

frog (*Hyla arborea*) – $1,2 \pm 0,2$ ind/ha, European fire-bellied toad (*Bombina bombina*) – $2,2 \pm 0,5$ ind/ha.

19 amphibians of following species were found at the upland meadow: Common spadefoot (*Pelobates fuscus*) – $7,3 \pm 1,2$ ind/ha, Common frog (*Rana temporaria*) – $4,2 \pm 1,8$ ind/ha, Common toad (*Bufo bufo*) – $3,3 \pm 1,3$ ind/ha, European green toad (*Bufo viridis*) – $2,6 \pm 0,5$ ind/ha, European tree frog (*Hyla arborea*) – $2,2 \pm 0,3$ ind/ha, European fire-bellied toad (*Bombina bombina*) – $1,4 \pm 0,8$ ind/ha.

On the drainage canals Marsh frog (*Pelophylax ridibundus*) and Pool frog (*Rana lessonae*) are the dominant species, that reach the highest density in the zone of reclamation channels – $4,1 \pm 0,3$ and $7,5 \pm 2,3$ ind/ha, respectively.

On the upland meadow Common spadefoot (*Pelobates fuscus*) has the highest density $7,3 \pm 1,2$ ind / ha.

In a result of studies it is clear that the most favorable biotopes for amphibian habitat are in areas that were exposed to the drainage reclamation – reclamation canals. The species composition of amphibian populations in the drainage canals in 1,5 times higher than of drained grasslands. There marked not only the greatest biodiversity of amphibians (8 species), but also the highest density of amphibians ($25,6 \pm 1,4$ ind/ha).

Asipchyk M., Zagortseva E., Golubev A.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

FEATURES OF GROWTH AND REPRODUCTION, PARTHENOGENESIS OF MARBLED CRAYFISH IN LABORATORY CONDITIONS

Freshwater crayfish have a tremendous impact on freshwater ecosystems due to their large size and dietary habits. Thus, the appearance or disappearance of cancers, replacement them with others, not characteristic for the habitat species can lead to disruption of the ecological balance and irreversible consequences.

Recently in Europe there is a trend for the appearance of non-indigenous species of North American crayfish. One of them is the marbled crayfish (*Procambarus fallax*). Marbled crayfish attract special attention because they are the only obligate triploid parthenogenetic decapod that produce genetically homogeneous offspring. This species multiplies rapidly, matures early and has a high fertility, thus creating competition to endemic species of freshwater ecosystems crayfish. In addition, they are carriers of crayfish plague (*Aphanomyces*) a highly contagious disease that causes mass death of European native crayfish species.

For studying the characteristics of growth and reproduction of crayfish marble 2 generation were taken in the laboratory: from 09.11.2015 (1) and 06.01.2016 (2).

Then all individuals were been sected on the aquariums, depending on the weight. Changes in average weight during the experiment are presented in Table 1.

Table 1. – The average weight of individuals during the experiment

Generation 1						Generation 2			
Age (days)	Aquarium No.					Age (days)	Aquarium No.		
	1–1	1–2	2–1	2–2	2–3		3–1	3–2	3–3
	Number of individuals						Number of individuals		
	7	6	6	5	5		5	5	6
	Average weight (mg)						Average weight (mg)		
158	58,6	160,6	215,5	71,4	44,3	154	251,3	198,6	157,2
178	126,6	260,3	321,1	129,04	83,7	180	426,6	371,7	305,8
212	233,6	438,7	593,4	298,36	319,5	223	1284,9	1043,9	641,8
238	398,8	627,3	1076,3	439,34	476,1	239		1480,3	918
281	1153,33	832,4	1345,1	858,6	1374				
297	1311	1756,3	1898	1025,25	1391,6				

The main factor influencing the growth and reproduction of marbled crayfish is the temperature. The nature of marbled crayfish temperature ranges is from 8 °C to 30 °C. In the laboratory conditions, the temperature varied from 15 °C to 30 °C. Typically marbled crayfish reproductive age beginning at 20–25 °C from 141–255 days of life.

Since the temperature in the laboratory varied all the time, and majority of the time barely reached 20 °C, so the first clutch in the individuals of the first generation aged were only at 297 day. The clutch of individuals of the second generation, from the aquarium 3–2, appeared at the age of 239 days. Usually in a laboratory conditions at a temperature below 15 °C marbled crayfish stops multiplying.

The data obtained can be used to further explore the characteristics of growth and reproduction of the marble cancer. And also for the development of methods of preventing the spread of invasive species in freshwater ecosystems

Astreyko V., Kapitsa V.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

ENVIRONMENTAL ASPECTS OF MANAGEMENT IN TEXTILE INDUSTRY

The textiles industry has a large pollution problem worldwide. The main issue is water pollution. It is estimated that 17 to 20% of industrial water pollution comes