

PROJECT REPORT

Landscape effects and anthropogenic habitat degradation on genetic diversity and gene flow in a freshwater turtle in the North of Mexico.

In this project, 24 field trips have been carried out in which a total of 154 individuals have been captured. A blood sample was taken from each individual, as well as morphometric data. Regarding the laboratory work, DNA extractions from all the 154 individuals are already available, as well as the standardization of the microsatellites. Regarding the characterization of the landscape, drone images were taken for 10 of the 15 proposed sites, as well as the physicochemical data of the riparian habitat. The main difficulties in the project is that in five collection sites no individuals were captured. On the other hand, the standardization of the microsatellites took a little longer than expected.

Regarding the achievements, a presentation was made at the South Western Association of Naturalist conference in which morphometric data for the species were presented, there is also an accepted publication in Herpetology Notes about the first record of the invasive exotic turtle species *Trachemys scripta elegans*. Four workshops have also been held in schools in the towns on the margins of the Nazas River. The creation and dissemination of infographics with information on native turtle species and the dangers of the introduction of exotic species have also been achieved. Dissemination talks about the importance of aquatic ecosystems, native turtle species of the Nazas River, and the effects of fragmentation on turtles have also been given. Finally, 16 undergraduate students and one master's student have been trained in the topics of trapping and sampling reptiles, morphometric data collection and marking in turtle species, and the use of drones for scientific and conservation studies. Three more undergraduate students were trained in DNA extraction and PCR techniques.

In addition, below I attach photographic evidence of the activities carried out.



Top: Field work using the drone to obtain images of the collection sites, as well as student training in the use of drones. Bottom: Talks about conservation of aquatic systems and native turtles of the Nazas River.



The Southwestern Association of Naturalists recognizes

Ernesto Becerra

for their presentation

Morphometrics of the Nazas Slider (*Trachemys gaigeae*) in a riparian system in the North of Mexico.

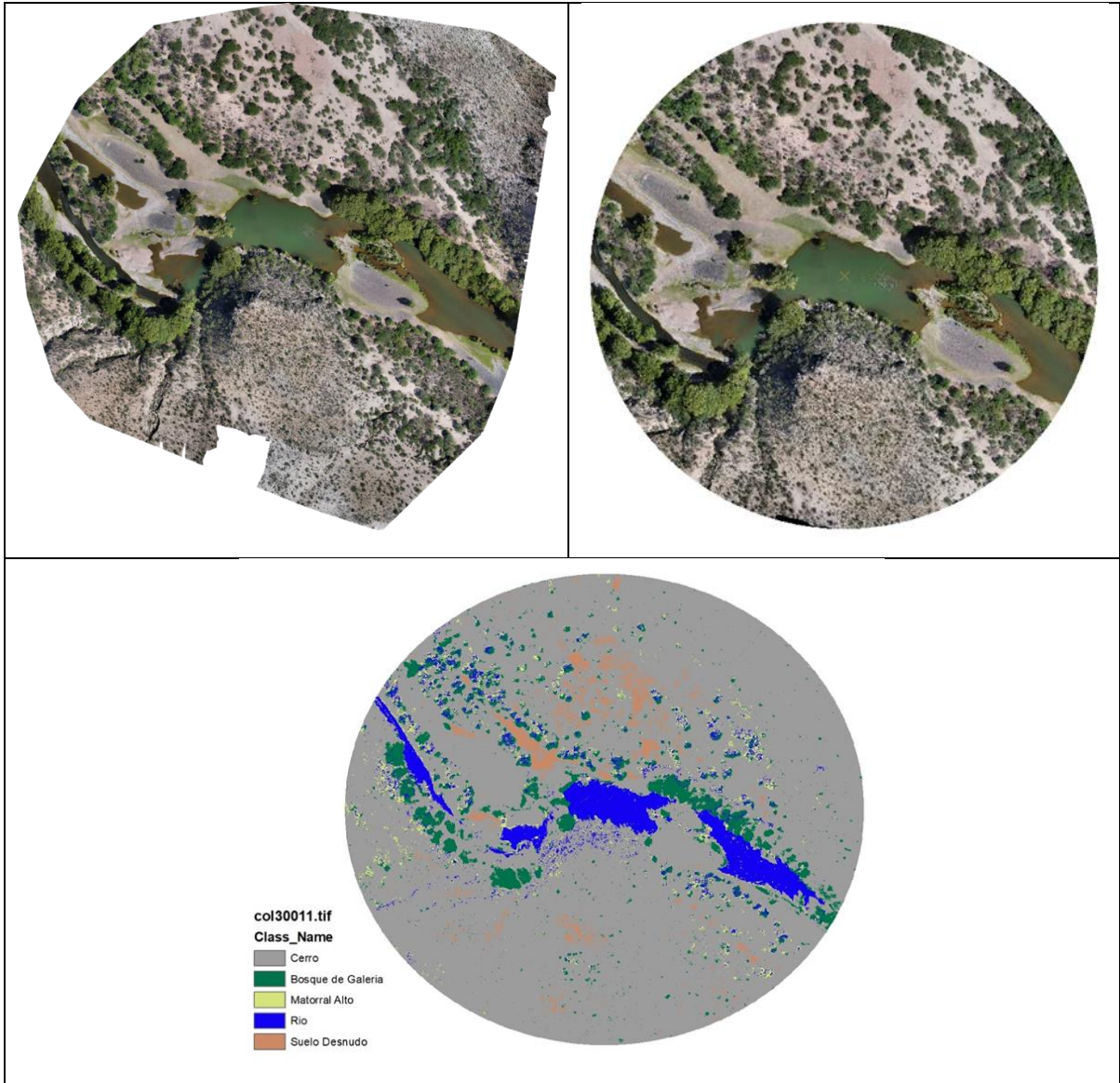
at the

70th Annual Meeting
San Antonio, Texas
August 3-5, 2023

Juliann Waits



Top: Field work using the potentiometer to obtain water parameters. Bottom: Evidence of participation in SWAN annual meeting and talks about native turtles of the Nazas River.



Top left: Orthophoto constructed with 150 drone images, Top right: Collection site buffer.
Bottom: Raster map with landscape attributes.

TORTUGAS DEL RÍO NAZAS

Tortugas nativas

Trachemys gaigeae

Comúnmente llamada: Tortuga de oreja roja del Nazas

Principal característica:
Mancha amarilla-naranja en ambos lados de la cabeza.

Kinosternon durangoense

Comúnmente llamada: Tortuga hedionda

Principales características:
Caparazón en forma de casco.
Olor muy fuerte.

Tortuga exótica

!
Ya que ha sido introducida intencional o accidentalmente por el humano.

Trachemys scripta

Comúnmente llamada: Tortuga de oreja roja

Principal característica:
Mancha roja brillante en ambos lados de la cabeza.

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Infographic made for the dissemination of information about native turtles and the exotic species