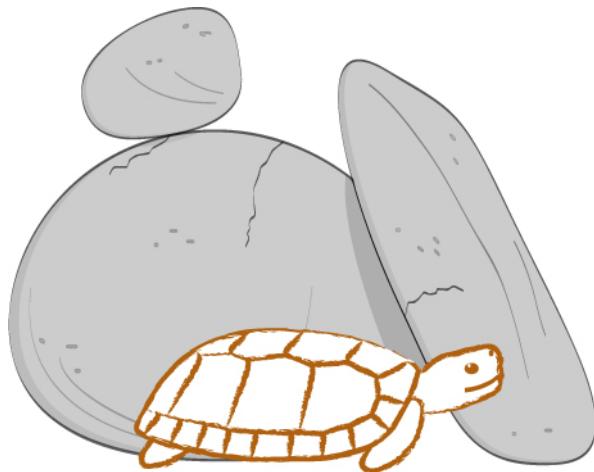


Homopus Research Foundation



Homopus Research Foundation

Annual Report

2010

*Victor Loehr
January 2011*

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1. INTRODUCTION AND ACHIEVEMENTS IN 2010

The Homopus Research Foundation aims to facilitate the long-term survival of *Homopus* in the wild, by gathering and distributing information about their biologies and by the formation of genetically healthy *ex situ* populations. In 2010, several activities contributed to this aim. The current report presents an overview of achievements in 2010, as well as activities planned for 2011 and thereafter. Moreover, the actual studbook populations for *Homopus areolatus*, *Homopus femoralis* and *Homopus signatus* are described, focussing on changes that occurred in 2010. All previous annual reports can be found on the website of the Homopus Research Foundation, <http://www.homopus.org>, section Publications.

The 2009 annual report anticipated on several results for 2010. The following table summarises these plans, with results obtained in 2010.

Result	Due
Fieldwork conducted on <i>H. femoralis</i>	Feb-2010
2010: Fieldwork was conducted. See also paragraph 1.2.	
Project proposal (schedule) and permits for long-term field study on <i>H. femoralis</i> updated	31-12-2010
2010: Project proposal and permits were updated.	
Detailed studbook management plan <i>H. signatus</i> drawn up	31-12-2010
2010: This plan was prepared as a draft in 2008. In 2010, communication with the studbook participants has made clear that a general meeting is necessary, to discuss the future of the studbook. See paragraph 1.1. The finalisation of the plan was postponed to 31-12-2012.	
Manuscripts submitted on:	
• Annual fluctuations of the temperature and relative humidity in the habitat of <i>H. femoralis</i>	31-12-2010
• Thermoregulation of wild <i>H. signatus</i>	31-12-2010
2010: Annual temperature fluctuations in the habitat of <i>H. femoralis</i> were already published in Loehr 2009 (Radiata 18:23-32). Relative humidity data will be submitted as an additional note in 2011.	
A scientific paper on thermoregulation in <i>H. signatus</i> is almost ready for submission. This will be submitted early 2011.	
In addition to these two papers, a non-scheduled paper on road mortality in <i>H. femoralis</i> was submitted for publication in 2010. Papers reporting treatment of constipation in <i>H. signatus</i> , and husbandry of <i>H. femoralis</i> were submitted and published in 2010. See Chapter 6.	

Further progress that is worth listing:

- The Homopus Research Foundation moved its bank account to a bank that cares for the environment (Triodos Bank, Netherlands).
- One general lecture about the ecology and conservation of South African tortoises was held at the annual general meeting of the Beaufort West farmers association, South Africa. Another lecture about tortoise husbandry in Namibia was held at a meeting of the Schildkrotte Grubbe region Basel, Switzerland.
- A participant in the studbook *H. areolatus* undertook a journey to visit the natural habitat of this species in the Sutherland area, South Africa. Another studbook participant attended the 2010 fieldwork on *H. femoralis* as a volunteer.
- The European Studbook Foundation (ESF) was sent a back-up file of the studbook registration, including the key to the participant names and addresses. The board of the ESF has explicitly confirmed that the files will only serve as a back-up for the studbook and will not be made available to anyone.
- Several private tortoise keepers in Belgium, France, Germany, Italy, Netherlands, and U.K. requested to obtain *Homopus* spp. Some of them received one or two *H. signatus* in 2010.
- One zoo in the U.S.A. requested *H. signatus*, possibly in collaboration with other zoos. Since no (female) animals were available, it was proposed to include the zoo(s) in a future application to collect and export additional founders based on a studbook management plan (see paragraph 1.1). This will be followed-up after the general meeting in the end of 2011.
- Information requests were received regarding:

- Presence of *H. signatus* in Tankwa Karoo National Park
- Locating *Homopus* spp. in the wild (University of Johannesburg)
- Suitability of *H. boulengeri* as a flagship species for the Karoo Highland Tourism Route (Endangered Wildlife Trust, South Africa)
- Clarification of results presented by the Homopus Research Foundation in a paper on diet of *H. signatus* (U.S. Marine Corps)
- Permit requirements and husbandry conditions for *Homopus* spp. in Cape Town
- Technical installation and climate simulation for an indoor tortoise area
- Rehoming a long-term captive *H. areolatus* within the U.S.A.
- Unfortunately, the Homopus Research Foundation received several e-mail messages regarding possible illegal trade of *Homopus* spp. in Europe. This information was forwarded to the South African authorities.
- Reprint requests for *Homopus* papers were received from:
 - Ciudad Universitaria, Mexico
 - University of Düsseldorf, Germany
 - Museo Nacional de Ciencias Naturales, Spain
 - Private individuals from Canada, Czech, and France
- Review requests were received from:
 - Chelonian Conservation and Biology
 - Biological Journal of the Linnean Society
 - Global Change Biology
- Photographic material was provided to:
 - Museum of Living Art, Fort Worth Zoo (www.fortworthzoo.org/conserve/mola.html)
 - Website www.testudines.org, Spain
 - Website www.infotortuga.com, Spain
 - Testudo Magazine, Italy
 - Karoo Highland Tourism Route, South Africa
- The website of the Homopus Research Foundation was updated with minor changes (new publications, new bank account details, actual studbook overviews).
- A German studbook participant had a *H. signatus* confiscated by the government, due to incomplete paperwork. Fortunately, the animal was returned to the participant within a few days, after verifying that this animal was legal. However, situations like this should not occur in a studbook that entirely consists of legal animals. All participants were reminded to ensure that their paperwork is in order.

1.1. Long-term studbook management plan *Homopus signatus*

A draft studbook management plan for *H. signatus* was prepared and reviewed by all studbook participants in 2008. A summary of their comments is listed in the 2008 annual report. Because the plan includes imports of additional founders in the next decade, the draft was also sent to the South African authorities. In October 2009, the South African authorities responded that they would be prepared to review the draft management plan, but it should contain more details to allow them to assess if they should opt for a genetically valuable *ex situ* population with conservation potential (requiring circa 50 additional funders over 10 years time), or for a terrarium population with limited conservation value (requiring few additional founders). The details that should be added to the plan are listed in the 2009 annual report.

While updating the plan in 2010, three studbook participants informed the studbook coordinator that they find the strict studbook policies (e.g., regulated breeding, all offspring to remain in the studbook) problematic. Although each participant has signed an agreement that outlines the rationale for these policies, further collaboration with the South African authorities should only be sought if the studbook is well supported by its participants. Therefore, it was decided to postpone the studbook management plan again, and to plan a general meeting for all studbook participants to discuss the future of the studbook and its policies in December 2011. Consequently, the studbook management plan may be finalised in 2012.

For the 2011 and 2012 captive breeding seasons, the advice to studbook participants keeping pairs of unrelated *H. signatus* (wild-caught or captive-bred) is modified. The motivation for this change can be found in Chapter 3. Participants may breed unrelated F1 individuals, but egg incubation methods should shift the sex ratio in the studbook towards females (e.g., eggs should be incubated in a strictly controlled environment at relatively high temperatures). Incubation results should be submitted to the studbook coordinator for inclusion in the annual reports.

1.2. Progress long-term field study *Homopus femoralis*

This study was permitted by CapeNature (South Africa). The permits require annual progress updates for CapeNature. Because this information may be informative for *Homopus* studbook participants, it will be included in the annual reports of the Homopus Research Foundation.

Based on low rainfall chances for September–December, and lack of tortoise activity during previous fieldwork episodes in March 2006 and December 2008, fieldwork was conducted in February 2010. Unfortunately, no tortoises were found until rainfall started in the end of the fieldwork period. Interestingly, *H. femoralis* started activity immediately after rainfall, and continued after dark. We managed to measure 14 individuals in three weeks time. Prior to this activity period, *H. femoralis* mortality along a tar road was measured, and the data have been submitted for publication in Turtle and Tortoise Newsletter (see Chapter 6).

Based on the poor results in 2010, the 2011 fieldwork will be conducted in spring (October–November). There are indications that *H. femoralis* might start spring activity more or less independent of rainfall (M.D. Hofmeyr, pers. comm.). If spring activity will turn out to be as rain-dependent as activity in summer, it may be necessary to abort the field study on this species.

2. PLANS FOR 2011 AND THEREAFTER

The table below lists results anticipated for 2011 and thereafter, with progress indicated:

Result	Due	Current status
Presentation held at symposium of the Herpetological Association of Africa, South Africa	Jan-2011	Presentation prepared
Presentation held at meeting of the Arbeitsgemeinschaft Schildkröten, Germany	19-03-2011	Not yet started
Fieldwork conducted on <i>H. femoralis</i>	Spring 2011	In preparation, one volunteer recruited
General meeting future studbook <i>H. signatus</i>	03-12-2011	Date planned, invitations sent out
Manuscripts submitted on:		
• Annual fluctuations of the relative humidity in the habitat of <i>H. femoralis</i>	31-12-2011	Data available
• Thermoregulation of wild <i>H. signatus</i>	01-03-2011	Manuscript almost ready for submission
Detailed studbook management plan <i>H. signatus</i> drawn up	31-12-2012	Draft prepared but requires more details before it can be assessed by the South African authorities. Plan may be finalised after the general studbook meeting in December 2011 (see paragraph 1.1).
Studbook management plan <i>H. areolatus</i> drawn up	31-12-2013	Not yet started; due to the delayed <i>H. signatus</i> plan, this task was postponed from 2011 to 2013.
Follow-up fieldwork conducted on <i>H. signatus</i>	Oct-2014	Not yet started

3. STUDBOOK SUMMARIES

To keep the studbook registrations up to date, it is vital that all studbook participants keep the coordinator informed of any changes. In the studbooks on *H. femoralis* and *H. signatus*, each participant has accepted this obligation in a formal agreement between participant and coordinator. Regardless of the agreements, most participants are very motivated and inform the coordinator spontaneously when changes occur throughout the year. Others choose to wait until information is requested by the coordinator in the end of each year. However, some participants remain silent for an entire year or longer, despite repeated messages from the studbook coordinator. In order to keep track of where these communication flaws occur, the annual reports will include a list of unresponsive locations. This will make it easier for the reader to assess the validity of studbook information per location, and will facilitate the coordinator when approaching a silent participant. In 2010, only location A45 has been unresponsive.

Homopus areolatus

Live specimens on 1 January 2010: 55 (excluding 6 specimens lost to follow-up)

Number of locations on 1 January 2010: 12 (5 countries, 1 zoo; excluding 1 location lost to follow-up)

New registrations: 0

Births: 24, at 6 locations

Deaths: 7, at 3 locations

Live specimens on 31 December 2010: 72 (excluding 6 specimens lost to follow-up)

Number of locations on 31 December 2010: 15 (6 countries, 1 zoo; excluding 1 location lost to follow-up)

Interpretation of changes:

Similar to 2009, locations A16, A44, and A46 produced offspring in 2010. In addition, location A56 started reproducing, and location A10 produced a hatchling as well. The large number of offspring, combined with low mortality, ensured significant growth of the studbook population. The animals that died were all 2010 offspring. Two (at different locations) were already weak when hatching and stopped eating, and three may have died due to a severe infestation with ticks. The sixth and seventh hatchlings died unexpectedly.

