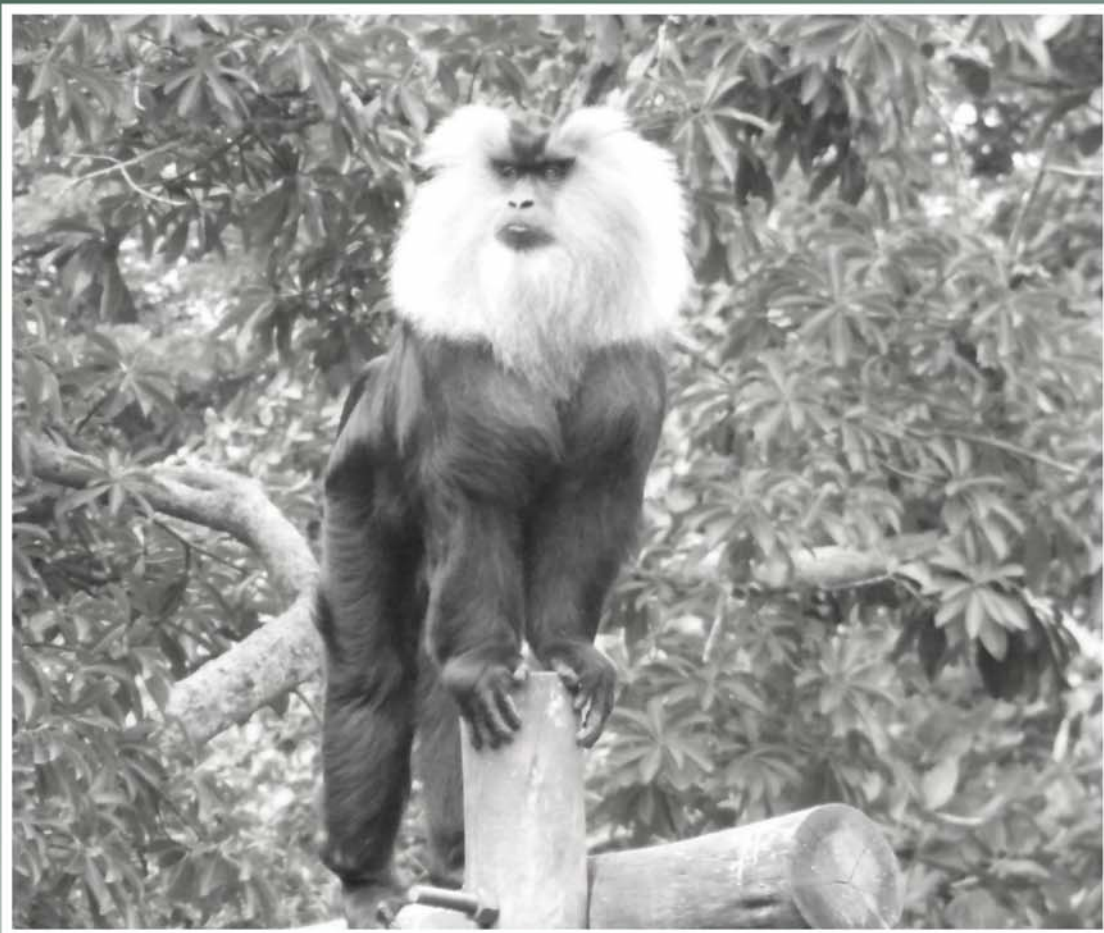


# National Studbook of Lion Tailed Macaque (*Macaca silenus*)



भारतीय वन्यजीव संस्थान  
Wildlife Institute of India



केन्द्रीय चिड़ियाघर प्राधिकरण  
Central Zoo Authority

September, 2011

# National Studbook of Lion Tailed Macaque (*Macaca silenus*)

*Studbook compiled and analyzed by*

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**Authors**

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# Lion Tailed Macaque: Biology and Status

## Taxonomy

<b>Kingdom:</b>	<b>Animalia</b>
<b>Phylum:</b>	<b>Chordata</b>
<b>Class:</b>	<b>Mammalia</b>
<b>Order:</b>	<b>Primates</b>
<b>Family:</b>	<b>Cercopithecidae</b>
<b>Scientific Name:</b>	<b><i>Macaca silenus</i></b>
<b>Species Authority:</b>	<b>Linnaeus, 1758</b>
<b>Common Name/s:</b>	<i>Siah Bandar</i> (Hindi), <i>Neel Bandar</i> (Bengali), <i>Singalika</i> (Kannada), <i>Karingode</i> (Coorgi), <i>Neela manthi</i> , <i>Chingala</i> (Malyalam), <i>Kuram</i> , <i>Karangu</i> , <i>Arakkan</i> (Tamil), <i>Kondamachu</i> (Telugu)

Lion tailed macaque belonging to the family Cercopithecidae which includes old world monkeys, has been named so because its tail has a tuft of hair at its end similar to that of lion (*Panthera leo*) (Jayson, 1996). One of the dispersal theories suggest that prosilenus ancestor evolved in South Asia and dispersed further north and east from here, due to certain events in Pleistocene, a population in Western Ghats got isolated; this population later on became the ancestor of present day lion tailed macaques (Fooden, 1975; Kumar, 2001).

Morphological and molecular phylogenetic studies place the species in the silenus group forming a monophyletic cluster with pig tailed and toque macaques (Hayasaka *et al*, 1996).

## Biology

**Morphology:** The most distinguishing feature of lion tailed macaque is the presence of a brownish gray mane around its face. It has a black body and bare face. As mentioned earlier the tail has tuft at the end, it is about two third the head and body length. Skin is pale pink and hair is brown in juveniles (Roonwal & Mohnot, 1977; Rowe, 1996; Jayson, 1996; Grooves, 2001; AZA, 2000).

**Table 1: Biological attributes of Lion tailed macaque**

Attributes	Male	Female
Head and Body length	510-610mm	460mm
Tail length	254-386mm	254-320mm
Weight	5-10kg	3-6kg
Age at first reproduction (in wild)	*80 months	
Age at first reproduction (in captivity)	**48 months	
Gestation period	162-186 days	
Longevity	38 years	

Source: Rowe, 1996; \*Kumar, 1995; \*\*Kaumanns *et al*, 2006

The species has been reported to have a low birth rate (mean 0.2966) and long inter-birth interval (mean 2.47 years) (Kumar, 1995 & 2001). The survival rate has been calculated as 0.95/individual/year for immatures, 0.97/female/year and 0.92/male/year for adults (Singh *et al*, 2000a).

**Habitat:** The lion tailed macaque is endemic to the tropical rain forest of Western Ghats and occupies dense evergreen hilly forest of high trees, inhabiting an altitude between 610-1070 m. It is also known to occupy cardamom and tea plantation when interspersed with undisturbed evergreen forest (Roonwal & Mohnot, 1977; Jayson, 1996).

They are mostly spotted on tall (Mean 17.5 m) trees, a preference for which is commonly exhibited during wet season. During the wet season medium height tree are less utilized as compared to dry season. They mostly occupy the middle and upper canopy of these trees. A marked preference for lower and upper canopy is exhibited during wet season (Singh *et al*, 2000b).

**Diet:** Lion tailed macaque is primarily frugivorous but as it also feeds upon selected fauna; is classified as frugivorous/faunivorous. Though it feeds on treetops, it may sometimes also forage on ground. The carbohydrate and protein rich diet chiefly consist of fruits and seeds (57.5%), faunal group (37.3%) and other plant parts (5%). A total of 200 species of trees are known to contribute to the macaque's diet, of which fruit bearing trees (like *Mangifera indica* and *Semicarpus travancoria*) make the largest component, followed by seed bearing, nectar (*Bombax malabarica*) and gum and resin producing trees (*Gnetum ulae* and *Vepris bilocularis*). They are also known to eat flowers of *Xanthophyllum flavescens*; seeds and flowers of *Cullenia exarillata* is considered as an important food item, other important genres being *Artocarpus*, *Ficus* and *Litsea* (Menon & Poirier, 1996; Ganesh & Davidar, 1999). Apart from these they also feed on moss, lichen and mushroom (Kumar, 1995; Kumar, 2001; Rowe, 1996; Jayson, 1996; Singh *et al*, 2000b; Ramchandran and Joseph, 2000). The faunal component of the macaque's diet is made of small vertebrates, nestlings and birds (0.60%) that are mostly preyed upon by adults in the group; and arthropods. There is a seasonal variation in feeding pattern with more faunal and less fruit intake during winter and dry season; as against less faunal and more fruit intake during autumn and wet period (Kumar *et al*, 2000; Singh *et al*, 2000b).

### Social Organization & Behaviour

**Group structure and size:** The species has a multi male – multi female group structure with sub adult and juveniles. All male groups are not normally reported in wild but a study in captivity showed that lion tailed macaques are capable of forming social relationships and tolerant enough to exist as multi male group (Stahl *et al*, 2000). In a study at Sirsi-Honnavaara Karnataka, group density per km<sup>2</sup> was observed to be 0.28 (Kumara & Singh, 2004).

The troop size of free ranging groups varies with location, which appears to be dependent upon resource availability (Table 2); in general, undisturbed habitats are known to hold groups of 7 to 40 animals with an average group size of 18 animals. The adult sex ratio is biased toward female being 1:6 (Kumar, 2001). Studies show that in highly fragmented habitat the birth rate and immature survival is significantly different from what it is for normal forest, also the group is significantly larger. In addition the number of males in the group is more in fragmented habitat which has an impact on the sex ratio (Umapathy & Kumar, 2000; Menon & Poirier, 1996; Singh *et al*, 2002a).

**Table 2: Lion tailed macaque - group size at various locations**

S.No.	Location	Group size	Author(s)
1.	Sringeri, Karnataka	(avg.) 21.8	Singh <i>et al</i> , 2000a
2.	Indira Gandhi Wildlife Sanctuary, Tamil Nadu	(mean) 18.8	Kumar, 1995
3.	Annamalai hills	(mean) 16.3	Singh <i>et al</i> , 2002a
4.	Sirsi- Honnavara, Karnataka	(mean) 24.7	Kumara & Singh, 2004
5.	Kerala	(avg.) 19	Easa <i>et al</i> , 1997

**Behaviour:** Lion tailed macaque is diurnal and considered to be most arboreal of all macaques (Napier & Napier, 1985). They spend most of their time feeding and foraging (50%), followed by resting (33%) and moving (15%) (Rowe, 1996). In captivity they spend 31.2% of their time playing, 24.5 % feeding, 29.6% investigating and moving, 10.2% grooming, 3.6 % resting, 0.4% drinking, 0.3% mating and 0.1% of the time exhibiting agonistic behaviour (Roonwal & Mohnot, 1977). Higher frequency of feeding is observed during the midday period (Singh *et al*, 2000b) and more time is spent in foraging when the group is feeding on non-key resources (Menon & Poirier, 1996). A certain peak in foraging behaviour has been observed during September to December (Rowe, 1996). The activity pattern also changes with weather, such as when it is hot there is a decline in grooming and increase in resting (Roonwal & Mohnot, 1977). In fragmented forest they have been observed to be spending most of their time ranging (directional travel including movement from one canopy to another) rather than resting (inactive sitting or standing) and feeding (actual manipulation or intake of food items) (Menon & Poirier, 1996).

They are known to forage for insects by breaking branches and under bark of trees. Use of simple tool has been observed at various instances. They have been observed using tools for extracting termites from termite mounds, in captivity (Rowe, 1996). In wild they have been reported to use leaf for food preparation while feeding upon insects (Hohmann, 1988).

A peak in mating has been observed during January and February, which is indicated by the typical behaviour exhibited by female when it is in estrous. A female call to indicate her receptive state, the same is also advertised by the swelling of perineal skin. The sexual swelling in females has been associated with heightened reproductive behaviour. It starts 1-2 month after delivery, 11-13 days after which mating takes place (Rowe, 1996; Kumar, 2001; Mohnot, 2005). The sexual cycle lasts 30 days. During mating the couple isolates itself from rest of the group; Grooming, embracing and examination of vulva of female by male is observed (Roonwal & Mohnot, 1977). Both single and multiple mount ejaculations are exhibited by lion tailed macaques (Mohnot, 2005; Kumar, 2001b).

There is a lack of studies about such social behaviour of these macaques as mother-infant relationship and interaction of group members. Though it is known that mother suckles the new born and when it grows to the age of about five and a half month mother starts weaning; at this age there is also a peak in social play and environmental exploration. After this age the animals as they mature become more passive spending lesser time in social play and exploration. In a study by Krishna *et al*, (2008) it was observed that unlike other macaques mother of this species are biased towards male offspring rather than female and hence not only are males suckled and weaned later (up to ten months as compared to seven months in females) but also groomed twice more than females.

Males of the species migrate upon reaching maturity while females always remain in their natal groups. Male migration is an important behavior that can ensure the survival of the species even in fragmented habitats having small population, by keeping away the deleterious effects of inbreeding. Lion tailed macaque are tolerant and a migratory male is easily accepted and often preferred over resident male by adult females (Kumar, 1995; Umaphathy & Kumar, 2000; Kumar, 2001; Mohnot, 2005; Kaumanns *et al*, 2006)

A study in captivity concludes that during inter group encounter both male and female actively participate but there are marked differences in behaviour (Zinner *et al*, 2001). Behaviour also varies with the size of the group with larger groups being more dominant and aggressive. Females are aggressive and remain unfriendly towards females of other group even after many encounters; they are also aggressive towards male of other group if they have infants. Males are aggressive towards both males and females; during an encounter the male chase away the females and juveniles of its group from the encounter site. Male aggression is more directed towards the females and juveniles of other group rather than

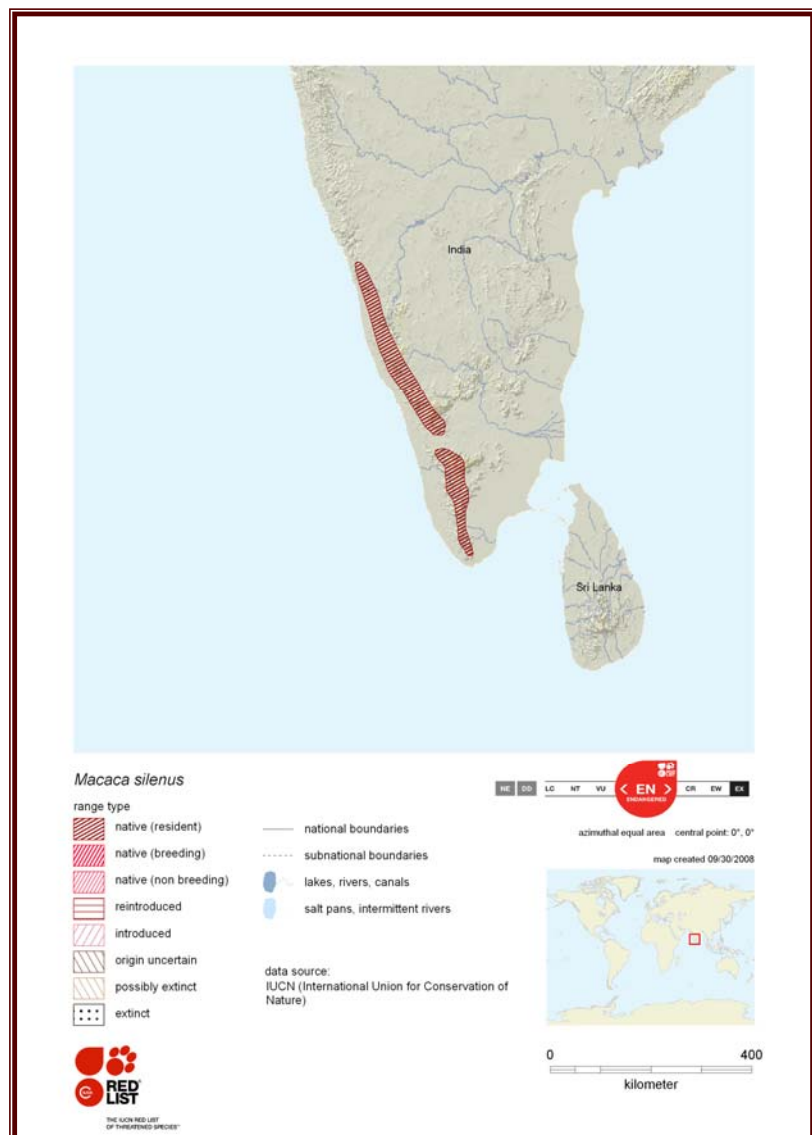
other males. It has been observed that the frequency of mounting increases during an encounter (Zinner *et al*, 2001). Whooping is also observed during such encounter, as mentioned earlier the adult males seldom fight. Usually the less dominant group gives way to more dominant or both the groups may continue to stay near each other (Roonwal & Mohnot, 1977). During intra and inter group encounters the submitting individual presents its hindquarters. In 60% of the cases reconciliation is initiated by aggressor after a fight, while in rest 40% it is the victim (Rowe, 1996).

Ten types of vocalizations have been reported in LTM. Both male and female emit copulation calls, which is unique to lion tailed macaque. Male of the species gives out a loud territorial call. The most frequent call that is associated with a traveling group is “who”. An alarm call is emitted when threatened by aerial predator. Apart from these there are - threat call against individuals of same group, female and juvenile screams, squeals of infants and short distance communication call. But vocalization is variedly defined, with some workers observing a musical call “pio”, others short distance calls like “*ughh, ughh*” and “*coo-ooo*” (Roonwal & Mohnot, 1977; Rowe, 1996).

## Distribution

The lion tailed macaques are endemic to Western Ghats, roughly distributed from 8°25'N Kalakkadu Hills to 14°55'N north of Anshi Ghat (Grooves, 2001). Their historic distribution included almost the entire Western Ghats, they are locally extinct in Maharashtra and Goa and are restricted to three south Indian states of Karnataka, Kerala and Tamil Nadu (Kumar, 2001; Kumar, 1995). In the Western Ghats they are divided in to two sub population by the Palaghat gap in Kerala (Singh *et al*, 2002a; Kaumanns *et al*, 2006). As a matter of fact the entire population of lion tailed macaque exists at present, only in small fragmented habitat, north of Sharavathi River in Karnataka and higher elevations of Karnataka and Kerala (Kumar, 2001; Kumar 1995).

In Karnataka it is reported in Siddapur forest range, Srimangala Forest Range, Kumta Range, Mudigere Range, Hosanagara range, Agumbe range, Karkala



**Figure 1:** Distribution map of Lion tailed macaque in India (IUCN Red List of Threatened Species, 2011)

range, Mudbidri range, forest ranges of Kyadagi, Sringeri, Kalasa, Shankaranarayana and a small population in Charmadi Hills of the Belthangadi range. The protected areas in the state with reported presence of LTM are Brahmagiri, Pushpagiri, Talakaveri, Sharavati, Mookambika and Someshwara Wildlife Sanctuaries and Kudremukh National Park (Kumar, 2001; Kumar 1995).

Kerala and Tamil Nadu, hold the largest population of these macaques. The ranges that are known to hold significant portion of the population are Nilgiri hills, Anaimalai hills, and Cardamom hills (Roonwal & Mohnot, 1977; Kumar, 2001; Kumar 1995; Singh *et al*, 2002a; Easa *et al*, 1997). It has been reported from the following protected areas Silent Valley National Park, Periyar Tiger Reserve, Aralam, Chimmomy, Shendury, Parambikulam, Neyyar and Peppar Wildlife Sanctuaries in Kerala and Indira Gandhi, Kalakkad, Mundanthurai, Grizzled Giant Squirrel Sanctuaries in Tamil Nadu (Jayson, 1996; Easa *et al*, 1997; Molur *et al* 2003).

### **Threats**

Habitat fragmentation, deterioration and hunting are the main threats faced by the species. Habitat fragmentation due to habitat being lost to agriculture and other non forestry purposes has resulted in breaking of the population into small isolated groups, with only a few fragments holding more than ten troops (Kumar, 1995 & 2001; Kumara & Singh, 2004). In the absence of male migration lion tailed macaques inhabiting small fragmented habitat are susceptible to inbreeding and stochastic extinction. A study has suggested habitat fragmentation results in lowering of birth rate and immature survival, skewing of the sex ratio and lowering of immature to adult ratio (Kumara & Sinha, 2000; Umapathy & Kumar, 2000; Singh *et al*, 2002). Moreover isolated, marginal habitat also increases the predation risk and lower food availability (Menon & Poirier, 1996). Habitat degradation is considered even a bigger threat than habitat loss. It is ensued by exploitation of forest resources by people (collection of fuelwood and NTFP like honey, cane, tubers, fruits and flowers), illegal human settlements (as in Kundermukh-Narasimha Parvata) and developmental projects like hydro-electric power project (e.g.. Sharavathi project), mining and mineral exploration (as in Kundermukh and Andar reserve forests), railway lines (e.g. Hassan-Mangalore railway), highways and roads (like in Tungabhadra and Kandamakal reserve forest) (Karanth, 1992; Singh *et al* 2000a; Krishnamani & Kumar, 2000; Jayson, 1996). Habitat conversion by cardamom and tea plantation has also resulted in deterioration of habitat, with decreased food availability and negative impacts on regeneration (Kumar, 1995 & 2000). Hunting across the range (Kodagu, Nilambur, Cardamom and Silent Valley) is also responsible for the decline in the population size. The animal is poached for its meat by many tribal communities, as it is supposed to possess medicinal properties (Karanth, 1992; Kumar, 1995 & 2000; Jayson, 1996).

