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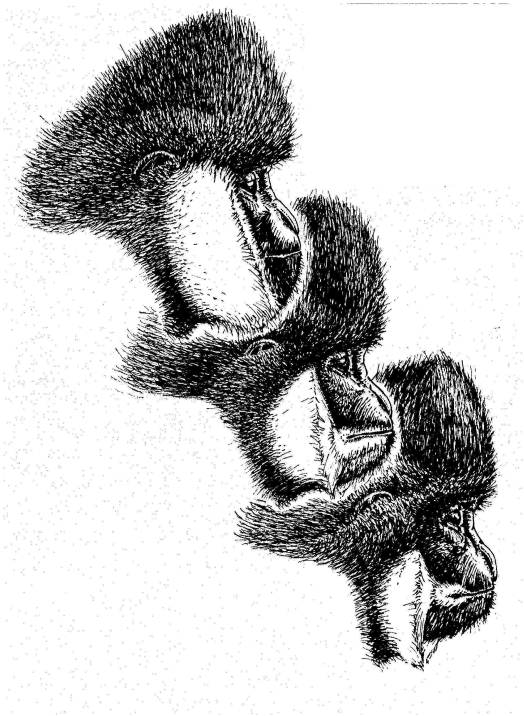
Edited by Pierre Moisson & Mélanie Berthet

Northern White-cheeked Gibbon - *Nomascus leucogenys*
Southern White-cheeked Gibbon - *Nomascus siki*
Red-cheeked Gibbon - *Nomascus gabriellae*

With Nutrition guidelines by David Gomis and a summary of Hylobatidae diseases



ZOO MULHOUSE SUD ALSACE

Nutrition guidelines for “Concolor” gibbons

by David Gomis, DVM, with the collaboration of Sara De Michelis, PhD ; Thijs Flahou, DVM ; Lise Turner, DVM.

These nutritional guidelines can also be used for other *Hylobatidae* species, except perhaps Siamangs. Part of this work was undertaken in 2005 by L. Turner for her veterinary thesis (Cf. *9- Ref.* 84) and more recently in 2006-2007 with T. Flahou for the Mulhouse Zoo Dietary Manual publication.

1- Introduction:

The present guidelines have been written in response to a lack of research and published informations on *Nomascus* subspecies diets. Meeting the nutritional needs of gibbons is essential to assure their survival and their reproduction in captivity.
Present guidelines are not nutrition recommendations, but a first evaluation done in Mulhouse Zoo. Our Zoo has experience with keeping and breeding gibbons since 1961, and even if their nutrition doesn’t seem to represent a real difficulty compared to other non human primates, the diets have been improved over these 46 years. Therefore this work does not pretend to be exhaustive. Hopefully it would initiate some more nutrition research and coordination among zoos, with the objective of improving the database.
Zoo animal nutrition is increasingly being recognised as a specialty: knowledge available is increasing too. The first aim of this study was to provide a database, useful for the development of diets for “Concolor” gibbons, as objectively as possible: with this purpose, we synthetized the few data we could collect on “Concolor” gibbons’ diets and nutrient requirements. We would be pleased to receive some more information that we could include in the next “Concolor” Gibbon Studbook.

2- Feeding ecology and requirement establishment:

Gibbons are considered frugivorous, although feeding ecology suggests they may have a more mixed herb or even an omnivorous diet. Ellefson (1974) reported that they eat at least 61 sorts of plants. These include leaf buds, shoots, fruits and flowers. Occasionally they catch insects, eggs or little birds. The proportion of each may depend on the feeds’ distribution, the territory size and the seasonal changes (they will eat some animals when fruits are scarce). Mean proportions of a “Concolor”’s natural diet are estimated to exist of 61% of leaf buds and shoots, 21% of fruits, 10% of leaves; 7% of flowers and 1% of animal prey (See Table 1).

Table 1: Dietary proportions of some Hylobatidae sp observed in wild

SPECIES	Study sites	Monthly dietary proportions (% mean and range)					Sources
		FRUITS	FIG	FLOWERS	LEAVES	PREYS	
H. hoolock	Assam, India	67		32		0	Tilson, 1979; Chivers, 1984
H. agilis	Sungai Dal, W. Malaysia	72	17	6	15	7	Gittins and Raemakers, 1980; Whitten, 1984
H. klossii	Paitan, Siberut, Indonesia	70	23	0	2	25	Whitten, 1984
H. lar	Kuala Lompat, W. Malaysia	50 (36-60)	22	7 (3-8)	29 (14-53)	13 (6-24)	Gittins and Raemakers, 1980; Whitten, 1984

H. pileatus	Khao Soi Dao, Thailand	71	26	15	13	1	Srikosamatara, 1984
H. moloch	Ujong Kulon, Java, Indonesia	61 (49-68)		1 (0-2)	38 (30-50)	0	Kappeler, 1984; Chivers, 1984
H. muelleri	Kutai, E. Kalimantan, Indonesia	62 (27-90)	24	4 (0-16)	32 (8-73)	2 (0-6)	Leighton, unpub.; Chivers, 1984
H. syndactylus	Kuala Lompat, W. Malaysia	36 (21-49)	22	6 (0-23)	43 (19-69)	15 (8-20)	Gittins and Raemakers, 1980
H. concolor		21		7	71	1	Yang D.H., 1990

The diet composition of gibbons varies with the body size and the digestive morphology of the animal. For instance, siamangs have a larger range of food than others gibbons, because of the longer digestive tract, which facilitates the digestion of dry leaves. Consequently their territory is often smaller.
The feeding ecology is very useful when establishing a captive diet, but it may be more important to know the quality and the quantity of the consumed nutrients. Very few studies about nutrient requirements have been made: the main source of compiled scientific information on nutrient requirements in Non human primates remains the National Research Council publications (2003). Unfortunately, few species were examined and only 24 nutrients are presented, while primates may require more (up to 47 nutrients).
The table bellow presents a synthesis of data collected on Old World primate nutrient recommendations, compared to Human recommendations.

Table 2: Values we could use for Gibbons' requirements (dietary Dry Matter basis)
Main source: NRC, Nutrient requirements for Non Human Primates, 1998-2003; for other sources (a) to h)) see details on bottom.

	UNIT	MINI	MAXI	COMMENTS		Human recommendations
Metabolic Energy	(Kcal/KgBW/day)	34 (Pongidae, table 2-2)	100* *a)*	(M)		1800-2400 kcal/day women 2200-3400 kcal/day men
		200 *a)*	300 *a)*	(G)		50-100 kcal/kgBW/day
Crude Protein	(%)	15 *a)*	16,7 c*)*	1,38 to 0,59 g/BW/day (egg or milk protein) 5(G) to 6(M) % ME *b2)*	2-3g/KgBW/d(M) 3-5g/kgBW/d (G) (rhesus monkey)****	0,8g /kgBW/day 10-15% EM/day
Carbohydrates	(%)	50 *a)*	60 *a)*	>1g /KgBW/day		150g/day 50-55% EM/day
Crude fat	(%)	traces *a)*	10 *a)*	mini: 4%DM *d2)* w3 =1-2% total calories		30-35% EM/day W6=4%EM W3=0,8%EM w6/w3=+-5
Fiber	(%) NDF	20	30	TDF = 0,73(NDF)+15,5 *f)*		
	ADF	10	15			
	TDF	30,1 *f)*	37,4 *f)*			25-30 g/day with 10-15g soluble fiber
Calcium	(%)	0,55	0,8 *b1)*	Ca/P from 1:1 to 2:1	1-1,3 %DM *d2)*	900-2000mg/day adult 1300mg/day lactation 500-1000 mg/day growth
Phosphorus	(%)	0,33	0,6 *b1)*			

Potassium	(%)	0,40	0,89 *a)*			
Sodium	(%)	0,2 *b1)*	0,65			NaCl : 5-6g/day
Magnesium	(%)	0,10	0,17 *c)*			6mg/kBW/day
Chloride	(%)	0,20	0,55			
Copper	(mg/kgDM)	12	20			
Zinc	(mg/kgDM)	11 *c)*	100 *b1)*	1,6-2 mg/day 1-1,5 mg/kgBW /day (G) (experimented on Rhesus infant)		10-20 mg/day
Manganese	(mg/kgDM)	20 *b1)*	100 *a)*			
Iodine	(mg/kgDM)	_ _*d1)*	0,35 *b1)* **			150-200 µg/day
Iron	(mg/kgDM)	100 *b1)*	200 c)	5 mg/d or 3-10 mg/kgBW/day (G) (experimented on Rhesus infant)		Men : 9mg/day women : 16mg/day
Vit A	(IU/KgDM)	8000 *b1)*	14000 *c)*	20000-25000 IU/ kgDM *d2)*		Men : 800 ER/day Women :600 ER/day
Vit D3	(IU/KgDM)	1000	3000			400UI/day (0-3 yo, repro, old) 200UI/day
Vit E	(mg/kgDM)	56 *c)*	100 *b1)*	0,7-3mg/kgBW/d (rhesus) *e)*	0,36 mg d-a-tocopherol/ g of dietary linoleic acid *a) (on rhesus)*	12 mg/day
Vit K	(mg/kgDM)	0,5*** *b1)*	12			
Vit C	(mg/kgDM)	55	110			110mg/day
Vit B1	(mg/kgDM)	1,1	3 *b1)*			Men : 1,3 mg/day Women : 1,1mg/day
Vit B2	(mg/kgDM)	1,7	4 *b1)*			
Niacin	(mg/kgDM)	16	56	(on rhesus monkeys)		5mg/ 1000kcal (>15mg/day)
Vit B5	(mg/kgDM)	12 *b1)*	_ _*d)1***			0,5-5µg/day (2,4 adult)
Vit B6	(mg/kgDM)	2,5 *a)*	4,4 (for rhesus)	1mg/day sufficient to prevent signs of deficiency (rhesus)		Men : 1,8 mg/day Women : 1,5mg/day
Vit B12	(mg/kgDM)	0,011	0,03			
Folacin	(mg/kgDM)	0,2 *a)*	4 *b1)*	30-60µg/kgBW/day (G) rhesus)		300µg/day (400 reproductive)
Biotin	(mg/kgDM)	0,11	0,2 *b1)* **			
Choline	(mg/kgDM)	_ _*d1)*	750 *b1)*	500-750 mg/kgDM *d2)*		

a) NRC, Nutrient requirements for Non human primates, 1978

b1) NRC, Nutrient Requirements for Non Human Primates, 2003. Table 11-2 : Estimated Adequate Nutrient Concentrations (Dry Matter basis) in diets for post weaning Non human primates, p193

b2) NRC, Nutrient Requirements for Non Human Primates, 2003. Table 11-1 : Nutrient requirements for Humans, p192
c) W.L. JANSEN and J. NIJBOER, 2003 : Zoo Animal Nutrition, Tables and Guidelines, Recommendations for Old World Primates
d1) no reliable data
d2) practical values, commonly used
e) FITCH and DINNING, Vitamin E deficiency in the monkey. V. Estimated requirements and the influence of fat deficiency and antioxidants on the syndrome, 1963. 79:69-78.
f) E. DIERENFELD et al., unpublished
h) ZOOTRITION Software, Tolerances, issued from NRC, 1987 : Vitamin Tolerance of Animals. National Academy Press.Washington, DC. 96 pp.
(M) Maintenance
(G) Growing
* From NRC,78 Table 1, Energy requirements for Adults Old world primates: Real maximum recommended
** Single recommendation found
*** as Phylloquinone
**** Recommendation with High quality protein

The protein dietary level can easily be used as a first "monitoring" nutrient, as mineral and vitamin supplementation can be done following pellet intake, with pellets supplying the major protein source.
Dietary nitrogen in the form of protein, including adequate amounts of essential amino acids, is required for growth and for synthesis of all structural and functional proteins. "High-quality" protein for gibbons is mostly derived from animal sources (casein, lactalbumin). Proteins from plant sources generally contain low levels of one or more amino acids. Therefore it is important to diversify the items in a diet: a mixture of plants will hopefully provide complementary ratios of amino acids.
Smaller species have greater requirements, per unit of body weight, than larger species do. Growing, pregnant and lactating animals can also be assumed to have higher requirements, per unit of body weight, than adult animals. As a general rule, about 3-5 g/kg of body weight per day of high-quality protein are required for infant animals of larger species such as rhesus monkeys. Smaller infant cebus and squirrel monkeys need a larger amount, 5-8 g/kg of body weight per day. Older animals and larger within each species require a lesser quantity and quality of dietary protein per unit body weight, with approximately 3,5-4,5 g/kg BW/ day of high-quality proteins being the minimal amount suggested.

3- Conducting nutrition intake surveys: example Mulhouse Zoo 2002-2005

The purpose of performing an intake study is to determine the actual amount of food consumed by an animal or a group of animals in an enclosure. Because some diet components may be offered but not be consumed, mesuring the intake can provide a better evaluation of the nutritional adequacy of the diet. Since 2002, Mulhouse Zoo has been conducting intake studies and the present evaluation was done on 3 breeding groups of Concolor gibbons, over 42 days:

Nomascus gabriellae ..... Yellow-cheeked crested gibbon ……5 animals
Nomascus leucogenys leucogenys ..... Northern white-cheeked gibbon ……4 animals
Nomascus leucogenys siki ..... Southern white-cheeked gibbon ……3 animals

1. All feed items were individually washed and prepared before being weighed and then mixed into the feed pan.
2. The weights were automatically reported on a list of feeds that are included in each animal's diet.
3. Ideally, a desiccation pan must be set up, separately from the feed pans, to measure the amount of water lost to the air. This pan should be placed in an area as similar as possible to the exhibit being evaluated.
4. As the animals are fed at half past 17.30 hrs, the feed pans are left overnight and retrieved in the morning.

5. We also collected all feed items remaining in the exhibit and separated them all from each other.
6. Each item was weighed individually, including discarded items, and recorded on the sheet.
7. Food amounts need to be adjusted using dessication factors mesured with the extra pan.

Body weight condition and health status were visually monitored, and regular parasitological screenings were done on mixed fecal samples.

Yellow-cheeked crested gibbons ……. adult weight is 5-6 kg
Northern white-cheeked gibbons ……. adult males weigh 8,0 kg, females weight 10,0 kg
Southern white-cheeked gibbons ……. adult male weight is 7,0 kg, female weight is 8,0 kg

The feeding program was never altered during the intake studies, all gibbons are fed pellets in the morning and fruits and vegetables in the evening.

10.00hr "crousti' croc" (dog pellets), "simial" pellets and sunflower seeds
17.30hr Fruits and vegetables, milk bread-mix and "simial" powder, sultanas when not enough fruits

Intake studies were each time conducted over 7 consecutive days, averages of intake amounts were calculated with MICROSOFT EXCEL® tables.

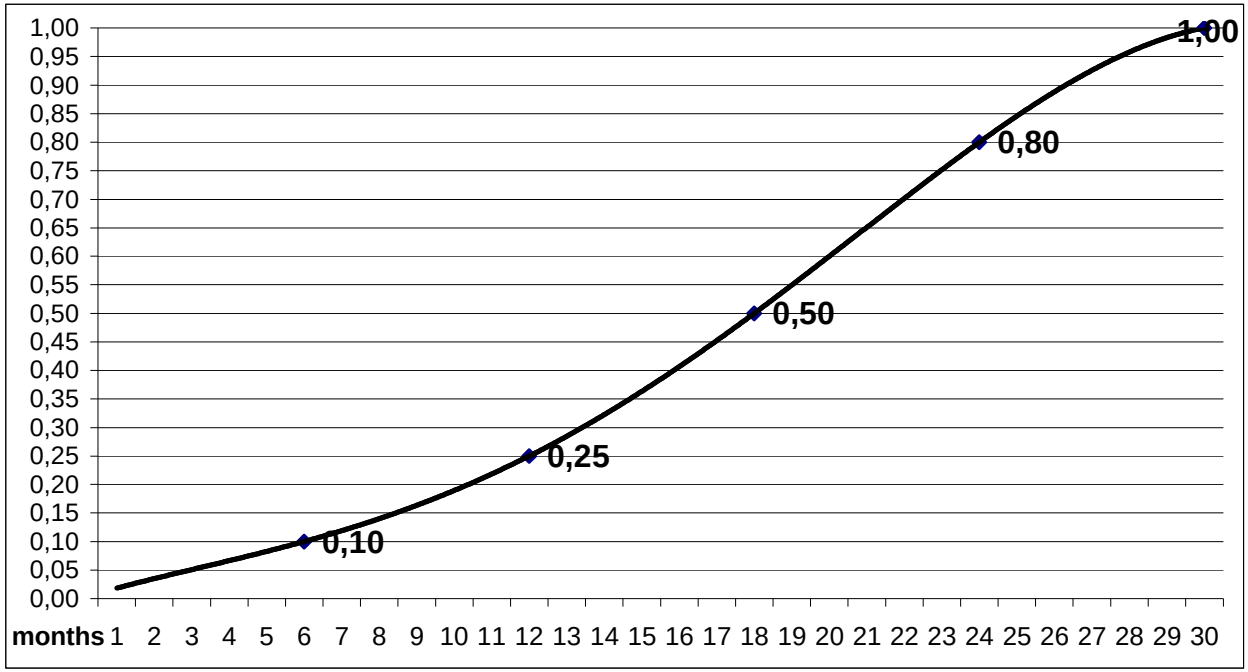
Table 3: Ex. of intake study for a family of Yellow-cheeked crested gibbons (3 adults and 1 young), amounts in g:

	16/07/02	17/07/02	18/07/02	19/07/02	20/07/02	23/07/02	24/07/02	Average	Average / adult*
Apples	819	730	606	758	580	864	808	737,9	207,8
Bananas	449	530	514	293	513	550	127	425,1	119,8
Cooked carrots	9	94	89	110	100	102	133	91,0	25,6
Milk bread	164	170	188	177	195	300	185	197,0	55,5
« Simial » powder	41	65	33	43	54	54	69	51,3	14,4
Lettuce	106	268	166	164	75	110	97	140,9	39,7
Chicory	0	0	0	0	0	248	0	35,4	10,0
Leeks	0	0	0	0	0	0	22	3,1	0,9
Cabbage	0	0	0	0	0	0	68	9,7	2,7
Cucumber	54	108	58	110	113	87	70	85,7	24,1
Peppers	28	0	35	0	62	0	0	17,9	5,0
Eggplant	0	23	43	0	70	40	40	30,9	8,7
Grapefruit	0	0	0	0	0	0	0	0,0	0,0
Melon	0	0	0	349	0	340	0	98,4	27,7
Plums	0	0	0	0	114	0	0	16,3	4,6
Pears	0	0	0	173	102	0	0	39,3	11,1
Pineapple	348	0	0	0	0	0	0	49,7	14,0
Grapes	0	386	299	0	0	0	609	184,9	52,1
Sunflower seeds	42	42	42	42	42	42	42	42,0	11,8
"Crousti' croc" pel.	41	41	41	41	41	41	41	40,5	11,4
"Simial" pellets	68	68	68	68	68	68	68	67,5	19,0
Total	2168	2524	2181	2327	2128	2845	2356	2361,3	665,2

* In this example, the family existed of the breeding pair and two youngs, the 1st one was 3 years and 10 months old, the 2nd was 1 year and 7 months old. In order to monitor intake amounts, especially pellets, each animal was given a nutrition coefficient: 1,0 for an adult; 0,5 for a young animal eating half of an adult diet; 0,0 for a new-born baby; etc. With this "young coefficient" the group intake can be calculated for an adult animal, and thus, compared between studies.

Mulhouse Zoo keepers observed an evolution of the intake with growth. We were able to model this as shown on the graph below. The curve represents a factor , which gives us the proportion of an adult diet a young gibbon can eat, depending on his age. For instance, a Concolor gibbon of 18 months of age, will count for half an adult.

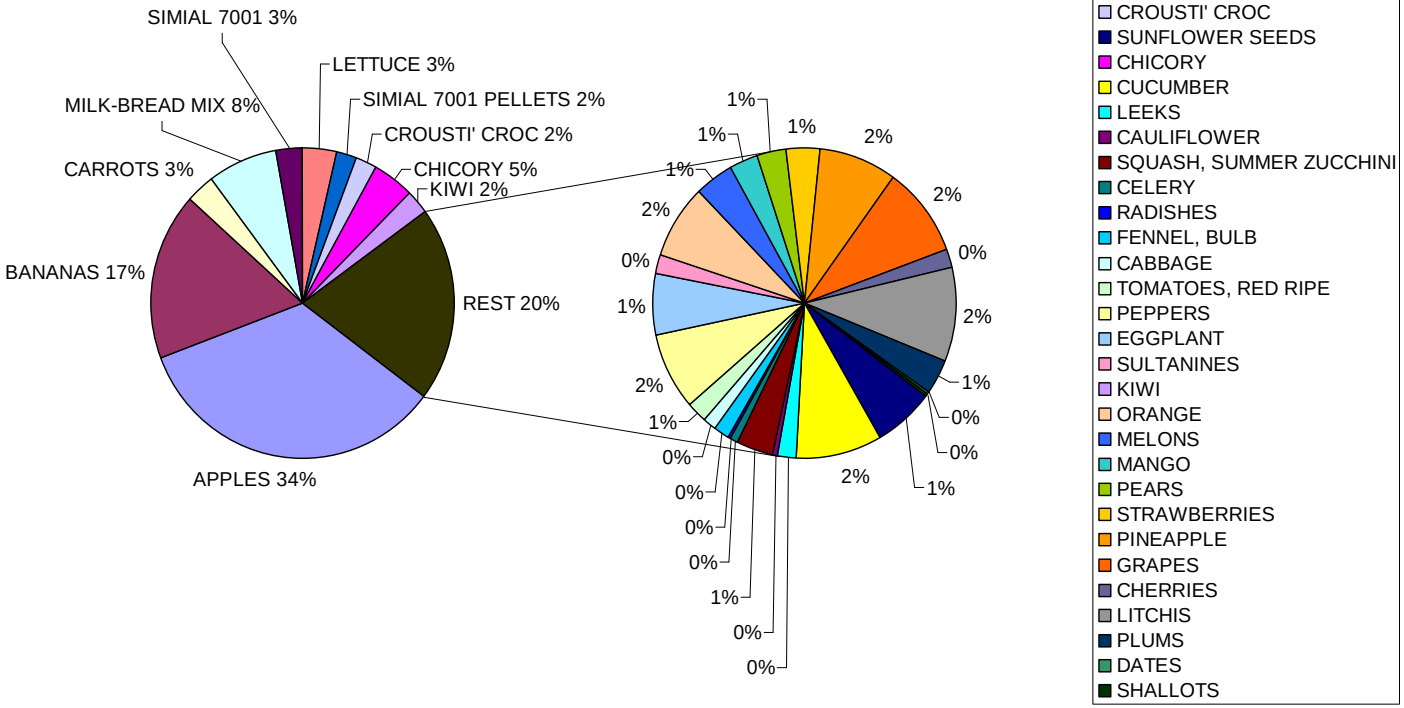
Graph 1: Between age of 6 and 30 months, the coefficient can be approximated with "y = 0,0392x - 0,175" (R2 = 0,9897)



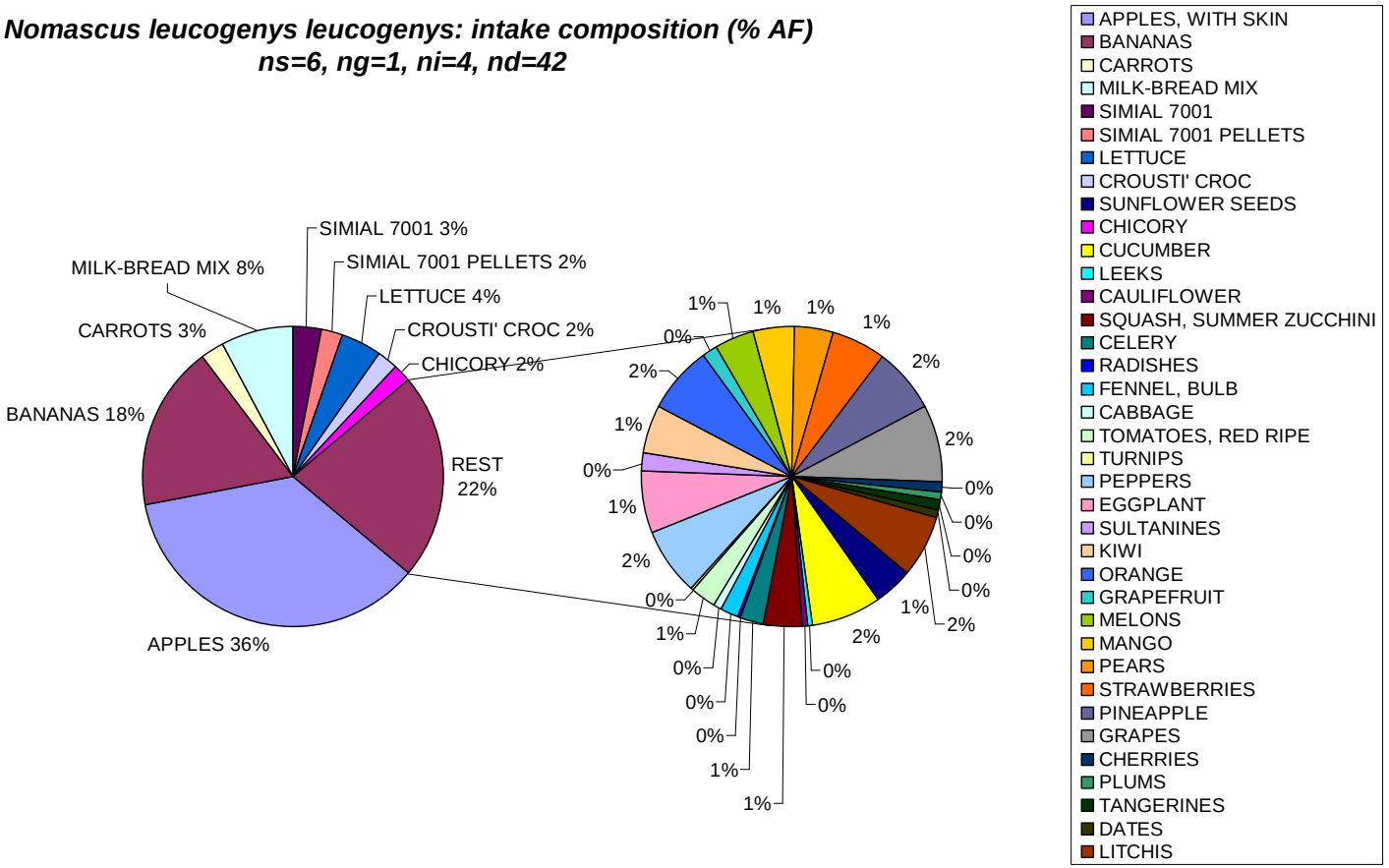
Intake composition was first evaluated on an as fed (AF) basis in order to work with major feeds. In Mulhouse Zoo, diets seem very complicated but that's only because we receive most fruits and vegetables for free, and because offer varies from day to day. This means that over 42 days of studies, between 14% and 22% of fruits and vegetables (AF) were changing, and Excel averages were calculated even if only offered once (of course in other Zoos, diets can be really easier to monitor and calculate!). AF percentages were translated to a dry matter (DM) basis, which is better to monitor Crude Protein levels (CP) and thus pellets' incorporation.