The progress that was reported in the 2009 annual report continued in 2010. It appears that an increasing number of locations succeeds in breeding the species structurally, while mortality remains low. This situation is very different from that a couple of years ago. Consequently, the perspectives for the studbook are improving. Until now, the studbook has focused on optimising husbandry and breeding. Along with the development of a studbook management plan in 2013 (see Chapter 2), it will be useful to consider how genetic diversity could be taken into account.

Homopus femoralis

Live specimens on 1 January 2010: 7

Number of locations on 1 January 2010: 3 (2 countries)

New registrations: 0

Births: 1

Deaths: 0

Live specimens on 31 December 2010: 8

Number of locations on 31 December 2010: 3 (2 countries)

Interpretation of changes:

Breeding results obtained at location HRF in 2008 were continued in 2010. Two eggs were produced, and one hatched. The other egg did not develop. Location A10 produced a clutch of two eggs, but these did not develop. At this point, all three adult females in the studbook have produced clutches in the past years. The publication of a second paper on husbandry of *H. femoralis* (see Chapter 6) will facilitate husbandry and breeding results in the years to come.

Homopus signatus

Live specimens on 1 January 2010: 61 (excluding 13 specimens lost to follow-up)

Number of locations on 1 January 2010: 22 (5 countries, 1 zoo; excluding 1 location lost to follow-up)

New registrations: 0

Births: 8, at 3 locations

Deaths: 7, at 6 locations

Live specimens on 31 December 2010: 62 (excluding 13 specimens lost to follow-up)

Number of locations on 31 December 2010: 27 (6 countries, 1 zoo; excluding 1 location lost to follow-up)

Interpretation of changes:

The relatively high mortality in 2009 continued in 2010. The offspring born at location A07 in 2010 died within three months from unknown causes. At location A50, one male died (cause unknown), after two earlier deaths in 2009. Two more males died at location A54 from bacterial sepsis. Extensive veterinary analysis, including bacteriological examination, could not reveal what caused the sepsis. A big loss was also the adult female transferred to location A60 in 2010; it died (cause unknown) after producing two eggs that did not hatch. At location A63, a male died, probably caused by dehydration. A paper was produced that describes the veterinary treatment for this individual (see Chapter 6). Finally, one male died at location PRAHA. The cause was not known.

Like in 2009, several deaths were F1 offspring from founders that have already died. Consequently, they cannot be replaced. The surviving offspring from 2010 are all from bloodlines 44 x 7 (F1 from 1 x 3 and 35 x 36), and 37 x 38/9 (wild-caught, and F1 from 1 x 2). Considering the increased mortality in the past two years, and the absence of founders to replace these animals, F2 offspring should be produced

from the genetically unrelated F1 couples in the studbook. In order to maintain genetic diversity, it is particularly important that locations with F1 couples based on bloodline 1 x 2 start breeding. These locations are A18, A40 and A57. To stimulate male mating activity, night temperatures in autumn and winter may be kept relatively low (see 2009 annual report, e.g., around 15°C).

Two years of relatively high mortality in this studbook are worrisome. The total number of individuals and the breeding results demonstrate that the population itself is not at risk, but the decreasing genetic diversity may become problematic.

4. ACTUAL STUDBOOK OVERVIEWS

Homopus areolatus: Total studbook population. MULTX are groups of unregistered specimens at locations outside of the studbook. UNKX are specimens at locations outside of the studbook. ltf means that a specimen is lost to follow-up.

Stud #	Sex	Hatch Date	Sire	Dam	Location	Date	Local ID	Event
--------	-----	------------	------	-----	----------	------	----------	-------

A03	1	F	????	WILD	WILD	KRAAIFONT HRF A03	~ Jul 1997 21 Nov 1997 14 Dec 1997 9 Nov 1998	_____ I	Transfer
									Transfer
									Transfer
									Death
	2	F	????	WILD	WILD	KRAAIFONT HRF A03	~ Jul 1997 21 Nov 1997 14 Dec 1997 13 Aug 1999	_____ II	Transfer
									Transfer
									Transfer
									Death
	6	M	????	MULT1	MULT2	KRAAIFONT HRF A03	???? 21 Nov 1997 14 Apr 2001 ~12 Sep 2007	_____ VI	Hatch
									Transfer
									Loan to
									Death
	7	M	????	WILD	WILD	ROTTERDAM A03	???? 5 Jul 1998	_____ HZ0457	Transfer
									Loan to
									Death
	32	F	????	WILD	WILD	A29 A03	~ Jun 2000 15 Jun 2001 16 May 2002	_____ HZ0752	Transfer
									Transfer
									Death
	33	F	????	WILD	WILD	LONDON RP A03	???? 23 Dec 2001 28 Jul 2003	_____ HZ0793	Transfer
									Transfer
									Death
	45	M	14 Dec 1999	58	UNK5	A46 HRF A03	14 Dec 1999 4 Nov 2004 5 Nov 2004 25 Mar 2006	_____ V3 HZ0989	Hatch
									Transfer
									Loan to
									Death

Totals: 3.4.0 (7)

A10	4	F	????	MULT1	MULT2	KRAAIFONT HRF A10	???? 21 Nov 1997 27 Oct 2004	_____ IV	Hatch
									Transfer
									Loan to
	5	M	????	MULT1	MULT2	KRAAIFONT HRF A10	???? 21 Nov 1997 27 Oct 2004	_____ V	Hatch
									Transfer
									Loan to
	62	F	~25 Nov 2007	5	4	A10 HRF	~25 Nov 2007 ~25 Nov 2007	_____	Hatch
									Ownership
	117	?	6 Sep 2010	5	4	A10 HRF	6 Sep 2010 6 Sep 2010 4 Dec 2010	_____	Hatch
									Ownership
									Death

Totals: 1.2.1 (4)

A12	8	F	????	WILD	WILD	KRAAIFONT A12	???? ~16 Sep 1999 19 Mar 2000	_____ A1	Transfer
									Transfer
									Death

9	F	????	WILD	WILD	A13 A12	???? ~16 Sep 1999 30 Apr 2000	BLACKY	Transfer Transfer Death
13	M	????	WILD	WILD	KRAAIFONT A12	???? ~16 Sep 1999 15 Feb 2000	A7	Transfer Transfer Death
15	F	????	WILD	WILD	A13 A12	???? ~16 Sep 1999 15 Feb 2000	A4	Transfer Transfer Death
19	?	5 Feb 2000	MULT3	11	A12	5 Feb 2000 5 Feb 2000	_____	Hatch Death
20	?	16 Mar 2000	MULT3	11	A12	16 Mar 2000 16 Mar 2000	_____	Hatch Death
21	?	16 Mar 2000	MULT3	11	A12	16 Mar 2000 16 Mar 2000	_____	Hatch Death

Totals: 1.3.3 (7)

A16	16	M	????	WILD	WILD	A16	30 Aug 1994	_____	Transfer
	17	F	????	WILD	WILD	A16	30 Aug 1994	_____	Transfer
	18	M	23 May 2000	16	17	A16	23 May 2000 30 Mar 2003	_____	Hatch Death
	38	F	5 Apr 2003	16	17	A16	5 Apr 2003 28 Nov 2006	_____	Hatch Death
	39	M	9 Apr 2003	16	17	A16	9 Apr 2003	_____	Hatch
	48	M	23 Mar 2004	16	17	A16	23 Mar 2004	_____	Hatch
	49	F	25 Mar 2004	16	17	A16	25 Mar 2004	_____	Hatch
	50	F	8 Aug 2004	16	17	A16	8 Aug 2004	_____	Hatch
	51	M	19 Aug 2004	16	17	A16	19 Aug 2004	_____	Hatch
	52	F	25 Aug 2004	16	17	A16	25 Aug 2004	_____	Hatch
	54	M	10 Jun 2005	16	17	A16	10 Jun 2005	_____	Hatch
	55	M	27 Jun 2005	16	17	A16	27 Jun 2005	_____	Hatch
	56	F	6 Oct 2005	16	17	A16	6 Oct 2005	_____	Hatch
	57	F	3 Nov 2005	16	17	A16	3 Nov 2005	_____	Hatch
	61	?	17 Dec 2006	16	17	A16	17 Dec 2006 ~ 9 May 2007	_____	Hatch Death
	108	?	8 Mar 2010	47	37	A44 A16	8 Mar 2010 4 Jun 2010	_____	Hatch Transfer
	109	?	8 Mar 2010	47	37	A44 A16	8 Mar 2010 4 Jun 2010	_____	Hatch Transfer
	115	?	30 May 2010	16	17	A16	30 May 2010	_____	Hatch
	116	?	31 May 2010	16	17	A16	31 May 2010	_____	Hatch

Totals: 7.7.5 (19)

A26	27	M	????	WILD	WILD	KRAAIFONT A26	???? 9 Jul 2001	_____ ltf	Transfer
	28	F	????	WILD	WILD	KRAAIFONT A26	???? 9 Jul 2001	_____ ltf	Transfer

Totals: 1.1.0 (2)

A27	29	M	????	WILD	WILD	KRAAIFONT A27	???? 9 Jul 2001 9 Nov 2001	_____	Transfer Transfer Death
	30	F	????	WILD	WILD	KRAAIFONT A27	???? 9 Jul 2001 11 Nov 2001	_____	Transfer Transfer Death

Totals: 1.1.0 (2)

A37											
22	M	????	WILD	WILD	A20 A21 A37	???? 17 Oct 2000 15 Sep 2002	_____1	Transfer Transfer Transfer			
23	F	????	WILD	WILD	A20 A21 A37	???? 17 Oct 2000 15 Sep 2002	_____2	Transfer Transfer Transfer			
24	F	~ 1993	UNK1	UNK2	A20 A21 A37	~ 1993 17 Oct 2000 15 Sep 2002	_____3	Hatch Transfer Transfer			
46	?	30 Sep 2004	22	24	A37	30 Sep 2004	_____	Hatch			
107	?	8 Mar 2010	47	37	A44 A37	8 Mar 2010 5 May 2010	_____	Hatch Transfer			
111	?	29 Mar 2010	47	37	A44 A37	29 Mar 2010 7 Jun 2010	_____	Hatch Transfer			
Totals: 1.2.3 (6)											

A42											
35	M	9 Jul 2002	16	17	A16 A42	9 Jul 2002 ~30 Sep 2005	_____	Hatch Loan to			
Totals: 1.0.0 (1)											

A43											
10	M	????	WILD	WILD	A13 A12 A43	???? ~16 Sep 1999 ~ May 2004	ERNST _____1tf	Transfer Transfer Loan to			
11	F	????	WILD	WILD	KRAAIFONT A12 A43	???? ~16 Sep 1999 ~ May 2004	_____A5 1tf	Transfer Transfer Loan to			
12	F	????	WILD	WILD	KRAAIFONT A12 A43	???? ~16 Sep 1999 ~ May 2004	_____A6 1tf	Transfer Transfer Loan to			
14	F	????	WILD	WILD	KRAAIFONT A12 A43	???? 16 Sep 1999 ~ May 2004	BABY _____1tf	Transfer Transfer Loan to			
Totals: 1.3.0 (4)											

