

EAZA Yearbook 2007/2008

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<http://www.eaza.net/activities/cp/Pages/yearbook.aspx>

EAZA Sheep and Goat TAG

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EAZA Sheep and Goat TAG Annual Report 2007 - 2008



1. Information on organisation, structure and activities of the TAG

- TAG chair:** Jean-Luc Berthier, Paris-jardin berthier@mnhn.fr
- TAG vice-chair:** Mati Kaal, Tallinn mati.kaal@tallinnlv.ee
- TAG members:** Leif Blomqvist (Helsinki)
Vladimir Fainstein (Tallinn)
Jutta Heuer (Halle)
Paula Holma (Helsinki)
Bengt Holst (Kobenhavn-zoo)
Christian Kern (Berlin-tierpark)
Martin Krug (Bratislava)
Herwig Pucher (Wien-zoo)
Douglas Richardson (Kingussie)
Frank Rietkerk (Apeldoorn)
Paul Vercammen (Sharjah)
Jitka Vokurkova (Olomouc)
Ewa Wikberg (Hunnebostrand)
- TAG advisors:**
- General**
 - Behavioural**
 - Taxonomy**
Arnd Schreiber, Heidelberg University, Geneticist
 - Veterinary**
 - Nutritional**
 - Conservation**
Roland Wirth, Zoologischen Gesellschaft für Arten- und Populationschutz , Field conservationist
 - Research**
 - Educational**
- Current EEPs:** Muskox (*Ovibos moschatus*)
- Current ESBs:** West Caucasian tur (*Capra caucasica*)
East Caucasian tur (*Capra cylindricornis*)
Turkmenian markhor (*Capra falconeri heptneri*)
Nubian ibex (*Capra nubiana*)
Japanese serow (*Naemorhedus crispus*)
Blue sheep (*Pseudois nayaur*)
- TAG meeting:** Date of last meeting: 7 September 2008
Last meeting hosted at Antwerpen Zoo (Royal Zoological Society of Antwerp).
- Regional Collection Plan:** Has a RCP been published? Yes
Most recent edition published in 2004.
Next edition to be published in 2010.
- Publications:**

An overview of publications regarding Caprines taxa is presented here. Of course this is not an exhaustive list. Most of these publications are available in .pdf format on request to Jean-Luc Berthier (berthier@mnhn.fr). Please feel free to ask for these.

2007

Arif Abdi, B.V.Sc., M.Sc., Julia Schulz, D.V.M., Francois Thiaucourt, D.V.M., Ph.D., Abid Taha, B.Sc., and Sven Hammer, D.V.M. (2007) CONTAGIOUS CAPRINE PLEUROPNEUMONIA OUTBREAK IN CAPTIVE WILD UNGULATES AT AL WABRA WILDLIFE PRESERVATION, STATE OF QATAR *Journal of Zoo and Wildlife Medicine* 38(1): 93–96

Lyberth B., A. Landa, J. Nagy, A. Loison, C. R. Olesen, A. Gunn & M. C. Forchhammer (2007) Muskoxen in the high Arctic-temporal and spatial differences in body size *Journal of Zoology* 272 227–234

Chen W., Shen Q., Ma Q., Pan G., Lei C. (2007) . Diurnal activity rhythms and time budget of captive Qinling golden takin (*Budorcas taxicolor bedfordi*) in the Qinling Mountains, Shaanxi, China. *Journal of Forestry research*. 18(2): 149-152

LIU Zhensheng, WANG Xiaoming, LI Zhigang, CUI Duoying, LI Xinqing (2007) Feeding habitats of blue sheep (*Pseudois nayaur*) during winter and spring in Helan Mountains, China *Front. Biol. China* 2(1): 100–107

Rosa Cheryl, D.V.M., Ph.D., Debra Miller, D.V.M., Ph.D., Matthew J. Gray, Ph.D., Anita Merrill, Tammie Vann, and John Blake, D.V.M., M.Vet. Sc. (2007) EXPLORING PASSIVE TRANSFER IN MUSKOXEN (*OVIOS MOSCHATUS*) *Journal of Zoo and Wildlife Medicine* 38(1): 55–61

