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## FAUNISTIC ANALYSIS OF LEPIDOPTERA (INSECTA, LEPIDOPTERA) DISTRIBUTED IN THE EASTERN PART OF ANDIJAN

**Abstract:** This article presents the results of the faunistic analysis of some widespread representatives of the Lepidoptera family conducted in the southeastern regions of Andijan in 2021-2023. According to the results of the conducted research, 6 families, 10 genera and 12 species belonging to 1 suborder were found in the studied areas.

**Key words:** Lepidoptera, bioecology, imago, egg, fungus, Zygaena, Pieris brassicae, Coliaserate, Lepidoptera.

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### Introduction

The world of butterflies living on earth is amazing and diverse. The ancient Romans believed that these amazing creatures of nature were separated from plants or arose from flowers, and they relied on legends to name them. Therefore, especially among the names of day butterflies, you can find the names of heroes and gods of ancient mythology: Apollo, Phoebus, Laertes, Cypris, Mnemosyne. The famous Swedish scientist Karl Linnaeus, one of the founders of the science of classification of living organisms, also studied butterflies and made a great contribution

to naming them. It is not for nothing that the ancient Romans followed the continuous development cycle of butterflies and made it a symbol of immortality [1].

The branch of entomology that studies Lepidoptera is called Lepidopterology. Lepidopterology comes from the Greek words lepis - scales, pteron - wing, logos - science, study.

Butterflies live in almost all landscapes. They even have the ability to adapt to desert environments where life seems impossible. Currently, there are more than 140,000 species of moths on earth, of which about 8,000 species have been studied in the

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Commonwealth of Independent States, and more than 1,500 species have been studied in Uzbekistan. The genus of moths is divided into 3 subfamilies. They are suborders of jaws, demersals, and supersuckers. These suborders are divided into 100 to 200 families. Many species are protected as an important piece of nature that gives aesthetic pleasure (for example, *Papilio machaon*, *Parnassius apollo*) [4,5].

8 families, 27 species belonging to 25 genera, 2 families, 16 species belonging to 14 genera, 3 families, 5 species belonging to 4 genera are distributed in rapeseed plant. Populations of *Oncocera semirubella*, *Chrysodeixis chalcites*, which are recorded for the first time in the entomofauna of the Fergana Valley, and *Evergestis frumentalis*, *Evergestis extimalis*, which are recorded for the first time in the entomofauna of Uzbekistan, are currently expanding.

The population of *Carcharodus alceae*, *Colias erate*, *Polyommatus icarus napaea*, which has an active trophic relationship with food plants, is considered one of the species in need of protection [2,7].

## MATERIALS AND METHODS.

### Research area.

Researches was carried out in plains, hills and mountain regions of the southeastern regions of Khojaabad and neighboring regions of Andijan in the 2021-2023 (spring-summer-autumn season) The climate of the places is strictly continental. Average

annual temperature is 13.1°C. In July, the average temperature is 26.7°C, the highest temperature is 45°C. The average temperature in January is -3.5°C, the lowest temperature is -26°C. Annual rainfall is 218-330 mm.

Researches were conducted at the "White Stork" fishery of Khojaabad district, at the sports rehabilitation camp located in the village of Karnaychi, in the reservoirs around the Shrine of Imam Ata, and around the lakes at the foot of Imam Ata Mountain.

### Materials.

In order to study the fauna and distribution of Lepidoptera distributed in Khojaabad and its border areas, an expeditionary route (Dedyukhin style) was used to collect biomaterials. A GPS navigator was used to obtain daily, study location data for process recording. Collection of samples (using an entomological trap) was carried out on the banks of water bodies, ditches, lakes, ditches and cultivated fields. The collection of materials was carried out in the summer-autumn seasons of 2022-2023 (from the second half of June).

In order to identify the types of stilts, including the scientific literature related to the field, as well as in their systematic analysis, the site <https://www.gbif.org/> was consulted [3]. The location coordinates of the materials collected for research were determined using the cartographic service of the "Google map" program.



A

B

### South-eastern regions of Andijan

Figure-1. Map of sample collection areas from the southeastern regions of Andijan A. (Overview of southeastern areas of Andijan, B. Sample collection areas in Khojaabad district).

1. (40°32'54"N 72°36'34"E), 2. (40°36'44"N 72°43'57"E), 3. (40°32'52"N 72° 36'37"E), 4. (40°32'47"N 72°36'32"E), 5. (40°32'49"N 72°36'39"E), 6. (40° 32'39"N 72°36'50"E), 7. (40°32'34"N 72°36'19"E), 8. (40°32'27"N 72°36'34"E ), 9. (40°32'50"N 72°36'30"E), 10. (40°32'46"N 72°37'17"E), 11. (40°32'24"N 72°37'08"E), 12. (40°32'42"N 72°37'26"E).

## RESULT AND DISCUSSION.

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According to the results of the taxonomic analysis of the fauna of pterosaurs distributed in Khojaabad and its border areas, it was found that they

consist of 1 suborder, 6 families, 10 genera, and 12 species (Table-1).