A44											
37	F	7 Aug 2003	5	4	HRF A10 HRF A44	7 Aug 2003 21 Aug 2004 27 Oct 2004 31 Oct 2004	IV-3 IV-3 ESMERA	Hatch Loan to Transfer Loan to			
41	M	????	WILD	WILD	WUPPERTAL A44	28 Mar 1991 27 Aug 2010	91586B _____	Transfer Loan to			
47	M	~ Jun 1993	UNK3	UNK4	A47 A48 A44	~ Jun 1993 ~ 2000 21 Nov 2004	_____HUGO	Hatch Transfer Transfer			
94	?	7 Jul 2009	16	17	A16 A44	7 Jul 2009 5 Jun 2010	_____	Hatch Transfer			
113	M	30 Mar 2010	47	37	A44 HRF A44	30 Mar 2010 30 Mar 2010 20 Aug 2010	_____	Hatch Ownership Death			
114	M	30 Mar 2010	47	37	A44 HRF A44	30 Mar 2010 30 Mar 2010 26 Aug 2010	_____	Hatch Ownership Death			
Totals: 4.1.1 (6)											

A45											
25	F	15 Sep 2001	5	4	HRF A10 A16 A45	15 Sep 2001 24 May 2003 4 Dec 2004 27 Feb 2005	IV-1 _____	Hatch Loan to Loan to Loan to			
34	M	30 Jun 2002	16	17	A16 A45	30 Jun 2002 27 Feb 2005	_____	Hatch Loan to			
53	M	12 Jun 2005	34	25	A45	12 Jun 2005	_____	Hatch			
Totals: 2.1.0 (3)											

A46										
58	M	????	WILD	WILD	A46	9 Sep 1997	03	Transfer		
59	F	????	WILD	WILD	A46	9 Sep 1997	01	Transfer		
60	F	????	WILD	WILD	A46	25 Mar 1999	02	Transfer		
84	?	~ 7 Feb 2008	58	MULT4	A46	~ 7 Feb 2008	_____	Hatch		
85	?	~ 7 Feb 2008	58	MULT4	A46	~ 7 Feb 2008	_____	Hatch		
86	?	~ 7 Feb 2008	58	MULT4	A46	~ 7 Feb 2008	_____	Hatch		
87	?	~25 Feb 2008	58	MULT4	A46	~25 Feb 2008	_____	Hatch		
88	?	5 Feb 2009	58	MULT4	A46	5 Feb 2009	_____	Hatch		
89	?	6 Feb 2009	58	MULT4	A46	6 Feb 2009	_____	Hatch		
91	?	12 Feb 2009	58	MULT4	A46	12 Feb 2009	_____	Hatch		
92	?	~ 7 Mar 2009	58	MULT4	A46	~ 7 Mar 2009	_____	Hatch		
95	?	~15 Jan 2010	58	MULT4	A46	~15 Jan 2010	_____	Hatch		
96	?	~18 Jan 2010	58	MULT4	A46	~18 Jan 2010	_____	Hatch		
98	?	11 Feb 2010	58	MULT4	A46	11 Feb 2010	_____	Hatch		
100	?	3 Feb 2010	58	MULT4	A46	3 Feb 2010 25 Sep 2010	_____	Hatch Death		
101	?	~12 Feb 2010	58	MULT4	A46	~12 Feb 2010	_____	Hatch		
102	?	~24 Feb 2010	58	MULT4	A46	~24 Feb 2010	_____	Hatch		
103	?	3 Apr 2010	58	MULT4	A46	3 Apr 2010 18 Sep 2010	_____	Hatch Death		
104	?	3 Mar 2010	58	MULT4	A46	3 Mar 2010 13 May 2010	_____	Hatch Death		
105	?	~ 3 Apr 2010	58	MULT4	A46	~ 3 Apr 2010	_____	Hatch		
106	?	9 Apr 2010	58	MULT4	A46	9 Apr 2010 16 Sep 2010	_____	Hatch Death		
Totals: 1.2.18 (21)										

A48										
90	F	3 Feb 2009	47	37	A44 A48	3 Feb 2009 3 Feb 2009 10 Feb 2009	_____	Hatch Ownership Transfer		
93	M	7 Jul 2009	16	17	A16 A44 A48	7 Jul 2009 5 Jun 2010 13 Jun 2010	_____	Hatch Transfer Transfer		
Totals: 1.1.0 (2)										

A54										
79	M	~15 Mar 2007	58	MULT4	A46 A54	~15 Mar 2007 ~15 Jun 2008	_____	Hatch Transfer		
80	?	~15 Mar 2007	58	MULT4	A46 A54	~15 Mar 2007 ~15 Jun 2008 15 Oct 2008	_____	Hatch Transfer Death		
81	F	~15 Mar 2007	58	MULT4	A46 A54	~15 Mar 2007 ~15 Jun 2008	_____	Hatch Transfer		
82	F	~15 Mar 2007	58	MULT4	A46 A54	~15 Mar 2007 ~15 Jun 2008	_____	Hatch Transfer		
83	?	~15 Mar 2007	58	MULT4	A46 A54	~15 Mar 2007 ~15 Jun 2008 15 Oct 2008	_____	Hatch Transfer Death		

Totals: 1.2.2 (5)

A56										
67	F	8 Apr 2004	58	MULT4	A46 A56	8 Apr 2004 ~15 Jun 2008	_____	Hatch Transfer		
70	F	14 Mar 2004	58	MULT4	A46 A56	14 Mar 2004 ~15 Jun 2008 8 May 2009	_____	Hatch Transfer Death		

72	M	14 Mar 2004	58	MULT4	A46 A56	14 Mar 2004 ~21 May 2006	_____	Hatch Transfer
73	M	14 Mar 2004	58	MULT4	A46 A56	14 Mar 2004 ~21 May 2006	_____	Hatch Transfer
75	M	6 Jan 2004	58	59	A46 A56	6 Jan 2004 ~15 Jun 2008	_____	Hatch Transfer
76	F	11 Jan 2004	58	59	A46 A56	11 Jan 2004 ~15 Jun 2008	_____	Hatch Transfer
78	F	23 Mar 2005	58	MULT4	A46 A56	23 Mar 2005 ~15 Jun 2008	_____	Hatch Transfer
97	?	27 Jan 2010	75	67	A56	27 Jan 2010	_____	Hatch
99	?	17 Feb 2010	75	67	A56	17 Feb 2010	_____	Hatch
118	?	13 Nov 2010	75	67	A56	13 Nov 2010	_____	Hatch
Totals: 3.4.3 (10)								

A66	68	M	8 Apr 2004	58	MULT4	A46 A56 A66	8 Apr 2004 ~15 Jun 2008 18 Sep 2009	_____	Hatch Transfer Transfer
	77	F	14 Feb 2005	58	MULT4	A46 A56 A66	14 Feb 2005 ~15 Jun 2008 18 Sep 2009	_____	Hatch Transfer Transfer
Totals: 1.1.0 (2)									

A70	110	?	8 Mar 2010	47	37	A44 HRF A70	8 Mar 2010 8 Mar 2010 5 Sep 2010	_____	Hatch Ownership Loan to
	112	?	30 Mar 2010	47	37	A44 HRF A70	30 Mar 2010 30 Mar 2010 5 Sep 2010	_____	Hatch Ownership Loan to
Totals: 0.0.2 (2)									

A73	69	M	~22 Apr 2004	58	MULT4	A46 A56 A73	~22 Apr 2004 ~21 May 2006 19 Jun 2010	_____	Hatch Transfer Transfer
	71	F	~ 6 Mar 2004	58	MULT4	A46 A56 A73	~ 6 Mar 2004 ~21 May 2006 19 Jun 2010	_____	Hatch Transfer Transfer
Totals: 1.1.0 (2)									

A74	74	M	~11 Feb 2004	58	MULT4	A46 A56 A74	~11 Feb 2004 ~21 May 2006 ~ Mar 2009	_____	Hatch Transfer Transfer
Totals: 1.0.0 (1)									

HRF	3	?	????	MULT1	MULT2	KRAAIFONT HRF	???? 21 Nov 1997 29 Oct 1999	III	Hatch Transfer Death
	26	?	15 Oct 2001	5	4	HRF	15 Oct 2001 26 Apr 2002	IV-2	Hatch Death
	31	?	11 Nov 2001	5	4	HRF	11 Nov 2001 11 Nov 2001	_____	Hatch Death
	36	?	12 Oct 2002	5	4	HRF	12 Oct 2002 12 Oct 2002	_____	Hatch Death
Totals: 0.0.4 (4)									

WUPPERTAL	40	M	????	WILD	WILD	WUPPERTAL	28 Mar 1991	91586A	Transfer
	42	F	22 Feb 1999	58	MULT4	A46 HRF WUPPERTAL	22 Feb 1999 4 Nov 2004 9 Nov 2004 14 Apr 2005	NOMARK 91586C	Hatch Transfer Loan to Death

43	F	21 Dec 1999	58	MULT4	A46 HRF WUPPERTAL	21 Dec 1999 4 Nov 2004 9 Nov 2004 26 Mar 2005	_____CRI	Hatch Transfer Loan to Death
44	F	20 Dec 2001	58	MULT4	A46 HRF WUPPERTAL	20 Dec 2001 4 Nov 2004 9 Nov 2004 4 Nov 2005	_____CL2	Hatch Transfer Loan to Death

Totals: 1.3.0 (4)

TOTALS: 33.39.42 (114)

Homopus femoralis: Total studbook population.

Stud #	Sex	Hatch Date	Sire	Dam	Location	Date	Local ID	Event
--------	-----	------------	------	-----	----------	------	----------	-------

A08								
	1	M	????	WILD	WILD	A28 HRF A08	~ Jan 2001 23 Dec 2001 17 Apr 2002	_____I Transfer Loan to Loan to
	6	F	????	WILD	WILD	BEAUF W HRF A08	16 Mar 2006 19 Mar 2006 2 Apr 2006	NONE Capture Transfer Loan to

Totals: 1.1.0 (2)

A10								
	2	M	????	WILD	WILD	A28 A08 A10	~ Jan 2001 23 Dec 2001 30 Jul 2006	_____II Transfer Loan to Loan to
	5	F	????	WILD	WILD	BEAUF W HRF A10	16 Mar 2006 19 Mar 2006 30 Jul 2006	NONE Capture Transfer Loan to

Totals: 1.1.0 (2)

HRF								
	3	M	????	WILD	WILD	A28 HRF	~ Jan 2001 23 Dec 2001	_____III Transfer Loan to
	4	F	????	WILD	WILD	BEAUF W HRF	16 Mar 2006 19 Mar 2006	NONE Capture Transfer
	7	M	7 Jun 2008	3	4	HRF	7 Jun 2008	_____Hatch
	8	?	30 Jun 2010	3	4	HRF	30 Jun 2010	_____Hatch

Totals: 2.1.1 (4)

TOTALS: 4.3.1 (8)

Homopus signatus: Total studbook population. MULT1 are specimens 18 and 19, MULT2 specimens 20 and 21. UNK1 and UNK2 are unknown specimens outside of the studbook. ltf means that a specimen is lost to follow-up. Specimen number 95 is inbred and not available for further breeding.

