describe this species based on a single female.”

***Brueelia breueri* Balát, 1955a:** 505. Ex *Chloris chloris* (Linnaeus, 1758). SLOVAKIA and HUNGARY.

*Etymology*: “After the Hungarian ornithologist Georg Breuer, who sent me several specimens of the chewing lice, including one female of this species.”

***Brueelia ferianci* Balát, 1955a:** 508. Ex *Anthus trivialis* (Linnaeus, 1758). CZECHIA.

*Etymology*: “After Prof. Oskár Ferienc, Slovak naturalist, entomologist-dipterologist and ornithologist.”

***Brueelia glizi* Balát, 1955a:** 509. Ex *Fringilla montifringilla* Linnaeus, 1758. CZECHIA.

*Etymology*: “In honor of the South Moravian ornithologist and retired schoolteacher Julius Glíž.”

***Brueelia kluzi* Balát, 1955a:** 512. Ex *Fringilla coelebs* Linnaeus, 1758. CZECHIA.

*Etymology*: “After Zdeněk Klůz, an ornithologist from the city of Lázně Bělohrad.”

***Brueelia kratochvili* Balát, 1958:** 413. Ex *Motacilla flava feldeggii* Michahelles, 1830. BULGARIA.

*Etymology*: “Dedicated to Prof. Josef Kratochvíl, leader and organizer of the expedition to Bulgaria in 1957, on his upcoming 50th birthday.” (Fig. 12).

***Brueelia matvejevi* Balát, 1981b:** 278. Ex *Turdus viscivorus* Linnaeus, 1758. MONTENEGRO and CZECHIA.

*Etymology*: “After Dr Sergey Dmitrievich Matvejev, a prominent Yugoslav ornithologist.”

***Brueelia pelikani* Balát, 1958:** 414. Ex *Emberiza melanocephala* Scopoli, 1769. BULGARIA.

*Etymology*: “After Dr Jaroslav Pelikán, a colleague and member of our zoological expedition in Bulgaria in 1957, who helped me several times with obtaining ornithological material.” (Figs 9, 12, 16).

***Brueelia rosickyi* Balát, 1955a:** 517. Ex *Curruca nisoria* (Bechstein, 1792). CZECHIA and SLOVAKIA.

*Etymology*: “After Dr Bohumír Rosický, laureate of the State Prize.”

***Brueelia vaneki* Balát, 1981b:** 277. Ex *Acrocephalus schoenobaenus* (Linnaeus, 1758). CZECHIA.

*Etymology*: “Dedicated to my friend Karel Vaněk, who often helped me with bird trapping in the field.”

**\**Brueelia weberi* Balát, 1982:** 44. Ex *Parus major* Linnaeus, 1758. CZECHIA and GERMANY.

*Current status*: Junior synonym of ***Brueelia conocephalus* (Blagoveshtchensky, 1940):** 64. Synonymised by Gustafsson *et al.* 2019: 25.

*Etymology*: “After Hubert Weber, long-time director of the Serrahn Biological Station in the German Democratic Republic.”



***Guimaraesiella haftorni* (Balát, 1981b):** 280 [in *Allobrueelia*]. Ex *Turdus iliacus* Linnaeus, 1758. CZECHIA.  
*Etymology*: “Dedicated to Prof. Svein Haftorn, a prominent Norwegian ornithologist from the University of Trondheim.”

***Guimaraesiella tovoornikae* (Balát, 1981b):** 281 [in *Allonirmus*]. Ex *Sylvia atricapilla*, (Linnaeus, 1758). CZECHIA and “YUGOSLAVIA”.

*Etymology*: “After Dr Danica Tovornik from Ljubljana, co-author of the research on Mallophaga in Yugoslavia.”

**\**Halipeurus hanaki* Balát, 1958:** 415. Ex *Puffinus yelkouan* (Acerbi, 1827). BULGARIA.

*Current status*: Junior synonym of ***Halipeurus diversus* (Kellogg, 1896)**: 123. Synonymised by Emerson 1972a: 80.