Graph 2: Intake composition on AF basis for Yellow-cheeked crested gibbons in Mulhouse Zoo
(ns = number of intake studies of 7 days; ng = number of groups, ni = number of individuals, nd = total number of days)

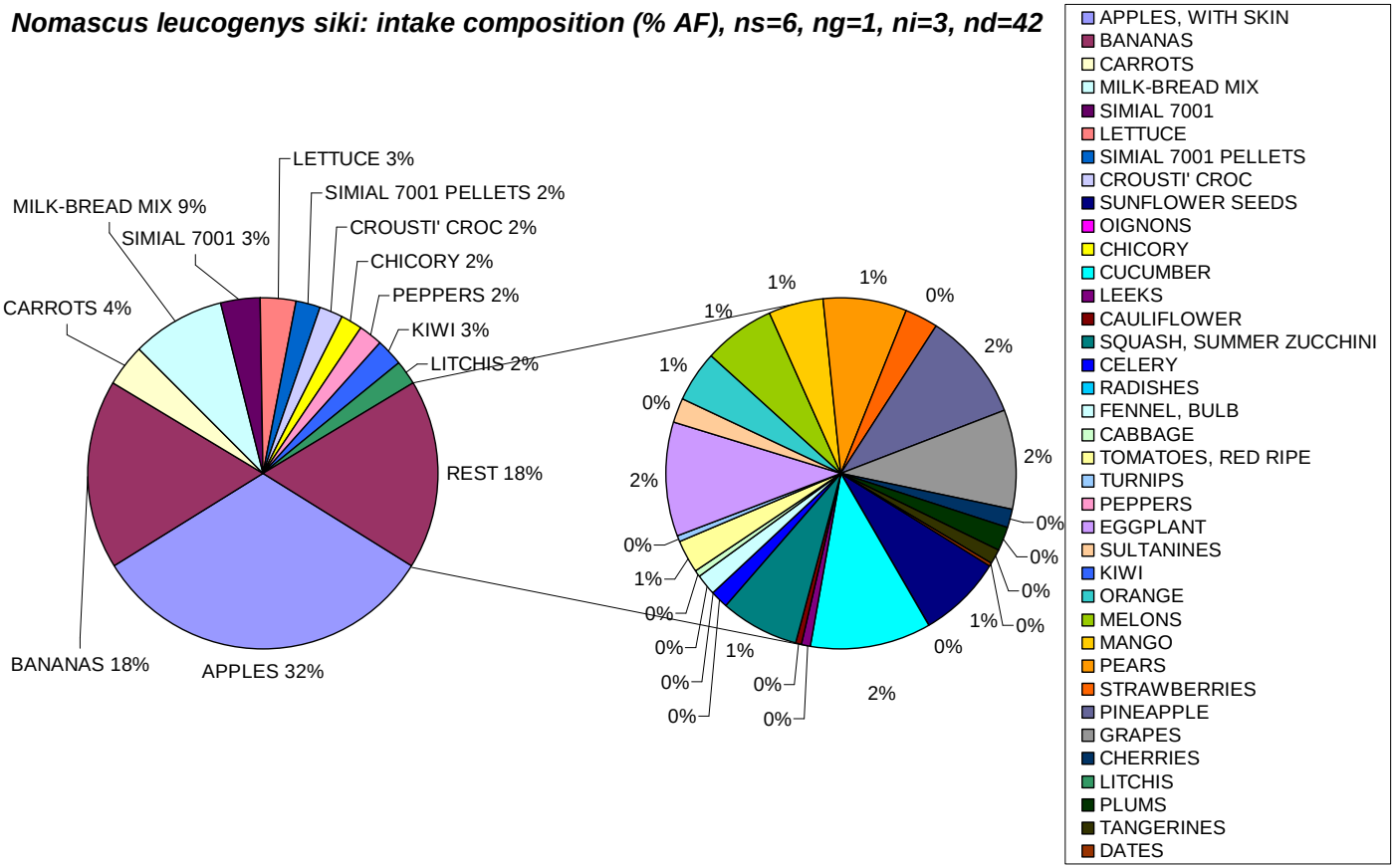
Nomascus gabriellae: intake composition (% AF), ns=6, ng=1, ni=5, nd=42



Graph 3: Intake composition on AF basis for Northern white-cheeked gibbons in Mulhouse Zoo

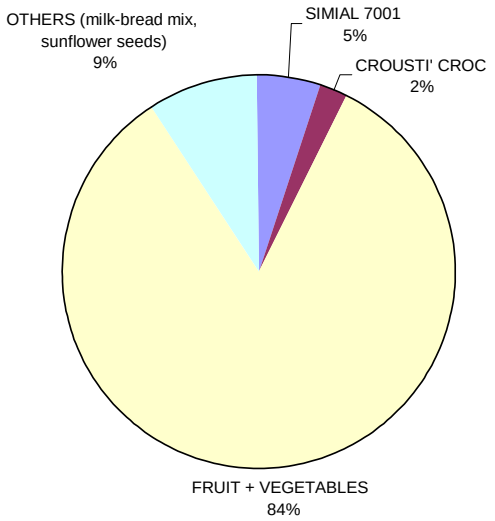


Graph 4: Intake composition on AF basis for Southern white-cheeked gibbons in Mulhouse Zoo



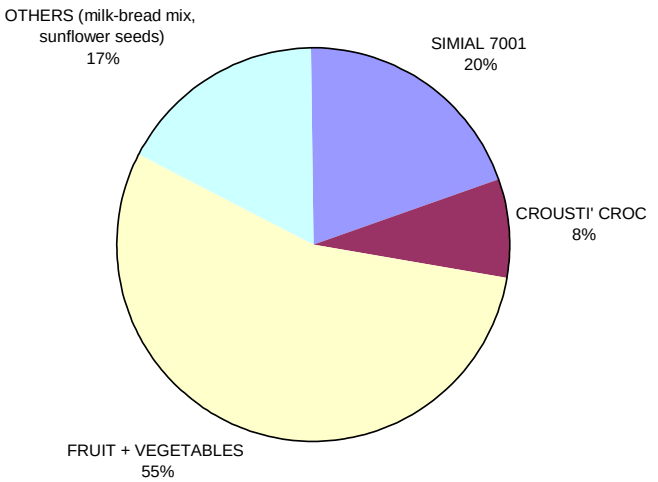
Graph 5: Intake composition on an AF basis for all Concolor gibbons in Mulhouse Zoo

Nomascus (gabriellae, leucogenys, siki): intake composition (% AF, average all species)



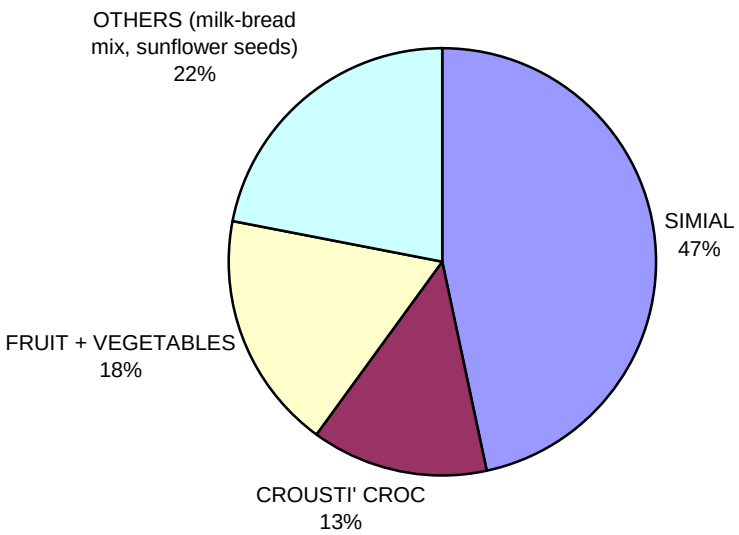
Graph 6: Intake composition on DM basis for all Concolor gibbons in Mulhouse Zoo

Nomascus (gabriellae, leucogenys, siki): intake composition (% DM, average all species)



For Concolor gibbons, pooled pellet intakes (both “simial” -which is more or less 31% CP DM- and “crousti’croc” -which is near 22% CP DM-) represented 28% of dry matter (DM), and fruit and vegetables 55% of DM. Fruits and vegetables commonly used in Zoos for gibbons only represent between 3,93% and 4,83% CP DM resulting in 5 % CP DM maximum!
Even before calculating the nutritional value of the actual diet, we can see that the CP target (15 % CP DM) is near to be reached: we can expect more or less: 0.20*(31,00) + 0.08*(22.00) + 0.55*(4.50) = 6.20 + 1.76 + 2.48 = 10.14 % CP DM.
(Note that all these datas don’t include foliage or plants that gibbons can eat in outside enclosures, Cf.8-).

Graph 7: % of protiens delivered by different diet components for Nomascus spp



4- Calculating intake nutritional value: example Mulhouse Zoo 2002-2005

The variety and the nutritional content of the feeds available on the market seem to be very different from those that are consumed in the wild. Analysis of fruits from the same botanical classification showed, that fruits in the wild are higher in fiber and proteins but lower in sugars and water, than those cultivated for human use (Calvert, 1985). Also, fruits consumed in the wild may be primarily unripe, while those available to zoos are usually very ripe. Ripening increases the sugar level in the fruit.

ZOOTRITION® v2.6 is a software package and database designed as a tool for zoos, aquariums and training institutions to assist in the analysis and preparation of diets for captive wild animals. We found this tool very useful for a quick analysis of a diet: you just need to enter the intake values for each item, and it calculates the nutrient composition of the diet, in DM or on an AF basis.
Table 4 includes nutritional composition of average intakes, for 3 breeding groups of Concolor gibbons and 1 breeding group of Pileated gibbons (Mulhouse Zoo too) for comparison.

Table 4: Mulhouse diets' composition (DM basis), calculated with ZOOTRITION® v2.6

Nutrient	Unit	*Nomascus gabriellae*	*Nomascus leucogenys leucogenys*	*Hylobates pileatus*	*Nomascus leucogenys siki*	Min./max. recommendations Zoo Mulhouse
Nutrient Category: Energy						
ME Primate	kcal/g	3,42	3,40	3,12	3,44	
Nutrient Category: Carbohydrates						
Acid Lignin*	%	0,06	0,08	0,07	0,05	
ADF*	%	3,53	3,70	3,90	3,73	10,00/15,00
Cellulose*	%	1,39	1,52	1,54	1,37	
Crude Fiber*	%	2,76	2,90	3,06	2,82	
Lignin*	%	0,46	0,51	0,59	0,50	
NDF*	%	5,45	5,63	5,79	5,76	20,00/30,00
Total Dietary Fiber	%	12,38	12,37	12,21	12,25	
Water Soluble Carbohydrates*	%	6,86	6,75	6,46	7,19	
Nutrient Category: Fat						
Arachidonic Acid*	%	0,00	0,00	0,00	0,00	
Crude Fat	%	6,70	5,97	6,06	6,71	3,00/6,00
Linoleic Acid	%	2,91	2,43	2,45	2,90	
Linolenic Acid	%	0,11	0,10	0,11	0,10	

Nutrient	Unit	*Nomascus gabriellae*	*Nomascus leucogenys leucogenys*	*Hylobates pileatus*	*Nomascus leucogenys siki*	Min./max. recommendations Zoo Mulhouse
Monounsaturated Fats	%	0,98	0,83	0,68	0,99	
PUFA	%	3,32	2,84	2,85	3,33	
Saturated Fats	%	1,06	0,99	0,83	1,08	
Nutrient Category:	**Protein**					
Arginine	%	0,63	0,60	0,58	0,64	
Crude Protein	%	13,17	12,96	13,56	13,56	15,00/16,70
Cystine	%	0,19	0,19	0,17	0,20	
Histidine	%	0,22	0,21	0,20	0,23	
Isoleucine	%	0,48	0,47	0,44	0,50	
Leucine	%	0,96	0,96	0,89	1,01	
Lysine	%	0,50	0,50	0,47	0,53	
Methionine	%	0,23	0,23	0,21	0,24	
Phenylalanine	%	0,53	0,52	0,47	0,55	
Threonine	%	0,40	0,39	0,37	0,41	
Tryptophan	%	0,12	0,12	0,11	0,13	
Tyrosine	%	0,37	0,37	0,33	0,39	
Valine	%	0,54	0,53	0,48	0,56	
Nutrient Category:	**Vitamins**					
Biotin	mg/kg					0,00/0,20
Choline	mg/kg	448,91	462,68	431,60	479,02	/750,00
Folacin	mg/kg	0,89	0,87	0,90	0,87	0,00/4,00
Pantothenic Acid*	mg/kg	9,31	8,43	8,60	9,12	12,00/
Vit A	IU A/g or	40,39	42,87	74,88	48,19	8,00/14,00
Vit B1 (Thiamin)	mg/kg	4,33	4,03	3,54	4,39	1,00/3,00
Vit B12*	mcg/g	0,00	0,00	0,00	0,00	0,01/0,03
Vit B2 (Riboflavin)	mg/kg	2,48	2,46	2,23	2,52	1,00/4,00
Vit B3 (Niacin)	mg/kg	20,71	20,28	18,56	21,64	16,00/56,00
Vit B6 (Pyridoxine)	mg/kg	6,75	6,68	7,35	6,67	2,00/4,40
Vit C Ascorbic Acid	mg/kg	476,38	489,59	558,41	503,74	55,00/110,00
Vit D3	IU Vit D3/g	1,49	1,53	1,31	1,60	1,00/3,00
Vit E	mg/kg	49,44	44,61	50,54	49,32	56,00/100,00
Vit K	mg/kg	0,43	0,44	0,43	0,46	0,00/12,00

Nutrient	Unit	*Nomascus gabriellae*	*Nomascus leucogenys leucogenys*	*Hylobates pileatus*	*Nomascus leucogenys siki*	Min./max. recommendations Zoo Mulhouse	
Nutrient Category:	**Ash/Minerals**						
Ash	%	5,52	5,54	6,06	5,65		
Calcium	%	0,73	0,74	0,78	0,76	0,55/0,80	
Chloride	%	0,15	0,15	0,14	0,15	0,20/0,55	
Cobalt*	mg/kg	0,07	0,07	0,05	0,08		
Copper	mg/kg	13,14	13,11	13,10	13,72	12,00/20,00	
Iodine*	mg/kg	0,03	0,03	0,03	0,03		/0,35
Iron	mg/kg	75,59	76,33	74,61	79,35	100,00/200,00	
Magnesium	%	0,11	0,10	0,11	0,11	0,04/0,17	
Manganese	mg/kg	18,11	17,87	14,63	19,07	20,00/100,00	
Phosphorus	%	0,54	0,54	0,58	0,56	0,33/0,60	
Potassium	%	1,01	1,01	1,09	1,01	0,40/0,89	
Selenium	mg/kg	0,18	0,17	0,14	0,19		
Sodium	%	0,22	0,23	0,17	0,24	0,20/0,65	
Sulfur	%	0,09	0,10	0,09	0,10		
Zinc	mg/kg	16,11	15,60	15,42	16,72	11,00/100,00	

* Some resulting values seem really not reliable and possibly too low. This is because these values are not always entered in Zootrition for the feeds which are used in the diets.

Using ZOOTRITION® software, chains of errors are easily created. Because we've revealed some problems by using the software, and have probably missed others, we preferred to check the ZOOTRITION® results by a home-made program on EXCEL®: we created our own table by using USDA nutrient values. The USDA National Nutrient Database for Standard Reference (SR) is the major source of food composition data in the United States. It provides the foundation for most food composition databases in the public and private sectors. As information is updated, new versions of the database are released. We worked on the Release SR19 (August 2006) that contains data on 6,839 food items and up to 128 food components. Finally, with the right formulas put into an EXCEL® page and the measures of the intake, we were able to determine the nutrient composition of the diet for all gibbons.

Table 5: Comparison between ZOOTRITION® and USDA databased results

		gabriellae		*leucogenys*		*siki*	
Nutrient	Unit	Zootrition	USDA	Zootrition	USDA	Zootrition	USDA
ME Primate/Humans	kcal/g DM	3,42	3,23	3,40	3,21	3,44	3,23
Crude Protein	% DM	13,17	12,97	12,96	12,56	13,56	13,36
Carbohydrates	% DM		63,41		64,25		61,71

Crude Fat	% DM	6,70	6,02	5,97	4,37	6,71	6,11
Protein %kcal	%kcal	16,4	16,1	16,3	15,7	17,5	16,5
Carbohydrates %kcal	%kcal		78,5		80,1		76,4
Fat %kcal	%kcal	18,7	16,8	16,8	12,3	19,4	17,0
Ca/P		1,35	1,37	1,37	1,40	1,36	1,39

We concluded basically that ZOOTRITION® software is a really powerful calculator, that reliability of results just depends on feeds' database reliability itself, and that we should always interpret the values with a range target and not with a single precise value target! This last point is essential as feed databases will never include exhaustive composition data for all feeds.

5- Comparing study results versus targets: example Mulhouse Zoo 2002-2005

Energy: Values cannot be easily compared to the requirement target because the problem of a universal unit and the lack of precision in the food data remains, as for "Simial" pellets and powder. For some of the food compositions in USDA databased tables, the energy value has been calculated with Atwater's coefficients, which are 4 kcal per gram of CHO and per gram of crude protein, and 9 kcal per gram of crude fat. Even if energy could be the most interesting way to calculate diets, energy requirements remain very difficult to evaluate under zoo conditions… Thus, energy and carbohydrates are merely restricted in zoo diets, where we often encounter overweight problems with already well-balanced diets (CP, vit & min, ….).

Carbohydrates: There are no real recommendations for this nutrient category. Reference values have been determined from feeding ecology: it has been observed that in the wild, gibbons were eating about 50-60% of carbohydrates on dry matter basis. But many fluctuations occur (season, ripeness...). In Mulhouse, the diet for Concolor gibbons comprises an average of 63.4%, 64.3% and 61.7% CHO for respectively the *gabriellae*, *leucogenys*, and *siki* subspecies. These values seem reasonable.

Fiber: Concerning the fiber analysis, it has been observed that the free-ranging diet was composed of 10-15% ADF (Acid Detergent Fiber) and 20-30 % NDF (Neutral Detergent fiber) (source, NRC 2003). Values of ADF and TDF in ZOOTRITION® software are not realiable because of missing data in the database. Even if TDF could be approximated with the proposed formula from E. Dierenfeld et al. (for gorillas' species, source., unpublished: TDF = 0,73(NDF) + 15,5), we encounter an important gap with the USDA databased estimation.

Fatty acids and crude fat : Few data exist on the fat requirement for gibbons. The only recommendations we found are at a level of maximum 10% DM of fat in the diet. In fact, it is mostly the level of essential fatty acids as linoleic acid and linolenic which are important. Also, fat is an important factor of palatability (Murray and Fowler, 1986). But too much fat can induce diarrhea and may in long term issue, lead to antagonisms with calcium, selenium, iron, and vitamin E metabolism. In Mulhouse diets contain in average 4 to 6% DM of fat, and this seems adequate.

Protein: "Adequacy" of dietary protein generally reflects ability to support satisfactory health, growth, and reproductive ability. "Quantity" of dietary protein is reflected by total nitrogen content. "Quality" reflects the presence and ratios of the constituent essential amino acids. Animal source of proteins has a high-digestibility and contains high levels of essential amino acids. Proteins from plant sources are less digestible and generally contain low levels of one or more

ot the essential amino acids. Therefore a dietary amino acids balance should be maximised by a mixed diet. The diet distributed in Mulhouse has been determined in function of the protein concentration. 13% CP DM in the diet seems to be an adequate level to support gibbons needs, at least in Mulhouse Zoo. Proteins deliver 16-17,5% of the metabolized energy of the diet, a proportion very close to the Human recommendations. Nevertheless, an uncertainty on the protein content of some feeds and the industrial supplements is still remaining.
Interesting to note is the percentage of proteins delivered by diet items: "Simial" pellets and powder: deliver 46,6% of the total dietary protein, "Crousti' Croc" pellets 13,4% , Fruits + vegetables 18,0% and others 20,0% %. This means that nearly 2/3 of the proteins are delivered by 7% AF and 28% DM (Simial and Crousti' croc) of the diet. 30% DM seems to us to be the maximum pellets' incorporation we can obtain in this kind of diet. Therefore the protein content in pellets has to be determined according to this incorporation percentage.

Vitamins:

Vitamin A (Retinol) and Provitamin A (Carotens): No data are available on Beta carotene, but with conversion (carotene 6µg = 1µg Retinol), we can calculate the total vitaminA concentration in the diet. Published Studies consider diets containing from 8 to 14 IU vitA per gram diet on a dry matter basis as adequate. In Zoos it is frequent to have a diet with about 100 IU vitaminA per gram, on a dry matter basis. With the supplement "Simial" - a major source of vitamineA, which delivers 76% of the total dietary vitaminA - Mulhouse's diet contains an average of 43.8 IU of vitamin A per gram, on a dry matter basis. Concolor gibbons fed with that diet don't show signs of toxicity.
(Nb: Beta caroten is never toxic for humans. Teratogen effects occur in females with diets containing more than 3000 UI per day of vitaminA in the first month of pregnancy. The upper safe levels for non-ruminant animals are presumed to be 4 to 10 times the requirement).

Vitamin D: It has been shown that Vitamin D3 is much more effective than Vitamin D2 for New world primates, particularly in preventing rickets. Old world primates (OWP) such as rhesus monkeys appear to utilize ergociferol (Vit D2) more effectively, but Hunt et al. (1972) indicate that cholecalciferol (Vit D3) still has a stronger biological activity. This may explain why only recommendations for cholecalciferol exist: about 1-3 UI of vitamin D3 per gram of diet on dry matter basis. In Mulhouse Zoo the minimal recommendation published - of 1 IU vit D3 per gram DM- is reached with the supplement "Simial", that contributes more than 90% of the Vit D3 level in the diet.
(Nb: 400 UI Vitamin D3 per day in Rhesus monkeys' diet doesn't produce signs of toxicity, but for Humans, the limitation for an adult is 1000 UI of vit D per day).

Vitamin E: Biologic activity of vitaminE (and diet recommendation) depends directly on α-tocopherol and w6 fatty acids proportions. VitE Deficiency is common in zoos. The adequate values were estimated at 56 to 100 milligram per kilo of diet on dry matter basis. In Mulhouse Zoo, the diets for Concolor gibbons contain an average of 47.8 mg/ Kg DM diet, which is still sufficient for primates (E. Dierenfeld, personal communication).
(Nb: Uncertainty remains on vitamin E composition of the offered diet, because values of food composition data vary extremely from one source to another. We could observe it in the case of sunflower seeds for instance, very rich in vitamin E).

Vitamin K: The vitamin K requirement for nonhuman primates is small because of an endogen source : synthesized by bacteria in the intestinal tract (except newborn animals and those receiving long-term broad spectrum antibiotic therapy). USDA food composition tables doesn't report any vitamin K levels.

Vitamin B1 (Thiamin): Thiamin's requirement exists and diets with 1,1 to 3,0 mg/Kg DM are sufficient. Principal natural sources are yeasts, cereals and leguminous plants. Recommended maximal values published can be easily reached, notably when using supplements.

Vitamin B2 (Riboflavin): Sources of Vitamin B2 are various and deficiency is rare. The diet distributed in Mulhouse to Concolor gibbons contains about 2,5 mg/kg DM, which corresponds to the target interval.

Vitamin B3 (PP, Niacin) : With a level of about 21 mg/Kg DM of Niacin in the diet, Mulhouse diet is adequate for Niacin.
(Nb: Nicotinamid -second form of niacin with equivalent biological activity- is synthesized partially from Tryptophan in the liver. Also Niacin deficiency is usually linked with a protein deficiency. Toxicity limit of Niacin for Humans is 33mg per day on top of the nutrient need (>15mg/day)).

Vitamin B6 (Pyridoxine): The concentration of Vitamin B6 in Mulhouse diet seems adequate even if it exceeds the maximal target. For Humans, toxicity signs have been noticed with a diet containing more than a hundred times the daily need.
(Nb: Pyridoxine's requirement depends on the protein concentration in the diet and with specific medications such as ison azid or D-penicillamin, that augment its urinary elimination. Moreover, oestrogens increase the Pyridoxine needs.)

Vitamin B9 (Folic acid): This nutrient level must be controlled because deficiency is quite frequent. It concerns mostly pregnant or lactating females and newborn animals.

Vitamin B12 (Cobalamin) : Dietary sources of vitamin B12 are exclusively animal sources. Biological needs are very low but deficiency signs may occur when using a vegetarian diet (no meat, no fish, no egg). The analysis of Mulhouse diet, the table above, is incorrect because of a lack of data of vitamin B12 concentration in the supplements.

Vitamin C (Ascorbic acid): The diet in Mulhouse Zoo contains pepper, broccoli and citrus fruits, and the gibbons' needs are consequently easily reached. Unfortunately, the toxicity value isn't known. Long term excess may create oxalate calculi in the urinary tract. In Mulhouse, Vit C is 4 to 5 times the requirement but, being a water-soluble vitamin, this is not a risk for toxicity. High Vit C levels could also contribute to the development of haemosiderosis due to enhanced iron-absorption, but the iron content in this diet is on the low side and Hylobatidae are not particularly prone to haemosiderosis.

Biotin and Cholin: There are few data available about these nutrients; food composition datas give only 50% of the cholin analysis and nothing about biotin. So we cannot make conclusions about these nutrient requirements and the diets analysis.

<u>Minerals:</u>

All primates have high needs of sodium, chloride, calcium, phosphorus, magnesium and lower, but nonetheless essential, needs of zinc, chrome, copper, cobalt, iron, manganese, selenium and molybdenum.

Calcium and phosphorus: The ratio of Ca/P is important and is recommended to set between 1,0 and 1,5. Calcium absorption is in competition with magnesium's.

Sodium: The minimal recommended value published is not covered by the diet furnished in Mulhouse Zoo but it seems adequate: no deficiency signs as pica have been observed.

Chloride and Iodine: The analysis cannot lead to a conclusion, because 50% of the feed composition data are lacking for chloride and even more for Iodine.

Copper: Its deficiency can lead to Iron accumulation in the liver but with 13 mg/kg diet DM basis, Mulhouse diets seem adequate.
(Nb: Copper absorption is diminished with high vitamin C, zinc and iron).

6- Practical feeding strategy:

6-1- Using observed intake averages in zoos:

We can take for example the case of an adult couple of Northern white-cheeked gibbons. According to Mulhouse observed intake amounts (table 6) this couple should eat more or less:

- (1050 x 2) = 2100 g AF (BW difference between males and females is not considered)
- (250 x 2) = 500 g DM and 500/2100 = 23.80% DM (or using observed % DM of 24.30% (table 7): 510 g DM)
- we can expect 4.5 % CP DM from fruits and vegetables (Cf. *3*-)
- pellets have only to deliver (15.0 – 4.5) = 10.5% CP DM, so (0.105 x 500) = 52.5 g CP DM
- if we use a pellet containing 20% CP DM (basic OWM), they should eat (52.5 x 100)/20 = 262.5 g DM of pellets
- if pellets contain 90% DM, they should eat (262.5 x 100)/90 = 291.6 g AF of pellets
- resulting diet (15 % CP DM) is: 291.6 g of pellets and (2100 – 291.6) = 1808.4 g of fruits and vegetables
- pellets will be incorporated (262.5 / 500) = 52.5 % DM and (291.6 / 2100) = 13.9 % AF , which is too high

Generally, pellet producers estimate the intake percentage of a pellet in a diet at 30% AF and 60% DM (ex. Mazuri® Primate basix). In this case, our calculated diet would be right. However, as written previously (Cf. *5*- proteins), 30% DM seems to be the maximum pellets' incorporation we can obtain, in this kind of zoo diets. Thus, such pellets are not rich enough in proteins: we need pellets with at least 25 to 30% CP DM:

- if we use a pellet containing 25% CP DM, they should eat (52.5 x 100)/25 = 210 g DM of pellets
- if pellets contain 90% DM, they should eat (210 x 100)/90 = 233.3 g AF of pellets
- resulting diet (15% CP DM) is: 233.3 g of pellets and (2100 – 233.3) = 1866.7 g of fruits and vegetables
- pellets will be incorporated (210 / 500) = 42 % DM and (233.3 / 2100) = 11.1 % AF , which is still high

In this case we cannot expect more than 13.5% CP DM in the intake diet. Even 13% CP DM in the diet seems to be an adequate level to support gibbons needs, at least in Mulhouse Zoo

- pellets have then only to bring (13.5 – 4.5) = 9% CP DM, so (0.09 x 500) = 45 g CP DM
- if we use a pellet 25% CP DM, they should eat (45 x 100)/25 = 180 g DM of pellets
- if pellets contain 90% DM, they should eat (180 x 100)/90 = 200 g AF of pellets
- resulting diet (13.5 % CP DM) is: 200 g of pellets and (2100 – 200) = 1900 g of fruits and vegetables

- pellets will be incorporated (180 / 500) = 36 % DM and (200 / 2100) = 9.5 % AF , which is still a little bit high but possible with a high palatability pellet

In fact working with two different kinds of pellets make the diet possible:

- pellets' incorporation target is now 30% DM, so (500 x 0.3) = 150 g DM
- if we use a 1st pellet 22% CP DM and a 2d one 31 % CP DM like in Mulhouse, they should eat X g DM of 1st pellet and Y g DM of 2d one, with 150 = X + Y and (9/13.5) x (0.135 x 500) = 45 = 0.22X + 0.31Y ; so X = 16.6 g and Y = 133.4 g
- if both pellets contain 90% DM, they should eat (16.6 x 100)/90 = 18.4 g AF of 1st pellet and (133.4 x 100)/90 = 148.2 g AF of 2d pellet
- resulting diet (13.5 % CP DM) is: 18.4 g of pellets 22%, 148.2 g of pellets 31% and (2100 – 166.6) = 1933.4 g of fruits and vegetables
- pellets will be incorporated (166.6 / 2100) = 8 % AF , which is easy to reach

This final diet contains 30% DM (only 8% AF) of pellets. If problems with overweight would be encountered, the amount of vegetables could be easily reduced for BW control. The protein loss as a result of this would be minimal, because of the low protein content of fruits.

Table 6: Observed intake amounts in Mulhouse Zoo (AF and DM basis) for an adult gibbon

	jul. 2002	feb. 2003	jul. 2003	dec. 2003	mar. 2004	feb. 2005	AVERAGE
g AF intake / adult animal							
Nomascus gabriellae	666,0	1062,0	855,0	913,0	924,0	949,0	894,9
Nomascus leucogenys leucogenys	798,0	1314,0	995,0	1017,0	1022,0	1106,0	1042,1
Nomascus leucogenys siki	713,0	1161,0	927,0	877,0	907,0	1002,0	931,1
all sp.							956,0
g DM intake / adult animal							
Nomascus gabriellae	161,0	234,0	218,0	238,0	229,0	228,0	218,0
Nomascus leucogenys leucogenys	195,0	292,0	251,0	252,0	258,0	263,0	251,9
Nomascus leucogenys siki	153,0	290,0	241,0	227,0	238,0	248,0	232,7
all sp.							234,2

In conlusion, when we work like that, pellets containing 25% CP DM, or even better, two kinds of pellets (around 20% and 30%), are needed. It seems that a sufficient intake of basic OWP pellets with only 20% CP DM is difficult to reach, if the produce is not restricted. Using two kind of pellets allows us to give two different kinds of proteins (for ex. one from animal origin and the other one from plant origin) too. This could help to bring the amino acids levels in balance (Cf. 5- proteins).
Another way is of course to replace a part of the pellets by meat, cheese, eggs, etc, but the calculation of proportions is more difficult and should be closely monitored concerning intake. Using software like ZOOTRITION® can help a lot.

6-2- Using energy requirement:
Using energy requirement is not so easy, moreover few datas are available for gibbons. Basal Metabolic Rate formula BMR= $0.31W^{0.755}$ (where W is the BW in g., source, Cf. *9- Ref.* 49) can also be used to estimate energy requirement.
For the same couple of Northern white-cheeked gibbon:

- estimated BW = 8.0+10.0 = 18.0Kg
- estimated Maintenance Energy requirement is between 34 and 100 Kcal/KgBW/day (Cf. *2*-), in this case ME_{min} = 34 x 18 = 612 Kcal / day and ME_{min} = 100 x 18 = 1800 Kcal / day
- estimated BMR = 0.31 x $10000^{0.755}$ + 0.31 x $8000^{0.755}$ = 324.6 + 274.3 = 598.9 Kcal / day
- 600 Kcal / day is a minimum and 1800 Kcal / day the maximum energy requirement for this pair of gibbons
- according to NRC 2003, protein requirement is 6 % ME for maintenance
- 0.06 x 600 = 36 g CP is a minimum protein requirement, 0.06 x 1800 = 108 g CP a maximum
- if we use a pellet 25% CP DM, they should eat between (36 x 100)/25 = 144g DM and (108 x 100)/25 = 432g DM of pellets
- if pellets contain 90% DM, they should eat between (144 x 100)/90 = 160 g AF and (432 x 100)/90 = 480 g AF of pellets (this maximum calculated amount of pellets is extremely high and will never be eaten!)
- once we choose an amount, for example 200 g AF of pellets (180 g DM), and an expected incorporation limit, for example 30% DM, we calculate the rest of the diet: (180 x 70) / 30 = 466.6 g DM of fruits and vegetables
- fruits and vegetables commonly used for gibbons contain 84% of moisture, then (466.6 x 100) / 16 = 2916.2 g AF
- resulting diet is: 200 g of pellets and 2916.2 g of fruits and vegetables…!
- ME Primate in fruits and vegetables commonly used for gibbons could be around 3.56 Kcal / g DM
- this big amount of fruits and vegetables calculated contains at least 3.56 x (0.16 x 466.6) = 265.8 Kcal

We conclude that energy requirement is difficult to evaluate and interpret, but it remains helpfull to zoo nutritionists for calculating the amount of pellets. We have experienced a lack of precision in the food data. Observed intake averages in zoos are easier to work with, and energy content seems adequate: in our previous example choosing 250 g DM / animal was not so bad:

- ME Primate calculated with Zootrition in Mulhouse diets is 3.40 Kcal / g DM
- we estimated DM intake to 500 g
- ME reached with Mulhouse diet is around 500 x 3.40 = 1700 Kcal / day / this pair

6-3- Using "protein monitoring":
Protein dietary level (in % DM) of the total diet is easy to use as a first "monitoring" nutrient. The following two reasons make it difficult to work with the unit 'g of proteins/BW/day':

- observed intake averages in zoos are scarce for the moment, so the intake quantity in grams/BW/day is not well known
- BW is often difficult to estimate accurately, unless the animals are being captured or medically trained

Also, nutrient quantities expressed in % DM basis give a better idea on the nutrient density and consequently the quality of the diet.
Mineral and vitamin supplementation can be undertaken following a pellet intake assessment (*).

