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# SEASONAL DYNAMICS AND ECOLOGICAL FEATURES OF DERMACENTOR BUGS IN SOUTHERN UZBEKISTAN

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**ABSTRACT**
Live-stock production, one of the leading sectors of the economy in the Republic of Uzbekistan, is of great importance in ensuring the high productivity of agricultural animals in the production of dairy products. From this point of view, the results of scientific research on the morpho-biological and functional poultry ectoparasite in zoology and parasitology serve as a scientific basis for direct action against them.

**KEYWORDS:** Amblyomminay seasonal dynamics, Dermacentor, fauna, ecology.

The influence of the anthropogenic pressures on the structure and functions of the animal community is increasing year by year. As a result, the populations of certain groups of animals and particularly blood sucking ticks – ectoparasites infecting vertebrates, including human beings – increase.

According to the results of the survey conducted in the southern regions of Surkhandarya and Kashkadarya regions, *D.pictus*, *D.pavlovski*, *D.dagehestanicus* species belonging to the *Dermacentor* family were widely spread.

## MATERIAL AND METHODS

Surveillance of ductal bugs in vertebrate animals in Sherobod, Muzrabod, Baysun districts of Surkhandarya regions and Dehkanobod district of Kashkadarya region was investigated. Based on the findings of the survey, using field research and observation techniques, research works on pastures, irrigated lands, fields, various vertebrate animals and human beings were conducted in order to obtain information on canals' ecology. Bug samples were collected during the daytime, pastures and largely from the mallow, the large and small horns, as well as dogs, cats and rodents. The collection of cannabis in animals and other livestock products has been carried out by means of several authors' works. In addition to calculating bugs, injecting labeled, testers, using blood collection and collection methods, the bugs were stored in 70% ethyl alcohol.[1,2,3,4,5,6] Investigation of the morphological and biological properties of the tour was continued at the Parasitology Laboratory of the Institute of Botany and Zoology of the Academy of Sciences of the Republic of Uzbekistan.

## RESULTS AND DISCUSSION

As a result of researches 15 species of acarians of 6 genus belonging to two subfamilies are defined - Amblyomminay.

Family of Ixodidae Murr 1877 is represented by 15 species from 6 genus – *Ixodes, Haemaphysalis, Boophilus, Dermacentor, Rhipicephalus, Hyalomma*.

There are 6 types of Dermacentor series in our country in 1965 – 1975 according to the literature review. Until now, these scientific studies have not been continued, and the bugs have been slightly revised. Factors that occur in these processes can be predicted by factors such as reduced living conditions and climate change. According to the results of the research, the *Dermacentor* family found that *D. pictus*, *D. pavlovski*, *D. dagehestanicus* species were found in the mammals, body of breech and various biotopes. Due to the change in the ecological factors, biotopes can not survive due to changes in their habitat. Loss of agricultural animals with *Dermacentor* bugs was observed in June, July and in rarely cases in August. *D. pictus* and *D. pavlovsky* tulips were found to be parasitic in cattle, sheep and rabbits, D.dagehestanicus reptiles, including snakes and tigers. The larvae and herds of nymphs parasitize mice, rats, flies, and eat with their blood. The *Dermacentor* cane can grow up to 500 – 1000 eggs at 35-40 $^0$C in field conditions. Egg lasted 23-27 days. After the egg is released, the females can die. The duration of the embryo development depends on temperature and humidity and has been completed in the literature for 35 to 38 days during our 20 to 28-days study. The embryonic development was found to be 22-25 days in April, 32-35

days in May, June and July, and the larval output of larvae lasted 7-8 days. When compared to literature, the biological properties of the aforementioned bugs are currently varying to 10 days.[7,8,9,10,11]

**1-photo. *D. dagehestanicus* appearance and eggs of blood type.**

Egg-shaped larvae emerge from the egg for 3-4 days, stick to vertebrates, start feeding, and absorb large quantities of blood. During our observation, larvae have been found to be rooting for 9 to 12 days in the body of rodent creatures, and 14 days larvae nymphs. These tulips may also be exploited as a result of a massive increase in summer days.