Stud #	Sex	Hatch Date	Sire	Dam	Location	Date	Local ID	Event
--------	-----	------------	------	-----	----------	------	----------	-------

A07								
	35	M	????	WILD	WILD	SPRINGBOK HRF A07	4 Oct 2001 6 Oct 2001 16 Dec 2001	NONE Capture Transfer Loan to
	36	F	????	WILD	WILD	SPRINGBOK HRF A07	3 Oct 2001 6 Oct 2001 16 Dec 2001	NONE Capture Transfer Loan to
	103	M	10 Aug 2008	35	36	A07 HRF A07	10 Aug 2008 10 Aug 2008 27 Feb 2009	Hatch Ownership Death
	108	?	~27 Sep 2009	35	36	A07 HRF A07	~27 Sep 2009 ~27 Sep 2009 ~15 Dec 2009	Hatch Ownership Death

116	?	12 Aug 2010	35	36	A07 HRF A07	12 Aug 2010 12 Aug 2010 16 Nov 2010	_____	Hatch Ownership Death
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Totals: 2.1.2 (5)

<hr/>								
A08								
42	F	20 Aug 2002	1	2	HRF A08	20 Aug 2002 19 Apr 2003	II-11 _____	Hatch Loan to
73	M	2 Aug 2005	37	38	HRF A08	2 Aug 2005 18 Apr 2009	HSS73 _____	Hatch Loan to
95	M	18 Sep 2007	41	42	A08 HRF	18 Sep 2007 18 Sep 2007	_____	Hatch Ownership

Totals: 2.1.0 (3)

<hr/>								
A10								
6	M	8 Nov 1996	1	3	HRF A10 A31 A10	8 Nov 1996 4 Aug 2001 7 May 2002 8 Dec 2002 5 Sep 2009	III-2 _____	Hatch Loan to Loan to Loan to Death
7	F	24 Dec 1996	1	3	HRF A06 A07 A18 A31 A10	24 Dec 1996 22 Nov 1998 5 Jul 2000 14 Dec 2001 6 May 2002 8 Dec 2002	III-3 _____	Hatch Loan to Loan to Loan to Loan to Loan to
44	M	31 Oct 2002	35	36	A07 HRF A10	31 Oct 2002 31 Oct 2002 24 Jul 2004	_____	Hatch Ownership Loan to
80	?	10 Sep 2006	44	7	A10 HRF A10	10 Sep 2006 10 Sep 2006 1 Mar 2007	_____	Hatch Ownership Death
81	?	3 Sep 2006	44	7	A10 HRF A10	3 Sep 2006 3 Sep 2006 8 Apr 2008	_____	Hatch Ownership Death
94	M	27 Aug 2007	44	7	A10 HRF	27 Aug 2007 27 Aug 2007	_____	Hatch Ownership
109	?	3 Feb 2010	44	7	A10 HRF	3 Feb 2010 3 Feb 2010	_____	Hatch Ownership
110	?	23 Mar 2010	44	7	A10 HRF	23 Mar 2010 23 Mar 2010	_____	Hatch Ownership
115	?	1 May 2010	44	7	A10 HRF	1 May 2010 1 May 2010	_____	Hatch Ownership

Totals: 3.1.5 (9)

<hr/>								
A12								
45	?	~ Jun 2002	MULT1	20	A12	~ Jun 2002 ~ Jun 2002	_____	Hatch Death
46	?	~ Jun 2002	MULT1	20	A12	~ Jun 2002 ~ Jun 2002	_____	Hatch Death
48	?	~ Jul 2002	MULT1	20	A12	~ Jul 2002 ~ Jul 2002	_____	Hatch Death
49	?	~ Jul 2002	MULT1	20	A12	~ Jul 2002 ~ Jul 2002	_____	Hatch Death

Totals: 0.0.4 (4)

<hr/>								
A16								
11	M	10 Nov 1997	1	3	HRF A06 A07 A16	10 Nov 1997 22 Nov 1998 5 Jul 2000 16 Sep 2000	III-4 _____	Hatch Loan to Loan to Loan to
14	M	22 Oct 1998	1	3	HRF A07 A16	22 Oct 1998 22 Nov 1998 16 Sep 2000	III-5 _____	Hatch Loan to Loan to
97	F	15 Sep 2007	35	36	A07 HRF A16	15 Sep 2007 15 Sep 2007 14 Mar 2010	_____	Hatch Ownership Loan to

Totals: 2.1.0 (3)

A18	15	F	20 Sep 1999	1	2	HRF A31 A18	20 Sep 1999 6 May 2002 8 Dec 2002	II-6	Hatch Loan to Loan to	
	69	M	9 May 2005	37	38	HRF A33 A18	9 May 2005 28 May 2006 3 Sep 2007	HSS69 NURI	Hatch Loan to Loan to	
Totals: 1.1.0 (2)										
<hr/>										
A25	3	F	????	WILD	WILD	SPRINGBOK HRF A25	26 Sep 1995 30 Sep 1995 12 Jun 2004 22 Aug 2008	NONE III	Capture Transfer Loan to Death	
	Totals: 0.1.0 (1)									
<hr/>										
A31	22	M	19 Jun 2000	1	2	HRF A31	19 Jun 2000 6 May 2002 14 Sep 2002	II-7	Hatch Loan to Death	
	29	?	15 Jul 2001	1	3	HRF A31	15 Jul 2001 6 May 2002 14 Aug 2002	III-9	Hatch Loan to Death	
Totals: 1.0.1 (2)										
<hr/>										
A33	53	F	20 Jul 2003	13	5	HRF A51 A33	20 Jul 2003 16 Sep 2006 30 Dec 2007	030720	Hatch Loan to Loan to	
	63	M	6 Jul 2004	35	36	A07 HRF A51 A33	6 Jul 2004 6 Jul 2004 14 Aug 2006 30 Dec 2007		Hatch Ownership Loan to Loan to	
	66	F	6 Aug 2004	13	5	HRF A51 A33	6 Aug 2004 2 Jun 2006 30 Dec 2007	040806	Hatch Loan to Loan to	
Totals: 1.2.0 (3)										
<hr/>										
A35	31	M	3 Aug 2001	1	2	HRF A31 A35	3 Aug 2001 6 May 2002 30 Nov 2002 ~ Jul 2006	II-10	Hatch Loan to Loan to Death	
	34	M	30 Sep 2001	1	3	HRF A31 A35	30 Sep 2001 6 May 2002 30 Nov 2002 ~ 1 Apr 2007	III-11	Hatch Loan to Loan to Death	
Totals: 2.0.0 (2)										
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A36	12	M	21 Nov 1997	1	2	HRF A07 A18 A31 A36	21 Nov 1997 22 Nov 1998 14 Dec 2001 6 May 2002 8 Dec 2002 20 Oct 2003	II-4	Hatch Loan to Loan to Loan to Loan to Death	
Totals: 1.0.0 (1)										
<hr/>										
A37	33	M	19 Aug 2001	1	3	HRF A31 A37	19 Aug 2001 6 May 2002 11 Dec 2002 26 Dec 2003	III-10	Hatch Loan to Loan to Death	
	60	F	????	WILD	WILD	A37	~15 Mar 2003		Transfer	
	61	M	7 Oct 2003	WILD	60	A37	7 Oct 2003		Hatch	
	62	F	5 Jun 2004	WILD	60	A37	5 Jun 2004		Hatch	
	67	M	5 Aug 2004	WILD	60	A37	5 Aug 2004		Hatch	
	83	?	~15 Jan 2006	25	60	A37	~15 Jan 2006 ~15 Jan 2006		Hatch Death	
	84	?	~15 Feb 2006	25	60	A37	~15 Feb 2006 ~15 May 2006		Hatch Death	

85	?	~15 Mar 2006	25	60	A37	~15 Mar 2006 ~20 Mar 2006	_____	Hatch Death
86	M	~20 Apr 2006	25	60	A37	~20 Apr 2006	_____	Hatch
87	M	~15 Oct 2005	25	60	A37	~15 Oct 2005	_____	Hatch
89	M	18 Jan 2007	25	60	A37	18 Jan 2007	_____	Hatch
92	M	10 Aug 2007	25	60	A37 HRF	10 Aug 2007 10 Aug 2007	_____	Hatch Ownership
98	M	29 Dec 2007	25	60	A37	29 Dec 2007	_____	Hatch
Totals: 8.2.3 (13)								

A39								
40	M	2 Jul 2002	1	3	HRF A39	2 Jul 2002 12 Apr 2003	III-13 _____	Hatch Loan to
Totals: 1.0.0 (1)								

A40								
43	F	29 Sep 2002	1	2	A40	6 Jun 2003	_____	Loan to
91	M	3 Aug 2007	37	38	HRF A40	3 Aug 2007 14 Nov 2009	_____	Hatch Loan to
Totals: 1.1.0 (2)								

A42								
41	M	25 Jul 2002	1	3	HRF A08 A60 A42	25 Jul 2002 19 Apr 2003 12 Oct 2009 22 Jan 2010	III-14 _____	Hatch Loan to Loan to Loan to
55	?	3 Sep 2003	1	2	HRF A42	3 Sep 2003 7 Nov 2003 13 Mar 2004	II-14 _____	Hatch Loan to Death
Totals: 1.0.1 (2)								

A43								
17	M	????	WILD	WILD	A12 A43	8 Sep 1999 ~ May 2004	_____	Transfer ltf Loan to
18	M	????	WILD	WILD	SPRINGBOK A12 A43	~16 Sep 1999 ~16 Sep 1999 ~ May 2004	NONE VIEJO	Capture Transfer ltf Loan to
19	M	????	WILD	WILD	SPRINGBOK A12 A43	~16 Sep 1999 ~16 Sep 1999 ~ May 2004	NONE STUMPY	Capture Transfer ltf Loan to
20	F	????	WILD	WILD	SPRINGBOK A12 A43	~16 Sep 1999 ~16 Sep 1999 ~ May 2004	NONE MIDGE	Capture Transfer ltf Loan to
21	F	????	WILD	WILD	SPRINGBOK A12 A43	~16 Sep 1999 ~16 Sep 1999 ~ May 2004	NONE BERTHA	Capture Transfer ltf Loan to
27	?	17 Oct 2000	MULT1	MULT2	A12 A43	17 Oct 2000 ~ May 2004	SASHI	Hatch ltf Loan to
28	?	15 Nov 2000	MULT1	MULT2	A12 A43	15 Nov 2000 ~ May 2004	PEANUT	Hatch ltf Loan to
30	?	26 Jul 2001	MULT1	20	A12 A43	26 Jul 2001 ~ May 2004	_____	Hatch ltf Loan to
32	?	10 Aug 2001	MULT1	20	A12 A43	10 Aug 2001 ~ May 2004	_____	Hatch ltf Loan to
47	M	????	UNK1	UNK2	A12 A43	~ Jan 2002 ~ May 2004	ERNST	Transfer ltf Loan to
56	?	22 Aug 2003	MULT1	20	A12 A43	22 Aug 2003 ~ May 2004	_____	Hatch ltf Loan to
57	?	17 Sep 2003	MULT1	20	A12 A43	17 Sep 2003 ~ May 2004	_____	Hatch ltf Loan to
58	?	20 Sep 2003	MULT1	20	A12 A43	20 Sep 2003 ~ May 2004	_____	Hatch ltf Loan to
Totals: 4.2.7 (13)								

A50	1	M	????	WILD	WILD	SPRINGBOK HRF A25 A50	27 Sep 1995 30 Sep 1995 12 Jun 2004 8 Mar 2009	NONE I	Capture Transfer Loan to Loan to
	5	F	27 Feb 1996	WILD	3	HRF A50	27 Feb 1996 16 Sep 2006 24 Mar 2009	III-1	Hatch Loan to Death
	13	M	26 Sep 1998	1	2	A07 A18 A31 HRF A50	22 Nov 1998 14 Dec 2001 6 May 2002 8 Dec 2002 16 Sep 2006 15 Sep 2010	II-5	Loan to Loan to Loan to Transfer Loan to Death
	64	M	29 Jul 2004	1	3	HRF A50	29 Jul 2004 17 Apr 2005 25 Mar 2009	III-19	Hatch Loan to Death
Totals:	3.1.0	(4)							

A52	70	M	24 Jun 2005	1	3	A25 HRF A52	24 Jun 2005 24 Jun 2005 5 Jan 2007 11 Jun 2007	DOPPIE	Hatch Ownership Loan to Death
Totals:	1.0.0	(1)							

A54	75	M	9 May 2006	13	5	HRF A54	9 May 2006 24 Mar 2007 ~27 Oct 2010		Hatch Loan to Death
	76	F	20 Jun 2006	13	5	HRF A54	20 Jun 2006 24 Mar 2007	V-4	Hatch Loan to
	102	M	28 Jun 2008	35	36	A07 HRF A54	28 Jun 2008 28 Jun 2008 2 Jan 2010 ~27 Oct 2010		Hatch Ownership Loan to Death
Totals:	2.1.0	(3)							