*Etymology*: “After Dr Vladimír Hanák, assistant professor at the Institute of Zoology, Charles University in Prague, who found an exhausted yelkouan shearwater (*Puffinus yelkouan*) on the seashore along with specimens of this new species and brought them to me.”

**\**Ornithobius matthewsi* Balát, 1974:** 1. Ex *Anser anser* (Linnaeus, 1758). CZECHIA.

*Current status*: Junior synonym of ***Ornithobius mathisi* (Neumann, 1912)**: 382. Synonymised by Price *et al.* 2003: 202.

*Etymology*: “In honour of the eminent British ornithologist and waterfowl expert Prof. Geoffrey Vernon Townsend Matthews, of the Wildfowl Trust in Slimbridge.” (Fig. 16).

***Penenirmus barusi* Balát, 1981a:** 162. Ex *Phoenicurus ochruros* (Gmelin, 1774). CZECHIA and BULGARIA.

*Etymology*: “After Prof. Vlastimil Baruš, a prominent Czechoslovak parasitologist, academician, director of the Institute for Vertebrate Research of the Czechoslovak Academy of Sciences in Brno.”

***Penenirmus kuxi* Balát, 1981a:** 163. Ex *Locustella luscinioides* (Savi, 1824). CZECHIA.

*Etymology*: “Dedicated to my long-time friend, ing. Zdeněk Kux, ornithologist at the Moravian Museum in Brno, who paid special attention to the Savi’s warbler *Locustella luscinioides*.” (Fig. 2).

***Penenirmus patevi* Balát, 1958:** 417. Ex *Anthus campestris* (Linnaeus, 1758). BULGARIA.

*Etymology*: “After Bulgarian ornithologist Pavel Patev.”

***Penenirmus pikulai* Balát, 1981a:** 164. Ex *Curruca nisoria* (Bechstein, 1792). CZECHIA.

*Etymology*: “After Dr Jiří Pikula, a colleague at the Ornithology Department of the Institute for Vertebrate Research of the Czechoslovak Academy of Sciences in Brno.”

***Penenirmus serraheensis* Balát, 1982:** 43. Ex *Fringilla coelebs* Linnaeus, 1758. GERMANY.

*Etymology*: After the type locality, Serrahn, Müritznational Park.

***Philopterus emiliae* Balát, 1955b:** 393. Ex *Prunella collaris* (Scopoli, 1769). SLOVAKIA.

*Etymology*: “Dedicated to my wife Dr Emilie Balátová-Tuláčková.”

***Philopterus hanzaki* Balát, 1955b:** 390. Ex *Anthus spinoletta* (Linnaeus, 1758). SLOVAKIA.

*Etymology*: “After ornithologist Jan Hanzák.”

***Rostrinirmus boeovi* (Balát, 1958):** 418 [in *Penenirmus*]. Ex *Passer hispaniolensis* (Temminck, 1820). BULGARIA.

*Etymology*: “After Bulgarian ornithologist Nikolay Boëv, assistant at the Sofia Zoo.”

***Rostrinirmus buresi* (Balát, 1958):** 416 [in *Penenirmus*]. Ex *Emberiza melanocephala* Scopoli, 1769 and *Emberiza hortulana* Linnaeus, 1758. BULGARIA.

*Etymology*: “In honor of Academician Dr Ivan Bureš, Director of the Zoological Institute of the Bulgarian Academy of Sciences in Sofia and the founder and creator of Bulgarian zoology.”

***Rostrinirmus carpodaci* Balát, 1981a:** 165. Ex *Carpodacus erythrinus* (Pallas, 1770). CZECHIA and SLOVAKIA.

*Etymology:* After the generic name of the host.

