

NATIONAL STUDBOOK

Tibetan Wolf (*Canis lupus chanco*): III Edition

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National Studbook

Tibetan Wolf (*Canis lupus chanco*) III Edition

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FOREWORD

Wolves inhabiting the trans-Himalayas are a genetically unique species/ sub-species and the oldest lineage of the wolf-dog clan. Maintaining genetically viable and demographically stable *ex-situ* populations can ensure their sustained survival. This can be ensured by using pedigree information contained in studbooks that form the key to understanding the demographic and genetic structure of populations and taking corrective actions as required for effective management of captive populations.

The Central Zoo Authority (CZA) has initiated a conservation breeding program for threatened species in Indian zoos. As a part of this endeavor the Wildlife Institute of India has been carrying out the task of compilation and update of studbooks of identified species in Indian zoos.

As a part of the project outcomes: the WII has compiled and updated the 'National studbook for Tibetan wolf (*Canis lupus chanco*) III Edition' in Indian zoos. The recommendations contained in the studbook should form the basis for the long term management of the species in captivity.

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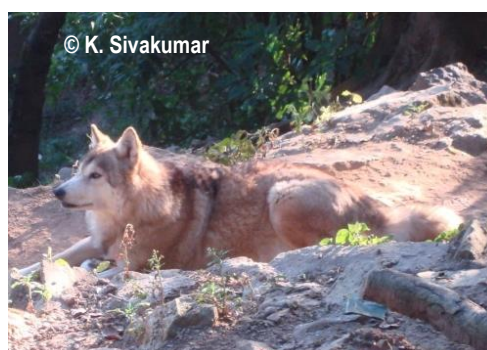
TIBETAN WOLF

(*Canis lupus chanco*)

Species Information

Taxonomy

Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Carnivora
Family	Canidae
Species	<i>Canis lupus</i>
Sub-species	<i>Canis lupus chanco</i>
Species Authority	Gray, 1863
Common Name	Tibetan wolf



Systematics of wolves from the Indian subcontinent has been poorly studied and remains controversial with taxonomists accepting both the Indian *Canis lupus pallipes* and the Himalayan *C. l. chanco* to be distinct relatives of other wolves (Sharma *et al.* 2004). Based on physical characteristics, Hodgson (1847) described the Himalayan wolf as a distinct species, *C. laniger*. Later, Blanford (1888) combined *C. laniger* with *C. lupus* and elevated the Indian wolf to *C. pallipes*. Pocock (1941) described both as subspecies of *C. lupus*, making *C. laniger* and *C. pallipes* parts of the more widely distributed *C. l. pallipes* and *C. l. chanco*, respectively.

Recent molecular genetic studies have suggested the wolf population found in the Indian Trans-Himalayas to be a genetically unique species or subspecies and the oldest lineage of the wolf-dog clan worldwide (Aggarwal *et al.* 2003; Sharma *et al.* 2004). Aggarwal *et al.* (2003) proposed to revise the existing nomenclature and rechristened the two Indian wolf populations with new species/sub-species status *i.e.*, *C. himalayensis* (or *C. lupus himalayensis*) and *C. indica* (*C. lupus indica*), respectively. However; (Sharma *et al.* 2004) based on samples of wild origin animals collected from peninsular India (N = 45), Himalayas and Tibetan plateau (N = 23) concluded that the Indian subcontinent has three divergent, ancient and apparently parapatric mtDNA lineages within the morphologically delineated wolf. These are the peninsular and eastern Pakistan wolf lineage, the western Himalayan lineage from northwest Jammu and Kashmir and the eastern Himalayan lineage from Ladakh, Spiti, Tibet and Nepal.

Aggarwal (2007) confirmed the distinctness of Himalayan wolf from a similar wolf from China, *C. lupus chanco*, and that it represents the most ancient wolf lineage ever recorded and analysed using molecular means. Similarly, the Indian Grey Wolf was found to be distinct from the purported similar wolves from south-east Asia, *C. lupus pallipes*, and probably also represents the other ancient wolf lineage from India.

Studies by Werhahn *et al.* (2017) support the hypothesis proposed by Aggarwal *et al.* (2003) while highlighting the need for a more detailed assessment to establish the taxonomic status of Tibetan / Himalayan wolf.

Habitat and Ecology

The trans-Himalayan region characterised by low temperatures, and rainfall, limited floristic diversity and vegetation cover and low prey density (Rawat, 2008) are the home to two apex predators namely the Himalayan/ Tibetan wolf and Snow leopard (Habib *et al.* 2013). Field studies based on sign surveys in Nepal part of the trans-Himalayas revealed a preference for grasslands (68% of scats recovered) and a close association to pastoral communities with livestock with domestic livestock forming 65% of the prey base of the animal (Subba, 2012). Tibetan wolves descend to the valleys in winter, migrating with wild and domestic ungulates to the snow-line in summer (Prater, 1971). During winter they shelter in holes, caves and crevices in rocks while in summer thickets of reeds and scrub are used.



In the Qinghai-Tibet Plateau, hare, yak, and small rodents were found to be the most important prey species of the wolves during summers; whereas yak, sheep and hare were found to be important prey species in winters (Liu and Jiang, 2003). Badgers, Przewalski's gazelle, birds, reptiles, invertebrates and plants also formed a part of their diet in this region. Additionally they are believed to scavenge on livestock carcasses (Liu and Jiang, 2003). Davidson *et al.* (2012) reported that on the Tibetan Plateau; plateau pikas (*Ochotona curzoniae*) represented as much as 50% of their diet. In Kargil and Drass areas of Jammu and Kashmir, Maheshwari *et. al.* (2010) recorded domestic and wild ungulates to be a major portion of their diet with wild rodents also contributing significantly to it.

Social and reproductive behaviour

The species has been poorly studied, and limited information on its social and reproductive behaviour is available in literature. The social and reproductive behaviour of gray wolves described by Mech (1974) reveals wolves to be social animals usually living in packs of 5 to 8 members, though; packs of up to 36 have also been reported (Rausch, 1967). The wolf packs defend resource based territories and delineate them by scent marking while howling and fights are used for defence. Territorial conflicts also control the number of packs in an area (Mech, 1970).

The wolf pack includes the dominant “alpha pair” their off-spring and an assortment of other individuals that live and hunt in pairs. Dominance hierarchy in the pack is maintained with the adult male dominant to the adult female and pups, the female dominant to the pups, and a linear order among the pups. Social rank in pups is established normally through play-fighting, involving chasing, ambushing, and mock

fighting. Separate male and female orders may develop among adults in large packs; however, the pack is usually led by the “alpha male.”

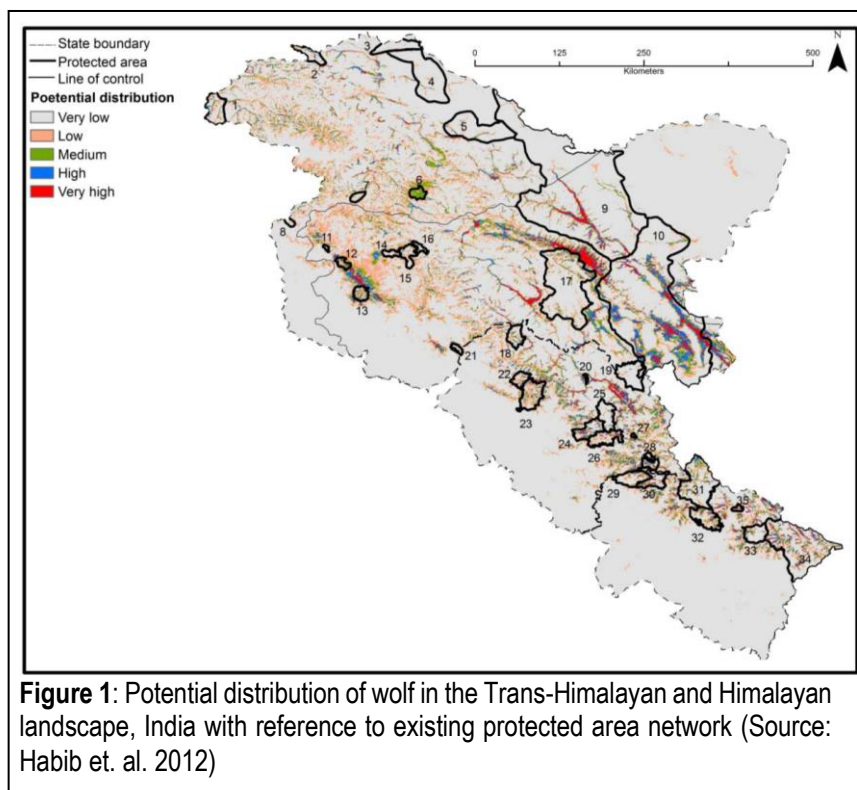
Social interactions and dominance demonstrations occur throughout the year but intensify during the breeding season. The courtship ritual consists of sniffing, nipping, head rubbing; snout grabbing, tail wagging and general play with body contact can extend from a few days to several months. Courtship may be initiated by dominant wolves of a pack or lone wolves with only a few of the several such attempts succeeding. Copulation is similar to other canids with mounting being oriented from behind. The male grasps the female around the chest and inserts his penis and thrusts until the penis is locked behind the vaginal sphincter. A mating pair can remain tied, for up to 30 minutes, during which multiple ejaculations may occur.