In Mulhouse Zoo, the gibbons diets have been established from the total protein level to approximate the requirement, which is known to be less than 15% DM for OWP. Of course "protein monitoring" supposes at least some intake weight studies. We first have to evaluate real proportions of pellets or feeds ingested! Table 7 shows how we have increased the weight of given and eaten pellets because the calculated dietary protein levels were rather low: ex. *N. leucogenys leucogenys* study n°2 and *N. gabriellae* study n° 2. From the ongoing study 3, we've increased the quantity of pellets offered. This obviously results in an increase of dietary protein.

Table 7: Ex. of protein monitoring in Mulhouse Concolor gibbons

study n°	date	Number	TOTAL INTAKE					SIMIAL			CROUSTI' CROC			**CP**	% CP from	% CP from
		of Animals	g AF	g DM / Al	g DM	g DM / Al	% DM	g AF	g AF / Al	% DM	g AF	g AF / Al	% DM	**% DM**	SIMIAL	C. CROC
leucogenys (1)	juil-02	3,000	2394	798	585	195	24	115	38	18	41	14	6	13,0	42,3	10,6
leucogenys (2)	févr-03	3,125	4107	1314	914	292	22	195	62	19	58	19	6	11,9	50,1	10,7
leucogenys (3)	juil-03	3,260	3244	995	819	251	25	199	61	22	80	24	9	13,0	52,2	15,0
leucogenys (4)	déc-03	3,400	3458	1017	858	252	25	209	62	22	86	25	9	13,5	50,4	14,8
leucogenys (5)	mars-04	3,590	3668	1022	925	258	25	210	59	20	99	28	10	13,6	46,7	15,7
leucogenys (6)	févr-05	4,000	4425	1106	1051	263	24	206	51	18	106	27	9	12,4	44,0	16,3
AVERAGE LEUCOGENYS				1042,1		251,9	24,3		55,6	19,8		22,6	8,0	12,8	47,6	13,8
gabriellae (1)	juil-02	3,550	2365	666	572	161	24	119	33	19	41	11	6	13,1	44,3	10,8
gabriellae (2)	févr-03	3,985	4231	1062	933	234	22	190	48	18	54	13	5	11,9	47,7	9,7
gabriellae (3)	juil-03	4,195	3587	855	916	218	26	224	53	22	106	25	10	14,0	48,8	16,5
gabriellae (4)	déc-03	4,340	3964	913	1033	238	26	244	56	21	114	26	10	13,6	48,5	16,2
gabriellae (5)	mars-04	4,490	4148	924	1027	229	25	210	47	18	110	25	10	13,7	41,7	15,7
gabriellae (6)	févr-05	4,970	4717	949	1131	228	24	207	42	16	100	20	8	12,4	41,2	14,3
AVERAGE GABRIELLAE				894,9		218,0	24,4		46,5	19,2		20,2	8,2	13,1	45,4	13,9
siki (1)	juil-03	2,000	1425	713	305	153	21	56	28	16	15	7	4	12,5	40,8	7,8
siki (2)	févr-03	2,095	2433	1161	607	290	25	143	68	21	41	20	6	13,6	48,3	9,9
siki (3)	juil-03	2,250	2086	927	542	241	26	138	61	23	53	24	9	13,3	53,5	14,8
siki (4)	déc-03	2,370	2079	877	537	227	26	126	53	21	57	24	9	14,0	46,9	15,2
siki (5)	mars-04	2,530	2294	907	603	238	26	145	57	22	72	28	11	14,7	45,8	16,2
siki (6)	févr-04	2,990	2996	1002	742	248	25	157	53	19	58	19	7	13,1	45,1	11,8
AVERAGE SIKI				931,1		232,7	24,9		53,5	20,4		20,4	7,7	13,5	46,7	12,6
AVERAGE ALL SP				**956,0**		**234,2**	**24,5**		**51,9**	**19,8**		**21,1**	**7,9**	**13,1**	**46,6**	**13,4**

(*) Concerning mineral and vitamin supplementation, two strategies were applied in Mulhouse Zoo:

- as fruits and vegetables basis always change (Cf. ***3-***), we couldn't base the diet with a constant mineral and vitamin source, so "Simial" pellet was calculated with doubled content (if dietary CP target is 15% DM and "Simial" is produced with 30% CP DM content, 50% DM dietary intake should lead to 30/2 = 15% CP DM !; for vit&min it was calculated in the same way). However, observed intake was only 20% DM for "Simial", and "Crousti' croc" dog pellets were added to diet.
- a special milk bread was done with Vitapaulia M® (INTERVET®) containing vit. A, D3, E, B1, B3, B5, Cu, Co, Mn, Mg and Zn.

7-Examples of other zoo diets: (TO BE FURTHER DEVELOPED!)

7-1- St Louis Zoo (U.S.A.): supplied by Ellen Dierenfeld:

for 1 gibbon / day : (see composition: **Table 8**)

- 75 g Hi-fiber primate biscuit, 75g Primate canned diet, 150 g yams/carrots, 50g apples with skin, 50 g bananas, 25g grapes/oranges, 75 g kale
- etimated body weight: 8 kg
- calories provided by diet: 570 kcal

7-2- Doué La Fontaine Zoo (France): supplied by Brice Lefaux :

for 4 gibbons / day ((1.2.1),estimated total BW 20 Kg):

- morning: 500g OWM pellets
- afternoon: 10 apples with skin, 5 bananas, 3 lettuces, 2 grapefruits or 4 oranges, 6 carrots, 4 available fruits (depending on season), ½ yoghurt, ¼ avocado, 1 coffee spoon of sunflower oil

7-3- La Vallée des Singes Park (France): supplied by Jan Vermeer :

for 4 gibbons / day:

- 08.45 : 3 apples with skin, 2 chicories, 1 carrot, ½ pepper, ¼ cabbage or 1 celery, 50g OWM pellets
- 12.00 : 2 apples with skin and 1 chicory
- 14.00 : fruits (2 kiwis, 1½ bananas, 2 oranges…) and 2 carrots
- 17.45 : 3 apples with skin, ½ pepper, ¼ cabbage or 1 celery, 1 lettuce, ¼ leek, ½ turnip, fruits (1 banana, 1 orange…), 25g OWM pellets
- on monday: 1 boiled egg without shell / animal

Table 8: St Louis Zoo diets' composition (DM basis), calculated with ZOOTRITION®: 164.94 grams of diet dry matter, (32.99% DM / 67.01% Water)

Nutrient Category:	Energy		
Nutrient		Qty	Unit
ME Primate		3.83	kcal/g
Nutrient Category:	Carbohydrates		
Nutrient		Qty	Unit
ADF		2.47	%
Cellulose		1.35	%
Crude Fiber		6.39	%
NDF		4.25	%
Total Dietary Fiber		5.09	%
Nutrient Category:	Fat		
Nutrient		Qty	Unit
Crude Fat		4.77	%
Nutrient Category:	Protein		
Nutrient		Qty	Unit
Crude Protein		18.41	%
Nutrient Category:	Vitamins		
Nutrient		Qty	Unit
Biotin		0.16	mg/kg
Vit A		269.91	IU A/g or RE/g
Vit B12		0.02	mcg/g
Vit B6 (Pyridoxine)		7.71	mg/kg
Vit C Ascorbic Acid		775.58	mg/kg
Vit D3		0.97	IU Vit D3/g
Vit E		112.10	mg/kg
Nutrient Category:	Ash/Minerals		
Nutrient		Qty	Unit
Ash		6.39	%
Calcium		0.74	%
Copper		14.85	mg/kg
Iron		96.86	mg/kg
Magnesium		0.13	%
Phosphorus		0.34	%
Potassium		1.32	%
Selenium		0.11	mg/kg
Sodium		0.34	%
Zinc		80.17	mg/kg

8- Foliage:

Plants take a lower place in the natural diet of Concolor gibbons. On exhibit, plants- high in moisture and low in calorie- appear like an appropriate environmental enrichment. But we have to be careful: if free-ranging primates are highly selective in their feeding, captive-born primates do not have the same experience as wild primates in food selection and avoidance of potentially hazardous material. The morbidity and mortality related to primate-browse interactions have increased proportionnaly with the inclusion of browse in diets of captive animals (Ensley et al., 1982; Robinson et al., 1982; Janssen, 1994). For instance, the relatively high concentration of lignin (23,6% acid-detergent lignin, DM basis) in *Acacia longifolia* contributed to the formation of gastrointestinal obstructions (phytobezoars). And ingestion of indigenous plants containing toxic secondary plant compounds (as alkaloids) has resulted in poisoning of non human primates.

Although the use of browse can be both behaviorally and nutritionally beneficial, the uncertainties concerning nutrient composition and the presence of toxicants suggest caution (Oftedal et al., 1996). It will be interesting to develop research on the nutritional benefits and potential risks when using fresh plant materials.

Table 8 lists some plant species that have been offered to captive primates or that were consumed by provisioned, semi-free ranging primates, without secondary effects reported. Table 9 lists some plant species present inside and next to the Concolor gibbons' enclosures in the Mulhouse Zoo. It could be great if everyone would complete the list with the plants (safe/risk) used in their zoos for captive primate enclosures and feeding. This work was already initiated by the EAZA-ZOO Horticultural Group with the EZG Animal-Plant Database (last version sept. 2005 downloadable on http://www.eaza.net/).

Table 8 : Plants species used in Feeding Captive Primates (from NRC, Non human primates, 2003, p187)

Plant species	Reference
Alder (Alnus spp.)	Dierenfeld et al., 1992; Kirschner et al., 1999
Alfalfa (Medicago sativa)	Bauchop and Martucci, 1968
American holly (Ilex opaca)	Dierenfeld and McCann, 1999
Bamboo (Pseudosasa spp., Phyllostachys spp.)	Gould and Bres, 1986
Beech (Fagus spp.)	Gould and Bres, 1996
Blackberry (Rubus betuifolius)	Dierenfeld and McCann, 1999
Brush cherry (Syzgium paniculatum)	Griner, 1977; Ullrey et al., 1982; Janeke, 1995
Buckthorn (Burnelia tena)	Dierenfeld and McCann, 1999
Cabbage palm (Sabel palmetto)	Dierenfeld and McCann, 1999
Carolina cherry laurel (Prunus caroliniana)	Dierenfeld and McCann, 1999
Chinaberry (Melia azedarach)	Dierenfeld and McCann, 1999
Common nightshade (Solanum nigrum)	Dierenfeld and McCann, 1999
Cuo-of-gold (Solandra guttata)	Griner, 1977
Fig (Ficus carica)	Janeke, 1995
Fig (Ficus glomerata)	Janeke, 1995
Fig (Ficus macrophylla)	Janeke, 1995
Fig (Ficus nittida)	Janeke, 1995

Fig (Ficus retusa)	Janeke, 1995
Fig (Ficus rubiginosa)	Janeke, 1995
Fig (Ficus rumphii)	Janeke, 1995
Fig (Ficus thonningii)	Janeke, 1995
Flowering dogwood (Cornus florida)	Dierenfeld and McCann, 1999
Grape (Vitis spp.)	Hill, 1964; Dierenfeld et al., 1992
Giant cane (Arundinari gigantean)	Dierenfeld and McCann, 1999
Hackberry (Celtis occidentalis georgiana)	Dierenfeld and McCann, 1999
Hercule's club (Zanthoxylum clava-herculis)	Dierenfeld and McCann, 1999
Hibiscus (Hibiscus rosa-sinensis)	Hill, 1964; Griner, 1977; Ullrey et al.,1982; Janeke, 1995
Kudzu (Pueraria hirsuta)	Gould and Bres, 1986
Lice oak (Quercus virginiana)	Dierenfeld and McCann, 1999
Loblolly pine (Pinus taeda)	Dierenfeld and McCann, 1999
Mangrove (Rhizophora spp.)	Dierenfeld et al., 1992
Maple (Acer spp.)	Gould and Bres, 1986
Mexican tea (Chenopodium ambrosiodes)	Dierenfeld and McCann, 1999
Mistletoe (Phoradendron flavescens)	Dierenfeld and McCann, 1999
Mulberry (Morus spp.)	Hill, 1964; Gould and Bres, 1986; Dierenfeld et al., 1992; Janeke, 1995
Muscadine grape (Vitis rotundifolia)	Dierenfeld and McCann, 1999
Mushrooms (unknown spp.)	Dierenfeld and McCann, 1999
Nut muscadine (Vitis cinerea)	Dierenfeld and McCann, 1999
Persimmon (Diospyros virginiana)	Dierenfeld and McCann, 1999
Red bay (Persea borbonia)	Dierenfeld and McCann, 1999
Red cedar (Juniperus silicicild)	Dierenfeld and McCann, 1999
Resurrection fern (Polypodium polyploides)	Dierenfeld and McCann, 1999
Small pignut (Carya ovalis)	Dierenfeld and McCann, 1999
Southern bayberry/wax myrtle (Myrica cerifera)	Dierenfeld and McCann, 1999
Southern magnolia (Magnolia grandiflora)	Dierenfeld and McCann, 1999
Spanish moss (Tillandsia usnevides)	Dierenfeld and McCann, 1999
Sparkleberry (Vaccinium arboreum)	Dierenfeld and McCann, 1999
Sugarberry (Celtis laevigata)	Dierenfeld and McCann, 1999
Virginia creeper (Parthenocissus quinquefolia)	Dierenfeld and McCann, 1999
Weeping chinese banyan (Ficus benjamina)	Janeke, 1995
Willow (Salix spp.)	Höllihn, 1973; Gould and Bres, 1986; Dierenfeld et al., 1992; Kirschner et al., 1999
Yaupon (Ilex vomitoria)	Dierenfeld and McCann, 1999

Table 9: Plant species present inside and next to the Concolor gibbons' enclosures in Mulhouse Zoo

Species	In the oustide enclosure	Near outside enclosure
N. l. leucogenys	Berberis x hybrido-gagnepainii Pleiobastus graminus	Wisteria floribunda Pleioblastus graminus Bamboo Fraximus ornus (ND) Crataegus monogyna (ND) Cornus sanguinea (ND) Ribes nigrum (ND) Ribes rubrum (ND) Ribes uva-crispa (ND)
N. gabriellae	Berberis x hybrido-gagnepainii Pleiobastus graminus Pinus mugo Bamboo Urtica dioica	Hedera helix Berberis julianae Corylus avellana Chamaecyparis lawsoniana Ligustrum sinense Pleioblastus graminus Pryracantha coccinea Prunus laurocerasus Fraximus ornus (ND) Crataegus monogyna (ND) Cornus sanguinea (ND) Ribes nigrum (ND) Ribes rubrum (ND) Ribes uva-crispa (ND)
N. l. siki	Dryopteris filix-mas Circium arvense Eupatorium cannabinum Carex pendula Pinus mongo Pleiobascus graminus Bamboo Rumex obtusifolius	Berberis julianae Wisteria floribunda "Alba" Pleiobascus graminus Bamboo

ND= No Data (just planted)

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Hylobatidae diseases

The present paper will not detail all diseases occuring in *Hylobatidae*. The first part exposes diseases reported bibliography specific in *Hylobatidae*; the second part focuses on three main transmissible diseases: Hepatitis B, Herpes simplex and Tuberculosis. The goal is to combine data specific to gibbons, to have a global view on diseases occuring in this species in captivity, and then orientate the diagnosis and improve husbandry. The third part concerns the preventive mesures against zoonosis and the protocol to follow in case of bite.

Part 1 : Inventory of *hylobatidae* diseases

1- Bibliographic data

All these diseases were recorded in gibbons; the references are at the end of the document.

Viral zoonosis

Encephalomyocarditis due to *picornaviridae*, Gibbon Ape Leukaemia Virus, Hepatitis A, Herpes simplex, Influenza (asymptomatic, or hyperthermia with anorexia, depression, rhinitis, conjunctivitis, cough, gastro-intestinal troubles), Rabies, Measles, Paramyxovirus : Para influenza Virus type 1 (resistant) and type 3, Respiratory Syncitial Virus, Reovirus (Respiratory Enteric Organ virus), Rhinovirus, Rubella, Lentivirus (gibbons are experimentally susceptible to VIH-1, without clinical signs), Monkey pox (occurs in Africa, but cases of *Hylobatidae* were recorded in research centres).

Enteric infections

Leptospirose (*L. icterohemorragiae*), Shigellose and Yersiniose (*Y. enterocolitica*).

General infections

Actinomycetales, Chromobacteriosis (Septicaemia, weakness and anorexia).

Tuberculosis (*M. africanum:* asymptomatic clinic; *M. tuberculosis:* bronchopulmonary form, ocular and systemic signs; *M. bovis*: extrapulmonary form, pneumonia, hypertrophy of mesenteric lymphatic nodes).

Mycoplasmose (*M. pneumoniae*), Rickettsioses (*R. burnetti*), Yersiniose (*Y. pseudotuberculosis*), Pseudomonas.

2- Zoological parks data

A questionnary has been transferred to all zoological parks housing this three species: *Nomascus leucogenys*, *N. siki* and *N. gabriellae*. Only 14 zoos answered and the results couldn't be exploited.

Part 2: Hepatitis B, Herpes and Tuberculosis

1. Hepatitis B

Epidemiology

Hepatitis B is a transmissible disease occurring in *Hylobatidae*. Wild and captive populations could be infected by Hepatitis B virus, but no data are available to confirm that wild animals can be carriers (Unwin, 2007).
In Cambodia, a survey has been made, testing from 26 originally wild-caught *H. pileatus* and 2 *N. gabriellae* gibbons on entry or after entry into the Phnom Tamao Wildlife Rescue Centre. A similar frequency of HBV infection was found between wild-caught gibbons that were tested whilst in initial quarantine and those tested after contact with conspecifics. Samples from 12/26 (46.2 %) pileated gibbons were found to be positive, whereas those from the two yellow-cheeked gibbons were negative. The data provide further evidence for a scenario in which reservoirs of HBV infection are maintained amongst South-East Asian ape species in the wild (Sall *et al*., 2005).
A serological analysis of 30 captive gibbons (*H. agilis* and *H. moloch*) housed in California revealed that 47% were positive for at least one marker of ongoing or previous infection with a hepatitis B virus. The transmission of human HBV to gibbons could be a current problem due to close contact between these primates and humans in areas where high percentage of the population is chronically infected with HBV (Lanford *et al*., 2000).
These surveys shows that Hepatitis B virus (HBV) infections may occur in gibbons in the wild and in captivity.

Transmission
The virus can be transmited by blood transfusion, copulation, or contact (virus excretion in saliva, vaginal discharges, urine, bile, breast milk, seminal fluid, sweat, tears).
HBV is quite stable in the environment and remains infectious for up to 7 days or longer, increasing the risk of possible exposure from surfaces contaminated by infectious body fluids (Unwin, 2007).

Based on current epidemiological information it would appear that NHP HBV transmission is mainly vertical, with limited horizontal transmission, depending on the geographic range and the population size of the host species (Unwin, 2007). In general, vertical transmission is more likely to result in chronic infection, while horizontal transmission is more likely to result in viral clearance. Vertical transmission in the perinatal period in humans is associated with a 90% transmission rate of the virus to the offspring, as well as a 90% chance of developing chronic infection in those infected in the perinatal period (*i.e* there is an 81% that a chronically infected dam will pass the infection on to her offspring, and that offspring in turn will also become chronically infected) (Unwin, 2007). Horizontal transmission has been surveyed in the Gibbon Rehabilitation Centre in Thailand, on 101 *Hylobatidae*: *Hylobates*: *lar, pileatus, agilis, moloch*; *Nomascus: concolor, leucogenys, gabriellae*; *Bunopithicus: Hoolock.*

Incubation
The incubation period is 2-15 weeks in gibbons (Unwin, 2007), generally 75 days (5-25 weeks) in NHP (Brack, 2005).

Clinical symptoms
Jaundice, occasionally purpura. Tendency of chronic infections particularly in infants (Brack, 2005). ALAT rate is elevated, clinical signs are rare, but this infection probably made the animals more susceptible to other infections (Unwin, 2007).

Diagnosis
Serology:
HbsAg, HbcAG, HbeAG, anti HBs, anti HBc antibodies (microparticle enzyme immunoassays, restriction pattern analysis of pre – S amplicons, PCR, immunohistochemistry). The material required for laboratory analysis is needle biopsies, saliva, serum and others secretions.

Treatment
Interferon-alpha in man.

Prevention
Vaccination. Testing for HBV before import.

A) Perth Zoo vaccination schedule to reduce VERTICAL transmission

Although the number of animals in the PZ study is low (4), it appears that the modified regimen, involving vaccination at 24-72hrs with 0.5mL Energix-B vaccine intramuscularly and 0.1mL HBV Immunoglobulin (100IU/mL) intramuscularly (at separate sites), followed by a booster vaccination of 0.5mL Energix-B vaccine intramuscularly at eight months of age, is successful in providing a serological response consistent with vaccine-induced immunity

B) Gibbon Conservation Centre (California) Vaccination Schedule to protect against HORIZONTAL transmission.

The same dose of Energix-B was used as for PZ. Vaccinations were given at 0, 1 and 5 months. Anti-HBs titres measured 1 year after the second booster demonstrated protective titres. This regimen was used to provide immunity to HBV prior to introduction to chronic carrier animals, and therefore to protect against horizontal transmission. To date, only a small number of animals have been vaccinated, however protective titres (based on chimpanzee and human standards) have been achieved on each occasion.

Zoonosis

Transmission of HBV from PNH to human has never been recorded (Lodde, 1998 ; Unwin, 2007). Experimental transmission from human to gibbon is possible, but natural transmission has never been recorded in each way (human to PHN and vice versa) (Unwin, 2007).
However Hepatitis B is considered as a zoonosis, here is husbandry practices if import chronic carriers (Unwin, 2007):

- Reassure keeping staff if carriers are brought into the collection that the risk to staff is NEGLIGIBLE.
- Although quantified risk to staff is negligible, recommend vaccination of primate staff with Energix B. This will help allay staff fears, and would be prudent as zoonotic potential has been indicated experimentally. It would be very helpful to obtain HBV titres before vaccine if this becomes protocol. Pre vaccination titre checks are often recommended with this vaccine.
- Vaccinate offspring as arrive following Perth Zoo protocol.
- Vaccinate IN CONTACT naïve gibbons with Californian protocols.
- Make sure areas contaminated with heavily contaminated with secretions (especially blood) are disinfected with F10.
- Change foot ware or provide F10 footbath for staff when entering enclosure area where chronic carrier is located.

2. Herpes

Etiology
Hylobatidae are susceptible to disease caused by several herpes viruses (Fowler, Sakulwira *et al*., 2002). Multiple cases of infection by *Herpes virus hominis* type 1 (HSV-1), *Herpesvirus hominis* type 2, Human Cytomegalovirus and Epstein-Barr virus have occured in captive pileated, lar and agilis gibbons. The prevalence were respectivly 28,2 % ; 28,2 % ; 17,9 % and 14,1 % (Sakulwira *et al*., 2002).

Epidemiology
The most common herpesviruses infecting hylobatides are HSV-1 and HSV-2. The wild prevalence is unknown. Transmission from human carrers seems to be the origin of great apes infection (Lodde, 1998). So appropriate hygienic measures should be used by zoological parcs staff, especially when handling neonates.

Clinical symptoms
The clinical symptoms and post-mortem findings in *Hylobates* spp. are CNS-symptoms (Ataxia, myoclonus, and encephalitis), excorations, vesicles or ulcers at labial commissures and nonsuppurative Encephalitis (Brack, 2005).

Diagnosis

The diagnosis test of reference is the PCR, rapid, sensitive and specific, and the carriers status can be determined. Other laboratory diagnosis is available:

Virology: immunoperoxidase, in situ hybridization,

Serology: neutralization, immunofluorescence.

The material required for laboratory analysis is materials from vesicles or other lesions for virological tests, serum or whole blood for serology (Brack, 2005).

3. Tuberculosis

Etiology

Tuberculosis affects more rarely *Hylobatidae* than *Pongidae* and *Cercopithecidae* (Brack & Lecu, 2006). The causative organisms are *Mycobacterium tuberculosis, M.bovis, M.africanum* (Lodde , 1998 ; Brack & Lecu, 2006) and *Mycobacterium kansasii* (Linn *et al*., 2006). *M. bovis* is responsable of 10 to 30 % of PNH affections (Lodde , 1998).

Clinical symptoms

Clinical symptoms are rarely observed; more severely affected monkeys show dry, soft, chronic coughing, lymphadenopathy, wasting, hepato- or splenomegaly, apathy or depression. The main symptom of enteric infection is diarrhea, skin infections result in cutaneous ulcerations (Brack & Lecu, 2006).

Diagnosis

The most common method used to diagnose tuberculosis in zoological parks and sanctuaries is the intradermal skin reaction or **tuberculinization**. A dose of 0.04 – 0.1 ml (= 1500 – 3000 units) of mammalian Old Tuberculin (mOT) is injected on the upper eye lid, (alternatively abdominal skin), reading after 24, 48, and 72 h (Boardman *et al*., 2004 ; Brack & Lecu, 2006). Bovine PPD (Purified Protein Derivatives) is also used at 0.05-0.1 ml (1000-2000 UI). MOT is more sensitive but less specific than PPD, leading to more false positive results during quarantine and after appearance of positive reactors repeating of the entire procedure at least once after 6 weeks. A practical problem in the evaluation is the occurrence of false positive or false negative reactions (Brack & Lecu, 2006).

The Mulhouse zoo schedule consist in the administration of 0,1 mL Avian and Bovine PPD in the upper eyelid, reading after 24, 48 and 72h.

Here are other methods of diagnosis (Fowler & Miller, 1999 ; Brack & Lecu, 2006).

- Clinical examination and X-rays
- Cultivation of mycobacteria from clinical or pathological materials using Löwenstein- Jensen- agar or other suitable cultivation media. Faster results with semi-liquid mediums.

- PCR (false positive and false negative reactions reported!)
- ELISA (limited usefulness in man due to false positives). The 38 kDa proteins (most seroreactive protein antigen in man) provoke only weak antibody responses in nonhuman primates. Better results are obtained using antibodies against purified *M.tuberculosis* proteins. - Lymphocyte transformation test: sensitivity and specificity better than the skin test in NHP. Required fresh blood and radioactive products to proceed to cell count after stimulation.
- Primagam interferon- Gamma-test (false positives or false negative tuberculin reactors not detected). The primagram test detects interferon gamma, and works well with sera from gibbons.
- A new test is in process, based on Multi Antigen Print Immuno Assay (MAPIA) technique. It depends on exposure of the serum antibodies to a cocktail of antigens (selected for their known immunogenicity) all printed in one test well. USDA validation of this "Primate Rapid Test" is in progress.
- Necropsy/ histopathology. Differential diagnosis: lung mite lesions, pseudotuberculosis, nocardiosis, deep mycoses, granulomas caused by Freund's complete adjuvans.

<u>Part 3</u> : Precautionary measures against zoonosis and protocol to follow in case of bite

1- Precautionary measures against zoonosis

The presence in most non-human primates of some zoonotic agents is almost unavoidable, even after release from quarantine. The relevant Authorities should, therefore, encourage the management of institutions whose staff are exposed to non-human primates or their body fluids, faeces or tissues (including when performing necropsies) to comply with the following guidelines (Anonyme, 2006):

1. to provide staff with training in the proper handling of primates, their body fluids, faeces and tissues, with respect to zoonoses containment and personal safety;
2. to inform their staff that certain species should be considered lifetime as having lifelong infections with some zoonotic agents, e.g. macaques with Herpes B virus;
3. to ensure that the staff follows personal hygiene practices, including the use of protective clothing, and the prohibition of eating, drinking and smoking in potentially infective areas;
4. to implement a screening programme for personnel health, including monitoring for tuberculosis, pathogenic enteric bacteria and endoparasites and other agents that are deemed necessary;
5. to implement an immunisation programme as appropriate, including e.g. tetanus, measles, poliomyelitis, rabies, hepatitis A and B, and other diseases endemic in the area of origin of the non-human primates;
6. to develop guidelines for the prevention and treatment of zoonoses that may be transmitted by bites and scratches, e.g. rabies and herpes viruses;
7. to issue to their staff a card which states that they work with non-human primates or with their body fluids, faeces or tissues, and which may be presented to the medical profession in case of illness;
8. to dispose of carcasses, body fluids, faeces and tissues in a manner which is not detrimental to public health.

2- Guidelines to prevent and treat zoonoses transmitted by bites and scratches

Information Regarding Non-Human Primate Bites, Scratches or Splashes onto Mucous Membrane (Anonyme, 2007)

1. Confirm that the responsable has been contacted (for obtaining swabs and serum samples from the animal involved and for submitting these samples for testing).

2. Assess adequacy of prior cleaning. If there is any doubt that the wound was cleaned thoroughly for a full 15 minutes, clean the wound again for 15 minutes. The wound should be scrubbed with an EZ scrub (prepackaged hexachlorophene scrub brush), using the bristle side vigorously. For eye exposure or mucous membrane exposure, irrigate with sterile saline or running water for at least 15 minutes.

3. Patient should be carrying a culture swab from the wound taken after cleansing**.** If this has not been done, check to be sure the wound has been cleansed and then proceed to swab the wound as deeply as you can, using one of the viral culture swabs.

4. Make sure patient has current tetanus vaccine.

5. Patient must be seen and assessed by physician in Urgent Care before discharge.

6. Instruct patient to return immediately if pain, numbness, paralysis, vesicular lesion, or other problems at the site of the wound or anywhere else.

