



FIELD EXPEDITION AND RESEARCH DEVELOPMENT REPORT

GARDEL'S LIZARD CONSERVATION PROJECT

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1. Summary of research developments

First of all, we would like to apologize for the delay in delivering the report. We had two problems. The first was in 2024 when a major flood occurred in southern Brazil that for several months interrupted the roads leading to the study area, which delayed the fieldwork and other activities. The second was that the General Coordinator became ill and had to be absent from work for a few months in 2025.

The continuation of our report.

1.1 Extinction risk status assessment

A complete assessment has been submitted for special consideration at IUCN and is awaiting approval for the official inclusion of *Liolaemus gardeli* in the IUCN Red List of Threatened Species.

We evaluated the species as EN (endangered), under criterion B1+2ab(iii). The species fit the criteria based on its small areas of occupancy (AOO) and extent of occurrence (EOO), 28 and 171 square kilometers respectively (Figures 1 and 2). Additionally, the species presents severely fragmented populations distributed over 4 localities (each considered its own location for IUCN criteria due to geographical distance and the scope of most prominent threats to the lizard). These results were presented in the VIII Congreso de Uruguayo de Zoología as a poster (Figure 3).

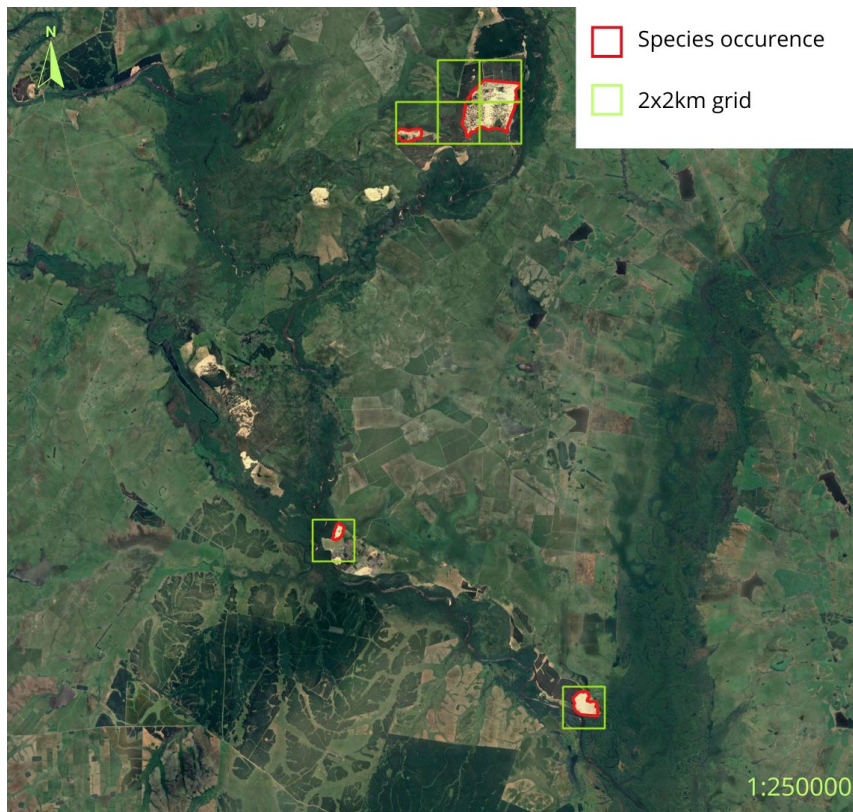


Figure 1 - Area of occupancy (AOO) of *L. gardeli* per IUCN Red List Assessment standards.

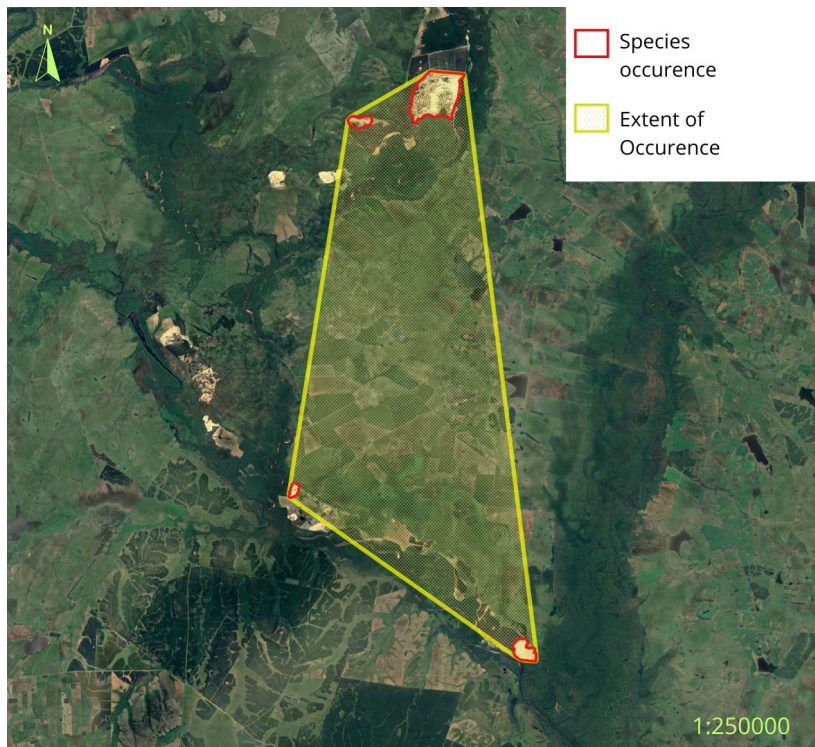


Figure 2 - Extent of occupancy (EOO) of *L. gardeli* per IUCN Red List Assessment standards.