A55	74	M	31 Jul 2005	1	3	A25 HRF A55	31 Jul 2005 31 Jul 2005 24 Mar 2007		Hatch Ownership Loan to
	96	F	30 Jul 2007	35	36	A07 HRF A61 A64 A55	30 Jul 2007 30 Jul 2007 13 Apr 2008 10 May 2009 12 Sep 2009		Hatch Ownership Loan to Loan to Loan to
Totals:	1.1.0	(2)							

A57	10	M	22 Oct 1997	1	2	HRF A10 A31 A33 A57	22 Oct 1997 4 Aug 2001 7 May 2002 8 Nov 2002 6 Apr 2008	II-3	Hatch Loan to Loan to Loan to Loan to
	79	F	9 Aug 2006	37	38	HRF A57	9 Aug 2006 5 Nov 2009		Hatch Loan to
Totals:	1.1.0	(2)							

A58	71	M	25 Jun 2005	44	7	A10 HRF A58	25 Jun 2005 25 Jun 2005 6 May 2008		Hatch Ownership Loan to
Totals:	1.0.0	(1)							

A59	51	M	1 Jul 2003	1	2	HRF A41 A59	1 Jul 2003 2 Nov 2003 13 Sep 2008	II-13	Hatch Loan to Loan to
Totals:	1.0.0	(1)							

A60	54	F	5 Sep 2003	1	3	HRF A42 A60	5 Sep 2003 7 Nov 2003 22 Jan 2010 29 May 2010	III-17 THEODO _____	Hatch Loan to Loan to Death
	68	M	14 Aug 2004	35	36	A07 HRF A61 A60	14 Aug 2004 15 Aug 2004 8 Oct 2006 18 Sep 2008	_____	Hatch Ownership Loan to Loan to
Totals: 1.1.0 (2)									
<hr/>									
A62	25	M	12 Sep 2000	1	3	HRF A31 A37 A62	12 Sep 2000 6 May 2002 11 Dec 2002 ~ 9 Oct 2008 2 Jan 2009	III-8 _____	Hatch Loan to Loan to Loan to Death
	Totals: 1.0.0 (1)								
<hr/>									
A63	77	F	13 Jul 2006	44	7	A10 HRF A63	13 Jul 2006 13 Jul 2006 14 Aug 2010	_____	Hatch Ownership Loan to
	78	M	10 Jun 2006	44	7	A10 HRF A63	10 Jun 2006 10 Jun 2006 7 Mar 2009 23 Jul 2010	_____	Hatch Ownership Loan to Death
	93	M	30 Jul 2007	44	7	A10 HRF A63	30 Jul 2007 30 Jul 2007 14 Aug 2010	_____	Hatch Ownership Loan to
	Totals: 2.1.0 (3)								
<hr/>									
A64	59	M	10 Jun 2004	1	3	HRF A61 A64	10 Jun 2004 17 Apr 2005 10 May 2009	III-18 _____	Hatch Loan to Loan to
	Totals: 1.0.0 (1)								
<hr/>									
A65	72	M	24 Jul 2005	MULT3	MULT4	HRF A65	24 Jul 2005 17 Oct 2009	?-1 _____	Hatch Loan to
	Totals: 1.0.0 (1)								
<hr/>									
A67	106	?	20 May 2009	35	36	A07 HRF A67	20 May 2009 20 May 2009 13 Mar 2010	_____	Hatch Ownership Loan to
	107	?	21 Jul 2009	35	36	A07 HRF A67	21 Jul 2009 21 Jul 2009 13 Mar 2010	_____	Hatch Ownership Loan to
	Totals: 0.0.2 (2)								
<hr/>									
A68	99	M	21 May 2008	37	38	HRF A68	21 May 2008 5 Jun 2010	_____	Hatch Loan to
	100	M	24 Jun 2008	37	38	HRF A68	24 Jun 2008 5 Jun 2010	_____	Hatch Loan to
	Totals: 2.0.0 (2)								
<hr/>									
A69	88	M	~15 Nov 2005	25	60	A37 HRF A69	~15 Nov 2005 ~15 Nov 2005 30 Aug 2010	_____	Hatch Ownership Loan to
	Totals: 1.0.0 (1)								
<hr/>									
A71	82	M	26 Dec 2005	25	60	A37 HRF A71	26 Dec 2005 26 Dec 2005 30 Aug 2010	_____	Hatch Ownership Loan to
	Totals: 1.0.0 (1)								
<hr/>									
A72	105	F	27 Jul 2009	37	9	HRF A72	27 Jul 2009 29 Oct 2010	_____	Hatch Loan to

112	?	8 Jun 2010	37	9	HRF A72	8 Jun 2010 29 Oct 2010	_____	Hatch Loan to
Totals: 0.1.1 (2)								
HRF								
2	F	????	WILD	WILD	SPRINGBOK HRF	26 Sep 1995 30 Sep 1995 14 May 2004	NONE II	Capture Transfer Death
4	M	????	WILD	WILD	SPRINGBOK HRF	28 Sep 1995 30 Sep 1995 24 Dec 1995	NONE IV	Capture Transfer Death
8	?	26 Jan 1997	1	2	HRF	2 Feb 1997		Death
9	F	30 Nov 1996	1	2	HRF	30 Nov 1996	II-1	Hatch
16	?	4 Oct 1999	1	3	HRF	4 Oct 1999 4 Oct 1999	III-6	Hatch Death
23	?	19 Jul 2000	1	2	HRF	19 Jul 2000 29 Jun 2001	II-8	Hatch Death
24	?	2 Aug 2000	1	3	HRF	2 Aug 2000 2 Aug 2000	III-7	Hatch Death
37	M	????	WILD	WILD	SPRINGBOK HRF A25 HRF	3 Oct 2001 6 Oct 2001 6 Oct 2001 12 Jun 2004	NONE _____ 0612-I	Capture Transfer Loan to Transfer
38	F	????	WILD	WILD	SPRINGBOK HRF A25 HRF	3 Oct 2001 6 Oct 2001 6 Oct 2001 12 Jun 2004	NONE _____ 612-II	Capture Transfer Loan to Transfer
39	?	11 Jun 2002	1	3	HRF	11 Jun 2002 20 Jun 2002	III-12	Hatch Death
90	F	29 May 2007	37	38	HRF	29 May 2007 8 Jul 2007	_____	Hatch Death
101	?	10 Nov 2008	41	42	A08 HRF	10 Nov 2008 10 Nov 2008 ~24 Nov 2008	_____	Hatch Ownership Death
104	M	4 Jun 2009	37	38	HRF	4 Jun 2009	_____	Hatch
111	?	13 May 2010	37	38	HRF	13 May 2010	_____	Hatch
113	?	16 Jun 2010	37	38	HRF	16 Jun 2010	_____	Hatch
114	?	4 Jul 2010	37	9	HRF	4 Jul 2010	_____	Hatch
Totals: 3.4.9 (16)								
PRAHA								
50	M	17 Jun 2003	1	3	HRF PRAHA	17 Jun 2003 20 Dec 2003 3 Dec 2010	III-15 _____	Hatch Loan to Death
52	F	9 Jul 2003	1	3	HRF PRAHA	9 Jul 2003 20 Dec 2003	III-16 _____	Hatch Loan to
65	M	31 Jul 2004	35	36	A07 HRF PRAHA	31 Jul 2004 31 Jul 2004 31 Aug 2006	_____	Hatch Ownership Loan to
Totals: 2.1.0 (3)								
WUPPERTAL								
26	F	7 Oct 2000	1	2	HRF A31 WUPPERTAL	7 Oct 2000 6 May 2002 18 Dec 2002 2 Jun 2008	II-9 _____	Hatch Loan to Loan to Death
Totals: 0.1.0 (1)								
=====								
TOTALS: 55.26.35 (116)								

5. SPECIFIC INFORMATION FROM STUDBOOK PARTICIPANTS

Location A07

In 2010, three eggs were produced by *H. signatus*, on 15 March, 17 March, and 19 May. Only the second egg hatched, on 12 August. Unfortunately, this individual (see below) died within a few months.



Location A10

Three hatchling *H. signatus* born in 2010 appear to be all females. Incubation conditions were as described in the 2009 annual report:

*In order to alter the sex ratio for offspring *H. signatus*, I changed the set point of the incubator's temperature controller and I installed a new heat cable (increased wattage to provide sufficient heat to reach the set temperature). The set point was increased from 32.5°C to 33.5°C to increase the female/male ratio of the offspring. This resulted in a temperature of 33.5-34.0°C in the incubator (overall) with peaks up to 35°C for a very short time for some days when the set point of the temperature controller changed from night time (29°C) to daytime (33.5°C). In addition, the diurnal cycle was altered. Previously, day and night time were both 12 hours. In the new situation, day time was 18 hours and night time was 8 hours.*

At these incubation conditions, a clutch of four *H. areolatus* eggs resulted in one egg (probably) dying during incubation, a second egg dying during hatching, and a third egg hatching but leading to a hatchling with a relatively large yolk sac.

On 19 March, a two-egg clutch from *H. femoralis* was found, but it did not develop. It appeared that *H. areolatus* and *H. femoralis* chose relatively exposed egg-laying sites, while *H. signatus* preferred sites that are covered by rocks or bushes.

Location A16

The female *H. signatus* was introduced to one of the males in 2010. Mating behaviour followed, but no eggs were produced yet.

Location A44

Let me say at first that is was a real successful year for my *H. areolatus*. Like I mentioned in the 2009 annual report, my female *H. areolatus* laid four eggs on 13 December 2009 and gained her normal weight within one week. She then laid a second clutch of four eggs on 10 January 2010, exactly four weeks after she laid the first clutch. Looking back at it, the stimulus for producing eggs might have been moving in the first week of November 2009. The tortoises were kept at cooler temperatures (day 25°C with spot up to 40°C, night 20°C) with a low relative humidity (30 to 70%) before moving. After moving, the temperatures were rather high (day 30°C with a spot up to 40°C, night 24°C) with a high relative humidity (day 70, night up to 100%). All eight eggs hatched, with an incubation time between 78-85 days (incubation as described in the 2009 annual report).

The hatchlings were transferred to other locations. Two of the hatchlings died this year. One hatchling died unexpectedly on its back under the heat lamp, the other hatchling had to be euthanized. It was already weak when it hatched, had good times and bad times, but in the end it refused to eat. Both hatchlings were put in formalin for histopathology. Some flagellates could be found in the rectum of both hatchlings, and both came out to be males. The two new *H. areolatus* transferred to my location do really

good. Studbook number 94 was first believed to be a female but now the tail grew really long. I hope I can tell the gender within one year.

The breeding pair of *H. areolatus* is doing good, but up to now the female shows no signs of producing eggs (there was no moving this year).

Location A46

The ticks that appeared associated with the death of several juvenile *H. areolatus* in 2010 were *Ornithodoros* spp.



Location A55

Significant mating activity was observed for *H. signatus* in 2010.