### **Status of Lion tailed macaque**

A estimate in 1977, done by Green & Minkowski estimated a population size of 600 in the entire western ghats, recent estimates suggest of a population size of 3550 individuals existing as fragmented population all over the western ghats (Molur *et al*, 2003; Easa *et al*, 1997; Kumara & Singh, 2004; Menon & Poirier, 1996; Kumara & Sinha, 2009; Southwick & Siddiqi, 2001). In captivity, in India there are 86(44.41.1) individuals in 20 Institutions. Details are presented in table 3.

**Table 3: Status in captivity**

S.No.	Zoo Name	Males	Females	Unknown	Total
1.	Assam State Zoo cum Botanical Garden	0	1	0	1
2.	National Zoological Park, New Delhi	3	1	1	5
3.	Sri Chamarajendra Zoo (mysore Zoo), Mysore, Karnataka	7	6	0	13
4.	Arignar Anna Zool Park Chennai, Chennai, Tamil Nadu	9	11	0	20
5.	Nehru Zoological Park, Hyderabad, Andhra Pradesh	0	2	0	2
6.	Nandankanan Biological Park, Orissa	0	1	0	1
7.	Kanpur Zoological Park, Uttar Pradesh	2	2	0	4
8.	Mahendra Chaudhary Zoological Park, Punjab	1	0	0	1
9.	Bannerghatta Zool Garden National Park, Bangalore, Karnataka	1	0	0	1
10.	Thiruvananthapuram (Trivandrum) Zoo, Kerala	9	6	0	15
11.	Parassinikkadavu Snake Park, Kerala	1	2	0	3
12.	Maitri Bagh Zoo, Bhilai, Chhattisgarh	2	3	0	5
13.	Sanjay Gandhi Biol.Park, Bihar	1	3	0	4
14.	Children's Corner, Guindy Childrens Pk, Chennai, Tamil Nadu	2	0	0	2
15.	Alipore Zoological Garden, Calcutta	1	1	0	2
16.	Jaipur Zoological Garden, Rajasthan	1	0	0	1
17.	Trichur Zoo, Kerala	1	0	0	1
18.	Kodanadu Mini Zoo, Kerala	1	0	0	1
19.	Lady Hydari Park and Animal Land, Shillong, Meghalaya	1	2	0	3
20.	Lucknow Zoological Park, Lucknow	1	0	0	1
	<b>Total</b>	<b>44</b>	<b>41</b>	<b>1</b>	<b>86</b>

Since the species is endemic to only Western Ghats and exist as fragmented population, it has been listed as:

- Endangered C2a(i) ver 3.1 in IUCN Red Data List
- Appendix I of CITES
- Schedule I of Wildlife Protection Act, 1972.

### Methodology

Data for compilation of national studbook was collected from 20 zoos in India that are housing lion tailed macaque by means of mailed questionnaire survey, personal visits and CZA website. Collected Data in appropriate format was then entered in SPARKS 1.5 software and studbook report was generated. Subsequently, the SPARKS dataset was imported in Poplink 1.3 and created ~.prn and ~.ped files for demographic and genetic analyses in pm2000. The software pm2000 was used to produce the census report, life tables, population projections, founder statistics, inbreeding coefficients, possible pairings and population planning.

## Profile of Captive Population

A total of 86 individuals comprise the living population of lion tailed macaque in captivity that includes 44 males, 41 females and 1 unknown sex individuals (table 4).

**Table 4: Listing of living Lion tailed macaque in captivity in India**

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
<b>Assam State Zoo cum Botanical Garden</b>										
1.	Muni	135	F	Wild	104	31 Jan 1988	Assam	31 Jan 1988	Birth	
0.1.0 (1)										
<b>National Zoological Park, New Delhi</b>										
1.		138	M	67	42	19 Jul 1988	Delhi	19 Jul 1988	Birth	
2.	Dass	263	M	182	187	17 Jan 2002	Madras Delhi	17 Jan 2002 1 Oct 2006	Birth Transfer	
3.	Banu	272	F	186	120	25 Nov 2003	Madras Delhi	25 Nov 2003 1 Oct 2006	Birth Transfer	
4.		303	M	Unk	272	20 Nov 2008	Delhi	20 Nov 2008	Birth	
5.		309	?	138	172	7 Sep 2010	Delhi	7 Sep 2010	Birth	
3.1.1(5)										
<b>Sri Chamarajendra Zoo (mysore Zoo), Mysore, Karnataka</b>										
1.	Netra M00036	86	F	Wild	Wild	~ 1982	India Bannerghata Mysore	??? ??? 20 Jan 1992	Capture Transfer Transfer	
2.	Manja ZAK02	159	M	Wild	Wild	???	India Trivandrum Mysore	??? ??? 7 Dec 1982	Capture Transfer Transfer	
3.	Priya M00038 00063B3B7F	175	F	Wild	Wild	~ 1990	Bannerghata Mysore	~ 1990 10 Oct 1992	Capture Transfer	
4.	Rama ZAK05	176	M	Wild	Wild	~ 1990	India Shimoga Mysore	~ 1990 ~ 1990 13 Mar 1996	Capture Transfer Transfer	
5.	Shanti M00037 00063AFBBC	184	F	Wild	Wild	~ 1992	India Mangalore Mysore	~ 1992 ~ 1992 13 Jun 1996	Capture Transfer Transfer	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
6.	Lingan 00-0611-7E09	189	M	110	120	13 Jul 1996	Madras Mysore	13 Jul 1996 18 Dec 2003	Birth Loan to	
7.	Krishna M00035 00063B2551	248	M	Wild	Wild	~ 1991	Karnataka Mysore	~4 Nov 2001 4 Nov 2001	Capture Transfer	
8.	Geetha M00005 00063B1763	253	F	Wild	Wild	~ 1997	India Mangalore Mysore	??? ??? 28 Oct 2006	Capture Transfer Transfer	
9.	Ankitha MOOOO3 0006B96F1	261	F	Wild	Wild	~ 2001	Karnataka Mysore	~20 Oct 2007 20 Oct 2007	Capture Transfer	
10.	Aswath M00006 00063B2623	265	M	Wild	Wild	~2002	India Mysore	~21 Jul 2007 21 Jul 2007	Capture Transfer	
11.	Appu M00034 00063B1431	276	M	Wild	Wild	~ 2004	India Mysore	~ 6 Nov 2006 6 Nov 2006	Capture Transfer	
12.	Swathi M00004 00063B010B	281	F	Wild	Wild	~ 2005	India Mysore	~21 Jul 2007 21 Jul 2007	Capture Transfer	
13.	Abhi M00007 0006B4C07	288	M	Wild	Wild	~Aug 2006ñ1m	India Mysore	~ 5 Nov 2006 5 Nov 2006	Capture Transfer	
7.6.0 (13)										
<b>Arignar Anna Zool Park Chennai, Chennai, Tamil Nadu</b>										
1.	Mohan	110	M	WILDM1	WILDM2	~ 1984	India Guindy Madras	~ 1990 7 Apr 1990 26 Apr 1990	Capture Transfer Transfer	
2.	Veni	187	F	110	120	14 Jun 1995	Madras	14 Jun 1995	Birth	
3.	Mala 10#00.0611.41 B	190	F	110	120	27 May 1998	Madras	27 May 1998	Birth	
4.	Apsara 10#00.0611-1F1F	191	F	Wild	Wild	~1998	India Madras	~ 1999 5 Jun 1999	Capture Transfer	
5.	Murugan #98109810205688	271	M	182	187	23 Jul 2003	Madras	23 Jul 2003	Birth	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
6.	Anitha	273	F	182	191	4 Jan 2004	Madras	4 Jan 2004	Birth	
7.	Sindhu #98109810205821	277	F	182	187	16 Aug 2004	Madras	16 Aug 2004	Birth	
8.	Sandhiya #98109810205815	279	F	182	190	5 Apr 2005	Madras	5 Apr 2005	Birth	
9.	Anand #98109810080144	284	M	182	191	5 Nov 2005	Madras	5 Nov 2005	Birth	
10.	Vimala AAZP41	292	M	256	259	25 Apr 2007	Madras	25 Apr 2007	Birth	
11.	Asok AAZP43	294	F	182	191	9 Jun 2007	Madras	9 Jun 2007	Birth	
12.	Ravi AAZP46	298	M	256	188	1 Sep 2007	Madras	1 Sep 2007	Birth	
13.	Amala	300	F	182	273	20 Mar 2008	Madras	20 Mar 2008	Birth	
14.	Raj	301	M	182	187	5 Apr 2008	Madras	5 Apr 2008	Birth	
15.	Vinodh	302	M	256	259	11 Aug 2008	Madras	11 Aug 2008	Birth	
16.	Anjali AAZP51	304	F	182	191	19 Feb 2009	Madras	19 Feb 2009	Birth	
17.	Ragavi AAZP52	305	F	256	188	16 Apr 2009	Madras	16 Apr 2009	Birth	
18.	Ranjani AAZP55	306	F	256	188	10 Dec 2009	Madras	10 Dec 2009	Birth	
19.	Arun AAZP53	307	M	182	173	2 Aug 2010	Madras	2 Aug 2010	Birth	
20.	Akash AAZP54	308	M	182	191	12 Aug 2010	Madras	12 Aug 2010	Birth	
9.11.0 (20)										
<b>Nehru Zoological Park, Hyderabad, Andhra Pradesh</b>										
1.	Mani 0006B73EB1	117	F	Wild	Wild	~ 1985	India Trivandrum Hyderabad	~ 1987 13 Jul 1987 24 Sep 2003	Capture Transfer Transfer	
2.	Thara	136	M	106	97	13 Mar 1988	Trivandrum Hyderabad	13 Mar 1988 22 Sep 2003	Birth Transfer	
1.1.0 (2)										

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
<b>Nandankanan Biological Park, Orissa</b>										
1.		57	F	16	42	18 Jul 1977	Delhi Nandankan	18 Jul 1977 20 Jan 1982	Birth Transfer	
0.1.0 (1)										
<b>Kanpur Zoological Park, Uttar Pradesh</b>										
1.	Neeta 2305	66	F	36	45	5 Aug 1979	Kanpur	5 Aug 1979	Birth	
2.	Kalua 1KAN3	98	M	39	47	28 Apr 1982	Delhi Lucknow Kanpur	28 Apr 1982 24 Mar 1988 23 Jan 1996	Birth Transfer Transfer	
3.		124	M	36	45	6 May 1986	Kanpur	6 May 1986	Birth	
4.	Seeta	211	F	WILDJ3	WILDJ4	~ 1977	India Jaipur Jodhpur Jaipur Kanpur	~ 1978 15 Mar 1978 7 Mar 1984 17 Oct 1992 10 Sep 1993	Capture Transfer Transfer Transfer Transfer	
2.2.0 (4)										
<b>Mahendra Chaudhary Zoological Park, Punjab</b>										
1.	Majnu	123	M	82	81	1 Apr 1986	Chatbir	1 Apr 1986	Birth	
1.0.0 (1)										
<b>Bannerghatta Zool Garden National Park, Bangalore, Karnataka</b>										
1.		83	M	UNK1	UNK5	???	Bannerghata	??? ???	Birth Transfer	
1.0.0 (1)										
<b>Thiruvananthapuram (Trivandrum) Zoo, Kerala</b>										
1.	Mohan	96	M	Wild	Wild	~ 1982	India Trivandrum	~1987 22 Apr 1987	Capture Transfer	
2.	Laxmi	116	F	Wild	Wild	~ 1985	India Kodanad Trivandrum	~ 1988 5 Sep 1988 15 Dec 2002	Capture Transfer Transfer	
3.	Bindu	121	F	Wild	Wild	~ 1986	India Trivandrum	~ 1988 25 May 1988	Capture Transfer	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
4.	Ganesh	126	M	Wild	Wild	~ 1987	India Trivandrum	~ 1989 18 May 1989	Capture Transfer	
5.	Gunjan	127	F	Wild	Wild	~ 1987	India Kodanad Trivandrum	~ 1989 13 Dec 1989 15 Dec 2002	Capture Transfer Transfer	
6.	Ranjan	134	M	Wild	Wild	~ 1988	India Kodanad Trivandrum	~ 1989 23 Sep 1989 15 Dec 2002	Capture Transfer Transfer	
7.	Pachi	172	F	Wild	Wild	30 Jun 1990	India Trivandrum	~ 1993 20 Nov 1993	Capture Transfer	
8.	Seenu 00-0611-7E4A	186	M	110	132	4 Jan 1995	Madras Trivandrum	4 Jan 1995 27 Dec 2003	Birth Transfer	
9.	Rajesh	266	M	Wild	Wild	???	India Trivandrum	~16 Aug 2002 16 Aug 2002	Capture Transfer	
10.	Kiran	267	M	Wild	Wild	???	India Trivandrum	~15 Dec 2002 15 Dec 2002	Capture Transfer	
11.	Raman	270	M	Wild	Wild	???	India Trivandrum	~8 Feb 2005 8 Feb 2005	Capture Transfer	
12.	Kannan	280	M	186	121	13 May 2005	Trivandrum	13 May 2005	Birth	
13.		291	F	186	121	1 Mar 2007	Trivandrum	1 Mar 2007	Birth	
14.	Radha	312	F	Wild	Wild	???	India Trivandrum	~15 Jun 2002 15 Jun 2002	Capture Transfer	
15.	Kuttan	313	M	Wild	Wild	???	India Trivandrum	~26 May 2008 26 May 2008	Capture Transfer	
9.6.0 (15)										
<b>Parassinikadavu Snake Park, Kerala</b>										
1.		111	M	Wild	Wild	~ 1984	India Parras	~ 1986 1 Feb 1986	Capture Transfer	
2.		185	F	Wild	Wild	~ 1994	India Parras	~ 1995 7 Sep 1995	Capture Transfer	
3.		258	F	Wild	Wild	???	India Parassini	??? ???	Capture Transfer	
1.2.0 (3)										
<b>Maitri Bagh Zoo, Bhilai, Chhattisgarh</b>										
1.	Geeta	167	F	67	59	19 Feb 1990	Bhilai	19 Feb 1990	Birth	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
2.	Ram	219	M	67	69	26 Aug 1983	Bhilai	26 Aug 1983	Birth	
3.	Shyam	221	M	67	59	10 Apr 1987	Bhilai	10 Apr 1987	Birth	
4.	Rajkumari	262	F	219	167	16 Dec 2001	Bhilai	16 Dec 2001	Birth	
5.	Kumari	275	F	219	167	1 Jul 2004	Bhilai	1 Jul 2004	Birth	
2.3.0 (5)										
<b>Sanjay Gandhi Biol.Park, Bihar</b>										
1.	Krishna LTM17	177	M	54	57	12 Jan 1992	Nandankan Patna	12 Jan 1992 26 Mar 1995	Birth Transfer	
2.	Basanti	251	F	Wild	Wild	???	India Patna	???	Capture Transfer	
3.	Radha	310	F	Wild	Wild	???	India Patna	???	Capture Transfer	
4.	72390	311	F	Unk	Unk	???	Unknown Patna	???	Birth Transfer	
1.3.0 (4)										
<b>Children's Corner, Guindy Childrens Pk, Chennai, Tamil Nadu</b>										
1.	Vijayan 00-0611-8273	182	M	110	132	1 Oct 1993	Madras Guindy	1 Oct 1993 7 Aug 1998	Birth Transfer	
2.	Umar	183	M	110	120	21 Dec 1993	Madras Guindy	21 Dec 1993 7 Aug 1998	Birth Transfer	
2.0.0 (2)										
<b>Alipore Zoological Garden, Calcutta</b>										
1.		194	M	Wild	Wild	???	India Calcutta	~ 1992 30 Sep 1992	Capture Transfer	
2.		195	F	Wild	Wild	???	India Calcutta	~ 1992 20 Feb 1992	Capture Transfer	
1.1.0 (2)										
<b>Jaipur Zoological Garden, Rajasthan</b>										
1.		200	M	199	197	10 Jun 1999	Jaipur	10 Jun 1999	Birth	
1.0.0 (1)										
<b>Trichur Zoo, Kerala</b>										
1.		220	M	Wild	Wild	~ 1987	India Trichur	~ 1990 5 Feb 1990	Capture Transfer	
1.0.0 (1)										

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
<b>Kodanadu Mini Zoo, Kerala</b>										
1.	Raman	105	M	Wild	Wild	~ 1983	India Kodanad	~ 1995 14 Nov 1995	Capture Transfer	
1.0.0 (1)										
<b>Lady Hydari Park and Animal Land, Shillong, Meghalaya</b>										
1.		314	F	Wild	Wild	???	India Shillong	~12 May 1998 12 May 1998	Capture Transfer	
2.		315	F	Wild	Wild	???	India Shillong	~ 6 Jun 1994 6 Jun 1994	Capture Transfer	
3.		316	M	Wild	Wild	???	India Shillong	~ 1 Mar 2000 1 Mar 2000	Capture Transfer	
1.2.0 (3)										
<b>Lucknow Zoological Park, Lucknow</b>										
1.	130	317	M	Unk	Unk	???	Unknown Lucknow	??? 1 Aug 2003	Birth Transfer	
1.0.0 (1)										
TOTAL: 44.41.1 (86)      20 Institutions										

The records of lion tailed macaque being in captivity dates back to 1966 details of which is provided in the historic listing (table 5); across the time the number of individuals is 256.