Rudolph Karen M., B.A., Ph.D., David L. Hunter, B.S., D.V.M., Richard B. Rimler, M.S., Ph.D., E. Frances Cassirer, M.S., Ph.D., William J. Foreyt, M.S., Ph.D., Walter J. DeLong, B.S., M.S., Glen C. Weiser, M.S., Ph.D., and Alton C. S. Ward, M.S., Ph.D. (2007) MICROORGANISMS ASSOCIATED WITH A PNEUMONIC EPIZOOTIC IN ROCKY MOUNTAIN BIGHORN SHEEP (*OVIS CANADENSIS CANADENSIS*) *Journal of Zoo and Wildlife Medicine* 38(4): 548–558

Shrader Adrian M., Graham I.H. Kerley, Burt P. Kotler, and Joel S. Brown (2007) Social information, social feeding, and competition in group-living goats (*Capra hircus*) *Behav Ecol* 18:103–107

2008

Casas-Díaz Encarna, Jorge Ramón López-Olvera, Ignasi Marco, Gregorio Mentaberre and Santiago Lavín (2008) HEMATOLOGIC AND BIOCHEMICAL VALUES FOR SPANISH IBEX (*CAPRA PYRENAICA*) CAPTURED VIA DRIVE-NET AND BOX-TRAP *Journal of Wildlife Diseases*, 44(4), pp. 965-972

Dassanayake Rohana P, Weiguo Liu, William C. Davis, William J. Foreyt, and Subramaniam Srikumaran (2008) Bighorn Sheep b2-Integrin LFA-1 Serves as a Receptor for Mannheimia haemolytica Leukotoxin *Journal of Wildlife Diseases*, 44(3), 2008, pp. 743–747

Fakhar-i-Abbas F., Tanveer Akhtar, and Afsar Mian (2008) Food and Feeding Preferences of Himalayan Gray Goral (*Naemorhedus goral bedfordi*) in Pakistan and Azad Jammu and Kashmir *Zoo Biology* 27:371–380 (2008)

Favre M., Julien G. A. Martin & M. Festa-Bianchet (2008) Determinants and life-history consequences of social dominance in bighorn ewes. *Animal Behaviour*, 2008, 76, 1373-380

George Janet L., Daniel J. Martin, Paul M. Lukacs, and Michael W. Miller (2008) EPIDEMIC PASTEURELLOSIS IN A BIGHORN SHEEP POPULATION COINCIDING WITH THE APPEARANCE OF A DOMESTIC SHEEP *Journal of Wildlife Diseases*, 44(2), 2008, pp. 388–403

Kenny David, Anthony DeNicola, Sukhiin Amgalanbaatar, Zundui Namshir, Ganchimeg Wingard, and Richard Reading (2008) Successful Field Capture Techniques for Free-ranging Argali Sheep (*Ovis ammon*) in Mongolia *Zoo Biology* 27:137–144 (2008)

Rogerson Jared D., W. Sue Fairbanks, and Louis Cornicelli (2009) ECOLOGY OF GASTROPOD AND BIGHORN SHEEP HOSTS OF LUNGWORM ON ISOLATED, SEMIARID MOUNTAIN RANGES IN UTAH, USA *Journal of Wildlife Diseases*, 44(1), 2008, pp. 28–44

Serrano Emmanuel, Ph.D., Francisco J. Gonzalez, Ph.D., José E. Granados, Ph.D., Gisela Moco, M.S., Paulino Fandos, Ph.D., Ramón C. Soriguer, Ph.D., and Jesús M. Pérez, Ph.D. (2008) THE USE OF TOTAL SERUM PROTEINS AND TRIGLYCERIDES FOR MONITORING BODY CONDITION IN THE IBERIAN WILD GOAT (*CAPRA PYRENAICA*) *Journal of Zoo and Wildlife Medicine* 39(4): 646–649,