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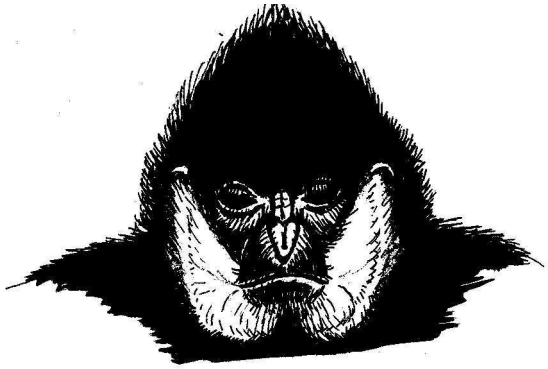
European Studbook

Northern White-cheeked Gibbon (data 31.12.2006)

Nomascus leucogenys



NORTHERN WHITE-CHEEKED GIBBON -Historical European Studbook

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
1	M	~ 1960	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CHUBAKA	
					AUGUSTIN	1 Jan 1970	______	Transfer			
					LA PALMYR	28 Jan 1993	1253	Transfer			
					ASSON	5 Apr 1995	1586	Transfer			
					LISIEUX Z	4 Apr 2002	M02030	Loan to			
2	M	????	WILD	WILD	PARIS ZOO	????	______	Transfer	Unknown		
					HANNOVER	????	II947	Transfer			
						16 Sep 1963		Death			
3	M	~ 1963	WILD	WILD	LAFERRIER	~ Jan 1970	______	Transfer	Unknown	HUBERT	
					FONTAINE	2 Jun 1988	57HC2	Transfer			
					LILLE ZO	13 Mar 1993	369	Loan to			
					THEFT	9 Mar 1999	NONE ltf	Transfer			
4	M	~ 1964	WILD	WILD	PORTLAND	14 Oct 1975	1325	Transfer	Unknown	GUNTHER	00-0017-172D
5	F	????	WILD	WILD	HANNOVER	17 Sep 1964	II946	Transfer	Unknown		
						31 Jan 1968		Death			
6	F	~ 1966	WILD	WILD	LAOS	????	NONE	Capture	Unknown	MIETZI	
					HANNOVER	5 Oct 1969	II/45	Transfer			
					HILVARENB	12 Oct 1989	M66143	Loan to			
						10 Jan 2002	M66143	Transfer			
7	M	~ 1966	WILD	WILD	LAOS	????	NONE	Capture	Unknown		
					HANNOVER	5 Oct 1969	II944	Transfer			
						15 Apr 1971		Death			
8	M	~ 1966	WILD	WILD	LAOS	????	NONE	Capture	Unknown		
					HANNOVER	5 Oct 1969	II945	Transfer			
						11 May 1971		Death			
9	M	~ 1967	WILD	WILD	HANNOVER	3 Jun 1971	II46	Transfer	Unknown	MIKE	
						26 Jun 1984		Death			
10	M	~ 1967	WILD	WILD	MULHOUSE	25 Sep 1968	680001	Transfer	Unknown	JOJO	
						24 Apr 1982		Death			
11	F	~ 1968	WILD	WILD	GUERNO	~ 1969	______	Transfer	Unknown		

					FONTAINE	28 Mar 1988	57HC1	Loan to				
					MONTAINE	20 Oct 1989	_____	Loan to				
						6 Feb 1990		Death				
12	F	~ 1968	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CLAIRE		
					CLERES	22 Jun 1970	C70001	Transfer				
					PARIS ZOO	12 Jun 1981	_____	Loan to				
					CLERES	10 Aug 1981	C70001	Transfer				
					PARIS ZOO	24 Dec 1982	_____	Loan to				
					CLERES	15 Mar 1983	C70001	Transfer				
					MULHOUSE	23 Aug 1983	830017	Loan to				
					CLERES	26 May 1988	C70001	Transfer				
					FONTAINE	26 May 1988	_____	Transfer				
					LAFERRIER	27 May 1988	_____	Transfer				
						15 Sep 1997		Death				
13	M	~ Aug 1968	WILD	WILD	LAOS	????	NONE	Capture	Unknown	LE GROS		
					CLERES	28 Jun 1969	C69001	Transfer				
					PARIS ZOO	2 Mar 1993	_____	Loan to				
					CLERES	3 Mar 1993	C69001	Transfer				
14	F	????	WILD	WILD	LAOS	????	NONE	Capture	Unknown	LA MERE		
					CLERES	28 Jun 1969	069002	Transfer				
15	M	~ Sep 1969	WILD	WILD	LAOS	~ 1970	NONE	Capture	Unknown	SIKKI		
					CLERES	1 Apr 1970	C70002	Transfer				
16	F	~ 1970	WILD	WILD	MUNICH	20 Jun 1975	_____	Transfer	Unknown	ZOE		
					TWYCROSS	13 Jan 1977	46	Transfer				
						22 Jul 1998		Death				
17	F	~ 1970	WILD	WILD	PORTLAND	25 Sep 1975	1318	Transfer	Unknown	PHYLLIS	00-000D-457C	
18	F	~ 1971	WILD	WILD	LOSANGELE	13 Apr 1972	93234	Transfer	Unknown			
					ANTWERP	30 Mar 1978	M6743	Loan to				
						21 Dec 1981		Death				
19	M	~ 1971	WILD	WILD	LAOS	????	NONE	Capture	Unknown			
					DUISBURG	20 Sep 1972	144	Transfer				
						11 Feb 1983		Death				
20	F	~ 1971	WILD	WILD	ASSON	1 Jan 1973	750	Transfer	Unknown	SARA		
21	M	~ 1972	WILD	WILD	LAFERRIER	1 Mar 1973	_____	Transfer	Unknown		250229600004850	
					LA PALMYR	2 Mar 2002	3212	Loan to				

					MONTPELLIER	2 Oct 2006	?	Transfer				
22	F	~ 1972	WILD	WILD	EYZIESTAC	~ 1973	_____	Transfer	Unknown	BLONDIE	00-01D2-4479	
					MULHOUSE	31 Oct 1980	800017	Transfer				
					FONTAINE	31 Oct 1989	57HC5	Loan to				
					LA PALMYR	31 Jan 1993	1254	Loan to				
					AMSTERDAM	14 Sep 1999	M99093	Loan to				
						30 Jun 2004		Death				
23	M	~ 1972	WILD	WILD	LAOS	????	NONE	Capture	Unknown			
					PARIS ZOO	13 Feb 1979	_____	Transfer				
					PARIS JP	26 Mar 1979	M79145	Transfer				
					FONTAINE	28 Jun 1989	57HC3	Loan to				
						2 Aug 1996		Death				
24	F	~ 1972	WILD	WILD	PARIS ZOO	13 Feb 1979	_____	Transfer	Unknown			
					PARIS JP	26 Mar 1979	M79147	Transfer				
					FONTAINE	28 Jun 1989	57HC4	Loan to				
25	F	~ 1973	WILD	WILD	LAOS	????	NONE	Capture	Unknown	FRAUKE		
					PARIS ZOO	13 Feb 1979	_____	Transfer				
					PARIS JP	26 Mar 1979	M79148	Transfer				
					ANTWERP	11 Oct 1984	M8194	Loan to				
					PLANCKNDL	30 Mar 1988	131003	Loan to				
					ANTWERP	7 Nov 1988	M8194	Loan to				
					PLANCKNDL	28 Mar 1989	131003	Loan to				
					HANNOVER	15 Nov 1994	II475	Transfer				
					PLANCKNDL	8 Nov 1997	131003	Loan to				
						18 May 2006		Death				
26	M	~ 1973	WILD	WILD	LAOS	????	NONE	Capture	Unknown			
					PARIS ZOO	13 Feb 1979	_____	Transfer				
					PARIS JP	26 Mar 1979	M79146	Transfer				
					AMSTERDAM	17 Sep 1986	M86O57	Transfer				
						14 Nov 1988		Death				
27	F	~ 1973	WILD	WILD	LAOS	????	NONE	Capture	Unknown		250229600006044	
					PARIS ZOO	13 Feb 1979	_____	Transfer			00-01D3-9293	
					PARIS JP	26 Mar 1979	M79144	Transfer				
					AMSTERDAM	17 Sep 1986	M86058	Transfer				
					LA PALMYR	8 Sep 1999	2679	Transfer				
					MONTPELLIER	2 Oct 2006	?	Transfer				
28	M	~ 1973	WILD	WILD	DUISBURG	28 Oct 1988	525	Transfer	Unknown	CHARLY	00-0643-EBA9	
29	M	~ 1974	WILD	WILD	ASSON	1 Jan 1975	_____	Transfer	Unknown	TRESOR		
					LA PALMYR	5 Apr 1995	1771	Transfer				

					LAFERRIER	3 Feb 2002	______	Loan to			
30	F	~ 1974	WILD	WILD	LIBEREC	13 Aug 1975	______	Transfer	Unknown	FUFRINE	
						11 Feb 1997		Death			
31	M	????	WILD	WILD	LEIPZIG	21 Oct 1974	______	Transfer	Unknown	CON KHI	
						12 Aug 1987		Death			
32	F	~ 1974	WILD	WILD	LEIPZIG	21 Oct 1974	______	Transfer	Unknown	HOA DO THI	
						9 Aug 1987		Death			
33	M	~ 1974	WILD	WILD	HILVARENB	26 Feb 1976	M76019	Transfer	Unknown	PAULTJE	00-01C9-472E
					HANNOVER	13 May 1992	II417	Loan to			
					PLANCKNDL	8 Nov 1997	131006	Loan to			
34	F	~ 1974	WILD	WILD	DUISBURG	6 Jan 1977	142	Transfer	Unknown	PUPPI	00-0097-2CE7
					LIBEREC	1 Feb 2001	11	Transfer			
35	F	~ 1974	WILD	WILD	DUISBURG	23 Jan 1976	143	Transfer	Unknown	SOPHIE	00-0644-0676
36	M	~ 1974	WILD	WILD	TWYCROSS	24 Jul 1977	55	Transfer	Unknown	FRED	
						9 Jan 2006		Death			
37	F	~ 1974	WILD	WILD	TWYCROSS	24 Jul 1977	54	Transfer	Unknown	CLARA	
38	M	~ 1974	WILD	WILD	HILVARENB	15 Apr 1976	M76021	Transfer	Unknown	BB 3	
						22 Jan 1978		Death			
39	M	~ 1975	WILD	WILD	MULHOUSE	25 Mar 1983	830015	Transfer	Unknown	JACK	00-0127CC47
40	F	~ 1975	WILD	WILD	MULHOUSE	25 Mar 1983	830016	Transfer	Unknown	JACQUELINE	
						4 Feb 1996		Death			
41	F	28 Oct 1975	13	14	CLERES	28 Oct 1975	C75001	Birth	Parent	LA GROSSE	
						10 Nov 1994		Death			
42	F	~ 1976	WILD	WILD	HILVARENB	26 Feb 1976	M76022	Transfer	Unknown	BB 2	
						12 May 1977		Death			
43	F	5 May 1976	9	6	HANNOVER	5 May 1976	II/142	Birth	Parent	MOTJA	
					PLANCKNDL	16 Nov 1994	131005	Loan to			
					LISIEUX Z	2 Nov 1997	M97078	Loan to			
44	M	~ 1977	WILD	WILD	MOSCOW	28 Dec 1978	A00336	Transfer	Unknown	IVAN	
					LIBEREC	17 May 1985	5	Transfer			
						11 Aug 2006		Death			
45	M	~ 1977	WILD	WILD	ROSTOV	????	______	Transfer	Unknown		
					MOSCOW	30 Dec 1985	A00338	Transfer			

						9 Jan 1986		Death		
46	M	????	WILD	WILD	MOSCOW	28 Dec 1978	A00335	Transfer	Unknown	KROSHA
					HOYERSWER	9 Oct 1981	_____	Loan to		
					MOSCOW	5 Aug 1987	A00335	Transfer		
					GIBSBIRDS	23 Jun 1999	NLL604	Loan to		
						24 May 2001	NLL604	Transfer		
47	F	~ 1978	WILD	WILD	EBERSWALD	13 Feb 1982	_____	Transfer	Unknown	TUANA
					BUDAPEST	15 Aug 1991	_____	Transfer		
						27 Oct 1991		Death		
48	M	26 Nov 1978	9	6	HANNOVER	26 Nov 1978	II190	Birth	Unknown	
						26 Jun 1980		Death		
49	?	1 Dec 1978	13	14	CLERES	1 Dec 1978	C78007	Birth	None	
						1 Dec 1978		Death		
50	F	????	WILD	WILD	PARIS ZOO	13 Feb 1979	Z79018	Transfer	Unknown	GAO-XIN
						20 Dec 2000		Death		
51	M	????	WILD	WILD	PARIS ZOO	13 Feb 1979	Z79010	Transfer	Unknown	LABIN
						27 Mar 1991		Death		
52	M	????	WILD	WILD	PARIS ZOO	13 Feb 1979	_____	Transfer	Unknown	CLAUDE
					LA PALMYR	24 Jun 1980	_____	Loan to		
					MULHOUSE	27 Jun 1985	850020	Transfer		
					ANTWERP	1 Nov 1989	M8971	Loan to		
					PLANCKNDL	8 Dec 1989	131004	Loan to		
					LISIEUX Z	2 Nov 1997	M97079	Loan to		
53	?	12 Nov 1979	15	12	CLERES	12 Nov 1979	C79002	Birth	None	
						12 Nov 1979		Death		
54	M	8 Dec 1979	13	14	CLERES	8 Dec 1979	C79001	Birth	Parent	
						9 Jan 1980		Death		
55	M	????	WILD	WILD	ANTWERP	23 Jan 1980	M7180	Transfer	Unknown	
						4 Dec 1981		Death		
56	M	30 Apr 1980	31	32	LEIPZIG	30 Apr 1980	_____	Birth	Unknown	
						29 May 1980		Death		
57	M	2 Nov 1980	13	14	CLERES	2 Nov 1980	C80001	Birth	Parent	
						18 May 1981		Death		
58	M	16 Dec 1980	9	6	HANNOVER	16 Dec 1980	II232	Birth	Unknown	
						11 Oct 1981		Death		

59	M	~ 1981	UNK	UNK	ANTWERP	19 Feb 1981	M7459	Transfer	Unknown		00-01D3-9293
					PLANCKNDL	30 Mar 1988	131002	Loan to			
					ANTWERP	7 Nov 1988	M7459	Transfer			
					PLANCKNDL	25 Mar 1989	131002	Loan to			
					AMSTERDAM	17 Oct 1989	M89165	Loan to			
						11 May 2001		Death			
60	M	19 Mar 1981	55	18	ANTWERP	19 Mar 1981	M7472	Birth	Unknown		
					LOSANGELE	15 Nov 1983	94413	Loan to			
					CINCINNAT	16 Nov 1983	M5046	Loan to			
						20 Jun 1993		Death			
61	M	9 Aug 1981	31	32	LEIPZIG	9 Aug 1981	_____	Birth	None		
						9 Aug 1981		Death			
62	M	????	UNK	UNK	CUSTOMS	????	_____	Transfer	Hand		
					OLMENSE	3 May 1995	OZ0031	Transfer			
63	M	14 Jan 1982	13	14	CLERES	14 Jan 1982	C82004	Birth	Parent		
						17 Jun 1984		Death			
64	F	12 Jun 1982	15	12	CLERES	12 Jun 1982	C82005	Birth	Parent		
						19 Jun 1982		Death			
65	M	~ 1983	WILD	WILD	BUDAPEST	10 Jun 1986	000171	Transfer	Unknown	DODO	
					KISKUT	25 Oct 2001	_____	Loan to			
66	M	29 Jan 1983	31	32	LEIPZIG	29 Jan 1983	_____	Birth	Unknown	ERICH	
					HANNOVER	26 Jun 1985	II/296	Transfer			
					HILVARENB	13 May 1992	M83029	Loan to			
						10 Jan 2002	M83029	Transfer			
67	M	9 Apr 1983	19	35	DUISBURG	9 Apr 1983	145	Birth	Parent		
						29 Jun 1983		Death			
68	F	12 Feb 1984	15	41	CLERES	12 Feb 1984	C84002	Birth	Hand	KIKI	00-211-919B
						13 Jul 2000		Death			
69	M	20 Jun 1984	13	14	CLERES	20 Jun 1984	C84001	Birth	Parent	NONKEL	00-0211-8910
					OVERLOON	18 Jun 2001	300280	Loan to			
70	F	????	WILD	WILD	MOSCOW	1 Jul 1985	A00337	Transfer	Unknown	ASIA	
					GIBSBIRDS	23 Jun 1999	NLL605	Loan to			
						24 May 2001	NLL605	Transfer			
					FT WAYNE	20 May 2004	97196	Loan to			
71	F	????	UNK	UNK	WINGST ZO	????	_____	Transfer	Unknown		

72	F	4 Apr 1985	39	40	MULHOUSE	4 Apr 1985	850019	Birth	Hand			
						12 Jul 1986		Death				
73	M	7 Jun 1985	31	32	LEIPZIG	7 Jun 1985	_____	Birth	Hand	BENNIE		
					DUISBURG	25 Apr 1986	146	Transfer				
					CHICAGOBR	21 Jun 1995	950132	Transfer				
74	F	~ 1986	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	FEA		
					USTI	23 May 1987	930121	Transfer				
75	F	~ 1986	WILD	WILD	USTI	19 Nov 1987	_____	Transfer	Unknown			
						~ 1991		Death				
76	M	~ 1986	WILD	WILD	USTI	19 Nov 1987	930120	Transfer	Unknown	TODIK II		
77	M	~ 1986	WILD	WILD	USTI	5 Sep 1987	_____	Transfer	Hand	OTTI	968000000042498	
					LEIPZIG	12 Nov 1987	M01217	Loan to				
					HANNOVER	17 Jun 1989	II/353	Loan to				
					OSNABRUCK	6 Sep 2001	616	Loan to				
78	F	13 Jul 1986	15	41	CLERES	13 Jul 1986	C86002	Birth	Parent			
						30 Nov 1986		Death				
79	M	30 Nov 1986	13	14	CLERES	30 Nov 1986	C86001	Birth	Parent	MAX		
					PARIS ZOO	22 Jun 1991	Z91113	Loan to				
					ASSON	10 Apr 2002	2376	Loan to				
80	F	10 Dec 1986	44	30	LIBEREC	10 Dec 1986	_____	Birth	Unknown			
						13 Jan 1987		Death				
81	M	17 Dec 1986	23	24	PARIS JP	17 Dec 1986	M86247	Birth	Parent			
						1 Jul 1987		Death				
82	M	17 Dec 1986	31	32	LEIPZIG	17 Dec 1986	M00279	Birth	Hand	LAMI		
					HANNOVER	17 Jun 1989	II/354	Loan to				
					COLUMBUS	17 May 1995	952031	Transfer				
83	M	1 May 1987	39	40	MULHOUSE	1 May 1987	870017	Birth	Parent			
						14 Nov 1990		Death				
84	F	3 Sep 1987	66	6	HANNOVER	3 Sep 1987	II/282	Birth	Hand	LENA	968000000051006	
					OSNABRUCK	6 Sep 2001	617	Loan to				
85	M	24 Jan 1988	44	30	LIBEREC	24 Jan 1988	_____	Birth	Unknown	ALEX		
					LOUROSA Z	1 Jul 1993	_____	Transfer				

					LAGOS ZOO	9 Sep 2000	______	Transfer				
					PRIVATE	24 Aug 2001	______	Transfer				
					EPARADISE	????	______	Transfer				
86	M	18 May 1988	23	24	PARIS JP	18 May 1988	M88092	Birth	Parent			
						2 Feb 1989		Death				
87	F	21 Oct 1988	15	41	CLERES	21 Oct 1988	C88181	Birth	Parent			
					GUERNO	12 Dec 1996	______	Loan to				
88	F	9 Feb 1989	13	14	CLERES	9 Feb 1989	C89001	Birth	Parent			
89	F	17 Jul 1989	28	34	DUISBURG	17 Jul 1989	929	Birth	Hand			
						25 Jul 1989		Death				
90	M	28 Jan 1990	28	35	DUISBURG	28 Jan 1990	980	Birth	Hand	CARUSO	00-0015-B448	
					CHICAGOLP	22 Jul 1993	9737	Transfer				
					COLUMBUS	22 Jul 1993	932099	Loan to				
					CHICAGOLP	3 Sep 1993	9737	Transfer				
91	F	1 Apr 1990	23	24	FONTAINE	1 Apr 1990	57HC6	Birth	Parent	CONNIE	00-0128-B21F	
					MULHOUSE	7 Dec 1996	960252	Loan to				
92	M	2 Apr 1990	39	40	MULHOUSE	2 Apr 1990	900021	Birth	Parent	CRAIG		
					FONTAINE	11 Dec 1996	57HC10	Loan to				
						17 Oct 2002		Death				
93	M	3 Jul 1990	28	34	DUISBURG	3 Jul 1990	1036	Birth	Parent	FRITZCHEN	00-0015-C244	
					COLUMBUS	22 Jul 1993	932100	Transfer				
					CHICAGOLP	3 Sep 1993	9738	Transfer				
						24 Jul 1994		Death				
94	M	5 Sep 1990	21	12	LAFERRIER	5 Sep 1990	______	Birth	Unknown			
95	M	~ Nov 1990	WILD	WILD	LONDON RP	26 Apr 1997	A3565	Transfer	Unknown	JIMMY		
96	M	4 May 1991	44	30	LIBEREC	4 May 1991	8	Birth	Unknown			
97	M	2 Jun 1991	13	14	CLERES	2 Jun 1991	C91166	Birth	Parent			
					GUERNO	12 Dec 1996	______	Loan to				
98	?	11 Jun 1991	15	41	CLERES	11 Jun 1991	C91167	Birth	Parent			
						12 Oct 1992		Death				
99	M	3 Aug 1991	28	35	DUISBURG	3 Aug 1991	1499	Birth	Parent			
						18 Oct 1991		Death				

100	M	10 Feb 1992	39	40	MULHOUSE	10 Feb 1992	920009	Birth	Parent	EARL	
					TWYCROSS	14 Jan 1997	2028	Loan to			
101	M	10 Jul 1992	28	35	DUISBURG	10 Jul 1992	1831	Birth	Unknown		
						8 Sep 1992		Death			
102	M	23 Jan 1993	66	6	HILVARENB	23 Jan 1993	M93002	Birth	Parent	TOMMY	
					HANNOVER	23 Jan 1993	II472	Ownership			
					HILVARENB	5 Jul 1996		Death			
103	M	10 Feb 1993	23	24	FONTAINE	10 Feb 1993	57HC7	Birth	Parent	KAYAK	00-063C-0FC2
					PERTH	4 Jun 1999	990374	Loan to			
104	M	8 Apr 1993	77	84	HANNOVER	8 Apr 1993	II439	Birth	Parent	PINOCCHIO	00-004E-4CF4
					PERTH	3 Feb 1998	980071	Loan to			
						1 Jan 1999	980071	Transfer			
					MOGO	1 Sep 1999	_____ ltf	Transfer			
105	F	6 May 1993	28	35	DUISBURG	6 May 1993	2102	Birth	Hand	KANETTE	
					FONTAINE	11 May 1995	57HC8	Loan to			
					APELDOORN	14 Mar 2000	2136	Loan to			
					OVERLOON	19 Jun 2001	300283	Loan to			
106	M	~ Jul 1993	UNK	UNK	GDANSK	27 Oct 1993	M00001	Transfer	Unknown	KLEMENS	
107	M	7 Jul 1993	44	30	LIBEREC	7 Jul 1993	9	Birth	Unknown		
108	F	18 Aug 1993	13	14	CLERES	18 Aug 1993	C93420	Birth	Parent	KANAK	
					FONTAINE	31 Aug 1999	57HC12	Loan to			
					APELDOORN	14 Mar 2000	2135	Loan to			
109	F	2 Sep 1993	UNK	UNK	BEIJING	2 Sep 1993	_____	Birth	Unknown		
					LIBEREC	28 Jun 2002	13	Transfer			
110	M	25 Jan 1994	28	35	DUISBURG	25 Jan 1994	2463	Birth	Parent	ROMULUS	00-060F-9543
						14 Jan 2004		Death			
111	M	12 Mar 1994	73	34	DUISBURG	12 Mar 1994	2524	Birth	Unknown		
						4 Aug 1994		Death			
112	F	28 Oct 1994	4	17	PORTLAND	28 Oct 1994	94161	Birth	Parent	KAMPUCHEA	00-0133-789D
					TWYCROSS	19 Oct 2000	3570	Transfer			
113	?	30 Oct 1994	15	41	CLERES	30 Oct 1994	C94363	Birth	None		
						30 Oct 1994		Death			

114	M	10 May 1995	76	74	USTI	10 May 1995	950015	Birth	Hand	KASZAT	00-0204-03EB
					SZEGED	28 Dec 1996	1	Loan to			
115	M	4 Jul 1995	73	34	DUISBURG	4 Jul 1995	2933	Birth	Parent	RASCAL	00-0095-A78F
					FUENGIROL	31 Jan 2001	FU81	Transfer			
					LA FRONTI	11 Feb 2004	GIB1	Loan to			
116	F	30 Jul 1995	69	68	CLERES	30 Jul 1995	C95267	Birth	None		
						30 Jul 1995		Death			
117	M	2 Aug 1995	13	14	CLERES	2 Aug 1995	C95268	Birth	Parent		00-0213-4018
					OSTRAVA	18 Jun 2002	202028	Loan to			
118	M	7 Nov 1995	33	25	HANNOVER	7 Nov 1995	II495	Birth	None		
						8 Nov 1995		Death			
119	M	22 Dec 1995	77	84	HANNOVER	22 Dec 1995	II497	Birth	Parent	TOM	00-0200-38C5
					FUENGIROL	5 Jul 2000	FU65	Loan to			
					LA FRONTI	11 Feb 2004	GIB2	Loan to			
120	F	23 Dec 1995	23	24	FONTAINE	23 Dec 1995	57HC9	Birth	Unknown		
						5 Jan 1997		Death			
121	M	26 Jun 1996	28	35	DUISBURG	26 Jun 1996	3171	Birth	Parent	REMUS	00-0644-219C
					ADELAIDE	23 Aug 2006	?	Loan to			
122	F	28 Jul 1996	66	6	HILVARENB	28 Jul 1996	M96181	Birth	Parent		
					AMSTERDAM	22 May 2001	M01079	Transfer			
						30 Jun 2004		Death			
123	M	30 Sep 1996	33	25	HANNOVER	30 Sep 1996	II518	Birth	Parent	YUNNAN	00-01FA-1BEF
					PLANCKNDL	8 Nov 1997	131007	Loan to			
					APELDOORN	4 Jul 2001	2277	Loan to			
124	M	13 Sep 1997	76	74	USTI	13 Sep 1997	UL9770	Birth	Parent	LUCIE	
125	M	20 Sep 1997	92	24	FONTAINE	20 Sep 1997	57HC11	Birth	Unknown		
126	M	21 Nov 1997	13	14	CLERES	21 Nov 1997	C97347	Birth	Parent		00-0212-E514
					OSTRAVA	18 Jun 2002	202029	Loan to			
127	M	24 Dec 1997	97	87	GUERNO	24 Dec 1997	_____	Birth	None		
						25 Dec 1997		Death			
128	M	29 May 1998	28	35	DUISBURG	29 May 1998	3622	Birth	Unknown		

						8 Sep 1999		Death				
129	M	30 Oct 1998	97	87	GUERNO	30 Oct 1998	_____	Birth	Hand			
						2 Nov 1998		Death				
130	M	25 Mar 1999	77	84	HANNOVER	25 Mar 1999	II574	Birth	Parent	JERRY	968000000043623	
					LEIPZIG	25 Mar 1999	M03033	Ownership				
					OSNABRUCK	6 Sep 2001	618	Loan to				
131	F	13 May 1999	15	88	CLERES	13 May 1999	C99033	Birth	Parent			
						30 Jul 2003		Death				
132	M	15 Nov 1999	39	91	MULHOUSE	15 Nov 1999	990273	Birth	Parent	PACO		
133	F	29 Nov 1999	33	25	PLANCKNDL	29 Nov 1999	131008	Birth	Parent	ASTRIKS	056098101173538	
					HANNOVER	29 Nov 1999	II608	Ownership				
134	M	11 Dec 1999	66	6	HILVARENB	11 Dec 1999	M99090	Birth	None			
						11 Dec 1999		Death				
135	M	12 Dec 1999	97	87	GUERNO	12 Dec 1999	_____	Birth	Parent			
						12 Jun 2001		Death				
136	F	14 Dec 1999	76	74	USTI	14 Dec 1999	UL9950	Birth	Unknown			
137	F	7 Apr 2000	28	35	DUISBURG	7 Apr 2000	4046	Birth	Parent	SULU	00-0643-FFA5	
138	?	7 Apr 2000	92	24	FONTAINE	7 Apr 2000	57HC13	Birth	None			
						7 Apr 2000		Death				
139	M	13 Nov 2000	115	34	DUISBURG	13 Nov 2000	4185	Birth	Parent			
					LIBEREC	1 Feb 2001	12	Transfer				
140	M	24 Jan 2001	66	6	HILVARENB	24 Jan 2001	M01005	Birth	None			
						24 Jan 2001		Death				
141	M	7 May 2001	15	88	CLERES	7 May 2001	CA1006	Birth	Parent			
						7 Apr 2003		Death				
142	?	10 Oct 2001	92	24	FONTAINE	10 Oct 2001	57HC14	Birth	Parent			
143	M	14 Feb 2002	13	14	CLERES	14 Feb 2002	CA2002	Birth	None			
						14 Feb 2002		Death				
144	M	21 Feb 2002	66	6	HILVARENB	21 Feb 2002	M02005	Birth	Parent	YOUNG LU		