**Table 5: Historical listing of Lion tailed macaque in captivity in India**

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
1.		1	M	Wild	Wild	~ 1955	India Assam	~ 1966 21 Sep 1966 10 Apr 1971	Capture Transfer Death	
2.		6	M	WILD01	WILD02	~ 1957	India Delhi	~ 1959 11 Sep 1959 20 Sep 1990	Capture Transfer Death	
3.		7	M	WILD01	WILD03	~ 1957	India Delhi	~ 1959 11 Sep 1959 4 Oct 1970	Capture Transfer Death	
4.		8	F	WILDD4	WILDD5	~ 1957	India Delhi Burma	~ 1959 23 Oct 1959 6 Nov 1969 6 Nov 1969	Capture Transfer Transfer Ltf	
5.		9	M	WILDD4	WILDD6	~ 1957	India Delhi Burma	~ 1959 23 Oct 1959 6 Nov 1969 6 Nov 1969	Capture Transfer Transfer Ltf	
6.		10	F	WILDD4	WILDD7	~ 1957	India Delhi	~ 1959 23 Oct 1959 31 Dec 1976	Capture Transfer Death	
7.		11	F	WILDD4	WILDD8	~ 1957	India Delhi	~ 1959 23 Oct 1959 23 Nov 1967	Capture Transfer Death	
8.		12	F	Wild	Wild	~ 1958	India Assam	~ 1966 21 Sep 1966 21 Sep 1966	Capture Transfer Ltf	
9.		13	M	WILDH1	WILDH2	~ 1960	India Hyderabad	~ 1960 20 Feb 1964 24 Jul 1983	Capture Transfer Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
10.		14	M	WILDH1	WILDH3	~ 1960	India Hyderabad	~ 1964 20 Feb 1964 24 Jul 1983	Capture Transfer Death	
11.		16	M	6	7	18 Mar 1962	Delhi	18 Mar 1962 10 Oct 1977	Birth Death	
12.		19	F	WILDN1	WILDN2	~ 1963	India Nandankan	~ 1965 29 Jan 1966 16 Jun 1984	Capture Transfer Death	
13.		20	F	WILDN1	WILDN3	~ 1963	India Nandankan	~ 1965 29 Jan 1966 18 May 1967	Capture Transfer Death	
14.		21	F	Wild	Wild	~ 1964	India Delhi	~ 1966 29 Apr 1966 20 Nov 1977	Capture Transfer Death	
15.		23	M	Wild	Wild	~ 1965	India Nandankan	~ 1967 29 Mar 1967 15 Nov 1975	Capture Transfer Death	
16.		26	F	6	7	13 Jun 1967	Delhi Sandiego	13 Jun 1967 9 Mar 1971 6 Jan 1993	Birth Transfer Death	
17.		27	M	6	10	1 Mar 1967	Delhi Sandiego	1 Mar 1967 9 Mar 1971 2 Mar 1993	Birth Transfer Death	
18.		28	F	Wild	Wild	~ 1968	India Delhi	~Mar 1970 26 Mar 1970 8 Nov 1985	Capture Transfer Death	
19.		29	F	6	7	7 Jan 1969	Delhi	7 Jan 1969 13 Aug 1982	Birth Death	
20.		31	F	Wild	Wild	15 Jun 1969	India Calcutta Adelaide	~ 1971 ~ 1971 18 Oct 1971 18 Jul 1985	Capture Transfer Transfer Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
21		32	M	Wild	Wild	~ 1969	India Calcutta Adelaide	~ 1971 ~ 1971 18 Oct 1971 9 Feb 1996	Capture Transfer Transfer Death	
22.		34	F	Wild	Wild	~ 1970	India Assam	~ 1973 14 Aug 1973 12 Apr 1977	Capture Transfer Death	
23.		35	F	6	10	19 May 1970	Delhi	19 May 1970 16 Mar 1979	Birth Death	
24.	Kaloo 2301	36	M	Wild	Wild	~ 1970	India Kanpur	30 Jun 1973 6 Oct 1973 3 Feb 1994	Capture Transfer Death	
25.		37	M	Wild	Wild	~ 1971	India Assam	~ 1973 8 Oct 1973 8 Oct 1973	Capture Transfer Death	
26.		38	?	16	10	7 May 1971	Delhi	7 May 1971 1 Dec 1981	Birth Death	
27.		39	M	16	21	9 Sep 1971	Delhi	9 Sep 1971 6 Nov 1984	Birth Death	
28.		40	M	WILDN4	WILDN5	~ 1972	India Nandankan	~ 1974 13 Feb 1974 10 Feb 1982	Capture Transfer Death	
29.		41	F	WILDN4	WILDN6	~ 1972	India Nandankan	~ 1974 13 Feb 1974 29 Aug 1975	Capture Transfer Death	
30.		42	F	16	10	1 Apr 1972	Delhi	1 Apr 1972 1 Apr 1972	Birth LTF	
31.	Bhola 2302	43	M	WILDK1	WILDK2	~ 1972	India Kanpur	~ 1974 ~ 1974 31 Mar 1987	Capture Transfer Death	
32.	Budha 2303	44	M	WILDK1	WILDK2	~ 1972	India Kanpur	~ 1974 20 Jan 1975 11 Aug 1990	Capture Transfer Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
33.	Meeta 2304	45	F	Wild	Wild	~ 1973	India Kanpur	~ 1974 6 Nov 1974 21 Jun 1993	Capture Transfer Death	
34.		46	?	16	21	14 Apr 1973	Delhi	14 Apr 1973 11 Jun 1979	Birth Death	
35.		47	F	16	10	28 Sep 1973	Delhi	28 Sep 1973 17 Jun 1989	Birth Death	
36		48	F	16	29	24 Sep 1974	Delhi	24 Sep 1974 1 Dec 1987	Birth Death	
37.		49	F	16	10	10 Nov 1974	Delhi	10 Nov 1974 12 Nov 1985	Birth Death	
38.		50	F	16	21	24 May 1975	Delhi	24 May 1975 21 May 1987	Birth Death	
39		51	M	Wild	Wild	~ 1976	India Trivandrum Chatbir	~ 1978 1 Jul 1978 6 Mar 1979 29 Sep 1984	Capture Transfer Transfer Death	
40.		52	F	Wild	Wild	~ 1976	India Trivandrum Chatbir	~ 1978 ~ 1978 6 Mar 1979 1 Jul 1981	Capture Transfer Transfer Death	
41.		53	M	16	29	23 Mar 1976	Delhi Jaipur	23 Mar 1976 27 May 1987 14 Oct 1994	Birth Transfer Death	
42.	Ram LTM6	54	M	16	35	26 May 1976	Delhi Nandankan	26 May 1976 20 Jan 1982 6 Mar 2001	Birth Transfer Death	
43.		55	F	16	21	13 Nov 1976	Delhi	13 Nov 1976 27 Aug 1989	Birth Death	
44.		56	F	78	79	20 Feb 1977	Trivandrum	20 Feb 1977 3 Sep 1984	Birth Death	
45.		57	F	16	42	18 Jul 1977	Delhi Nandankan	18 Jul 1977 20 Jan 1982	Birth Transfer	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
46.		58	M	39	35	26 Apr 1978	Delhi Jaipur	26 Apr 1978 11 Feb 1981 16 Oct 1982	Birth Transfer Death	
47.		59	F	39	29	29 Apr 1978	Bhilai	29 Apr 1978 ~ 1982 ~ 1991	Birth Transfer LTF	
48.		60	?	39	35	11 Aug 1978	Delhi	11 Aug 1978 3 Sep 1990	Birth Death	
49.		61	F	78	79	29 Sep 1978	Trivandrum	29 Sep 1978 13 Aug 1984	Birth Death	
50.		62	?	39	42	1 Oct 1978	Delhi	1 Oct 1978 21 Oct 1978	Birth Death	
51.		63	?	39	48	17 Oct 1978	Delhi	17 Oct 1978 17 Oct 1978	Birth Death	
52.		64	F	Wild	Wild	~ 1979	India Hyderabad	~ 1983 12 Sep 1983 10 Sep 1985	Capture Transfer Death	
53.		65	F	39	48	29 Jul 1979	Delhi	29 Jul 1979 16 Apr 1991	Birth Death	
54.	Neeta 2305	66	F	36	45	5 Aug 1979	Kanpur	5 Aug 1979	Birth	
55.		67	M	39	48	11 Sep 1979	Delhi Bhilai	11 Sep 1979 ~ 1982 ~ 1991	Birth Transfer LTF	
56.		68	?	39	42	1 Oct 1979	Delhi	1 Oct 1979 3 Jan 1980	Birth Death	
57.		78	M	Wild	Wild	~ 1973	India Trivandrum Jaipur	30 Jun 1975 9 Dec 1975 12 May 1981 18 Nov 1996	Capture Transfer Transfer Death	
58.		79	F	Wild	Wild	~ 1973	India Trivandrum Jaipur	~1975 16 Dec 1975 12 May 1981 10 Jun 1990	Capture Transfer Transfer Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
59	Soni	81	F	WILDP1	WILDP2	~ 1980	India Chatbir	~ 1981 26 Oct 1981 16 Sep 1989	Capture Transfer Death	
60	Mehiwal	82	M	WILDP1	WILDP2	~ 1980	India Chatbir	~ 1981 26 Oct 1981 16 Sep 1989	Capture Transfer Death	
61.		83	M	UNK1	UNK5	???	Bannerghata	??? ???	Birth Transfer	
62.	Netra M00036	86	F	Wild	Wild	~ 1982	India Bannerghata Mysore	??? ??? 20 Jan 1992	Capture Transfer Transfer	
63.		87	M	39	47	4 Apr 1980	Delhi	4 Apr 1980 4 Apr 1980	Birth LTF	
64.		88	?	39	49	10 Nov 1980	Delhi	10 Nov 1980 13 Nov 1980	Birth Death	
65.		91	F	39	42	1 May 1981	Delhi	1 May 1981 6 Feb 2000	Birth Death	
66.		92	F	39	49	10 Jul 1981	Delhi	10 Jul 1981 10 Jul 1981	Birth LTF	
67.	Pavan ML0001	93	M	Wild	Wild	~ 1982	India Hyderabad	~ 1983 12 Jul 1983 21 Oct 1990	Capture Transfer Death	
68.	Sumitra ML0002	94	F	WILDH4	WILDH5	~ 1982	India Hyderabad	~ 1984 8 Mar 1984 2 Feb 1990	Capture Transfer Death	
69.		95	F	WILDH4	WILDH6	~ 1982	India Hyderabad	~ 1984 8 Mar 1984 14 Jan 1997	Capture Transfer Death	
70.	Mohan	96	M	Wild	Wild	~ 1982	India Trivandrum	~1987 22 Apr 1987	Capture Transfer	
71.		97	F	154	56	31 Mar 1982	Trivandrum Veermata	31 Mar 1982 22 Dec 1992 9 Nov 1993	Birth Transfer Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
72.	Kalua 1KAN3	98	M	39	47	28 Apr 1982	Delhi Lucknow Kanpur	28 Apr 1982 24 Mar 1988 23 Jan 1996	Birth Transfer Transfer	
73.		99	F	39	48	2 Jul 1982	Delhi Chatbir	2 Jul 1982 21 Oct 1989 17 Aug 1995	Birth Transfer Death	
74.		100	F	39	42	26 Aug 1982	Delhi Lucknow	26 Aug 1982 24 Mar 1988 10 Jun 1988	Birth Transfer Death	
75.		101	M	39	50	2 Dec 1982	Delhi	2 Dec 1982 2 Dec 1982	Birth LTF	
76.		102	M	Wild	Wild	~ 1983	India Mohotta Peshwe Pune	??? ??? 11 Jan 1984 ??? 27 Dec 2006	Capture Transfer Transfer Transfer Death	
77.	Bori	103	F	78	79	26 Nov 1982	Jaipur Tripura	26 Nov 1982 26 Apr 1990 3 Aug 2000	Birth Transfer Death	
78.	Jaya	104	F	Wild	Wild	~ 1983	India Madras Assam	??? ??? 15 Jun 1986 31 Jan 1992	Capture Transfer Transfer Death	
79.	Raman	105	M	Wild	Wild	~ 1983	India Kodanad	~ 1995 14 Nov 1995	Capture Transfer	
80.	Raju	106	M	154	61	24 Jan 1983	Trivandrum	24 Jan 1983 10 Nov 2006	Birth Death	
81.		107	M	39	47	14 May 1983	Delhi NY Bronx	14 May 1983 31 Mar 1989 31 Mar 1989	Birth Transfer LTF	
82.		108	M	36	45	17 Jul 1983	Kanpur	17 Jul 1983 18 Jul 1983	Birth Death	
83.	FEMAL2	109	F	54	57	4 Oct 1983	Nandankan	4 Oct 1983 24 Aug 1996	Birth Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
84.	Mohan	110	M	WILDM1	WILDM2	~ 1984	India Guindy Madras	~ 1990 7 Apr 1990 26 Apr 1990	Capture Transfer Transfer	
85.		111	M	Wild	Wild	~ 1984	India Parras	~ 1986 1 Feb 1986	Capture Transfer	
86.	20487	112	M	Wild	161	19 Feb 1984	Trivandrum Mysore Toronto	19 Feb 1984 4 Aug 1984 9 Mar 1986	Birth Transfer LTF	
87.		113	F	36	45	22 Jun 1984	Kanpur	22 Jun 1984 23 Jun 1984	Birth Death	
88.		114	?	39	42	21 Nov 1984	Delhi	21 Nov 1984 21 Nov 1984	Birth Death	
89.	Laxmi	116	F	Wild	Wild	~ 1985	India Kodanad Trivandrum	~ 1988 5 Sep 1988 15 Dec 2002	Capture Transfer Transfer	
90.	Mani 0006B73EB1	117	F	Wild	Wild	~ 1985	India Trivandrum Hyderabad	~ 1987 13 Jul 1987 24 Sep 2003	Capture Transfer Transfer	
91		118	F	67	50	20 Feb 1985	Delhi NY Bronx	20 Feb 1985 31 Mar 1989 31 Mar 1989	Birth Transfer LTF	
92.	FEMAL3	119	F	54	57	28 Mar 1985	Nandankan	28 Mar 1985 9 Apr 1991	Birth Death	
93.	Bhama 00-0610-DG53	120	F	WILDM1	WILDM2	~ 1986	India Guindy Madras	~ 1990 7 Apr 1990 26 May 1990 9 Dec 2010	Capture Transfer Transfer Death	
94.	Bindu	121	F	Wild	Wild	~ 1986	India Trivandrum	~ 1988 25 May 1988	Capture Transfer	
95	Majnu	123	M	82	81	1 Apr 1986	Chatbir	1 Apr 1986	Birth	
96.		124	M	36	45	6 May 1986	Kanpur	6 May 1986	Birth	
97.		125	F	Unk	Unk	???	Unk Bannerghata	??? ??? ???	Birth Transfer LTF	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
98.	Ganesh	126	M	Wild	Wild	~ 1987	India Trivandrum	~ 1989 18 May 1989	Capture Transfer	
99.	Gunjan	127	F	Wild	Wild	~ 1987	India Kodanad Trivandrum	~ 1989 13 Dec 1989 15 Dec 2002	Capture Transfer Transfer	
100.		128	M	54	109	19 Jan 1987	Nandankan	19 Jan 1987 19 Jan 1987	Birth Death	
101.	MALE2	129	M	54	57	21 Jan 1987	Nandankan	21 Jan 1987 26 May 1991	Birth Death	
102.	Laila	131	M	82	81	14 Nov 1987	Chatbir	14 Nov 1987 25 Sep 1990	Birth Death	
103.	Rukumani	132	F	Wild	Wild	~ 1988	India Madras	~ 1990 26 May 1990 25 May 1997	Capture Transfer Death	
104.	Ramu 00-0611-IA D5	133	M	Wild	Wild	~ 1988	India Madras Guindy	~ 1994 20 Jun 1994 7 May 2004 10 May 2009	Capture Transfer Transfer Death	
105.	Ranjan	134	M	Wild	Wild	~ 1988	India Kodanad Trivandrum	~ 1989 23 Sep 1989 15 Dec 2002	Capture Transfer Transfer	
106.	Muni	135	F	Wild	104	31 Jan 1988	Assam	31 Jan 1988	Birth	
107.	Thara	136	M	106	97	13 Mar 1988	Trivandrum Hyderabad	13 Mar 1988 22 Sep 2003	Birth Transfer	
108.		137	?	67	47	1 Jun 1987	Delhi	1 Jun 1987 11 Jun 1988	Birth Death	
109.		138	M	67	42	19 Jul 1988	Delhi	19 Jul 1988	Birth	
110.		140	M	54	57	3 Nov 1988	Nandankan	3 Nov 1988 20 Aug 1989	Birth Death	
111.		141	M	54	109	14 Nov 1988	Nandankan	14 Nov 1988 14 Nov 1988	Birth Death	
112.	Babu	142	M	215	203	30 Jun 1990	Trichur Trivandrum Hyderabad	30 Jun 1990 16 Nov 1994 22 Sep 2003 22 Sep 2003	Birth Transfer Transfer LTF	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
113.	MALE3	143	M	54	119	25 Jan 1989	Nandankan	25 Jan 1989 3 Jul 2010	Birth Death	
114.		145	F	Unk	Unk	???	Calcutta Rangoon	??? 20 Feb 1971	Birth Transfer	
115.		146	F	Unk	Unk	???	Calcutta Kuala lumpur	??? 15 Dec 1970 15 Dec 1970	Birth Transfer LTF	
116.		148	F	Wild	Wild	???	India Madras	~ 1983 9 Feb 1983 9 Feb 1983	Birth Transfer LTF	
117.	Kishore In Triva	154	M	Wild	Wild	~ 1975	India Trivandrum Madras	~ 1980 3 Jun 1980 18 Sep 1985 18 Sep 1985	Capture Transfer Transfer LTF	
118.	Manja ZAK02	159	M	Wild	Wild	???	India Trivandrum Mysore	??? ??? 7 Dec 1982	Capture Transfer Transfer	
119.	Leena	160	F	Wild	Wild	???	India Trivandrum	~ 1980 14 May 1985 5 Aug 1985	Capture Transfer Death	
120.	Sita 20488	161	F	Wild	Wild	~ 1980	India Trivandrum Mysore Toronto	~ 1984 14 Feb 1984 4 Aug 1984 9 Mar 1986 15 Nov 1999	Capture Transfer Transfer Transfer Death	
121.		162	F	78	79	4 Nov 1988	Jaipur	4 Nov 1988 16 Sep 1999	Birth Death	
122.	Ranjan	165	M	Wild	Wild	???	Trivandrum	~ 1987 28 Apr 1987 16 Aug 1987	Capture Transfer Death	
123.		166	M	54	109	9 Jan 1990	Nandankan	9 Jan 1990 29 Sep 1994	Birth Death	
124.	Geeta	167	F	67	59	19 Feb 1990	Bhilai	19 Feb 1990	Birth	
125.		168	F	54	57	16 Mar 1990	Nandankan	16 Mar 1990 5 Sep 1999	Birth Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
126.	Shahidhar / Sashi 0006B72C17	170	M	110	120	5 Dec 1990	Madras Hyderabad	5 Dec 1990 27 Aug 1992	Birth Death	
127.	Pachi	172	F	Wild	Wild	30 Jun 1990	India Trivandrum	~ 1993 20 Nov 1993	Capture Transfer	
128.	Malar	173	F	110	120	31 Dec 1991	Madras	31 Dec 1991 8 Sep 1994	Birth Death	
129.	Sekar	174	M	Wild	Wild	~ 1992	India Madras	~ 1993 2 May 1993 8 Aug 1993	Capture Transfer Death	
130.	Priya M00038 00063B3B7F	175	F	Wild	Wild	~ 1990	Bannerghata Mysore	~ 1990 10 Oct 1992	Capture Transfer	
131.	Rama ZAK05	176	M	Wild	Wild	~ 1990	India Shimoga Mysore	~ 1990 ~ 1990 13 Mar 1996	Capture Transfer Transfer	
132.	Krishna LTM17	177	M	54	57	12 Jan 1992	Nandankan Patna	12 Jan 1992 26 Mar 1995	Birth Transfer	
133.	Geetha	178	F	110	132	14 Jan 1992	Madras	14 Jan 1992 21 Jul 1995	Birth Death	
134.	LTM18	179	F	54	109	29 Jan 1992	Nandankan Patna	29 Jan 1992 26 Mar 1995 11 Dec 2000	Birth Transfer Death	
135.	Padan / Sankar	180	M	110	120	18 Aug 1992	Madras	18 Aug 1992 21 Jun 1995	Birth Death	
136.	Vijayan 00-0611-8273	182	M	110	132	1 Oct 1993	Madras Guindy	1 Oct 1993 7 Aug 1998	Birth Transfer	
137.	Umar	183	M	110	120	21 Dec 1993	Madras Guindy	21 Dec 1993 7 Aug 1998	Birth Transfer	
138.	Shanti M00037 00063AFBBC	184	F	Wild	Wild	~ 1992	India Mangalore Mysore	~ 1992 ~ 1992 13 Jun 1996	Capture Transfer Transfer	
139.		185	F	Wild	Wild	~ 1994	India Parras	~ 1995 7 Sep 1995	Capture Transfer	
140.	Seenu 00-0611-7E4A	186	M	110	132	4 Jan 1995	Madras Trivandrum	4 Jan 1995 27 Dec 2003	Birth Transfer	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
141.	Veni	187	F	110	120	14 Jun 1995	Madras	14 Jun 1995	Birth	
142.	Rani	188	F	110	132	13 Jul 1996	Madras Guindy Madras	13 Jul 1996 7 Aug 1998 12 Mar 2004 13 Dec 2006	Birth Transfer Transfer Death	
143.	Lingan 00-0611-7E09	189	M	110	120	13 Jul 1996	Madras Mysore	13 Jul 1996 18 Dec 2003	Birth Loan to	
144.	Mala 10#00.0611.41 B	190	F	110	120	27 May 1998	Madras	27 May 1998	Birth	
145.	Apsara 10#00.0611-1F1F	191	F	Wild	Wild	~1998	India Madras	~ 1999 5 Jun 1999	Capture Transfer	
146.	Mani	192	M	110	120	26 Oct 1999	Madras	26 Oct 1999 28 Sep 2002	Birth Death	
147.		193	F	Unk	Unk	???	Renuka Chatbir	??? 21 Apr 1995 21 Apr 1995	Transfer Transfer LTF	
148.		194	M	Wild	Wild	???	India Calcutta	~ 1992 30 Sep 1992	Capture Transfer	
149.		195	F	Wild	Wild	???	India Calcutta	~ 1992 20 Feb 1992	Capture Transfer	
150.		196	M	Wild	Wild	~ 1980	India VOC PKZOO	~ 1980 ~ 1980 ~ 1980	Capture Transfer LTF	
151.		197	F	78	162	11 Dec 1993	Jaipur	11 Dec 1993 30 Jan 2004	Birth Death	
152.		198	?	78	162	20 May 1994	Jaipur	20 May 1994 15 Jun 1994	Birth Death	
153.		199	M	78	162	15 Oct 1995	Jaipur	15 Oct 1995 30 Apr 2005	Birth Death	
154.		200	M	199	197	10 Jun 1999	Jaipur	10 Jun 1999	Birth	
155.		201	F	Wild	Wild	???	India Trichur	~ 1988 17 Apr 1988 7 Mar 1993	Birth Transfer Death	
156.		203	F	208	204	30 Apr 1974	Trichur	30 Apr 1974 24 Jan 1996	Birth Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
157.		204	F	Wild	Wild	~ 1967	India Trichur	~ 1973 5 Sep 1973 1 Aug 1982	Capture Transfer Death	
158.		208	M	Wild	Wild	~ 1955	India Trichur	~ 1968 14 Sep 1968 19 Apr 1974	Capture Transfer Death	
159.		209	?	MULT1	MULT2	11 Oct 1963	Delhi	11 Oct 1963 22 Nov 1964	Birth Death	
160.	Seeta	211	F	WILDJ3	WILDJ4	~ 1977	India Jaipur Jodhpur Jaipur Kanpur	~ 1978 15 Mar 1978 7 Mar 1984 17 Oct 1992 10 Sep 1993	Capture Transfer Transfer Transfer Transfer	
161.		212	M	WILDJ3	WILDJ4	~ 1977	India Jaipur	~ 1978 15 Mar 1978 17 Dec 1983	Capture Transfer Death	
162.		215	M	Wild	Wild	~ 1984	India Trichur	~ 1986 1 May 1986 23 Oct 2003	Capture Transfer Death	
163.		216	F	78	79	5 Jun 1984	Jaipur	5 Jun 1984 24 Aug 1992	Birth Death	
164.		217	F	78	79	30 Jan 1986	Jaipur	30 Jan 1986 1 Dec 1986	Birth Death	
165.		218	M	Wild	Wild	~ 1986	India Trichur	~ 1988 11 Aug 1988 28 Feb 2005	Capture Transfer Death	
166.	Ram	219	M	67	69	26 Aug 1983	Bhilai	26 Aug 1983	Birth	
167.		220	M	Wild	Wild	~ 1987	India Trichur	~ 1990 5 Feb 1990	Capture Transfer	
168.	Shyam	221	M	67	59	10 Apr 1987	Bhilai	10 Apr 1987	Birth	
169.		222	F	78	79	4 May 1987	Jaipur	4 May 1987 15 Oct 1997	Birth Death	
170.		226	F	78	162	19 Jul 1992	Jaipur	19 Jul 1992 11 Mar 1993	Birth Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
171.		228	M	Unk	Unk	???	Unknown Trichur	??? 22 Mar 1959 29 Oct 1971	Birth Transfer Death	
172.		229	M	Unk	Unk	???	Unknown Trichur Trivandrum	??? 9 Jul 1964 5 Jan 1972 5 Jan 1972	Birth Transfer Transfer LTF	
173.		230	F	Unk	Unk	???	Trivandrum Trichur	??? 8 Sep 1964 6 Jun 1971	Birth Transfer Death	
174.		231	F	Unk	Unk	???	Unknown Trichur	??? 8 Dec 1971 8 Dec 1971	Birth Transfer LTF	
175.		232	F	Unk	Unk	???	Unknown Trichur	??? 23 Jun 1972 23 Jun 1972	Birth Transfer LTF	
176.		233	F	Unk	Unk	???	Unknown Trichur	??? 18 Feb 1973 18 Feb 1973	Birth Transfer LTF	
177.	Reena	234	F	Wild	Wild	~ 1970	India Veermata	~ 1971 ~ 1971 6 Nov 1986	Capture Transfer Death	
178.		235	M	Unk	Unk	???	Trivandrum Trichur	??? 12 Jun 1976 12 Jun 1976	Birth Transfer LTF	
179.		236	M	Unk	Unk	???	Trivandrum Trichur	??? 11 Oct 1975 11 Oct 1975	Birth Transfer LTF	
180.		237	F	Unk	Unk	???	Trivandrum Trichur	??? 31 Mar 1977 31 Mar 1977	Birth Transfer LTF	
181.	Meena	238	F	Wild	Wild	~ 1974	India Veermata	~ 1976 ~ 1976 1 May 1995	Capture Transfer Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
182.	Jani	239	M	Wild	Wild	~ 1975	India Veermata	~ 1976 ~ 1976 30 Jun 1993	Capture Transfer Death	
183.		240	F	Unk	Unk	???	Unknown Trichur	??? 8 May 1989 8 May 1989	Birth Transfer LTF	
184.		241	M	Unk	Unk	???	Unknown Trichur	??? 19 Jul 1985 3 May 1986	Birth Transfer LTF	
185.		242	M	Unk	Unk	???	Unknown Trichur	??? 3 Jul 1989 18 Jul 1990	Birth Transfer Death	
186.	Radha	243	F	Wild	Wild	~ 1985	India Guindy Madras	??? ??? 7 Apr 1990 16 Nov 1995	Capture Transfer Transfer Death	
187.	Ravi	244	M	Unk	Unk	31 Mar 1986	Trivandrum	31 Mar 1986 20 Apr 1986	Birth Death	
188.	Ram	245	M	239	238	13 Jul 1981	Veermata	13 Jul 1981 13 Sep 1993	Birth Death	
189.	Kamraj	246	M	Wild	Wild	~ 1991	India Guindy Madras	??? ??? 12 Mar 2004 13 Dec 2006	Capture Transfer Transfer Death	
190.	Krishna M00035 00063B2551	248	M	Wild	Wild	~ 1991	Karnataka Mysore	~4 Nov 2001 4 Nov 2001	Capture Transfer	
191.	Basanti	251	F	Wild	Wild	???	India Patna	??? ???	Capture Transfer	
192.	Mani / Raghav	252	M	Wild	Wild	~ 1997	India Madras	~14 May 2005 14 May 2005 10 May 2009	Capture Transfer Death	
193.	Geetha M00005 00063B1763	253	F	Wild	Wild	~ 1997	India Mangalore Mysore	??? ??? 28 Oct 2006	Capture Transfer Transfer	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
194.		254	F	177	179	29 Sep 1997	Patna	29 Sep 1997 29 Sep 1997	Birth Death	
195.		255	?	Unk	Unk	???	Unknown Patna	??? ??? 13 Apr 2000	Birth Transfer Death	
196.	Venket	256	M	182	120	15 Jun 2000	Madras	15 Jun 2000 11 Dec 2009	Birth Death	
197.		258	F	Wild	Wild	???	India Parassini	??? ???	Capture Transfer	
198.	Viji	259	F	110	120	14 Apr 2001	Madras	14 Apr 2001 16 Feb 2010	Birth Death	
199.	Ramya AAZP50 #98109810205790	260	F	Wild	Wild	~ 2001	India Madras	~12 Sep 2008 12 Sep 2008 24 Apr 2009	Capture Transfer Death	
200.	Ankitha MOOOO3 0006B96F1	261	F	Wild	Wild	~ 2001	Karnataka Mysore	~20 Oct 2007 20 Oct 2007	Capture Transfer	
201.	Rajkumari	262	F	219	167	16 Dec 2001	Bhilai	16 Dec 2001	Birth	
202.	Dass	263	M	182	187	17 Jan 2002	Madras Delhi	17 Jan 2002 1 Oct 2006	Birth Transfer	
203.		264	?	186	120	10 Jul 2002	Madras	10 Jul 2002 10 Jul 2002	Birth Death	
204.	Aswath M00006 00063B2623	265	M	Wild	Wild	~2002	India Mysore	~21 Jul 2007 21 Jul 2007	Capture Transfer	
205	Rajesh	266	M	Wild	Wild	???	India Trivandrum	~16 Aug 2002 16 Aug 2002	Capture Transfer	
206.	Kiran	267	M	Wild	Wild	???	India Trivandrum	~15 Dec 2002 15 Dec 2002	Capture Transfer	
207.	Rani	268	F	Wild	Wild	???	India Trivandrum Delhi	~15 Dec 2002 15 Dec 2002 24 Mar 2004 5 Jan 2010	Capture Transfer Transfer Death	
208.		269	M	189	191	9 Jan 2003	Madras	9 Jan 2003 9 Jan 2003	Birth Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
209.	Raman	270	M	Wild	Wild	???	India Trivandrum	~8 Feb 2005 8 Feb 2005	Capture Transfer	
210.	Murugan #98109810205688	271	M	182	187	23 Jul 2003	Madras	23 Jul 2003	Birth	
211.	Banu	272	F	186	120	25 Nov 2003	Madras Delhi	25 Nov 2003 1 Oct 2006	Birth Transfer	
212.	Anitha	273	F	182	191	4 Jan 2004	Madras	4 Jan 2004	Birth	
213.	Sumi	274	F	182	190	11 Feb 2004	Madras	11 Feb 2004 15 Feb 2004	Birth Death	
214.	Kumari	275	F	219	167	1 Jul 2004	Bhilai	1 Jul 2004	Birth	
215.	Appu M00034 00063B1431	276	M	Wild	Wild	~ 2004	India Mysore	~ 6 Nov 2006 6 Nov 2006	Capture Transfer	
216.	Sindhu #98109810205821	277	F	182	187	16 Aug 2004	Madras	16 Aug 2004	Birth	
217.		278	?	256	188	11 Feb 2005	Madras	11 Feb 2005 12 Feb 2005	Birth Death	
218.	Sandhiya #98109810205815	279	F	182	190	5 Apr 2005	Madras	5 Apr 2005	Birth	
219.	Kannan	280	M	186	121	13 May 2005	Trivandrum	13 May 2005	Birth	
220.	Swathi M00004 00063B010B	281	F	Wild	Wild	~ 2005	India Mysore	~21 Jul 2007 21 Jul 2007	Capture Transfer	
221.		282	?	256	120	16 Jul 2005	Madras	16 Jul 2005 23 Jul 2005	Birth Death	
222.		283	?	256	259	11 Aug 2005	Madras	11 Aug 2005 3 Sep 2005	Birth Death	
223.	Anand #98109810080144	284	M	182	191	5 Nov 2005	Madras	5 Nov 2005	Birth	
224.	Guna	285	M	256	188	13 May 2006	Madras	13 May 2006 19 Sep 2007	Birth Death	
225.		286	M	182	187	2 Jul 2006	Madras	2 Jul 2006 ~2 Jul 2006	Birth Death	
226.		287	M	182	187	2 Jul 2006	Madras	2 Jul 2006 ~2 Jul 2006	Birth Death	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
227.	Abhi M00007 0006B4C07	288	M	Wild	Wild	~Aug 2006ñ1m	India Mysore	~ 5 Nov 2006 5 Nov 2006	Capture Transfer	
228.		289	M	256	120	25 Aug 2006	Madras	25 Aug 2006 2 Sep 2006	Birth Death	
229.		290	?	186	116	21 Oct 2006	Trivandrum	21 Oct 2006 24 Oct 2006	Birth Death	
230.		291	F	186	121	1 Mar 2007	Trivandrum	1 Mar 2007	Birth	
231.	Vimala AAZP41	292	M	256	259	25 Apr 2007	Madras	25 Apr 2007	Birth	
232.		293	?	182	187	14 May 2007	Madras	14 May 2007 28 May 2007	Birth Death	
233.	Asok AAZP43	294	F	182	191	9 Jun 2007	Madras	9 Jun 2007	Birth	
234.	AAZP44	295	?	182	190	18 Jun 2007	Madras	18 Jun 2007 19 Jun 2007	Birth Death	
235.	AAZP45	296	?	256	120	2 Aug 2007	Madras	2 Aug 2007	Birth Death	
236.		297	?	256	120	2 Aug 2007	Madras	2 Aug 2007	Birth Death	
237.	Ravi AAZP46	298	M	256	188	1 Sep 2007	Madras	1 Sep 2007	Birth	
238.		299	M	263	272	27 Sep 2007	Delhi	27 Sep 2007 12 Nov 2010	Birth Death	
239.	Amala	300	F	182	273	20 Mar 2008	Madras	20 Mar 2008	Birth	
240.	Raj	301	M	182	187	5 Apr 2008	Madras	5 Apr 2008	Birth	
241.	Vinodh	302	M	256	259	11 Aug 2008	Madras	11 Aug 2008	Birth	
242.		303	M	Unk	272	20 Nov 2008	Delhi	20 Nov 2008	Birth	
243.	Anjali AAZP51	304	F	182	191	19 Feb 2009	Madras	19 Feb 2009	Birth	
244.	Ragavi AAZP52	305	F	256	188	16 Apr 2009	Madras	16 Apr 2009	Birth	
245.	Ranjani AAZP55	306	F	256	188	10 Dec 2009	Madras	10 Dec 2009	Birth	

