Interim report

of

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“Conservation of critically endangered species of reptiles of Ararat Valley, Armenia.”

for submitting

Rufford Small Grants for Nature Conservation

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INTRODUCTION:

In Armenia the semideserts areas are fast disappearing, being converted to agricultural use. Natural habitats in this zone are thus greatly reduced, and those that remain are threatened because of human activities. In summary, cultivated lands now cover from 80% to 90% of the area, and natural ecosystems have been extensively damaged as the result of agricultural exploitation, including intensive, uncontrolled irrigation, which has led to increasing soil erosion, soil salinity, and pollution.

The following target species of reptiles from IUCN Red List are noted in arid zone of Ararat Valley of Armenia:

Critically Endangered by the IUCN Red List:
persian toad agama (*Phrynocephalus horvathi)*, Pleske's racerunner *(Eremias pleskei)*

Vulnerable by the IUCN Red List of Threatened Species:
spur-thighed tortoise (*Testudo graeca armeniaca.*

The main objective of project is inventory and updating of the data of distribution and abundance, getting the first-hand knowledge on ecology of the critically endangered and vulnerable species of reptiles to using it as a background for further conservation-oriented projects.

FIELD SURVEY RESULTS:

In 15 April – 20 June, 2011 and 10 September – 20 October we surveyed area of southern Armenian, presented by the natural and transformed landscapes. In the total six populations were examined in Armavir and Ararat Provinces, where the target species were noted before according to our data and published articles. Habitats of all localities were presented by semi-desert and desert landscapes.

Inventory and monitoring of three endangered species of reptiles have been done at each week trips of survey period by 4-5 persons. Presence or absence of animals carried out on a random count along the 1000 m predefined transects. In this project we tried to employ GIS technology for searching (and later to describe the environmental parameters) of localities of the lizards and tortoises, using space pictures. All materials collected by the author for 2012 (6 biotopes) have been summarized in database.

Tortoises *Testudo graeca armeniaca* have shown very low density in all studied populations: they was met only 2 individuals during spring survey on territory of 150-160 ha in Armavir region, and 6 individuals on the area of 25 - 27 ha was noted in Ararat province where situation better than Armavir region.

During implementation of project we found that the populations of lizards and tortoises near Armavir city were completely destroyed as a result of anthropogenic pressure and urbanization. Also next populations in Armavir region, which previously was noted *T. g. armeniaca*, *E. pleskei* and *Ph. horvati*, now completely destroyed as a result of ploughing up territory for agricultural use.
We have found *Ph. horvati* and *E. pleskei* only in one site, which located in Ararat Province. However the number of *Ph. horvati* here were very low: 1 individual on territory of 200 ha, when *E. pleskei* was abundance (15 individuals on 1 ha), however distributed in very restricted area (120 ha).

We have not met target animals in June –October period, which is explained by the arid climate of area, where many reptiles become inactive.

DISSEMINATION OF RESULT:

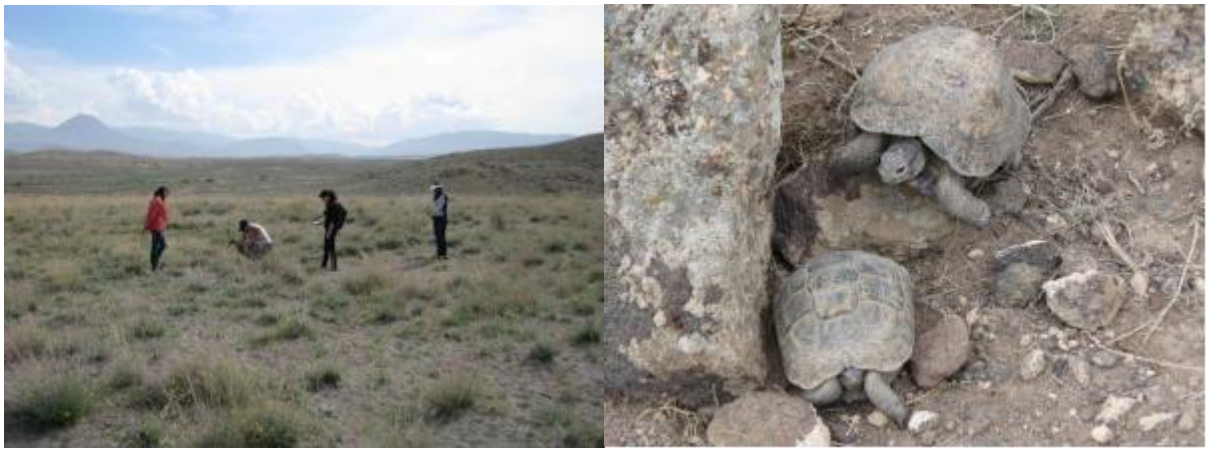
The results of our field survey and the preliminary findings of conservation actions have been presented and discussed during Rufford Small Grants Recipients Conference in Armenia (Tsaghkadzor, 28-29 September, 2012) and one field seminars for students of Yerevan State University.