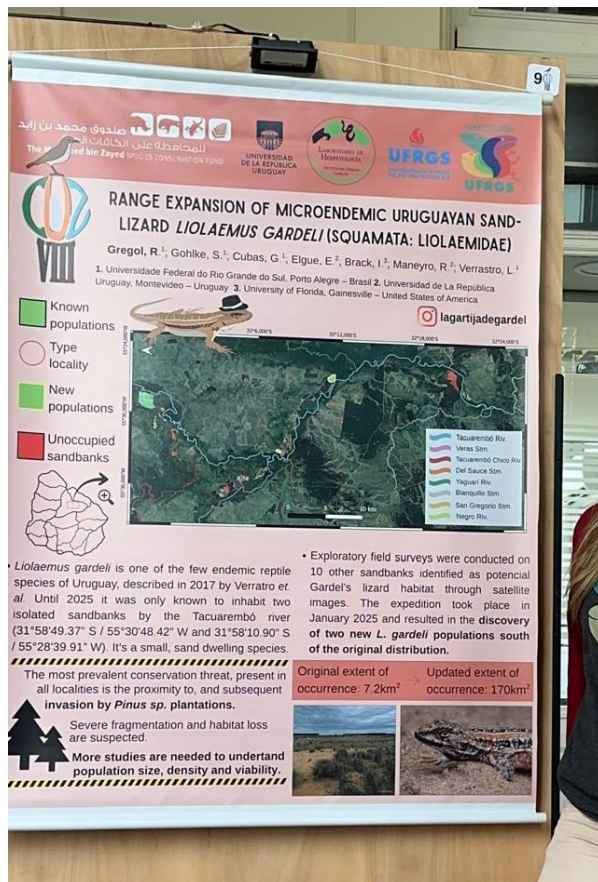


Figure 3 - Poster presentation at VII Congreso Uruguayo de Zoología on *L. gardeli* range expansion.

1.2 Population size

In February 2026, a seven consecutive day field expedition was conducted in the species type locality (Figure 4) for the execution of the population size study. Capture-mark-recapture methodology was employed to estimate adult and juvenile population size. The sampling area measured 7.83 hectares.

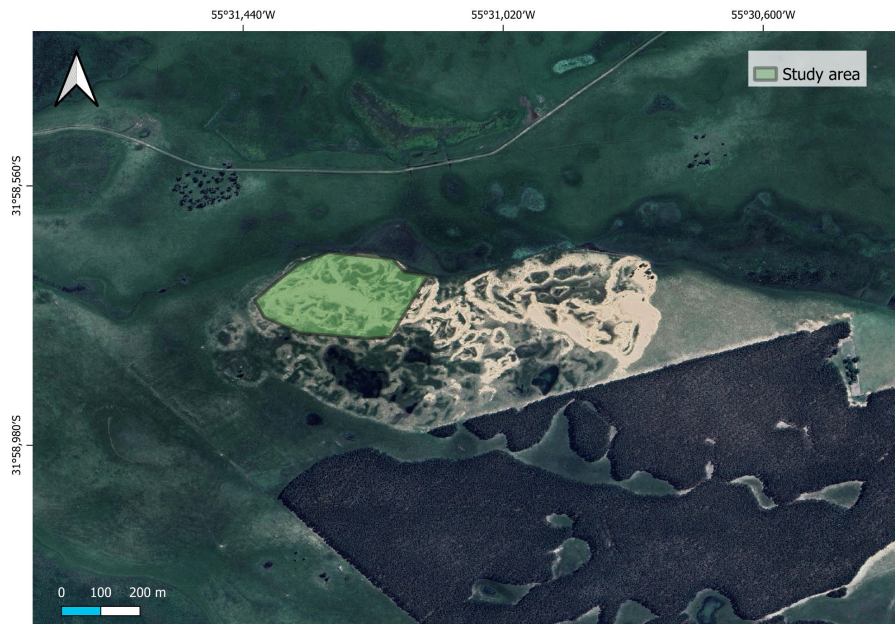


Figure 4 - Sampling area for *L. gardeli* population size study.

In the span of seven days, 220 individuals were marked using non-toxic acrylic paint on the ventral surface of the hind legs and had their dorsal scales photographed for posterior photoidentification. There were a total of 47 recaptures. Each individual had their morphometric data collected, including SVL and tail measurements, weight, sex and number of pre-cloacal pores, as well as the categorization of habitat-resource use upon encounter, for the development of further studies. Ambient data (temperature and wind speed) were recorded in-site for detection probability modelling. Statistical analyses are yet to be performed.