Verbisck-Bucker G., M. González-Candela, J. Galián, M. J. Cubero-Pablo, P. Martín-Atance and L. León-Vizcaíno (2008) EPIDEMIOLOGY OF MYCOPLASMA AGALACTIAE INFECTION IN FREE-RANGING SPANISH IBEX (*CAPRA PYRENAICA*) IN ANDALUSIA, SOUTHERN SPAIN *Journal of Wildlife Diseases*, 44(2), pp. 369-380

Wakefield Simon, O. Attum, E. R. Robinson and M. A. Sandoka (2008) Seasonal use of a waterhole by Nubian ibex *Capra nubiana* (*Artiodactyla: Bovidae*) *Mammalia* 72: 123–125

2. Information on developments during 2007 - 2008

The Sheep and Goat TAG held a midyear meeting in Woburn on 20 June 2007. The meeting was jointly organised with the Antelope and Giraffe TAG. Unfortunately most of the Sheep and Goat TAG members could not attend. The minutes of the meeting are available on the EAZA website. Two noticeable points were:

- The decision to initiate an ESB for Japanese serow;
- The presentation on two conservation projects, by Joep van de Vlasaker (Large Herbivore Foundation) regarding the Turkmenian markhor in Uzbekistan and the argali in Mongolia.

During the EAZA Annual Conference in Warsaw a one hour TAG meeting was held on 14 September 2007. The most important topic was the approval of the Japanese serow ESB, with Herwig Pucher (Wien-Zoo) being appointed as ESB keeper.

In 2008 no midyear meeting was held. A two hours TAG meeting was held during the EAZA Annual Conference in Antwerp on 7 September 2008. The minutes of this meeting are available on the EAZA website as well. Two noticeable points were:

- Announced changes in TAG membership: new members are Herwig Pucher as Japanese serow ESB keeper, and Christian Kern (Berlin-Tierpark) replacing Claus Pohle, who retired. Douglas Richardson, who joined Kingussie, and developed the Caprines collection there, was proposed and appointed as a new TAG member;
- Two new ESB were proposed to the EEP Committee (approval expected in 2009). The Takin ESB is proposed to be managed by Douglas Richardson as studbook keeper and the Chinese goral ESB by Deborah Drysdale (Kingussie) as studbook keeper.

3. TAG goals for 2009

- Hold a midyear meeting in April 2009. Herwig Pucher invited to the TAG to hold the meeting in Vienna Zoo;
- Finish a new version of the RCP prior to the EAZA Annual Conference in September.



West Caucasian tur

ESB Annual Report 2007 - 2008



1. Programme information

West Caucasian tur

Capra caucasica

ESB established in 1997.

Goal(s)

Percentage of gene diversity 90% saved in 100 years.

2. Programme personnel

European Studbook Keeper

Jitka Vokurkova (Olomouc)

3. Publications

Studbook

Recent edition: 2007

Next edition: 2009

Husbandry guidelines

Not yet published.

4. Status

Status and developments over the year 2007 - 2008

West Caucasian tur

Capra caucasica

New	No reply	Participants	Status 1 Jan.	Births (DNS)	EAZA zoos		non-EAZA zoos		Deaths	31. Dec.
					In	Out	In	Out		
		BOJNICE	8.8.0	3.3.0 (0.0.0)	0.0.0	0.2.0	0.0.0	2.0.0	1.2.0	8.7.0
		CHEMNITZ	7.5.0	2.3.0 (2.1.0)	1.0.0	0.0.0	0.0.0	0.0.0	2.1.0	6.6.0
*		DECIN	0.0.0	0.0.0 (0.0.0)	1.2.0	0.0.0	0.0.0	0.0.0	0.0.0	1.2.0
		DRESDEN	2.2.0	2.0.0 (1.0.0)	0.2.0	1.0.0	0.0.0	1.1.0	0.1.0	1.2.0
		HALLE	6.5.0	4.5.0 (1.2.0)	0.0.0	0.0.0	0.0.0	0.0.0	1.0.0	8.8.0
		OLOMOUC	10.14.0	6.5.0 (3.1.0)	0.0.0	1.0.0	0.0.0	6.0.0	1.6.0	5.12.0
		PARIS-JARDIN	1.3.0	2.3.0 (1.1.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0	2.4.0
		PRAHA	7.6.0	7.3.0 (4.0.0)	0.3.0	0.0.0	0.0.0	3.0.0	0.2.0	7.10.0
		TALLINN	13.19.0	11.11.0 (0.1.0)	0.0.0	0.5.0	0.0.0	1.0.0	7.3.0	16.21.0
		Total (9)	54.62.0	37.33.0 (12.6.0)	2.7.0	2.7.0	0.0.0	13.1.0	12.16.0	54.72.0