145	M	2 Mar 2002	97	87	GUERNO	2 Mar 2002 28 Nov 2002	______	Birth Death	Parent			
146	F	20 Jun 2002	76	74	USTI	20 Jun 2002 28 Jul 2005	UL0205	Birth Death	Parent			
147	M	23 Jul 2002	39	91	MULHOUSE	23 Jul 2002	M02079	Birth	Parent	TAO		
148	M	27 Aug 2002	110	35	DUISBURG	27 Aug 2002	4515	Birth	Parent	CLIF	00-0643-917D	
149	M	12 Oct 2002	69	105	OVERLOON	12 Oct 2002	300417	Birth	Parent	MALOU	00-064D-B3F0	
150	?	6 Feb 2003	13	14	CLERES	6 Feb 2003 7 Feb 2003	CA3001	Birth Death	None			
151	M	9 Feb 2003	77	84	OSNABRUCK HANNOVER	9 Feb 2003 9 Feb 2003	774 II925	Birth Ownership	Parent	GOLUM		
152	M	10 Feb 2003	123	108	APELDOORN HANNOVER	10 Feb 2003 10 Feb 2003	2485 II923	Birth Ownership	Parent	KIRIN		
153	?	7 Jun 2003	33	25	PLANCKNDL	7 Jun 2003 14 Jul 2006	131009	Birth Death	Parent	ELECTRA		
154	?	5 Oct 2003	UNK	35	DUISBURG	5 Oct 2003 27 Oct 2003	4635	Birth Death	Parent			
155	M	18 Nov 2003	96	109	LIBEREC	18 Nov 2003	14	Birth	Unknown			
156	M	18 Nov 2003	97	87	GUERNO	18 Nov 2003 5 Sep 2004	______	Birth Death	Parent			
157	?	13 Feb 2004	15	88	CLERES	13 Feb 2004	CA4003	Birth	Parent			
158	M	15 Feb 2004	13	14	CLERES	15 Feb 2004	CA4004	Birth	Parent			
159	M	13 May 2004	100	112	TWYCROSS	13 May 2004	4344	Birth	Hand	ETHAN		
160	?	10 Oct 2004	76	74	USTI	10 Oct 2004	UL0430	Birth	Parent			
161	M	13 Dec 2004	69	105	OVERLOON	13 Dec 2004	300841	Birth	Parent			
162	M	19 Dec 2004	123	108	APELDOORN	19 Dec 2004	2725	Birth	Parent			
163	F	28 Feb 2005	39	91	MULHOUSE	28 Feb 2005	M05011	Birth	Parent	ALYO		

164	?	10 Mar 2005	97	87	GUERNO	10 Mar 2005	_____	Birth	Parent		250229600014896
165	M	23 Mar 2005	?	32	DUISBURG	23 Mar 2005	4877	Birth	Parent	WUKI/SATHA?	
166	M	12 Mar 2006	77	84	OSNABRUCK	12 Mar 2006	1490	Birth	Parent	CARUSO	
167	M	7 Apr 2006	28	35	DUISBURG	7 Apr 2006	5123	Birth	Parent	MERU	
168	?	18 May 2006	96	109	LIBEREC	18 May 2006	15	Birth	Parent		
169	?	4 Dec 2006	13	14	CLERES	4 Dec 2006	CA6161	Birth	Parent		
170	?	12 Dec 2006	97	87	GUERNO	12 Dec 2006	_____	Birth	Parent		
171	?	14 Dec 2006	69	105	OVERLOON	14 Dec 2006	301222	Birth	Parent		

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TOTALS: 104.51.16 (171)

Nomascus leucogenys hybrids:7.8.1(16)

1 : *Nomascus gabriellae* studbook	**1** : *Nomascus siki* studbook
1 : *Nomascus leucogenys* studbook	**1** : *Nomascus concolor*

H3	M	28 Apr 1975	*10*	**3**	MULHOUSE	28 Apr 1975	750030	Birth	Parent	LEUxSIK
					LA PALMYR	27 Jun 1985	22	Transfer		
					AUGUSTIN	27 Jan 1993	_____	Transfer		
						~ 1998		Death		
H5	F	15 Nov 1978	*10*	**3**	MULHOUSE	15 Nov 1978	780023	Birth	Parent	LEUxSIK
					LA PALMYR	27 Jun 1985	24	Transfer		
					AUGUSTIN	27 Jan 1993	_____	Transfer		
						29 Dec 1996		Death		
H7	M	29 Sep 1981	***1***	*16*	TWYCROSS	29 Sep 1981	_____	Birth	Parent	CONCxLEU
						5 Apr 1982		Death		
H8	F	6 Nov 1981	*10*	**3**	MULHOUSE	6 Nov 1981	810070	Birth	Parent	LEUxSIK
					LA PALMYR	27 Jun 1985	23	Transfer		
					LA FLECHE	24 Sep 1991	215	Transfer		
H10	M	11 Feb 1983	**1**	*16*	TWYCROSS	11 Feb 1983	50	Birth	Unknown	CONCxLEU
					RICHARDS	29 Nov 1987	_____	Transfer		
						~ Oct 1993		Death		
H11	F	29 Oct 1984	**1**	*16*	TWYCROSS	29 Oct 1984	10	Birth	Unknown	CONCxLEU
					RICHARDS	29 Nov 1987	_____	Transfer		
						~ Aug 1990		Death		
H12	F	13 Dec 1985	**1**	*16*	TWYCROSS	13 Dec 1985	51	Birth	Hand	CONCxLEU
					COMBE MAR	12 Mar 1989	_____	Transfer		
						27 Jan 2001		Death		
H13	M	25 Nov 1986	**1**	*16*	TWYCROSS	25 Nov 1986	52	Birth	Hand	CONCxLEU
					COMBE MAR	12 Mar 1989	_____	Transfer		
H16	M	18 Oct 1987	**1**	*16*	TWYCROSS	18 Oct 1987	53	Birth	Hand	CONCxLEU

					FARJESTAD	11 Jul 1990	_____	Transfer			
H18	F	23 Oct 1988	1	16	TWYCROSS	23 Oct 1988	_____	Birth	Hand	CONCxLEU	
					FARJESTAD	11 Jul 1990	_____	Transfer			
H19	?	29 Sep 1989	1	16	TWYCROSS	29 Sep 1989	_____	Birth	None	CONCxLEU	
						29 Sep 1989		Death			
H20	F	14 Jan 1990	1	16	TWYCROSS	14 Jan 1990	349	Birth	Hand	CONCxLEU	
					RICHARDS	20 Mar 1993	_____	Loan to			
						15 Feb 1996		Death			
H29	M	8 Sep 1996	65	7	BUDAPEST	8 Sep 1996	001075	Birth	Hand	LEUxSIK	
					KISKUT	20 Nov 1997	_____	Loan to			
						8 Dec 1997	_____	Transfer			
H33	F	15 Jun 1999	95	61	LONDON RP	15 Jun 1999	A4139	Birth	Parent	LEUxGAB	
						5 Oct 1999		Death			
H34	M	6 Jul 2000	95	61	LONDON RP	6 Jul 2000	A4415	Birth	Parent	LEUxGAB	00-0604-1BA3
H36	F	31 Jan 2003	95	61	LONDON RP	31 Jan 2003	2279	Birth	Parent	LEUxGAB	00-060D-A863
					EDINBURGH	15 Sep 2004	M04104	Loan to			
H37	M	17 Sep 2001	H9	H8	LA FLECHE	17 Sep 2001	220	Birth	Parent	LEUxGABxSIK	
					MONTEMOR	2 Oct 2006					
H38	?	16 Jun 2005	H9	H8	LA FLECHE	16 Jun 2005	482	Birth	Parent	LEUxGABxSIK	

NORTHERN WHITE-CHEEKED GIBBON – Current European Population

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
1	M	~ 1960	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CHUBAKA	
					AUGUSTIN	1 Jan 1970	______	Transfer			
					LA PALMYR	28 Jan 1993	1253	Transfer			
					ASSON	5 Apr 1995	1586	Transfer			
					LISIEUX Z	4 Apr 2002	M02030	Loan to			
6	F	~ 1966	WILD	WILD	LAOS	????	NONE	Capture	Unknown	MIETZI	
					HANNOVER	5 Oct 1969	II/45	Transfer			
					HILVARENB	12 Oct 1989	M66143	Loan to			
						10 Jan 2002	M66143	Transfer			
13	M	~ Aug 1968	WILD	WILD	LAOS	????	NONE	Capture	Unknown	LE GROS	
					CLERES	28 Jun 1969	C69001	Transfer			
					PARIS ZOO	2 Mar 1993	______	Loan to			
					CLERES	3 Mar 1993	C69001	Transfer			
14	F	????	WILD	WILD	LAOS	????	NONE	Capture	Unknown	LA MERE	
					CLERES	28 Jun 1969	069002	Transfer			
15	M	~ Sep 1969	WILD	WILD	LAOS	~ 1970	NONE	Capture	Unknown	SIKKI	
					CLERES	1 Apr 1970	C70002	Transfer			
20	F	~ 1971	WILD	WILD	ASSON	1 Jan 1973	750	Transfer	Unknown	SARA	
21	M	~ 1972	WILD	WILD	LAFERRIER	1 Mar 1973	______	Transfer	Unknown		250229600004850
					LA PALMYR	2 Mar 2002	3212	Loan to			
					MONTPELLIER	2 Oct 2006		Transfer			
24	F	~ 1972	WILD	WILD	PARIS ZOO	13 Feb 1979	______	Transfer	Unknown		
					PARIS JP	26 Mar 1979	M79147	Transfer			
					FONTAINE	28 Jun 1989	57HC4	Loan to			
27	F	~ 1973	WILD	WILD	LAOS	????	NONE	Capture	Unknown		250229600006044
					PARIS ZOO	13 Feb 1979	______	Transfer			00-01D3-9293
					PARIS JP	26 Mar 1979	M79144	Transfer			

					AMSTERDAM	17 Sep 1986	M86058	Transfer				
					LA PALMYR	8 Sep 1999	2679	Transfer				
					MONTPELLIER	2 Oct 2006		Transfer				
28	M	~ 1973	WILD	WILD	DUISBURG	28 Oct 1988	525	Transfer	Unknown	CHARLY	00-0643-EBA9	
29	M	~ 1974	WILD	WILD	ASSON	1 Jan 1975	_____	Transfer	Unknown	TRESOR		
					LA PALMYR	5 Apr 1995	1771	Transfer				
					LAFERRIER	3 Feb 2002	_____	Loan to				
33	M	~ 1974	WILD	WILD	HILVARENB	26 Feb 1976	M76019	Transfer	Unknown	PAULTJE	00-01C9-472E	
					HANNOVER	13 May 1992	II417	Loan to				
					PLANCKNDL	8 Nov 1997	131006	Loan to				
34	F	~ 1974	WILD	WILD	DUISBURG	6 Jan 1977	142	Transfer	Unknown	PUPPI	00-0097-2CE7	
					LIBEREC	1 Feb 2001	11	Transfer				
35	F	~ 1974	WILD	WILD	DUISBURG	23 Jan 1976	143	Transfer	Unknown	SOPHIE	00-0644-0676	
37	F	~ 1974	WILD	WILD	TWYCROSS	24 Jul 1977	54	Transfer	Unknown	CLARA		
39	M	~ 1975	WILD	WILD	MULHOUSE	25 Mar 1983	830015	Transfer	Unknown	JACK	00-0127CC47	
43	F	5 May 1976	9	6	HANNOVER	5 May 1976	II/142	Birth	Parent	MOTJA		
					PLANCKNDL	16 Nov 1994	131005	Loan to				
					LISIEUX Z	2 Nov 1997	M97078	Loan to				
52	M	????	WILD	WILD	PARIS ZOO	13 Feb 1979	_____	Transfer	Unknown	CLAUDE		
					LA PALMYR	24 Jun 1980	_____	Loan to				
					MULHOUSE	27 Jun 1985	850020	Transfer				
					ANTWERP	1 Nov 1989	M8971	Loan to				
					PLANCKNDL	8 Dec 1989	131004	Loan to				
					LISIEUX Z	2 Nov 1997	M97079	Loan to				
62	M	????	UNK	UNK	CUSTOMS	????	_____	Transfer	Hand			
					OLMENSE	3 May 1995	OZ0031	Transfer				
65	M	~ 1983	WILD	WILD	BUDAPEST	10 Jun 1986	000171	Transfer	Unknown	DODO		
					KISKUT	25 Oct 2001	_____	Loan to				
66	M	29 Jan 1983	31	32	LEIPZIG	29 Jan 1983	_____	Birth	Unknown	ERICH		
					HANNOVER	26 Jun 1985	II/296	Transfer				
					HILVARENB	13 May 1992	M83029	Loan to				
						10 Jan 2002	M83029	Transfer				
69	M	20 Jun 1984	13	14	CLERES	20 Jun 1984	C84001	Birth	Parent	NONKEL	00-0211-8910	

					OVERLOON	18 Jun 2001	300280	Loan to				
71	F	????	UNK	UNK	WINGST ZO	????	_____	Transfer	Unknown			
74	F	~ 1986	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	FEA		
					USTI	23 May 1987	930121	Transfer				
76	M	~ 1986	WILD	WILD	USTI	19 Nov 1987	930120	Transfer	Unknown	TODIK II		
77	M	~ 1986	WILD	WILD	USTI	5 Sep 1987	_____	Transfer	Hand	OTTI	968000000042498	
					LEIPZIG	12 Nov 1987	M01217	Loan to				
					HANNOVER	17 Jun 1989	II/353	Loan to				
					OSNABRUCK	6 Sep 2001	616	Loan to				
79	M	30 Nov 1986	13	14	CLERES	30 Nov 1986	C86001	Birth	Parent	MAX		
					PARIS ZOO	22 Jun 1991	Z91113	Loan to				
					ASSON	10 Apr 2002	2376	Loan to				
84	F	3 Sep 1987	66	6	HANNOVER	3 Sep 1987	II/282	Birth	Hand	LENA	968000000051006	
					OSNABRUCK	6 Sep 2001	617	Loan to				
85	M	24 Jan 1988	44	30	LIBEREC	24 Jan 1988	_____	Birth	Unknown	ALEX		
					LOUROSA Z	1 Jul 1993	_____	Transfer				
					LAGOS ZOO	9 Sep 2000	_____	Transfer				
					PRIVATE	24 Aug 2001	_____	Transfer				
					EPARADISE	????	_____	Transfer				
87	F	21 Oct 1988	15	41	CLERES	21 Oct 1988	C88181	Birth	Parent			
					GUERNO	12 Dec 1996	_____	Loan to				
88	F	9 Feb 1989	13	14	CLERES	9 Feb 1989	C89001	Birth	Parent			
91	F	1 Apr 1990	23	24	FONTAINE	1 Apr 1990	57HC6	Birth	Parent	CONNIE	00-0128-B21F	
					MULHOUSE	7 Dec 1996	960252	Loan to				
94	M	5 Sep 1990	21	12	LAFERRIER	5 Sep 1990	_____	Birth	Unknown			
95	M	~ Nov 1990	WILD	WILD	LONDON RP	26 Apr 1997	A3565	Transfer	Unknown	JIMMY		
96	M	4 May 1991	44	30	LIBEREC	4 May 1991	8	Birth	Unknown			
97	M	2 Jun 1991	13	14	CLERES	2 Jun 1991	C91166	Birth	Parent			
					GUERNO	12 Dec 1996	_____	Loan to				
100	M	10 Feb 1992	39	40	MULHOUSE	10 Feb 1992	920009	Birth	Parent	EARL		
					TWYCROSS	14 Jan 1997	2028	Loan to				

105	F	6 May 1993	28	35	DUISBURG	6 May 1993	2102	Birth	Hand	KANETTE		
					FONTAINE	11 May 1995	57HC8	Loan to				
					APELDOORN	14 Mar 2000	2136	Loan to				
					OVERLOON	19 Jun 2001	300283	Loan to				
106	M	~ Jul 1993	UNK	UNK	GDANSK	27 Oct 1993	M00001	Transfer	Unknown	KLEMENS		
107	M	7 Jul 1993	44	30	LIBEREC	7 Jul 1993	9	Birth	Unknown			
108	F	18 Aug 1993	13	14	CLERES	18 Aug 1993	C93420	Birth	Parent	KANAK		
					FONTAINE	31 Aug 1999	57HC12	Loan to				
					APELDOORN	14 Mar 2000	2135	Loan to				
109	F	2 Sep 1993	UNK	UNK	BEIJING	2 Sep 1993	_____	Birth	Unknown			
					LIBEREC	28 Jun 2002	13	Transfer				
112	F	28 Oct 1994	4	17	PORTLAND	28 Oct 1994	94161	Birth	Parent	KAMPUCHEA	00-0133-789D	
					TWYCROSS	19 Oct 2000	3570	Transfer				
114	M	10 May 1995	76	74	USTI	10 May 1995	950015	Birth	Hand	KASZAT	00-0204-03EB	
					SZEGED	28 Dec 1996	1	Loan to				
115	M	4 Jul 1995	73	34	DUISBURG	4 Jul 1995	2933	Birth	Parent	RASCAL	00-0095-A78F	
					FUENGIROL	31 Jan 2001	FU81	Transfer				
					LA FRONTI	11 Feb 2004	GIB1	Loan to				
117	M	2 Aug 1995	13	14	CLERES	2 Aug 1995	C95268	Birth	Parent		00-0213-4018	
					OSTRAVA	18 Jun 2002	202028	Loan to				
119	M	22 Dec 1995	77	84	HANNOVER	22 Dec 1995	II497	Birth	Parent	TOM	00-0200-38C5	
					FUENGIROL	5 Jul 2000	FU65	Loan to				
					LA FRONTI	11 Feb 2004	GIB2	Loan to				
123	M	30 Sep 1996	33	25	HANNOVER	30 Sep 1996	II518	Birth	Parent	YUNNAN	00-01FA-1BEF	
					PLANCKNDL	8 Nov 1997	131007	Loan to			00-000D-2D11	
					APELDOORN	4 Jul 2001	2277	Loan to				
124	M	13 Sep 1997	76	74	USTI	13 Sep 1997	UL9770	Birth	Parent	LUCIE		
125	M	20 Sep 1997	92	24	FONTAINE	20 Sep 1997	57HC11	Birth	Unknown			
126	M	21 Nov 1997	13	14	CLERES	21 Nov 1997	C97347	Birth	Parent		00-0212-E514	
					OSTRAVA	18 Jun 2002	202029	Loan to				
130	M	25 Mar 1999	77	84	HANNOVER	25 Mar 1999	II574	Birth	Parent	JERRY	968000000043623	
					LEIPZIG	25 Mar 1999	M03033	Ownership				

					OSNABRUCK	6 Sep 2001	618	Loan to				
132	M	15 Nov 1999	39	91	MULHOUSE	15 Nov 1999	990273	Birth	Parent	PACO		
133	F	29 Nov 1999	33	25	PLANCKNDL	29 Nov 1999	131008	Birth	Parent	ASTRIKS	056098101173538	
					HANNOVER	29 Nov 1999	II608	Ownership				
136	F	14 Dec 1999	76	74	USTI	14 Dec 1999	UL9950	Birth	Unknown			
137	F	7 Apr 2000	28	35	DUISBURG	7 Apr 2000	4046	Birth	Parent	SULU	00-0643-FFA5	
139	M	13 Nov 2000	115	34	DUISBURG	13 Nov 2000	4185	Birth	Parent			
					LIBEREC	1 Feb 2001	12	Transfer				
142	?	10 Oct 2001	92	24	FONTAINE	10 Oct 2001	57HC14	Birth	Parent			
144	M	21 Feb 2002	66	6	HILVARENB	21 Feb 2002	M02005	Birth	Parent	YOUNG LU		
147	M	23 Jul 2002	39	91	MULHOUSE	23 Jul 2002	M02079	Birth	Parent	TAO		
148	M	27 Aug 2002	110	35	DUISBURG	27 Aug 2002	4515	Birth	Parent	CLIF	00-0643-917D	
149	M	12 Oct 2002	69	105	OVERLOON	12 Oct 2002	300417	Birth	Parent	MALOU	00-064D-B3F0	
151	M	9 Feb 2003	77	84	OSNABRUCK	9 Feb 2003	774	Birth	Parent	GOLUM		
					HANNOVER	9 Feb 2003	II925	Ownership				
152	M	10 Feb 2003	123	108	APELDOORN	10 Feb 2003	2485	Birth	Parent	KIRIN		
					HANNOVER	10 Feb 2003	II923	Ownership				
155	M	18 Nov 2003	96	109	LIBEREC	18 Nov 2003	14	Birth	Unknown			
157	?	13 Feb 2004	15	88	CLERES	13 Feb 2004	CA4003	Birth	Parent			
158	M	15 Feb 2004	13	14	CLERES	15 Feb 2004	CA4004	Birth	Parent			
159	M	13 May 2004	100	112	TWYCROSS	13 May 2004	4344	Birth	Hand	ETHAN		
160	?	10 Oct 2004	76	74	USTI	10 Oct 2004	UL0430	Birth	Parent			
161	M	13 Dec 2004	69	105	OVERLOON	13 Dec 2004	300841	Birth	Parent			
162	M	19 Dec 2004	123	108	APELDOORN	19 Dec 2004	2725	Birth	Parent			
163	F	28 Feb 2005	39	91	MULHOUSE	28 Feb 2005	M05011	Birth	Parent	ALYO		
164	?	10 Mar 2005	97	87	GUERNO	10 Mar 2005	_____	Birth	Parent		250229600014896	

165	M	23 Mar 2005	?	32	DUISBURG	23 Mar 2005	4877	Birth	Parent	WUKI/SATHA
166	M	12 Mar 2006	77	84	OSNABRUCK	12 Mar 2006	1490	Birth	Parent	CARUSO
167	M	7 Apr 2006	28	35	DUISBURG	7 Apr 2006	5123	Birth	Parent	MERU
168	?	18 May 2006	96	109	LIBEREC	18 May 2006	15	Birth	Parent	
169	?	4 Dec 2006	13	14	CLERES	4 Dec 2006	CA6161	Birth	Parent	
170	?	12 Dec 2006	97	87	GUERNO	12 Dec 2006	_____	Birth	Parent	
171	?	14 Dec 2006	69	105	OVERLOON	14 Dec 2006	301222	Birth	Parent	

TOTALS: 48.24.8 (80)

Nomascus leucogenys hybrids:5.3.1 (9)

1 :*Nomascus gabriellae* studbook	**1** : *Nomascus siki* studbook
1 : *Nomascus leucogenys* studbook	**1** : *Nomascus concolor*

H8	F	6 Nov 1981	*10*	**3**	MULHOUSE	6 Nov 1981	810070	Birth	Parent	LEUxSIK	
					LA PALMYR	27 Jun 1985	23	Transfer			
					LA FLECHE	24 Sep 1991	215	Transfer			
H13	M	25 Nov 1986	**1**	*16*	TWYCROSS	25 Nov 1986	52	Birth	Hand	CONCxLEU	
					COMBE MAR	12 Mar 1989	_____	Transfer			
H16	M	18 Oct 1987	**1**	*16*	TWYCROSS	18 Oct 1987	53	Birth	Hand	CONCxLEU	
					FARJESTAD	11 Jul 1990	_____	Transfer			
H18	F	23 Oct 1988	**1**	*16*	TWYCROSS	23 Oct 1988	_____	Birth	Hand	CONCxLEU	
					FARJESTAD	11 Jul 1990	_____	Transfer			
H29	M	8 Sep 1996	*65*	**7**	BUDAPEST	8 Sep 1996	001075	Birth	Hand	LEUxSIK	
					KISKUT	20 Nov 1997	_____	Loan to			
						8 Dec 1997	_____	Transfer			
H34	M	6 Jul 2000	*95*	61	LONDON RP	6 Jul 2000	A4415	Birth	Parent	LEUxGAB	00-0604-1BA3
H36	F	31 Jan 2003	*95*	61	LONDON RP	31 Jan 2003	2279	Birth	Parent	LEUxGAB	00-060D-A863
					EDINBURGH	15 Sep 2004	M04104	Loan to			
H37	M	17 Sep 2001	H9	H8	LA FLECHE	17 Sep 2001	220	Birth	Parent	LEUxGABxSIK	
					MONTEMOR	2 Oct 2006					
H38	?	16 Jun 2005	H9	H8	LA FLECHE	16 Jun 2005	482	Birth	Parent	LEUxGABxSIK	

NORTHERN WHITE-CHEEKED GIBBON– Current European Population by location

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
APELDOORN											
108	F	18 Aug 1993	13	14	CLERES	18 Aug 1993	C93420	Birth	Parent	KANAK	
					FONTAINE	31 Aug 1999	57HC12	Loan to			
					APELDOORN	14 Mar 2000	2135	Loan to			
123	M	30 Sep 1996	33	25	HANNOVER	30 Sep 1996	II518	Birth	Parent	YUNNAN	00-01FA-1BEF
					PLANCKNDL	8 Nov 1997	131007	Loan to			00-000D-2D11
					APELDOORN	4 Jul 2001	2277	Loan to			
152	M	10 Feb 2003	123	108	APELDOORN	10 Feb 2003	2485	Birth	Parent	KIRIN	
					HANNOVER	10 Feb 2003	II923	Ownership			
162	M	19 Dec 2004	123	108	APELDOORN	19 Dec 2004	2725	Birth	Parent		
Totals: 3.1.0 (4)											
ASSON											
20	F	~ 1971	WILD	WILD	ASSON	1 Jan 1973	750	Transfer	Unknown	SARA	
79	M	30 Nov 1986	13	14	CLERES	30 Nov 1986	C86001	Birth	Parent	MAX	
					PARIS ZOO	22 Jun 1991	Z91113	Loan to			
					ASSON	10 Apr 2002	2376	Loan to			
Totals: 1.1.0 (2)											

CLERES

13	M	~ Aug 1968	WILD	WILD	LAOS	????	NONE	Capture	Unknown	LE GROS	
					CLERES	28 Jun 1969	C69001	Transfer			
					PARIS ZOO	2 Mar 1993	_____	Loan to			
					CLERES	3 Mar 1993	C69001	Transfer			
14	F	????	WILD	WILD	LAOS	????	NONE	Capture	Unknown	LA MERE	
					CLERES	28 Jun 1969	069002	Transfer			
15	M	~ Sep 1969	WILD	WILD	LAOS	~ 1970	NONE	Capture	Unknown	SIKKI	
					CLERES	1 Apr 1970	C70002	Transfer			
88	F	9 Feb 1989	13	14	CLERES	9 Feb 1989	C89001	Birth	Parent		
157	?	13 Feb 2004	15	88	CLERES	13 Feb 2004	CA4003	Birth	Parent		
158	M	15 Feb 2004	13	14	CLERES	15 Feb 2004	CA4004	Birth	Parent		
169	?	4 Dec 2006	13	14	CLERES	4 Dec 2006	CA6161	Birth	Parent		

Totals: 3.2.2 (7)

DUISBURG

28	M	~ 1973	WILD	WILD	DUISBURG	28 Oct 1988	525	Transfer	Unknown	CHARLY	00-0643-EBA9
35	F	~ 1974	WILD	WILD	DUISBURG	23 Jan 1976	143	Transfer	Unknown	SOPHIE	00-0644-0676
137	F	7 Apr 2000	28	35	DUISBURG	7 Apr 2000	4046	Birth	Parent	SULU	00-0643-FFA5
148	M	27 Aug 2002	110	35	DUISBURG	27 Aug 2002	4515	Birth	Parent	CLIF	00-0643-917D
165	M	23 Mar 2005	?	35	DUISBURG	23 Mar 2005	4877	Birth	Parent	SATHA/WUKI?	
167	M	7 Apr 2006	28	35	DUISBURG	7 Apr 2006	5123	Birth	Parent	MERU	

Totals: 4.2.0 (6)

EPARADISE

85	M	24 Jan 1988	44	30	LIBEREC	24 Jan 1988	_____	Birth	Unknown	ALEX
					LOUROSA Z	1 Jul 1993	_____	Transfer		
					LAGOS ZOO	9 Sep 2000	_____	Transfer		
					PRIVATE	24 Aug 2001	_____	Transfer		

Totals: 1.0.0 (1)

FONTAINE

24	F	~ 1972	WILD	WILD	PARIS ZOO	13 Feb 1979	_____	Transfer	Unknown	
					PARIS JP	26 Mar 1979	M79147	Transfer		
					FONTAINE	28 Jun 1989	57HC4	Loan to		
125	M	20 Sep 1997	92	24	FONTAINE	20 Sep 1997	57HC11	Birth	Unknown	
142	?	10 Oct 2001	92	24	FONTAINE	10 Oct 2001	57HC14	Birth	Parent	

Totals: 1.1.1 (3)

GDANSK

106	M	~ Jul 1993	UNK	UNK	GDANSK	27 Oct 1993	M00001	Transfer	Unknown	KLEMENS

Totals: 1.0.0 (1)

GUERNO

87	F	21 Oct 1988	15	41	CLERES	21 Oct 1988	C88181	Birth	Parent	
					GUERNO	12 Dec 1996	_____	Loan to		
97	M	2 Jun 1991	13	14	CLERES	2 Jun 1991	C91166	Birth	Parent	
					GUERNO	12 Dec 1996	_____	Loan to		
164	?	10 Mar 2005	97	87	GUERNO	10 Mar 2005	_____	Birth	Parent	250229600014896
170	?	12 Dec 2006	97	87	GUERNO	12 Dec 2006	_____	Birth	Parent	

Totals: 1.1.2 (4)

HILVARENB

6	F	~ 1966	WILD	WILD	LAOS	????	NONE	Capture	Unknown	MIETZI	
					HANNOVER	5 Oct 1969	II/45	Transfer			
					HILVARENB	12 Oct 1989	M66143	Loan to			
						10 Jan 2002	M66143	Transfer			
66	M	29 Jan 1983	31	32	LEIPZIG	29 Jan 1983	_____	Birth	Unknown	ERICH	
					HANNOVER	26 Jun 1985	II/296	Transfer			
					HILVARENB	13 May 1992	M83029	Loan to			
						10 Jan 2002	M83029	Transfer			
144	M	21 Feb 2002	66	6	HILVARENB	21 Feb 2002	M02005	Birth	Parent	YOUNG LU	

Totals: 2.1.0 (3)

KISKUT/Gyor

65	M	~ 1983	WILD	WILD	BUDAPEST	10 Jun 1986	000171	Transfer	Unknown	DODO	
					KISKUT	25 Oct 2001	_____	Loan to			

Totals: 1.0.0 (1)

LA FRONTI/Jerez

115	M	4 Jul 1995	73	34	DUISBURG	4 Jul 1995	2933	Birth	Parent	RASCAL	00-0095-A78F
					FUENGIROL	31 Jan 2001	FU81	Transfer			
					LA FRONTI	11 Feb 2004	GIB1	Loan to			
119	M	22 Dec 1995	77	84	HANNOVER	22 Dec 1995	II497	Birth	Parent	TOM	00-0200-38C5
					FUENGIROL	5 Jul 2000	FU65	Loan to			
					LA FRONTI	11 Feb 2004	GIB2	Loan to			

Totals: 2.0.0 (2)

LAFERRIER/Ozoir

29	M	~ 1974	WILD	WILD	ASSON	1 Jan 1975	_____	Transfer	Unknown	TRESOR
					LA PALMYR	5 Apr 1995	1771	Transfer		
					LAFERRIER	3 Feb 2002	_____	Loan to		
94	M	5 Sep 1990	21	12	LAFERRIER	5 Sep 1990	_____	Birth	Unknown	

