

A New Record for Turkish Lice Fauna: *Dennyus hirundinis* (Linnaeus, 1761) (Mallophaga: Menoponidae)

Ahmet KARATAŞ¹, Bayram GÖÇMEN², Ayşegül KARATAŞ³

¹Niğde University, Zübeyde Hanım Health High School, Niğde, Turkey; ²Ege University Science Faculty, Department of Zoology, Bornova, Izmir, Turkey; ³Niğde University, Faculty of Arts and Sciences, Department of Biology, Niğde, Turkey

SUMMARY: In this study, a bird louse *Dennyus hirundinis* was recorded for the first time from the swift, *Apus apus* living in Turkey. Since so little information is available on this rare species, the new record is briefly presented here.

Key Words: Bird louse, first record, Menoponidae, *Dennyus hirundinis*, Turkey

Türkiye Bit Faunası için Yeni bir Kayıt: *Dennyus hirundinis* (Linnaeus, 1761) Mallophaga: Menoponidae)

ÖZET: Bu çalışmada *Dennyus hirundinis* kuş biti, Türkiye'deki Karasağan (Ebabel) *Apus apus*'tan ilk kez kaydedilmiştir. Bu nadir tür hakkında fazla bilgi olmadığı için, yeni kayıt burada kısaca sunulmuştur.

Anahtar Sözcükler: Kuş biti, ilk kayıt, Menoponidae, *Dennyus hirundinis*, Türkiye

INTRODUCTION

Menoponidae is the largest amblyceran family with more than 600 species described worldwide, from many orders and families of birds, the name "bird lice" (1-3, 8). They exhibit a varied existence, with different species feeding on feathers and skin, or in some cases even blood. So far, seven species of genera *Menopon* Nitzsch, 1818 (5 spp.), *Colpocephalum* Nitzsch, 1818 (1 sp.), *Trinoton* Nitzsch, 1818 (1 sp.) of this family have been known in Turkey. Almost all of them were recorded from the poultries (6). *Dennyus hirundinis* (Linnaeus, 1761), new to Turkish fauna, is an ectoparasite of the swift, *Apus apus* (Apodiformes) (4, 5, 7). This paper deals with the characteristic features of *D. hirundinis* and adds a species to the lice fauna of Turkey.

MATERIAL AND METHODS

On 17th April 2002, a total of 17 individuals were collected on a common swift, *Apus apus* (Apodiformes), in the centre of

Niğde Province and Sazlıca Village. All samples were placed in small vials and preserved in 70% ethanol. In laboratory, they were slide-mounted and labelled. All the louse samples have been deposited in the collection of Niğde University. The identification was carried out by means of Olympus stereo-microscope with a camera lucida. The present literature was used for identification and comparison.

RESULTS AND DISCUSSION

In *D. hirundinis*, head is broad and somewhat triangular (Fig. 1). Labial palpi are present and maxillary palpi are four segmented. Antennae very short and four segmented. Eyes reduced. The dorsal parts of the thoracic integuments are separated. The first coxa is elongated antero-posteriorly. Each leg has two small claws.

The total length and width measured are 1.91 (1.17-1.73) mm and 0.57 (0.50-0.67) mm in seven samples, respectively. The samples agree in all characteristics with the descriptions given at the literature cited in here (4, 5, 7). *D. hirundinis* was found inside the quills of the primary feathers of *A. apus*.

In a result of this investigation, the louse has been reported for the first time for Turkish fauna. So, the number of species of the family Menoponidae in the country was increase to eight species.

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Yazışma /Corresponding Author: Ahmet Karataş

Tel: (+90) (388) 232 10 37 Fax: (+90) (388) 232 05 46

E-mail: rousettus@hotmail.com

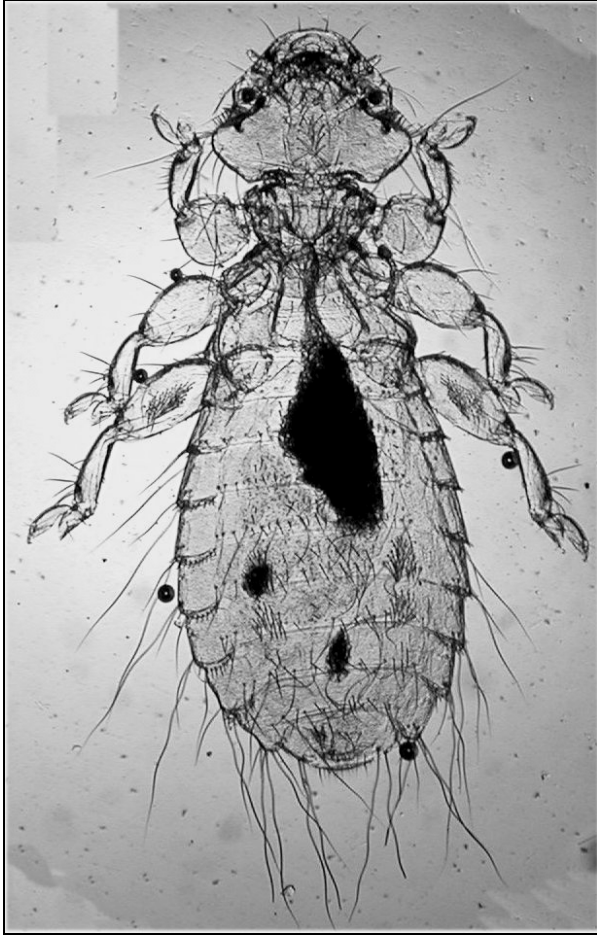


Figure 1. *D. hirundinis* in view of ventral (x 68) (original).

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REFERENCES

1. Clay T, 1969. A key to the genera of the Menoponidae (Amblycera: Mallophaga: Insecta). *Bull Brit Mus (Nat. Hist). Ent Ser*, 24: 1-26.
2. Clayton DH, Price RD, Page RDM, 1996. Revision of *Dennyus* (*Collodennyus*) lice (Phthiraptera: Menoponidae) from swiftlets, with descriptions of new taxa and a comparison of host-parasite relationships. *Syst Entomol*, 21: 179-204.
3. Emerson KC, 1982. Mallophaga. In: Parker, S.P., ed. *Synopsis and Classification of Living Organisms*. Vol. 1, New York: McGraw-Hill, pp. 409-414.
4. Ledger JA, 1970. A preliminary review of *Dennyus* (Mallophaga: Menoponidae) parasitic on swiftlets. *J. Ent. Soc. S. Afr.*, 33 (2): 239-260.
5. Lee PLM, Clayton DH, 1995. Population biology of Swift (*Apus apus*) ectoparasites in relation to host reproductive success. *Ecol Entomol*, 20 (1): 43-50.
6. Merdivenci A, 1970. Türkiye Parazitleri ve Parazitolojik Yayınları. *İ.Ü. Cerrahpaşa Tıp Fakültesi Yayınları, İstanbul*.
7. Page RD, Lee PL, Becher SA, Griffiths R, Clayton DH, 1998. A different tempo of mitochondrial DNA evolution in birds and their parasitic lice. *Mol Phyl & Evol*, 9 (2): 276-293.
8. Palma RL, 1996. Menoponidae. In: Wells, A., ed. *Zoological Catalogue of Australia*. Vol. 26: Psocoptera, Phthiraptera, Thysanoptera. Melbourne: CSIRO Publishing, Australia, pp. 109-144.