

# The ecology of the world's smallest tortoise, *Homopus signatus signatus*

Field report summer 2004

## What?

This report gives an update of the ongoing project "The ecology of world's smallest tortoise, *Homopus signatus signatus*". The project has been initiated by the Homopus Research Foundation in 2000, and is now registered as a Ph.D. project at the University of the Western Cape (South Africa), as part of the Chelonian Biodiversity and Conservation Research Programme (see <http://www.science.uwc.ac.za/Staff/retha/chelonian.htm>).

## When?

This brief fieldwork episode took place in (southern hemisphere) summer, between 9 and 15 January 2004.

## Where?

The observations were made in the permanent research area near Springbok, South Africa. See previous field reports at <http://www.homopus.org> for details.

## With whom?

Because the duration of the fieldwork would be limited to one week, all the work was done by myself.

## Results

In an attempt to track all 19 tortoises with radio transmitters, there was no signal from two of them. The transmitter of one was already malfunctioning in spring 2003, whereas the other tortoise may have been removed from the area. A search for a signal in the general area, and even in neighbouring towns, did not yield anything. Two other specimens transmitted a signal, but where in deep crevices or dense bushes, so that they could not be seen. One tortoise could be seen, but could not be reached in its deep hiding place. All observed tortoises were still alive. The usual set of measurements was taken (see previous annual reports), including radiographs of females.

In addition, eight opportunistic observations of specimens without transmitters were made. Most tortoises were active, and activity was also noted in the tracked specimens. This may be due to the late spring rains and moderate summer temperatures. Although most of the vegetation was dry, some herbs and even one or two flowers were found.

An eggshell that might be from *H. s. signatus* was found. It appeared to be a hatched egg, and some fragments were collected and taken to the Netherlands for electron microscopy. Comparison with (already prepared) electron microscopic photographs of eggs produced in captivity might confirm if the shell is from *H. s. signatus*, and if it is a hatched shell. If the egg is from *H. s. signatus*, information about the site where it was found, and a comparison between the morphology of captive shells and the wild shell will be published in a note.

## Future

This study is ongoing, and the next field study will be in September and October 2004. It will be a more elaborate fieldwork, with several field assistants, as in previous spring seasons. After this, all results will be presented in a Ph.D. thesis as well as in several publications in international peer-reviewed journals. The population monitoring will continue after 2004.

## Acknowledgements

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Victor Loehr  
Homopus Research Foundation  
Netherlands  
[loehr@homopus.org](mailto:loehr@homopus.org)  
[Http://www.homopus.org](http://www.homopus.org)