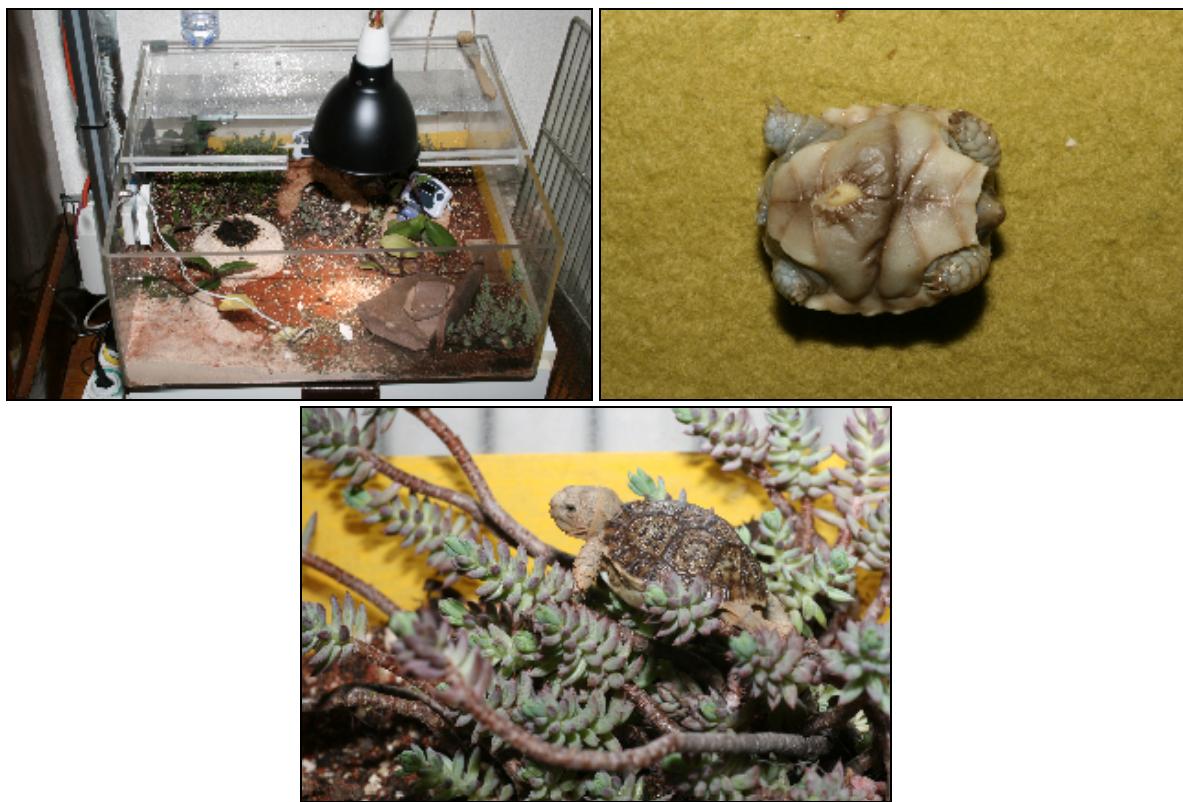
Location A56

Homopus areolatus is kept outdoors during summer. These pictures show the terrariums.





Husbandry conditions resulted in offspring:



An extensive report from this location (in German) can be found in appendix 1.

Location A60

The following pictures show two *H. signatus* when the female was still alive. The female was upturned when found dead, the pictures show the soil type used. The right picture shows one of the eggs that was produced.



Location A65

I do have a noteworthy observation(s) with my male *H. signatus*. On several occasions, just before or during feeding, this male showed (mushroomed) his penis. This event lasted for several minutes (between 1-5 minutes). Substrate was not attached to the penis while it was outside the body. The tortoise had no problem retracting the penis and showed no signs of discomfort or stress and resumed feeding directly after the event. I did not notice any semen flow or other bodily fluids.

Location A66

An extensive report from this location (in German) can be found in appendix 1.

Location A69

The solitary *H. signatus* is doing well, see picture.



Location HRF

Homopus signatus number 38 that had produced an egg that broke during oviposition on 2 March 2009, after which egg shell remains were retained in the body until 18 April (see 2009 annual report), produced two eggs in 2010. One of these eggs was already present in the female's body as a calcified egg on 2 March 2009. This egg hatched successfully, indicating that female *H. signatus* are capable of retaining a viable egg for more than one year. In the end of the 2010 egg-laying season, the female produced two marble-sized eggs stuck to one another, without yolks.

6. NEW PUBLICATIONS

The following overview summarises all manuscripts and articles that were submitted, accepted, or published in 2010.

Subject	Submitted	Accepted	Published	Journal
Husbandry and breeding account <i>Homopus</i> spp.	2003/2008			Mertensiella (English), resubmitted for inclusion in a book edited by Prof. W. Sachsse in 2008
Annual variation in reproduction of wild <i>H. s. signatus</i>	2008			Copeia (English)
Structure and dynamics of a Namaqualand speckled tortoise (<i>Homopus signatus signatus</i>) population over five years of rainfall variation	2009	2010	2010	Chelonian Conservation and Biology (English)
"Groot padloper" in het terrarium (<i>Homopus femoralis</i> Boulengeri, 1888)	2009	2010	2010	Trionyx (Dutch)
Road Mortality in the Greater Padloper, <i>Homopus femoralis</i>	2009			Turtle and Tortoise Newsletter (English)
Environmental factors affecting modelled current and future distributions of <i>Homopus signatus</i> , an arid-zone chelonian endemic to South Africa (co-authored)	2009			Journal of Arid Environments (English)
Darmobstructie bij een Namaqualand gespikkeld padloper (<i>Homopus signatus signatus</i> Gmelin, 1789)	2010	2010	2010	Trionyx (Dutch)

7. FINANCIAL REPORT

The available funds accumulated in 2010, as a result of several donations and low expenses. The low expenses were caused by the relatively unsuccessful fieldwork in February (see paragraph 1.2). The currently available funds suffice for the planned telemetry study on *H. femoralis*, but provide little financial space for the acquisition of additional research equipment.

Financial report Homopus Research Foundation 2010

Revenues		Expenses	
Net amount	Item	Amount	Item
€		€	
<i>Project H. femoralis 2006-2012</i>		<i>Project H. femoralis 2006-2012</i>	
2,510	Remaining funds 2009	45	Aerial photos
663	Donations private individuals	27	Radiographs
3	Interest bank account	11	Refurbish rainfall logger
		1,000	Reservation rebatterying radiotransmitters
		2,000	Reservation purchase additional radiotransmitters
		92	Reservation other project expenses
3,176	Subtotal	3,176	Subtotal
<i>Other</i>		<i>Other</i>	
107	Donation V. Loehr to cover non-project expenses	26	Chamber of Commerce 2010
107	Subtotal	81	Annual costs bank account
3,282	Total	107	Subtotal
3,282	Total	3,282	Total

8. PERMIT OVERVIEW

The activities reported in this document would not have been possible without the following permits issued by the South African and Namibian authorities:

Exporting of H. areolatus

- Exporting permit 49683 (Ministry of Environment and Tourism, Namibia)
- CITES exporting permit 8830 (Ministry of Environment and Tourism, Namibia)
- CITES exporting permit 3558 (Ministry of Environment and Tourism, South Africa)
- Health certificate 13\14\2\ 09/2- 1676/04 (Ministry of Agriculture, Water and Rural Development, Namibia)
- Various additional permits issued to individual studbook participants (Namibia)

Collecting and exporting of H. femoralis

- Collecting permit AAA004-00010-0035 (CapeNature, South Africa)
- CITES exporting permit 58679 (Department of Environmental Affairs and Tourism, South Africa)
- Health declaration dated 17-03-06 (Department of Agriculture, South Africa)

Collecting and exporting of H. signatus

- Collecting permit 331/95 (Western Cape Nature Conservation Board, South Africa)
- Collecting permit 28/2001 (Northern Cape Nature Conservation, South Africa)
- CITES exporting permits 16579 and 281/95C (Department of Environmental Affairs and Tourism, South Africa)
- Permit to move animals/animal products 2001/10/3/A (Department of Agriculture, South Africa)

Field study on H. boulengeri

- Research permits 755/05, 43/2005 and 35/2005 (Northern Cape Nature Conservation, South Africa)

Field study on H. femoralis

- Research permit AAA-004-000185-0035
- Research permit AAA-004-00020-0028
- Research permit AAA-004-000392-0035
- Research permit AAA-004-00027-0028

Field studies on H. signatus and H. s. cafer

- Research permits 137/99, 84/99, 019/2001, 010/2001, 46/2003, 26/2003, 8/2003, 168/2003, 43/2003, 158/2003, 633/2003, 25/2003, 158/2004 and 633/2004 (Northern Cape Nature Conservation, South Africa)
- Research permits 428/2002 and 41/2002 (Western Cape Nature Conservation Board, South Africa)

APPENDICES 1 AND 2 - REPORTS FROM LOCATIONS A56 AND A66

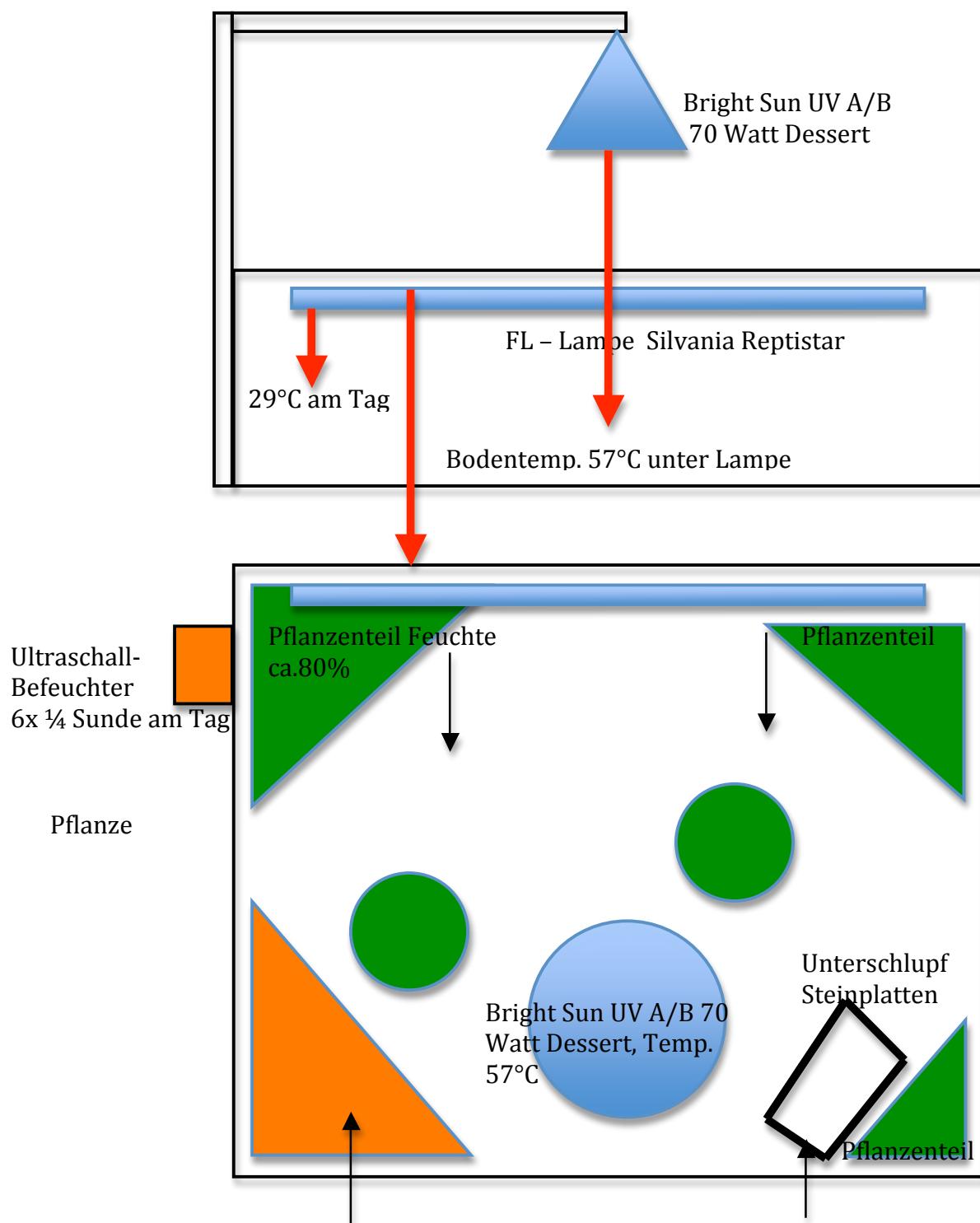
Terrarium *Homopus areolatus* Schlüpfling