Totals: 2.0.0

LIBEREC

34	F	~ 1974	WILD	WILD	DUISBURG	6 Jan 1977	142	Transfer	Unknown	PUPPI	00-0097-2CE7
					LIBEREC	1 Feb 2001	11	Transfer			
96	M	4 May 1991	44	30	LIBEREC	4 May 1991	8	Birth	Parent	MATEJ I	
I											
107	M	7 Jul 1993	44	30	LIBEREC	7 Jul 1993	9	Birth	Parent	MATEJ II	00 0601 3022
109	F	2 Sep 1993	UNK	UNK	BEIJING	2 Sep 1993	_____	Birth	Parent	WEN-WEN	00 0616 0CCB
					LIBEREC	28 Jun 2002	13	Transfer			
139	M	13 Nov 2000	115	34	DUISBURG	13 Nov 2000	4185	Birth	Parent		
					LIBEREC	1 Feb 2001	12	Transfer			
155	M	18 Nov 2003	96	109	LIBEREC	18 Nov 2003	14	Birth	Parent		
168	?	18 May 2006	96	109	LIBEREC	18 May 2006	15	Birth	Parent		

Totals: 4.2.1 (7)

LISIEUX Z

1	M	~ 1960	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CHUBAKA
					AUGUSTIN	1 Jan 1970	_____	Transfer		
					LA PALMYR	28 Jan 1993	1253	Transfer		
					ASSON	5 Apr 1995	1586	Transfer		
					LISIEUX Z	4 Apr 2002	M02030	Loan to		
43	F	5 May 1976	9	6	HANNOVER	5 May 1976	II/142	Birth	Parent	MOTJA
					PLANCKNDL	16 Nov 1994	131005	Loan to		
					LISIEUX Z	2 Nov 1997	M97078	Loan to		
52	M	????	WILD	WILD	PARIS ZOO	13 Feb 1979	_____	Transfer	Unknown	CLAUDE
					LA PALMYR	24 Jun 1980	_____	Loan to		
					MULHOUSE	27 Jun 1985	850020	Transfer		
					ANTWERP	1 Nov 1989	M8971	Loan to		
					PLANCKNDL	8 Dec 1989	131004	Loan to		
					LISIEUX Z	2 Nov 1997	M97079	Loan to		

Totals: 2.1.0 (3)

LONDON RP

95	M	~ Nov 1990	WILD	WILD	LONDON RP	26 Apr 1997	A3565	Transfer	Unknown	JIMMY		

Totals: 1.0.0 (1)

MONTPELLIER

21	M	~ 1972	WILD	WILD	LAFERRIER	1 Mar 1973	_____	Transfer	Unknown		250229600004850	
					LA PALMYR	2 Mar 2002	3212	Loan to				
					MONTPELLIER	2 Oct 2006	?	Transfer				
27	F	~ 1973	WILD	WILD	LAOS	????	NONE	Capture	Unknown		250229600006044	
					PARIS ZOO	13 Feb 1979	_____	Transfer			00-01D3-9293	
					PARIS JP	26 Mar 1979	M79144	Transfer				
					AMSTERDAM	17 Sep 1986	M86058	Transfer				
					LA PALMYR	8 Sep 1999	2679	Transfer				
					MONTPELLIER	2 Oct 2006	?	Transfer				

Totals: 1.1.0 (2)

MULHOUSE

39	M	~ 1975	WILD	WILD	MULHOUSE	25 Mar 1983	830015	Transfer	Unknown	JACK	00-0127CC47
91	F	1 Apr 1990	23	24	FONTAINE	1 Apr 1990	57HC6	Birth	Parent	CONNIE	00-0128-B21F
					MULHOUSE	7 Dec 1996	960252	Loan to			
132	F	15 Nov 1999	39	91	MULHOUSE	15 Nov 1999	990273	Birth	Parent	PAQUITA	
147	M	23 Jul 2002	39	91	MULHOUSE	23 Jul 2002	M02079	Birth	Parent	TAO	
163	F	28 Feb 2005	39	91	MULHOUSE	28 Feb 2005	M05011	Birth	Parent	ALYO	

Totals: 2.3.0 (5)

OLMENSE

62	M	????	UNK	UNK	CUSTOMS	????	_____	Transfer	Hand		
					OLMENSE	3 May 1995	OZ0031	Transfer			

Totals: 1.0.0 (1)

OSNABRUCK

77	M	~ 1986	WILD	WILD	USTI	5 Sep 1987	______	Transfer	Hand	OTTI	968000000042498
					LEIPZIG	12 Nov 1987	M01217	Loan to			
					HANNOVER	17 Jun 1989	II/353	Loan to			
					OSNABRUCK	6 Sep 2001	616	Loan to			
84	F	3 Sep 1987	66	6	HANNOVER	3 Sep 1987	II/282	Birth	Hand	LENA	968000000051006
					OSNABRUCK	6 Sep 2001	617	Loan to			
130	M	25 Mar 1999	77	84	HANNOVER	25 Mar 1999	II574	Birth	Parent	JERRY	968000000043623
					LEIPZIG	25 Mar 1999	M03033	Ownership			
					OSNABRUCK	6 Sep 2001	618	Loan to			
151	M	9 Feb 2003	77	84	OSNABRUCK	9 Feb 2003	774	Birth	Parent	GOLUM	
					HANNOVER	9 Feb 2003	II925	Ownership			
166	M	12 Mar 2006	77	84	OSNABRUCK	12 Mar 2006	1490	Birth	Parent	CARUSO	

Totals: 4.1.0 (5)

OSTRAVA

117	M	2 Aug 1995	13	14	CLERES	2 Aug 1995	C95268	Birth	Parent		00-0213-4018
					OSTRAVA	18 Jun 2002	202028	Loan to			
126	M	21 Nov 1997	13	14	CLERES	21 Nov 1997	C97347	Birth	Parent		00-0212-E514
					OSTRAVA	18 Jun 2002	202029	Loan to			

Totals: 2.0.0 (2)

OVERLOON

69	M	20 Jun 1984	13	14	CLERES	20 Jun 1984	C84001	Birth	Parent	NONKEL	00-0211-8910
					OVERLOON	18 Jun 2001	300280	Loan to			
105	F	6 May 1993	28	35	DUISBURG	6 May 1993	2102	Birth	Hand	KANETTE	
					FONTAINE	11 May 1995	57HC8	Loan to			
					APELDOORN	14 Mar 2000	2136	Loan to			
					OVERLOON	19 Jun 2001	300283	Loan to			
149	M	12 Oct 2002	69	105	OVERLOON	12 Oct 2002	300417	Birth	Parent	MALOU	00-064D-B3F0
161	M	13 Dec 2004	69	105	OVERLOON	13 Dec 2004	300841	Birth	Parent		
171	?	14 Dec 2006	69	105	OVERLOON	14 Dec 2006	301222	Birth	Parent		

Totals: 3.1.1 (5)

PLANCKNDL

33	M	~ 1974	WILD	WILD	HILVARENB	26 Feb 1976	M76019	Transfer	Unknown	PAULTJE	00-01C9-472E
					HANNOVER	13 May 1992	II417	Loan to			
					PLANCKNDL	8 Nov 1997	131006	Loan to			
133	F	29 Nov 1999	33	25	PLANCKNDL	29 Nov 1999	131008	Birth	Parent	ASTRIKS	056098101173538
					HANNOVER	29 Nov 1999	II608	Ownership			

Totals: 1.1.0 (2)

SZEGED

114	M	10 May 1995	76	74	USTI	10 May 1995	950015	Birth	Hand	KASZAT	00-0204-03EB
					SZEGED	28 Dec 1996	1	Loan to			

Totals: 1.0.0 (1)

TWYCROSS

37	F	~ 1974	WILD	WILD	TWYCROSS	24 Jul 1977	54	Transfer	Unknown	CLARA	
100	M	10 Feb 1992	39	40	MULHOUSE	10 Feb 1992	920009	Birth	Parent	EARL	
					TWYCROSS	14 Jan 1997	2028	Loan to			
112	F	28 Oct 1994	4	17	PORTLAND	28 Oct 1994	94161	Birth	Parent	KAMPUCHEA	00-0133-789D
					TWYCROSS	19 Oct 2000	3570	Transfer			
159	M	13 May 2004	100	112	TWYCROSS	13 May 2004	4344	Birth	Hand	ETHAN	

Totals: 2.2.0 (4)

USTI

74	F	~ 1986	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	FEA	
					USTI	23 May 1987	930121	Transfer			
76	M	~ 1986	WILD	WILD	USTI	19 Nov 1987	930120	Transfer	Unknown	TODIK II	
124	M	13 Sep 1997	76	74	USTI	13 Sep 1997	UL9770	Birth	Parent	LUCIE	
136	F	14 Dec 1999	76	74	USTI	14 Dec 1999	UL9950	Birth	Unknown		
160	?	10 Oct 2004	76	74	USTI	10 Oct 2004	UL0430	Birth	Parent		

Totals: 2.2.1 (5)

WINGST ZO

71	F	????	UNK	UNK	WINGST ZO	????	_____	Transfer	Unknown

Totals: 0.1.0 (1)

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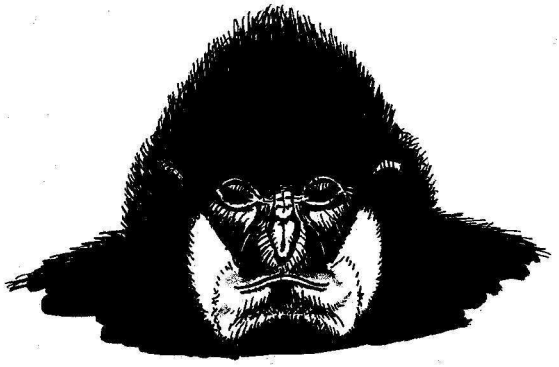
TOTALS: 48.24.8 (80)

European Studbook

Southern White-cheeked Gibbon (data 31.12.2006)

Nomascus siki



SOUTHERN WHITE-CHEEKED GIBBON - Historical European Studbook

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
1	M	~ 1937	WILD	WILD	PARIS ZOO	~ 1937	Z49739	Transfer	Unknown	YOYO	
						27 Oct 1981		Death			
2	M	????	WILD	WILD	BERLIN TP	8 Apr 1963	_____	Transfer	Unknown	MOHRLE	
						14 Nov 1988		Death			
3	F	~ 1962	WILD	WILD	LAOS	~ 1962	NONE	Capture	Unknown	MIMI	
					MULHOUSE	5 Aug 1969	690002	Transfer			
					MUNICH	6 Oct 1986	021002	Loan to			
					MULHOUSE	17 Jan 1991	690002	Transfer			
						30 Oct 2005		Death			
4	M	~ 1964	WILD	WILD	LEIPZIG	~ Jul 1964	_____	Transfer	Unknown	CHARLY	
					WINGST ZO	6 May 1975	_____	Transfer			
					MUNICH	4 Nov 1975	021001	Transfer			
					MULHOUSE	17 Jan 1991	910002	Transfer			
						27 Mar 1997		Death			
5	F	~ Sep 1969	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CHARLOTTE	250229600009415
					CLERES	1 Apr 1970	C70003	Transfer			
					PARIS JP	13 Mar 1985	_____	Loan to			
					CLERES	26 Mar 1985	C70003	Transfer			
					MULHOUSE	11 May 1989	890155	Loan to			
					MUNICH	1 Jun 1989	021004	Loan to			
					MULHOUSE	17 Jan 1991	890155	Loan to			
					ROMAGNE	2 Apr 2004	575	Loan to			
6	M	~ 1984	WILD	WILD	SAIGON	~ 1986	_____	Transfer	Unknown	TOT	00-00F5-59BC
					USTI	23 May 1987	930345	Transfer			
					MULHOUSE	3 Nov 1992	920104	Transfer			
					LONDON RP	22 Oct 1996	A3415	Loan to			
						22 Nov 1999		Death			
7	F	~ 1985	WILD	WILD	BUDAPEST	4 Nov 1987	000172	Transfer	Unknown	TSICKO	
					NYIREGYHA	20 May 1997	_____	Transfer			
						30 May 1997		Death			
8	M	26 Jul 1987	4	3	MUNICH	26 Jul 1987	021003	Birth	Parent	MICHA	
						25 Jan 1990		Death			
9	M	23 Dec 1989	4	5	MUNICH	23 Dec 1989	021005	Birth	Parent	DORIAN	
					MULHOUSE	17 Jan 1991	910003	Loan to			

10	F	~ 1990	WILD	WILD	LONDON RP	9 Jan 1996	A3202	Transfer	Unknown	CONCY	00-00F7-2385	
						14 Nov 1999		Death				
11	M	18 Aug 1990	4	3	MUNICH	18 Aug 1990	021006	Birth	Parent	DUFFY	250229600009654	
					MULHOUSE	18 Aug 1990	910004	Ownership				
						17 Jan 1991	910004	Transfer				
					ROMAGNE	2 Apr 2004	576	Loan to				
12	F	13 Jun 1993	4	3	MULHOUSE	13 Jun 1993	930068	Birth	Parent	FANY		
13	M	10 Aug 1998	11	5	MULHOUSE	10 Aug 1998	980206	Birth	None			
						10 Aug 1998		Death				
14	M	7 Jul 1999	9	12	MULHOUSE	7 Jul 1999	990200	Birth	Hand	POPAUL		
15	M	5 Dec 1999	11	5	MULHOUSE	5 Dec 1999	990278	Birth	Parent	PIMKY	250229600010162	
					AMSTERDAM	4 Nov 2004	M04110	Loan to				
16	M	30 Nov 2000	9	12	MULHOUSE	30 Nov 2000	M-0105	Birth	Parent			
						6 Dec 2000		Death				
17	F	24 Sep 2001	9	12	MULHOUSE	24 Sep 2001	M01079	Birth	None			
						24 Sep 2001		Death				
18	M	18 Aug 2002	11	5	MULHOUSE	18 Aug 2002	M02087	Birth	Parent	TOKAY	250229600010158	
					ROMAGNE	2 Apr 2004	577	Loan to				
19	M	19 Aug 2002	9	12	MULHOUSE	19 Aug 2002	M02088	Birth	Parent	TAI-TCHI		
20	?	19 Mar 2005	11	5	ROMAGNE	19 Mar 2005	663	Birth	Parent	KALAWEIT		
21	?	25 Oct 2005	9	12	MULHOUSE	25 Oct 2005	M05131	Birth	Parent	HANOI		

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TOTALS: 13.6.2 (21)

Nomascus siki hybrids: 6.4.2 (12)

1 : *Nomascus gabriellae* studbook **1** : *Nomascus siki* studbook

1 : *Nomascus leucogenys* studbook

H2	F	13 Mar 1973	**1**	3	PARIS ZOO	13 Mar 1973	Z73052	Birth	Parent	SIKxGAB
H3	M	28 Apr 1975	*10*	**3**	MULHOUSE	28 Apr 1975	750030	Birth	Parent	LEUxSIK
					LA PALMYR	27 Jun 1985	22	Transfer		
					AUGUSTIN	27 Jan 1993	_____	Transfer		
						~ 1998		Death		
H4	M	10 Apr 1978	1	**5**	CLERES	10 Apr 1978	C78008	Birth	Unknown	GABxSIK
						15 May 1981		Death		
H5	F	15 Nov 1978	*10*	**3**	MULHOUSE	15 Nov 1978	780023	Birth	Parent	LEUxSIK
					LA PALMYR	27 Jun 1985	24	Transfer		
					AUGUSTIN	27 Jan 1993	_____	Transfer		
						29 Dec 1996		Death		
H6	M	10 Dec 1980	1	**5**	CLERES	10 Dec 1980	C80002	Birth	Parent	GABxSIK
					PARIS JP	19 May 1988	_____	Loan to		
					CLERES	30 Jun 1988	C80002	Transfer		
					LA FLECHE	22 Mar 1989	213	Transfer		
					AUGUSTIN	1 Jul 1998	_____	Transfer		
					LE VIGEN	18 Mar 2001	_____	Transfer		
H8	F	6 Nov 1981	*10*	**3**	MULHOUSE	6 Nov 1981	810070	Birth	Parent	LEUxSIK
					LA PALMYR	27 Jun 1985	23	Transfer		
					LA FLECHE	24 Sep 1991	215	Transfer		
H9	M	18 Dec 1982	1	**5**	CLERES	18 Dec 1982	C82006	Birth	Parent	GABxSIK
					PARIS JP	19 May 1988	_____	Loan to		
					CLERES	30 Jun 1988	C82006	Transfer		
					LA FLECHE	22 Mar 1989	214	Transfer		
H15	?	21 Apr 1987	1	**5**	CLERES	21 Apr 1987	C87001	Birth	None	GABxSIK
						21 Apr 1987		Death		

H29	M	8 Sep 1996	*65*	**7**	BUDAPEST	8 Sep 1996	001075	Birth	Hand	LEUxSIK
					KISKUT	20 Nov 1997	_____	Loan to		
						8 Dec 1997	_____	Transfer		
H31	F	2 Aug 1998	**11**	H22	MULHOUSE	2 Aug 1998	980202	Birth	None	SIK x G*S
						2 Aug 1998		Death		
H37	M	17 Sep 2001	H9	H8	LA FLECHE	17 Sep 2001	220	Birth	Parent	LEUxGABxSIK
					MONTEMOR	2 Oct 2OO6				
H38	?	16 Jun 2005	H9	H8	LA FLECHE	16 Jun 2005	482	Birth	Parent	LEUxGABxSIK

SOUTHERN WHITE-CHEEKED GIBBON – Current European Population

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
5	F	~ Sep 1969	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CHARLOTTE	250229600009415
					CLERES	1 Apr 1970	C70003	Transfer			
					PARIS JP	13 Mar 1985	_____	Loan to			
					CLERES	26 Mar 1985	C70003	Transfer			
					MULHOUSE	11 May 1989	890155	Loan to			
					MUNICH	1 Jun 1989	021004	Loan to			
					MULHOUSE	17 Jan 1991	890155	Loan to			
					ROMAGNE	2 Apr 2004	575	Loan to			
9	M	23 Dec 1989	4	5	MUNICH	23 Dec 1989	021005	Birth	Parent	DORIAN	
					MULHOUSE	17 Jan 1991	910003	Loan to			
11	M	18 Aug 1990	4	3	MUNICH	18 Aug 1990	021006	Birth	Parent	DUFFY	250229600009654
					MULHOUSE	18 Aug 1990	910004	Ownership			
						17 Jan 1991	910004	Transfer			
					ROMAGNE	2 Apr 2004	576	Loan to			
12	F	13 Jun 1993	4	3	MULHOUSE	13 Jun 1993	930068	Birth	Parent	FANY	
14	M	7 Jul 1999	9	12	MULHOUSE	7 Jul 1999	990200	Birth	Hand	POPAUL	
15	M	5 Dec 1999	11	5	MULHOUSE	5 Dec 1999	990278	Birth	Parent	PIMKY	250229600010162
					AMSTERDAM	4 Nov 2004	M04110	Loan to			
18	M	18 Aug 2002	11	5	MULHOUSE	18 Aug 2002	M02087	Birth	Parent	TOKAY	250229600010158
					ROMAGNE	2 Apr 2004	577	Loan to			
19	M	19 Aug 2002	9	12	MULHOUSE	19 Aug 2002	M02088	Birth	Parent	TAI-TCHI	
20	?	19 Mar 2005	11	5	ROMAGNE	19 Mar 2005	663	Birth	Parent	KALAWEIT	
21	M	25 Oct 2005	9	12	MULHOUSE	25 Oct 2005	M05131	Birth	Parent	HANOI	

TOTALS: 7.2.1 (10)

Nomascus siki hybrids: 4.3.1 (8)

1 : *Nomascus gabriellae* studbook **1** :*Nomascus siki* studbook

1 : *Nomascus leucogenys* studbook

H2	F	13 Mar 1973	**1**	3	PARIS ZOO	13 Mar 1973	Z73052	Birth	Parent	SIKxGAB	
H6	M	10 Dec 1980	1	**5**	CLERES	10 Dec 1980	C80002	Birth	Parent	GABxSIK	
					PARIS JP	19 May 1988	_____	Loan to			
					CLERES	30 Jun 1988	C80002	Transfer			
					LA FLECHE	22 Mar 1989	213	Transfer			
					AUGUSTIN	1 Jul 1998	_____	Transfer			
					LE VIGEN	18 Mar 2001	_____	Transfer			
H8	F	6 Nov 1981	*10*	**3**	MULHOUSE	6 Nov 1981	810070	Birth	Parent	LEUxSIK	
					LA PALMYR	27 Jun 1985	23	Transfer			
					LA FLECHE	24 Sep 1991	215	Transfer			
H9	M	18 Dec 1982	1	**5**	CLERES	18 Dec 1982	C82006	Birth	Parent	GABxSIK	
					PARIS JP	19 May 1988	_____	Loan to			
					CLERES	30 Jun 1988	C82006	Transfer			
					LA FLECHE	22 Mar 1989	214	Transfer			
H22	F	~ 1991	WILD	WILD	MULHOUSE	27 Apr 1993	930054	Transfer	Unknown	GABxSIK	00-0008-BC11
					AMSTERDAM	4 Nov 2004	M04111	Loan to			
H29	M	8 Sep 1996	*65*	**7**	BUDAPEST	8 Sep 1996	001075	Birth	Hand	LEUxSIK	
					KISKUT	20 Nov 1997	_____	Loan to			
						8 Dec 1997	_____	Transfer			
H37	M	17 Sep 2001	H9	H8	LA FLECHE	17 Sep 2001	220	Birth	Parent	LEUxGABxSIK	
					MONTEMOR	2 Oct 2006					
H38	?	16 Jun 2005	H9	H8	LA FLECHE	16 Jun 2005	482	Birth	Parent	LEUxGABxSIK	

SOUTHERN WHITE-CHEEKED GIBBON – Current European Population by location

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
AMSTERDAM											
15	M	5 Dec 1999	11	5	MULHOUSE	5 Dec 1999	990278	Birth	Parent	PIMKY	250229600010162
					AMSTERDAM	4 Nov 2004	M04110	Loan to			
Totals: 1.0.0 (1)											
MULHOUSE											
9	M	23 Dec 1989	4	5	MUNICH	23 Dec 1989	021005	Birth	Parent	DORIAN	
					MULHOUSE	17 Jan 1991	910003	Loan to			
12	F	13 Jun 1993	4	3	MULHOUSE	13 Jun 1993	930068	Birth	Parent	FANY	
14	M	7 Jul 1999	9	12	MULHOUSE	7 Jul 1999	990200	Birth	Hand	POPAUL	
19	M	19 Aug 2002	9	12	MULHOUSE	19 Aug 2002	M02088	Birth	Parent	TAI-TCHI	
21	M	25 Oct 2005	9	12	MULHOUSE	25 Oct 2005	M05131	Birth	Parent	HANOI	
Totals: 4.1.0 (5)											

ROMAGNE

5	F	~ Sep 1969	WILD	WILD	LAOS	????	NONE	Capture	Unknown	CHARLOTTE	250229600009415
					CLERES	1 Apr 1970	C70003	Transfer			
					PARIS JP	13 Mar 1985	_____	Loan to			
					CLERES	26 Mar 1985	C70003	Transfer			
					MULHOUSE	11 May 1989	890155	Loan to			
					MUNICH	1 Jun 1989	021004	Loan to			
					MULHOUSE	17 Jan 1991	890155	Loan to			
					ROMAGNE	2 Apr 2004	575	Loan to			
11	M	18 Aug 1990	4	3	MUNICH	18 Aug 1990	021006	Birth	Parent	DUFFY	250229600009654
					MULHOUSE	18 Aug 1990	910004	Ownership			
						17 Jan 1991	910004	Transfer			
					ROMAGNE	2 Apr 2004	576	Loan to			
18	M	18 Aug 2002	11	5	MULHOUSE	18 Aug 2002	M02087	Birth	Parent	TOKAY	250229600010158
					ROMAGNE	2 Apr 2004	577	Loan to			
20	?	19 Mar 2005	11	5	ROMAGNE	19 Mar 2005	663	Birth	Parent	KALAWEIT	

Totals: 2.1.1 (4)

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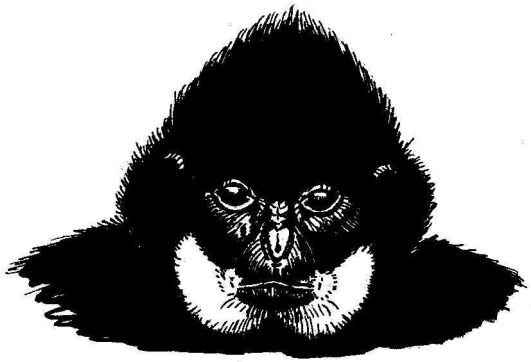
TOTALS: 7.2.1 (10)

European Studbook

Red-cheeked Gibbon (data 31.12.2006)

Nomascus gabriellae



RED-CHEEKED GIBBON – Historical European Studbook

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
1	M	~ Apr 1950	WILD	WILD	WILD	????	NONE	Capture	Unknown	CHARLES	
					CLERES	1 Apr 1950	C50001	Transfer			
						23 May 1996		Death			
2	M	~ 1961	WILD	WILD	WILD	~ 1961	NONE	Capture	Unknown	CHARLOT	
					AMIENS	~ 1961	______	Transfer			
					MULHOUSE	2 Sep 1982	820007	Transfer			
						4 Apr 1995		Death			
3	F	????	WILD	WILD	WILD	????	NONE	Capture	Unknown	MARIE	
					PARIS ZOO	21 May 1963	Z63160	Transfer			
						31 Mar 1974		Death			
4	F	~ 1967	WILD	WILD	WILD	~ 1967	NONE	Birth	Unknown	HKF1	
					HONG KONG	2 Feb 1968	680001	Transfer			
						29 Oct 1997		Death			
5	M	~ 1970	WILD	WILD	WILD	????	NONE	Capture	Unknown	ARTHUR	00-0212-F973
					LA FLECHE	31 Jan 1973	212	Transfer			
					CLERES	27 Jan 1989	C90123	Transfer			
					MULHOUSE	27 Jan 1989	890020	Loan to			
					CLERES	26 Jul 1990	C90123	Transfer			
						26 May 2000		Death			
6	F	~ 1973	WILD	WILD	UNKNOWN	????	NONE	Capture	Unknown	TAI	
					THOIRY	13 Apr 1973	73001	Transfer			
					MULHOUSE	23 Nov 1983	830019	Loan to			
					THOIRY	15 Mar 1984	73001	Transfer			
					MULHOUSE	17 Apr 1985	830019	Transfer			
					FONTAINE	11 Dec 1996	60HC5	Loan to			
7	M	~ 1973	WILD	WILD	WILD	????	NONE	Capture	Unknown	HKM1	00-0639-2A49
					HONG KONG	16 Aug 1974	740002	Transfer			
					FUENGIROL	11 Feb 2004	______	Transfer			
8	F	~ 1973	WILD	WILD	WILD	????	NONE	Capture	Unknown	HKF2	
					HONG KONG	16 Aug 1974	740001	Transfer			
						19 Feb 2002		Death			

9	M	~ 1973	WILD	WILD	VIETNAM S	~ 1973	NONE	Capture	Unknown	KOO	00-0114-BE9D		
					LOSANGELE	5 Apr 1980	94010	Transfer					
						29 Aug 2001		Death					
10	F	~ 1973	WILD	WILD	VIETNAM S	~ 1973	NONE	Capture	Unknown	BAHMETOO			
					LOSANGELE	5 Apr 1980	94011	Transfer					
11	F	~ 1974	WILD	WILD	SE ASIA	~ 1974	NONE	Capture	Unknown	GABRIELLA	00-0213-3D4F		
					V.D.BRINK	~ 1976	_____	Transfer					
					HILVARENB	15 Apr 1976	M76020	Transfer					
					CLERES	10 Aug 1990	C90137	Loan to					
						10 Nov 2001		Death					
12	M	~ 1979	WILD	WILD	DVURKRALV	~ 1985	_____	Transfer	Unknown	VILDA	00-01BF-9DFC		
					OLOMOUC	29 Dec 1988	_____	Loan to					
					JIHLAVA	20 Dec 1989	1	Loan to					
13	M	4 May 1979	7	4	HONG KONG	4 May 1979	790097	Birth	Parent	HKM2			
						9 Jan 1994		Death					
14	M	22 Sep 1980	7	8	HONG KONG	22 Sep 1980	800225	Birth	Parent	HKM3			
						4 Jan 1981		Death					
15	F	15 Jul 1981	9	10	LOSANGELE	15 Jul 1981	94241	Birth	Parent	ROBIN	968000000686449		
					MULHOUSE	10 Jan 1992	920003	Loan to					
					OSNABRUCK	31 Jan 1995	244	Loan to					
					HANNOVER	6 Sep 2001	II646	Loan to					
						16 Mar 2006		Purchase from L.A					
16	M	21 Oct 1981	7	8	HONG KONG	21 Oct 1981	810206	Birth	Parent	HKM4			
						29 Sep 1986		Death					
17	F	6 Mar 1982	7	4	HONG KONG	6 Mar 1982	820227	Birth	Unknown	TINA/HKF3			
					SD-WAP	26 Apr 1989	689202	Loan to					
18	F	~ 1983	WILD	WILD	WILD	????	NONE	Capture	Unknown	TOTO			
					MULHOUSE	10 Aug 1983	830018	Transfer					
					MONTPELLI	6 Feb 1991	_____	Loan to					
						~ Apr 1996		Death					
19	F	~ 1983	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	MINNI			
					SAIGON	~ 1985	_____	Transfer					
					LEIPZIG	21 Nov 1986	M00278	Transfer					
					HOYERSWER	8 Dec 1986	_____	Loan to					
					LEIPZIG	14 Sep 1987	M00278	Transfer					