Growth and development

A den often a hole in the ground or a rocky crevice is used for whelping. The dens are situated in areas with minimal disturbance with the same den being used several times. A litter comprising on an average of six pups is born blind after a gestation period of 63 days. The reproducing female takes care of the pups while the alpha male and other pack members hunt and feed the female and pups. Milk teeth erupt by the third week while weaning takes place at five weeks of age. The pups are shifted to a ground nest when they are eight weeks old where they acquire the skills essential to survival. Play and mock fights are the predominant activities of the cubs in these open dens days (Mech, 1974). The pups start accompanying their parents by 4-5 months of age (Mech and Boitani 2003). They may attain sexual maturity by two years of age but usually start reproducing only after the third year.

Distribution

Tibetan wolf have been reported to occur in the Trans-Himalayan regions of India (Fox *et al.* 1986; Chundawat 1992; Chundawat and Qureshi 1999). They have been recently sighted in the Trans-Himalaya region of Uttarakhand, i.e., in Nanda Devi Biosphere Reserve (BR) and Gangotri National Park (NP) (Bhattacharya and Sathyakumar, 2010). Sign surveys and interviews with local communities carried out by Habib *et al.* (2013) in the



states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand suggest a patchy distribution. The

distribution based on Habib *et al.* (2013) is presented as figure 1. A study by Chetri *et al.* (2016) has established the presence of Himalayan wolf in the Upper Mustang area of Nepal.

Threats

Livestock predation by Tibetan wolves in the Trans-Himalayan region has been well documented (Fox *et al.* 1986; Fox *et al.* 1991; Chundawat 1992; Mishra 1997; Chundawat and Qureshi 1999; Maheshwari *et al.* 2010, Habib *et al.* 2013). This livestock depredation has resulted in retaliatory killing by pastoralists across their range in India and Nepal. Mishra (1997) observed that pastoralists locate dens of the wolves and then kill all the pups found there; thus effectively limiting recruitment in the population. This retaliatory killing in association with increased anthropogenic activities in their habitat has impacted populations.

Conservation measures

The species is listed in Schedule I Part I of the Wildlife Protection Act (1972) of India. Taxonomic uncertainties between Tibetan wolf and Himalayan wolf limit conservation measures at an international level.

Status in Captivity

The global captive population based on information maintained on the ZIMS Platform of the Species360 website consists of 33 Tibetan/ Himalayan wolves (14.19.0) maintained at 6 institutions in Asia and Europe (India: 3, rest of Asia: 2 and Europe: 1). In Indian the Species360 website records the presence of 13 (6.7.0) specimens at 3 zoos. The Inventory of animals maintained by the Central Zoo Authority records the presence of 10 (2.4.4) specimens present at 2 zoos in India. The data made available by the 2 holding institutions for the update of the studbook includes 14 (2.8.4) specimens.

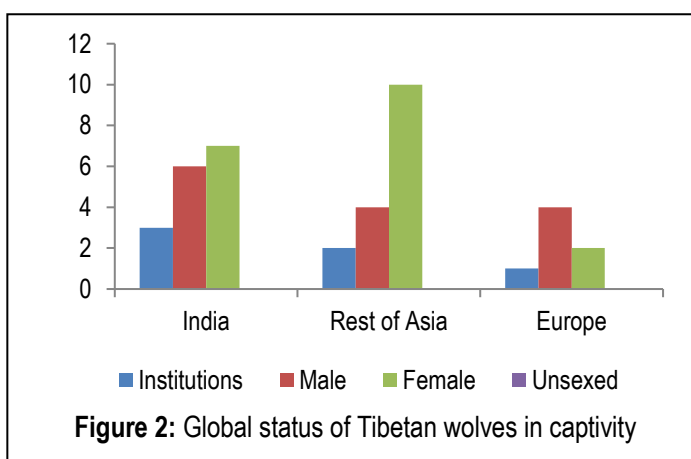


Figure 2: Global status of Tibetan wolves in captivity

Table 1: Status of Tibetan wolves in Indian zoos

Zoo Name	Species360				CZA Inventory				Studbook			
	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
Pt. Govind Ballabh Pant High Altitude Zoo, Nainital	1	1	0	2	1	1	0	2	1	1	0	2
Padmaja Naidu Himalayan Zoological Park, Darjeeling	3	5	0	8	1	3	4	8	1	6	4	121
Himalayan Nature Park, Kufri	2	1	0	3	0	0	0	0	0	0	0	0
Total Living	6	7	0	13	2	4	4	10	2	7	4	13

Methods

Data on individual history was collected by means of questionnaires, zoo visits and from the websites of CZA and ZIMS (Zoological Information Management System). Questionnaires were sent to institutions to having Tibetan wolves in India, requesting information for each captive specimen either housed at present or in the past. Data was entered in the Single Population Analysis and Records Keeping System (SPARKS v 1.66) (ISIS 2004) and subsequently exported to population management program PMx v 1.2 (Ballou *et al.* 2010). Data was exported from SPARKS and used as input files in PMx for further analysis.

Scope of the studbook and data quality

- The data included in the National Studbook of Tibetan wolf (*Canis lupus chanco*) (2009 and 2014) forms the basis for the third edition of the National Studbook of Tibetan wolf.
- The studbook includes all specimens present in India for whom records were available from holding institutions. The CZA inventory was used as a benchmark for population estimates and deviations from the same are based on records made available by the holding institutions.
- The mnemonics present in the SPARKS software were used for individual institutions and the same are listed in the location glossary (Appendix IV). The mnemonic India was used for all specimens acquired from the wild.

Analysis

Demographic Status

Historical Population

Census Trends

Tibetan wolves have been housed at four Indian zoos (Padmaja Naidu Himalayan Zoological Park, Darjeeling; Himalayan Zoological Park, Gangtok; Himalayan Nature Park, Kufri and Pt. G. B. Pant High Altitude Zoo, Nainital) since 1990 with a historical population of 75 (30.41.4) specimens. This includes 3 (1.2.0) wild-born that have contributed to the captive population; and 72 (29.41.4) captive-born individuals. An overview of the captive population is presented in Table 2, and the details of individual specimens in the captive population are provided as Annexure - I. The census trends of

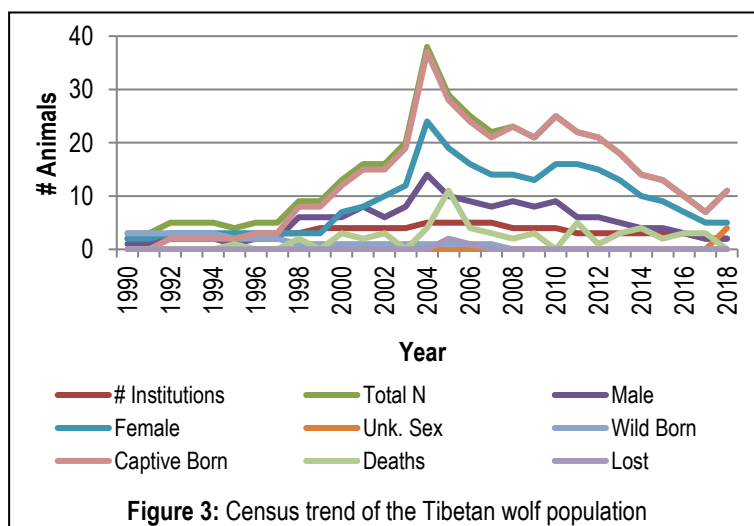


Table 2: Summary of the historical population

	Males	Females	Unknown	Total
Total studbook size	30	41	4	75
Acquisitions from wild	1	2	0	3
Captive-born	29	39	4	72
Lost	1	2	0	3
Number of deaths	27	34	0	61
Breeding individuals	7	8	0	15

this population are presented in figure 3. The first birth in captivity occurred in 1991. The species though present in captivity since 1990 has remained as a small population since inception. Figure 3 indicates that the sex-ratio was equal till 1999; from 2000 onwards a female bias is observed.

Living Population

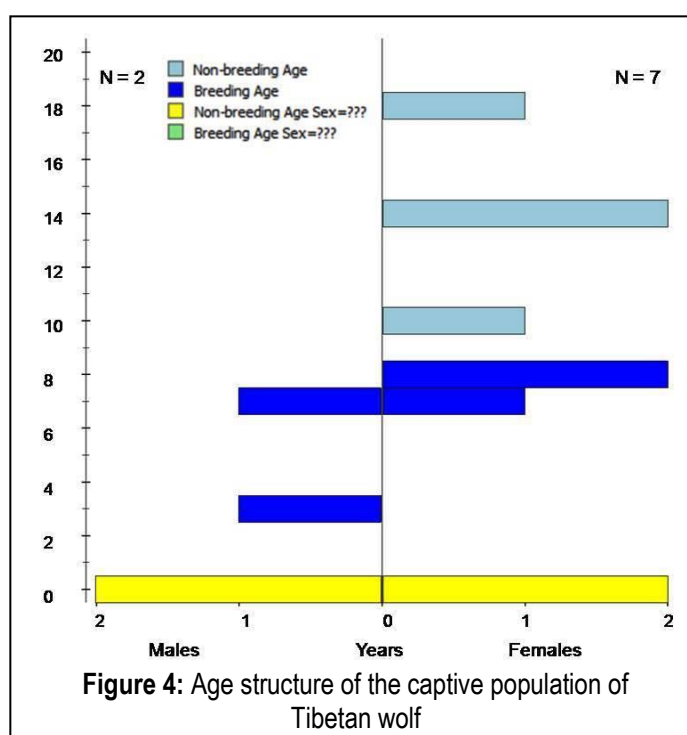
Table 3 summarizes the living population of Tibetan wolf in captivity. The population includes 13 (2.7.4) specimens all of which are born in captivity. A total of 4 (1.3) specimens have reproduced in the current population.

