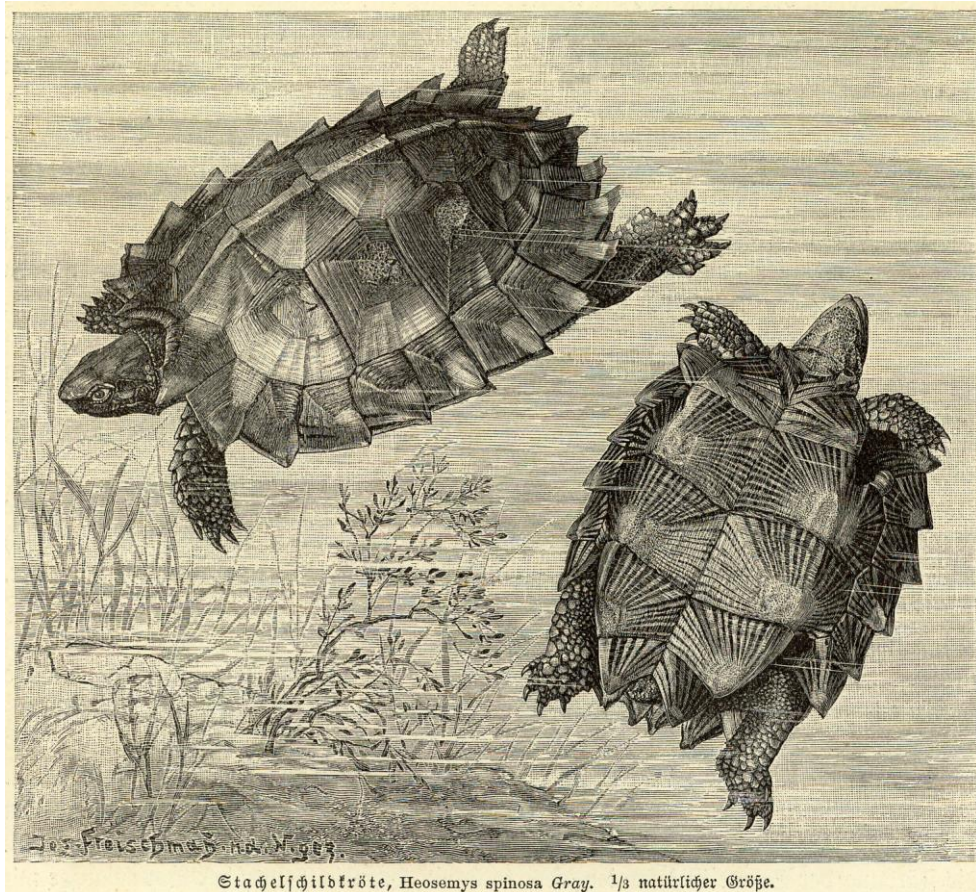


Studbook breeding programme

Heosemys spinosa (Spiny hill turtle)



Annual report 2013

Merijn Kerlen, studbook keeper

Martin van Wees, co-studbook keeper



European
Studbook
Foundation

KvK nr. 41136106

www.studbooks.eu

Introduction

In 2012 an article has been published in which a notification is made of two suggested lineages. This research is very positive for the lack of knowledge about *Heosemys spinosa*. Due to this research the studbook got more knowledge about suggested subspecies. Within the studbook research about these suggested lineages started at the end of 2013 and will be continued in 2014.

CITES Appendix II

Studbook population

The total population;

Date	Locations	Specimens	Birth	Death
31-12-2011	6	24 (8, 14, 2)		
31-12-2012	6	23 (8, 13, 2)	0	1
31-12-2013	6	20 (7, 11, 0)	0	3

Locations contain Belgium, Germany and The Netherlands. The population is decreasing which could be explained because of the stable number of locations, some death and lack of new animals.

A few participants reported some eggs but none hatched.

For 2013 3 death were reported from 2 different locations.

For 2013 no birth, transfer, import or new participants are reported.

Research

In 2012 an article (Spinks et al) has been published about *Heosemys spinosa* in which a notification is made of two suggested lineages. For conservation actions it is advisable to split those two suggested lineages. If those suggested lineages are mixed this could be the reason of no success on breeding or this could lead to unwanted hybrids. Keepers of *Heosemys spinosa* should be advised to split their animals according the suggested lineages. To implement this advice some additional research should be done to get more knowledge about the studbook population and different lineages within the studbook. The studbook keeper contacted the main author of the article, Phillip Spinks, and he is willing to expand his DNA research with the ESF population of *Heosemys spinosa*. For this research blood samples will be used which will be send to the University of California to expend the former research.

Over the past years some differences between animals have been noticed;

- Carapax; flat versus convex
- Iris colour; light versus dark
- Females; with spurs versus without spurs



Example of a brown iris and a yellow iris.



Example of spurs.

Discussion

The number of animals is still critical. It's known that over the past years many animals died without a known common reason. In the past some eggs are laid which were not fertilized. It is unknown why those were not fertilized, maybe caused by mixing different lineages.

Planned activities 2014

Most important for 2014 is the DNA research. For this research the complete studbook should be compared with the old ESB reports. For this research knowledge will be shared with the American studbook to get clear if suggested lineages occur within the current studbook population.

May 2014

Merijn Kerlen, Species coordinator

References

- Ernst, C.H. & R.W. Barbour, 1989. Turtles of the world: 147.
- Ernst, C.H., R.G.M. Altenburg & R.W. Barbour, 1997. Turtles of the World. ETI Information.
- Goetz, M. 2007. Husbandry and Breeding of the Spiny Turtle *Heosemys spinosa* (GRAY, 1931) at the *Durrell Wildlife Conservation Trust*. Radiata, Journal of German Chelonia Group, 2007-02.
- Pritchard, P.C.H., 1979. Encyclopedia of turtles
- Spinks PQ, Thomson RC, Hughes B, Moxley B, Brown R, Diesmos A, Shaffer HB. 2012. Cryptic variation and the tragedy of unrecognized taxa: the case of international trade in the spiny turtle *Heosemys spinosa* (Testudines: Geoemydidae). *Zoological Journal of the Linnean Society* 164: 811–824.