In this project we have trained some biology students of Yerevan State University who keep working with us. We have hired four Bachelor students; two of them were prepared and defended their thesis on topic of conservation of *Phrynocephalus horvathi* and *Testudo graeca*.

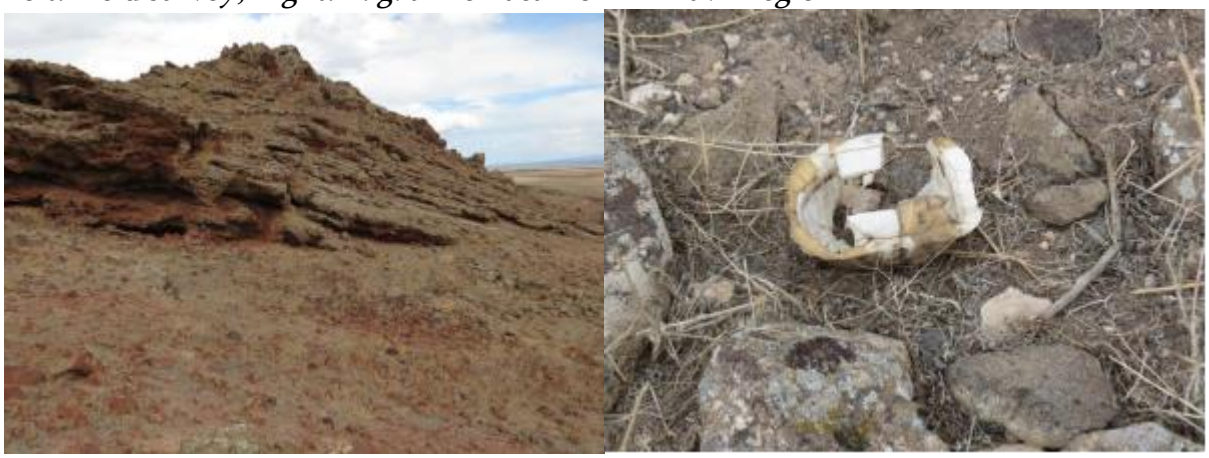
CONCLUSION:

Thus the first half of our studies has shown on critical situation of populations of lizards and tortoises in Ararat Valley. The most urgent conservation measurements have to be conservation education program among locals in places of critical habitat of animals, breeding program, establishment of protected sites, improvement the legislation against to animals' dealers. We are planning to continue the field researchers in Ararat Valley, educational program among locals, and preparing the draft Action Plan which will be submitted to Ministry of Natural Protection.

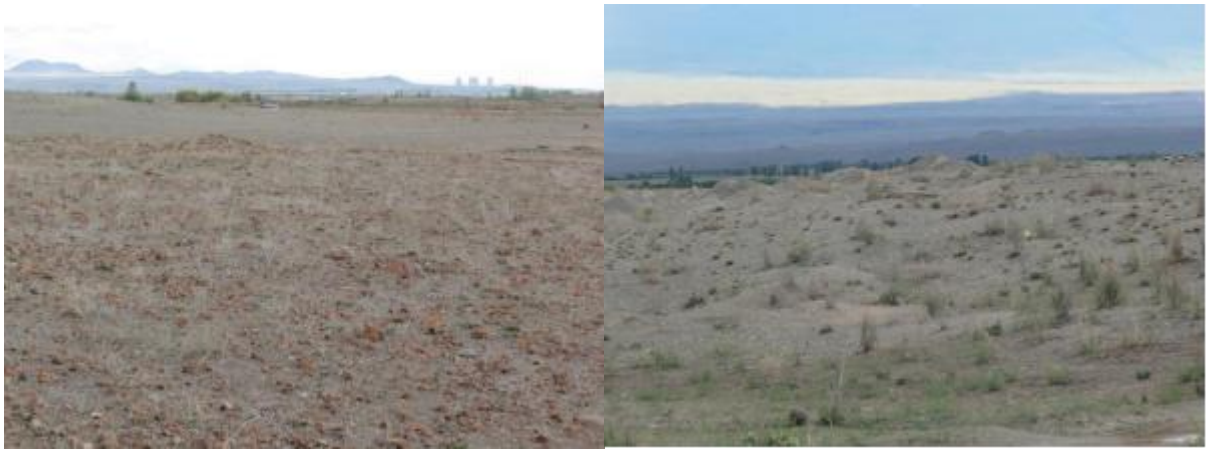
ILLUSTRATION:



