

# ПУХОЕДЫ ГОРБОНОСОГО ТУРПАНА *MELANITTA DEGLANDI* В СЕВЕРО-ЗАПАДНОЙ ЧАСТИ ЯКУТИИ

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Степанова Ольга Николаевна

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## Chewing lice of the white-winged scoter *Melanitta deglandi* in the northwestern part of Yakutia

O.N. Stepanova

*Olga Nikolayevna Stepanova*. Institute of Biological Problems of the Cryolithic Zone of the Siberian Branch of the Russian Academy of Sciences [IBPC SB RAS]. 41 Lenin Prospekt, Yakutsk, 677980, Russia. E-mail: [stepon72@yandex.ru](mailto:stepon72@yandex.ru)

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*Mallophaga*\* chewing lice is one of the most widespread groups of parasitic insects whose entire life cycle takes place on the host's body. A result of their activity is harm to feathers and skin; lice may contribute to emaciation, weakness of the animal's body and, accordingly, their predisposition to diseases. Chewing lice serve as intermediate hosts for other parasites and are carriers of infectious and invasive diseases. With a high infestation rate by chewing lice and the animal's low resistance, the host may die (Beklemishev 2009; Kokhonova & Drobina 2003; Johnson & Clayton 2003).

Chewing lice were collected from white-winged scoters *Melanitta deglandi* obtained through hunting in 2009 in the Zhigansk region of Yakutia. The collecting and processing of parasitic material was carried out using generally accepted methods (Dubinina 1971), and quantitative parameters (prevalence of infestation — P.I., abundance index — A.I.) were calculated as per Beklemishev (1970). A total of 38 scoters were examined, of which 26 (68.4%) were parasitized by lice. Eighty-two specimens of chewing lice were collected from the birds examined, which included 27 ♀♀ (33%), 18 ♂♂ (22%) and 37 nymphs (45%). The prevalence of infestation was 68.4%, while the abundance index comprised 2.2 specimens. According to our data, the most dominant and frequently occurring species of chewing lice on the white-winged scoters examined was *Anaticola constrictus* (Kellogg 1896). The average number of chewing lice per bird was 13 specimens.

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\*At the present time, chewing lice and sucking lice are combined in the order Phthiraptera.

We recorded 5 species of chewing lice on the scoters: *Anaticola constrictus* (Kellogg, 1896) (73.2%), *Anatoecus dentatus* (Scopoli, 1763) (18.3%), *Anatoecus icterodes* (Nitzsch 1818) (4.9%), *Holomenopon leucoxanthum* (Burmeister, 1838) (1.2%), and *Holomenopon loomisii* (Kellogg 1896) (2.4%), of which the two species from the genus *Holomenopon* were recorded for the first time on this host for the fauna of Yakutia. It is worth noting the absence in our sampling of *Trinoton minus* (Osborn 1986), previously known on this host (Vasyukova 1986). The chewing lice were collected in all stages of development, the majority of them were mature, and females with eggs were also encountered.

The species of chewing lice recorded are listed below, within the suborders and families:

Suborder **Amblycera** Kellogg, 1896  
Family Ancistroridae Harrison, 1915

Genus ***Holomenopon*** Eichler, 1941

Chewing lice of the genus *Holomenopon* are widespread on birds of the order Anseriformes. In our materials only two species of the present genus are present and in small numbers, therefore, numerical characteristics of the prevalence of these species of chewing lice were not calculated.

***Holomenopon leucoxanthum* (Burmeister 1838)**

Type host: European teal *Anas crecca*. This species of chewing lice was collected repeatedly on various species of Anseriformes in North America (Brander 1969; Emerson 1972), Europe (Palma & Jensen 2005; Threlfall *et al.* 1979), South Asia (Ahmad *et al.* 2014), Central Asia (Blagoveshchenskiy 1951), and Eastern Siberia (Fedorenko & Sonin 1983).

Material: 1 ♀.

***Holomenopon loomisii* (Kellogg 1896)**

Type host: Velvet scoter *Melanitta fusca*. Known in North America (Emerson 1972), Europe (Price 1971), and Eastern Siberia (Fedorenko & Sonin 1983) from a wide range of hosts. We detected it on 1 specimen.

Material: 1 ♀, 1 nymph.

Suborder **Ischnocera** Kellogg, 1896  
Family Esthiopteridae Harrison, 1916

Genus ***Anaticola*** Clay, 1936

***Anaticola constrictus* (Kellogg 1896)**

Type host: white-winged scoter. This species of chewing lice is widespread on various species of Anseriformes in Western Siberia (Kiseleva 1948), Central Asia (Blagoveshchenskiy 1948; Kasiyev 1971), and North America (Malcomson 1960; Emerson 1972; Threlfall *et al.* 1979). Found on 20 bird specimens in quite large numbers.

Material: 19 ♀, 14 ♂, 27 nymphs.

Genus ***Anatoecus*** Cummings, 1916

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

Typical host: mallard *Anas platyrhynchos*. This species is widespread in North America

(Malcomson 1960; Emerson 1972), Europe (Brander 1969; Eichler, Hackmann 1973), Central Asia (Blagoveshchenskiy 1940), and Eastern Siberia (Fedorenko & Sonin 1983). The range of hosts includes almost all domestic and wild waterfowl. We found this louse on 2 bird specimens.

Material: 5 ♀, 1 ♂, 9 nymphs.

***Anatoecus icterodes* (Nitzsch 1818)**

Type host: red-breasted merganser *Mergus serrator*. A quite widespread species of chewing lice on many species of ducks (about 20 are known). Widespread in North America (Emerson 1972), Eastern Siberia (Fedorenko & Sonin 1983), and Yakutia (Vasyukova 1986). Our sample was taken from 2 bird specimens.

Material: 2 ♀, 2 ♂.

Thus, 5 species of chewing lice from 3 genera and 2 families of both suborders are parasitic on the feathers of the white-winged scoter. From the suborder Amblycera the family Ancistrionidae (genus *Holomenopon*) has been identified, and from the suborder Ischnocera — Esthiopteridae (*Anaticola* and *Anatoecus*).

The number of chewing lice on a given bird varied over a rather wide range (from 1 to 13 specimens). If the species of chewing lice of the genus *Holomenopon* are characterized by quite close results of frequency of occurrence and abundance, then with chewing lice of the genus *Anatoecus*, on the contrary, with identical numbers their abundance varied. As per our data, the most dominant and frequently occurring species [of chewing lice] on the white-winged scoter is *Anaticola constrictus* (see the following table).

INFESTATION RATE OF THE WHITE-WINGED SCOTER BY DIFFERENT SPECIES OF CHEWING LICE

Species of chewing lice	N° of infested birds from 38 searched	N° of chewing lice collected	P.I.,%	A.I. spec.
<i>Anaticola constrictus</i>	20	60	52.6	1.6
<i>Anatoecus icterodes</i>	2	4	5.3	0.1
<i>Anatoecus dentatus</i>	2	15	5.3	0.4
<i>Holomenopon leucoxanthum</i>	1	1	—	—
<i>Holomenopon loomisii</i>	1	2	—	—
Totals	26	82	68.4	2.2

Considering the infestation rates of chewing lice, the white-winged scoter is characterized by quite high results. In the autumn, when the material was collected, the number of chewing lice was at its greatest owing to the appearance of new generations of parasites. Thus, prevalence of infestation comprised 68.4%, while the abundance index was 2.2 specimens, which is slightly lower than the results obtained previously in Yakutia — 71.4% and 3.9 specimens, respectively (Vasyukova 1986).

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