Grundfläche Breite 58cm x 53cm

Mit HQI Bright Sun UV A/B Dessert

FL – Lampe Silvania Reptistar UV A/B

Ultraschall – Befeuchter Solis Travel 100ml/ h



Temperaturen: Höhle Unterschlupf Tag 32° 40% Feuchte
Nachts ca. 18°C 70% Feuchte

Erster Schlüpfing von *Homopus areolatus*

Schlüpfing hat Schildanomalie

Female
Studbook No. 67

Male
Studbook Nr. 75

Ei:
Gew. 8.3gr.
L 32.5mm,
D 20.2mm

Ei vom 22.10.2009

geschlüpft

27.1.2010

Brutdauer 97 Tage

28.01.2010 Gewicht

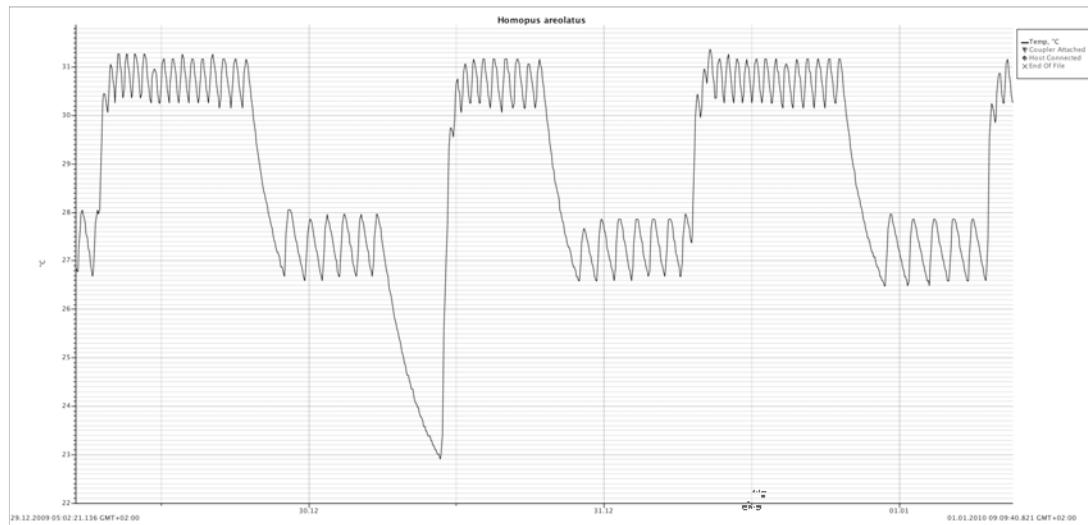
N. Bad
5,6gr

Grösse
Länge x Breite x Höhe
26,5 x 23,8 x 18

30.01.2010	5,9	5,8
02.02.2010	5,9	6,0
04.02.2010	5,7	5,8
07.02.2010	5,9	6,0

Bruttemperaturen:

06.00 – 18.00 31,5°C Feuchte 80 – 85%
18.00 – 24.00 27,0°C Feuchte 85 – 90%



Strohmausfall 6 Stunden auf 23°C runter hat anscheinend auf die Bebrütung keinen Einfluss gehabt. Nach 97 Tagen Brutdauer ohne Probleme geschlüpft

7.2.2010

Terrarium *Homopus areolatus* Schlüpfling

Grundfläche Breite 150cm x 40cm

Mit HQI Bright Sun UV A/B Dessert

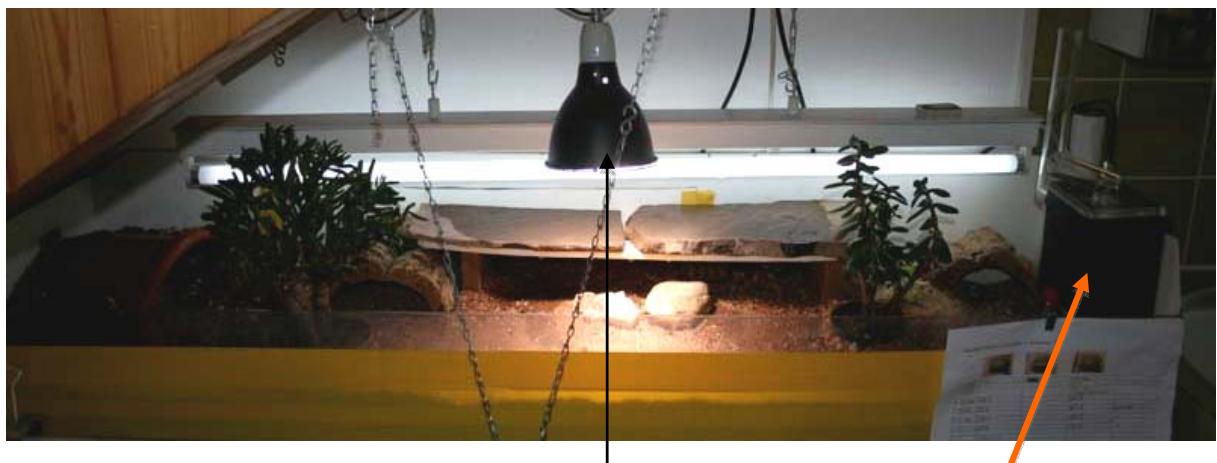
FL – Lampe Silvania Reptistar UV A/B

Ultraschall – Befeuchter Eigenbau 300ml/ h



Wir feiern die Naturbrut im Terrarium von *Homopus areolatus*
Beiliegend die Informationen über Terrarium und Temperaturen

Länge 1.5m Tiefe 0.4m



Ultraschallbefeuchter

Fundort 17.02.2010 08.30 unter Bright Sun 70W UV A/B Dessert, das ausserordentliche sie lag auf dem Rücken. Zweimal Glück der Schlupf und das auffinden der Schildkröte unter der Lampe (Temperatur unter Lampe bis 50°C) nach 30-40 Minuten wäre sie an Überhitzung gestorben.



Möglicher Fundort

Zweiter Schlüpfling von *Homopus areolatus*

Schlüpfling

Female
Studbook No. 67

Male
Studbook Nr. 75

Ei vom ??????

geschlüpft

17.2.2010

Brutdauer ?? Tage

17.02.2010 Gewicht

Im Terrarium

gelegt

N. Bad

Grösse
Länge x Breite x Höhe
27,5 x 25,8 x 17

5,5gr

17.02.2010	5,5	5,7
18.02.2010	5,8	6,1
19.02.2010	6,5	6,5
21.02.2010	6,5	6,7

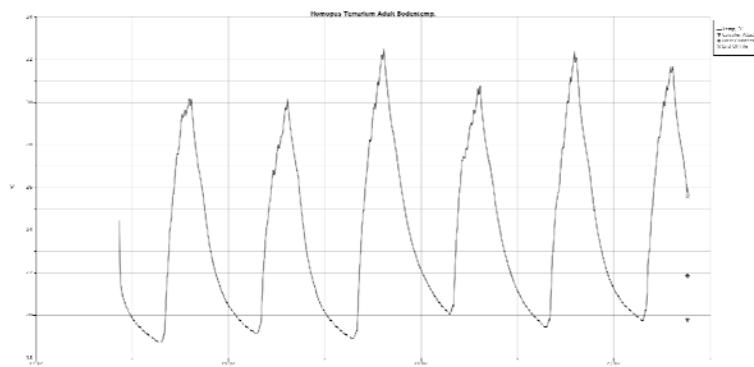
Bruttemperaturen = Raumtemperaturen und Bodentemperaturen

Raum Tags 29,5°C ± Raum Feuchte 55 – 65%

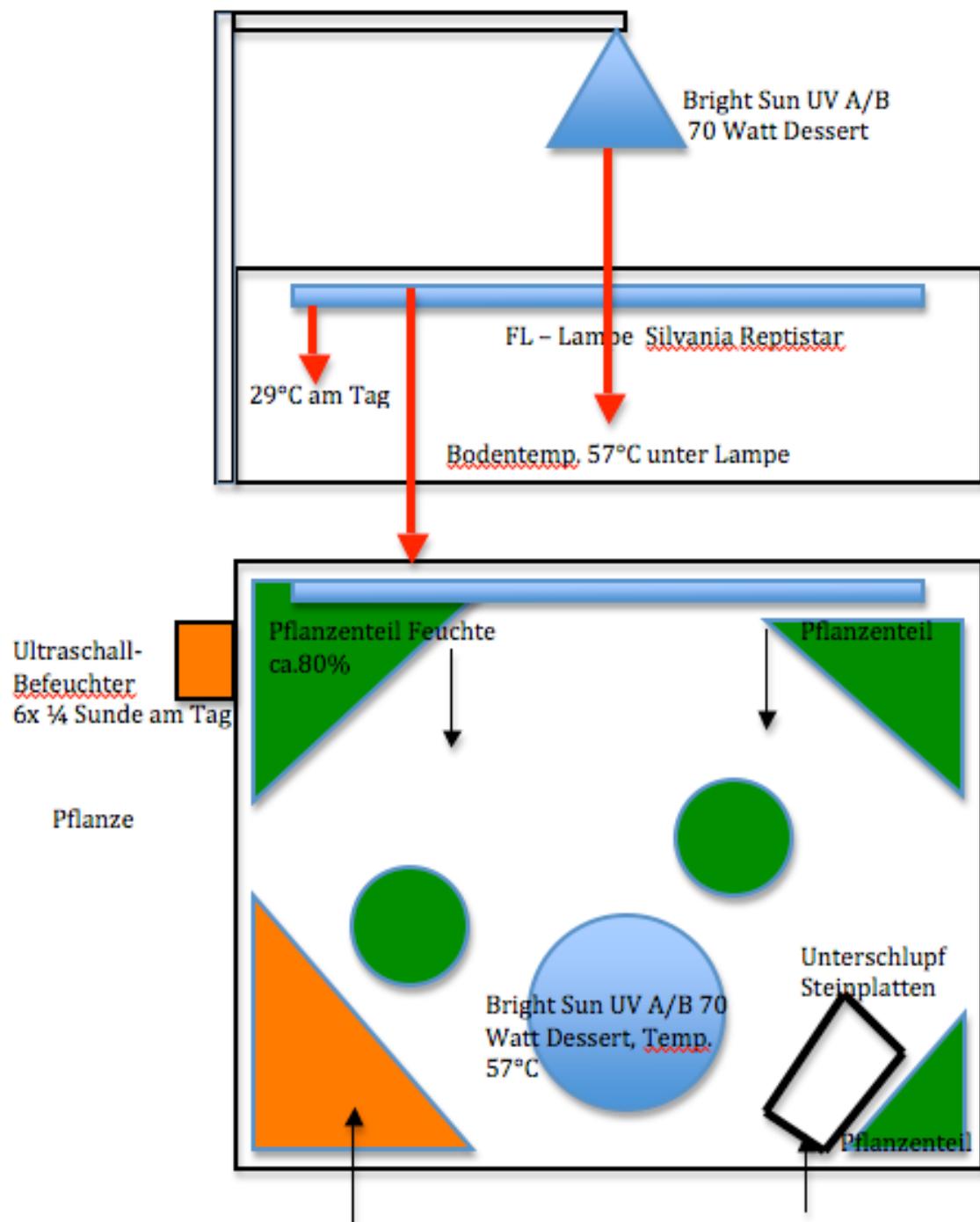
Raum Nachts 19,0°C ± Raum Feuchte 40 – 45%

Bodentemperatur:

