

POPULATIONS OF PYRRHOCORYS APTERUS (LINNAEUS, 1758) IN THE FOREST-PARK ZONES OF ZHYTOMYR

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The bug *Pyrrhocorys apterus* (Linnaeus, 1758) is a typical inhabitant of forest-park zones in Ukraine. It is predominantly found in mature and intermediate-aged coniferous, mixed, and deciduous forests. This insect is a convenient subject for study because it is a widespread, polymorphic species that is easily observable due to its colonial lifestyle.

Research on populations of this bug is conducted across three aspects:

1. feeding,
2. locomotor activity,
3. species ecology.

The study of ecological aspects focuses on explaining specific ecological patterns of the species, employing field methods as well as theoretical and analytical research [2].

Data collection was conducted through transect surveys, with the forest-park zones of Zhytomyr selected as the study area. Fieldwork focused primarily on detecting the species' presence in pre-selected sites specifically, the parks and public gardens of Zhytomyr.

The study conducted in various areas of the forest-park zone in Zhytomyr, examined aspects such as bug abundance in the study area, seasonal behavior, reproductive activity, locomotor activity, and morphological diversity and variability.

The total body length of the adult insect ranges from 7 to 12 mm. Hind wings are usually absent, though exceptions occur. The body is red, the abdomen and the pattern on the elytra are black, and the dorsum is flattened.

The bugs varied somewhat in coloration; individuals ranging from light red to darker shades were observed. The larvae have predominantly red abdomens, sometimes with small black spots along the back. Winged adults have entirely black wings.

The insect possesses piercing-sucking mouthparts, which allow it to pierce not only plant tissues but even the tough exoskeletons of dead insects to extract their fluids [3].

These bugs are active from early april to late october and can form massive aggregations. They live in colonies on the ground near the base of tree trunks, feeding on plant sap. Their diet also includes small insects and seeds from plants such as linden,

mallow, and hibiscus. Aggregations particularly of immature individuals are frequently observed, ranging in size from a few dozen to around a hundred specimens.

In the spring, the female lays about 30 small eggs. These bugs reproduce quite rapidly: the presence of just one or two individuals leads to quick multiplication, and an entire colony emerges within a few weeks. The mating process of bed bugs is unique and interesting. The male and female join at the rear of their bodies, resulting in the transfer of the male's reproductive cells to the female.

The bugs lay white eggs within the plant tissues (leaves, shoots, or trunks) upon which they are currently feeding. The nymphs emerge after a week and a half; they differ from the adult insects in their smaller size and uniformly red bodies. These insects were found on tree trunks, stumps, and along both dirt and paved paths in the forest park area.

References

1. Palmer A.R. Fluctuating asymmetry: measurement, analysis, patterns. *Ann. Rev. Ecol. Syst.* 1996. V.17. P. 391-421.
2. Palmer A.R. Fluctuating asymmetry analyses. *Developmental instability: its origins and evolutionary implications*. Dordrecht, Netherlands: Kluwer, 1994. P. 335-364.