Table 3: Summary of the Living population

	Males	Females	Unknown	Total
Living Individuals	2	7	4	13
Wild born individuals	0	0	0	0
Captive-born	2	8	4	14
Breeding individuals	1	3	0	4

Age-Sex Structure

The age structure of the living population indicates the presence of 9 (2.7) specimens of known age and sex in the current population. The population includes 5 (2.3) specimens of reproductive age; while 4 specimens of unknown sex are present in the pre-reproductive age class. An additional 4 females that are reproductively senescent are also present in the population. The continued small population size of the captive population is attributed to the limited reproductive output and a limited number of active breeders in the population. This has resulted in the population showing a declining trend as the limited recruitment is unable to offset declines due to mortality.



Population vital rates

Population vital rates derived from life table analysis are summarized in table 4, these include population growth rate (λ), Mean generation time (T) and the projected population at 20 years. The population vital rates indicate a declining population. The small sample size used to arrive at the vital rates limit their accuracy; however, they provide an indicator of the demographic trends observed in the population.

Table 4: Life-table summary

Demographic variables	Male	Female	Total
Population growth rate (λ)	0.902	0.856	0.878
Mean generation time (T)	4.9	6.4	5.6
N at 20 years	0.5	0.7	1.2

Genetic Status

The Tibetan wolf population comprises of three wild origin animals; however, only 2 (1.1) (Studbook Nos. 00002 and 00003) have reproduced. Records available from holding zoos do not suggest any subsequent supplementation (Annexure I). The historical population includes 73 descendants of this founder pair. Absence of pedigree records, for the captive population limits detailed genetic

analysis. The limited mating choices available in the population indicate breeding between closely related individuals. The pedigree details of individual animals are provided as Annexure III.

Table 7: Genetic summary

Genetic parameters	Current
Founders	0
Living Animals	13
Percent Ancestry Known	0
Gene Diversity	0
Founder Genome Equivalents	0.50
Mean Inbreeding	0.00
Population mean kinship	1.00

Breeding Recommendations

Absence of pedigree records and dates of events for individual animals limit both demographic and genetic analysis of the population that are used to develop breeding recommendations for captive populations. The same are accordingly not included in the studbook.

Targets for Population Management

The current captive population of Tibetan wolf in Indian zoos includes 13 (2.7.4) individuals; all of these are of captive origin. The population shows a declining trend ($\lambda = 0.8785$), further the small size of the population limits an accurate assessment of the demographic status of the current population. An assessment of the genetic status of the captive population could also not be made due to data limitations. The inability of assessing the genetic and demographic status of the population is a constraint in developing a population management plan for the captive population.

Conclusions

Several studies have been conducted to assess the taxonomic position of Tibetan / Himalayan wolves; however definitive conclusions regarding its taxonomic position remain unclear, though all studies indicate its evolutionary distinctness besides regarding it as the evolutionary oldest wolf like canid. They inhabit cold deserts and are believed to persist at low densities in its habitat. Retaliatory killings are a major factor undermining free ranging populations.

The living captive population of Tibetan wolf comprises of 13 (2.7.4) individuals. It was initiated with an extremely small number of founders ($N = 2$) leading to the current population retaining a limited sample of the wild gene pool. Limitations of data availability on dates of events and pedigrees curtailed demographic and genetic analysis.

- The limited population size renders it vulnerable to random demographic events and catastrophes.

These suggest that the current captive Tibetan wolf population does not fulfil the objectives of maintaining a demographically stable and genetically viable *ex-situ* population for conservation purposes.

Steps to ensure the maintenance of demographically stable and genetically viable captive population can be initiated after addressing the issues that limit population growth including a review of the existing husbandry practices.

Molecular genetic analysis of the existing population can be carried out to arrive at an understanding of lineages in the current population. Further supplementation with additional founder animals can be carried out once husbandry issues are resolved. Mating choices can be based on the outcomes of the molecular genetic analysis carried out and the provenance of animals used for supplementation.

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Annexure I

Historical Population of Tibetan wolf (*Canis lupus chanco*) in Indian Zoos

Stud# Local ID Name Transponder	Sex	Birth Date	Sire	Dam	Location	Date	Event
00001 JULEE	F	????	WILD	WILD	INDIA SHIMLA	~ 1990 ~ 1990 30-Nov-08	Capture Transfer Death
00002 MOTI	F	????	WILD	WILD	INDIA DARJEELIN	~ Jan 1990 19-Jan-90 17-Mar-98	Capture Transfer Death
00003 HIRA	M	????	WILD	WILD	INDIA DARJEELIN	~ Sep 1990 19-Sep-90 20-Mar-95	Capture Transfer Death
00004 KARTIK	M	04-Aug-91	00003	00002	DARJEELIN	04-Aug-91 ????	Birth Death
00005 LAXMI 000610ECBO	F	04-Aug-91	00003	00002	DARJEELIN	04-Aug-91 ????	Birth Death
00006 IBEE	F	25-Feb-92	UNK	UNK	DARJEELIN NAINITAL	25-Feb-92 21-Mar-97 10-Feb-06	Birth Transfer Death
00007 AMAL	M	25-Feb-92	UNK	UNK	DARJEELIN NAINITAL	25-Feb-92 21-Mar-97 08-Dec-00	Birth Transfer Death
00008 DANNY TW1 00068313E	M	13-Mar-98	UNK	UNK	DARJEELIN GANGTOK	13-Mar-98 05-Mar-99 18-Oct-13	Birth Transfer Death
00009 JULIE	F	13-Mar-98	UNK	UNK	DARJEELIN GANGTOK	13-Mar-98 05-Mar-99 05-Nov-06	Birth Transfer Death
00010 167 PARBATI 00-0611-683C	F	23-Mar-04	UNK	UNK	DARJEELIN	23-Mar-04 05-Jul-09	Birth Death
00011 170 AKRITI 00-0617FB65	F	20-Mar-00	UNK	UNK	DARJEELIN	20-Mar-00	Birth
00012 6 SHAMBHU 0006B74BB0	M	~ 1996	UNK	UNK	DARJEELIN NAINITAL	~ 1996 23-Dec-04 09-May-11	Birth Transfer Death
00013 VAIDYA	M	????	UNK	UNK	DARJEELIN	???? 26-Mar-05	Birth Death
00014 165 ROHINI 00-0618-OCDA	F	20-Mar-00	UNK	UNK	DARJEELIN	20-Mar-00 12-Feb-14	Birth Death
00015 RAJANI 00-061F-66FC	F	17-Mar-04	UNK	UNK	DARJEELIN GANGTOK	17-Mar-04 11-Mar-05 09-Sep-05	Birth Transfer Death
00016 162 RAMU	M	07-Apr-00	UNK	UNK	DARJEELIN	07-Apr-00 18-Dec-11	Birth Death

Stud# Local ID Name Transponder	Sex	Birth Date	Sire	Dam	Location	Date	Event
00-0611-1A53							
00017 SHIVA 00-061F476D	M	????	UNK	UNK	DARJEELIN	???? 31-May-05	Birth Death
00018 BABAR 00-0610ECB0	M	05-Apr-01	UNK	UNK	DARJEELIN KUFRI	05-Apr-01 23-Dec-04 15-Jan-11	Birth Transfer Death
00019 ABDUL 00-0611-48C1	M	20-Apr-01	UNK	UNK	DARJEELIN KUFRI	20-Apr-01 23-Dec-04 26-Feb-09	Birth Transfer Death
00020 168 RITA 00-0617-589D	F	23-Mar-04	00016	00011	DARJEELIN	23-Mar-04 26-Jan-13	Birth Death
00021 MOHANI	F	10-Apr-02	00008	00009	GANGTOK	10-Apr-02 03-Jun-02	Birth Death
00022 TW4 ROSN 000683171A	F	10-Apr-02	00008	00009	GANGTOK	10-Apr-02 16-Aug-11	Birth Death
00023 RITUNI	F	10-Apr-02	00008	00009	GANGTOK	10-Apr-02 ~ 2009	Birth Death
00024 LAXMI 00-0617-71AC	F	18-Mar-03	UNK	UNK	DARJEELIN KUFRI INDIA	18-Mar-03 23-Oct-04 ????	Birth Transfer Ltf
00025 SARASWATI 00-0617-F26E	F	05-Apr-01	UNK	UNK	DARJEELIN KUFRI	05-Apr-01 23-Dec-04 23-Aug-07	Birth Transfer Death
00026 ANITA 0006B73D67	F	04-Oct-03	UNK	UNK	DARJEELIN NAINITAL	04-Oct-03 23-Dec-04 08-May-08	Birth Transfer Death
00027 TWBN-1 BARUN 00-0618-288A	M	17-Mar-04	UNK	UNK	DARJEELIN KUFRI INDIA	17-Mar-04 23-Dec-05 ????	Birth Transfer Ltf
00028 VIJAYA 00-0618-2DB0	F	20-Mar-04	UNK	UNK	DARJEELIN	20-Mar-04	Birth
00029 BASANT 00-0618-0962	F	20-Mar-04	UNK	UNK	DARJEELIN	20-Mar-04 ~ 2005	Birth Death
00030 BADRI 00-0617-D734	M	20-Mar-04	UNK	UNK	DARJEELIN	20-Mar-04 30-Jul-05	Birth Death
00031 173 DEEPEN 981098100800950	M	22-Mar-04	00008	00009	GANGTOK DARJEELIN	22-Mar-04 02-Nov-07 19-Jun-15	Birth Transfer Death
00032 RANI	F	22-Mar-04	00008	00009	GANGTOK	22-Mar-04 29-May-04	Birth Death
00033 TRIPTI	F	22-Mar-04	00008	00009	GANGTOK	22-Mar-04 10-Jun-04	Birth Death
00034 RUPA	F	22-Mar-04	00008	00009	GANGTOK	22-Mar-04 01-Jul-04	Birth Death
00035	M	22-Mar-04	00008	00009	GANGTOK	22-Mar-04	Birth