20	F	~ 1984	WILD	WILD	DVURKRALV	~ 1985	_____	Transfer	Unknown	IVANA	00-01C4-B9ED
					OLOMOUC	31 Mar 1989	_____	Loan to			
					JIHLAVA	20 Dec 1989	2	Loan to			
21	F	11 Nov 1984	7	4	HONG KONG	11 Nov 1984	840001	Birth	Parent	THAI/ALMON	
					MULHOUSE	21 Mar 1991	910028	Loan to			
					FONTAINE	8 Mar 1993	60HC2	Loan to			
	.					3 Jan 1996		Death			
22	F	16 May 1985	7	8	HONG KONG	16 May 1985	850001	Birth	Parent	ANDREA	055-050-260
					LOSANGELE	18 Nov 1991	96070	Loan to			
						30 Aug 1995	96070	Transfer			
23	M	~ Dec 1985	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	LII	
					SAIGON	~ 1986	_____	Transfer			
					LEIPZIG	4 Jun 1987	M00275	Transfer			
					HOYERSWER	1 Jul 1987	_____	Loan to			
					LEIPZIG	14 Sep 1987	M00275	Transfer			
					EBERSWALD	6 Dec 1996	_____	Loan to			
24	M	~ 1986	WILD	WILD	USTI	26 Oct 1989	_____	Transfer	Unknown		
						10 Sep 1992		Death			
25	F	~ 1986	WILD	WILD	VIETNAM N	~ 1986	NONE	Capture	Unknown	JOZEFINA	00-0123-FBEA
					MOSCOW	18 Feb 1987	A00339	Transfer			
					BUDAPEST	16 Mar 1991	000173	Loan to			
					BOJNICE	28 Jun 1994	M00527	Loan to			
					BRATISLAV	11 Sep 1996	D11996/3	Loan to			
					BOJNICE	12 Jun 2002	M00527	Loan to			
26	M	~ 1986	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	FALCO	CZE 09810011310
					HANOI	~ 1987	_____	Transfer			
					USTI	5 Sep 1987	930118	Transfer			
					LESNA-GOT	29 Apr 1998	203718	Loan to			
					USTI	12 May 1999	930118	Transfer			
					LEIPZIG	27 May 1999	M02638	Loan to			
						16 May 2001		Death			
27	F	????	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	PATTY	
					HANOI	~ 1986	_____	Transfer			
					USTI	19 Nov 1987	930119	Transfer			
					LESNA-GOT	29 Apr 1998	203719	Loan to			
						18 May 1998		Death			
28	M	7 Aug 1986	9	10	LOSANGELE	7 Aug 1986	95141	Birth	Unknown	YANG MENGG	
					MULHOUSE	10 Jan 1992	920002	Transfer			
					FONTAINE	8 Mar 1993	60HC1	Loan to			

29	F	~ 1987	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	ZOEY	000Z034A75
					MONKEYWRL	19 Jul 2000	_____	Transfer			
30	F	~ 1987	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	ALEX	0001C8E8A7
					MONKEYWRL	19 Jul 2000	_____	Transfer			
31	M	~ Jun 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	LIPING	
					HANOI	~ 1989	_____	Transfer			
					USTI	26 Oct 1989	930122	Transfer			
					DECIN	24 May 1990	_____	Loan to			
					USTI	27 Jun 1991	930122	Transfer			
					OHRADA	29 Jul 1997	_____	Loan to			
					LJUBLJANA	1 Dec 1998	PM0002	Loan to			
32	F	~ Jun 1987	WILD	WILD	OSIJEK	????	_____	Transfer	Unknown	LILING	
					LJUBLJANA	10 Aug 1991	PM0001	Transfer			
33	M	20 Jun 1987	2	6	MULHOUSE	20 Jun 1987	870018	Birth	Parent	VICTOR	062-312-266
					LOSANGELE	8 Jan 1992	96075	Transfer			
34	M	~ 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	KUBA	
					HANOI	~ 1987	_____	Transfer			
					USTI	19 Nov 1987	930123	Transfer			
					OLOMOUC	10 Jun 1988	3464	Loan to			
35	F	~ 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	GABINA	
					HANOI	~ 1987	_____	Transfer			
					USTI	19 Nov 1987	930124	Transfer			
					OLOMOUC	10 Jun 1988	3374	Loan to			
36	M	~ 1988	WILD	WILD	SAIGON	~ 1989	_____	Transfer	Unknown	SERVAC	00-0015-E249
					USTI	26 Oct 1989	_____	Transfer			
					DECIN	24 May 1990	_____	Loan to			
					USTI	27 Jun 1991	_____	Transfer			
					BOJNICE	19 May 1993	M00040	Transfer			
					BRATISLAV	11 Sep 1996	D11996/1	Loan to			
					BOJNICE	12 Jun 2002	M00040	Transfer			

37	M	~ 1988	WILD	WILD	SAIGON	~ 1989	_____		Transfer	Unknown	BONIFAC	00-0015-EAF3
					USTI	26 Oct 1989	_____		Transfer			
					DECIN	24 May 1990	_____		Loan to			
					USTI	27 Jun 1991	_____		Transfer			
					BOJNICE	19 May 1993	M00041		Transfer			
					BRATISLAV	11 Sep 1996	D11996/2		Loan to			
					BOJNICE	12 Jun 2002	M00041		Transfer			
38	M	~ Apr 1988	WILD	WILD	SAIGON	~ 1988	_____		Transfer	Unknown	DONG NAI	00-01DO-CDEB
					LEIPZIG	26 Jan 1989	M00276		Transfer			
					EBERSWALD	29 May 1989	_____		Loan to			
					LEIPZIG	6 Dec 1996	M00276		Transfer			
					OSIJEK	18 Sep 1999	_____	ltf	Loan to			
39	F	~ Apr 1988	WILD	WILD	WILD	????	NONE		Capture	Unknown	NAM KATJE	
					SAIGON	~ 1988	_____		Transfer			
					LEIPZIG	26 Jan 1989	M00277		Transfer			
					EBERSWALD	29 May 1989	_____		Loan to			
40	F	~ Jun 1988	WILD	WILD	OSIJEK	????	_____		Transfer	Unknown	MISA	00-001F-4057
					LJUBLJANA	10 Aug 1991	PM0005		Transfer			
					BOJNICE	15 Apr 1998	M00044		Transfer			
					BRATISLAV	15 Apr 1998	D150498		Loan to			
					BOJNICE	12 Jun 2002	M00044		Transfer			
41	F	~ Jun 1988	WILD	WILD	WILD	????	NONE		Capture	Unknown		
					OSIJEK	????	_____		Transfer			
					LJUBLJANA	10 Aug 1991	PM0004		Loan to			
					OSIJEK	22 Jun 1998	_____	ltf	Transfer			
42	F	10 Nov 1988	7	4	HONG KONG	10 Nov 1988	880002		Birth	Parent	CHEYANE	00-013B-D1A7
					PRETORIA	11 Oct 1992	903232		Loan to			
43	M	1 Dec 1988	13	8	HONG KONG	1 Dec 1988	880003		Birth	Parent	CHANG	968000000687547
					OSNABRUCK	8 Feb 1995	245		Loan to			
					HANNOVER	6 Sep 2001	II647		Loan to			
44	M	13 Jun 1989	9	10	LOSANGELE	13 Jun 1989	95737		Birth	Unknown	MELEKAT	00-0635-1C4B
					CINCINNAT	12 Jan 1994	194009		Loan to			
					HONG KONG	26 Aug 1995	950032		Transfer			
45	F	6 Jan 1990	2	6	MULHOUSE	6 Jan 1990	900001		Birth	Parent	CHLOE	
46	F	6 Nov 1990	12	20	JIHLAVA	6 Nov 1990	3		Birth	Unknown		
						6 Feb 1992			Death			
47	F	28 Jan 1991	13	8	HONG KONG	28 Jan 1991	910002		Birth	Parent		00-01C6-E949

48	M	14 Jul 1991	7	4	HONG KONG	14 Jul 1991	910001	Birth	Parent	GUCIO	00-06-0104-E3
					WARSAW	10 Mar 1995	S3368	Loan to			
49	M	~ Oct 1991	WILD	WILD	WILD	????	NONE	Capture	Unknown	DAN	00-0008-C770
					MULHOUSE	27 Apr 1993	930052	Transfer			
50	F	~ 1991	UNK	UNK	WARSAW	12 Oct 1993	S3103	Transfer	Unknown	FUNIA	
						16 Dec 1997		Death			
51	M	~ Oct 1991	WILD	WILD	WILD	????	NONE	Capture	Unknown		00-0008-C7DE
					MULHOUSE	27 Apr 1993	930053	Transfer			
					PRETORIA	12 Oct 1994	904589	Loan to			
52	F	~ Mar 1992	UNK	UNK	WARSAW	9 Sep 1993	S3093	Transfer	Unknown	BONIA	
53	M	14 Mar 1992	2	6	MULHOUSE	14 Mar 1992	920016	Birth	Parent	EUDES	
					AGRATE	10 Jan 1997	1075	Loan to			
54	F	~ 1992	WILD	WILD	VIETNAM	????	NONE	Capture	Hand	MILOUC	
					OLOMOUC	29 Aug 2000	5371	Loan to			
55	M	13 Dec 1992	12	20	JIHLAVA	13 Dec 1992	4	Birth	Unknown		
						21 Aug 1999		Death			
56	F	6 Mar 1993	13	8	HONG KONG	6 Mar 1993	930003	Birth	Parent	GABRIELLE	00-01C6-3864
					BESANCON	21 Dec 2000	B00128	Transfer			
57	F	10 Mar 1993	28	21	FONTAINE	10 Mar 1993	60HC3	Birth	Parent	ODETTE	
					MULHOUSE	10 Mar 1993	960262	Ownership			
					CLERES	12 Dec 1996	C96497	Loan to			
					AGRATE	10 Jan 1997	1076	Loan to			
58	F	~ Jun 1993	WILD	WILD	VIETNAM S	~ Dec 1993	NONE	Capture	Parent	PU MAT	
					PARIS ZOO	26 Mar 1994	Z94113	Transfer			
					FONTAINE	21 Apr 1995	60HC4	Loan to			
					CLERES	30 Apr 1997	C97171	Loan to			
						12 Jun 1997	C97171	Transfer			
					OLMENSE	15 Dec 2006	OZ0736	Transfer			
59	M	20 Aug 1993	7	4	HONG KONG	20 Aug 1993	_____	Birth	None		
						20 Aug 1993		Death			
60	F	~ 1993	WILD	WILD	VIETNAM	????	NONE	Capture	Parent	VIETTA	985100005297008
					CUSTOMS	????	_____	Transfer			
					KALININGR	8 Feb 1998	100534	Transfer			
					MONKEYWRL	22 May 2002	_____	Loan to			

61	F	~ Nov 1993	WILD	WILD	LONDON RP	26 Apr 1997	A3566	Loan to	Unknown	LUCY	00-060D-BD6E
					EDINBURGH	15 Sep 2004	M04I03	Loan to			
62	M	28 Nov 1994	7	4	HONG KONG	28 Nov 1994	940004	Birth	Parent	BAKMAT	
					CLERES	20 Dec 2001	CA1119	Loan to			
63	M	4 Feb 1995	9	10	LOSANGELE	4 Feb 1995	96274	Birth	Parent	JAKE	030-034-603
					DENVER	19 Nov 1998	980429	Transfer			
					HOGLE	24 Oct 2001	U01107	Loan to			
					LOSANGELE	11 Jun 2004	96274	Ownership			
					MONKEYWRL	23 Nov 2004	_____	Loan to			
64	F	24 Apr 1995	12	20	JIHLAVA	24 Apr 1995	5	Birth	Unknown	ZUZANA	00-01C0-42E4
					BRATISLAV	18 Jul 2005	M1977	Loan to			
65	F	8 May 1996	44	8	HONG KONG	8 May 1996	960023	Birth	Parent	HKF9	
						27 May 1996		Death			
66	M	26 May 1996	49	45	MULHOUSE	26 May 1996	960138	Birth	Parent	MANAU	
					BESANCON	12 Feb 2001	B01008	Loan to			
67	M	24 Jul 1996	34	35	OLOMOUC	24 Jul 1996	4644	Birth	Parent	KUBULA	
68	M	~ 1997	WILD	WILD	CUSTOMS	????	_____	Transfer	Hand	TITO	205229600000483
					MONKEYWRL	3 Apr 2004	_____	Transfer			
69	F	2 Jan 1997	43	15	OSNABRUCK	2 Jan 1997	246	Birth	Hand		
						2 Jan 1997		Death			
70	F	3 Feb 1997	51	42	PRETORIA	3 Feb 1997	906047	Birth	Parent		
71	F	15 Feb 1997	44	8	HONG KONG	15 Feb 1997	970004	Birth	Parent	HKF10	00-0638-A824
72	M	26 Jul 1997	UNK	UNK	JIHLAVA	26 Jul 1997	6	Birth	Parent	ARNOLD	00-01BE-B9BD
					LEIPZIG	3 May 2002	M03287	Loan to			
						14 Jun 2002		Death			
73	M	26 Oct 1997	43	15	OSNABRUCK	26 Oct 1997	369	Birth	Hand		
						1 Nov 1997		Death			
74	F	18 Nov 1997	28	6	FONTAINE	18 Nov 1997	60HC6	Birth	Parent		00-061C-3C1A
					FUENGIROL	30 May 2003	FU594	Loan to			
75	F	~ 1998	WILD	WILD	CUSTOMS	????	_____	Transfer	Hand	PEANUT	985100005472510
					MONKEYWRL	25 Aug 2000	_____	Transfer			

76	F	18 Aug 1998	49	45	MULHOUSE	18 Aug 1998	980215	Birth	Parent	OLEA	250229600015988
					CLERES	2 Feb 2006	CA1119	Loan to			
77	M	3 Sep 1998	43	15	OSNABRUCK	3 Sep 1998	454	Birth	None		
						3 Sep 1998		Death			
78	M	7 Sep 1998	44	47	HONG KONG	7 Sep 1998	980065	Birth	Parent		00-01F7-AA72
						7 Jul 2000		Death			
79	F	28 Dec 1998	44	8	HONG KONG	28 Dec 1998	980072	Birth	Parent		00-01CF-BDAC
80	F	27 Mar 1999	48	52	WARSAW	27 Mar 1999	S4487	Birth	Parent	MIGO	00-0601-D86B
					BOJNICE	29 Sep 2005	M00784	Loan to			
81	M	26 May 1999	51	42	PRETORIA	26 May 1999	907650	Birth	Parent	RAPHAEL	00-0144-71FC
					MULHOUSE	26 May 1999	990298	Ownership			
					MONKEYWRL	1 Sep 2004	_____	Loan to			
82	M	29 Jun 1999	53	57	AGRATE	29 Jun 1999	1248	Birth	Hand		
						6 Jul 1999		Death			
83	?	16 Aug 1999	31	32	LJUBLJANA	16 Aug 1999	PM0006	Birth	None		
						16 Aug 1999		Death			
84	F	16 Aug 1999	12	20	JIHLAVA	16 Aug 1999	7	Birth	Unknown	SUNY	00-05FD-8CE1
85	F	15 Oct 1999	43	15	OSNABRUCK	15 Oct 1999	543	Birth	None		
						15 Oct 1999		Death			
86	M	~ 2000	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	PUNG-YO	0005FC56BB
					MONKEYWRL	21 Jul 2001	_____	Transfer			
87	M	22 May 2000	31	32	LJUBLJANA	22 May 2000	PM0003	Birth	Parent	JON	705060000010368
					EDINBURGH	18 Feb 2005	M05B03	Loan to			
88	?	3 Jun 2000	23	39	EBERSWALD	3 Jun 2000	_____	Birth	None		
						3 Jun 2000		Death			
89	?	3 Jun 2000	23	39	EBERSWALD	3 Jun 2000	_____	Birth	None		
						3 Jun 2000		Death			
90	F	5 Oct 2000	28	6	FONTAINE	5 Oct 2000	60HC7	Birth	Parent		
					LA PALMYR	16 Jun 2006	4074	Transfer			
91	M	30 Oct 2000	44	47	HONG KONG	30 Oct 2000	A00033	Birth	Parent		00-01F6-BAA9

92	M	25 Nov 2000	49	45	MULHOUSE	25 Nov 2000	M-0104	Birth	Parent	ROBIN	250229600015095
					LA PALMYR	10 Aug 2006	4171	Transfer			
93	F	26 Dec 2000	44	8	HONG KONG	26 Dec 2000	A00044	Birth	Parent		00-0638-6E61
94	M	18 Mar 2001	53	57	AGRATE	18 Mar 2001	1321	Birth	None		
						18 Mar 2001		Death			
95	M	24 May 2001	36	40	BRATISLAV	24 May 2001	M1815	Birth	Hand	OLIVER	00001F4057
96	M	25 Jun 2001	51	42	PRETORIA	25 Jun 2001	908691	Birth	Parent		00-0659-216F
					HONG KONG	25 Jun 2001	A30010	Ownership			
					HONG KONG	24 Feb 2005		Transfer			
97	?	1 Aug 2001	23	39	EBERSWALD	1 Aug 2001	_____	Birth	None		
						1 Aug 2001		Death			
98	M	27 Nov 2001	48	52	WARSAW	27 Nov 2001	S5360	Birth	Parent	OBI	
99	F	16 Jan 2002	67	54	OLOMOUC	16 Jan 2002	5632	Birth	Parent		
						20 Jan 2002		Death			
100	M	22 Feb 2002	12	20	JIHLAVA	22 Feb 2002	8	Birth	Unknown		00-062E-F3F4
101	F	6 Apr 2002	36	40	BRATISLAV	6 Apr 2002	M1857	Birth	Hand	NATALIA	000015EB57
102	F	1 Sep 2002	53	57	AGRATE	1 Sep 2002	1430	Birth	Hand		
103	M	18 Sep 2002	49	45	MULHOUSE	18 Sep 2002	M02093	Birth	Parent	TONKIN	
104	M	26 Sep 2002	31	32	LJUBLJANA	26 Sep 2002	PM0007	Birth	Parent	MAL	
105	F	7 Dec 2002	44	47	HONG KONG	7 Dec 2002	A20114	Birth	Parent		
						13 Feb 2003		Death			
106	M	12 Feb 2003	66	56	BESANCON	12 Feb 2003	B03003	Birth	Parent	LEELOO	985101020062975
107	?	11 May 2003	28	6	FONTAINE	11 May 2003	60HC8	Birth	Parent		
108	M	1 Jun 2003	23	39	EBERSWALD	1 Jun 2003	_____	Birth	Hand	SAMMY	
109	F	17 Jun 2003	53	57	AGRATE	17 Jun 2003	1455	Birth	Hand		
110	F	9 Jul 2003	67	54	OLOMOUC	9 Jul 2003	5979	Birth	Parent	RONY	00 0638 6A5C
111	F	27 Aug 2003	43	15	HANNOVER	27 Aug 2003	II805	Birth	Parent		
						28 Aug 2003		Death			

112	M	11 Oct 2003	44	47	HONG KONG	11 Oct 2003	A30072	Birth	Parent		00-0639-3508
113	M	14 Nov 2003	12	20	JIHLAVA	14 Nov 2003	9	Birth	Unknown		
114	M	21 Nov 2003	51	42	PRETORIA	21 Nov 2003	910840	Birth	Parent		
115	M	24 Nov 2003	48	52	WARSAW	24 Nov 2003	S6025	Birth	Parent		
116	M	4 Apr 2004	31	32	LJUBLJANA	4 Apr 2004	PM0008	Birth	Parent		
117	?	5 May 2004	23	39	EBERSWALD	5 May 2004	_____	Birth	Unknown		
118	F	25 Oct 2004	43	15	HANNOVER	25 Oct 2004	II982	Birth	None		
						25 Oct 2004		Death			
119	M	2 Jan 2003	?	40	BOJNICE	2 Jan 2003	M00780	Birth	Parent		
					BOJNICE	3 Jan 2003		Death			
120	F	4 Jan 2004	36	40	BOJNICE	4 Jan 2004	M00781	Birth	Parent		
					BOJNICE	5 Jan 2004		Death			
121	F	26 Nov 2004	36	40	BOJNICE	26 Nov 2004	M00782	Birth	Parent		
					BOJNICE	26 Nov 2004		Death			
122	M	23 Jan 2005	51	42	PRETORIA	23 Jan 2005	911970	Birth	Hand	FRANZI	
123	?	13 Jun 2005	7	74	FUENGIROL	13 Jun 2005	863	Birth	Parent		
124	M	16 Jul 2005	37	25	BOJNICE	16 Jul 2005	M00783	Birth	Parent		
					BOJNICE	16 Jul 2005		Death			
125	?	9 Aug 2005	28	6	FONTAINE	9 Aug 2005	60HC9	Birth	Parent		
126	?	1 Oct 2005	12	20	JILHAVA	1 Oct 2005	10	Birth	UKN		
127	?	18 Nov 2005	44	47	HONG-KONG	18 Nov 2005	A50036	Birth	Parent		
128	?	8 Dec 2005	66	56	BESANCON	8 Dec 2005	B05179	Birth	Parent		
129	M	7 Feb 2006	87	61	EDINBURGH	7 Feb 2006	M06B01	Birth	Parent		
130	M	15 Feb 2006	48	52	WARSAW	15 Feb 2006	S6010	Birth	Parent		
					WARSAW	23 Aug 2006		Death			
131	M	18 Jul 2006			MONKEYWRLD	18 Jul 2006	_____	Birth	Unknown	TIEN	

132	?	13 Sep 2006	49	45	MULHOUSE	13 Sep 2006	M06105	Birth	Parent
133	?	21 Oct 2006	67	54	OLOMOUC	21 Oct 2006	6544	Birth	Parent
134	?	7 Nov 2006	31	32	LJUBLJANA	7 Nov 2006	PM0009	Birth	Parent
135	?	11 Nov 2006	91	79	HONG KONG	11 Nov 2006	A60022	Birth	Parent

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TOTALS: 61.58.16 (135)

Nomascus gabriellae hybrids : 5.3.2 (10)

1 : *Nomascus gabriellae* studbook	**1** : *Nomascus siki* studbook
1 : *Nomascus leucogenys* studbook	**1** : *Nomascus concolor*

H2	F	13 Mar 1973	**1**	3	PARIS ZOO	13 Mar 1973	Z73052	Birth	Parent	SIKxGAB
H4	M	10 Apr 1978	1	**5**	CLERES	10 Apr 1978	C78008	Birth	Unknown	GABxSIK
						15 May 1981		Death		
H6	M	10 Dec 1980	1	**5**	CLERES	10 Dec 1980	C80002	Birth	Parent	GABxSIK
					PARIS JP	19 May 1988	_____	Loan to		
					CLERES	30 Jun 1988	C80002	Transfer		
					LA FLECHE	22 Mar 1989	213	Transfer		
					AUGUSTIN	1 Jul 1998	_____	Transfer		
					LE VIGEN	18 Mar 2001	_____	Transfer		
H9	M	18 Dec 1982	1	**5**	CLERES	18 Dec 1982	C82006	Birth	Parent	GABxSIK
					PARIS JP	19 May 1988	_____	Loan to		
					CLERES	30 Jun 1988	C82006	Transfer		
					LA FLECHE	22 Mar 1989	214	Transfer		
H15	?	21 Apr 1987	1	**5**	CLERES	21 Apr 1987	C87001	Birth	None	GABxSIK
						21 Apr 1987		Death		
H33	F	15 Jun 1999	*95*	61	LONDON RP	15 Jun 1999	A4139	Birth	Parent	LEUxGAB
						5 Oct 1999		Death		
H34	M	6 Jul 2000	*95*	61	LONDON RP	6 Jul 2000	A4415	Birth	Parent	LEUxGAB 00-0604-1BA3
H36	F	31 Jan 2003	*95*	61	LONDON RP	31 Jan 2003	2279	Birth	Parent	LEUxGAB 00-060D-A863
					EDINBURGH	15 Sep 2004	M04104	Loan to		
H37	M	17 Sep 2001	H9	H8	LA FLECHE	17 Sep 2001	220	Birth	Parent	LEUxGABxSIK
					MONTEMOR	2 Oct 2006				
H38	?	16 Jun 2005	H9	H8	LA FLECHE	16 Jun 2005	482	Birth	Parent	LEUxGABxSIK

RED-CHEEKED GIBBON – Current European Population

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
6	F	~ 1973	WILD	WILD	UNKNOWN	????	NONE	Capture	Unknown	TAI	
					THOIRY	13 Apr 1973	73001	Transfer			
					MULHOUSE	23 Nov 1983	830019	Loan to			
					THOIRY	15 Mar 1984	73001	Transfer			
					MULHOUSE	17 Apr 1985	830019	Transfer			
					FONTAINE	11 Dec 1996	60HC5	Loan to			
7	M	~ 1973	WILD	WILD	WILD	????	NONE	Capture	Unknown	HKM1	00-0639-2A49
					HONG KONG	16 Aug 1974	740002	Transfer			
					FUENGIROL	11 Feb 2004	_____	Transfer			
12	M	~ 1979	WILD	WILD	DVURKRALV	~ 1985	_____	Transfer	Unknown	VILDA	00-01BF-9DFC
					OLOMOUC	29 Dec 1988	_____	Loan to			
					JIHLAVA	20 Dec 1989	1	Loan to			
15	F	15 Jul 1981	9	10	LOSANGELE	15 Jul 1981	94241	Birth	Parent	ROBIN	968000000686449
					MULHOUSE	10 Jan 1992	920003	Loan to			
					OSNABRUCK	31 Jan 1995	244	Loan to			
					HANNOVER	6 Sep 2001	II646	Loan to			
						16 Mar 2006		Purchase from L.A			
19	F	~ 1983	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	MINNI	
					SAIGON	~ 1985	_____	Transfer			
					LEIPZIG	21 Nov 1986	M00278	Transfer			
					HOYERSWER	8 Dec 1986	_____	Loan to			
					LEIPZIG	14 Sep 1987	M00278	Transfer			
20	F	~ 1984	WILD	WILD	DVURKRALV	~ 1985	_____	Transfer	Unknown	IVANA	00-01C4-B9ED
					OLOMOUC	31 Mar 1989	_____	Loan to			
					JIHLAVA	20 Dec 1989	2	Loan to			

23	M	~ Dec 1985	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	LII		
					SAIGON	~ 1986	______	Transfer				
					LEIPZIG	4 Jun 1987	M00275	Transfer				
					HOYERSWER	1 Jul 1987	______	Loan to				
					LEIPZIG	14 Sep 1987	M00275	Transfer				
					EBERSWALD	6 Dec 1996	______	Loan to				
25	F	~ 1986	WILD	WILD	VIETNAM N	~ 1986	NONE	Capture	Unknown	JOZEFINA	00-0123-FBEA	
					MOSCOW	18 Feb 1987	A00339	Transfer				
					BUDAPEST	16 Mar 1991	000173	Loan to				
					BOJNICE	28 Jun 1994	M00527	Loan to				
					BRATISLAV	11 Sep 1996	D11996/3	Loan to				
					BOJNICE	12 Jun 2002	M00527	Loan to				
28	M	7 Aug 1986	9	10	LOSANGELE	7 Aug 1986	95141	Birth	Unknown	YANG MENGG		
					MULHOUSE	10 Jan 1992	920002	Transfer				
					FONTAINE	8 Mar 1993	60HC1	Loan to				
29	F	~ 1987	WILD	WILD	PINGTUNG	????	______	Transfer	Hand	ZOEY	000Z034A75	
					MONKEYWRL	19 Jul 2000	______	Transfer				
30	F	~ 1987	WILD	WILD	PINGTUNG	????	______	Transfer	Hand	ALEX	0001C8E8A7	
					MONKEYWRL	19 Jul 2000	______	Transfer				
31	M	~ Jun 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	LIPING		
					HANOI	~ 1989	______	Transfer				
					USTI	26 Oct 1989	930122	Transfer				
					DECIN	24 May 1990	______	Loan to				
					USTI	27 Jun 1991	930122	Transfer				
					OHRADA	29 Jul 1997	______	Loan to				
					LJUBLJANA	1 Dec 1998	PM0002	Loan to				
32	F	~ Jun 1987	WILD	WILD	OSIJEK	????	______	Transfer	Unknown	LILING		
					LJUBLJANA	10 Aug 1991	PM0001	Transfer				
34	M	~ 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	KUBA		
					HANOI	~ 1987	______	Transfer				
					USTI	19 Nov 1987	930123	Transfer				
					OLOMOUC	10 Jun 1988	3464	Loan to				
35	F	~ 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	GABINA		
					HANOI	~ 1987	______	Transfer				
					USTI	19 Nov 1987	930124	Transfer				
					OLOMOUC	10 Jun 1988	3374	Loan to				

36	M	~ 1988	WILD	WILD	SAIGON	~ 1989	_____	Transfer	Unknown	SERVAC	00-0015-E249
					USTI	26 Oct 1989	_____	Transfer			
					DECIN	24 May 1990	_____	Loan to			
					USTI	27 Jun 1991	_____	Transfer			
					BOJNICE	19 May 1993	M00040	Transfer			
					BRATISLAV	11 Sep 1996	D11996/1	Loan to			
					BOJNICE	12 Jun 2002	M00040	Transfer			
37	M	~ 1988	WILD	WILD	SAIGON	~ 1989	_____	Transfer	Unknown	BONIFAC	00-0015-EAF3
					USTI	26 Oct 1989	_____	Transfer			
					DECIN	24 May 1990	_____	Loan to			
					USTI	27 Jun 1991	_____	Transfer			
					BOJNICE	19 May 1993	M00041	Transfer			
					BRATISLAV	11 Sep 1996	D11996/2	Loan to			
					BOJNICE	12 Jun 2002	M00041	Transfer			
39	F	~ Apr 1988	WILD	WILD	WILD	????	NONE	Capture	Unknown	NAM KATJE	
					SAIGON	~ 1988	_____	Transfer			
					LEIPZIG	26 Jan 1989	M00277	Transfer			
					EBERSWALD	29 May 1989	_____	Loan to			
40	F	~ Jun 1988	WILD	WILD	OSIJEK	????	_____	Transfer	Unknown	MISA	00-001F-4057
					LJUBLJANA	10 Aug 1991	PM0005	Transfer			
					BOJNICE	15 Apr 1998	M00044	Transfer			
					BRATISLAV	15 Apr 1998	D150498	Loan to			
					BOJNICE	12 Jun 2002	M00044	Transfer			
42	F	10 Nov 1988	7	4	HONG KONG	10 Nov 1988	880002	Birth	Parent	CHEYANE	00-013B-D1A7
					PRETORIA	11 Oct 1992	903232	Loan to			
43	M	1 Dec 1988	13	8	HONG KONG	1 Dec 1988	880003	Birth	Parent	CHANG	968000000687547
					OSNABRUCK	8 Feb 1995	245	Loan to			
					HANNOVER	6 Sep 2001	II647	Loan to			
44	M	13 Jun 1989	9	10	LOSANGELE	13 Jun 1989	95737	Birth	Unknown	MELEKAT	00-0635-1C4B
					CINCINNAT	12 Jan 1994	194009	Loan to			
					HONG KONG	26 Aug 1995	950032	Transfer			
45	F	6 Jan 1990	2	6	MULHOUSE	6 Jan 1990	900001	Birth	Parent	CHLOE	
47	F	28 Jan 1991	13	8	HONG KONG	28 Jan 1991	910002	Birth	Parent		00-01C6-E949
48	M	14 Jul 1991	7	4	HONG KONG	14 Jul 1991	910001	Birth	Parent	GUCIO	00-06-0104-E3
					WARSAW	10 Mar 1995	S3368	Loan to			
49	M	~ Oct 1991	WILD	WILD	WILD	????	NONE	Capture	Unknown	DAN	00-0008-C770
					MULHOUSE	27 Apr 1993	930052	Transfer			

