

STUDBOOK BREEDING PROGRAMME

TESTUDO KLEINMANNI EGYPTIAN TORTOISE



Photos: Henk Zwartepoorte

Annual reports 2015



European
Studbook
Foundation

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Studbook and Breeding Programme Egyptian tortoise *Testudo kleinmanni*

Annual reports 2015:

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1. Introduction and activities 2015:

First I want to apologise for not publishing a 2014 annual report. This has two main reasons. First my retirement from the Rotterdam Zoo in October 2014 and transferring all data (digitally and printed) and computers to my private address (email wise and locality wise) was a huge operation. Furthermore the first preparations for the ReHerp project did cost a lot of time. Second the feedback from a number of participants was insufficient and on some location not accurate. This did cost a lot of time to figure this out by hundreds of emails. Also the EAZA EEP I had to move from the Rotterdam Zoo to my private address. As you may know a large number of animals moved from the EEP to the ESF studbook. After a well earned holiday in November and December 2014 and the Christmas/New Years eve time I spent almost whole 2015 to re settle behind my private desk at home. The 2014 studbook however was updated. Currently in September 2016 the studbook 2015 was finished and I finally was able to draft the 2015 annual report.

2. Total studbook population:

December 31, 2015 the total population of historically registered animals was 147.168.303 (618) specimens. This is an increase of 113 specimens over the past two years.

3. Living studbook population:

December 31, 2015 the living studbook population counts 87.104.216 (407) specimens.

4. Locations:

December 31, 2015 these 407 specimens are kept by 45 private keepers. This number showed an increase during the past decade. These keepers/breeders live in 12 countries; Germany, Belgium, United Kingdom, Hungary, Czech republic, Poland, Sweden, Spain, France, Finland, Switzerland and the Netherlands. This number of participants is stable but it is worth to note that several people stopped participation and several new keepers entered the studbook.

Furthermore a number of participants and their animals is removed from the studbook. This was already announced in the 2013 report. In the Sparks studbook these animals are marked as LTF (Lost to Follow up).

Non reliable numbers and information will blur the image of the studbook/breeding program. These non responding participants were individually approached by the studbook with the question whether they want to remain participating or not. None of these participants replied to this message. 22.29.12 (63) animals and 15 participants were removed as LTF from the studbook.

5. Births:

During 2015 at 5 locations 50 births were reported; 3 locations in the Netherlands, 1 in Belgium and 1 in Germany.

This is a decrease compared to former years. See discussion.



Photo 1:

Hatchling

6. Imports:

No legal imported animals can be reported.

7. Deaths:

During 2015 3.3.8 (14) animals died.

As always the cause of death is often unknown. Quite frequently this species dies suddenly without any signs of disease. Suspected causes of death can be of a bacterial origin and/or sub optimal husbandry and nutrition can play a role in this as well. Deaths are reported of wild caught as well as of captive born origin. Disappointing is the fact that hardly any autopsies are executed and reported. This way the causes of death remain unknown.

8. Transfers:

During 2015 fifty six animals were transferred to other studbook participants; seventeen locations were involved.. These were mainly captive born animals that moved to other participants in order to create new breeding possibilities or to rather beginning participants in order to form larger groups. Some even to new participants. Significant transfers were those to the ReHerp Foundation breeding centre in Rijswijk. Two studbook participants donated their offspring to ReHerp; respectively 20 and 19 animals.

9. The in situ component: This point no. 9 is an excerpt from the EAZA EEP 2014 annual report. With kind permission of the EAZA EEP *Testudo kleinmanni* coordinator.

9.1 The in situ status:

The status in the wild is still critically endangered despite the CITES-listing and as such international protection. In Egypt the species is virtually extinct while in Israel military movements and human settlements and in Libya illegal trade and export are ongoing factors for decline of the species in general.

The Egyptian tortoise *Testudo kleinmanni* (Family *Testudinidae*) is a small-sized tortoise with a carapace length of up to 140 mm that inhabits an arid to semi-arid range extending over the coastal regions of Egypt and Libya, and some interior desert areas of Israel. The species is almost completely herbivorous.

The IUCN in situ status is Critically Endangered A2abcd+3d [ver 3.1](#) with a decreasing population trend. The species is protected by CITES I.

Population sizes have been under severe pressure for decades.

Causes of the decline are overgrazing by cattle, intensification of agriculture and over collecting for the international pet trade.

In Egypt the population is virtually extinct. Just very small scattered populations occur in the northern Sinai. In Israel the species suffers from military operations and human settlements. From Libya population numbers lack.

Despite the international protection illegal trade is continuing. On the internet animals are regularly offered for sale. Given the fact that export from Israel is not likely to happen and that the population in Egypt is virtually extinct it can be assumed that these animals are originated from Libya.

9.2 Conservation in relation to law enforcement:

Since 2000, the breeding program for the European Association of Zoos and Aquaria has now been coordinated. That same year also the privately managed studbook breeding program of the European Studbook Foundation saw a restart. At present both EAZA and ESF studbooks have respectively 112.104.103 (319) and 99.104.174 (377) living animals; so in total 696 animals. With respect to the TSA Zero extinction aim these numbers are hopeful. However recovery and protection of the original habitat is desired in order to make it possible to reintroduce captive born animals next to protection and recovery of the existing wild population and its habitat. With respect to that improvement of law enforcement in the northern African region but also globally is vital. Within the illegal trade often wild animals are claimed to be captive born in order to legalize the export and import. Experts often can distinguish captive born from wild animals but a scientific prove is necessary to be used in court. Also *Testudo kleinmanni* are shipped together with *Testudo graeca* in the same crates. Difference between the two species are often not seen by law enforcement people and the trade is intensively increasing during the past decade. At present in the Netherlands an isotope annex DNA research is executed to develop a tool in order to distinguish captive born from wild born animals. Van Hall university student Fabina Martis will collect and analyze a number of saliva and scute samples from animals in both EAZA and ESF collections as well as samples of wild animals in both Israel and Egypt. Seen the instable situation in Libya sampling from Libyan wild animals is impossible. The first part of the study on captive animals will be finished summer 2016 and will be followed by the study on samples of both tortoises and food plants in the wild later in 2016 or early 2017. The study is made possible by funding by the Munich Zoo, ESF *Testudo kleinmanni* studbook participants, the British Chelonian Group, the European Studbook Foundation and WWF Netherlands.