Sl. No.	House Name Local Identifiers Transponder #	National Studbook Number	Sex	Sire	Dam	Birth Date	Location	Date	Event	Remarks
246.	Arun AAZP53	307	M	182	173	2 Aug 2010	Madras	2 Aug 2010	Birth	
247.	Akash AAZP54	308	M	182	191	12 Aug 2010	Madras	12 Aug 2010	Birth	
248.		309	?	138	172	7 Sep 2010	Delhi	7 Sep 2010	Birth	
249.	Radha	310	F	Wild	Wild	???	India Patna	??? ???	Capture Transfer	
250.	72390	311	F	Unk	Unk	???	Unknown Patna	??? ???	Birth Transfer	
251.	Radha	312	F	Wild	Wild	???	India Trivandrum	~15 Jun 2002 15 Jun 2002	Capture Transfer	
252.	Kuttan	313	M	Wild	Wild	???	India Trivandrum	~26 May 2008 26 May 2008	Capture Transfer	
253.		314	F	Wild	Wild	???	India Shillong	~12 May 1998 12 May 1998	Capture Transfer	
254.		315	F	Wild	Wild	???	India Shillong	~ 6 Jun 1994 6 Jun 1994	Capture Transfer	
255.		316	M	Wild	Wild	???	India Shillong	~ 1 Mar 2000 1 Mar 2000	Capture Transfer	
256.	130	317	M	Unk	Unk	???	Unknown Lucknow	??? 1 Aug 2003	Birth Transfer	
TOTAL:113.121.22 (256)										

## Demographic Analyses

### Census

A study of census graph (Figure 2) reveals that the population has been growing since 1971, even though there were periods of slight depression (1976, 1985, 1989, 1991-1999) the wider picture projects a steadily growing population, that has grown from mere 20 individuals in 1971 to 86 in 2010.

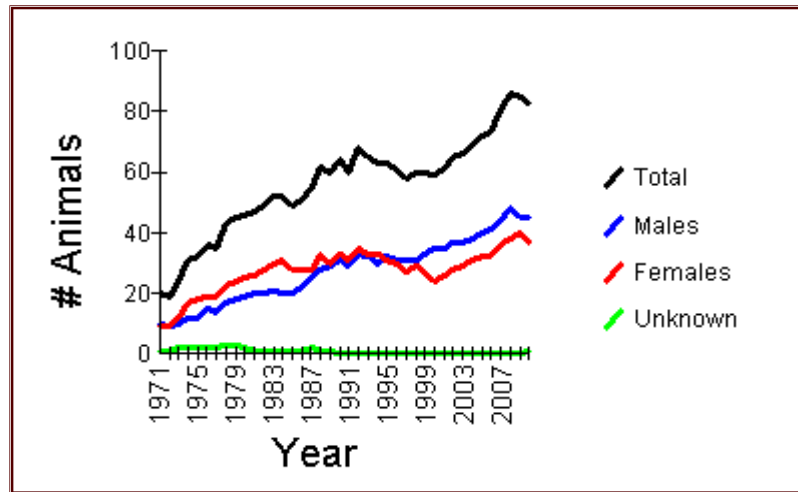


Figure 2: Census trends of Lion tailed macaque in captivity

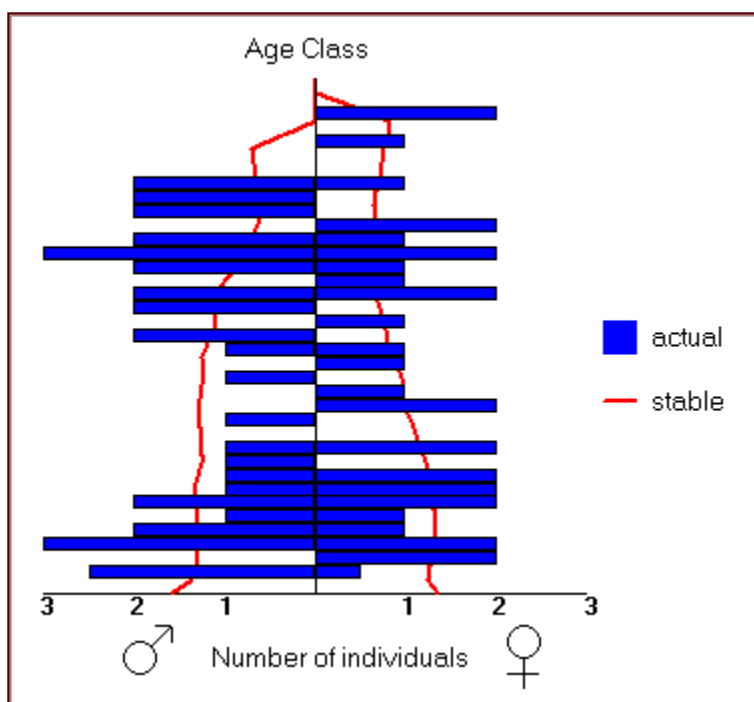
Table 6: Census data of Lion tailed macaque in captivity

Year	Total	Males	Females	Unsexed	Wild Born	Captive Born
1971	20	10	9	1	12	8
1972	19	9	9	1	12	7
1973	24	10	12	2	15	9
1974	31	12	17	2	19	12
1975	32	12	18	2	19	13
1976	36	15	19	2	20	16
1977	35	14	19	2	18	17
1978	43	17	23	3	22	21
1979	45	18	24	3	22	23
1980	46	19	25	2	24	22
1981	47	20	26	1	25	22
1982	49	20	28	1	24	25
1983	52	21	30	1	23	29
1984	52	20	31	1	24	28
1985	49	20	28	1	19	30
1986	51	22	28	1	21	30
1987	55	25	28	2	22	33
1988	62	28	33	1	26	36
1989	60	29	30	1	27	33
1990	64	31	33	0	29	35
1991	60	29	31	0	29	31
1992	68	33	35	0	32	36
1993	65	32	33	0	30	35
1994	63	30	33	0	31	32
1995	63	32	31	0	31	32

Year	Total	Males	Females	Unsexed	Wild Born	Captive Born
1996	61	31	30	0	29	32
1997	58	31	27	0	27	31
1998	60	31	29	0	28	32
1999	60	33	27	0	28	32
2000	59	35	24	0	29	30
2001	61	35	26	0	30	31
2002	65	37	28	0	34	31
2003	66	37	29	0	33	33
2004	69	38	31	0	34	35
2005	72	40	32	0	35	37
2006	73	41	32	0	37	36
2007	80	44	36	0	40	40
2008	86	48	38	0	42	44
2009	85	45	40	0	39	46
2010	86	44	41	1	39	47

### Age Distribution

Age distribution indicates the proportion of population in each age class. Age pyramid of Lion tailed macaque (Figure 3) suggests that there is a low number of breeding individuals (between the ages of 9-20) in the population most of the animals are either past breeding age or are in sub-adult stage. The age pyramid reflects that for certain age classes one of the sexes is nearly absent i.e the population is highly skewed towards one of the sex in that age class. Also there is a gap at the base of the pyramid which though not very prominent indicates the absence of neonates in the population. The details of age distribution have been provided in Table 7. There is thus an urgent need to increase the reproductive rate of the captive population and sex representation need to be balanced for all age classes.



**Figure 3:** Age distribution of living Lion tailed macaque population in captivity

**Table 7: Age distribution of Lion tailed macaque living population**

<b>Age (x)</b>	<b>Male Actual</b>	<b>Male Stable</b>	<b>Female Actual</b>	<b>Female Stable</b>
0	0	1.59	0	1.34
1	2.5	1.37	0.5	1.24
2	0	1.33	2	1.27
3	3	1.31	2	1.29
4	2	1.30	1	1.31
5	1	1.30	1	1.33
6	2	1.31	2	1.32
7	1	1.33	2	1.31
8	1	1.33	2	1.27
9	1	1.29	0	1.24
10	1	1.25	2	1.19
11	0	1.25	0	1.12
12	1	1.26	0	1.08
13	0	1.27	2	1.01
14	0	1.28	1	0.97
15	1	1.26	0	0.96
16	0	1.24	1	0.85
17	1	1.26	1	0.85
18	2	1.19	0	0.80
19	0	1.13	1	0.77
20	2	1.10	0	0.72
21	2	1.07	2	0.68
22	0	1.07	1	0.68
23	2	0.94	1	0.71
24	3	0.76	2	0.69
25	2	0.75	1	0.63
26	0	0.68	2	0.61
27	2	0.61	0	0.63
28	2	0.63	0	0.65
29	2	0.63	0	0.65
30	0	0.66	0	0.71
31	0	0.68	0	0.73
32	0	0.70	1	0.76
33	0	0.36	0	0.79
34	0	0.00	2	0.82
35	0	0.00	0	0.43
36	0	0.00	0	0.00

## Life Table

The important characteristics of demography such as age specific fertility and age specific mortality are summarized in the life table obtained for both the sexes (Table 8). Life table for lion tailed macaque reveals that the male population is growing at a rate of 0.026 with a generation length of 11.56 years, while female population is declining at a rate of -0.0381 with a generation length of 10.84 years. Other demographic characteristics as obtained from life tables, like percent of population change per year ( $\lambda$ ) and rate of change per generation (Net Reproductive rate,  $R_0$ ) have been summarized in Table 9.