51	M	~ Oct 1991	WILD	WILD	WILD	????	NONE	Capture	Unknown		00-0008-C7DE
					MULHOUSE	27 Apr 1993	930053	Transfer			
					PRETORIA	12 Oct 1994	904589	Loan to			
52	F	~ Mar 1992	UNK	UNK	WARSAW	9 Sep 1993	S3093	Transfer	Unknown	BONIA	
53	M	14 Mar 1992	2	6	MULHOUSE	14 Mar 1992	920016	Birth	Parent	EUDES	
					AGRATE	10 Jan 1997	1075	Loan to			
54	F	~ 1992	WILD	WILD	VIETNAM	????	NONE	Capture	Hand	MILOUC	
					OLOMOUC	29 Aug 2000	5371	Loan to			
56	F	6 Mar 1993	13	8	HONG KONG	6 Mar 1993	930003	Birth	Parent	GABRIELLE	00-01C6-3864
					BESANCON	21 Dec 2000	B00128	Transfer			
57	F	10 Mar 1993	28	21	FONTAINE	10 Mar 1993	60HC3	Birth	Parent	ODETTE	
					MULHOUSE	10 Mar 1993	960262	Ownership			
					CLERES	12 Dec 1996	C96497	Loan to			
					AGRATE	10 Jan 1997	1076	Loan to			
58	F	~ Jun 1993	WILD	WILD	VIETNAM S	~ Dec 1993	NONE	Capture	Parent	PU MAT	
					PARIS ZOO	26 Mar 1994	Z94113	Transfer			
					FONTAINE	21 Apr 1995	60HC4	Loan to			
					CLERES	30 Apr 1997	C97171	Loan to			
						12 Jun 1997	C97171	Transfer			
					OLMENSE	15 Dec 2006	OZ0736	Transfer			
60	F	~ 1993	WILD	WILD	VIETNAM	????	NONE	Capture	Parent	VIETTA	985100005297008
					CUSTOMS	????	_____	Transfer			
					KALININGR	8 Feb 1998	100534	Transfer			
					MONKEYWRL	22 May 2002	_____	Loan to			
61	F	~ Nov 1993	WILD	WILD	LONDON RP	26 Apr 1997	A3566	Loan to	Unknown	LUCY	00-060D-BD6E
					EDINBURGH	15 Sep 2004	M04I03	Loan to			
62	M	28 Nov 1994	7	4	HONG KONG	28 Nov 1994	940004	Birth	Parent	BAKMAT	
					CLERES	20 Dec 2001	CA1119	Loan to			
63	M	4 Feb 1995	9	10	LOSANGELE	4 Feb 1995	96274	Birth	Parent	JAKE	030-034-603
					DENVER	19 Nov 1998	980429	Transfer			
					HOGLE	24 Oct 2001	U01107	Loan to			
					LOSANGELE	11 Jun 2004	96274	Ownership			
					MONKEYWRL	23 Nov 2004	_____	Loan to			

64	F	24 Apr 1995	12	20	JIHLAVA	24 Apr 1995	5	Birth	Unknown	ZUZANA	00-01C0-42E4
					BRATISLAV	18 Jul 2005	M1977	Transfer			
66	M	26 May 1996	49	45	MULHOUSE	26 May 1996	960138	Birth	Parent	MANAU	
					BESANCON	12 Feb 2001	B01008	Loan to			
67	M	24 Jul 1996	34	35	OLOMOUC	24 Jul 1996	4644	Birth	Parent	KUBULA	
68	M	~ 1997	WILD	WILD	CUSTOMS	????	_____	Transfer	Hand	TITO	205229600000483
					MONKEYWRL	3 Apr 2004	_____	Transfer			
70	F	3 Feb 1997	51	42	PRETORIA	3 Feb 1997	906047	Birth	Parent		
71	F	15 Feb 1997	44	8	HONG KONG	15 Feb 1997	970004	Birth	Parent	HKF10	00-0638-A824
74	F	18 Nov 1997	28	6	FONTAINE	18 Nov 1997	60HC6	Birth	Parent		00-061C-3C1A
					FUENGIROL	30 May 2003	FU594	Loan to			
75	F	~ 1998	WILD	WILD	CUSTOMS	????	_____	Transfer	Hand	PEANUT	985100005472510
					MONKEYWRL	25 Aug 2000	_____	Transfer			
76	F	18 Aug 1998	49	45	MULHOUSE	18 Aug 1998	980215	Birth	Parent	OLEA	250229600015988
					CLERES	2 Feb 2006	CA1119	Transfer			
79	F	28 Dec 1998	44	8	HONG KONG	28 Dec 1998	980072	Birth	Parent		00-01CF-BDAC
80	F	27 Mar 1999	48	52	WARSAW	27 Mar 1999	S4487	Birth	Parent	MIGO	00-0601-D86B
					BOJNICE	29 Sep 2005	M00784	Transfer			
81	M	26 May 1999	51	42	PRETORIA	26 May 1999	907650	Birth	Parent	RAPHAEL	00-0144-71FC
					MULHOUSE	26 May 1999	990298	Ownership			
					MONKEYWRL	1 Sep 2004	_____	Loan to			
84	F	16 Aug 1999	12	20	JIHLAVA	16 Aug 1999	7	Birth	Unknown	SUNY	00-05FD-8CE1
86	M	~ 2000	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	PUNG-YO	0005FC56BB
					MONKEYWRL	21 Jul 2001	_____	Transfer			
87	M	22 May 2000	31	32	LJUBLJANA	22 May 2000	PM0003	Birth	Parent	JON	705060000010368
					EDINBURGH	18 Feb 2005	M05B03	Transfer			
90	F	5 Oct 2000	28	6	FONTAINE	5 Oct 2000	60HC7	Birth	Parent		
					LA PALMYR	16 Jun 2006	4074	Transfer			
91	M	30 Oct 2000	44	47	HONG KONG	30 Oct 2000	A00033	Birth	Parent		00-01F6-BAA9

92	M	25 Nov 2000	49	45	MULHOUSE LA PALMYR	25 Nov 2000 10 Aug 2006	M-0104 4171	Birth Transfer	Parent	ROBIN	250229600015095
93	F	26 Dec 2000	44	8	HONG KONG	26 Dec 2000	A00044	Birth	Parent		00-0638-6E61
95	M	24 May 2001	36	40	BRATISLAV	24 May 2001	M1815	Birth	Hand	OLIVER	00001F4057
96	M	25 Jun 2001	51	42	PRETORIA HONG KONG HONG KONG	25 Jun 2001 25 Jun 2001 24 Feb 2005	908691 A30010	Birth Ownership Transfer	Parent		00-0659-216F
98	M	27 Nov 2001	48	52	WARSAW	27 Nov 2001	S5360	Birth	Parent	OBI	
100	M	22 Feb 2002	12	20	JIHLAVA	22 Feb 2002	8	Birth	Unknown		00-062E-F3F4
101	F	6 Apr 2002	36	40	BRATISLAV	6 Apr 2002	M1857	Birth	Hand	NATALIA	000015EB57
102	F	1 Sep 2002	53	57	AGRATE	1 Sep 2002	1430	Birth	Hand		
103	M	18 Sep 2002	49	45	MULHOUSE	18 Sep 2002	M02093	Birth	Parent	TONKIN	
104	M	26 Sep 2002	31	32	LJUBLJANA	26 Sep 2002	PM0007	Birth	Parent	MAL	
106	M	12 Feb 2003	66	56	BESANCON	12 Feb 2003	B03003	Birth	Parent	LEELOO	985101020062975
107	?	11 May 2003	28	6	FONTAINE	11 May 2003	60HC8	Birth	Parent		
108	M	1 Jun 2003	23	39	EBERSWALD	1 Jun 2003	_____	Birth	Hand	SAMMY	
109	F	17 Jun 2003	53	57	AGRATE	17 Jun 2003	1455	Birth	Hand		
110	F	9 Jul 2003	67	54	OLOMOUC	9 Jul 2003	5979	Birth	Parent	RONY	00 0638 6A5C
112	M	11 Oct 2003	44	47	HONG KONG	11 Oct 2003	A30072	Birth	Parent		00-0639-3508
113	M	14 Nov 2003	12	20	JIHLAVA	14 Nov 2003	9	Birth	Unknown		
114	M	21 Nov 2003	51	42	PRETORIA	21 Nov 2003	910840	Birth	Parent		
115	M	24 Nov 2003	48	52	WARSAW	24 Nov 2003	S6025	Birth	Parent		
116	M	4 Apr 2004	31	32	LJUBLJANA	4 Apr 2004	PM0008	Birth	Parent		
117	?	5 May 2004	23	39	EBERSWALD	5 May 2004	_____	Birth	Unknown		
122	M	23 Jan 2005	51	42	PRETORIA	23 Jan 2005	911970	Birth	Hand	FRANZI	

123	?	13 Jun 2005	7	74	FUENGIROL	13 Jun 2005	863	Birth	Parent	
125	?	9 Aug 2005	28	6	FONTAINE	9 Aug 2005	60HC9	Birth	Parent	
126	?	1 Oct 2005	12	20	JILHAVA	1 Oct 2005	10	Birth	UKN	
127	?	18 Nov 2005	44	47	HONG-KONG	18 Nov 2005	A50036	Birth	Parent	
128	?	8 Dec 2005	66	56	BESANCON	8 Dec 2005	B05179	Birth	Parent	
129	M	7 Feb 2006	87	61	EDINBURGH	7 Feb 2006	M06B01	Birth	Parent	
131	M	18 Jul 2006			MONKEYWRLD	18 Jul 2006	_____	Birth	Unknown TIEN	
132	?	13 Sep 2006	49	45	MULHOUSE	13 Sep 2006	M06105	Birth	Parent	
133	?	21 Oct 2006	67	54	OLOMOUC	21 Oct 2006	6544	Birth	Parent	
134	?	7 Nov 2006	31	32	LJUBLJANA	7 Nov 2006	PM0009	Birth	Parent	
135	?	11 Nov 2006	91	79	HONG KONG	11 Nov 2006	A60022	Birth	Parent	

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TOTALS: 40.36.11 (87)

Nomascus gabriellae hybrids: 4.2.1 (7)

1 : *Nomascus gabriellae* studbook	**1** : *Nomascus siki* studbook
1 : *Nomascus leucogenys* studbook	**1** : *Nomascus concolor*

H2	F	13 Mar 1973	**1**	3	PARIS ZOO	13 Mar 1973	Z73052	Birth	Parent	SIKxGAB	
H6	M	10 Dec 1980	1	**5**	CLERES	10 Dec 1980	C80002	Birth	Parent	GABxSIK	
					PARIS JP	19 May 1988	______	Loan to			
					CLERES	30 Jun 1988	C80002	Transfer			
					LA FLECHE	22 Mar 1989	213	Transfer			
					AUGUSTIN	1 Jul 1998	______	Transfer			
					LE VIGEN	18 Mar 2001	______	Transfer			
H9	M	18 Dec 1982	1	**5**	CLERES	18 Dec 1982	C82006	Birth	Parent	GABxSIK	
					PARIS JP	19 May 1988	______	Loan to			
					CLERES	30 Jun 1988	C82006	Transfer			
					LA FLECHE	22 Mar 1989	214	Transfer			
H34	M	6 Jul 2000	*95*	61	LONDON RP	6 Jul 2000	A4415	Birth	Parent	LEUxGAB	00-0604-1BA3
H36	F	31 Jan 2003	*95*	61	LONDON RP	31 Jan 2003	2279	Birth	Parent	LEUxGAB	00-060D-A863
					EDINBURGH	15 Sep 2004	M04104	Loan to			
H37	M	17 Sep 2001	H9	H8	LA FLECHE	17 Sep 2001	220	Birth	Parent	LEUxGABxSIK	
					MONTEMOR	2 Oct 2006					
H38	?	16 Jun 2005	H9	H8	LA FLECHE	16 Jun 2005	482	Birth	Parent	LEUxGABxSIK	

RED-CHEEKED GIBBON – Current European Population by location

Stud #	Sex	Birth Date	Sire	Dam	Location	Date	Local ID	Event	Rearing	Name	Transponder #
AGRATE											
53	M	14 Mar 1992	2	6	MULHOUSE	14 Mar 1992	920016	Birth	Parent	EUDES	
					AGRATE	10 Jan 1997	1075	Loan to			
57	F	10 Mar 1993	28	21	FONTAINE	10 Mar 1993	60HC3	Birth	Parent	ODETTE	
					MULHOUSE	10 Mar 1993	960262	Ownership			
					CLERES	12 Dec 1996	C96497	Loan to			
					AGRATE	10 Jan 1997	1076	Loan to			
102	F	1 Sep 2002	53	57	AGRATE	1 Sep 2002	1430	Birth	Hand		
109	F	17 Jun 2003	53	57	AGRATE	17 Jun 2003	1455	Birth	Hand		
Totals: 1.3.0 (4)											
BESANCON											
56	F	6 Mar 1993	13	8	HONG KONG	6 Mar 1993	930003	Birth	Parent	GABRIELLE	00-01C6-3864
					BESANCON	21 Dec 2000	B00128	Transfer			
66	M	26 May 1996	49	45	MULHOUSE	26 May 1996	960138	Birth	Parent	MANAU	
					BESANCON	12 Feb 2001	B01008	Loan to			
106	M	12 Feb 2003	66	56	BESANCON	12 Feb 2003	B03003	Birth	Parent	LEELOO	985101020062975
128	?	8 Dec 2005	66	56	BESANCON	8 Dec 2005	B05179	Birth	Parent		
Totals: 2.1.1(4)											

BOJNICE

25	F	~ 1986	WILD	WILD	VIETNAM N	~ 1986	NONE	Capture	Unknown	JOZEFINA	00-0123-FBEA
					MOSCOW	18 Feb 1987	A00339	Transfer			
					BUDAPEST	16 Mar 1991	000173	Loan to			
					BOJNICE	28 Jun 1994	M00527	Loan to			
					BRATISLAV	11 Sep 1996	D11996/3	Loan to			
					BOJNICE	12 Jun 2002	M00527	Loan to			
36	M	~ 1988	WILD	WILD	SAIGON	~ 1989	_____	Transfer	Unknown	SERVAC	00-0015-E249
					USTI	26 Oct 1989	_____	Transfer			
					DECIN	24 May 1990	_____	Loan to			
					USTI	27 Jun 1991	_____	Transfer			
					BOJNICE	19 May 1993	M00040	Transfer			
					BRATISLAV	11 Sep 1996	D11996/1	Loan to			
					BOJNICE	12 Jun 2002	M00040	Transfer			
37	M	~ 1988	WILD	WILD	SAIGON	~ 1989	_____	Transfer	Unknown	BONIFAC	00-0015-EAF3
					USTI	26 Oct 1989	_____	Transfer			
					DECIN	24 May 1990	_____	Loan to			
					USTI	27 Jun 1991	_____	Transfer			
					BOJNICE	19 May 1993	M00041	Transfer			
					BRATISLAV	11 Sep 1996	D11996/2	Loan to			
					BOJNICE	12 Jun 2002	M00041	Transfer			
40	F	~ Jun 1988	WILD	WILD	OSIJEK	????	_____	Transfer	Unknown	MISA	00-001F-4057
					LJUBLJANA	10 Aug 1991	PM0005	Transfer			
					BOJNICE	15 Apr 1998	M00044	Transfer			
					BRATISLAV	15 Apr 1998	D150498	Loan to			
					BOJNICE	12 Jun 2002	M00044	Transfer			
80	F	27 Mar 1999	48	52	WARSAW	27 Mar 1999	S4487	Birth	Parent	MIGO	00-0601-D86B
					BOJNICE	29 Sep 2005	M00784	Transfer			

Totals: 2.3.0 (5)

BRATISLAV

64	F	24 Apr 1995	12	20	JIHLAVA	24 Apr 1995	5	Birth	Unknown	ZUZANA	00-01C0-42E4
					BRATISLAV	18 Jul 2005	M1977	Transfer			
95	M	24 May 2001	36	40	BRATISLAV	24 May 2001	M1815	Birth	Hand	OLIVER	00001F4057
101	F	6 Apr 2002	36	40	BRATISLAV	6 Apr 2002	M1857	Birth	Hand	NATALIA	000015EB57

Totals: 1.2.0 (3)

CLERES

62	M	28 Nov 1994	7	4	HONG KONG	28 Nov 1994	940004	Birth	Parent	BAKMAT	
					CLERES	20 Dec 2001	CA1119	Loan to			
76	F	18 Aug 1998	49	45	MULHOUSE	18 Aug 1998	980215	Birth	Parent	OLEA	250229600015988
					CLERES	2 Feb 2006	CA1119	Transfer			

Totals: 1.1.0 (2)

EBERSWALD

23	M	~ Dec 1985	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	LII	
					SAIGON	~ 1986	_____	Transfer			
					LEIPZIG	4 Jun 1987	M00275	Transfer			
					HOYERSWER	1 Jul 1987	_____	Loan to			
					LEIPZIG	14 Sep 1987	M00275	Transfer			
					EBERSWALD	6 Dec 1996	_____	Loan to			
39	F	~ Apr 1988	WILD	WILD	WILD	????	NONE	Capture	Unknown	NAM KATJE	
					SAIGON	~ 1988	_____	Transfer			
					LEIPZIG	26 Jan 1989	M00277	Transfer			
					EBERSWALD	29 May 1989	_____	Loan to			
108	M	1 Jun 2003	23	39	EBERSWALD	1 Jun 2003	_____	Birth	Hand	SAMMY	
117	?	5 May 2004	23	39	EBERSWALD	5 May 2004	_____	Birth	Parent		

Totals: 2.1.1 (4)

EDINBURGH

61	F	~ Nov 1993	WILD	WILD	LONDON RP	26 Apr 1997	A3566	Loan to	Unknown	LUCY	00-060D-BD6E
					EDINBURGH	15 Sep 2004	M04I03	Loan to			
87	M	22 May 2000	31	32	LJUBLJANA	22 May 2000	PM0003	Birth	Parent	JON	705060000010368
					EDINBURGH	18 Feb 2005	M05B03	Transfer			
129	M	7 Feb 2006	87	61	EDINBURGH	7 Feb 2006	M06B01	Birth	Parent		

Totals: 2.1.0 (3)

FONTAINE

6	F	~ 1973	WILD	WILD	UNKNOWN	????	NONE	Capture	Unknown	TAI	
					THOIRY	13 Apr 1973	73001	Transfer			
					MULHOUSE	23 Nov 1983	830019	Loan to			
					THOIRY	15 Mar 1984	73001	Transfer			
					MULHOUSE	17 Apr 1985	830019	Transfer			
					FONTAINE	11 Dec 1996	60HC5	Loan to			
28	M	7 Aug 1986	9	10	LOSANGELE	7 Aug 1986	95141	Birth	Unknown	YANG MENGG	
					MULHOUSE	10 Jan 1992	920002	Transfer			
					FONTAINE	8 Mar 1993	60HC1	Loan to			
107	?	11 May 2003	28	6	FONTAINE	11 May 2003	60HC8	Birth	Parent		
125	?	9 Aug 2005	28	6	FONTAINE	9 Aug 2005	60HC9	Birth	Parent		

Totals: 1.1.2 (4)

FUENGIROL

7	M	~ 1973	WILD	WILD	WILD	????	NONE	Capture	Unknown	CHINO	00-0639-2A49
					HONG KONG	16 Aug 1974	740002	Transfer			
					FUENGIROL	11 Feb 2004	_____	Transfer			
74	F	18 Nov 1997	28	6	FONTAINE	18 Nov 1997	60HC6	Birth	Parent	NANCY	00-061C-3C1A
					FUENGIROL	30 May 2003	FU595	Loan to			
123	?	13 Jun 2005	7	74	FUENGIROL	13 Jun 2005	863	Birth	Parent		

Totals: 1.1.1 (3)

HANNOVER

15	F	15 Jul 1981	9	10	LOSANGELE	15 Jul 1981	94241	Birth	Parent	ROBIN	968000000686449
					MULHOUSE	10 Jan 1992	920003	Loan to			
					OSNABRUCK	31 Jan 1995	244	Loan to			
					HANNOVER	6 Sep 2001	II646	Loan to			
						16 Mar 2006		Purchase from L.A			
43	M	1 Dec 1988	13	8	HONG KONG	1 Dec 1988	880003	Birth	Parent	CHANG	968000000687547
					OSNABRUCK	8 Feb 1995	245	Loan to			
					HANNOVER	6 Sep 2001	II647	Loan to			

Totals: 1.1.0 (2)

HONG KONG

44	M	13 Jun 1989	9	10	LOSANGELE	13 Jun 1989	95737	Birth	Unknown	MELEKAT	00-0635-1C4B
					CINCINNAT	12 Jan 1994	194009	Loan to			
					HONG KONG	26 Aug 1995	950032	Transfer			
47	F	28 Jan 1991	13	8	HONG KONG	28 Jan 1991	910002	Birth	Parent		00-01C6-E949
71	F	15 Feb 1997	44	8	HONG KONG	15 Feb 1997	970004	Birth	Parent	HKF10	00-0638-A824
79	F	28 Dec 1998	44	8	HONG KONG	28 Dec 1998	980072	Birth	Parent		00-01CF-BDAC
91	M	30 Oct 2000	44	47	HONG KONG	30 Oct 2000	A00033	Birth	Parent		00-01F6-BAA9
93	F	26 Dec 2000	44	8	HONG KONG	26 Dec 2000	A00044	Birth	Parent		00-0638-6E61
96	M	25 Jun 2001	51	42	PRETORIA	25 Jun 2001	908691	Birth	Parent		00-0659-216F
					HONG KONG	25 Jun 2001	A30010	Ownership			
					HONG KONG	24 Feb 2005		Transfer			
112	M	11 Oct 2003	44	47	HONG KONG	11 Oct 2003	A30072	Birth	Parent		00-0639-3508
127	?	18 Nov 2005	44	47	HONG-KONG	18 Nov 2005	A50036	Birth	Parent		
135	?	11 Nov 2006	91	79	HONG KONG	11 Nov 2006	A60022	Birth	Parent		

Totals: 4.4.2 (10)

JIHLAVA

12	M	~ 1979	WILD	WILD	DVURKRALV	~ 1985	_____	Transfer	Unknown	VILDA	00-01BF-9DFC
					OLOMOUC	29 Dec 1988	_____	Loan to			
					JIHLAVA	20 Dec 1989	1	Loan to			
20	F	~ 1984	WILD	WILD	DVURKRALV	~ 1985	_____	Transfer	Unknown	IVANA	00-01C4-B9ED
					OLOMOUC	31 Mar 1989	_____	Loan to			
					JIHLAVA	20 Dec 1989	2	Loan to			
84	F	16 Aug 1999	12	20	JIHLAVA	16 Aug 1999	7	Birth	Unknown	SUNY	00-05FD-8CE1
100	M	22 Feb 2002	12	20	JIHLAVA	22 Feb 2002	8	Birth	Unknown		00-062E-F3F4
113	M	14 Nov 2003	12	20	JIHLAVA	14 Nov 2003	9	Birth	Unknown		
126	?	1 Oct 2005	12	20	JILHAVA	1 Oct 2005	10	Birth	UKN		

Totals: 3.2.1 (6)

LA PALMYRE

90	F	5 Oct 2000	28	6	FONTAINE	5 Oct 2000	60HC7	Birth	Parent		
					LA PALMYRE	16 Jun 2006	4074	Transfer			
92	M	25 Nov 2000	49	45	MULHOUSE	25 Nov 2000	M-0104	Birth	Parent	ROBIN	250229600015095
					LA PALMYRE	10 Aug 2006	4171	Transfer			

Totals: 1.1.0 (2)

LEIPZIG

19	F	~ 1983	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	MINNI	
					SAIGON	~ 1985	_____	Transfer			
					LEIPZIG	21 Nov 1986	M00278	Transfer			
					HOYERSWER	8 Dec 1986	_____	Loan to			
					LEIPZIG	14 Sep 1987	M00278	Transfer			

Totals: 0.1.0 (1)

LJUBLJANA

31	M	~ Jun 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	LIPING		
					HANOI	~ 1989	______	Transfer				
					USTI	26 Oct 1989	930122	Transfer				
					DECIN	24 May 1990	______	Loan to				
					USTI	27 Jun 1991	930122	Transfer				
					OHRADA	29 Jul 1997	______	Loan to				
					LJUBLJANA	1 Dec 1998	PM0002	Loan to				
32	F	~ Jun 1987	WILD	WILD	OSIJEK	????	______	Transfer	Unknown	LILING		
					LJUBLJANA	10 Aug 1991	PM0001	Transfer				
104	M	26 Sep 2002	31	32	LJUBLJANA	26 Sep 2002	PM0007	Birth	Parent	MAL		
116	M	4 Apr 2004	31	32	LJUBLJANA	4 Apr 2004	PM0008	Birth	Parent			
134	?	7 Nov 2006	31	32	LJUBLJANA	7 Nov 2006	PM0009	Birth	Parent			

Totals: 3.1.1 (5)

MONKEYWRL

29	F	~ 1987	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	ZOEY	000Z034A75
					MONKEYWRL	19 Jul 2000	_____	Transfer			
30	F	~ 1987	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	ALEX	0001C8E8A7
					MONKEYWRL	19 Jul 2000	_____	Transfer			
60	F	~ 1993	WILD	WILD	VIETNAM	????	NONE	Capture	Parent	VIETTA	985100005297008
					CUSTOMS	????	_____	Transfer			
					KALININGR	8 Feb 1998	100534	Transfer			
					MONKEYWRL	22 May 2002	_____	Loan to			
63	M	4 Feb 1995	9	10	LOSANGELE	4 Feb 1995	96274	Birth	Parent	JAKE	030-034-603
					DENVER	19 Nov 1998	980429	Transfer			
					HOGLE	24 Oct 2001	U01107	Loan to			
					LOSANGELE	11 Jun 2004	96274	Ownership			
					MONKEYWRL	23 Nov 2004	_____	Loan to			
68	M	~ 1997	WILD	WILD	CUSTOMS	????	_____	Transfer	Hand	TITO	205229600000483
					MONKEYWRL	3 Apr 2004	_____	Transfer			
75	F	~ 1998	WILD	WILD	CUSTOMS	????	_____	Transfer	Hand	PEANUT	985100005472510
					MONKEYWRL	25 Aug 2000	_____	Transfer			
81	M	26 May 1999	51	42	PRETORIA	26 May 1999	907650	Birth	Parent	RAPHAEL	00-0144-71FC
					MULHOUSE	26 May 1999	990298	Ownership			
					MONKEYWRL	1 Sep 2004	_____	Loan to			
86	M	~ 2000	WILD	WILD	PINGTUNG	????	_____	Transfer	Hand	PUNG-YO	0005FC56BB
					MONKEYWRL	21 Jul 2001	_____	Transfer			
131	M	18 Jul 2006			MONKEYWRLD	18 Jul 2006	_____	Birth	Unknown	TIEN	

Totals: 5.4.0 (9)

MULHOUSE

45	F	6 Jan 1990	2	6	MULHOUSE	6 Jan 1990	900001	Birth	Parent	CHLOE	
49	M	~ Oct 1991	WILD	WILD	WILD	????	NONE	Capture	Unknown	DAN	00-0008-C770
					MULHOUSE	27 Apr 1993	930052	Transfer			
103	M	18 Sep 2002	49	45	MULHOUSE	18 Sep 2002	M02093	Birth	Parent	TONKIN	
132	?	13 Sep 2006	49	45	MULHOUSE	13 Sep 2006	M06105	Birth	Parent		

Totals: 2.1.1 (4)

OLMENSE

58	F	~ Jun 1993	WILD	WILD	VIETNAM S	~ Dec 1993	NONE	Capture	Parent	PU MAT	
					PARIS ZOO	26 Mar 1994	Z94113	Transfer			
					FONTAINE	21 Apr 1995	60HC4	Loan to			
					CLERES	30 Apr 1997	C97171	Loan to			
						12 Jun 1997	C97171	Transfer			
					OLMENSE	15 Dec 2006	OZ0736	Transfer			

Totals: 0.1.1 (1)

OLOMOUC

34	M	~ 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	KUBA	
					HANOI	~ 1987	_____	Transfer			
					USTI	19 Nov 1987	930123	Transfer			
					OLOMOUC	10 Jun 1988	3464	Loan to			
35	F	~ 1987	WILD	WILD	VIETNAM	????	NONE	Capture	Unknown	GABINA	
					HANOI	~ 1987	_____	Transfer			
					USTI	19 Nov 1987	930124	Transfer			
					OLOMOUC	10 Jun 1988	3374	Loan to			
54	F	~ 1992	WILD	WILD	VIETNAM	????	NONE	Capture	Hand	MILOUC	
					OLOMOUC	29 Aug 2000	5371	Loan to			
67	M	24 Jul 1996	34	35	OLOMOUC	24 Jul 1996	4644	Birth	Parent	KUBULA	
110	F	9 Jul 2003	67	54	OLOMOUC	9 Jul 2003	5979	Birth	Parent	RONY	00 0638 6A5C
133	?	21 Oct 2006	67	54	OLOMOUC	21 Oct 2006	6544	Birth	Parent		

Totals: 2.3.1 (6)

PRETORIA

42	F	10 Nov 1988	7	4	HONG KONG	10 Nov 1988	880002	Birth	Parent	CHEYANE	00-013B-D1A7
					PRETORIA	11 Oct 1992	903232	Loan to			
51	M	~ Oct 1991	WILD	WILD	WILD	????	NONE	Capture	Unknown		00-0008-C7DE
					MULHOUSE	27 Apr 1993	930053	Transfer			
					PRETORIA	12 Oct 1994	904589	Loan to			
70	F	3 Feb 1997	51	42	PRETORIA	3 Feb 1997	906047	Birth	Parent		
114	M	21 Nov 2003	51	42	PRETORIA	21 Nov 2003	910840	Birth	Parent		
122	M	23 Jan 2005	51	42	PRETORIA	23 Jan 2005	911970	Birth	Hand	FRANZI	

Totals: 3.2.0 (5)

WARSAW

48	M	14 Jul 1991	7	4	HONG KONG	14 Jul 1991	910001	Birth	Parent	GUCIO	00-06-0104-E3
					WARSAW	10 Mar 1995	S3368	Loan to			
52	F	~ Mar 1992	UNK	UNK	WARSAW	9 Sep 1993	S3093	Transfer	Unknown	BONIA	
98	M	27 Nov 2001	48	52	WARSAW	27 Nov 2001	S5360	Birth	Parent	OBI	
115	M	24 Nov 2003	48	52	WARSAW	24 Nov 2003	S6025	Birth	Parent		

Totals: 3.1.0 (4)

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TOTALS: 40.36.11 (87)