

# Discussing the future of the studbook on *Homopus signatus*

## Discussion paper

Homopus Research Foundation  
Victor Loehr

2 September 2011

### Introduction

Studbooks are long-term projects, requiring long-term planning. In 2009, the Homopus Research Foundation initiated the preparation of a long-term studbook management plan for the studbook on *Homopus signatus*. This will be one of the first long-term plans for privately managed studbooks. The preparation process included consultation of all studbook participants. Participants made clear that they had different views on the future of the studbook. Since the efforts of the participants are the backbone of the studbook, their support will be essential for the studbook management plan to succeed. Therefore, it was found necessary to organise a plenary meeting to discuss the future of the studbook, on 3 December 2011.

This paper presents the current position of the Homopus Research Foundation, its background, and (im)possibilities for future developments. The paper will serve as a discussion guideline during the meeting. It outlines the issues that are open for discussion, but also explains about which issues the Homopus Research Foundation has no saying.

The result of the plenary discussion should be a decision how to proceed with this studbook. The decision will be laid down in a final draft of the studbook management plan in 2012.

### History

Since the mass exports of the eighties, the South African authorities have generally not allowed additional exports of wild-caught tortoises. The exploitation of natural tortoise populations for the trade was considered harmful. This point of view is still in place today.

Nevertheless, a permit was issued to the (predecessor of the) Homopus Research Foundation to collect and export two wild couples *Homopus signatus* in 1995. The main reason for this exception was the fact that the tortoises would be registered in a studbook, allowing the South African authorities to verify that the tortoises and their offspring would not end up in the trade.

The tortoises did well, reproduced from 1996, and did not end up in the trade. Therefore, a second permit to collect and export two couples *H. signatus* was granted in 2001. Although it might seem easy to collect and export tortoises, this involved a huge investment in time and money for everyone involved. It required years of communication with the authorities, planning, obtaining permits to collect tortoises, to move them within South Africa, to export them from South Africa, and to import them into the European Union, obtaining veterinary certificates, locating a wild population in the active season, locating individuals fit for export, hiring competent yet expensive carriers and brokers, etc. All costs involved were funded privately. This was the basis for the current population.

The captive population continued to do well, and grew from the original nine individuals (including one individual registered from a different source) to 62 live individuals in 2010. The first second generation offspring was born in 2003. The South African authorities have followed the developments of the studbook carefully through the annual reports, papers, and personal communication, and are extremely satisfied with the way we are proceeding. This was reflected in permission to collect and export *Homopus femoralis* for a different studbook in 2006.

Obviously, the studbook has also had its fair share of problems. Most importantly, two wild-caught couples, collected and exported by an American studbook participant in 1999, disappeared in 2004 (i.e., the tortoises were transferred, and the new keeper did not respond to requests from the studbook coordinator). The South African authorities were provided with the full address details from the participants involved, allowing the authorities to use this information in possible future permit applications. Since the collecting permits for these four *H. signatus* were issued to the American participant directly, the Homopus Research Foundation did not technically violate any permit conditions.

### **Permit conditions and agreements with participants**

The collecting permits issued to the Homopus Research Foundation contain strict conditions that help us acknowledge the point of view of the South African authorities regarding exploitation of wild tortoise populations. The following conditions are particularly relevant for the discussion about the long-term plans for the studbook on *H. signatus*:

*Collecting permit issued by the Western Cape Province in 1995:*

“Any hatchlings that have been bred in captivity must stay the property of the studbook and may not be used for commercial purposes.”

*Collecting permit issued by the Northern Cape Province in 2001:*

“Collected specimens may not be sold, traded, or used for any other commercial purposes.”

*Memorandum of Understanding between the Homopus Research Foundation and the Northern Cape Province, signed in 2001:*

“Subject to clauses 2 and 4 below, the Applicant may use the material and progeny or derivatives thereof (such as modified or unmodified extracts) for non-commercial purposes only.”

“Under this agreement, the Applicant may not commercialise the material or any progeny or derivatives thereof.”

“The Applicant may not transfer the material or any progeny or derivatives thereof to any third party [this includes studbook participants VL] without the prior informed consent in writing of the Director and then only under a written agreement containing terms no less restrictive than those contained in this agreement unless otherwise agreed in writing by the Director. The Applicant agrees to take every reasonable precaution to prevent the material coming into the possession of any unauthorised third party.”

Especially the last condition in the Memorandum of Understanding necessitated the Homopus Research Foundation to draw up formal agreements for studbook participants, transferring the conditions to the participants. Currently, every studbook participant in the studbook *H. signatus* has signed this agreement. The foundation discussed with the South African authorities that it will act as an “operational manager”, so that it is not necessary to ask the authorities permission for each transfer.

The Homopus Research Foundation has managed to respect the permit conditions despite the fact that the studbook management has become increasingly difficult with 62 tortoises housed at 27 locations in six countries. Our ability to respect permit conditions has certainly contributed to the positive attitude of the South African authorities towards our efforts. It should also be noted that other permit conditions state that future permit applications will be jeopardised by violations of permit conditions. This might even affect other studbooks on South African species.