**Table 8: Life table for male and female Lion tailed macaque**

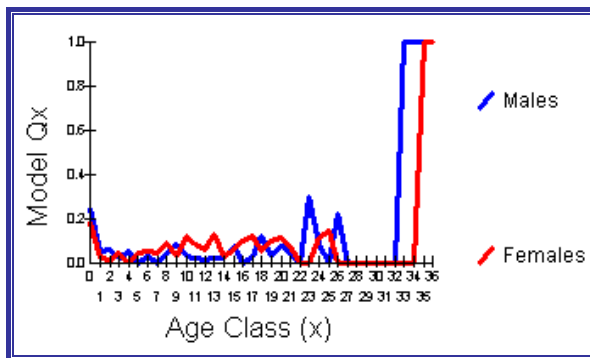
Age	Males					Females				
	Qx	Px	Lx	Mx	Vx	Qx	Px	Lx	Mx	Vx
0	0.240	0.760	1.000	0.000	1.136	0.180	0.820	1.000	0.000	1.099
1	0.050	0.950	0.760	0.000	1.315	0.020	0.980	0.820	0.000	1.186
2	0.060	0.940	0.722	0.000	1.356	0.010	0.990	0.804	0.000	1.159
3	0.020	0.980	0.679	0.020	1.377	0.040	0.960	0.796	0.040	1.144
4	0.050	0.950	0.665	0.020	1.371	0.000	1.000	0.764	0.070	1.085
5	0.000	1.000	0.632	0.090	1.351	0.040	0.960	0.764	0.110	0.997
6	0.030	0.970	0.632	0.080	1.247	0.050	0.950	0.733	0.120	0.894
7	0.000	1.000	0.613	0.130	1.155	0.040	0.960	0.697	0.080	0.780
8	0.040	0.960	0.613	0.100	1.020	0.090	0.910	0.669	0.070	0.721
9	0.080	0.920	0.588	0.130	0.953	0.030	0.970	0.608	0.100	0.667
10	0.030	0.970	0.541	0.150	0.850	0.120	0.880	0.590	0.070	0.590
11	0.020	0.980	0.525	0.080	0.699	0.080	0.920	0.519	0.090	0.557
12	0.010	0.990	0.515	0.150	0.613	0.060	0.940	0.478	0.100	0.484
13	0.020	0.980	0.509	0.130	0.458	0.130	0.870	0.449	0.080	0.408
14	0.020	0.980	0.499	0.060	0.326	0.030	0.970	0.391	0.060	0.344
15	0.070	0.930	0.489	0.090	0.271	0.060	0.940	0.379	0.020	0.286
16	0.000	1.000	0.455	0.040	0.183	0.100	0.900	0.356	0.070	0.278
17	0.030	0.970	0.455	0.000	0.142	0.120	0.880	0.321	0.040	0.225
18	0.120	0.880	0.441	0.030	0.149	0.050	0.950	0.282	0.020	0.195
19	0.030	0.970	0.388	0.020	0.126	0.100	0.900	0.268	0.030	0.182
20	0.070	0.930	0.377	0.060	0.109	0.110	0.890	0.241	0.060	0.164
21	0.040	0.960	0.350	0.000	0.050	0.070	0.930	0.215	0.110	0.110
22	0.000	1.000	0.336	0.050	0.050	0.000	1.000	0.200	0.000	0.000
23	0.300	0.700	0.336	0.000	0.000	0.000	1.000	0.200	0.000	0.000
24	0.080	0.920	0.235	0.000	0.000	0.110	0.890	0.200	0.000	0.000
25	0.000	1.000	0.217	0.000	0.000	0.140	0.860	0.178	0.000	0.000
26	0.220	0.780	0.217	0.000	0.000	0.000	1.000	0.153	0.000	0.000
27	0.000	1.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
28	0.000	1.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
29	0.000	1.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
30	0.000	1.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
31	0.000	1.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
32	0.000	1.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
33	1.000	0.000	0.169	0.000	0.000	0.000	1.000	0.153	0.000	0.000
34	1.000	0.000	0.000	0.000	0.000	0.000	1.000	0.153	0.000	0.000
35	1.000	0.000	0.000	0.000	0.000	1.000	0.000	0.153	0.000	0.000
36	1.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000

Qx = mortality; Px = survival; Lx = cumulative survivorship; Mx = fecundity; Vx = expected future reproduction

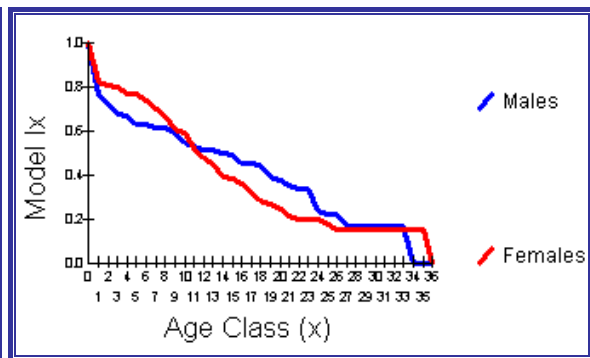
**Table 9: Population growth rates**

Population Parameters	Males	Females
<i>Intrinsic rate of increase (r)</i>	0.0258	-0.0381
<i>Lambda</i>	0.9745	0.9626
<i>Net Reproductive rate (R<sub>0</sub>)</i>	0.742	0.662
<i>Generation length (T)</i>	11.56	10.84

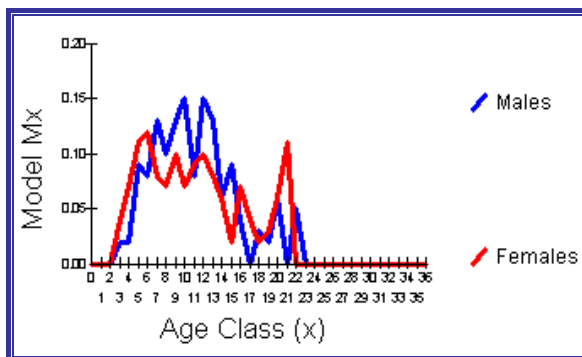
Age specific mortality rate ( $Q_x$ ) (Figure 4) for female population is higher than males for younger age classes. The  $Q_x$  is high for males in 23-24 and 26-27 age classes. The comparison also reveals that males are at higher risk in 31-32 and 32-33 age classes than females which are at higher risk in later age classes. Age specific survivorship ( $L_x$ ) is also higher for males for younger age classes but for breeding age classes it is higher for females (Figure 5). Age specific fertility rate or fecundity ( $M_x$ ) suggest that the breeding in LTM onsets when in 2-3 age class, and they breed up to 22-23 years.  $M_x$  is higher for males almost across all the age classes but for younger classes of 2-3, 3-4 and mature classes of 19-20, 20-21 and 21-22, implying that in the breeding classes more males are reproducing as compared to females in the same age classes (Figure 6). Reproductive value ( $V_x$ ) is also higher for males across almost all the age classes (Figure 7). Thus there are probabilities that though females would live longer but males would produce more number of offspring in the population.



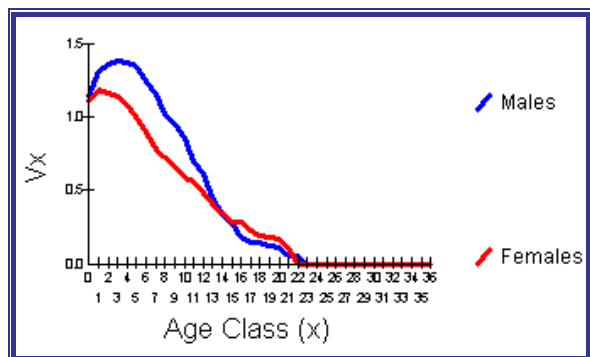
**Figure 4:** Comparison of male- female mortality



**Figure 5:** Comparison of age specific survivorship



**Figure 6:** Comparison of male-female fecundity



**Figure7:** Comparison of male-female reproductive value

## Population Projections

Population projection for the Lion tailed macaque population at Indian Zoos for next 20 years has been derived from life table and age pyramid study (Figure 8). In order to maintain stable population at least for 20 years, the number of effective individuals required under particular age class and number of birth required in each year are provided in Table 10.

**Table 10: Projected age class to maintain a stable population for next 20 years**

# Age Class	Year																				
	Born	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
0	0.00	2.80	2.64	2.88	2.80	2.87	2.47	2.66	2.50	2.39	2.40	2.23	2.16	2.10	1.97	2.06	1.95	1.87	1.91	1.80	1.40
1	0.00	2.51	2.37	2.58	2.51	2.56	2.21	2.30	2.24	2.14	2.14	1.99	1.93	1.87	1.76	1.84	1.74	1.67	1.71	1.61	1.31
2	3.00	0.00	2.18	2.05	2.23	2.17	2.22	1.91	2.05	1.93	1.85	1.84	1.72	1.67	1.61	1.53	1.59	1.50	1.44	1.47	1.34
3	2.00	2.86	0.00	2.11	1.98	2.15	2.10	2.13	1.84	1.97	1.86	1.78	1.77	1.66	1.60	1.55	1.47	1.53	1.45	1.38	1.33
4	5.00	1.95	2.75	0.00	2.05	1.92	2.08	2.03	2.06	1.77	1.91	1.80	1.72	1.71	1.60	1.55	1.50	1.42	1.48	1.40	1.29
5	3.00	4.85	1.91	2.66	0.00	1.99	1.87	2.03	1.97	2.01	1.72	1.85	1.75	1.67	1.67	1.56	1.51	1.46	1.38	1.44	1.30
6	2.00	2.93	4.74	1.87	2.59	0.00	1.95	1.82	1.98	1.93	1.96	1.69	1.81	1.71	1.64	1.63	1.52	1.47	1.42	1.35	1.22
7	4.00	1.94	2.86	4.61	1.79	2.54	0.00	1.88	1.77	1.92	1.87	1.90	1.64	1.76	1.66	1.59	1.58	1.48	1.43	1.38	1.23
8	3.00	3.88	1.88	2.78	4.49	1.71	2.49	0.00	1.82	1.71	1.86	1.81	1.85	1.59	1.71	1.61	1.54	1.54	1.43	1.39	1.25
9	3.00	2.85	3.72	1.80	2.69	4.32	1.60	2.42	0.00	1.74	1.64	1.78	1.74	1.77	1.52	1.64	1.55	1.48	1.48	1.38	1.10
10	1.00	2.82	2.68	3.49	1.69	2.53	4.06	1.50	2.27	0.00	1.63	1.54	1.67	1.63	1.66	1.43	1.54	1.45	1.39	1.39	1.23
11	3.00	0.94	2.63	2.50	3.27	1.59	2.37	3.80	1.39	2.14	0.00	1.54	1.44	1.57	1.52	1.56	1.34	1.44	1.36	1.30	1.16
12	0.00	2.77	0.92	2.43	2.31	3.07	1.49	2.26	3.60	1.25	2.06	0.00	1.42	1.35	1.47	1.43	1.47	1.26	1.36	1.28	1.09
13	1.00	0.00	2.63	0.91	2.30	2.19	2.94	1.43	2.19	3.48	1.16	2.01	0.00	1.36	1.29	1.41	1.37	1.41	1.21	1.31	0.91
14	2.00	0.99	0.00	2.46	0.89	2.16	2.05	2.80	1.36	2.11	3.33	1.05	1.96	0.00	1.28	1.22	1.34	1.30	1.34	1.16	0.88
15	1.00	1.83	0.97	0.00	2.31	0.80	2.03	1.93	2.67	1.30	2.03	3.19	0.96	1.90	0.00	1.22	1.16	1.27	1.24	1.28	0.00
16	1.00	0.96	1.75	0.92	0.00	2.21	0.84	1.94	1.85	2.55	1.24	1.94	3.05	0.92	1.82	0.00	1.16	1.11	1.22	1.18	1.29
17	1.00	0.96	0.88	1.61	0.89	0.00	2.07	0.81	1.82	1.73	2.41	1.17	1.85	2.90	0.85	1.74	0.00	1.10	1.05	1.15	0.50
18	2.00	0.89	0.95	0.78	1.44	0.88	0.00	1.93	0.79	1.69	1.61	2.28	1.11	1.78	2.77	0.75	1.70	0.00	1.03	0.99	1.79
19	2.00	1.84	0.81	0.88	0.71	1.31	0.81	0.00	1.77	0.73	1.55	1.48	2.10	1.02	1.64	2.56	0.69	1.57	0.00	0.95	0.91
20	1.00	1.84	1.70	0.75	0.81	0.66	1.21	0.75	0.00	1.64	0.68	1.43	1.37	1.94	0.95	1.51	2.36	0.64	1.45	0.00	0.88
21	2.00	0.90	1.75	1.57	0.67	0.77	0.59	1.09	0.71	0.00	1.50	0.64	1.32	1.26	1.81	0.88	1.42	2.21	0.57	1.37	0.00
22	4.00	1.89	0.81	1.66	1.45	0.61	0.73	0.54	0.99	0.67	0.00	1.39	0.61	1.22	1.17	1.68	0.82	1.33	2.06	0.52	1.29
23	1.00	3.89	1.85	0.78	1.62	1.41	0.59	0.71	0.52	0.95	0.66	0.00	1.35	0.60	1.19	1.13	1.64	0.80	1.30	2.01	0.50
23	3.00	1.00	3.59	1.57	0.78	1.38	1.30	0.59	0.61	0.52	0.95	0.56	0.00	1.26	0.51	1.10	1.05	1.48	0.72	1.14	1.79

<b>24</b>	5.00	2.53	0.94	3.14	1.24	0.74	1.09	1.13	0.56	0.48	0.49	0.90	0.44	0.00	1.10	0.40	0.97	0.92	1.25	0.61	0.94
<b>25</b>	3.00	4.63	2.34	0.83	2.86	1.19	0.65	1.04	1.03	0.49	0.46	0.43	0.79	0.42	0.00	1.00	0.38	0.88	0.84	1.16	0.56
<b>26</b>	2.00	2.70	4.18	2.11	0.77	2.60	1.06	0.60	0.93	0.94	0.45	0.41	0.40	0.73	0.30	0.00	0.91	0.34	0.80	0.76	1.05
<b>27</b>	2.00	2.00	2.48	3.86	1.95	0.77	2.46	0.93	0.60	0.81	0.88	0.45	0.36	0.40	0.73	0.33	0.00	0.87	0.30	0.76	0.72
<b>28</b>	2.00	2.00	2.00	2.48	3.86	1.95	0.77	2.46	0.93	0.60	0.81	0.88	0.45	0.36	0.40	0.73	0.33	0.00	0.87	0.30	0.76
<b>29</b>	3.00	2.00	2.00	2.00	2.48	3.86	1.95	0.77	2.46	0.93	0.60	0.81	0.88	0.45	0.36	0.40	0.73	0.33	0.00	0.87	0.30
<b>30</b>	0.00	3.00	2.00	2.00	2.00	2.48	3.86	1.95	0.77	2.46	0.93	0.60	0.81	0.88	0.45	0.36	0.40	0.73	0.33	0.00	0.87
<b>31</b>	0.00	0.00	3.00	2.00	2.00	2.00	2.48	3.86	1.95	0.77	2.46	0.93	0.60	0.81	0.88	0.45	0.36	0.40	0.73	0.33	0.00
<b>32</b>	1.00	0.00	0.00	3.00	2.00	2.00	2.00	2.48	3.86	1.95	0.77	1.97	0.93	0.60	0.81	0.88	0.45	0.36	0.40	0.73	0.33
<b>33</b>	0.00	1.00	0.00	0.00	2.00	1.00	1.00	2.00	1.70	2.74	1.36	0.77	1.97	0.46	0.60	0.41	0.70	0.45	0.18	0.40	0.73
<b>34</b>	2.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	2.00	0.92	1.62	0.77	0.77	1.48	0.00	0.60	0.00	0.51	0.45	0.00	0.40
<b>35</b>	0.00	1.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	1.00	0.46	0.81	0.38	0.38	0.74	0.00	0.30	0.00	0.25	0.23	0.00
<b>36</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	70.00	68.14	66.27	64.71	62.65	60.59	57.41	55.89	55.04	51.96	48.92	46.90	44.93	43.10	41.16	36.69	38.58	37.70	36.92	35.97	35.37

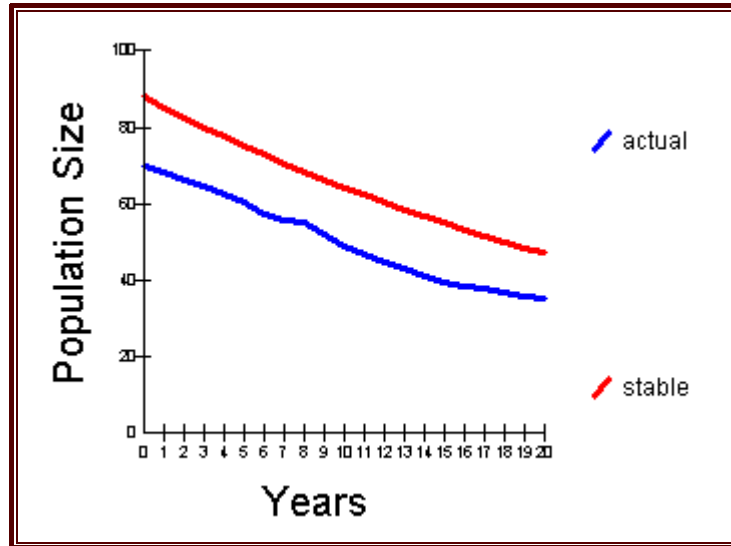


Figure 8: Population projection for next 20 years

## Genetic Analyses

Results of genetic analysis show that 89% genetic diversity is being retained by the Lion tailed macaque population. The gene value (which is an expression of expected heterozygosity if the given population is bred randomly) was calculated to be 0.82, which is relatively moderate. Although current population size is 88, mean 'effective' population size ( $N_e$  i.e. individuals offering genetic viability to next generation) is only 13.82 over the past 2.56 generations. The current  $N_e$  though is better at 16.94 estimated from 8 males and 9 female breeders. Such low effective population size depicts that population is neither effectively maintaining genetic diversity across the generations nor breeding randomly. Mean effective size can be augmented by equalizing the sex ratio, decreasing the variability in family size, checking the fluctuations in the population size over generations and avoiding overlap of generations. The population genetics have been summarized in Table 11.

**Table 11: Genetic status of the captive Lion tailed macaque population**

Genetic variables	Current	Potential
Founders	22	36 additional
Founder genome equivalents	4.52	48.46
Founder genome surviving	12.17	48.46
Gene diversity retained	0.889	0.99
Population mean kinship	0.111	0.01
Mean inbreeding	0.166	0.01
$N_e / N$	0.2	-----
% of pedigree known	91	-----

## Founder Statistics

The founder statistics show that there are 22 founders with living descendants in the population, the potential founder number is as high as 36. However, the Founder Genome Equivalents (fge), is low and equals the genetic variation contributed by 4.52 founders if their allelic retention is 1. The sum total of allelic retentions of individual founders expressed as Founder Genomes Surviving was calculated to be 12.17. The values of 'Founder Genome Equivalents' and 'Founder Genome Surviving' are low because though the population has a lot of wild origin individuals, considerable number of founders (36) are not contributing to the population at all. Some are being overrepresented (WILDM2, WILDM1, 132, WILD2, WILD1, WILD3) while some are underrepresented (WILD4, WILD3, WILD2, WILD1, 104, 154)(Table 10). Thus, there is a need to equalize the founder representation hence the under-represented founder should be given more breeding opportunities. It should be noted that increasing breeding of under-represented founder's descendants may increase loss of heterozygosity. The founder statistics on key parameters such as founder representation, founder contribution, founder allele retention and potential founder allele retention have been provided in Table 12 and Figures 9, 10, 11, and 12.

**Table 12: Founder statistics**

Studbook #	Sex	Age	Representation	Contribution	Allele Retent.	Potential Ret.	Descendants
WILD02	M	D	0.0374	1.7030	0.3350	0.3350	10.00
WILD01	F	D	0.0735	3.3440	0.5310	0.5310	10.00
WILD03	M	D	0.0361	1.6410	0.3090	0.3090	10.00
WILDD7	M	D	0.0124	0.5630	0.2835	0.2835	5.00
WILDD4	F	D	0.0124	0.5630	0.3065	0.3065	5.00
WILDJ4	M	D	0.0110	0.5000	0.5000	0.5000	1.00
WILDJ3	F	D	0.0110	0.5000	0.5000	0.5000	1.00
WILDP2	M	D	0.0110	0.5000	0.4255	0.4255	1.00
WILDP1	F	D	0.0110	0.5000	0.4400	0.4400	1.00

Studbook #	Sex	Age	Representation	Contribution	Allele Retent.	Potential Ret.	Descendants
WILDM2	M	D	0.2019	9.1880	0.7475	0.7475	30.00
WILDM1	F	D	0.2019	9.1880	0.7460	0.7460	30.00
P104	M	D	0.0110	0.5000	0.5000	0.5000	1.00
21	F	D	0.0371	1.6880	0.4200	0.4200	8.00
36	M	D	0.0220	1.0000	0.7600	0.7600	2.00
45	F	D	0.0220	1.0000	0.7515	0.7515	2.00
78	M	D	0.0220	1.0000	0.7030	0.7030	2.00
79	F	D	0.0110	0.5000	0.3895	0.3895	2.00
86	F	29	0.0000	0.0000	0.0000	1.0000	0.00
96	M	29	0.0000	0.0000	0.0000	1.0000	0.00
104	F	D	0.0110	0.5000	0.5000	0.5000	1.00
105	M	28	0.0000	0.0000	0.0000	1.0000	0.00
111	M	27	0.0000	0.0000	0.0000	1.0000	0.00
116	F	26	0.0000	0.0000	0.0000	1.0000	0.00
117	F	26	0.0000	0.0000	0.0000	1.0000	0.00
121	F	25	0.0220	1.0000	0.7395	1.0000	2.00
126	M	24	0.0000	0.0000	0.0000	1.0000	0.00
127	F	24	0.0000	0.0000	0.0000	1.0000	0.00
132	F	D	0.1456	6.6250	0.8595	0.8595	24.00
134	M	23	0.0000	0.0000	0.0000	1.0000	0.00
154	M	D	0.0110	0.5000	0.4480	0.4480	1.00
159	M	-1	0.0000	0.0000	0.0000	1.0000	0.00
172	F	21	0.0000	0.0000	0.0000	1.0000	0.00
175	F	21	0.0000	0.0000	0.0000	1.0000	0.00
176	M	21	0.0000	0.0000	0.0000	1.0000	0.00
184	F	19	0.0000	0.0000	0.0000	1.0000	0.00
185	F	17	0.0000	0.0000	0.0000	1.0000	0.00
191	F	13	0.0659	3.0000	0.9740	1.0000	7.00
194	M	-1	0.0000	0.0000	0.0000	1.0000	0.00
195	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
220	M	24	0.0000	0.0000	0.0000	1.0000	0.00
248	M	20	0.0000	0.0000	0.0000	1.0000	0.00
251	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
253	F	14	0.0000	0.0000	0.0000	1.0000	0.00
258	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
261	F	10	0.0000	0.0000	0.0000	1.0000	0.00
265	M	9	0.0000	0.0000	0.0000	1.0000	0.00
266	M	-1	0.0000	0.0000	0.0000	1.0000	0.00
267	M	-1	0.0000	0.0000	0.0000	1.0000	0.00
270	M	-1	0.0000	0.0000	0.0000	1.0000	0.00
276	M	7	0.0000	0.0000	0.0000	1.0000	0.00
281	F	6	0.0000	0.0000	0.0000	1.0000	0.00
288	M	5	0.0000	0.0000	0.0000	1.0000	0.00
310	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
312	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
313	M	-1	0.0000	0.0000	0.0000	1.0000	0.00
314	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
315	F	-1	0.0000	0.0000	0.0000	1.0000	0.00
316	M	-1	0.0000	0.0000	0.0000	1.0000	0.00