***Rostrinirmus hudeci* Balát, 1981a:** 166. Ex *Parus major* Linnaeus, 1758. SLOVAKIA.

*Etymology:* “After long-time colleague, ornithologist Dr Karel Hudec” (Fig. 9).

***Rostrinirmus pflegeri* Balát, 1981a:** 166. Ex *Acrocephalus palustris* (Bechstein, 1798). CZECHIA.

*Etymology:* “Dedicated to the memory of the late Dr Karel Pflieger, a prominent taxidermist and founder of an extensive collection of chewing lice, from which the holotype of this species is also included.”

***Saemundssonina kratochvili* Balát, 1950:** 109. Ex *Gallinago gallinago* (Linnaeus, 1758). CZECHIA.

*Etymology:* “After Prof. Josef Kratochvíl, founder of the Institute for Vertebrate Research of the Czechoslovak Academy of Sciences in Brno.” (Fig. 12).

***Strigiphilus tuleskovi* Balát, 1958:** 418. Ex *Otus scops* (Linnaeus, 1758). BULGARIA.

*Etymology:* “In honor of the only Bulgarian mallophagologist, Dr Krastia Nikolov Tuleshkov, director of the Sofia Zoo.”

***Sturnidoecus tulackovae* (Balát, 1981a):** 167 [in *Rostrinirmus*]. Ex *Locustella fluviatilis* (Wolf, 1810). SLOVAKIA. (Fig. 24).

*Etymology:* “Dedicated to my wife Dr Emilie Balátová-Tuláčková.”

## List of taxa named after František Balát

### Phthiraptera: Amblycera

#### Menoponidae

***Myrsidea balati* Macháček, 1977:** 1. Ex *Passer montanus* (Linnaeus, 1758). CZECHIA.

#### Ricinidae

***Ricinus balati* Rheinwald, 1968:** 272. Ex *Phylloscopus trochiloides viridanus* Blyth, 1843. NEPAL and THAILAND.

*Remarks.* The German phthirapterist Goetz Rheinwald (1968) wrote in his description of this species: “I named this new species after the prominent mallophagologist and ornithologist František Balát, who, through his intensive collecting activities, made an irreplaceable contribution to the knowledge of the distribution of many European louse species.”

### Phthiraptera: Ischnocera

#### Philopteridae

***Brueelia balati* Křištofik, 1999:** 139. Ex *Remiz pendulinus* (Linnaeus, 1758). CZECHIA and SLOVAKIA.

***Mulcticola balati* Tendeiro, 1962:** 352. Ex *Caprimulgus rufigena* Smith, 1845. ANGOLA, KENYA and CONGO.

***Saemundssonina platygaster balati* Timmermann, 1969:** 241. Ex *Charadrius bicinctus* (Jardine & Selby, 1827). Tasmania, AUSTRALIA.



## Acari: Astigmata

### Alloptidae

*Brephosceles balati* Černý, 1967. Ex *Puffinus puffinus* (Brünnich, 1764). FAROE ISLANDS.

### Proctophyllodidae

*Proctophyllodes balati* Černý, 1978. Ex *Panurus biarmicus* (Linnaeus, 1758). CZECHIA.

## Thysanoptera: Terebrantia

### Aeolothripidae

*Aeolothrips balati* Pelikán, 1958. BULGARIA.

## František Balát's louse collection

Balát's collection of slide-mounted chewing lice containing around 3000 microscope slides, including most of his type specimens, is now deposited in the Department of Entomology of the Moravian Museum in Brno (Figs 21, 23). A set of reprints of his publications on chewing lice is also available. The original collection consisted of 1533 items (numbered as series of lice from 1533 hosts) with serial numbers 1–1556 (23 numbers are vacant). About 2000 slides were mounted by Balát during the years 1946–1979 with lice he had collected. Unfortunately, about 200 of those slides are currently missing from the collection as unreturned loans. The additional 1000 slides originated from exchanges and gifts from other museums and colleagues. The Hungarian ornithologist Georg Breuer sent him 300 slides containing lice from Hungary, and the remaining 700 slides were received from several museums, such as the Natural History Museum in London, England (NHML) and the Natural History Museum in Berlin, Germany (ZMHU). Approximately 200 slides were sent to foreign museums, where they are still available, i.e., the Slovenian Museum of Natural History in Ljubljana (Slovenia), the Slovak National Museum in Bratislava (Slovakia), the Field Museum of Natural History in Chicago (U.S.A.), the NHML and the ZMHU.

