

Project Update: September 2015

During the second half of August 2015, a large expedition to Carpathians was carried involving the six students-biologists of Kyiv and Kharkiv national universities and one schoolgirl (an environmental activist) besides the main team members.

Main goal of the expedition was to explore the type locality of *Platyla jankowskiana* and to check state of its population(s). It is a minute land snail (shell 0.8 x 2.5 mm) that lives in the litter of beech forests and known only by the three shells that were collected in 1926 and 1933 by Polish malacologist Antoni Jankowski. The species was described much later, in 1979, by another Polish malacologist – Maria Jackiewicz. Despite that there was no any other data on it, *Platyla jankowskiana* was listed in IUCN Red List as a “Vulnerable” (being more likely a “Data Deficient”).

Type locality of *Platyla jankowskiana* was indicated not too much precise, just as a beech forest in the second terrace of the valley of the Zheniec River near Tatariv village. This valley is about 5 km length with the huge steep slopes. However there are not so many beech forests, most part of the valley is covered by the spruce. I have chosen the 20 remote plots with beech forests in the different parts of this valley in the various conditions. These 20 plots were studied extremely intensively, massive data was collected, and more than 40 species of terrestrial molluscs were revealed here, including threatened and rare ones. Some additional plots around were also briefly checked. But unfortunately we found no *Platyla jankowskiana*. Situation was complicated by the fact that in this valley another similar snail, *Acicula parcelineata*, of the related to *Platyla jankowskiana* genus, occurs. These two species have identical size, shape and colouration, differs only by the microsculpture of the shell that can be observed only through the microscope. Therefore *Platyla jankowskiana* cannot be recognised in the field and we were unaware are we found it or not till the numerous collected specimens of *Acicula parcelineata* were checked in the laboratory.

There could be several explanations why *Platyla jankowskiana* was not found in the type locality. Perhaps it is extinct. The valley of the Zheniec River is much transformed by the touristic infrastructure and cottages. All of it was build much later than species was found. There are almost no ancient primary beech forests here, only few small plots. Perhaps such forests were declined and this is cause extinction of the snails. A close species *Platyla perpusilla* is known in Ukraine only by the single population in one of the most preserved Carpathian beech forests, in the Kuziy reserve (part of the Carpathian Biosphere Reserve). Perhaps there was some confusion with basic material and species never was there. Perhaps these three shells are abnormal sculpture-less specimens of *Acicula parcelineata*. Perhaps we just did not find it. I will analyse these possibilities in more detail, will consult with foreign authorities, and will prepare a small paper in English on this problem (working title “Is *Platyla jankowskiana* extinct?”).

Moreover a larger paper on the molluscs from the 20 deeply studied plots will be prepared in English and submitted to some peer-reviewing journal.

Another outcome of this expedition is popularisation of the terrestrial molluscs' conservation by involving of the students. It was unexpectedly successful. One of the involved students, a just graduated zoologist from Kyiv National University (also an activist of "Zelene Maibutne" environmental student squad), Zoia Shvydka, is decided to change topic of her scientific work and to go on the postgraduate course in University dealing with land snails. We have already prepared a plan of her work, this PhD dissertation will be on the haired snails of *Trochulus* genus (*sensu lato*), and including their conservation (some of the species are threatened). Moreover involved schoolgirl, Veronica Skvortsova, a younger sister of the current head of "Zelene Maibutne" student squad, is decided to work on the mentioned *Acicula parcelineata* and to make a work on it in the Minor Academy of Sciences of Ukraine, a centre of the scientific work with school students in Ukraine. Next year she goes to be a student-ecologist in Kyiv National University. We will prepare a paper on the distribution, habitat preferences and conservation status (it is not clear enough, species is possibly threatened) of *Acicula parcelineata* in Ukraine using data collected during this expedition and some older materials. This paper will be submitted during timeline of my project to some peer-reviewing journal.

Some photos from this Carpathian expedition on my Facebook page:

https://www.facebook.com/igor.balashov.52/media_set?set=a.10153620496967206.1073741841.844757205

At the same time my team member botanist Marina Yarotskaya is checked some plant communities on the fens with threatened *Vertigo angustior* in Kharkiv region regarding the project and collected some data on the molluscs itself either.

I have submitted a large paper "Conservation of terrestrial molluscs of the Crimea" (in Russian) to the "Ecosystems" journal (Tavrida National University, Crimea) in support of my work on the printing edition of the Red Book (List) of the Crimea that should be published in the end of this year or in the 2016. It will be with the detailed accounts on each species, including 20 land snails that were already certified earlier this year after my submission.



Our team in Carpathian expedition on the one of the studied plots, Zheniec valley



Left: Searching for the snails in the beech forest. Right: Carpathian endemic, threatened land snail *Arianta petrii*



Left: *Helicopsis*. Right: *Vertigo*