

Incubation temperatures comparative study in *Emys orbicularis* and invasive sliders in Northern Portugal

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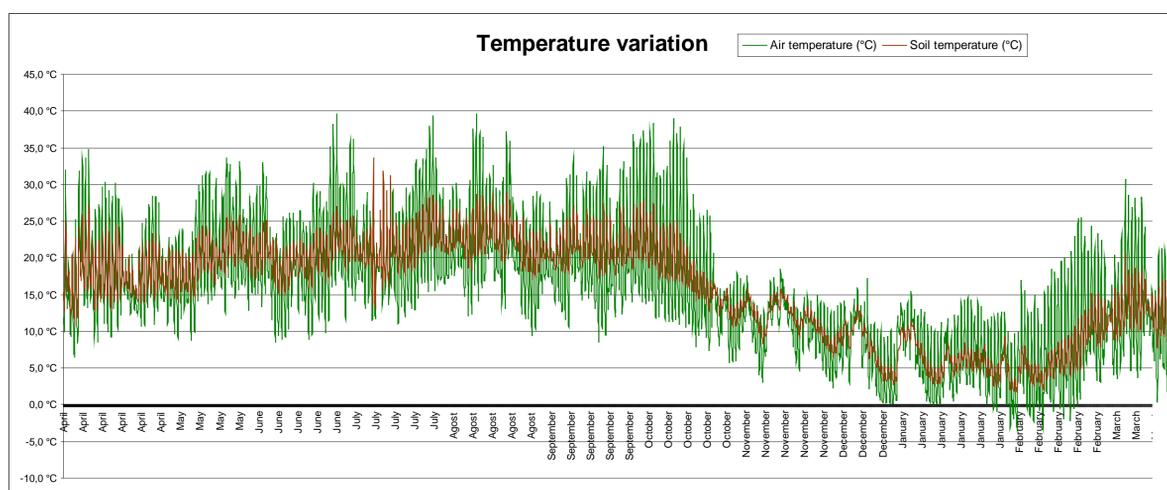
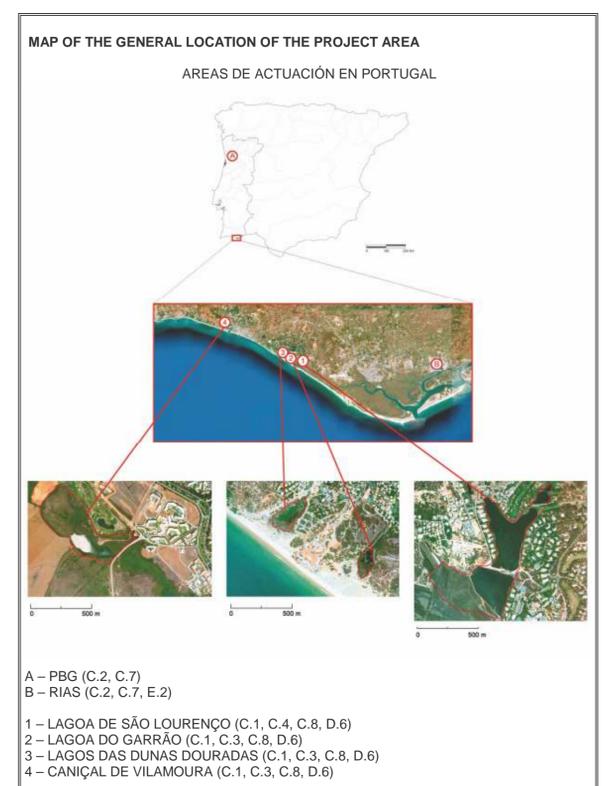
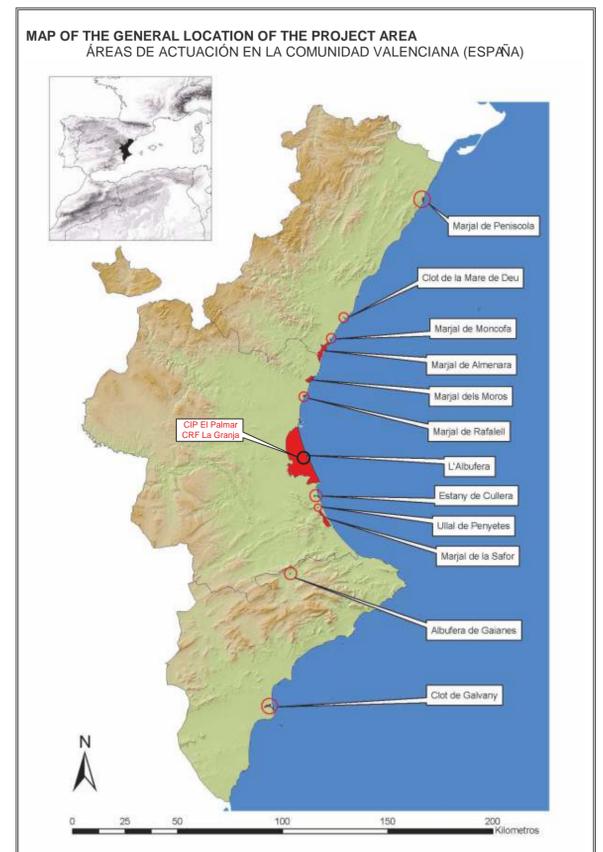
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The LIFE Trachemys Project 09NAT/ES/000529 is being developed in twenty nine wetlands of the Iberian peninsula, under the Generalitat Valenciana coordination, and having, as partners, the Spanish company VAERSA, the Portuguese institutions CIBIO-UP, RIAS (ALDEIA) and the Parque Biológico de Gaia (PBG).

