

Eremias arguta deserti (Reptilia: Lacertidae) is not extinct from Romanian Moldavia

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Abstract. The present paper proves that the endangered steppe runner (*Eremias arguta deserti*) still exists in the "Hanu Conachi River Sand Dunes" Nature Reserve. Prior to this study it had not been recorded for almost 40 years and had been reported as extinct in this region by the Romanian Red Data Book of Vertebrates. However, the majority of its natural habitat has been destroyed by the *Robinia pseudoacacia* plantations from the reserve. In order to ensure the survival of *Eremias arguta deserti* in the reserve, and in Romanian Moldavia, urgent measures have to be taken to reconstruct its natural habitat through the development of a management plan under the supervision and guidance of experts. At present, the steppe runner population from Hanu Conachi is extremely threatened.

Key Words: Steppe runner, Hanu Conachi, sand dunes, anthropogenic impact, *Robinia pseudoacacia* plantations, Galați County

The steppe runner (*Eremias arguta deserti* Gmelin, 1789) occupies a vast territory, being common in northern Caucasus, southern European Russia, Ukraine, the Republic of Moldova and south-eastern Romania (Fuhn & Vancea 1961, Fuhn 1960, Chirikova & Kolbinez 2003). In Romania, this species has previously been reported from the sand dunes of the Danube Delta (the islands of Letea, Caraorman, Sărăturile, Sfântu Gheorghe, Periteasca, Chituc; Fuhn & Vancea 1969, Fuhn 1969, Iftime 2005), the sandy beaches at Vadu (Covaciu-Marcov et al

2006a), both Enisala and Jurilocva (Iftime 2005) and from southern Moldavia at Hanu Conachi (Băcescu 1937, Fuhn & Vancea 1961, Fuhn 1969) (fig.1). The population from southern Moldavia was recently catalogued as extinct in the Romanian red data book of vertebrates (Iftime 2005). Across its wide range, the steppe runner mostly inhabits steppe regions with loess and wormwood (*Artemisia absinthium*) (Fuhn 1969). However, in Romania it is only encountered on sand dunes, which are covered with rare vegetation, especially xerophilious species

(*Euphorbia* sp., *Juncus* sp., *Elymus* sp., *Salix repens*) (Fuhn & Vancea 1961, Iftime 2005).

E. a. deserti has not been recoded in Moldavia since 1969 (Fuhn 1969). This fact is also probably due to the fact that no known attempts to identify this species in the "Hanu Conachi River Sand Dunes" Nature Reserve have been made until 2001 and 2005,

when, following those studies, it was officially considered extinct within the area (Iftime 2001, 2005). Only one other herpetological study has been carried out in the area since then, but it did not cover the territory in which *E. arguta deserti* has been known to occur and, as a result, could not confirm its presence or absence in the area (Covaciu-Marcov et al. 2006b).



Figure no. 1 A - Distribution of *Eremias arguta deserti* in Romania (after Iftime 2005, modified): 1. Grindul Letea; 2. Grindul Caraorman; 3. Grindul Sărăturile, Sfântul Gheorghe; 4, 5. Grindul Periteașca; 6. Enisala; 7. Jurilovca; 8. Grindul Chituc; 9. Vadu; 10. Hanu Conachi - present study). B - The location of the area in which we identified *Eremias arguta deserti*: The "birch cluster" (Pâlcu cu Mesteceni) from the "Hanu Conachi River Sand Dunes" Nature Reserve

Between the 13th -14th of august 2007, at the invitation of the Romanian Ornithological Society and the Galați Forestry Department, we organized a herpetological investigation in the "Hanu Conachi River Sand Dunes" Nature Reserve, with the aim of establishing if *Eremias arguta deserti*

(fig.2) is still present in the area, the presence of the steppe runner being one of the main reasons for which the nature reserve was first declared. Numerous transects were investigated in all types of habitat (with special attention paid to the areas with sandy soil) and a relatively large part of the

reserve was searched. After several failed attempts to find the steppe runner in several scientifically important parts of the reserve (e.g. "Dunele cu *Salix*" = the Dunes with *Salix*), we found it strictly localized in the centre of the reserve (fig.3). In total, we captured 16 juvenile and one adult *Eremias arguta deserti* in the area known as "Pâlcu cu Mesteceni" (= the Birch Cluster). The animals were photographed and released into their habitat. However, we must mention that one juvenile steppe runner was accidentally killed by one of the forestry workers which guided and helped us during our survey. The animal was preserved and subsequently donated to the Natural History Museum of Iași (MINJ), Romania by A.S.

The area in which the steppe runner was identified is located at an altitude of 19 m a.s.l. and the geographical coordinates are: 45°33'48" N; 27°34'56" E (fig.1). On the sand dunes from the "Birch Cluster", the steppe runner is found in sympatry with the green lizard (*Lacerta viridis*), these being the only reptile species which we identified in the area. Past publications have also reported the presence of the large whip snake (*Dolichophis caspius*) in the reserve but this species has not been found in the area since 1937 and is considered to be extinct from the region (reviewed by Iftime 2005, Strugariu & Gherghel 2007). The green toad (*Bufo viridis*) was also recorded by us from the outskirts of the reserve.

