

## Chewing Lice (Phthiraptera) of Magpie (*Pica pica* L.) (Aves: Passeriformes: Corvidae) in Turkey

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Makale Kodu (Article Code): KVFD-2012-7987

### Summary

This study was performed to detect chewing lice on Magpie, between the dates of August 2011-February 2012 in Konya, Central Anatolian Region of Turkey. For this aim, 64 Magpie individuals were examined for the louse. In order to sample chewing lice, the feathers of the birds were carefully examined macroscopically. All lice were collected and placed in tubes with 70% alcohol, cleared in 10% KOH mounted in Canada balsam on slides and identified under a light microscope. Of birds examined, 20 out of 64 (31.25%) were infested with at least one chewing louse species. Three lice species which belongs to the three genera, *Menacanthus eurysternus* (Burmeister, 1838), *Myrsidea picae* (Linnaeus, 1758) and *Brueelia biocellata* (Piaget, 1880) were found. *Brueelia biocellata* is the first ever recorded in Turkey.

**Keywords:** *Menacanthus eurysternus*, *Myrsidea picae*, *Brueelia biocellata*, Magpie, Turkey

## Türkiye’de Saksığanlarda (*Pica pica* L.) (Aves: Passeriformes: Corvidae) Görülen Bit (Phthiraptera) Türleri

### Özet

Bu çalışma saksığanlardaki (*Pica pica*) bit türlerini belirlemek amacıyla Ağustos 2011-Şubat 2012 tarihleri arasında Konya’da yapılmıştır. Bu amaçla 64 saksığan, bit yönünden incelenmiştir. Bitleri toplamak için kuşların tüyleri makroskopik olarak dikkatli bir şekilde incelenmiştir. Toplanan bitler, %70 alkol bulunan tüplere konulup %10 KOH’de saydamlaştırıldıktan sonra Kanada balsam ile lamlar üzerine yapıştırılarak ışık mikroskobunda teşhis edilmişlerdir. İncelenen 64 kuşun 20 (%31.25)’si en azından bir bit türü ile enfeste bulunmuştur. Enfeste kuşlarda üç cinse ait üç bit türü; *Menacanthus eurysternus* (Burmeister, 1838), *Myrsidea picae* (Linnaeus, 1758) ve *Brueelia biocellata* (Piaget, 1880) tespit edilmiştir. Bu türlerden *Brueelia biocellata* Türkiye’den ilk kez bildirilmektedir.

**Anahtar sözcükler:** *Menacanthus eurysternus*, *Myrsidea picae*, *Brueelia biocellata*, Saksığan, Türkiye

### INTRODUCTION

Magpie (*Pica pica*) is a bird which belongs to the family Corvidae, in the order Passeriformes. Its length is about 46 cm, the feathers on the ventral side of abdomen and shoulders are white, the other sides are black and metallic green on the tail, and their apical parts are metallic blue. Magpies live on the trees in the parks, gardens and shrubbery and feed by insects, roundworms. This bird is found very common in Turkey, Chine and Palearctic Region <sup>1</sup>. Magpies were shot by hunters and some farmers, because they usually destroyed planted lands.

Approximately 4000 species of chewing lice (Phthiraptera) have been recorded on birds worldwide <sup>2</sup>.

Price et al.<sup>2</sup> reported that, *Menacanthus eurysternus* (Burmeister, 1838), *Myrsidea picae* (Linnaeus, 1758), *Brueelia biocellata* (Piaget, 1880) and *Phlopterus picae* (Denny, 1842) were found on magpie over the world. However, the chewing lice fauna of magpie is little known in Turkey. Although, three magpies were examined for louse up today, two of them were found to be infested by the lice, and two lice species; *Menacanthus eurysternus* and *Myrsidea picae* were detected on the magpies in the study <sup>3</sup>.

This study was performed to detect the lice species found on Magpie in Turkey.



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## MATERIAL and METHODS

This study was done between the months August 2011-February 2012 in Konya. No Magpie was examined in September, in this period. In this study, 64 Magpies shot by the hunters in this season were examined for chewing lice. In order to collect the lice, the feathers of each bird were carefully examined. All lice were collected and placed in tubes with 70% alcohol. The lice specimens were cleared about 24 h in 10% KOH, and then kept for one day in distilled water. Following dehydration in a graded alcohol series (70%, 80%, 90% and 99%, in consecutive days), the specimens were mounted in Canada balsam on the slides. After dried in incubator, the lice specimens were identified under a light microscope (Leica DM750). The identification of the lice was carried out according to relevant literatures<sup>4-7</sup>.

## RESULTS

Of the birds examined, 20 out of 64 (31.25%) were infested with at least one chewing louse species and three lice species; *Brueelia biocellata* (Piaget, 1880), *Myrsidea picae* (Linnaeus, 1758) and *Philopterus picae* (Denny, 1842) were identified. *Menacanthus eurysternus* (Fig.1) was the most common species and it was found on 15 magpies. *Brueelia biocellata* (Fig. 2 and Fig. 3) and *M. picae* (Fig. 4) were detected on three and two birds, respectively. In all cases, only one louse species was detected on the birds.