Stud# Local ID Name Transponder	Sex	Birth Date	Sire	Dam	Location	Date	Event
RAJU						05-Jul-04	Death
00036 TW14 SHARAD 0006B74AA5	M	23-Mar-04	UNK	UNK	DARJEELIN GANGTOK	23-Mar-04 11-Mar-05 27-Nov-17	Birth Transfer Death
00037 0004 ASHISH 0006B739BF	M	23-Mar-04	UNK	UNK	DARJEELIN NAINITAL	23-Mar-04 23-Dec-04 26-Jun-14	Birth Transfer Death
00038 5 RADHIKA 00-0618-130B	F	23-Mar-04	16	11	DARJEELIN	23-Mar-04 25-Apr-17	Birth Death
00039 SHEELA 0006B74BB7	F	24-Mar-04	UNK	UNK	DARJEELIN NAINITAL	24-Mar-04 23-Dec-04 25-Jul-14	Birth Transfer Death
00040 HEENA 00-0610-FED9	F	23-Mar-04	UNK	UNK	DARJEELIN NAINITAL	23-Mar-04 23-Dec-04 24-Jan-06	Birth Transfer Death
00041 166 JAMILA 00-061F-7348	F	07-Apr-00	UNK	UNK	DARJEELIN	07-Apr-00 26-Jan-13	Birth Death
00042 JAVED 00-0618-18AF	M	17-Mar-04	UNK	UNK	DARJEELIN GANGTOK	17-Mar-04 11-Mar-05 16-Mar-06	Birth Transfer Death
00043 NISHA 00-0615-8987	F	23-Mar-04	00016	00011	DARJEELIN	23-Mar-04 29-Apr-15	Birth Death
00044 164 PUSHPA 00-0617-BF82	F	23-Mar-04	00016	00011	DARJEELIN	23-Mar-04 15-Aug-12	Birth Death
00045 REENA 000-0611-AOB9	F	17-Mar-04	UNK	UNK	DARJEELIN GANGTOK	17-Mar-04 11-Mar-05 29-Nov-05	Birth Transfer Death
00046 174 DENZONG 956000002151766	M	09-Apr-08	00031	00038	DARJEELIN	09-Apr-08 29-Mar-16	Birth Death
00047 175 DIKI 956000002161006	F	09-Apr-08	00031	00038	DARJEELIN	09-Apr-08 20-Feb-14	Birth Death
00048 176 DONKA 95600000215919	F	09-Apr-08	00031	00038	DARJEELIN	09-Apr-08	Birth
00049 177 DIANA 956000002161227	F	26-Mar-09	00031	00038	DARJEELIN	26-Mar-09 22-Jan-16	Birth Death
00050 HAMID 000610E1FE	M	17-Mar-03	UNK	UNK	DARJEELIN	17-Mar-03 02-Feb-05	Birth Death

Stud# Local ID Name Transponder	Sex	Birth Date	Sire	Dam	Location	Date	Event
00051 BINA 000617F6FF	F	????	UNK	UNK	DARJEELIN	???? 03-Dec-05	Birth Death
00052 TCHOEKI 95000002160046	F	02-Apr-10	00031	00038	DARJEELIN	02-Apr-10	Birth
00053 222 DOLMA 956000002152156	F	02-Apr-10	00031	00038	DARJEELIN	02-Apr-10	Birth
00054 220 YANKEE 956000002161670	F	02-Apr-10	00031	00038	DARJEELIN	02-Apr-10 24-Jul-17	Birth Death
00055 223 DANNY	M	14-Apr-10	00031	00044	DARJEELIN	14-Apr-10 26-Nov-11	Birth Death
00056 90 MONU	F	03-Apr-11	00037	00039	NAINITAL	03-Apr-11	Birth
00058 89 SONU	M	03-Apr-11	00037	00039	NAINITAL	03-Apr-11	Birth
00059 HW9 PEMBA	M	10-Apr-15	00046	00053	DARJEELIN	10-Apr-15	Birth
00060	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00061	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00062	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00063	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00064	F	13-Mar-98	UNK	UNK	DARJEELIN	13-Mar-98 26-Apr-98	Birth Death
00065	M	13-Mar-98	UNK	UNK	DARJEELIN	13-Mar-98 30-Mar-00	Birth Death
00066	M	13-Mar-98	UNK	UNK	DARJEELIN	13-Mar-98 10-Apr-02	Birth Death
00067	M	13-Mar-98	UNK	UNK	DARJEELIN	13-Mar-98 07-Jul-02	Birth Death
00068 VAHIDA 000610DE51	F	23-Mar-04	UNK	UNK	DARJEELIN	23-Mar-04 26-Jan-05	Birth Death
00069	M	????	UNK	UNK	DARJEELIN	???? 01-Nov-01	Birth Death
00070	M	????	UNK	UNK	DARJEELIN	???? 22-Jun-01	Birth Death
00071	M	02-Mar-00	UNK	UNK	DARJEELIN	02-Mar-00 19-Sep-00	Birth Death
00072	M	02-Mar-00	UNK	UNK	DARJEELIN	02-Mar-00 19-Jun-07	Birth Death
00073	F	20-Mar-00	UNK	UNK	DARJEELIN KUFRI INDIA	20-Mar-00 23-Dec-04 ????	Birth Transfer Ltf
00074 KUSUM 000617FECO	F	23-Mar-04	UNK	UNK	DARJEELIN	23-Mar-04 30-Jul-05	Birth Death

Stud# Local ID Name Transponder	Sex	Birth Date	Sire	Dam	Location	Date	Event
00075 MARY 00-061F-8168	F	23-Mar-04	UNK	UNK	DARJEELIN	23-Mar-04	Birth
00076 RAJU 000617-71AC	M	17-Mar-03	UNK	UNK	DARJEELIN	17-Mar-03 07-Mar-05	Birth Death
TOTALS: 75 (30.41.4)							

Annexure II

Living Population of Tibetan Wolf (*Canis lupus chanco*) in Indian Zoos

Stud# Local ID Name Transponder	Sex	Birth Date	Sire	Dam	Location	Date	Event
Padmaja Naidu Himalayan Zoological Park, Darjeeling							
00011 170 AKRITI 00-0617FB65	F	20-Mar-00	UNK	UNK	DARJEELIN	20-Mar-00	Birth
00028 VIJAYA 00-0618-2DB0	F	20-Mar-04	UNK	UNK	DARJEELIN	20-Mar-04	Birth
00048 176 DONKA 95600000215919	F	09-Apr-08	00031	00038	DARJEELIN	09-Apr-08	Birth
00052 TCHOEKI 95000002160046	F	02-Apr-10	00031	00038	DARJEELIN	02-Apr-10	Birth
00053 222 DOLMA 956000002152156	F	02-Apr-10	00031	00038	DARJEELIN	02-Apr-10	Birth
00059 HW9 PEMBA	M	10-Apr-15	00046	00053	DARJEELIN	10-Apr-15	Birth
00060	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00061	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00062	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00063	?	27-Mar-18	00059	00048	DARJEELIN	27-Mar-18	Birth
00075 MARY 00-061F-8168	F	23-Mar-04	UNK	UNK	DARJEELIN	23-Mar-04	Birth
Total: 11 (1.6.4)							
Pt. Govind Ballabh Pant High Altitude Zoo, Nainital							
00056 90 MONU	F	03-Apr-11	00037	00039	NAINITAL	03-Apr-11	Birth
00058 89 SONU	M	03-Apr-11	00037	00039	NAINITAL	03-Apr-11	Birth
Total: 2 (1.1.0)							
Total Living: 13 (2.7.4)							

Annexure III

Pedigree Chart Report Tibetan Wolf Studbook

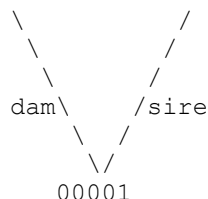
=====

Taxon Name: CANIS LUPUS CHANCO Studbook Number: 00001

=====

WILD

WILD

Sex: Female
Birth Date: ????

Last Location: SHIMLA (dead)

House Name:

Tattoo:

Tag/Band:

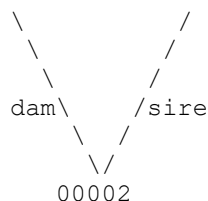
=====

Taxon Name: CANIS LUPUS CHANCO Studbook Number: 00002

=====

WILD

WILD

Sex: Female
Birth Date: ????

Last Location: DARJEELIN (dead)

House Name:

Tattoo:

Tag/Band:

=====

Taxon Name: CANIS LUPUS CHANCO Studbook Number: 00003

=====

WILD

WILD

Sex: Male
Birth Date: ????

Last Location: DARJEELIN (dead)

House Name:

Tattoo:

Tag/Band:

=====

Taxon Name: CANIS LUPUS CHANCO Studbook Number: 00004

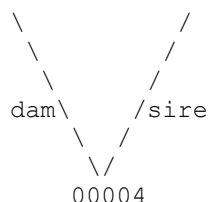
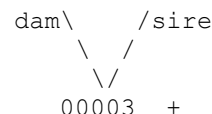
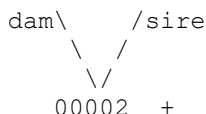
=====

WILD

WILD

WILD

WILD

Sex: Male
Birth Date: 4 Aug 1991
Last Location: DARJEELIN (dead)
House Name:
Tattoo:
Tag/Band:

+ Wild-caught...