The breakdown of captured individuals per life stage and sex are presented in Table 1 and Figures 5 and 6. Sex was determined through the counting of pre-cloacal pores (3-5 for females and 5-8 for males) and the presence of secondary sexual characteristics. Individuals too small to have their pores analyzed or those presenting an ambiguous number of pores (5) and no secondary sexual characteristics were deemed undetermined.

LIFE STAGE	N
Adult	81
Juvenile	139

Table 1 - Number of adult and juvenile individuals captured.

Capture breakdown by life stage

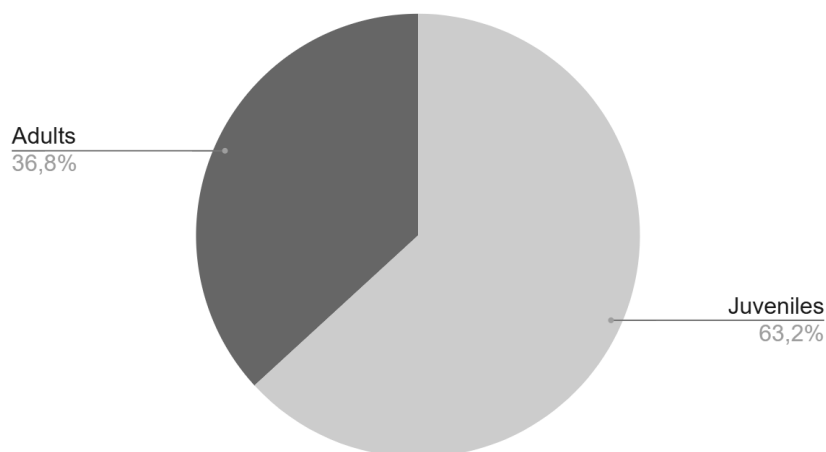


Figure 5 - Percentages of captured individuals by life stage.

Capture breakdown by sex

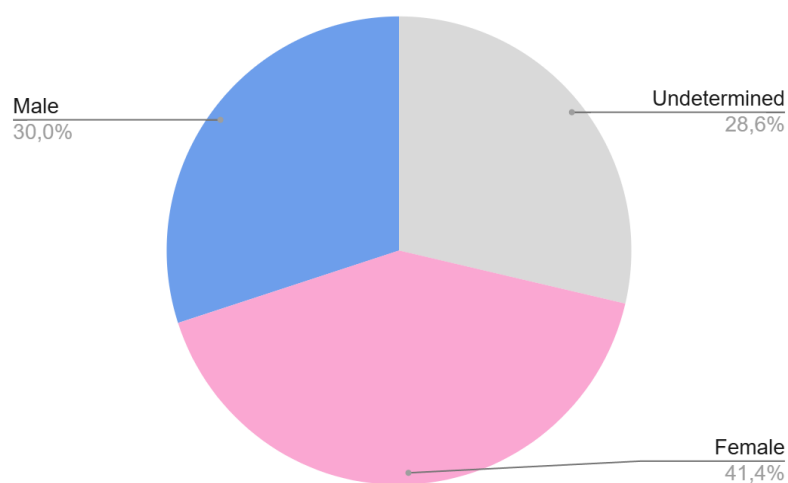


Figure 6 - Percentages of captured individuals by sex.

1.3 Genetics

During the most recent field expedition, conducted in February 2026, a total of eight tissue samples were collected from the tails of individuals captured at the type locality.

This procedure was carried out without putting the animals' lives at risk, as individuals performed caudal autotomy as a defensive strategy (with some individuals voluntarily shed their tails while being handled during the marking procedure).

These tissues, together with those collected during previous field campaigns (April 2024 and February 2025), constitute a tissue sample collection of the species comprising 21 individuals from the four localities where the species has been recorded.

These samples will be used to perform DNA extraction and amplification (targeting fragments of mitochondrial and nuclear genes), which will allow the assessment of genetic diversity, as well as the estimation of genetic distances and the degree of population connectivity among localities, key aspects for the conservation of the species.

2. Science communication and Environmental Education

On social media (instagram profile *lagartijadegardel*) we create informative content about *Liolaemus gardeli* in an accessible language, in an attempt to disseminate biological and ecological knowledge to the broader community. We also publish short videos recounting the field expeditions. We aim to approximate the local and international community to the species, generating interest and recognition to the necessity of conservating the species and the overall Pampa environment, often dismissed due to its unadvertised biodiversity.

During the field expedition we also visited three public schools in the municipality of Ansina (where species the type locality is situated). The schools visited were one rural institution that receives students from agricultural properties surrounding the lizards habitat (Escuela n. 33 Paso la Laguna) and one “middle” and one “high” school (Escuela n. 73 de Villa Ansia and Liceo de Ansina), the only two urban schools in the village. We presented the project and are currently in talks to schedule Environmental Education

activities including the local teachers and students, the development of didactical games and materials.

3. Next steps

The team should now focus on developing the research described in this report. We aim to maintain social media communications as well as strengthening scientific connections with researchers in related fields for further research projects regarding the species. We will be scheduling the aforementioned school activities and are studying the viability of conducting another field expedition in spring 2026.