

First record of *Philopterus timmermanni* (Złotorzycka, 1964c) (Phthiraptera, Ischnocera) from Iceland

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The first record of *Philopterus timmermanni* (Złotorzycka, 1964c) (Phthiraptera, Ischnocera) in Iceland. Lice were collected on a specimen of Redwing *Turdus iliacus coburni* (Aves, Passeriformes, Turdidae).

Key words: Chewing lice, ectoparasite, louse, passerine, Redwing, *Philopterus*, Phthiraptera, Ischnocera, Iceland.

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Introduction

The genus *Philopterus* (Nitzsch, 1818) parasitizes different orders of birds around the world (Kolencik *et al.* 2022). Two species of this genus have been recorded in Iceland (Ólafsson, 1771): *Philopterus corvi* (Linnaeus, 1758) and *P. fringillae* (Scopoli, 1771).

One of the lice that may be present in Iceland is *Philopterus timmermanni* (Złotorzycka, 1964), since its type host is a frequent bird on this island, the Redwing *Turdus iliacus coburni* subspecies. This louse has been reported on the type host in Faroe Islands, Hungary, Poland and Sweden (Złotorzycka 1977, Palma & Jensen 2005, Vas *et al.* 2012, Gustafsson *et al.* 2018), in North America on *T. musicus* (= *iliacus*) (Emerson 1972) and Song thrush *Turdus philomelos* and *T. iliacus* in Spain (Martín-Mateo 2009).

The *coburni* subspecies is widely distributed in Iceland and the Faroe Islands, where it breeds. During the winter it is recorded in Western Europe, mainly in the Atlantic regions (Shirihai & Svensson 2018). It is considered a rare bird in North America, were both the subspecies *coburni* and the nominate *iliacus* may be present (del Hoyo *et al.* 2005). According to Petersen (1998), he reports that the summer population size in Iceland has been estimated to be 100,000–200,000 pairs, and 1,000–5,000 birds in winter. Redwings overwinter mainly on the British Isles and in southwestern Europe (del Hoyo *et al.* 2005). Individuals from Scandinavia are believed to migrate to Iceland to some extent to in autums. The first birds return to Iceland in late March or in the beginning of April and start returning by the end of August which continues in the course of September and onwards to November.

Therefore, this manuscript presents the first record of *P. timmermanni* in the Iceland and gives an assessment of its occurrence in other regions.

Material and methods

The Redwing was found dead on road 60, Kinnarstadir, Thorska fjordur, NW Iceland (EIS27 UTM VN57 WGS84 6555738N-22140W) in June 2022. Lice were collected directly from the bird, stored in 70% ethanol and were cleaned in 10% KOH and mounted in DMHF (dimethyl hydantoin formaldehyde) on the slide. The species was identified under an optical microscope following Martín-Mateo (2009).

Results and discussion

Two lice were captured from the sampled Redwing.

Ischnocera, Philopteridae

Philopterus timmermanni Zlotorzyczka, 1964c.

Material: 1♂ and 1 nymph, 9 June 2022.

Host: Redwing *Turdus iliacus coburni*,
Locality: Kinnarstadir, Thorska fjordur, NW Iceland (Figure 1).

Remarks: Knowledge of the distribution of chewing lice can indirectly help to understand the areas of migration and wintering of some species of birds. According to Price *et al.* (2003), *P. timmermanni* only parasitizes the subspecies *coburni* of the Redwing. This subspecies is native to Iceland and Faroe Islands as a breeder, while it winters in western Europe.

Records of birds arriving in North America in which *P. timmermanni* has been detected may correspond to both specimens of *T. iliacus coburni* (east coast) and the nominate subspecies *iliacus* (east and west coasts). The citation considered by Palma & Jensen (2005) for the Faroe Islands coincides with the distribution area of the *coburni* as a breeder. Vas *et al.* (2012) cite *P. timmermanni* in Hungary on *Turdus iliacus*, without indicating a subspecific taxonomy. In Hungary, the



FIGURE 1. *Philopterus timmermanni*, adult male (original). Unit scale: 1 mm.

population of the Redwing corresponds to wintering specimens of the nominate subspecies *iliacus*, so the taxon corresponding to the citation by Vas *et al.* (2012) may correspond to *iliacus*. Gustafsson *et al.* (2018) indicate the presence of *P. timmermanni* on *Turdus iliacus coburni* in Sweden. The observations of Martín-Mateo (2009) indicate the presence of *P. timmermanni* on *Turdus philomelos* and on *Turdus iliacus* (probably *T. i. iliacus*), which indicates a wider distribution of this lice on different European *Turdus* species.

Citations indicate a wide distribution of *P. timmermanni* among European populations of Redwing, including the subspecies *coburni* and the nominate *iliacus*, meaning that it may also occur naturally in North America. In addition, the citation collected in Martín-Mateo (2009) shows that *P. timmermanni* can be represented within the genus *Turdus*, due in part to the condition of migratory birds of various species and their tendency to gregariousness during the winter, which favors the transmission of lice between individuals.

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