The collection comprises: 122 species of amblyceran lice belonging to 30 genera from 6 families, 339 species of ischnoceran lice belonging to 63 genera in the family Philopteridae, and 22 species of mammalian chewing lice (Trichodectera) belonging to 7 genera in the family Trichodectidae. The hosts are 307 species of birds from 25 orders, and 24 species of mammals from 5 orders. A total of 745 host-lice associations are documented.

Most of the specimens were collected during Balát's research on wild birds in the former Czechoslovakia, mainly in South Moravia. In addition, the collection includes specimens that Balát obtained during his work abroad, especially during expeditions to Bulgaria with the Institute for Vertebrate Research in 1957 (Fig. 12) and to Sweden in 1963; also, during shorter trips to Germany (1964, Fig. 14) and Austria. Several slides contain lice collected during Balát's visit to Cuba in 1979. Around 300 slides contain specimens sent to Balát by the ornithologist Georg Breuer from Hungary from 1950–1954. Approximately 700 specimens from other areas were acquired by Balát through exchange with phthirapterists across Europe. They were Theresa Clay (7 February 1911–17 March 1995), George H.E. Hopkins (22 March 1898–20 February 1973), Savo Brelj (5 May 1927–2 March 2012), Dmitri I. Blagoveshtchensky and Wolfdietrich Eichler (22 December 1912–7 February 1994) (Fig. 18). Some specimens were donated by Balát's predecessor, taxidermist and collector of chewing lice, Karel Pfleger (4 August 1900–30 January 1951). The collection documents include original handwritten lists with precise records and detailed information about the hosts, localities, special circumstances, and about the chewing lice collected, their numbers on each host, sex, food, etc., allowing us to evaluate the intensity of the infestation, the sex ratio and other parameters (Fig. 22).

In addition to the type material, there are some significant specimens, such as lice from rare or endangered hosts, e.g. *Capraiella subcuspidata* (Burmeister, 1938) from the European roller (*Coracias garrulus*), and *Bovicola alpinus* Kéler, 1942 from the Tatra chamois (*Rupicapra rupicapra tatrica*).

The quality of the slides varies from very good (mounted in Canada balsam), through quite good, to approximately 10% practically unusable (mounted in water-miscible media). Given its scope, the collection is an important source

of comparative material. A revision of the slides was recently completed and a detailed study of some species is underway for selected groups of lice. The electronic list of Balát's collection has been updated according to the current nomenclature and is being prepared to be publicly available through the Moravian Museum website. Balát's notebooks written during the years 1953–1963 are a valuable source of information, as they contain detailed records of birds captured to be examined for parasites. These notebooks—stored in the Ornithological Station of the Comenius Museum (ORNIS) in Přerov (Rác 2011)—contain records of more than 3000 birds of 140 species from 17 orders. The dominant group is Passeriformes (90%), with *Parus major* (9%) and *Passer montanus* (8%) being the more abundant species. These records would allow not only to assess the occurrence of a particular species of ectoparasite but, also the prevalence the various groups included, i.e., chewing lice, feather mites (Acari: Psoroptidia), ticks (Acari: Ixodida), louse-flies (Diptera: Hippoboscidae) and fleas (Siphonaptera).