NATIONAL STUDBOOK OF TIBETAN WOLF (*CANIS LUPUS CHANCO*) – III EDITION

=====

Taxon Name: CANIS LUPUS CHANCO

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Studbook Number: 00005

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WILD

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WILD

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 00005

WILD

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 00003 +

WILD

Sex: Female
Birth Date: 4 Aug 1991
Last Location: DARJEELIN (dead)
House Name:
Tattoo:
Tag/Band:

+ Wild-caught...

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Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00006

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UNK

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UNK

Sex: Female
Birth Date: 25 Feb 1992
Last Location: NAINITAL (dead)
House Name:
Tattoo:
Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00007

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UNK

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 00007

UNK

Sex: Male
Birth Date: 25 Feb 1992
Last Location: NAINITAL (dead)
House Name:
Tattoo:
Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

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Studbook Number: 00008

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UNK

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 00008

UNK

Sex: Male
Birth Date: 13 Mar 1998
Last Location: GANGTOK (dead)
House Name: danny
Tattoo:
Tag/Band:

=====

Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00009

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UNK

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 00009

UNK

Sex: Female
Birth Date: 13 Mar 1998
Last Location: GANGTOK (dead)
House Name: julie
Tattoo:
Tag/Band:

NATIONAL STUDBOOK OF TIBETAN WOLF (*CANIS LUPUS CHANCO*) – III EDITION

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00010

UNK

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 00010

Sex: Female
 Birth Date: 23 Mar 2004
 Last Location: DARJEELIN (dead)
 House Name: PARBATI
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00011

UNK

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 00011

Sex: Female
 Birth Date: 20 Mar 2000
 Last Location: DARJEELIN
 House Name: AKRITI
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00012

UNK

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 00012

Sex: Male
 Birth Date: ~ 1996
 Last Location: NAINITAL (dead)
 House Name: SHAMBHU
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00013

UNK

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 00013

Sex: Male
 Birth Date: ????
 Last Location: DARJEELIN (dead)
 House Name:
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00014

UNK

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 00014

Sex: Female
 Birth Date: 20 Mar 2000
 Last Location: DARJEELIN (dead)
 House Name: ROHINI
 Tattoo:
 Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

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Studbook Number: 00020

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 00011
 AKRITI

UNK

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 00020

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 00016
 RAMU

UNK

Sex: Female
Birth Date: 23 Mar 2004
Last Location: DARJEELIN (dead)
House Name: Rita
Tattoo:
Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00021

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 00009
 JULIE

UNK

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 00021

UNK

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 00008
 DANNY

UNK

Sex: Female
Birth Date: 10 Apr 2002
Last Location: GANGTOK (dead)
House Name:
Tattoo:
Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00022

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UNK

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 00009
 JULIE

UNK

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 00022

UNK

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 00008
 DANNY

UNK

Sex: Female
Birth Date: 10 Apr 2002
Last Location: GANGTOK (dead)
House Name: ROSNI
Tattoo:
Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00023

UNK

dam\
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 00009
 JULIE

UNK

dam\
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 00023

UNK

dam\
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 00008
 DANNY

UNK

Sex: Female
Birth Date: 10 Apr 2002
Last Location: GANGTOK (dead)
House Name:
Tattoo:
Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00024

UNK

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 00024

UNK

Sex: Female
Birth Date: 18 Mar 2003
Last Location: INDIA
House Name: LAXMI
Tattoo:
Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00025

UNK

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 00025

UNK

Sex: Female
Birth Date: 5 Apr 2001
Last Location: INDIA (dead)
House Name: SARASWATI
Tattoo:
Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00026

UNK

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 00026

UNK

Sex: Female
Birth Date: 4 Oct 2003
Last Location: NAINITAL (dead)
House Name:
Tattoo:
Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00027

UNK

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UNK

Sex: Male
Birth Date: 17 Mar 2004
Last Location: INDIA
House Name: BARUN
Tattoo:
Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

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Studbook Number: 00028

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          00028
    
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Sex: Female
 Birth Date: 20 Mar 2004
 Last Location: DARJEELIN
 House Name: BIJAYA
 Tattoo:
 Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

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Studbook Number: 00029

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          00029
    
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Sex: Female
 Birth Date: 20 Mar 2004
 Last Location: DARJEELIN (dead)
 House Name: BASANT
 Tattoo:
 Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

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Studbook Number: 00030

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          00030
    
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Sex: Male
 Birth Date: 20 Mar 2004
 Last Location: DARJEELIN (dead)
 House Name:
 Tattoo:
 Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00031

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          00009
          JULIE
    
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UNK

UNK

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          \ /
          00008
          DANNY
    
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      \      /
      \    /
      dam\ /sire
          \ /
          00031
    