Summary

Not specified.



East Caucasian tur ESB Annual Report 2007 - 2008



1. Programme information

East Caucasian tur

Capra cylindricornis

ESB established in 1996.

Goal(s)

Percentage of gene diversity 90% saved in 100 years.

2. Programme personnel

European Studbook Keeper

Vladimir Fainstein (Tallinn)

3. Publications

Studbook

Recent edition: 2008

Next edition: 2009

Husbandry guidelines

Not yet published.

4. Status

Status and developments over the year 2007 - 2008

East Caucasian tur
Capra cylindricornis

New	No reply	Participants	Status 1 Jan.	Births (DNS)	EAZA zoos		non-EAZA zoos		Deaths	31. Dec.
					In	Out	In	Out		
		AUGSBURG	9.14.0	5.5.0 (0.1.0)	0.0.0	0.0.0	0.0.0	0.0.0	2.2.0	12.16.0
		LIBEREC	3.10.0	0.0.0 (0.0.0)	2.0.0	0.0.0	0.0.0	0.0.0	0.2.0	5.8.0
		MOSKVA	7.4.0	4.3.0 (0.0.0)	0.0.0	0.0.0	1.1.0	1.0.0	2.1.0	9.7.0
		TALLINN	7.21.0	11.13.0 (4.4.0)	0.0.0	2.0.0	0.0.0	0.0.0	4.2.0	8.28.0
		Total (4)	26.49.0	20.21.0 (4.5.0)	2.0.0	2.0.0	1.1.0	1.0.0	8.7.0	34.59.0
		Non-EAZA Institutions (3)	2.1.0	0.0.0 (0.0.0)	0.0.0	0.0.0	1.0.0	0.0.0	0.0.0	3.1.0

Summary

The Studbook for the East Caucasian Tur, Vol. 12, lists a total of 370 animals. As of 31 December 2008, 37.60 (97) animals were held in 7 zoos (incl. 3 non-EAZA zoos). During the previous year the number of East Caucasian tur in the collections practically did not change.

One of the most difficult issues is finding new holders. In 2007-2008 only one Russian zoo (non-EAZA) was added to the list. If the lack of interest continues, we can predict a decrease of captive East Caucasian tur in the coming years.

In 2008, Moscow Zoo acquired from the wild 1.1 young East Caucasian tur which may become the founders of a new lineage in the future. Tallinn Zoo sent to Liberec Zoo 2 males, the offspring of #0246 (whose mother #0196 was captured in the wild in 1999), which was brought to Tallinn Zoo from Moscow Zoo in 2002.



Turkmenian markhor ESB Annual Report 2007 - 2008



1. Programme information

Turkmenian markhor

Capra falconeri heptneri

ESB established in 1997.

Goal(s)

Percentage of gene diversity 90% saved in 100 years.

2. Programme personnel

European Studbook Keeper

Paula Holma (Helsinki)

3. Publications

Studbook

Recent edition: 2007

Next edition: 2010

Husbandry guidelines

Not yet published.

