

Report on ex-situ outdoor breeding of Albanian Saddle Bush-cricket (*Uromenus dyrrhachiacus*)

Project number 220529928

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1. The global target of the project 220529928

This project covers only the urgent actions to save the species in 2023. When completed, we will have a better vision of the situation and threats and how to mitigate these threats with identified stakeholders, and we will ask for a next step project after.

Urgent actions are:

- 1- Get an accurate status of remaining populations in its restricted distribution area.
- 2 - Start an ex-situ breeding to save the species from extinction because habitat destruction are currently running fast in this area and we must have enough individuals to repopulate habitat when recovered.
- 3 - Find motivated local actors from environmental NGO of Durres and train them to find the species, the laid eggs and to be able to displace individuals/eggs in case of urgency. They will have to find and contact the appropriate stakeholders to avoid or mitigate the threats.

This report concerns the point 2 (ex-situ outdoor breeding)



2. The goal of the action 2 of this phase of the project

This is a precautionary plan to mitigate the potential case of a large decline of the population *in-natura* before discussing and implementing a conservation plan.

The goal of the second action of this project is:

- To secure a small population of the Albanian Saddle Bush-cricket (*Uromenus dyrrhachiacus*) in a controlled outdoor cage and to carry out breeding in order to be able to reintroduce the species into its natural environment, in the future, if necessary.
- To increase our knowledge of its biology in order to increase the relevance of advices for future conservation and/or rehabilitation actions of its suitable habitat.

Due to the average duration of egg diapause (at least 2 years), the success of this plan cannot be observed within the duration of this project.

The following chapters describe the process implemented to design and construct the cage to maximize our chances of success, and describe the first results.



3. Design of the cage

The aim is to be as closer as possible to the natural habitat of the species.

For this purpose:

- The cage was located, in Greece, in a land on a similar calcareous substrate, under the same type of climate (in the meso-Mediterranean zone of botanists).
- The size of the cage was chosen to host at least 30 couples of Albanian Saddle Bush-crickets.
- An automatic watering system was installed to locally increase the humidity of the air, in order to be close to the seaside conditions.
- About 20 cm of bare soil with characteristics similar to the original biotope was added inside the entire cage, and fennels, reeds, chaste trees and common golden thistles were planted.

The cage was made during spring 2023.

The base is the natural soil of the land surrounded by concrete and stones approximately 20 cm height. The structure is 2 m height from the ground (about 1.8 m from the added soil). The structure is metallic and rigid (tubes 40 mm) and a semi rigid metal grid has been applied on it. Then a metallic mosquito net was installed over it. All joints were filled with mastic to ensure that no holes could remain.

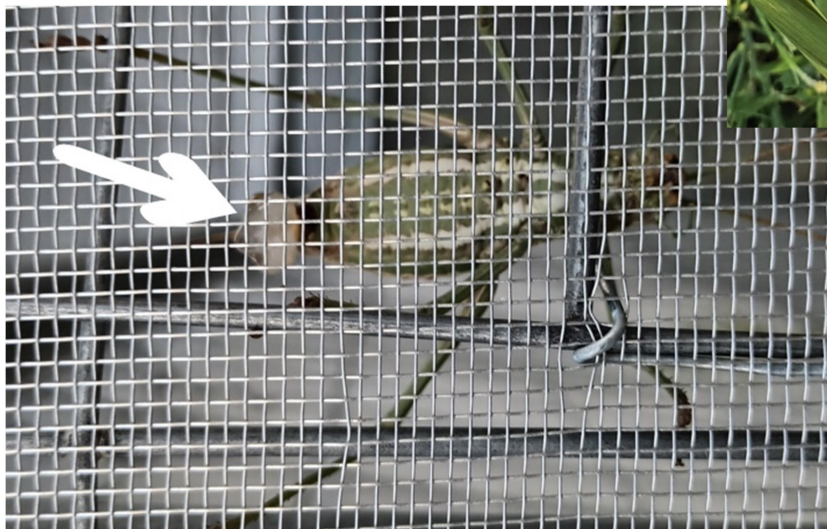




4. First results

Ex-situ breeding began in the fourth week of June 2023 with the outdoor cage populated with a number of couple adults consistent with the density observed in-situ (15 couples). To the natural food plants, we regularly added zucchini and wheat flakes, eaten during our indoor breeding carried out in 2022. (Lemonnier-Darcemont *et al.* 2022)¹.

On 10th of July, the first matings occurred in the breeding outdoor cage (see hereunder photo of a female with a spermatophore, taken the 11 July 2023).



We noted the presence of holes characterizing the presence of eggs laid in the stems.
By the third week of August, all adults were dead.

The life cycle of this species is still unknown.
However, by analogy with close species and genus, we think that we should wait at least 2 years before observing the first hatchings.



¹ M. Lemonnier-Darcemont, Ch. Darcemont, E. Halimi (2022): *Uromenus dyrrhachiacus* (Karny, 1918), (Orthoptera: Tettigoniidae), an Albanian endemic species on the brink of extinction. ARTICULATA 37: 23–30