```

Sex: Male
 Birth Date: 22 Mar 2004
 Last Location: DARJEELIN (dead)
 House Name: DEEPEN
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00032

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00009
JULIE

UNK

dam\
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00032

UNK

dam\
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00008
DANNY

Sex: Female

Birth Date: 22 Mar 2004

Last Location: GANGTOK (dead)

House Name: rani

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00033

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JULIE

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00033

UNK

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00008
DANNY

Sex: Female

Birth Date: 22 Mar 2004

Last Location: GANGTOK (dead)

House Name: tripti

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00034

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00009
JULIE

UNK

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00034

UNK

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00008
DANNY

Sex: Female

Birth Date: 22 Mar 2004

Last Location: GANGTOK (dead)

House Name: rupa

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00035

UNK

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00009
JULIE

UNK

dam\ /sire

00035

UNK

dam\ /sire

00008

DANNY

Sex: Male

Birth Date: 22 Mar 2004

Last Location: GANGTOK (dead)

House Name: raju

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00036

UNK

dam\ /sire

00036

UNK

Sex: Male

Birth Date: 23 Mar 2004

Last Location: GANGTOK (dead)

House Name: SHARAD

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00037

UNK

dam\ /sire

00037

UNK

Sex: Male

Birth Date: 23 Mar 2004

Last Location: NAINITAL (dead)

House Name: Ashish

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00038

UNK

dam\ /sire

00011
AKRITI

UNK

dam\ /sire

00038

UNK

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00016

RAMU

Sex: Female

Birth Date: 23 Mar 2004

Last Location: DARJEELIN (dead)

House Name: RADHIKA

Tattoo:

Tag/Band:

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Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00039

UNK

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 00039

Sex: Female
 Birth Date: 24 Mar 2004
 Last Location: NAINITAL (dead)
 House Name: SHEELA
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00040

UNK

UNK

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 00040

Sex: Female
 Birth Date: 23 Mar 2004
 Last Location: NAINITAL (dead)
 House Name: heena
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00041

UNK

UNK

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 00041

Sex: Female
 Birth Date: 7 Apr 2000
 Last Location: DARJEELIN (dead)
 House Name: JAMILA
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00042

UNK

UNK

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 dam \ /sire\n
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 00042

Sex: Male
 Birth Date: 17 Mar 2004
 Last Location: GANGTOK (dead)
 House Name: JAVED
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00043

UNK

UNK

dam \ /sire\n
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 00011
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UNK

UNK

dam \ /sire\n
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 00016
 RAMU

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 00043

Sex: Female
 Birth Date: 23 Mar 2004
 Last Location: DARJEELIN (dead)
 House Name: NISHA
 Tattoo:
 Tag/Band:

=====

Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00044

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UNK

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AKRITI

UNK

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00044

UNK

dam\ /sire

00016
RAMU

Sex: Female

Birth Date: 23 Mar 2004

Last Location: DARJEELIN (dead)

House Name: Pushpa

Tattoo:

Tag/Band:

=====

Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00045