The main objective of this project is to reduce the freshwater ecosystems biodiversity lost due to the presence of invading exotic tortoises, specially *Trachemys scripta*, and to preserve local species, namely by the development of *Emys orbicularis* captive reproduction programs.

In this project's scope, between April and May 2011, five pregnant *Emys orbicularis* (E.O.) females, captured in the action areas in Algarve (South of Portugal), were received in the Parque Biológico de Gaia. These animals were assigned to three enclosures (2:2:1). Each enclosure was totally fenced with 1 cm wire mesh and had an area of 6 m², with a 2 m² lake in it, with about 30 cm water depth. After confirmation that they had laid their eggs (by palpation), these animals were released in their natural environment (after two weeks, in average).

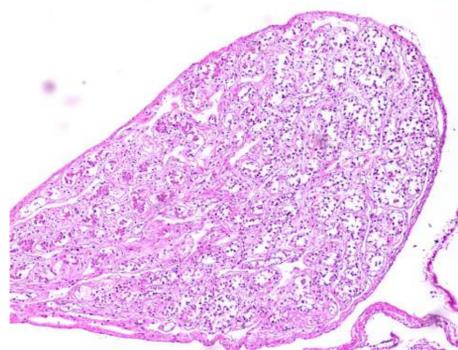
Also with the objective to study the reproductive capacity of *Trachemys scripta elegans* in the north of Portugal, three females and two males of this species were selected, among animals that were offered to the PBG Recovery Center by pet owners that no longer had conditions to keep them. These animals were housed in the same way that was previously described for E.O.



Between March 2011 and March 2012, the environmental and 10 cm deep temperatures were measured hourly using temperature probe placed in the animals enclosure and connected to a datalogger.

Four E.O. were born in October, 29, 2011, and eighteen *Trachemys scripta elegans* (T.S.E.) were born in February, 28 and March, 3, 2012.

The oviposition of E.O. was in middle June, so the incubation period was about 4 months. About T.S.E. we can't say how long was the incubation period because all juveniles overwinter in the nest and get out only when temperatures began to arise.



Trachemys scripta elegans gonad section (1µm; Haematoxylin/eosin).

These are the most setentrional results of reproduction in natural conditions of invasive species of freshwater turtles in Portugal.

This few results suggested that the invasive species T.S.E., can be very well adapted on the conditions of the study site. A great danger to the already threatened native species that can't compete with the body size and number of eggs produced by this exotic turtles.

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