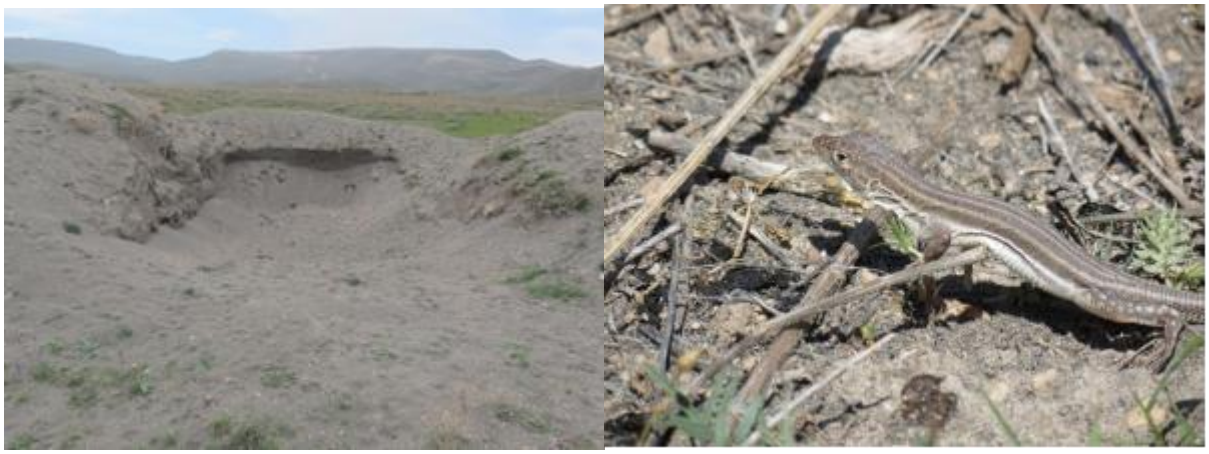
Left: Field survey, Right: T. g. armeniaca from Armavir region



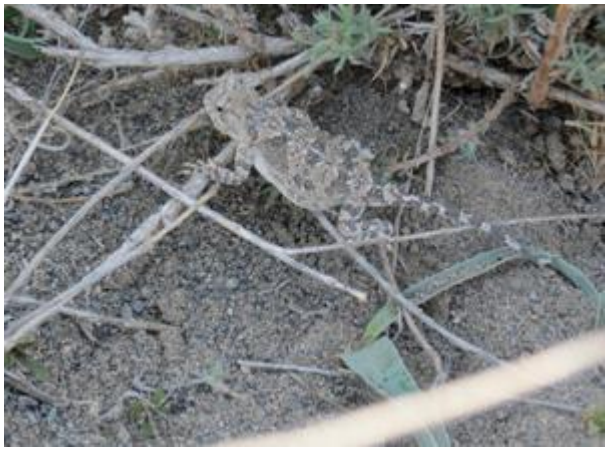
Left: Semidesert landscape in Armavir region (habitat of Testudo graeca). Right: Shell of T. g. armeniaca in Armavir region (killed by carnivore mammals or birds)



Left: Vicinity of Armavir city (destroyed habitat of target species). Right: Destroyed population of lizards in Armavir region



Left: Mining works in site of habitat of target endangered species. Right: Eremias pleskei,



Phrynocephalus horvati