=====

UNK

dam\ /sire

00045

UNK

Sex: Female

Birth Date: 17 Mar 2004

Last Location: GANGTOK (dead)

House Name: REENA

Tattoo:

Tag/Band:

=====

Taxon Name: CANIS LUPUS CHANCO

=====

Studbook Number: 00046

=====

UNK

dam\ /sire

00011
AKRITI

dam\ /sire

00038
RADHIKA

UNK

dam\ /sire

00016
RAMU

UNK

dam\ /sire

00009
JULIE

dam\ /sire

00031
DEEPEN

Sex: Male

Birth Date: 9 Apr 2008

Last Location: DARJEELIN (dead)

House Name: DENZONG

Tattoo:

Tag/Band:

UNK

dam\ /sire

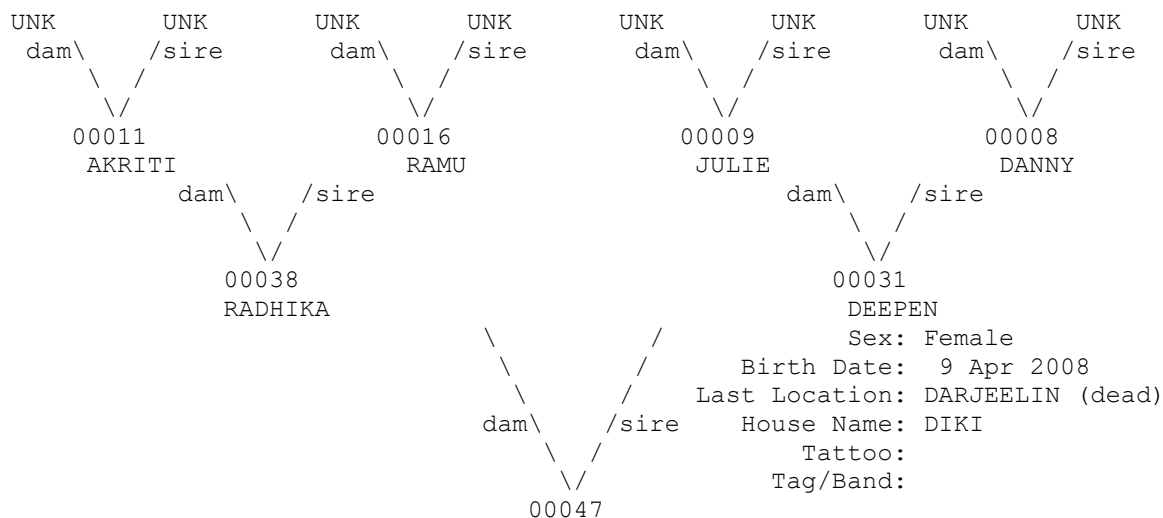
00008
DANNY

dam\ /sire

00046

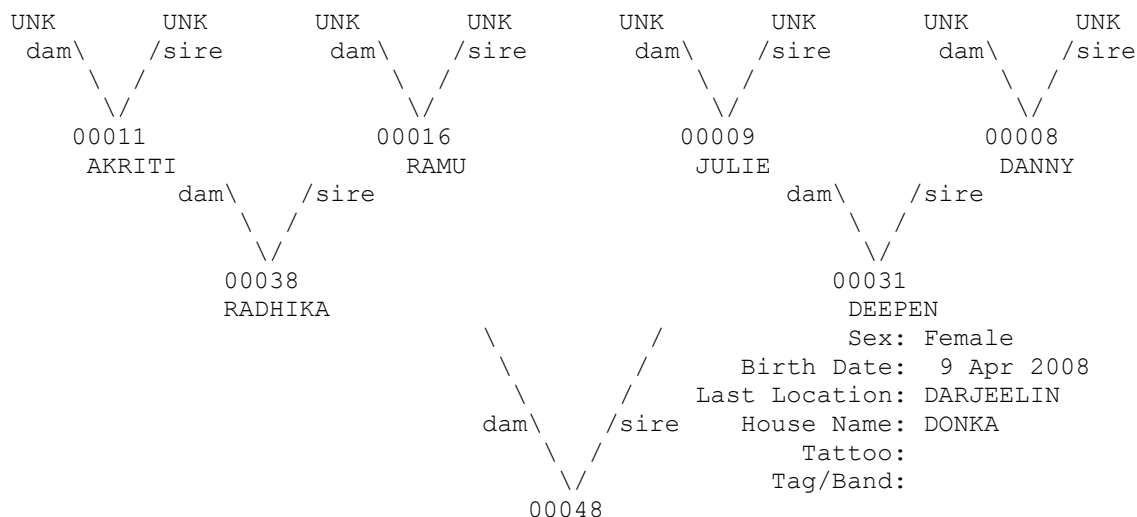
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Studbook Number: 00047



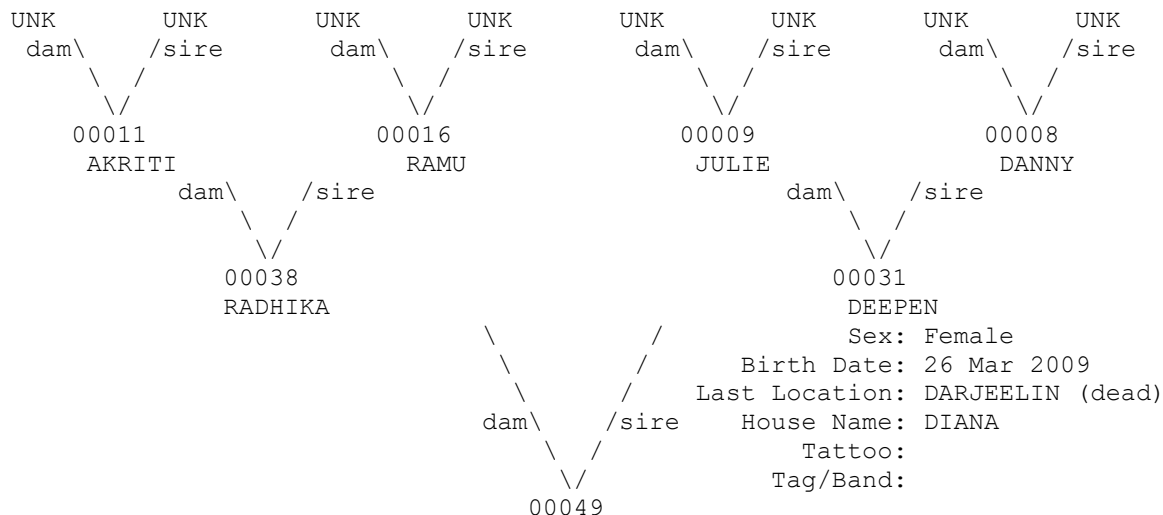
Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00048



Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00049



NATIONAL STUDBOOK OF TIBETAN WOLF (*CANIS LUPUS CHANCO*) – III EDITION

Studbook Number: 00050

UNK

Sex: Male

Birth Date: 17 Mar 2003

Last Location: DARJEELIN (dead)

House Name: hamid

Tattoo:

Tag/Band:

dam \ / sire
00050

00050

Studbook Number: 00051

UNK

Sex: Female

Birth Date: ????

Last Location: DARJEELIN (dead)

House Name: bina

Tattoo:

Tag/Band:

dam sire
00051

00051

Studbook Number: 00052

UNK UNK
dam\ /sire

UNK UNK
dam\ /sire

UNK UNK
dam\ /sire

UNK	UNK
dam\	/sire

00011
AKRITI

00016
RAMU

00009
JULIE

00008
DANNY

dam\ /sire

dam\ /sire

00038
RADHIKA

00031
DEEPEN

Sex: Female

Birth Date: 2 Apr 2010

Last Location: DARJEELIN)

House Name: TCHOEKI/CHAKI

Tattoo:

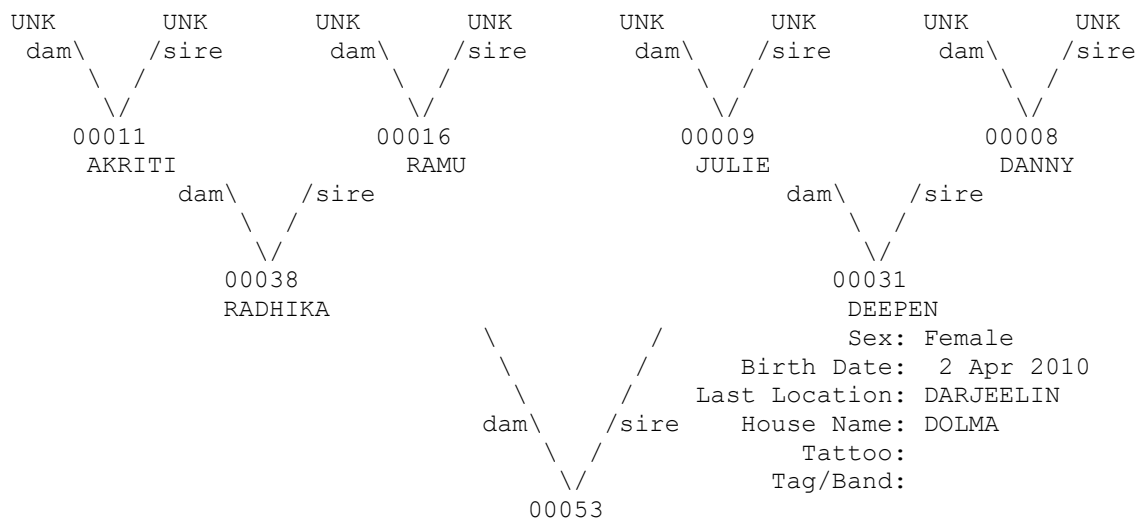
Tag/Band:

dam \ / sire
00052

00052

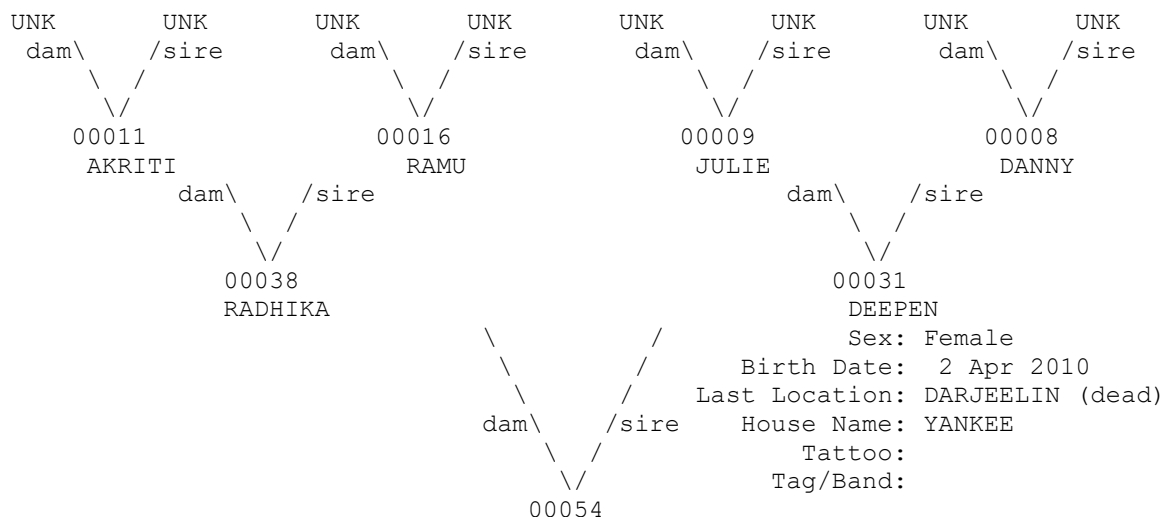
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Studbook Number: 00053



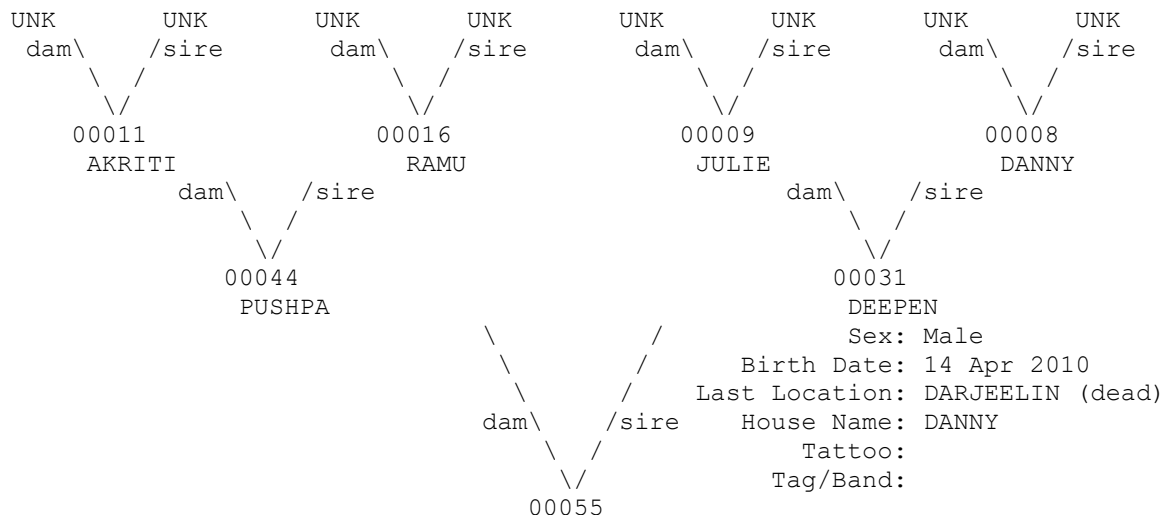
Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00054



Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00055



Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00056

UNK

dam\
00039
SHEELA

UNK

dam\
00056

UNK

dam\
00037
ASHISH

Sex: Female

Birth Date: 3 Apr 2011

Last Location: NAINITAL

House Name: MONU

Tattoo:

Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00058

UNK

dam\
00039
SHEELA

UNK

dam\
00058

UNK

dam\
00037
ASHISH

Sex: Male

Birth Date: 3 Apr 2011

Last Location: NAINITAL

House Name: SONU

Tattoo:

Tag/Band:

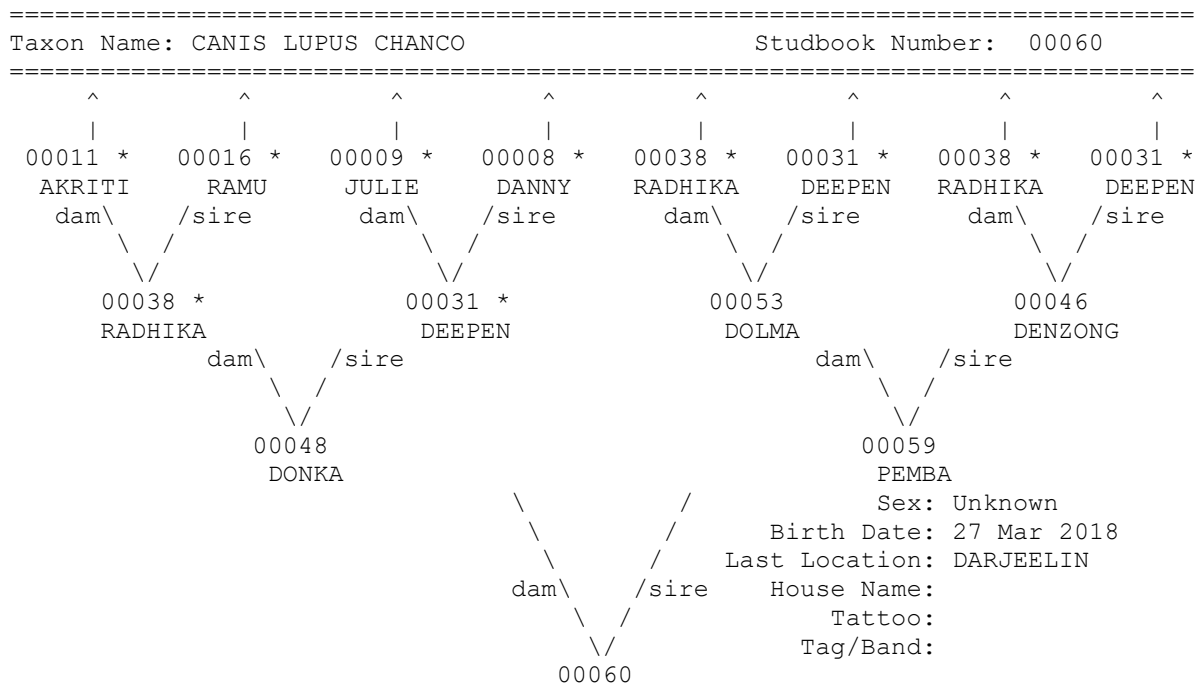
Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00059

^ | 00011 * 00016 * 00009 * 00008 * 00011 * 00016 * 00009 * 00008 *
AKRITI RAMU JULIE DANNY AKRITI RAMU JULIE DANNY
dam\ /sire dam\ /sire dam\ /sire dam\ /sire
00038 * 00031 * 00038 * 00031 *
RADHIKA DEEPEN RADHIKA DEEPEN
dam\ /sire dam\ /sire
00053 00046
DOLMA DENZONG
Sex: Male
Birth Date: 10 Apr 2015
Last Location: DARJEELIN
House Name: PEMBA
Tattoo:
Tag/Band:
00059

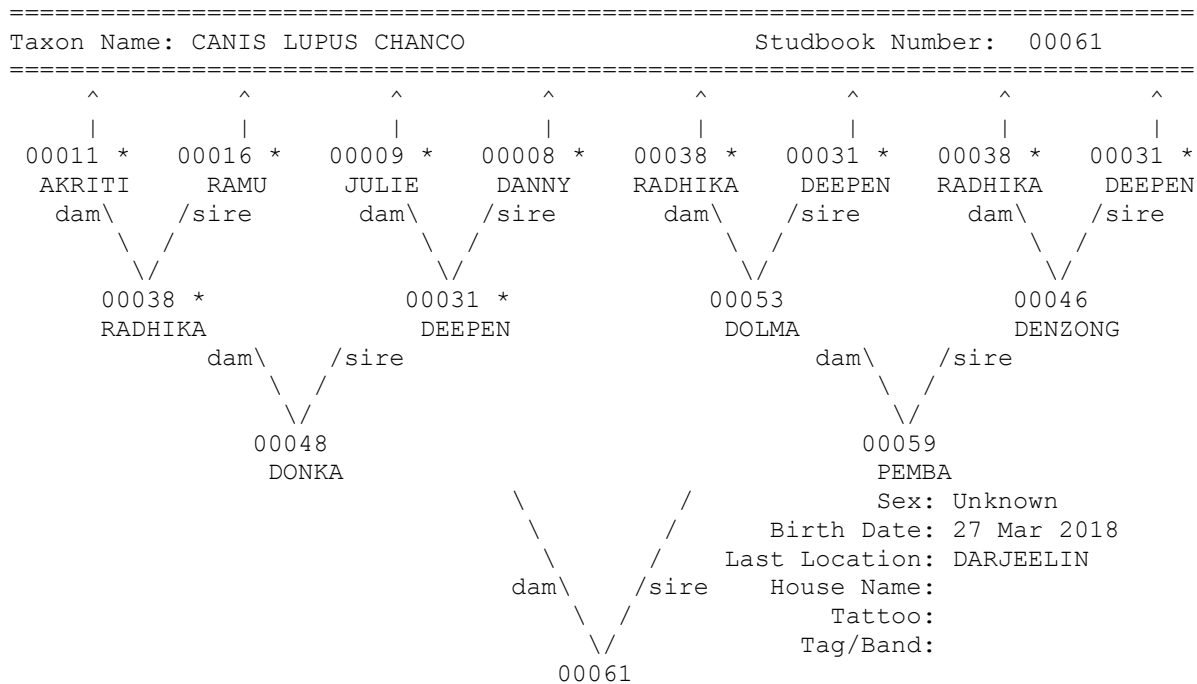
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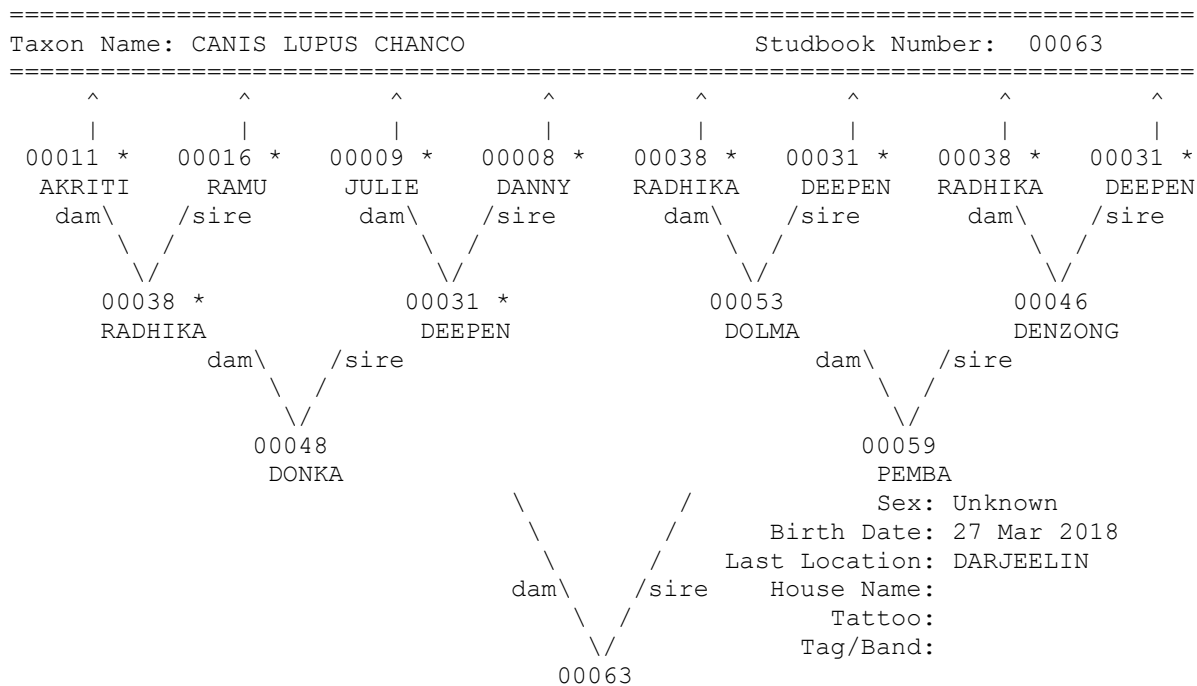
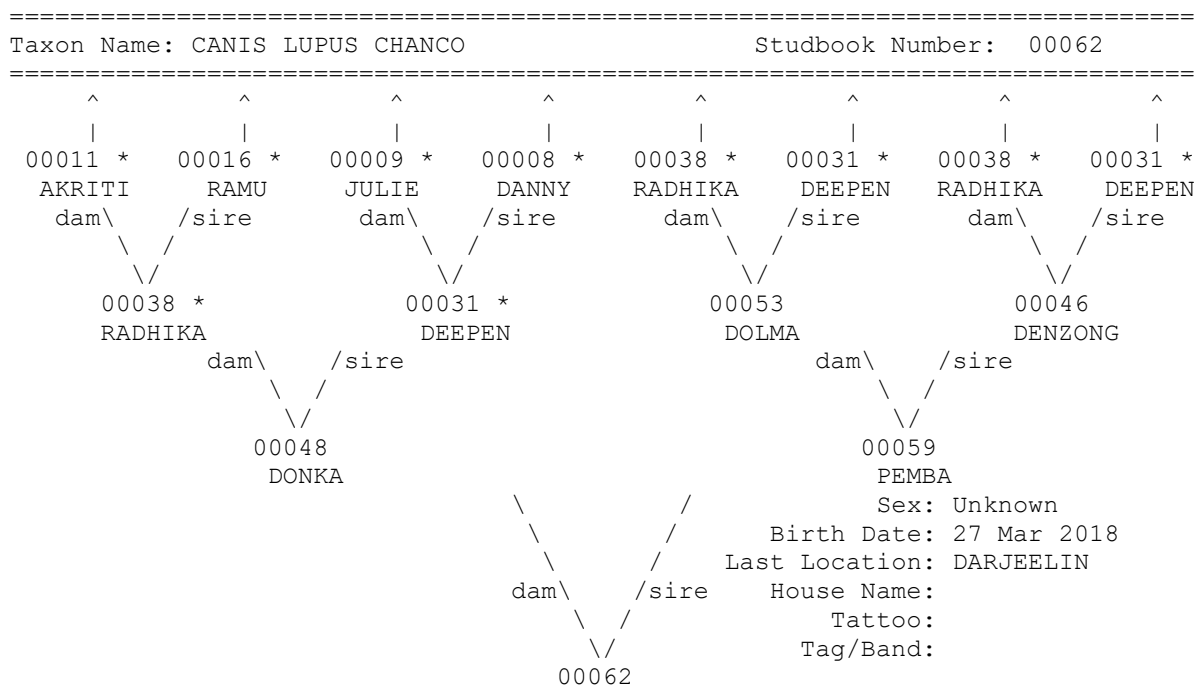
* Appear more than once...

^ Pedigree continues beyond top of page...



* Appear more than once...

^ Pedigree continues beyond top of page...



NATIONAL STUDBOOK OF TIBETAN WOLF (*CANIS LUPUS CHANCO*) – III EDITION

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00064

UNK

UNK

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 dam \ / sire
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 00064

Sex: Female
 Birth Date: 13 Mar 1998
 Last Location: DARJEELIN (dead)
 House Name:
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00065

UNK

UNK

\ /
 \ /
 dam \ / sire
 \ /
 \ /
 00065

Sex: Male
 Birth Date: 13 Mar 1998
 Last Location: DARJEELIN (dead)
 House Name:
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00066

UNK

UNK

\ /
 \ /
 dam \ / sire
 \ /
 \ /
 00066

Sex: Male
 Birth Date: 13 Mar 1998
 Last Location: DARJEELIN (dead)
 House Name:
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00067

UNK

UNK

\ /
 \ /
 dam \ / sire