4. Status

Status and developments over the year 2007 - 2008

Turkmenian markhor

Capra falconeri heptneri

New	No reply	Participants	Status 1 Jan.	Births (DNS)	EAZA zoos		non-EAZA zoos		Deaths	31. Dec.
					In	Out	In	Out		
*		AGRATE	7.4.1	0.0.0 (0.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	7.4.1
		ALMATY	9.9.0	0.2.0 (0.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0	9.10.0
		AUGSBURG	9.9.0	5.10.1 (0.2.0)	0.0.0	0.0.0	0.0.0	0.0.0	3.8.0	11.9.1
		BERLIN-TIERPARK	1.5.0	0.6.0 (0.0.0)	1.0.0	0.0.0	0.0.0	0.5.0	1.0.0	1.6.0
		BLACKPOOL	2.7.0	0.3.0 (0.0.0)	3.0.0	1.2.0	0.0.0	0.0.0	2.5.0	2.3.0
		BOJNICE	6.2.0	0.0.0 (0.0.0)	0.0.0	4.0.0	0.0.0	0.0.0	0.0.0	2.2.0
*		BRATISLAVA	5.0.0	0.0.0 (0.0.0)	1.3.0	0.0.0	0.0.0	0.0.0	0.0.0	6.3.0
*		EDINBURGH	0.0.0	0.0.0 (0.0.0)	2.0.0	1.0.0	0.0.0	0.0.0	1.0.0	0.0.0
		HALLE	3.2.0	1.1.0 (1.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.3.0	3.0.0
		HELSINKI	5.5.0	3.4.0 (2.1.0)	0.3.0	3.2.0	0.0.0	0.0.0	1.5.0	2.4.0
		HILVARENBEEK	3.8.0	0.0.0 (0.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0	3.7.0
		HUNNEBOSTRAND	2.8.0	5.0.0 (0.0.0)	1.0.0	2.2.0	0.0.0	0.0.0	3.4.0	3.2.0
*		KINGUSSIE	0.0.0	3.0.3 (0.0.0)	6.5.0	3.0.0	0.0.0	0.0.0	0.2.3	6.3.0
*		KRAKOW	0.0.0	0.0.0 (0.0.0)	1.2.0	0.0.0	0.0.0	0.0.0	0.1.0	1.1.0
		LIBEREC	4.8.0	9.5.0 (1.3.0)	2.0.0	3.4.0	1.0.0	0.0.0	2.1.0	10.5.0
*		LJUBLJANA	1.0.0	0.0.0 (0.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	1.0.0
		MOSKVA	11.6.0	1.2.8 (0.0.0)	0.1.0	1.1.0	0.0.0	5.1.0	0.2.5	6.5.3
*		MUNCHEN	8.4.0	0.0.0 (0.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	8.4.0
		MYKOLAYIV	5.4.0	6.1.0 (1.0.0)	0.0.0	0.0.0	0.0.0	2.0.0	3.2.0	5.3.0
		NOVOSIBIRSK	5.5.0	2.5.0 (0.0.0)	0.0.0	0.0.0	0.0.0	2.2.0	0.4.0	5.4.0
		OBTERRE	3.6.4	1.4.1 (0.0.0)	4.2.0	0.0.0	0.0.0	0.0.0	0.1.0	8.11.5
		OLOMOUC	3.6.0	3.6.0 (0.1.0)	2.0.0	0.0.0	0.0.0	3.0.0	2.4.0	3.7.0
		PARIS-JARDIN	6.6.0	10.2.0 (2.0.0)	0.0.0	4.2.0	0.0.0	0.0.0	2.1.0	8.5.0
		RIGA	4.4.0	1.4.0 (0.0.0)	0.0.0	1.1.0	1.0.0	3.0.0	1.1.0	1.6.0
		ST-PETERSBURG	2.2.0	1.1.0 (0.0.0)	0.0.0	0.0.0	0.0.0	2.0.0	0.0.0	1.3.0
		STUTTGART	5.4.0	1.2.1 (0.0.0)	0.0.0	1.0.0	0.0.0	0.0.0	1.0.1	4.6.0
		TALLINN	12.20.0	18.13.0 (4.1.0)	0.0.0	0.2.0	0.0.0	5.5.0	10.8.0	11.17.0
		Total (27)	121.134.5	70.71.14 (11.8.0)	23.16.0	24.16.0	2.0.0	22.13.0	32.54.9	127.130.10
		Non-EAZA Institutions (22)	64.61.0	5.8.0 (0.0.0)	1.0.0	0.0.0	31.23.0	3.0.0	1.5.0	97.87.0



