

a distance of 1–2,5 km in the south-eastern direction and 5 km in the north-eastern direction by 2,03–2,6 times. For *Betula pendula* Roth. there was a decrease in catalase activity only at a distance of 1 km in the south-west, south-east and north-east directions by 1,3–1,7 times.

Thus, the study showed that in the leaves of woody plants growing in a technogenically contaminated environment (in the conditions of emissions of gaseous substances into the air by the enterprise for the production of building materials), the development of oxidative stress was observed, accompanied by an increase of lipid peroxidation and unidirectional changes in the activity of the catalase enzyme.

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FEATURES OF THE DEVELOPMENT OF MANTIS RELIGIOSA IN THE PROCESS OF ONTOGENESIS IN LABORATORY CONDITIONS

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The process of *Mantis religiosa* individual development in the conditions of a laboratory experiment has been traced. The optimum of temperature conditions at larval hatching has been revealed; the processes of adaptation to the offspring preservation have been noted. The features of sex's relations in captivity have been established.

Keywords: optimum, adaptation, ontogenesis.

Purpose: to reveal the optimal parameters of an individual development from an egg to an imago.

Tasks:

1. to determine an optimal temperature regime
2. to show the role of sex's relations in captivity
3. to detect the nature of a copulation process
4. to trace the ways of *Mantis religiosa* settlement on the territory of Belarus.

In a preliminary experiment, a female, caught on a potato field near Baranovichy city, Zastarinje village, has been used.

The laboratory observations of development stages have shown that laying eggs occurs on the upper and inner side of a leaf, presumably for an adaptation to fluctuations in temperature and humidity. For the development of larvae, a certain temperature regime has been set. According to our observations, the hatching of larvae is observed in about a month if the temperature is above 25° C, and a larvae exit is delayed if the temperature is below 20 °C.

In 2018, there has been appeared the information in Internet sources that the appearance of larvae has been observed in house conditions in April. The matter is that the large quantities of a plant Acacia silver (*Acacia dealbata*) are delivered on March 8 to Belarus. In cases if a plant is not thrown out within a month, there is enough time for appearing nymphs. Thus, it is natural to assume that clutches on the thrown acacia plants, having got in favorable conditions, do not die, and the hatched larvae extend across the territory of the Republic. This fact confirms one of the ways of mantis spreading.

An imago sexual structure is represented by three females and two males, with which an experiment has been conducted to reveal the feasibility of sacrificing a male for the appearance of a full-fledged offspring. It has consisted in three variants as follows:

in the first, a male has been eaten before mating, in the second, mating has been observed, and a male has remained alive, and in the third, a female being on an imago stage has not become in contact with a male. It should be noted that eggs have been laid by three females. However, offspring has been obtained only in the second variant. From literary sources, it is known that a female eats a male after mating. This contradiction can be explained by a sufficient amount of food (fly larvae, mosquito larvae).

Offspring is not numerous due to closely related crossing and the stress of being in captivity. To an imago stage, one male has been saved. The experiment continues at this stage. Mantis oothecae have been placed for wintering in a natural environment.

ASSESSMENT OF OCCURRENCE OF TICKS IN THE PARK OF STONES

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The work evaluated the occurrence of ticks in the Park of the stones of the city of Minsk.

Keywords: recreation, recreation area, ectoparasites, mites.

According to the General plan of Minsk with adjacent territories within the perspective city line the Park of stones is carried to LR-4. It is a type of landscape-recreational zone, which is defined as a specially protected natural area and objects. Recreational load is less than 30 people. / ha, and landscaping reaches 99%

The Park was founded in 1985, in a place that represented the swampy outskirts of the city. The swamp was drained, carried out land works on the formation of the terrain. In total, 2,134 boulders were collected, they were brought to Minsk and the creation of the Museum began. Under the open halls of the Museum, there are about 7 hectares, located between the campus and the Metropolitan district Uruchcha. In 1989, the stone Park in Minsk received the status of a natural monument of national importance.

For the parks of the city of Minsk is characterized by the presence of Ixodes ticks, carriers of dangerous diseases. We used the method of collecting ticks on the flag to assess the activity of Ixodes ticks in the Park of stones. A flag is a piece of white, better brushed, fabric size 40x80 cm or 60x100 One of the short sides has support for strong stiff stick with a length of about 1.5 m. the Flag of "sweep off" the bushes, the grass, the lower branches of small trees, exposed areas of soil. Located on them in the "waiting position" ticks cling to the matter, and then removed from it by the collector. Registration of ticks was carried out in the period from July to August 2018. every decade. A total of 24 tick specimens were registered during this period.

The activity of ticks was determined by a number of factors. High air temperature during July and early August caused the least activity of parasites (2–4 individuals per flag/km). For ticks influenced Vikas grass.

The greatest activity of ticks was observed at the end of August (20 individuals per flag/km). During this period, the optimal conditions for habitat (temperature +20–22, humidity up to 78%).