In spite of our efforts, we could not identify any other *Eremias arguta deserti* populations inside the Reserve, this is likely to be a consequence of the fact that the majority of the species' natural habitat has been destroyed and replaced with the *Robinia pseudoacacia* plantations. Even in the areas where sand dunes still exist (e.g. "Dunele cu *Salix*" = the Dunes with *Salix*), the vegetation is very rare or it is too dense and mostly formed by Poaceae species or young *R. pseudoacacia*, which are slowly advancing towards the areas which are still covered by sand dunes.

The "Hanu Conachi River Sand Dunes" Nature Reserve occupies a surface area of 199.3 Ha and is situated south-west from the locality of Hanu Conachi (Galați County, Romania). At present, the reserve is mostly covered by *Robinia pseudoacacia* and *Pinus nigra* which were planted by the Galați Forestry Department in the 1980's (I. Manolache, pers. comm. 2007). The planting of these forests are responsible for the disappearance of the native sand dunes. In the past, the sand dunes were present in the shape of strips of variable widths (0,5 - 1 km), up to 4.2 km in length, with a N-S orientation. Nowadays, sand dunes can be found in very few isolated areas, with each of these not exceeding a 2 Ha in size. Several tree species, relicts of the former native habitat, appear isolated in the reserve: *Quercus* sp. (which can be found inside the *R. pseudoacacia* plantation), *Salix rosmarinifolia* (in the "Dunes with *Salix*"), and *Betula pendula* (in the area known as

the “birch cluster”). The sand dune vegetation is rare and mostly composed of xerophilious species (*Stippa* sp., *Festuca* sp.). The climate of the area is continental, with average multi-annual temperatures of 11°C, with the average temperature in July exceeding

22°C. There is a very low level of precipitation, with average annual values of 400 mm. The reserve is situated at altitudes of between 14 m a.s.l. in the southern areas of the Reserve to 20.5 m a.s.l. in its central area.

Figure no.2 Adult *E. a. deserti* from “Hanu Conachi” (photo by Al. Strugariu 2007)

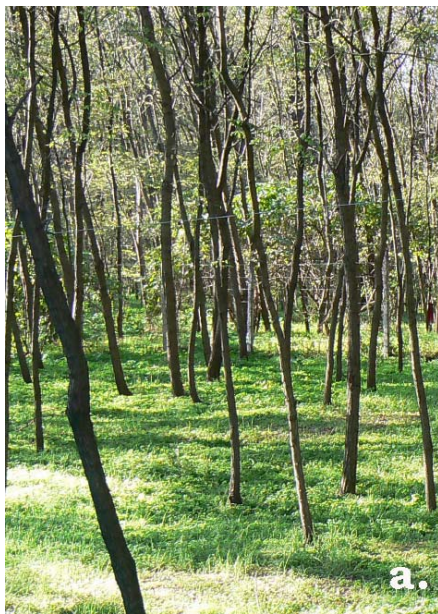


Figure no.3 **A** - Aspect of the “Hanu Conachi River Sand Dunes” Nature Reserve with *R. pseudoacacia* plantations (photo by Al. Strugariu 2006)
B - The steppe runner habitat inside the reserve (photo by Al. Strugariu 2007)

During our survey, we have observed that the typical sand dune habitat for *Eremias arguta deserti*, described in the literature (Fuhn & Vancea 1961, Fuhn 1969) have been almost completely destroyed by the planting of *Robinia pseudoacacia* within the Hanu Conachi reserve (fig.3). The steppe runner is strictly protected in Romania through the Law 462/2001, being included in Annex 4, and it is considered a species of national interest which demands strict protection through the OUG 57/2007, where it is included in annex 4b. It is thought that the populations of *Eremias arguta deserti* from Romania comprise less than 5000 individuals and, therefore it is considered to be an endangered species at a national level (Iftime 2005).

We consider that the *R. pseudoacacia* plantations are the main cause for the destruction of the habitat of the steppe runner in the "Hanu Conachi River Sand Dunes" Nature Reserve. Therefore, we recommend that a long term management plan should be conceived, in order to clear the plantation areas, under the careful supervision of experts. The aim of this plan would be to reconstruct the native natural habitats that once existed in the area. At present, taking all of the above into consideration, we consider the *Eremias arguta deserti* population from southern Moldavia to be in a critical state. Also, we suggest that further, more detailed research should be performed in the areas surrounding of the "Hanu Conachi

River Sand Dunes" Nature Reserve in order to establish the eventual presence of potential habitats or other populations of the steppe runner.

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- ***** OUG nr. 27 din 20/06/2007, privind regimul ariilor naturale protejate, conservarea habitatelor naturale, a florei și faunei sălbatice, Anexa Nr. 4B, Specii de Interes Național SPECII de animale și de plante care necesită o protecție strictă.

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