**Table-1. Lepidoptera fauna distributed in the eastern part of Andijan.**

№	Latin name of the species	Uzbek name of the species	English name of the species
<b>Category – Lepidoptera</b>			
<b>Family-Pieridae (Duponchel, 1835)</b>			
<b>Avlod-Pieris (D. Don)</b>			
1.	<i>Pieris brassicae</i> (Linnaeus, 1758)	Karam kapalagi	Cabbage butterfly
2.	<i>Pieris rapae</i> (Linnaeus, 1758)	Sholq'om kapalagi	Turnipbutterfly
3.	<i>Pieris chloridice</i> (Hübner, 1813)	Belyanka xlorid	Lesser Bath white
<b>Genus Colias (Fabricius, 1807)</b>			
4.	<i>Colias erate</i> (Esper, 1805)	Sariq cho'l kapalagi	Eastern pale cloudy yellow
<b>Family-Lycaenidae (Swainson, 1820)</b>			
<b>Genus Polyommatus (Latreille, 1804)</b>			
5.	<i>Polyommatus Icarus</i> (Rottemburg, 1775)	Ikar ko'k kapalagi	Common blue butterfly
<b>Genus-Praepilotes (Forster, 1938)</b>			
6.	<i>Praepilotes anthracias</i> (Christoph, 1877)	Ko'k burchakli	
<b>Genus Aricia (Robineau-Desvoidy, 1830)</b>			
7.	<i>Aricia agestis</i> (Denis & Schiffermüller) 1775	Golubyanka jigarrang	Brown Argus
<b>Family-Nymphalidae (Rafinesque, 1815)</b>			
<b>Generation-Vanessa (Fabricius, 1807)</b>			
8.	<i>Vanessa cardui</i> (Linnaeus 1758)	Qushqonmas o't kapalagi	Painted lady
<b>Genus Hyponephele (Muschamp, 1915)</b>			
9.	<i>Hyponephele interposita</i> (Erschoff, 1874)	Lo'li kuya	Gypsy moth
<b>Family-Erebidae (Leach, 1815)</b>			
<b>Genus Lymantria (Hübner, 1819)</b>			
10.	<i>Lymantria dispar</i>	Lo'li kuya	gypsy moth
<b>Family-Zygaenidae (Latreille, 1809)</b>			
<b>Genus Zygaena (Fabricius, 1775)</b>			
11.	<i>Zygaena truchmena</i> (Eversmann, 1854)	Turkman kuya	Turkmen moth
<b>Family Sphingidae (Latreille, 1802)</b>			
<b>Genus-Theretra (Hubner, 1819)</b>			
12.	<i>Theretra aleco</i> (Linnaeus, 1758)	Lochin kalxat Alecto	Hawk hawk Alecto

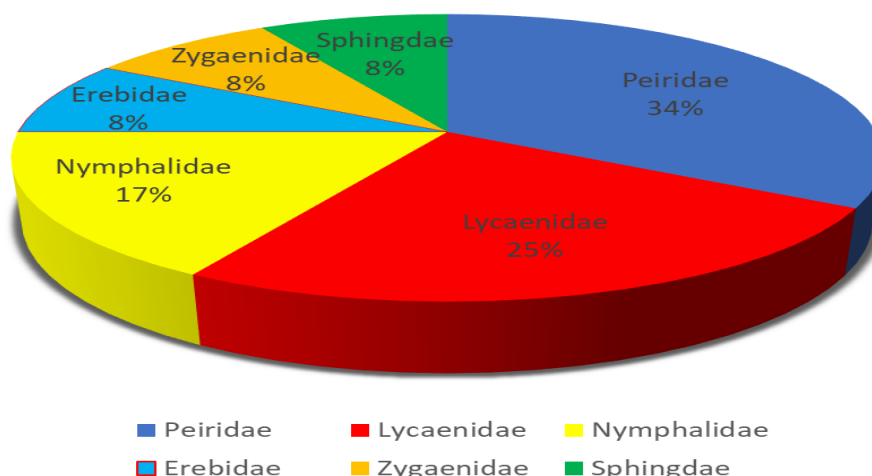
As a result of the study of the fauna of hornbills distributed in Khojaabad and its border areas, it was found that the group consists of 12 species.

In the diagram below, the Pieridae family of pincers dominates with 34% - *Pieris brassicae*

(Linnaeus, 1758), *Pieris rapae* (Linnaeus, 1758), *Pieris chloridice* (Hubner, 1813) includes types. In the total fauna, other families Lycaenidae make up 25%, Nymphalidae 17%, and families Erebidae, Zygaenidae and Sphingidae occupy 8%.

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**Figure 2. Distribution (%) of the Lepidoptera fauna distributed in the eastern part of Andijan in the section of families.**

In different regions of the world, especially in the CIS, 104 species of butterflies are included in the Red Book. 43 of these species live in Central Asia and Kazakhstan. *Zygaena truchmena* (Turkman ola butterfly) a family of butterflies, *Zygaena* of the *Zygaenidae* family Fabricius belongs to the generation. The distribution area of this species is found in open areas such as desert zones, oases, plains, steppes, groves and pastures. *Zygaena truchmena* is included in the Red Book of Kazakhstan. Currently, the drying of river plains, fires, cutting of forest vegetation have a negative effect on the population of the species [13].

### SUMMARY.

As a result of our research, it was found out that the fauna of anteaters in Khojaabad of Andijan region

and its bordering areas consists of 6 families, 10 genera, 12 species belonging to 1 suborder, and samples were taken from the identified species for collection materials. As a result of the observations, it became clear that the fauna of the hornbills in Khojaabad was almost homogeneous, and the hornbills of these areas were fully studied and analyzed for the first time. During the research, we found the species *Zygaena truchmena* (Eversmann, 1854), included in the Kyrgyz Red Book, on the slopes of Imam Ota Mountain. To conclude from this, the species *Zygaena truchmena* (Eversmann, 1854) has the ability to adapt to the mountain environment. We found out that due to the fact that this species is on the verge of extinction, it is included in the red book in the neighboring countries of Kazakhstan and Kyrgyzstan.

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