Turkmenian markhor ESB Annual Report 2007 - 2008



Discrepancy notes

Turkmenian markhor
Capra falconeri heptneri

LIBEREC	The status on 1 January 2007 is 4.8.0 instead of 4.9.0 as listed on 31 December 2008. Death was not recorded in 2006.
MOSKVA	The status on 1 January 2007 is 11.6.0 instead of 12.6.0 as listed on 31 December 2008. Death was not recorded in 2006.
MYKOLAYIV	The status on 1 January 2007 is 5.4.0 instead of 5.6.0 as listed on 31 December 2008. Mistake in transfer dates.
OBTERRE	The status on 1 January 2007 is 3.6.4 instead of 5.5.0 as listed on 31 December 2008. Missing information in 2006.
TALLINN	The status on 1 January 2007 is 12.20.0 instead of 12.19.0 as listed on 31 December 2008. One birth missing in 2006.

Summary

The Turkmenian markhor population in the EAZA region is stable. Complete population analysis are being run and expected to be completed in due course.

Programme difficulties:

- Many non-EAZA institutions keeping markhor, which creates challenges.
- 80% of the pedigree of the current population is unknown.
- Possible hybridisation may become an issue while ESB is transformed to EEP in the near future.



Muskox

EEP Annual Report 2007 - 2008



1. Programme information

Alaskan muskox
Greenland muskox
Hybrid muskox

Ovibos moschatus moschatus
Ovibos moschatus wardi
Ovibos moschatus HYBRID

EEP established in 1985.

Goal(s)

Percentage of gene diversity 90% saved in 100 years.

2. Programme personnel

Species Coordinator

Bengt Holst (Kobenhavn-zoo)

Species Committee members

Claus Pohle (Berlin-tierpark)
Marc Rosset (Bern)
Leif Blomqvist (Helsinki)
Angele Grebliauskiene (Kaunas)
Bengt Roken (Kolmarden)
Marleen Huyghe (Mechelen)
Maija Vilcane (Riga)

Veterinary advisor

Carsten Grondahl (Kobenhavn-zoo)

3. Activities

Species Committee

Last election: 2005
Last meeting: 6 October 2006 Madrid-zoo

Conservation activities

Not specified.

Research activities

Not specified.

4. Publications

Studbook

Recent edition: 2007
Next edition: 2010

Husbandry guidelines

Published in 1992.



Muskox

EEP Annual Report 2007 - 2008



Discrepancy notes

Greenland muskox

Ovibos moschatus wardi

JARVSO	Status on 1 January 2007 is 0.4.0 instead of 1.4.0 as listed on 31 December 2006.
KREFELD	Status on 1 January 2007 is 3.2.0 instead of 4.2.0 as listed on 31 December 2006.
LYCKSELE	Status on 1 January 2007 is 3.5.0 instead of 2.4.0 as listed on 31 December 2006.
TALLINN	Status on 1 January 2007 is 1.1.0 instead of 1.2.0 as listed on 31 December 2006.

Summary

In order to conserve 90% gene diversity over 100 years this EEP population must grow to a minimum of 130 animals and require a number of imports from the wild of at least 8 new founders. Such imports are not unrealistic since the wild population in Greenland is increasing and has led to a demand of a heavy harvest every year. But in order to increase the present population to 130 animals there is a need for radically improved breeding results which probably is a question of improved husbandry in general. Furthermore there is a need of relating the animals in the "unknown" group to a specific subspecies in order to be able to include them in the programme or to phase them out if they show to be hybrids. This can so far only be done by tracing them back to their geographical origin and relate that place to the recently defined subspecies distribution areas.

