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FAUNA AND ECOLOGY OF NEMATODE OF THE GENUS HAEMONCHUS (NEMATODA: HAEMONCHIDAE) - ENDOPARASITES OF ANIMALS

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Cover Page Footnote

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Erratum

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**FAUNA AND ECOLOGY OF NEMATODE OF THE GENUS HAEMONCHUS
(NEMATODA: HAEMONCHIDAE) - ENDOPARASITES OF ANIMALS**

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Abstract: *Currently 13 species of the considered genus parasitizing the abomasums of ungulate animals have been recorded. The ungulates of the family of Cervidae (1) Antilocapridae (1), Giraffidae (1), Bovidae (12) and Camelidae (2) were recorded as definitive hosts of this parasite. Individual populations of the Haemonchus species were recorded in Asia, Europe, America, Africa and Australia. Sex ratio in Haemonchus contortus between females and males is 1:5. One female lays from 150 to 10.000 eggs per day.*

Keywords: *haemonchus, fauna, nematoda, endoparasit, animals*

**ФАУНА И ЭКОЛОГИЯ НЕМАТОДА РОДА HAEMONCHUS (НЕМАТОДА:
HAEMONCHIDAE) - ЭНДОПАРАЗИТЫ ЖИВОТНЫХ**

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Аннотация: *В настоящее время зарегистрировано 13 видов рассматриваемого рода, паразитирующих на сычуге копытных животных. Копытные семейства Cervidae (1) Antilocapridae (1), Giraffidae (1), Bovidae (12) и Camelidae (2) были зарегистрированы в качестве окончательных хозяев этого паразита. Отдельные популяции видов Haemonchus были зарегистрированы в Азии, Европе, Америке, Африке и Австралии. Соотношение полов у Haemonchus contortus между самка и самец составляет 1: 5. Одна самка откладывает от 150 до 10.000 яиц в день.*

Ключевые слова: *гемонхус, фауна, нематода, эндопаразит, животных*

**ҲАЙВОНЛАР ЭНДОПАРАЗИТЛАРИ HAEMONCHUS АВЛОДИ (НЕМАТОДА:
HAEMONCHIDAE) НЕМАТОДАЛАРИ ФАУНАСИ ВА ЭКОЛОГИЯСИ**

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Аннотация: Ҳозирги вақтда туёқли ҳайвонларнинг ширдони паразитлари ҳисобланган ўрганилаётган авлоднинг 13 тури қайд этилган. Туёқли ҳайвонларнинг *Cervidae* (1) *Antilocapridae* (1), *Giraffidae* (1), *Bovidae* (12) ва *Camelidae* (2) оиласининг вакиллари ушбу паразитнинг асосий хўжайини сифатида қайд этилган. *Haemonchus* авлоди турларининг индивидуал популяциялари Осиё, Европа, Америка, Африка ва Австралияда қайд этилган. *Haemonchus contortus* нинг урғочи ва эркакларнинг жинс нисбати 1:5 ни ташкил қилади. Бир урғочи индивид кунига 150 дан 10 000 тагача тухум қўяди.

Калит сўзлар: гемонхус, фауна, нематода, эндопаразит, ҳайвонлар

Nematodes in the genus *Haemonchus* Cobbold, 1898 parasites in the abomasum ungulates and widely represented in terrestrial ecosystems. These nematodes are widespread throughout the world, including in Uzbekistan and are recognized as the most pathogenic helminthes of of in cattle, sheep, goats and considerable research has been conducted on those species. Loss inflicted by these parasites important livestock [1,3,6,9].

Therefore, knowledge of the mechanisms of formation of faunal assemblages these nematodes will establish ranges of distribution parasite hosts examine population structure and define the interactions between hosts and parasites, as well as to predict the basis of identification of biotic and a biotic determinants of communities "parasite – host". Availability of information on biodiversity these communities are a crucial basis for determining the reactions in the "host-parasite" and the potential causes of the disease under the prevailing conditions of environmental change.

The purpose of research study of faunal composition and ecology of the nematode genus *Haemonchus* - endoparasites ungulates.

Currently, according to the literature [1-6, 8] and original research in the world fauna recorded 13 species of nematode genus *Haemonchus*, parasites in the abomasum ungulates. As the definitive hosts marked ungulates family of *Cervidae*, *Antilocapridae*, *Giraffidae*, *Bovidae* and *Cervidae* (**table**).

According to the table, as definitive hosts haemonchus installed 13 species of ruminants: *Bovidae*-12, *Cervidae*-1, *Giraffidae*-1, *Antilocapridae*-1 and *Camelidae*-2 species. Separate populations of species in ecosystems haemonchus registered in Asia, Europe, America, Africa and Australia.

Haemonchus wild and domestic ungulates quite intensively studied in the literature accumulated versatile material. However, many questions remain ecology

haemonchus still not clarified, in particular features of the settlement, the sex ratio and fertility.

Environmental characteristics for helminthes genus *Haemonchus* in farms and small farms Surkhandarya, Kashkadarya, Namangan and slaughterhouses of Tashkent and Namangan helminthological full autopsy conducted on sheep Skrijabin method [7]. Carpological studies were performed by conventional methods Berman – Orlov [3]. Material served eggs and mature individuals spontaneously from *H. contortus* infected sheep in Uzbekistan.

Studies have shown that live throughout haemonchus mucosal surface of the abomasums of sheep. In the fundal and cardiac portion of the abomasums concentrated most individuals *H. contortus*. To study the sex ratio was determined by the index floor (IP), i.e. the ratio of females to males studied species for a certain period of time. We frequently encountered less prolific species SP varied seasonal more essential. In April - June and August - October and later SP *H. contortus* increased to 2.0-3.0, fluctuating during the year from 0.3 to 2.8. In *H. contortus* amount females during the year are 3 times more than males. This ratio of females to males is 1:5.

Distribution species of the haemonchus on taxonomic groups of definitive hosts

Table

Species of nematode of the genus <i>Haemonchus</i>	Definitive hosts – Artiodactyla															
	Camelidae	Cervidae					Giraffidae	Antilocapridae	Bovidae							
		Cervinae	Odocoileina	Alcinae	Rangiferinae	Cephalophinae			Tragelaphinae	Alcelaphinae	Hippotraginae	Reduncinae	Antilopinae	Saiginae	Caprinae	Bovinae
<i>Haemonchus contortus</i>	+	+	+	+	+		+		+	+	+		+	+	+	+
<i>H.bedfordi</i>										+		+			+	+
<i>H.horaki</i>										+		+				
<i>H.dinniki</i>													+			+
<i>H.lawrencei</i>									+							
<i>H.longistipes</i>	+														+	
<i>H.krugeri</i>												+				
<i>H. mitchelli</i>										+						
<i>H.okapiae</i>						+										
<i>H.tataricus</i>															+	
<i>H.similis</i>															+	+

time than the same embryos little prolitic strongyles. In this haemonchus theoretically have the same chance of being host and populate them to such an extent that it does not pose a threat to animal and, ultimately, to those who are haemonchus. Haemonchus that are self-regulating organism, which, as already noted, even the sex ratio is directly proportional to the fertility of females.

The above self-regulation strongyles closely related to ecology of helminthes and their hosts and, of course, not always clearly evident in experiments and can be violated in vivo. In the latter case haemonchus or do not survive in the host, or develop such host-parasite relationship in which animals overpopulate haemonchus excessively and very sick.

In this regard, we believe that any anti helminthic activities must begin with an environmental analysis of the specific situation and parasitological primarily with finding and eliminating the causes of disturbances in ecosystems haemonchus self-regulation, which was composed of these nematodes.

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