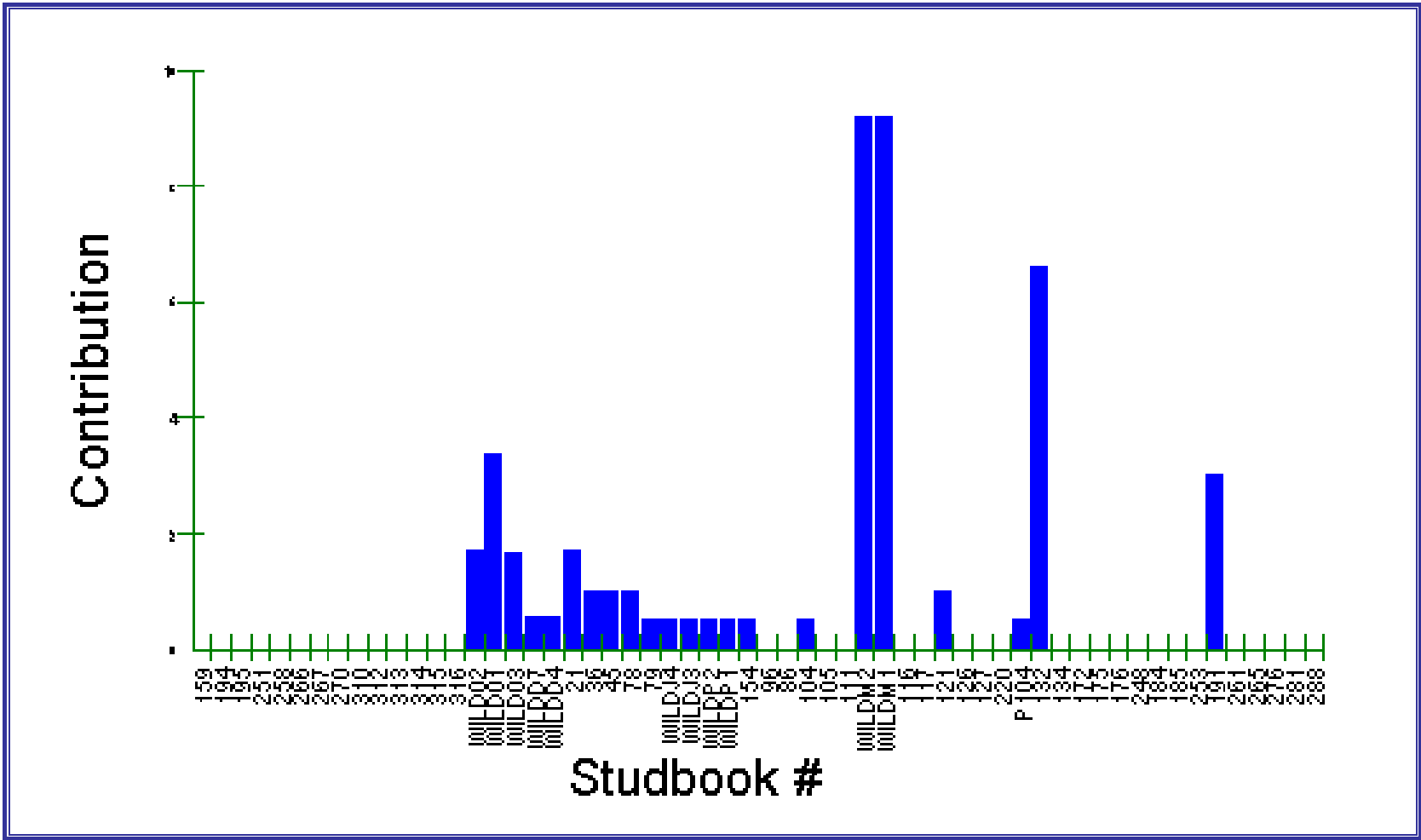


Figure 10: Founder contributions

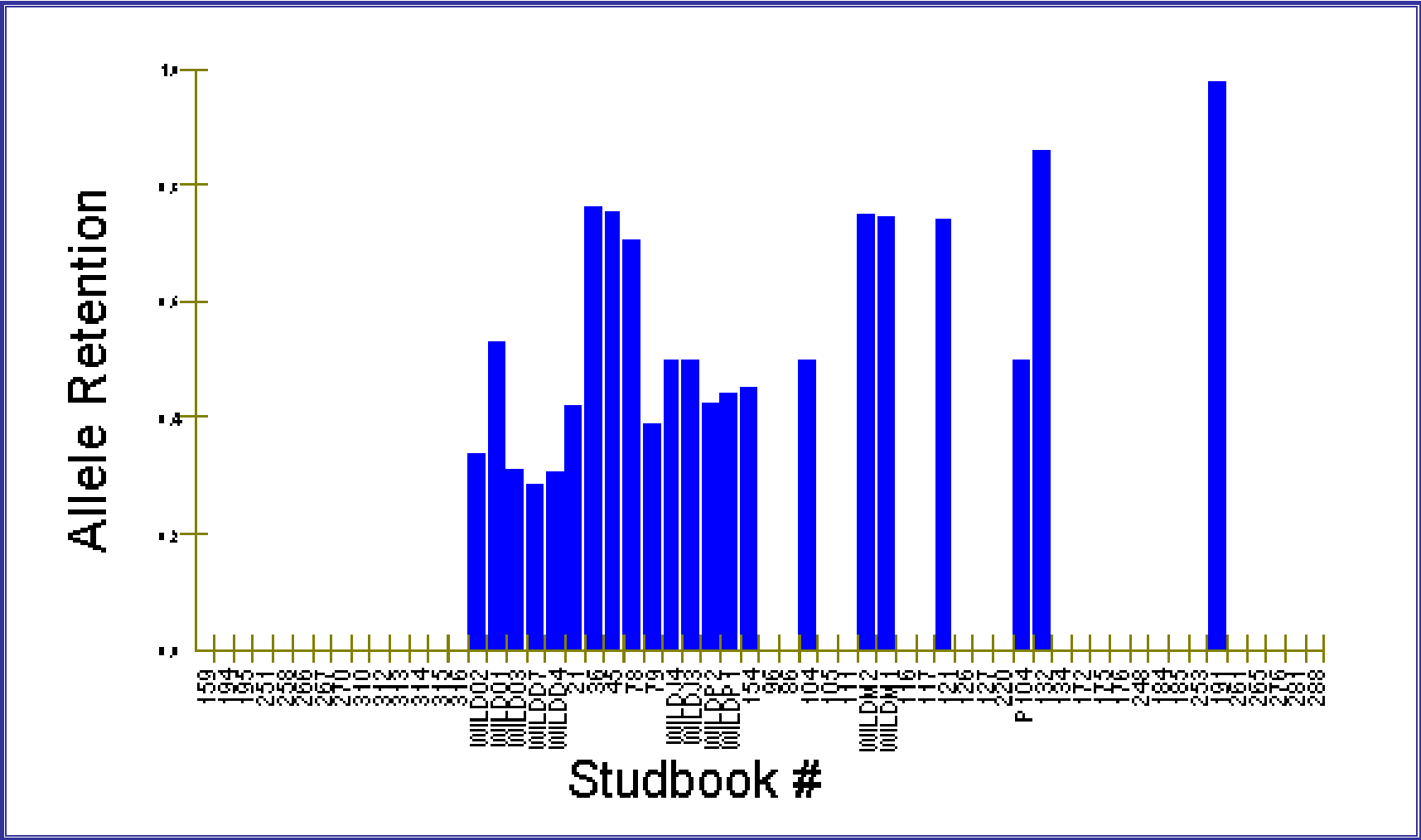


Figure 11: Founder allele retention

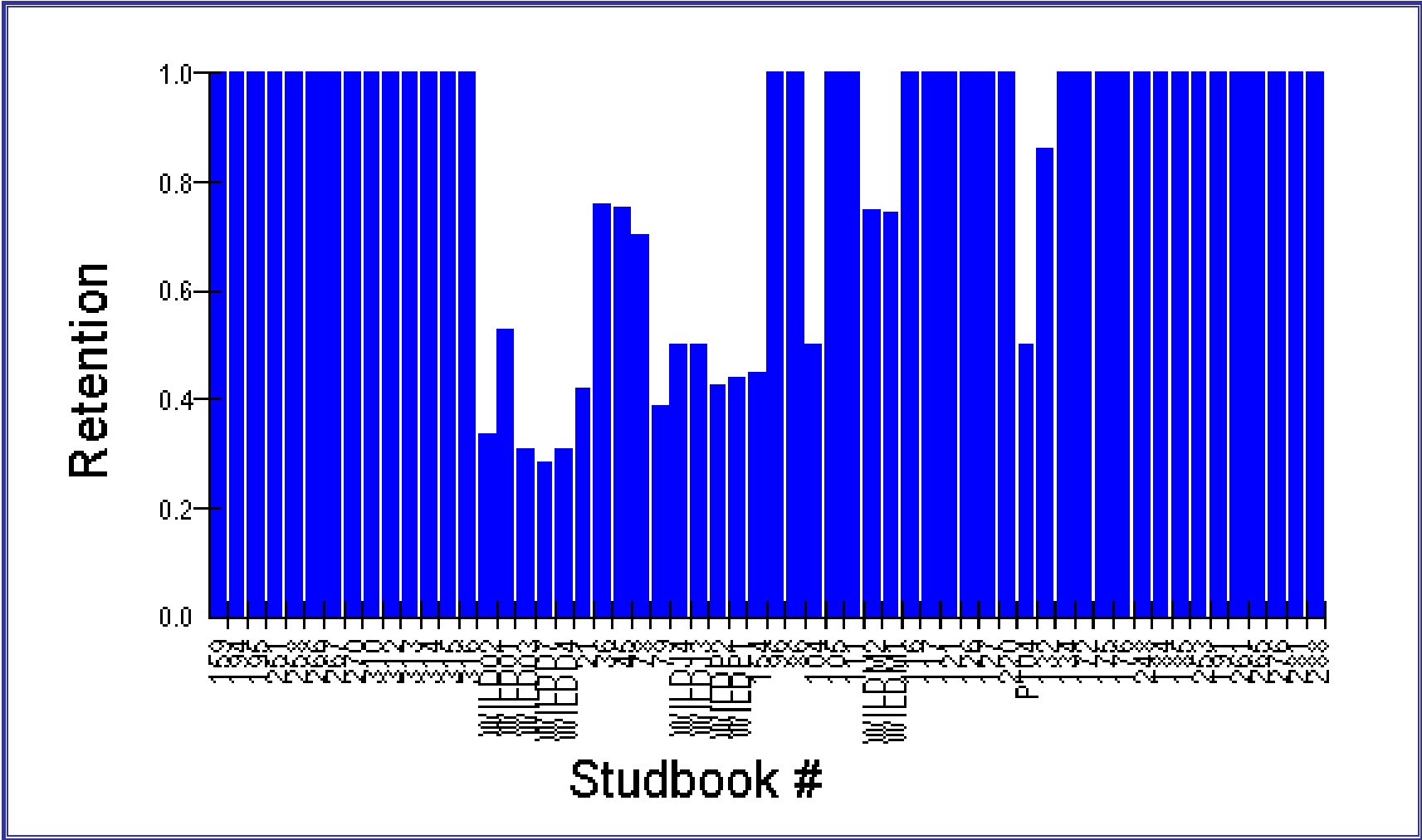


Figure 12: Potential founder allele retention

## Individual Statistics

Individual statistics table (Table 13) summarizes the genetic data for individual captive lion tailed macaque housed in Indian zoos. It is pertinent to note that 54 individuals have inbreeding coefficient zero, implying they are not inbred at all. Therefore these animals, especially those that have low mean kinship (Mk) and less number of offspring should be preferably bred.

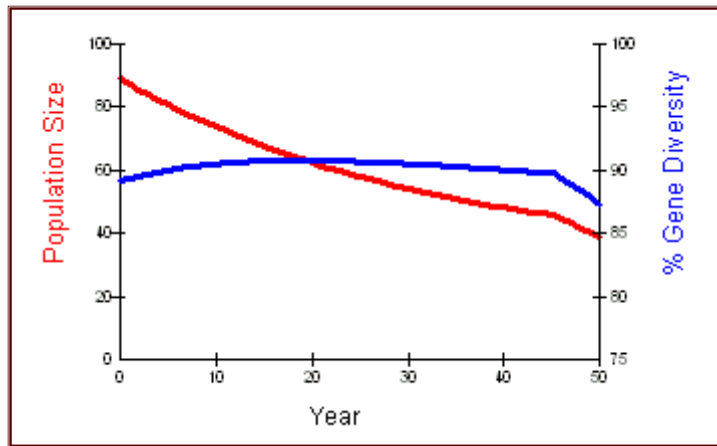
**Table 13: Individual statistics**

Stbk	Sex	Sire	Dam	Age	Location	Know F n	MK	KV	FOKE	Pro- geny	Local ID	Additional IDs	
57	F	16	42	34	NANDANKAN	100	0.281	0.068	0.021	12.3	6		
66	F	36	45	32	KANPUR	100	0	0.016	0	3	2305	Neeta	
83	M	UNK1	UNK5	0	BANNERGHATA	0	---	---	---	0			
86	F	WILD	WILD	29	MYSORE	100	0	0	0	0	M00036	Netra	
96	M	WILD	WILD	29	TRIVANDRUM	100	0	0	0	0		Mohan	
98	M	39	47	29	KANPUR	100	0.141	0.058	0.019	10.6	0	1KAN3	Kalua
105	M	WILD	WILD	28	KODANAD	100	0	0	0	0		Raman	
110	M	WILDM1	WILDM2	27	MADRAS	100	0	0.166	0.208	30.2	14		Mohan
111	M	WILD	WILD	27	PARRASSINIKK ADAVU	100	0	0	0	0			
116	F	WILD	WILD	26	TRIVANDRUM	100	0	0	0	0	1		Laxmi
117	F	WILD	WILD	26	HYDERABAD	100	0	0	0	0			Mani 0006B73EB1
121	F	WILD	WILD	25	TRIVANDRUM	100	0	0.011	0.02	2	2		Bindu
123	M	82	81	25	CHATBIR ZOO	100	0.25	0.014	0	2.5	0		Majnu
124	M	36	45	25	KANPUR	100	0	0.016	0	3	0		
126	M	WILD	WILD	24	TRIVANDRUM	100	0	0	0	0			Ganesh
127	F	WILD	WILD	24	TRIVANDRUM	100	0	0	0	0			Gunjan
134	M	WILD	WILD	23	TRIVANDRUM	100	0	0	0	0			Ranjan
135	F	P104	104	24	ASSAM	100	0	0.011	0	2	0		Muni
136	F	106	97	23	HYDERABAD	100	0.188	0.016	0.003	2.9	0		Thara
138	M	67	42	23	DELHI	100	0.18	0.073	0.029	13.3	1		
159	M	WILD	WILD	0	MYSORE	100	0	0	0	0	ZAK02	Manja	
167	F	67	59	22	BHILAI	100	0.328	0.086	0.036	15.7	2		Geeta
170	M	110	120	21	HYDERABAD	100	0.25	0.157	0.191	28.6	0		Shahidhar/shasi
172	F	WILD	WILD	21	TRIVANDRUM	100	0	0	0	0			Pachi
175	F	WILD	WILD	21	MYSORE	100	0	0	0	0	M00038	Priya 00063B3B7F	
176	M	WILD	WILD	21	MYSORE	100	0	0	0	0	ZAK05	Rama	
177	M	54	57	20	PATNA	100	0.301	0.065	0.02	11.8	1		Krishna
182	M	110	132	18	GUINDY	100	0	0.168	0.242	30.5	18		Vijayan 00-0611- 8273
183	M	110	120	18	GUINDY	100	0.25	0.157	0.192	28.6	0		Umar
184	F	WILD	WILD	19	MYSORE	100	0	0	0	0	M00037	Shanti 00063AFBBC	
185	F	WILD	WILD	17	PARRASSINIKK ADAVU	100	0	0	0	0			
186	M	110	132	17	TRIVANDRUM	100	0	0.136	0.183	24.8	5		Seenu 00-0611- 7E4A
187	F	110	120	16	MADRAS	100	0.25	0.168	0.211	30.6	7		Veni
189	M	110	120	15	MYSORE	100	0.25	0.157	0.193	28.6	1		Lingan 00-0611- 7E09
190	F	110	120	13	MADRAS	100	0.25	0.16	0.198	29.1	3		Mala 10#00.0611.41 BE
191	F	WILD	WILD	13	MADRAS	100	0	0.033	0.061	6	6		Apsara 10#00.0611- 1F1F
194	M	WILD	WILD	0	CALCUTTA	100	0	0	0	0			
195	F	WILD	WILD	0	CALCUTTA	100	0	0	0	0			
200	M	199	197	12	JAIPUR	100	0.375	0.018	0.015	3.2	0		
211	F	WILDJ3	WILDJ4	34	KANPUR	100	0	0.011	0	2	0		Seeta

Stbk	Sex	Sire	Dam	Age	Location	Know	F	MK	KV	FOKE	Pro- geny	Local ID	Additional IDs
219	M	67	59	28	BHILAI	100	0.328	0.086	0.036	15.7	2		Ram
220	M	WILD	WILD	24	TRICHUR	100	0	0	0	0	0		
221	M	67	59	24	BHILAI	100	0.328	0.082	0.031	14.9	0		Shyam
248	M	WILD	WILD	20	MYSORE	100	0	0	0	0	0	M00035	Krishna 00063B2551
251	F	WILD	WILD	0	PATNA	100	0	0	0	0	0		Basanti
253	F	WILD	WILD	14	MYSORE	100	0	0	0	0	0	M00005	Geetha 00063B1763
258	F	WILD	WILD	0	PARRASSINIKK ADAVU	100	0	0	0	0	0		
261	F	WILD	WILD	10	MYSORE	100	0	0	0	0	0	M00003	Ankitha 0006B96F1
262	F	219	167	10	BHILAI	100	0.461	0.09	0.039	16.4	0		Rajkumari
263	M	182	187	10	DELHI	100	0.188	0.173	0.233	31.4	1		Dass
265	M	WILD	WILD	9	MYSORE	100	0	0	0	0	0	M00006	Aswath 00063B2623
266	M	WILD	WILD	0	TRIVANDRUM	100	0	0	0	0	0		Rajesh
267	M	WILD	WILD	0	TRIVANDRUM	100	0	0	0	0	0		Kiran
270	M	WILD	WILD	0	TRIVANDRUM	100	0	0	0	0	0		Raman
271	M	182	187	8	MADRAS	100	0.188	0.173	0.235	31.4	0		Murugan #9810981020568 80
272	F	186	120	8	DELHI	100	0.125	0.147	0.196	26.8	3		Banu
273	F	182	191	8	MADRAS	100	0	0.111	0.169	20.2	2		Anitha
275	F	219	167	7	BHILAI	100	0.461	0.09	0.04	16.4	0		Kumari
276	M	WILD	WILD	7	MYSORE	100	0	0	0	0	0	M00034	Appu 00063B1431
277	F	182	187	7	MADRAS	100	0.188	0.173	0.233	31.4	0		Sindhu #9810981020582 13
279	F	182	190	6	MADRAS	100	0.188	0.168	0.227	30.7	0		Sandhiya #9810981020581 55
280	M	186	121	6	TRIVANDRU	100	0	0.079	0.113	14.4	0		Kannan
281	F	WILD	WILD	6	MYSORE	100	0	0	0	0	0	M00004	Swathi 00063B010B
284	M	182	191	6	MADRAS	100	0	0.106	0.163	19.2	0		Anand #9810981008014 45
288	M	WILD	WILD	5	MYSORE	100	0	0	0	0	0	M00007	Abhi 0006B4C07
291	F	186	121	5	TRIVANDRUM	100	0	0.079	0.11	14.4	0		Manju
292	M	256	259	4	MADRAS	100	0.281	0.166	0.23	30.2	0	AAZP41	Vimala
294	F	182	191	4	MADRAS	100	0	0.106	0.161	19.2	0	AAZP43	Asok
298	M	256	188	4	MADRAS	100	0.188	0.152	0.219	27.7	0	AAZP46	Ravi
300	F	182	273	3	MADRAS	100	0.25	0.145	0.216	26.4	0		Amala
301	M	182	187	3	MADRAS	100	0.188	0.173	0.237	31.4	0		Raj
302	M	256	259	3	MADRAS	100	0.281	0.166	0.23	30.2	0		Vinodh
303	M	P272	272	3	DELHI	50	0	0.152	0.207	27.7	0		
304	F	182	191	3	MADRAS	100	0	0.106	0.162	19.2	0	AAZP51	Anjali
305	F	256	188	2	MADRAS	100	0.188	0.152	0.217	27.7	0	AAZP52	Ragavi
306	F	256	188	2	MADRAS	100	0.188	0.152	0.217	27.7	0	AAZP55	Ranjani
307	M	182	273	1	MADRAS	100	0.25	0.145	0.217	26.4	0	AAZP53	Arun
308	M	182	191	1	MADRAS	100	0	0.106	0.163	19.2	0	AAZP54	Akash
309	U	138	272	1	DELHI	100	0	0.115	0.122	20.9	0		
310	F	WILD	WILD	0	PATNA	100	0	0	0	0	0		Radha
311	F	UNK	UNK	0	PATNA	0	---	---	---	---	0	72390	
312	F	WILD	WILD	0	TRIVANDRUM	100	0	0	0	0	0		Radha
313	M	WILD	WILD	0	TRIVANDRUM	100	0	0	0	0	0		Kuttan
314	F	WILD	WILD	0	SHILLONG	100	0	0	0	0	0		
315	F	WILD	WILD	0	SHILLONG	100	0	0	0	0	0		
316	M	WILD	WILD	0	SHILLONG	100	0	0	0	0	0		
317	M	UNK	UNK	0	LUCKNOW	0	---	---	---	---	0	130	

## Population Planning and Mating Recommendations

Association of Zoos and Aquarium's (AZA) Species Survival Plan (SSP) recommends certain population genetic management goal, i.e. 90% genetic diversity for 100 years. Population modeling of captive lion tailed macaque housed in Indian zoos using pm2000 software; suggest that for achieving the population genetic management goals if the present demographic and genetic trends remain unaltered, a very large number of founders would be required. Such target is difficult to achieve in the present situation, since lion tailed macaque wild population itself is in a precarious situation and it shall be difficult to procure such large number of founder for captive breeding program. Hence, a feasible genetic management goal of maintaining 90% genetic diversity for 50 years is suggested; for which a population of 150 individuals needs to be maintained with the addition of one founder every alternate year for the next 45 years (figure 13).