The present wardi population has increased by four animals from 50 to 54 animals partly due to births and partly due to import of animals (1,1) from outside EAZA. However, there is still a significant surplus of males which creates a need for all-male groups or for population management including culling of any surplus of low genetic and demographic value. Both recommendations are used in the EEP. Furthermore preparations are going on for another import of animals from the wild based on the masterplan developed in 2008.



Blue sheep

ESB Annual Report 2007 - 2008



1. Programme information

Blue sheep

Pseudois nayaur

ESB established in 1996.

Goal(s)

Percentage of gene diversity 80% saved in 100 years.

Target population size A= 150 and B= 150

Additional comments

The goal of 90% of gene diversity saved in 100 years is not realistic for the Blue sheep population. This would only be feasible by increasing the population size to 4261 animals (!) or importing additional founder animals.

Even taking the high maximum growth rate of the EAZA population in the last five years (13 %) and a generation length, calculated from the average age at birth in the EAZA population (8 years 4 months for males, 5 years 11 months for the females; taken value 7 years 2 months) it is not possible to keep a generic diversity of at least 90% for more than 15 years. After 100 years the gene diversity would be at 81%.

This conclusion is based on a quick population analysis carried out by the EAZA Population Management Advisory Group (EPMAG). The studbook keeper would like to thank Kristin Leus and Fabian Schmidt for running the analysis.

As the blue sheep is not a threatened taxon, the Sheep and Goat TAG decided to aim for a target population of ~150 and 80% of GD saved in 100 years, thereby ensuring sufficient space remains available for other, and more threatened Caprines.

2. Programme personnel

European Studbook Keeper

Jean-Luc Berthier (Paris-jardin)

3. Publications

Studbook

Recent edition: 2004

Next edition: 2010

Husbandry guidelines

Not yet published.

4. Status

Status and developments over the year 2007 - 2008

Blue sheep		<i>Pseudois nayaur</i>								
New	No reply	Participants	Status 1 Jan.	Births (DNS)	EAZA zoos		non-EAZA zoos		Deaths	31. Dec.
					In	Out	In	Out		
		BERLIN-TIERPARK	2.4.0	2.2.0 (0.0.0)	0.0.0	0.0.0	0.0.0	2.0.0	0.0.0	2.6.0
		EDINBURGH	2.0.0	0.0.0 (0.0.0)	0.0.0	2.0.0	0.0.0	0.0.0	0.0.0	0.0.0
*		KINGUSSIE	0.0.0	0.0.0 (0.0.0)	4.0.0	0.0.0	0.0.0	0.0.0	0.0.0	4.0.0
		LIBEREC	3.2.0	1.3.0 (1.0.0)	0.0.0	2.0.0	0.0.0	0.1.0	0.0.0	1.4.0
		MONTPELLIER	6.2.0	1.2.0 (0.0.0)	0.0.0	0.0.0	0.0.0	0.1.0	0.0.0	7.3.0
		MOSKVA	13.11.0	4.8.0 (0.1.0)	0.0.0	2.2.0	0.0.0	4.4.0	0.0.0	11.12.0
		MULHOUSE	5.6.0	4.5.0 (2.1.0)	0.0.0	0.0.0	0.0.0	0.0.0	1.0.0	6.10.0
*		NOVOSIBIRSK	0.0.0	1.1.0 (0.0.0)	2.2.0	0.0.0	0.0.0	0.0.0	0.0.0	3.3.0
		PARIS-JARDIN	1.4.0	2.0.0 (2.0.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0	1.3.0
		TALLINN	14.10.0	10.14.0 (3.1.0)	0.0.0	0.0.0	0.0.0	0.0.0	0.2.0	21.21.0
		Total (10)	46.39.0	25.35.0 (8.3.0)	6.2.0	6.2.0	0.0.0	6.6.0	1.3.0	56.62.0



Blue sheep

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Summary

Refer to the status table.

1.1 sheep were sent by Moskva to Rostov in 2007. Rostov still kept 1.1 on 31-12-2008.

3.3 sheep were sent by Moskva to MNC (UAE) in 2008. This institution kept 5.3 on 31-12-2008.