### František Balát's professional connections

In addition to countless ornithological activities, conferences and congresses, Balát also participated in the *Symposium über Mallophaga und Anoplura*, held on 5–7 November 1975 at the Humboldt University in Berlin (Mey *et al.* 2007) (Figs 18–20). Among the participants were Balát's colleagues Vladimír Černý (24 August 1928–24 July 1977) (Figs 18–19) and Jan Porkert (6 September 1934–26 September 2000) (Figs 19–20). Also, he had the opportunity to meet the most important figures in the field, with whom he had been already in contact by correspondence and by exchanging specimens. They included Wolfdietrich Eichler, Irina A. Fedorenko, Eberhard Mey (Fig. 18), Jozef Rékási (Figs 18, 20), Jadwiga Złotorzycka (14 October 1926–2 October 2002) (Fig. 18) and Robert C. Dalglish (1 March 1940–7 December 2009) (Figs 18, 20). Balát's lifelong contribution to the study of lice was posthumously appreciated by members of the International Society of Phthirapterists at the *International Conference on Phthiraptera 6-ICP6* held in June 2018 in Brno, attended by 100 experts from 22 countries around the world (Sychra *et al.* 2018), including Eberhard Mey, who attended the Symposium in 1975. Balát's precision in collecting and identifying chewing lice, as well as his willingness to share his experience and specimens with colleagues were especially mentioned.

Based on memories from people who knew Balát or who met him even briefly, we can give an impression of Balát's unique personality. He was extremely direct, although not always well understood (Matoušek 2008). He was rather shy. He felt best in the field, where he always went properly prepared and dressed, and did not hesitate to give advice or share his experiences with younger colleagues or students. Birdwatcher Robert Doležal (pers. comm. August 2025), who met Balát in the Lake Neusiedl, Austria, during an excursion in 1990, reminisces: “At one moment, Balát suddenly emerged from the reeds near our group, even though he did not travel to Austria with us, he raised only his index finger and said: ‘Do you hear it? That is the call of the moustached warbler (*Acrocephalus melanopogon*)!’ Then, he disappeared again, like some ornithological ghost.” (Fig. 15). Balát was a true Czechoslovakian, not only he worked in his native southern Moravia, but he also liked to go to Slovakia to observe and capture birds, where he met many colleagues and lifelong friends during his long career. His expeditions to Žitný ostrov are especially memorable (Fig. 4). Also, he often visited the Parížske močiare marsh in Gbelce, southern Slovakia. The dates of these visits are recorded in his notes as 1966, 1976, 1982 and 1984. He enjoyed his days observing and catching birds in the middle of vast reed beds, spending the nights on a small island. In order to avoid leaving the field, he had locals supplying him with food and water, hence the place was called “Balát's bedroom”.

Balát was really obsessed about ectoparasites, especially lice, and did not miss a single moment to examine dead birds in detail. He carried them separately inside plastic bags in his pockets and when he had a moment, he would start examining one at the time, even when he was waiting at the table for soup. He always carried bottles and test tubes for the unexpected dead bird or live catch. Ornithologists did not appreciate the fact that he was so precise while examining birds, because it took him a long time to thoroughly check one bird “feather by feather” (Figs 6–8).

We conclude this memorial to František Balát by relating an anecdote which shows his extraordinary passion for working in the field. In June 1965, Balát visited the Faroe Islands collecting interesting material of ectoparasites from seabirds, including mites from the Manx shearwater (*Puffinus puffinus*), later described by his friend Vladimír Černý as *Brephosceles balati*. Balát's experience was memorable, not because he was attacked by skuas defending their nest, but because when he set out for a small island, he had to wade through a shallow strait. As he stayed too



long on that island, he was caught by the high tide by surprise, and had to return with water reaching his chest. He constantly felt the bottom with his feet to avoid sinking. As he said later, the main problem was not that he would get wet and ruin the camera, but that he could not swim. Fortunately, he survived, and he lived another 27 years, allowing him to leave a great legacy to both ornithologists and phthirapterists alike.

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