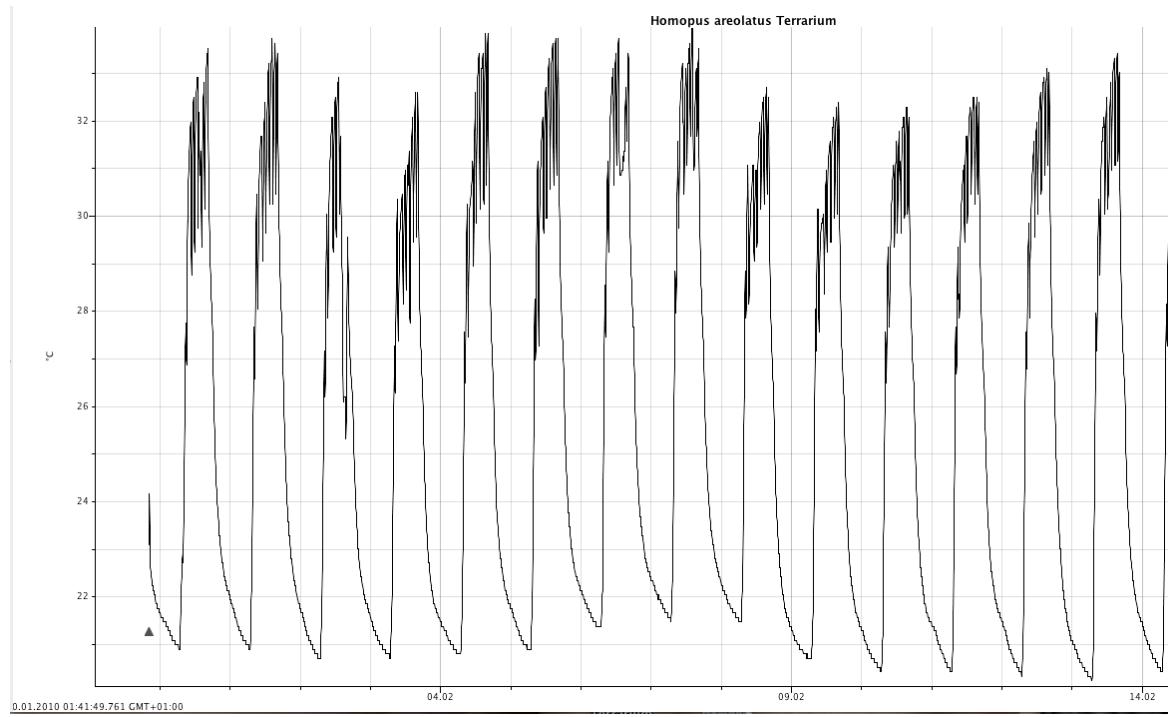
Im Substrat ca. 8cm Tief Tag ca. 32,5°C Nachts ca. 18°C



Wird mit dem Schläpfling vom 27.1.2010 zusammen im Terrarium gehalten.



Temperaturen im Terrarium 15 cm vom Lichtkegel der Bright Sun UV A/B Dessert weg, gemessen 4cm über Boden.



23.2.2010

Tagebuch Homopus

Januar 2010

Heute 1.1.2010 haben wir sie gebadet, gewogen und Fotos gemacht. Sie waren danach sehr lebendig.

Das erste Mal haben wir Kürbis gefüttert, dies wurde vorsichtig gekostet.

Auch das Ei haben wir nach 12 Wochen durchleuchtet. Bis anhin sieht es nicht nach Erfolg aus, die Flüssigkeit hat sich gesenkt und ist erstarrt, aus meiner Erfahrung daher nicht befruchtet. Aber so lange es nicht platzt oder riecht lassen wir es im Brutkasten.

Februar 2010

Das Ei haben wir nun nach 20 Wochen weggeworfen.

Wir haben die Ernährungsliste ergänzt. Ich habe Sojasprossen gefüttert und diese fressen sie noch lieber als rohe Karotten. Am Freitag 25.2. haben wir beobachtet, dass sie sich angeschaut und dabei genickt haben, es sah wirklich sehr lustig aus. Natürlich haben wir sie wieder gemessen und gebadet. Nach wie vor klettern sie sehr gerne.



Auch die Lampen werden unterschiedlich genutzt.



Bild links Bright Sun bringt weisses Licht bis 60'000 Lux, rechts Ultra Vitalux die ca. nur 1/5 Lux bringt aber einen hohen UV Anteil hat, sie nutzen beide Lampen rege nach Bedürfnis. Wichtig ist, dass man die Lux und UV Werte misst, um dementsprechend die Höhe nach Alterung der Leuchtmittel korrigieren kann.

März 2010

Viel Neues gibt es bei uns nicht, die Tiere sind aktiv. Eine Paarung haben wir noch nie gesehen, ob das Männchen noch zu jung ist? Schön ist zu sehen, dass dieses Pärchen sich gut versteht und keine Probleme macht. Wir glauben deshalb, dass es im Moment schade wäre, wenn wir dieses Pärchen trennen würden.

Als wir mal über Mittag nach Hause kamen, sahen wir, dass das Männchen unter der Ultra-Vitalux sonnte, aber so haben wir es noch nie gesehen, er streckte seine Beine so lange heraus, dass es aussah, als sei er tot.

Diesen Monat haben wir gekochte Bohnen gegeben, das Interesse war nicht so gross, probiert haben Beide. Wir tauschen regelmässig mit Location A56 Erfahrungen über die Nahrung aus, diese ist sehr Unterschiedlich, bei uns haben sie Sojasprossen und Karotten sehr gerne, bei Ihnen nicht.

April 2010

Da wir am 8. Mai in die Ferien gehen und das Terrarium nicht zwei Mal am Tag kontrolliert wird, hat Marcel beide UV Lampen (nur Grundbeleuchtung 12 Std.) als Test eine Woche nicht im Betrieb, damit das Terrarium und die Tiere nicht überhitzen, somit müssen die Pflanzen nicht täglich nachgegossen werden. Der Ultraschall-Vernebler Produkt Location A56 war in dieser Zeit immer in Betrieb. Die Tiere waren nicht mehr so aktiv, dadurch sieht man, dass die Tiere die UV Bestrahlung wirklich benötigen. Der Test war erfolgreich. Mitte Woche hatte ich die Vitalux über Mittag eine halbe Stunde als weiteren Test eingeschaltet. Die Tiere waren wieder aktiver und gingen sofort unter die Lampe. Gefressen haben sie dadurch weniger, aber das übliche, zusätzlich Löwenzahn- und Hahnenfussblüten. Bis Ferienbeginn 8. Mai ist die ganze Technik wieder in Betrieb wie vor dem Test.

Mai 2010

Anfangs Monat zeigte das Hompus Männchen sein Geschlechtsteil, das konnten wir bis anhin nie beobachten, somit hoffen wir, dass wir bald auch eine Paarung sehen. Unsere Ferien sind (wie der Test mit den Lampen) reibungslos verlaufen. Unsere Söhne haben die Tiere vorbildlich versorgt. Wir sind sehr froh, dass wir auf die Beiden zählen können.

Es ist sonst Ruhe eingekehrt, fressen auch weniger, sie warten manchmal auch auf ihr Lieblingsessen Sojasprossen, die es jedoch nicht immer gibt.

Nun hoffen wir, dass das Wetter bald wärmer wird, damit wir die Tiere ins Aussengehege platzieren können. Sind gespannt, wie sie sich dann verhalten, ob sie wieder aktiver werden, klettern können sie dort viel. Nächsten Monat gibt es hoffentlich auch Bilder davon.

Juni 2010

Die Tiere harren weiter im Terrarium aus, da das Wetter nicht sommerlich ist. Unser Lichtblick war der 19. Juni, da durften A56 und A73 bei A66 den aus Namibia lebenden A46 begrüssen. Wir befürchteten, da er einen Tag vorher Fieber hatte, dass der Termin platzt. Es war uns sehr wichtig, dass er sieht, wo und wie die Tiere gehalten werden. Er erzählte uns viele interessante Geschichten aus seinem Leben mit diesen Tieren. Für uns alle war dieser Abend sehr lehrreich und interessant.

Am 25. Juni konnten wir die Tiere endlich im Aussengehege platzieren, sie erkunden dieses genau. Das Weibchen sehen wir öfters unter der grossen Wurzel, das Männchen ist immer an verschiedenen Orten. An Versteckmöglichkeiten fehlt es ihnen nicht. Im Moment sind wir enttäuscht, das die Klettermöglichkeiten nicht ausgenutzt werden. Selbstverständlich wurde eine Lampe Vitalux montiert, damit kältere Tage überbrückt werden können. Die Hälfte des Aussengeheges haben wir mit einem flexibles Plexiglas überdeckt zum Schutz der elektrischen Installation.



Juli 2010

Die Tiere fühlen sich sichtbar wohl im Aussengehege. Am Morgen wärmen sich Beide am Alu blech auf und über Mittag ist das Männchen immer sehr aktiv und läuft umher.

Bereits am 6. Juli erfolgte eine Probebohrung, die aber erst am 7. Juli durch zwei Eier gekrönt wurde. Leider ging beim vorsichtigen Ausgraben eines zu Bruch, da sie sehr dünn schalig sind.

Nun blüht der Hibiskus, den sie sehr gerne als Nahrung fressen, den Stempel der Blüte lassen sie aber liegen.

August 2010

Die Klettermöglichkeit werden jedoch aussen nicht genutzt wie im Innenterrarium. Da das Wetter zeitweise nicht so warm ist und das Weibchen wieder nervös einen Platz zum Graben sucht und wir Angst vor einer Legenot haben, schalten wir die Vitalux des Öfteren ein. Nicht viel später am 12. August gib es wieder eine Probebohrung. Am 13. August hat sie die definitive Grube gemacht und zwei Eier gelegt. Beide Eier sind heil im Brutapparat.

September 2010

Am 17. September konnten wir nicht länger warten, da die Temperaturen stark gesunken sind. Über Mittag hat Marcel die Tiere ins Innenterrarium umgesetzt. Das er am 12. September sorgfältig eingerichtet hat.

Ab 28-30. September sind beide Tiere nervös, rannten und kletterten umher, Sie sonnen ihr Hinterteil unter der Lampe, dies ist ein Zeichen, dass es bald wieder Eier gibt. Sie ruhte sich sogar einmal auf dem Männchen aus.

Es ist wiederum festzustellen, dass sie beide Lampen Vitalux wie Bright Sun rege benutzen.

Oktober 2010

Hurra, am 1. Oktober hat das Weibchen wieder 2 Eier gelegt. Es ging sehr schnell, um 14.30 Uhr hatte sie schon ein 7 cm tiefes Loch, beim nächsten Kontrollgang um 15.00 Uhr war sie bereits am Zudecken. Der Abstand vom 2. zum 3. Gelege beträgt 7 Wochen (48Tg), vorher nur 5½ Wochen (38Tg).

November 2010

Am 5. November legte sie das letzte Gelege mit einem Ei. Nach wie vor wissen wir nicht, ob ein Junges schlüpft, dies wird sich wohl erst im Jahr 2011 zeigen.

Seither sind die Tiere ruhig geworden, fressen auch nicht mehr soviel, nun hat die Sommerruhe wohl begonnen.

Da die Temperaturen im Raum massiv (auf 15°) gesunken sind, habe ich die zwei Bright Sun wieder auf 20cm Höhe eingestellt. Auch habe ich die Glasscheiben

wieder montiert, damit die Temperaturen wie in der Natur von 16-33° simuliert werden können.

Dezember 2010

Das Weibchen hat sich zeitweise in ihrer Höhle rechts eingenistet neben den beiden Bright Sun, mit dem Rückenpanzer an die Decke im Unterschlupf angepasst. Manchmal verweilt sie dort eine Woche und wechselt danach in den Unterschlupf links zum Männchen, neben Trinkgefäß und Vitalux. An der Technik haben wir nichts geändert, da sich die Tiere im letzten Jahr (Dezember 09) nach unseren Beobachtungen wohl gefühlt haben.

Wir hoffen, dass der Zuchtbuchführer die anderen Teilnehmer motiviert, damit ein Erfahrungsaustausch gewährleistet wird. Es ist für Alle sehr wichtig, damit unsere Tiere die bestmöglichen Bedingungen erhalten. Das würde uns Schweizer helfen und sehr freuen!