9.3 In situ conservation:

Since several years in the northern Sinai desert, a recovery project has been established, supported by the local Sweirki Bedouin tribe and coordinated by Nature Conservation Egypt (Baha El Din, S., Attum, O. & Baha El Din, M.,2003). Linking the *in situ* project to the *ex situ* breeding programs forms the basis for the conservation and recovery of the Egyptian tortoise in Egypt. An exchange of

information of both in situ and ex situ data has been established during the past four years. Contact persons in Egypt are Bassim Rabia Motwaly and Sherif Baha El Din. Contact person in the USA is professor Omar Attum. In the Zaranik Protected Area several pilot studies have been executed on reintroduced animals equipped with radio transmitters. Local Bedouin people of the Sweirki tribe are trained as rangers. These rangers observe animals from sunrise to sunset and collect data such as behavior, feeding, reproductive behavior such as mating, egg laying. At present the situation in the region is unstable. More extensive data will be published in the 2015 annual report.



Photo 2: Northern Sinai desert.



Photo 3: Fenced protected areas.



Photo 5:

Photo 4: Field observations Bassim Rabia (middle) at work with Sweirki rangers

10. Discussion:

10.1 Breeding programme progress and involvement in general:

The establishment of a genetically healthy vital captive population, that may be used in the future as a source for reintroduction in the wild, is still an important aim of the studbook. Important aim for the near future is reproduction with so far non breeding preferably wild caught founder animals. The total captive capacity within Europe seems to have reached its limitations. An exact number of a desired and manageable studbook population seems to be around 750. With 407 living animals at present this number is still not reached but important is to monitor the number of wild caught blood lines and their F1 offspring. As announced in the 2013 ESF annual report with some breeding participants it is discussed whether their offspring should stay within the studbook or not. Alternatives such as removing the offspring from the studbook either all of specific bloodlines or certain numbers of them is discussed. With these breeders there is good communication on this issue.

10.2 A brief analyses:

Good to repeat once more is the following topic from the 2013 annual ESF report

The number of 100% certain wild caught founder animals in the studbook is low. 8.17 (25) living animals are currently registered; of these 25 animals 2.8 (10) have reproduced over the past twenty years of the history of the studbook. The number of deceased 100% certain wild caught animals is 15.15 (30); of these 30 dead animals only 3.1 (4) have reproduced over the past twenty years of the history of the studbook. This means that only in total 5.9 (14) 100% certain wild caught founder animals have reproduced over the past twenty years. Fortunately and important to note here is that a much larger number of unknown origin animals is reproducing. The cause for this uncertain/unknown data is that a significant number of participants do not have a proper record keeping system or they simply did not know the origin of their animals at the moment of acquirement. These unknown factors make proper analyses of the current status of the studbook population unreliable. The import of wild caught animals into the studbook has significantly reduced over the past few decades. This is a positive element but at the same times it means that the future of the studbook population is mainly relying on captive born animals. These animals have to be genetically managed properly.

10.3 Deaths within the studbook:

Historically seen 18.20.0 (38) animals of wild caught origin died over the past 26 years while 17.15.70 (102) captive born animals and 4.0.5 (9) of unknown origin died.

10.4 Breeding results:

During the past two decades by 24 studbook participants breeding results were reported. Next to this quite a large number of captive born tortoises are included into the studbook which are bred by non participants. These results show that reproduction in Europe in general is improving which is promising for the future of the studbook and the future of the species in captivity. Several breeding results are published by Bulsing (2008) and Verhoeks (2006) in the Dutch magazine Trionyx. In 2015 however the number of breeders was only 5. This number is not increasing. Causes for this are difficult to give. In order to get a better picture on how the studbook participants keep their animals in a way of climate, sex ratio and nutrition a short questionnaire has been sent to all participants.

10.5 Nutrition:

In relation to husbandry nutrition is an important issue probably still neglected within the Egyptian tortoise keeping community. Within the German AG (Arbeits Gruppe) Kleinmanni since about a year information is gathered on this issue and during several occasions of this Group in Germany nutrition is discussed. This AG is very well led by Michael Rothe and communication within the group is improving fast.

Within the EAZA EEP an initiative is taken to collect samples of food plants in Israel in order to analyze those in a laboratory. An American student working at the Jerusalem Zoo recently collected plants which will be analyzed in a laboratory in the USA. Results will hopefully shed some more light on specific nutritional needs of the tortoises. Investigated is also the option to carry out a similar

collection and research on food plants in Egypt and Libya. With respect to this research and what the outcomes means for captive tortoises there is full cooperation from the former Rotterdam Zoo nutritionist Joeke Nijboer.

Baha El Din, S., Attum, O. & Baha El Din, M. (2003): The status of *Testudo kleinmanni* and *T.weneri* in Egypt. *Chelonian Conservation* **4**: 648–655.

Acknowledgement photos:

No. 1 Henk Zwartepoorte

Nos 2 and 3: internet. Google.

Nos 4 and 5: Bassim Rabia Motwaly.

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