**Figure 13:** Population management goal for captive lion tailed macaque

**Table 14: Management strategy**

Population Variables	Planned
Generation length	11.2
Population growth rate	0.969
Ne / N ratio	0.2
Initial gene diversity	0.889
Target population size	150
# New founders needed	1

This scenario would require the minimal number of founders to be included in the captive breeding program. This goal though can be achieved even with a lesser number of founders and lesser individuals if the genetic and demographic structure of the population is improved by breeding all founders equally and all individuals randomly and applying such practices in future that conserves maximum genetic diversity (Table 14).

Mean kinship (MK) is the most important genetic parameter for making decision on which animal in the population should be given priority in breeding (Table 15). It is a measure of relatedness of an individual with other living animals (descendants & captive bred), with '0' indicating no relatedness to any individual in the population and '1' indicating relatedness to all the individuals. Therefore, the probable pairing options within lion tailed macaque population for breeding were selected on the basis of least mean kinship values (Table 16).

**Table 15:** Ordered mean kinships of captive Lion tailed macaques

Rank	Males					Females				
	Stbk#	MK	Known	Age	Location	Stbk#	MK	Known	Age	Location
1	96	0.0000	100.0	29	Trivandrum	86	0.0000	100.0	29	Mysore
2	105	0.0000	100.0	28	Kodanadu	116	0.0000	100.0	26	Trivandru
3	111	0.0000	100.0	27	Parras	117	0.0000	100.0	26	Hyderabad
4	126	0.0000	100.0	24	Trivandru	127	0.0000	100.0	24	Trivandru
5	134	0.0000	100.0	23	Trivandru	172	0.0000	100.0	21	Trivandru
6	159	0.0000	100.0	0	Mysore	175	0.0000	100.0	21	Mysore
7	176	0.0000	100.0	21	Mysore	184	0.0000	100.0	19	Mysore

Rank Males					Females						
Rank	Stbk#	MK	Known	Age	Location	Rank	Stbk#	MK	Known	Age	Location
8	194	0.0000	100.0	0	Calcutta	185	0.0000	100.0	17	Parras	
9	220	0.0000	100.0	24	Trichur	195	0.0000	100.0	0	Calcutta	
10	248	0.0000	100.0	20	Mysore	251	0.0000	100.0	0	Patna	
11	265	0.0000	100.0	9	Mysore	253	0.0000	100.0	14	Mysore	
12	266	0.0000	100.0	0	Trivandru	258	0.0000	100.0	0	Parassini	
13	267	0.0000	100.0	0	Trivandru	261	0.0000	100.0	10	Mysore	
14	270	0.0000	100.0	0	Trivandru	281	0.0000	100.0	6	Mysore	
15	276	0.0000	100.0	7	Mysore	310	0.0000	100.0	0	Patna	
16	288	0.0000	100.0	5	Mysore	312	0.0000	100.0	0	Trivandru	
17	313	0.0000	100.0	0	Trivandru	314	0.0000	100.0	0	Shillong	
18	316	0.0000	100.0	0	Shillong	315	0.0000	100.0	0	Shillong	
19	123	0.0137	100.0	25	Chatbir Z	121	0.0110	100.0	25	Trivandru	
20	124	0.0165	100.0	25	Kanpur	135	0.0110	100.0	24	Assam	
21	200	0.0179	100.0	12	Jaipur	211	0.0110	100.0	34	Kanpur	
22	98	0.0585	100.0	29	Kanpur	136	0.0158	100.0	23	Hyderabad	
23	177	0.0648	100.0	20	Patna	66	0.0165	100.0	32	Kanpur	
24	138	0.0729	100.0	23	Delhi	191	0.0330	100.0	13	Madras	
25	280	0.0790	100.0	6	Trivandru	57	0.0677	100.0	34	Nandankan	
26	221	0.0817	100.0	24	Bhilai	291	0.0790	100.0	5	Trivandru	
27	219	0.0862	100.0	28	Bhilai	167	0.0862	100.0	22	Bhilai	
28	284	0.1058	100.0	6	Madras	262	0.0898	100.0	10	Bhilai	
29	308	0.1058	100.0	1	Madras	275	0.0898	100.0	7	Bhilai	
30	186	0.1360	100.0	17	Trivandru	294	0.1058	100.0	4	Madras	
31	307	0.1449	100.0	1	Madras	304	0.1058	100.0	3	Madras	
32	298	0.1520	100.0	4	Madras	273	0.1113	100.0	8	Madras	
33	303	0.1521	50.0	3	Delhi	300	0.1449	100.0	3	Madras	
34	170	0.1569	100.0	21	Hyderabad	272	0.1473	100.0	8	Delhi	
35	183	0.1569	100.0	18	Guindy	305	0.1520	100.0	2	Madras	
36	189	0.1569	100.0	15	Mysore	306	0.1520	100.0	2	Madras	
37	292	0.1659	100.0	4	Madras	190	0.1597	100.0	13	Madras	
38	302	0.1659	100.0	3	Madras	187	0.1679	100.0	16	Madras	
39	110	0.1662	100.0	27	Madras	279	0.1684	100.0	6	Madras	
40	182	0.1676	100.0	18	Guindy	277	0.1726	100.0	7	Madras	
41	263	0.1726	100.0	10	Delhi	311	---	---	0	Patna	
42	271	0.1726	100.0	8	Madras						
43	301	0.1726	100.0	3	Madras						
44	83	---	---	0	Bannergha						
45	317	---	---	0	Lucknow						

**Ordered Mean Kinships for Unknown sex animals**

Rank	Stbk#	MK	Known	Age	Location
1	309	0.1148	100.0	1	DELHI

**Table 16: Pairing option for the captive Lion tailed macaque population**

S. No.	Studbook #	Approx. Age	Suggested Pair
1.	83	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
2	110	~27	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 191, 195, 211, 251, 253, 258, 261, 262, 272, 275, 281, 310, 311, 312, 314, 315
3.	111	~27	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191,

S. No.	Studbook #	Approx. Age	Suggested Pair
			195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
4.	116	~26	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
5.	117	~26	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
6.	121	~25	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
7.	123	25	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
8.	124	25	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
9.	126	~24	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
10.	127	~24	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
11.	134	~23	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
12.	135	23	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
13.	136	23	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
14.	138	23	116, 117, 121, 127, 135, 136, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 272, 273, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
15.	159	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
16.	167	21	83, 159, 110, 111, 123, 124, 126, 220, 134, 176, 170, 194, 248, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
17.	172	~21	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
18.	175	~21	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
19.	176	~21	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
20.	177	19	116, 117, 121, 127, 135, 136, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 272, 273, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
21.	182	18	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
22.	183	18	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315

S. No.	Studbook #	Approx. Age	Suggested Pair
23.	184	19	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
24.	185	17	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
25.	186	16	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
26.	187	16	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
27.	189	15	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
28.	190	13	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
29.	191	~13	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 313, 288, 292, 298, 301, 302, 303
30.	194	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
31.	195	Unk.	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
32.	200	12	116, 117, 121, 127, 135, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
33.	211	~34	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
34.	219	28	116, 117, 121, 127, 135, 136, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 272, 273, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
35.	220	~24	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
36.	221	24	116, 117, 121, 127, 135, 136, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 272, 273, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
37.	248	20	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
38.	251	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
39.	253	14	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
40.	258	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
41.	261	~10	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
42.	262	10	83, 159, 110, 111, 123, 124, 126, 220, 134, 176, 170, 194, 248, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
43.	263	9	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211,

S. No.	Studbook #	Approx. Age	Suggested Pair
			251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
44.	265	~9	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
45.	266	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
46.	267	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
47.	270	Unk.	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
48.	271	8	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
49.	272	8	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
50.	273	7	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
51.	275	7	83, 159, 110, 111, 123, 124, 126, 220, 134, 176, 170, 194, 248, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
52.	276	~7	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
53.	277	7	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
54.	279	6	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
55.	280	6	116, 117, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
56.	281	~6	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
57.	284	6	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
58.	288	~5	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
59.	291	4	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
60.	292	4	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
61.	294	4	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
62.	298	4	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
63.	300	3	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
64.	301	3	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
65.	302	3	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
66.	303	3	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 191, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
67.	304	2	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288

S. No.	Studbook #	Approx. Age	Suggested Pair
68.	305	2	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
69.	306	2	83, 159, 219, 111, 123, 124, 221, 126, 220, 134, 138, 176, 194, 248, 177, 316, 200, 317, 265, 266, 267, 270, 276, 313, 288
70.	307	1	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
71.	308	1	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 195, 211, 251, 253, 258, 261, 262, 275, 281, 310, 311, 312, 314, 315
72.	310	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
73.	311	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
74.	312	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
75.	313	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
76.	314	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
77.	315	Unk	83, 159, 219, 110, 111, 123, 124, 221, 126, 220, 134, 138, 176, 170, 194, 248, 177, 182, 183, 186, 189, 316, 200, 317, 263, 265, 266, 267, 270, 271, 276, 280, 284, 313, 288, 292, 298, 301, 302, 303, 307, 308
78.	316	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315
79.	317	Unk	116, 117, 121, 127, 135, 136, 167, 172, 175, 184, 185, 187, 190, 191, 195, 211, 251, 253, 258, 261, 262, 272, 273, 275, 277, 279, 281, 291, 294, 300, 304, 305, 306, 310, 311, 312, 314, 315

It is to be noted that no pairing has been suggested for some live animal viz. studbook no. 57, 66, 86, 96, 98 and 105. They have been kept out, since our life table data suggests that the animals breed up to the age of 22 years, taking a margin of five years an upper limit of 27 years was decided and thus no breeding recommendation was given for the older animals.

## Conclusion

Lion tailed macaque being endemic to Western Ghats are susceptible to stochastic extinction. The problems of habitat fragmentation and low rates of male migration have increased the chances of inbreeding in the wild population. In such a scenario the captive population of lion tailed macaque that holds even lesser gene diversity shall face severe inbreeding and related mortalities, if the population is not scientifically managed.

The results of the present studbook analysis reflects that the population is growing and maintaining moderate values of genetic diversity, but the population is suffering from a low number of breeding individuals, even those that are present, are not being randomly bred. There is thus an urgent need to increase the reproductive rate of the captive population. This can be achieved by a) moving animals to zoos with appropriate housing available and forming socially compatible groups and ensuring that the animals breed properly and b) by addition of new founder animals in the reproductive age classes. This would ensure that the gaps in the lower age classes are filled as the population grows.

Hence for the purpose of scientific management gaps in the age pyramid should be filled, all the animals that have low inbreeding and mean kinship should be preferably bred over other individuals and the founder representation should be made more equitable.

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## Glossary of Terms

### Demographic Terms

**Age Distribution** -- A two-way classification showing the numbers or percentages of individuals in various age and sex classes.

**Population Growth Rate (Lambda,  $\lambda$ )** -- The proportional change in population size from one year to the next. Lambda can be based on life-table calculations (the expected lambda) or from observed changes in population size from year to year. A lambda of 1.11 means a 11% per year increase; lambda of .97 means a 3% decline in size per year.

**Px, Age-Specific Survival** -- The probability that an individual of age  $x$  survives one time period; is conditional on an individual being alive at the beginning of the time period. Alternatively, the proportion of individuals which survive from the beginning of one age class to the next.

**Qx, Mortality** -- Probability that an individual of age  $x$  dies during time period.  $Qx = 1 - Px$ . The proportion of individuals that die during an age class. It is calculated from the number of animals that die during an age class divided by the number of animals that were alive at the beginning of the age class (i.e.-at risk).

**lx, Age-Specific Survivorship** -- The probability that a new individual (e.g., age 0) is alive at the beginning of age  $x$ . Alternatively, the proportion of individuals which survive from birth to the beginning of a specific age class.

**Mx, Fecundity** -- The average number of same-sexed young born to animals in that age class. Because SPARKS is typically using relatively small sample sizes, SPARKS calculates Mx as 1/2 the average number of young born to animals in that age class. This provides a somewhat less noisy estimate of Mx, though it does not allow for unusual sex ratios. The fecundity rates provide information on the age of first, last, and maximum reproduction.

**Vx, Reproductive Value** -- The expected number of offspring produced this year and in future years by an animal of age  $x$ .

**Ex, Life Expectancy** -- Average years of further life for an animal in age class  $x$ .

**Risk (Qx or Mx)** -- The number of individuals that have lived during an age class. The number at risk is used to calculate Mx and Qx by dividing the number of births and deaths that occurred during an age class by the number of animals at risk of dying and reproducing during that age class.

## Genetic Terms

**(Founder) Contribution** -- Number of copies of a founder's genome that are present in the living descendants. Each offspring contributes 0.5, each grand-offspring contributes 0.25, etc.

**Current Gene Diversity (GD)** -- The proportional gene diversity (as a proportion of the source population) is the probability that two alleles from the same locus sampled at random from the population will be identical by descent. Gene diversity is calculated from allele frequencies, and is the heterozygosity expected in progeny produced by random mating, and if the population were in Hardy-Weinberg equilibrium.

**Effective Population Size (Inbreeding Ne)** -- The size of a randomly mating population of constant size with equal sex ratio and a Poisson distribution of family sizes that would (a) result in the same mean rate of inbreeding as that observed in the population, or (b) would result in the same rate of random change in gene frequencies (genetic drift) as observed in the population. These two definitions are identical only if the population is demographically stable (because the rate of inbreeding depends on the distribution of alleles in the parental generation, whereas the rate of gene frequency drift is measured in the current generation).

**FOKE, First Order Kin Equivalents** -- The number of first-order kin (siblings or offspring) that would contain the number of copies of an individual's alleles (identical by descent) as are present in the captive-born population. Thus an offspring or sib contributes 1 to FOKE; each grand-offspring contributes 1/2 to FOKE; each cousin contributes 1/4 to FOKE.  $FOKE = 4 * N * MK$ , in which N is the number of living animals in the captive population.

**Founder** -- An individual obtained from a source population (often the wild) that has no known relationship to any individuals in the derived population (except for its own descendants).

**Founder Genome Equivalents (FGE)** -- The number wild-caught individuals (founders) that would produce the same amount of gene diversity as does the population under study. The gene diversity of a population is  $1 - 1 / (2 * FGE)$ .

**Founder Genome Surviving** -- The sum of allelic retentions of the individual founders (i.e., the product of the mean allelic retention and the number of founders).

**GU, Genome Uniqueness** -- Probability that an allele sampled at random from an individual is not present, identical by descent, in any other living individual in the population. GU-all is the genome uniqueness relative to the entire population. GU-Desc is the genome uniqueness relative to the living non-founder, descendants.

**Inbreeding Coefficient (F)** -- Probability that the two alleles at a genetic locus are identical by descent from an ancestor common to both parents. The mean inbreeding coefficient of a population will be the proportional decrease in observed heterozygosity relative to the expected heterozygosity of the founder population.

**KV, Kinship Value** -- The weighted mean kinship of an animal, with the weights being the reproductive values of each of the kin. The mean kinship value of a population predicts the loss of gene diversity expected in the subsequent generation if all animals were to mate randomly and all were to produce the numbers of offspring expected for animals of their age.<sup>45</sup>

**Mean Generation Time (T)** -- The average time elapsing from reproduction in one generation to the time the next generation reproduces. Also, the average age at which a female (or male) produces offspring. It is not the age of first reproduction. Males and females often have different generation times.

**Mean Kinship (MK)** -- The mean kinship coefficient between an animal and all animals (including itself) in the living, captive-born population. The mean kinship of a population is equal to the proportional loss of gene diversity of the descendant (captive-born) population relative to the founders and is also the mean inbreeding coefficient of progeny produced by random mating. Mean kinship is also the reciprocal of two times the founder genome equivalents:  $MK = 1 / (2 * FGE)$ .  $MK = 1 - GD$ .

**Percent Known** -- Percent of an animal's genome that is traceable to known Founders. Thus, if an animal has an UNK sire, the % Known = 50. If it has an UNK grandparent, % Known = 75.

**Prob Lost** -- Probability that a random allele from the individual will be lost from the population in the next generation, because neither this individual nor any of its relatives pass on the allele to an

offspring. Assumes that each individual will produce a number of future offspring equal to its reproductive value,  $V_x$ .

**(Founder) Representation** – Proportion of the genes in the descendant population that derives from that founder. I.e., proportional Founder Contribution.

**Allele Retention** – The probability that a gene present in a founder individual exists in the living, descendant population.

Pedigree Chart Report  
LION-TAILED MACAQUE - ARCHIVE Studbook

Annexure II

=====  
Taxon Name: MACACA SILENUS  
=====

=====  
Studbook Number: 1  
=====

WILD

WILD

dam \ / sire  
1  
Sex: Male  
Birth Date: ~ 1955  
Last Location: ASSAM (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS  
=====

=====  
Studbook Number: 6  
=====

WILD02

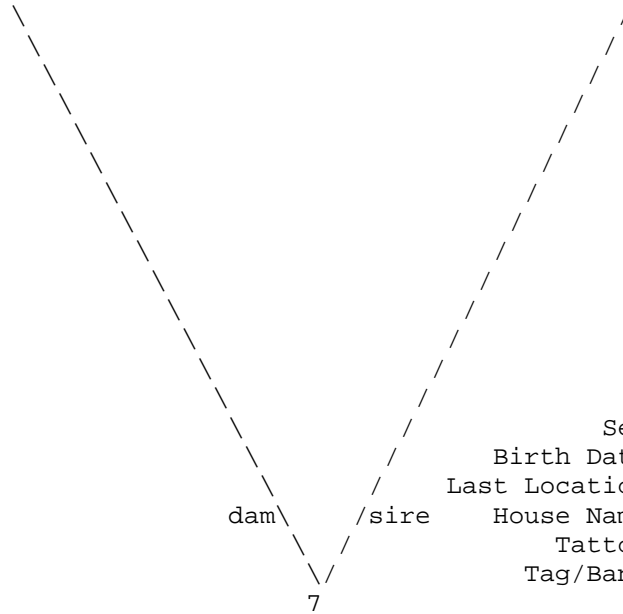
WILD01

dam \ / sire  
6  
Sex: Male  
Birth Date: ~ 1957  
Last Location: DELHI (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 7  
=====

WILD03

WILD01



Sex: Female  
Birth Date: ~ 1957  
Last Location: DELHI (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 8  
=====

WILDD5

WILDD4



Sex: Female  
Birth Date: ~ 1957  
Last Location: BURMA  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 9  
=====

WILDD6

WILDD4

dam \ /sire

9

Sex: Male  
Birth Date: ~ 1957  
Last Location: BURMA  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 10  
=====

WILDD7

WILDD4

dam \ /sire

10

Sex: Female  
Birth Date: ~ 1957  
Last Location: DELHI (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 11  
=====

WILDD8

WILDD4

dam \ /  
sire / \  
11

Sex: Female  
Birth Date: ~ 1957  
Last Location: DELHI (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 12  
=====

WILD

WILD

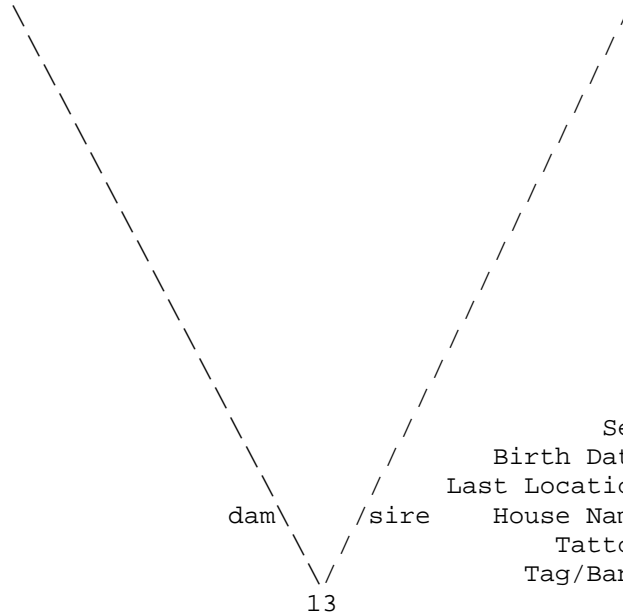
dam \ /  
sire / \  
12

Sex: Female  
Birth Date: ~ 1958  
Last Location: ASSAM  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 13  
=====

WILDH2

WILDH1

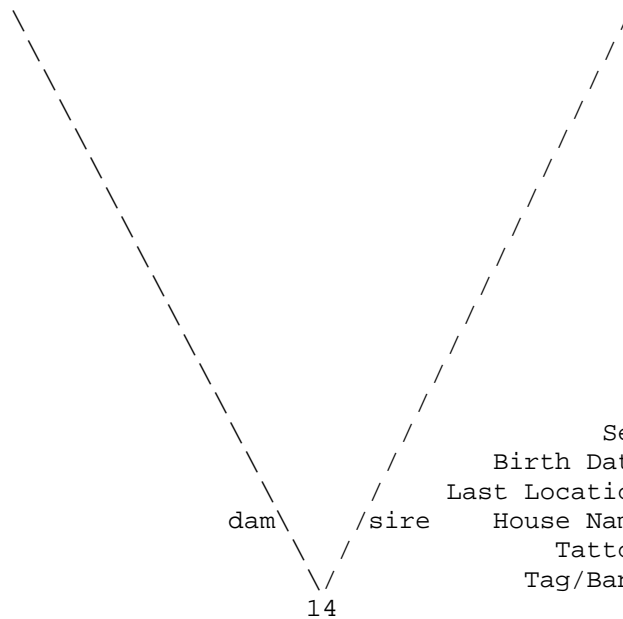


Sex: Male  
Birth Date: ~ 1960  
Last Location: HYDERABAD (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 14  
=====