### **Draft studbook management plan**

The growing population of captive *H. signatus* required a studbook management plan to outline what this growth should lead to on the long-term. For example, all second generation offspring is genetically related due to the small number of bloodlines. Should we start inbreeding or should we apply for permits to collect and export additional founders from South Africa?

In 2008, a draft management plan was prepared and sent to all participants and to the South African authorities for consultation. This draft continued the implicit studbook policies between 1995 and 2008, meaning the development of a conservation-orientated studbook that will be genetically fit for possible reintroductions in the (long-term) future (see the draft plan for details). It envisaged long generation times, relatively little breeding, and the collection and export of 50 additional founders from South Africa.

### *South African response*

The most important comments from the South African authorities were as following:

- Why do we need an assurance population for a species that is listed (IUCN) Lower risk?
- Why is an assurance population developing outside the range country?
- How are South African stakeholders (authorities, zoos, private tortoise keepers, universities, reptile dealers) involved?
- How will we ensure proper long-term management of the captive population?
- What will be the impact of collecting 50 wild *H. signatus* on its conservation status?
- How will we ensure that individuals will be available for South African conservation actions?

This response understandably reflects the interests of the South African authorities. For example, it would be up to them to explain to South African tortoise keepers and dealers why tortoises are being shipped overseas, whereas South Africans are often not permitted to keep or trade them.

#### *Participants' responses*

The most important comments from the studbook participants were as following:

- The number of offspring envisaged per breeding pair is too small (i.e., when a few offspring die, the bloodline may go extinct).
- The current sex ratio of the offspring is too unbalanced (male-biased) to justify the small number per breeding pair.
- It will be hard to find studbook participants if breeding should be reduced; participants may breed "illegally".
- The South African authorities should be requested to allow commercial trade in *H. signatus* (use financial gains for field projects).
- It is not useful to breed a location-specific captive population, when the wild population may become extinct in the next decades.
- House new wild-caught couples at locations that have gathered experience when keeping offspring *H. signatus*.

#### **Possible future developments for the studbook**

Our challenge is to alter the long-term plans to accommodate the comments from participants and the South African authorities, while respecting the conditions in the collecting permits and Memorandum of Understanding.

#### *Not open for discussion*

From the previous sections, it is clear that the following conditions for the studbook management plan are *not* open for discussion:

- All founders and their offspring should remain registered in the studbook.
- None of the tortoises may be used for commercial purposes.

These conditions have a direct effect on the studbook management (e.g., registering each tortoise in the studbook, not allowing participants to commercially sell *H. signatus*), but also an indirect effect. For example, it would be impossible to prevent studbook tortoises "leaking" out of the studbook and ending up in the commercial trade, when the studbook would be unmanageably large (see also the condition in Memorandum of Understanding: "The Applicant agrees to take every reasonable precaution to prevent the material coming into the possession of any unauthorised third party").

In the current draft studbook management plan, the population remains manageable by restricting the number of tortoises to ca. 350 individuals. However, the management mainly concerns studbook locations and not tortoises. Therefore, a larger number than 350 tortoises would be acceptable, as long as the number of participants remains ca. 75 or less. The fact that we do need a restriction follows from the conditions above and is therefore *not* open for discussion.

#### *Open for discussion*

What *is* open for discussion, is the final aim for the studbook. Each possible aim has different consequences in terms of (dis)advantages for studbook participants and risks. One could think of the following general studbook scenarios, but there are probably additional possibilities:

1. Conservation-orientated studbook (see also current draft studbook management plan)

Aim: Captive population with little loss of genetic diversity

How: Focus on tortoise survival (long generations) and not on breeding

Advantages for participants: Contribution to tortoise conservation, idealistic approach, new imports

Disadvantages for participants: Long waiting time before breeding, discarding eggs now

Risks: Too much responsibility, insufficient support of participants, "illegal" breeding

2. Terrarium studbook

Aim: Presence of the species in captivity

How: Focus on breeding and not on genetic diversity

Advantages for participants: Immediate (in)breeding allowed

Disadvantages for participants: Discarding eggs after the population has grown, no imports

Risks: Genetic loss irreversible if the natural population gets extinct, "illegal" breeding

3. Zoo studbook

Aim: Respecting the permit conditions when other scenarios are not supported by participants

How: Transferring the captive population to zoos, including permit requirements

Advantages for participants: None

Disadvantages for participants: No participation, dealing with zoo studbook regulations

Risks: Species mostly lost for private keepers, no conservation aims

In scenarios 1 and 2, one could consider some kind of rotation system for breeding tortoises among locations, enabling each location to breed at least some time.

There are many more things to be said about each scenario, and there will be more scenarios. During the meeting, the discussion will focus towards a scenario that should be incorporated in the studbook management plan.

A final aspect that we can discuss is how we should interpret "commercial" in this studbook. Is this trade for any money, even small fees to cover actual expenses? Trade at commercial prices? And does it include exchanges of tortoises for other (un)valuable tortoises? Most *H. signatus* are studbook-owned and there is no money involved in transfers, but a few offspring have private owners and it would be useful to decide on an interpretation that we could suggest to the South African authorities, and subsequently include in the long-term plan.