*D. pictus* and *D. pavlovsky* are short-pink, small-eyed, with a long red-brown leg. It is also covered with invisible feathers on its feet. Feathers work with tinctures to detect smell, and help them find their boss quickly. A large number of dots are covered with a shield. There are open, transverse circular shaped lines in the joints. Color black, brown. The number of bugs grows in April and May, and observes in animals in the long autumn, warmer years or even in winter. According to our research, the time of appearance of *D. pictus* and *D. pavlovsky* species in animals and different biotopes was not different in different parts and zones of our republic. In the northern part and the piedmont zones, the initial larvae were found at the beginning of May, in the central part of the middle of April and in the south by the end of March, animals were found in their nests. In the studied regions, depending on the hot or cold weather, the nymph and adult period of the bugs may occur at different times in animals. During the researches, the dynamics of seasonal growth of *D. pictus, D. pavlovsky* and *D. dagehestanicus bugs* were studied and the following result was obtained. The highest rates were observed in July, with *D. pictus* reaching 55%, *D. pavlovsky* by 40%, *D. dagehestanicus* by 45%. *Dermocentor bugs* were found to be most likely between June and July.

The results of the observations indicate that larvae and nymphs occupy a central place in the distribution of canals. During these stages of development bugs tend to bind to long-term months and spread to different biotopes. *Dermacentor* tins are mainly fed by cattle, head, ear, neck, legs, livestock ear and saddle. Echmias tested in steppe and sands of Surkhandarya region, the psoriasis was found in the head, only in the head. In the course of the research, there was a tendency of infection of mammals and reptiles during the different stages of the *Dermacentor* series.

**Dermocentor tissue is a condition of mammals and reptiles.**

| Animal species | Number of animals | Infection with bugs | |
|---|---|---|---|
| | | Total | % |
| Cattle | 55 | 25 | 45.45 |
| Sheep | 45 | 20 | 44.44 |
| Rabbit | 25 | 15 | 60 |
| Lizard | 15 | 8 | 53.33 |
| Tortoise | 20 | 16 | 80 |
| Total | 160 | 84 | 52.5 |

Larvae and nymphs of *Dermacentor bugs* were found in 10-18 cases in the body of cattle, sheep and rabbits in June and July, and in the body of the reptiles about 8-20 cases. The bugs in the Imago stage are active in the summer, sheltering on the ravioli, reed and steppers, where the saxual, cypress and wormwood are common. From October to November the development of leaflets slows down, larvae, nymphs and imaginary animals feed on their blood without moving. Blood filled bugs protect themselves from cold weather and cold by entering the flaccid, chimney crackers. Taking into consideration the above mentioned data, in the Surkhandarya region of our Republic Dermacentor's genes were indentified as three species of biotope. The data on ecology and morpho-biological properties, living conditions and reproduction of D. picktus, D. pavlovsky, D. dagehstanicus bugs. These bugs were observed in mammals by 45 %, in reptiles up to 80 %. This bug has being caused by

parasites in different vertebrates, in particular, leading to a sharp decrease in livestock productivity. D.nuttali, D.marginatus, D.silvarum bugs were not observed in the study previously mentioned in the above regions. The results are crucial in implementing anti-trafficking measures.

## CONCLUSION

Most species of ticks environmentally associated with mammals, or more precisely their separate groups. Another part of the specialized to parasitic is mainly on domestic and wild birds.

Degree mite reproductive of animals are dynamic, which is dependent on environmental factors and biocenotic links components of parasitic system.

The complex species composes *Dermacentor* mites fauna of Uzbekistan at the present stage involves the systematic monitoring of the number of animal ectoparasites populations with the aim of improving the methods of dealing with them in specific areas.

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