 \ /
 \ /
 00067

Sex: Male
 Birth Date: 13 Mar 1998
 Last Location: DARJEELIN (dead)
 House Name:
 Tattoo:
 Tag/Band:

Taxon Name: CANIS LUPUS CHANCO

Studbook Number: 00068

UNK

UNK

\ /
 \ /
 dam \ / sire
 \ /
 \ /
 00068

Sex: Female
 Birth Date: 23 Mar 2004
 Last Location: DARJEELIN (dead)
 House Name: VAHIDA
 Tattoo:
 Tag/Band:

=====		=====	
Taxon Name: CANIS LUPUS CHANCO		Studbook Number: 00069	
=====		=====	
UNK		UNK	
		Sex: Male	
		Birth Date: ????	
		Last Location: DARJEELIN (dead)	
		House Name:	
		Tattoo:	
		Tag/Band:	
	<pre> \ / \ / dam \ /sire \ / \/ 00069 </pre>		
=====		=====	
Taxon Name: CANIS LUPUS CHANCO		Studbook Number: 00070	
=====		=====	
UNK		UNK	
		Sex: Male	
		Birth Date: ????	
		Last Location: DARJEELIN (dead)	
		House Name:	
		Tattoo:	
		Tag/Band:	
	<pre> \ / \ / dam \ /sire \ / \/ 00070 </pre>		
=====		=====	
Taxon Name: CANIS LUPUS CHANCO		Studbook Number: 00071	
=====		=====	
UNK		UNK	
		Sex: Male	
		Birth Date: 2 Mar 2000	
		Last Location: DARJEELIN (dead)	
		House Name:	
		Tattoo:	
		Tag/Band:	
	<pre> \ / \ / dam \ /sire \ / \/ 00071 </pre>		
=====		=====	
Taxon Name: CANIS LUPUS CHANCO		Studbook Number: 00072	
=====		=====	
UNK		UNK	
		Sex: Male	
		Birth Date: 2 Mar 2000	
		Last Location: DARJEELIN (dead)	
		House Name:	
		Tattoo:	
		Tag/Band:	
	<pre> \ / \ / dam \ /sire \ / \/ 00072 </pre>		
=====		=====	
Taxon Name: CANIS LUPUS CHANCO		Studbook Number: 00073	
=====		=====	
UNK		UNK	
		Sex: Female	
		Birth Date: 20 Mar 2000	
		Last Location: INDIA	
		House Name:	
		Tattoo:	
		Tag/Band:	
	<pre> \ / \ / dam \ /sire \ / \/ 00073 </pre>		

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=====
Taxon Name: CANIS LUPUS CHANCO                      Studbook Number: 00074
=====
                                UNK
                                Sex: Female
                                Birth Date: 23 Mar 2004
                                Last Location: DARJEELIN (dead)
                                House Name: KUSUM
                                Tattoo:
                                Tag/Band:

                                \      /
                                \    /
                                dam\ /sire
                                \  /
                                \ /
                                00074
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=====
Taxon Name: CANIS LUPUS CHANCO                      Studbook Number: 00075
=====
                                UNK
                                Sex: Female
                                Birth Date: 23 Mar 2004
                                Last Location: DARJEELIN
                                House Name: MARY
                                Tattoo:
                                Tag/Band:

                                \      /
                                \    /
                                dam\ /sire
                                \  /
                                \ /
                                00075
```

```
=====
Taxon Name: CANIS LUPUS CHANCO                      Studbook Number: 00076
=====
                                UNK
                                Sex: Male
                                Birth Date: 17 Mar 2003
                                Last Location: DARJEELIN (dead)
                                House Name: RAJU
                                Tattoo:
                                Tag/Band:

                                \      /
                                \    /
                                dam\ /sire
                                \  /
                                \ /
                                00076
```

Annexure IV

Location Glossary of Tibetan Wolf Studbook

Mnemonic	Location
DARJEELIN	Padmaja Naidu Himalayan Zool. Park, Darjeeling
GANGTOK	Himalayan Zoological Park, Gangtok
INDIA	Wild origin specimens
KUFRI	Himalayan Nature Park, Shimla
NAINITAL	Pt. G. B. Pant Himalayan Zoological Park, Nainital,