Project Update: June 2020

Partial project results:

To clarify the environmental conditions in which live the mixed red underwing (*Catocala deducta*), I conducted a phenological observation of the spring-summer fauna (of Noctuoidea) in the floodplain forests of the Irtysh River at control site No. 2 - the village Pavlodarskoye in April 6th, May 10th, May 13th, May 17th, May 28th, May 31st, June 5th and June 10th 2020. I used mercury UV lights to attract the moths and made a list of the species that came.

We established successful cooperation with the Public Association "Pavlodar House of Geography" represented by its head Alexander Vervekin. Thanks to his connections, we were able to agree with the deputy head of the education department of Pavlodar region Karambaev Zhomart to conduct online seminars in "children youth ecological school "of the city of Pavlodar and rural schools of the village of Koktobe and Zhelezinka on the subject of our project in the autumn. Due to the quarantine caused by the COVID-19 pandemic, all mass events are postponed indefinitely, so we have the opportunity to interact with a large audience of children and students through online communication.

We agreed with the editor-in-chief of the Kazakhstan journal “Vestnik of the Pavlodar Geographical Society” Torpischeva Rufina to allocate a place in the journal for publishing the results of our project in February-March 2021.

Director of the Institute of Zoology, Yashchenko Roman Vasilievich (Almaty) agreed to help me and gave me first instructions for creating an official proposal document on Catocala deducta as a new species to be included in the Red Book of Kazakhstan.

Additional interesting information and useful results from the project:

On May 13th, 2020 an extraordinary event occurred during fieldwork. For the first time in all the practice of field research, I managed to find the rare Siberian - Central Asian steppe (xerophilic) species *Cucullia biradiata*, which is locally distributed in Kazakhstan, Russia and Mongolia and is known in these countries only by a few finds. Thanks to research supported by the Rufford Foundation, I managed to take the first photograph of this species in the nature in the world! Kazinform International News Agency asked me to publish this event in Kazakhstan news.

The period of spring-summer studies (April 6-June 5) was complicated by the mass exit of blood-sucking insects (Simuliidae and Culicidae), which interfered with scientific work and at sometimes made it almost impossible. Especially in the evening peak of activity from 22:00 to 01:00 am. Thick clothes did not help, and I had to use various repellents in order to scare away the bloodsuckers from my body and the research site. This continued until June 5th, on that very day I observed a massive exit of dragonflies from the Irtysh River, which began to regulate the number of mosquitoes and midges. After, on June 10, I noted a sharp decrease in the annoying insects, which greatly facilitated further work.

Cucullia biradiata - rare Siberian-Central Asian steppe species

For the project, we tried to purchase additional Osram HWL ballast-free mercury lamps that were always sold in any electrical equipment stores in Kazakhstan, but it turns out that recently they have not been imported to Kazakhstan due to the fact that they are being replaced by Chinese LED lamps on the market, which are cheaper and more economical . We had to order Osram HWL lamps in Russia, in the city of Novosibirsk, where the remains of these lamps are sold in warehouses of large stores.