

## Research Project on Rabbits in La Malinche, Tlaxcala Mexico



Mountain Rabbit *Sylvilagus cunicularius* is an endemic specie of Mexico considered as "endangered specie" by the International Union for Conservation of Nature. Its distribution includes the East and Center of the country and it is the rabbit endemic Mexican specie with the largest distribution. It is also the rabbit of largest size in Mexico which makes it a mammal of cynegetic importance.

In order to determine the biology and ecology of the mountain rabbit, the Tlaxcala Center of Biology Behavior of the Universidad Autónoma de Tlaxcala (Autonomous University of Tlaxcala) has researched *S. cunicularius* for over nine years. The group is formed by Masters in Sciences Luisa Rodríguez, Jorge Vázquez and Ph.D. Amando Bautista, Margarita Martínez-Gómez and Robyn Hudson.

Telemetry equipment was purchased to Telenax for a project by M. S. Vázquez in collaboration with Ph.D. Verónica Farías from the Institute of Biology of the UNAM, supported by the FOMIX Tlax-2003 CO2-123228 which objective was to determine the domestic precinct of the mountain rabbit. The purchase included 11 transmitters model TXE-311C of 28 grams, two receivers and two 3 element Yagi antennas.

The study was performed at Scientific Station La Malinche, located in La Malinche National Park, Tlaxcala. The type of vegetation is constituted by *Mulhenbergia spp.* Grassland, Pine forest (*Pinus spp.* and *Avies sp.*) and *Quercus spp.* The area is located at the bottom of a ravine, widths of 100 to 300 m, surrounded by rocky and forest slopes with heights between 50 and 300 m.

The activities consisted on carrying out captures of mature rabbits during the months of May to June, 2006 using net traps. Once captured, the sex and reproductive state were determined, they were marked with a tattooed number in the ear, and a collar transmitter was attached to the neck before being released.



Process of study and tagging of the captured rabbit



Transmitter attachment



Rabbit ready for its release



M.S. Rodríguez releasing a rabbit  
*Sylvilagus cunicularius*

A total of 11 transmitters were attached to rabbits, two of the specie *S. floridanus* and the rest of *S. cunicularius*.

The signal of the transmitters can be heard with good resolution and we have always found the signal whenever we have looked for it. In tests where some transmitters were placed in the field to measure the distance to which the signals can be heard they showed a range of around two kilometers, though we still have to perform more tests. We have also identified places where the signal of the transmitters is bounced, which can confuse people with little experience. Despite this, we have located the test collars accurately and those of five dead individuals. The transmitters were found in places with predominance of pines and in ravines of up to 100 m.

The number of "beeps" that indicate the Activity and Inactivity of the rabbits has allowed us to determine the patterns of activity of the study species.

Another advantage that we have found with this equipment has been to know when a rabbit is dead thanks to the Mortality sensor. This way we have found remains of even fresh rabbits allowing us to register signs of some of the predators who attack them.

Together with the above mentioned, we have begun a study to characterize the resting areas of the mountain rabbit. The telemetry equipment has allowed us to locate these resting areas where the grassland is very high and dense.



Remains of a predated rabbit. The transmitter was bitten but still working



Study Area



Israel is tracking a rabbit



Localization and characterization of a rabbit's resting area

Up to this moment we have been able to determine the rabbits' domestic precinct, patterns of daily activity and characterization of the resting areas with great success.

Article submitted M.S. Jorge Vázquez Pérez.

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