

## Original papers

## ***Trinoton querquedulae* (Linnaeus, 1758) (Phthiraptera: Amblycera, Menoponidae) – a rare parasite of the Eider duck *Somateria mollissima* (Linnaeus, 1758)**

**Sławomira Fryderyk**

Department of Invertebrate Zoology and Parasitology, Faculty of Biology, University of Gdańsk, Wita Stwosza 59, 80-308 Gdańsk, Poland

Corresponding author: Sławomira Fryderyk; e-mail: s.fryderyk@ug.edu.pl

**ABSTRACT.** In October 2006 an individual of the Common Eider (*Somateria mollissima*) was examined and one female of *Trinoton querquedulae* was found on one of the remiges. This species of lice was recorded for the first time in Poland on the studied host. Up till now, *T. querquedulae* has been noted only on this duck species in Belgium. Considering the extremely scarce information available, this species of lice is most probably rare in the Common Eider.

**Key words:** *Trinoton querquedulae*, Eider, *Somateria mollissima*, chewing lice, infestation

### **Introduction**

Chewing lice (i.e., Amblycera and Ischnocera) are highly specialized parasites of birds and mammals. They feed mainly on dermal debris, feathers, hair, and skin secretion. Among the largest lice are those of the genus *Trinoton*, which can reach 5–6 mm in length. They have numerous and diverse setae, large and strong legs, which enable them to move freely among feathers. Apart from feathers, lice can also feed on blood [1]. Chewing lice are parasites of Anseriformes; 5 species were recorded in Poland: *T. anserinum* (Fabricius, 1805), *T. luridum* Burmeister, 1938, *T. nyrocae* Eichler, 1943, *T. querquedulae* (Linnaeus, 1758), and *T. spinosum* Piaget, 1880 [2–4]. Pathogenicity of these lice is not well studied, but Cohen et al. [5] reported that *T. anserinum* could transmit filariasis in swans.

*Trinoton querquedulae* was recorded in different countries all over the world. The Teal (*Anas crecca* Linnaeus, 1758) is its typical host, however it was also noted on other bird species like: the Mallard (*Anas platyrhynchos* L., 1758), domestic duck (*Anas platyrhynchos f. domesticus* L., 1758), Pintail (*Anas acuta* L., 1758), South Georgia Pintail (*Anas georgica* Gmelin, 1789), Shoveler (*Anas clypeata*

L., 1758), Australasian Shoveler (*Anas rhynchos* Latham, 1802), Gadwall (*Anas strepera* L., 1758), Chestnut Teal (*Anas castanea* Eyton, 1838), Grey Teal (*Anas gracilis* Buller, 1869), Pacific Black Duck (*Anas superciliosa* Gmelin, 1789), Pochard (*Aythya ferina* L., 1758), Tufted Duck (*Aythya fuligula* L., 1758), Common Scoter (*Melanitta nigra* L., 1758), Pink-eared Duck (*Malacorhynchus membranaceus* Latham, 1802) and the Freckled Duck (*Stictonetta naevosa* Gould, 1841) [3,6–13].

In Poland this species was reported from several zoogeographic regions. As the domestic duck is one of its hosts, it is most probably distributed all over the country [2,3]. Except for the domestic duck, *T. querquedulae* was found in Poland on the Mallard, Gadwall, Garganey (*Anas querquedula* L., 1758) and the Teal [3,14,15].

This species was recorded on the Eider only once – in Belgium [16]; the present study supports previous finding, moreover it is the first record of *T. querquedulae* on this host in Poland.

### **Materials and Methods**

In October 2006, an individual of the Eider (*Somateria mollissima*), which drowned in the fishing nets in Gdańsk Bay was examined. The

feathers were thoroughly examined for lice starting from the head, then neck, back, rump, belly, wings and legs. One specimen of *Trinoton querquedulae* was found and used to prepare a permanent slide with polyvinyl lactophenol mounting medium. Measurements were taken using an optical microscope with an eyepiece micrometer (accuracy of 0.01 mm).

## Results and Discussion

One female of *T. querquedulae* (Fig. 1) on the



Fig. 1. Female of *Trinoton querquedulae*

wing of the Eider duck – on one of the remiges was observed. Previous study of this louse on other hosts showed that this species could be found all over the body of the bird, particularly at the base of the bill [17]. *T. querquedulae* was most often noted on the domestic duck and Mallard duck, while on the Eider duck was recorded only once – in Belgium [16].

Other lice species were also recorded on the Eider duck, i.e., *Anaticola mergiserrati* (= *Anaticola rubromaculatus*) (De Geer, 1778), *Anatoecus icterodes* (Nitzsch, 1818), *Anatoecus dentatus* (Scopoli, 1763) [16,18]. Still, the information on the ectoparasites of Eider ducks is scarce, despite the species could be numerous in some regions of Europe and North America. Up till now no information on the lice of the Eider duck was available from Poland. This could be due to the fact that this bird species is one of the least numerous sea ducks regularly wintering in Poland, while breeding only exceptionally [19]. Moreover, it was also supported by the structure of examined birds – there were only 3 Eider ducks among over 150 ducks, which were collected [20,21, unpublished data].

Usually intensity of invasion of *T. querquedulae* even in typical hosts is very low, while some increase in number of lice on the domestic ducks is noted in spring [22]. Within 12 mallards examined in Turkey, one specimen of this louse was recorded on one bird only [13]; however higher infestation of this host was recorded by Złotorzycka [3] (2.2 individuals). Heavy invasion is noted rarely. However, when it occurs then strong feather abrasion is observed, particularly on the back of the bird [22].

Table 1. Body size of females of *Trinoton querquedulae* (mm) on various hosts according to different authors

	Clay and Hopkins [6]	Ansari [23]	Złotorzycka [24]	Castresana et al. [10]	Aksin [13]	present data
Length of head	0.90	0.74	–	–	0.78	0.95
Width of head	1.33	–	–	–	1.31	1.33
Length of thorax	–	1.48	–	–	1.55	1.54
Width of thorax	–	–	–	–	–	1.44
Length of abdomen	3.26	2.28	–	–	2.40	3.13
Width of abdomen	1.69	–	–	–	1.44	1.65
Total length of body	6.10	4.51	5.2-5.6	4.51-6.00	4.73	5.61

The specimen of the louse recorded in this study was measured. Its measurements (total body length 5.61 mm) correspond to data given by other researchers (from approximately 4.50 mm to 6.10 mm; Table 1).

To conclude – both the results of this study and scarce information on the occurrence of *Trinoton querquedulae* on the Eider duck show that it is rare species of this host.

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