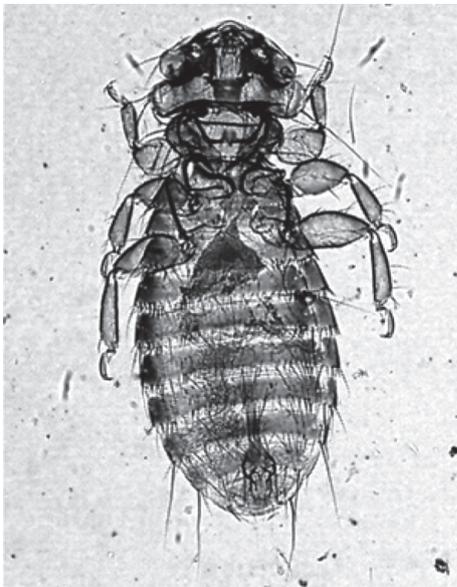


Fig 1. *Menacanthus eurysternus*, male, original  
Şekil 1. *Menacanthus eurysternus*, erkek, orijinal

## DISCUSSION

Approximately, 4000 valid lice species were found on the birds throughout the world<sup>2</sup>. There are 468 bird species recorded in Turkey so far and the actual total is likely



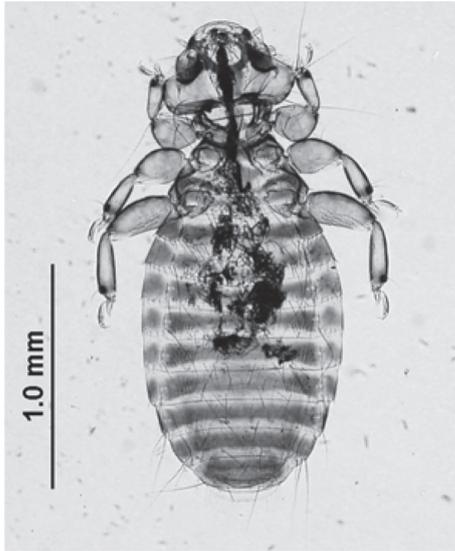
Fig 2. *Brueelia biocellata*, male, original  
Şekil 2. *Brueelia biocellata*, erkek, orijinal



Fig 3. *Brueelia biocellata*, female, original  
Şekil 3. *Brueelia biocellata*, dişi, orijinal

to exceed 500 species<sup>8</sup>. However, almost all of the louse fauna of these birds are still unknown.

Price et al.<sup>2</sup> stated that four lice species; *M. eurysternus*, *M. picae*, *B. biocellata* and *P. picae* were found on magpies. Dik et al.<sup>3</sup> reported that the louse infestation rates on songbirds' (Passeriformes) are very low rates, and only two lice species were detected on the magpies in a study in Kars, Turkey. In this study, three lice species; *M. eurysternus*, *M. picae* and *B. biocellata* were detected on the magpies,



**Fig 4.** *Myrsidea picae*, female, original

**Şekil 4.** *Myrsidea picae*, dişi, orijinal

while *P. picae* was not found on the birds. *Menacanthus eurysternus* was the very common species and it was found on 15 magpies. This species was collected in huge numbers on the birds. *Brueelia biocellata* and *M. picae* were found on a few birds and they were collected lower numbers.

*Menacanthus eurysternus* is a cosmopolitan species and it has been occurred on many bird species in the order Passeriformes<sup>26</sup>. Kettle<sup>9</sup> stated that the menoponids louse species on starlings were found the most prevalent in August and September, while philopterids were found in June and July. So; *M. eurysternus* had been collected on the starlings the most numbers in August and September<sup>9</sup>. Chandra et al.<sup>10</sup> reported that *M. eurysternus* has detected the lowest rate in January on myna (*Acridotheres tristis*) and infestation rate of this species has decreased in autumn and winter seasons, increased in spring and summer seasons. Although, no literatures found about the seasonal variations of this louse species on magpies. Recently, this species was found on European robin (*Erithacus rubecula*), sparrow (*Passer domesticus*) and starlings (*Sturnus vulgaris*) in Turkey in autumn and winter seasons<sup>11</sup>. In this study, 13 out of 20 magpies examined in August and two of 23 in October were found to be infested by the louse specimens. No louse individual was detected on 11 and 10 magpies examined in December and January, respectively. *M. eurysternus* and *M. picae* was found in August and October, *B. biocellata* was found on the magpie in August. Hunting many of the bird species including magpie is forbidden between the middle of August until the end of February in Turkey<sup>12</sup>. 64 magpies were examined in autumn and winter seasons, while

no magpie samples were examined due to hunting was forbidden in spring and summer seasons in Turkey. In spite of this, *B. biocellata* on three, *M. picae* on one of magpies examined in October were found in this study. Both species could not be detected on the magpies in the other months.

It was reported that *P. picae* was occurring on magpie<sup>13</sup>. This species also recorded from a magpie in Iran<sup>14</sup>. But, *P. picae* was not detected on the magpie in this study.

As a result, it was detected that 20 out of 64 (31.25%) were infested by the louse and three lice species; *M. eurysternus*, *M. picae* and *B. biocellata* were detected on magpies and *B. biocellata* was recorded for the first time in Turkey.

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