WILDH3

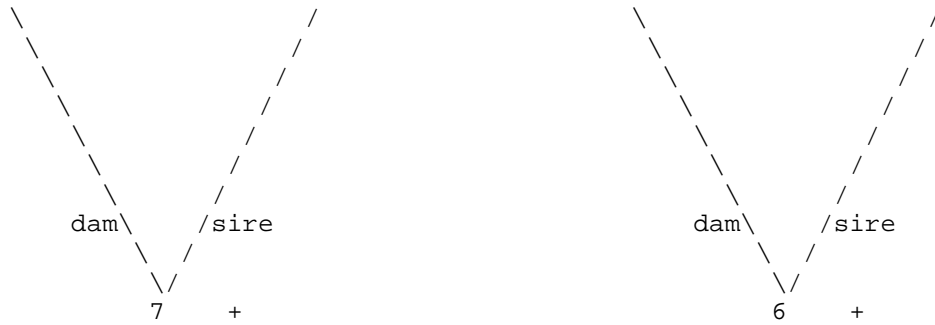
WILDH1



Sex: Male  
Birth Date: ~ 1960  
Last Location: HYDERABAD (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 16  
 =====

WILD03 WILD01\* WILD02 WILD01\*

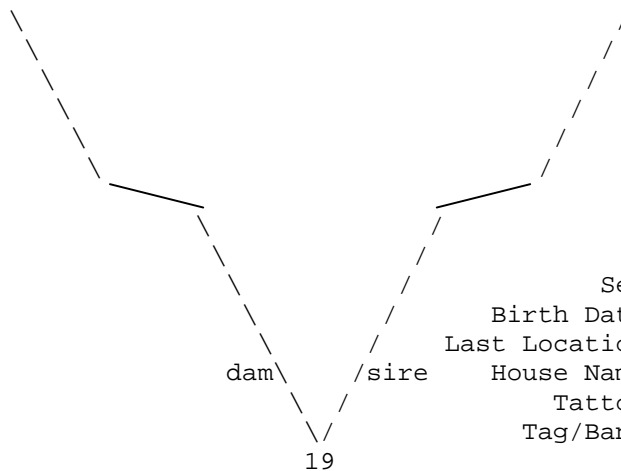


Sex: Male  
 Birth Date: 18 Mar 1962  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 19  
 =====

WILDN2 WILDN1

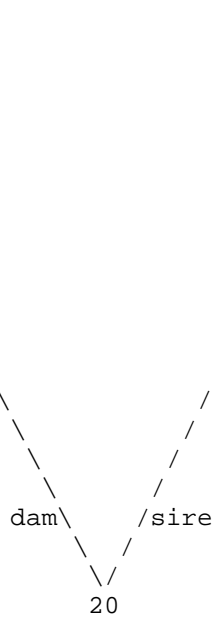


Sex: Female  
 Birth Date: ~ 1963  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 20  
=====

WILDN3

WILDN1

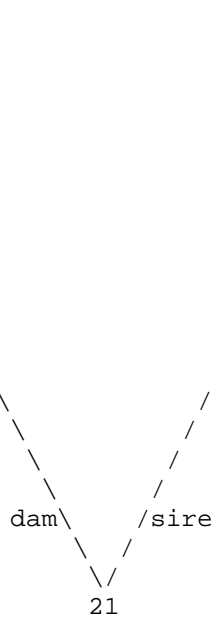


Sex: Female  
Birth Date: ~ 1963  
Last Location: NANDANKAN (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 21  
=====

WILD

WILD

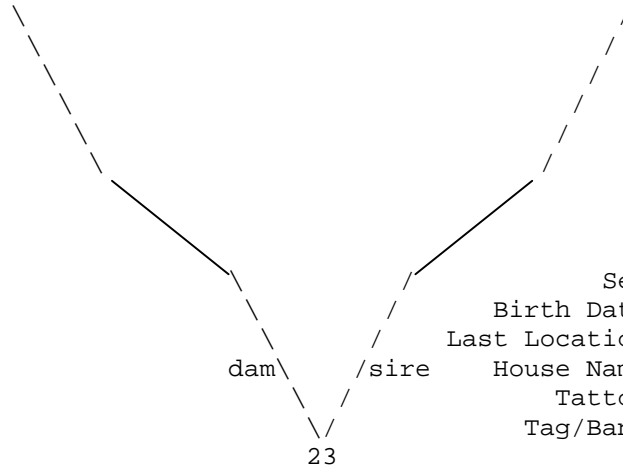


Sex: Female  
Birth Date: ~ 1964  
Last Location: DELHI (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 23  
 =====

WILD

WILD



Sex: Male  
 Birth Date: ~ 1965  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

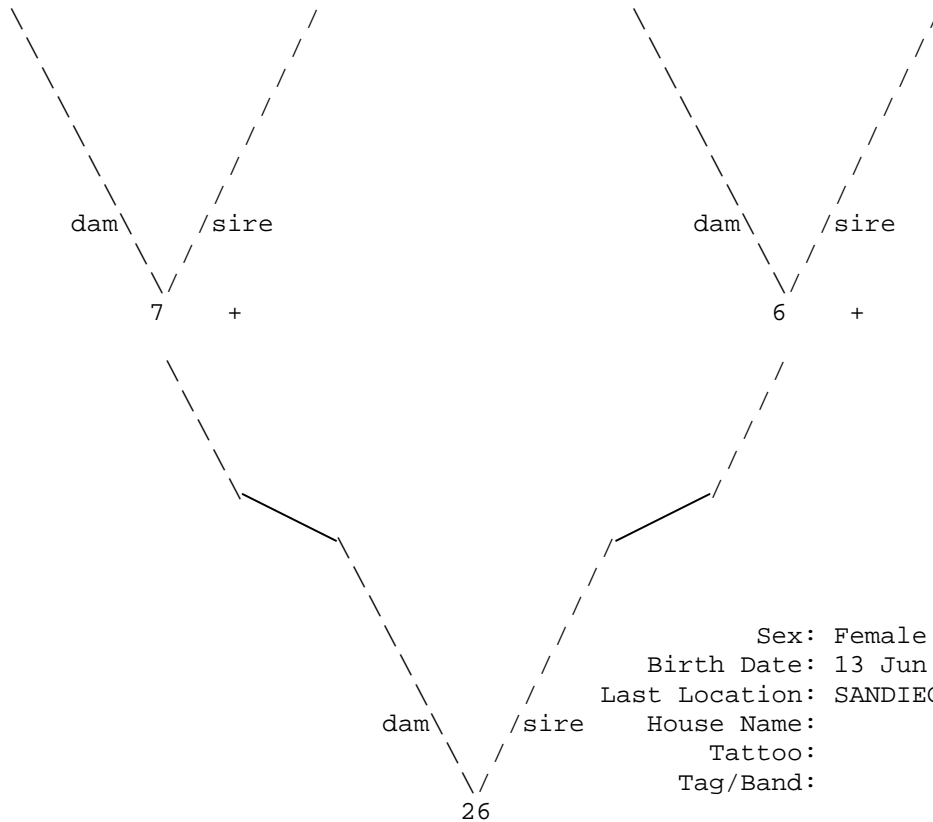
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 26  
 =====

WILD03

WILD01\*

WILD02

WILD01\*

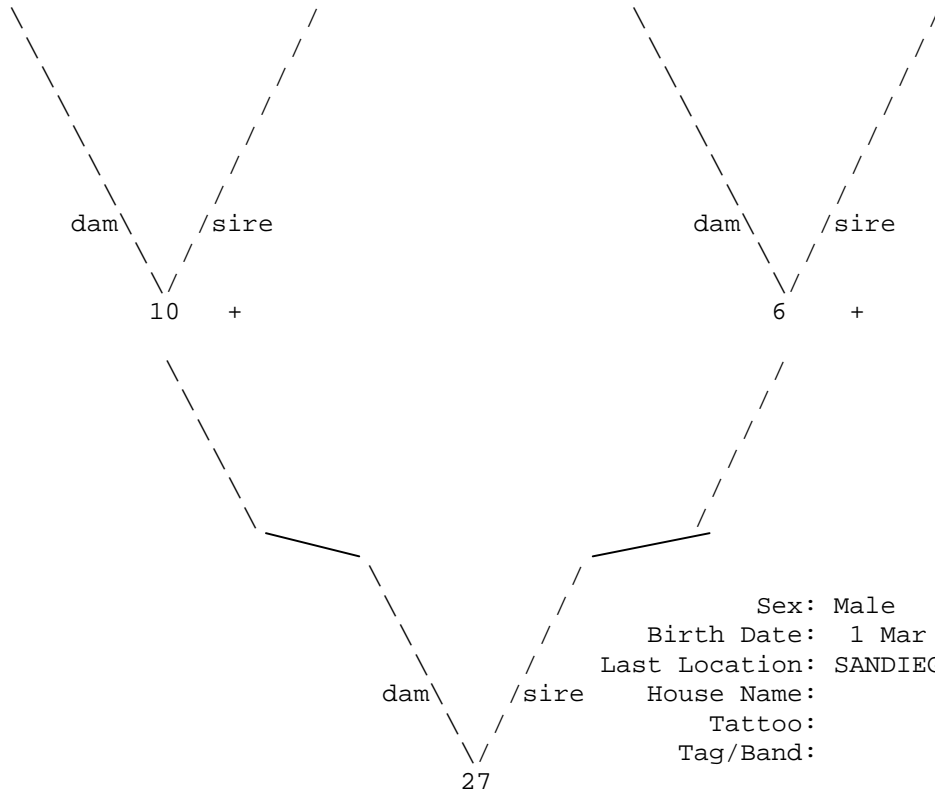


Sex: Female  
 Birth Date: 13 Jun 1967  
 Last Location: SANDIEGOZ (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 27  
 =====

WILDD7 WILDD4 WILD02 WILD01

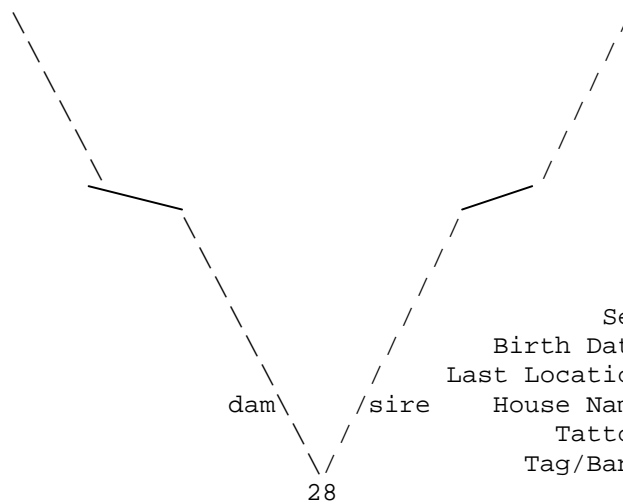


Sex: Male  
 Birth Date: 1 Mar 1967  
 Last Location: SANDIEGOZ (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 28  
 =====

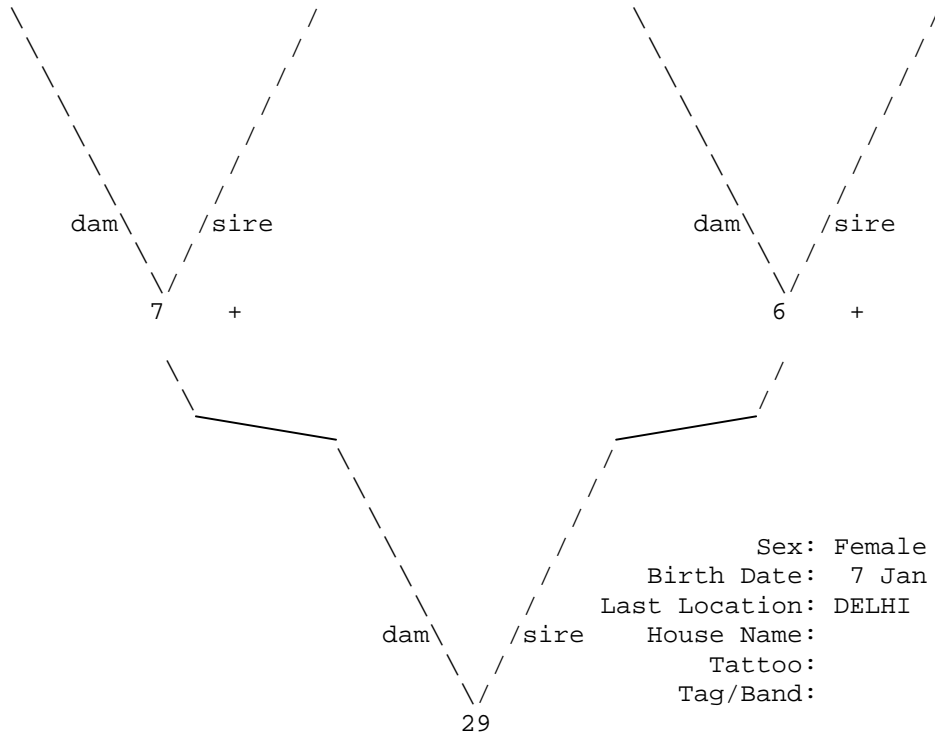
WILD WILD



Sex: Female  
 Birth Date: ~ 1968  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 29  
 =====

WILD03                      WILD01\*                      WILD02                      WILD01\*

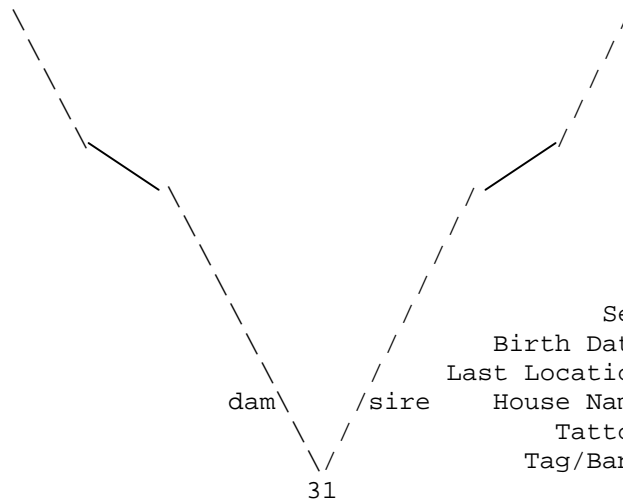


Sex: Female  
 Birth Date: 7 Jan 1969  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 31  
 =====

WILD    WILD

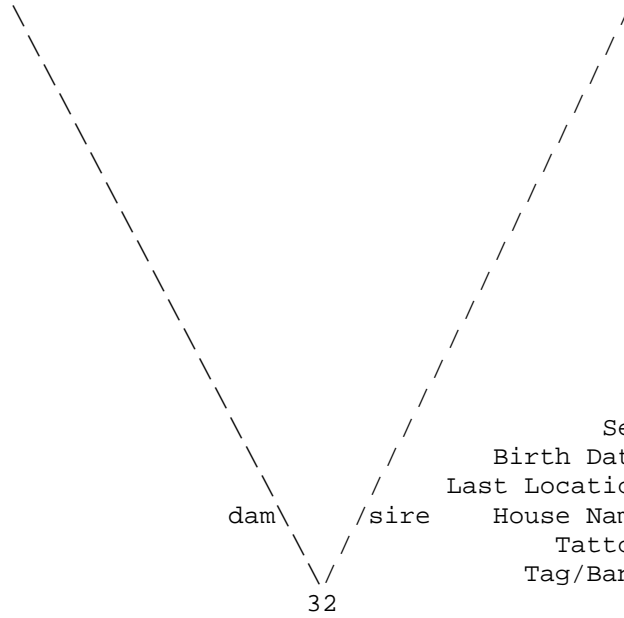


Sex: Female  
 Birth Date: 15 Jun 1969  
 Last Location: ADELAIDE (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 32  
=====

WILD

WILD

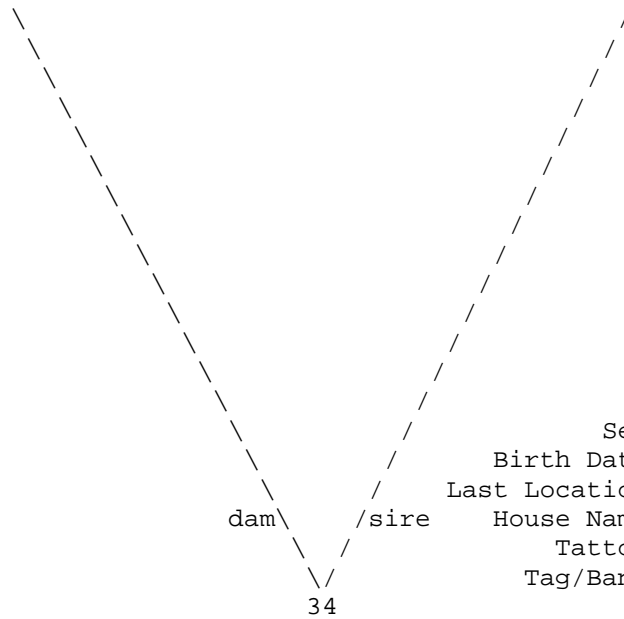


Sex: Male  
Birth Date: ~ 1969  
Last Location: ADELAIDE (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 34  
=====

WILD

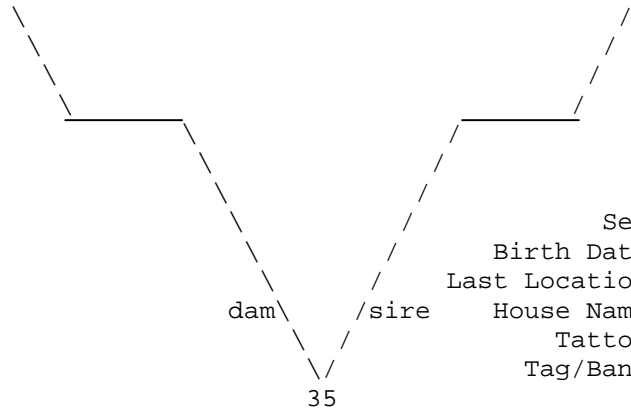
WILD



Sex: Female  
Birth Date: ~ 1970  
Last Location: ASSAM (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 35  
 =====

WILDD7 WILDD4 WILD02 WILD01

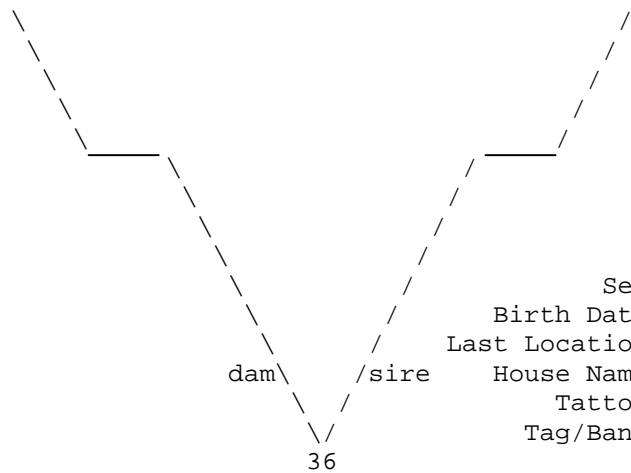


Sex: Female  
 Birth Date: 19 May 1970  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 36  
 =====

WILD WILD

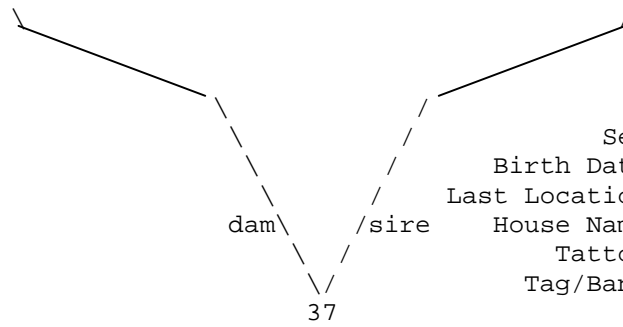


Sex: Male  
 Birth Date: ~ 1970  
 Last Location: KANPUR (dead)  
 House Name: KALLOO  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 37  
 =====

WILD

WILD



Sex: Male  
 Birth Date: ~ 1971  
 Last Location: ASSAM (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 38  
 =====

WILD03

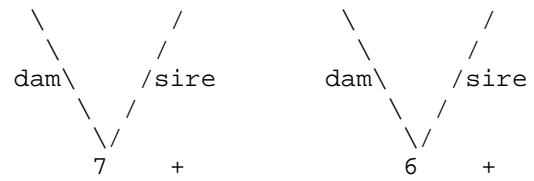
WILD01\*

WILD02

WILD01\*

WILDD7

WILDD4

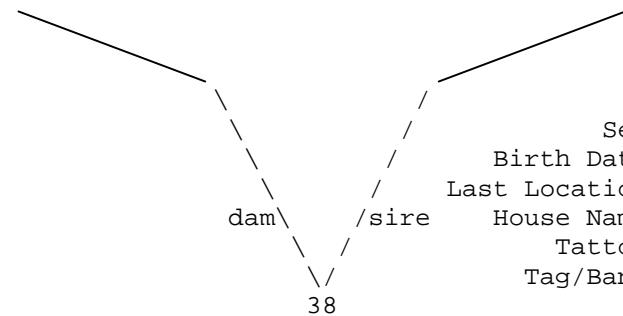


dam\' /sire

dam\' /sire

10 +

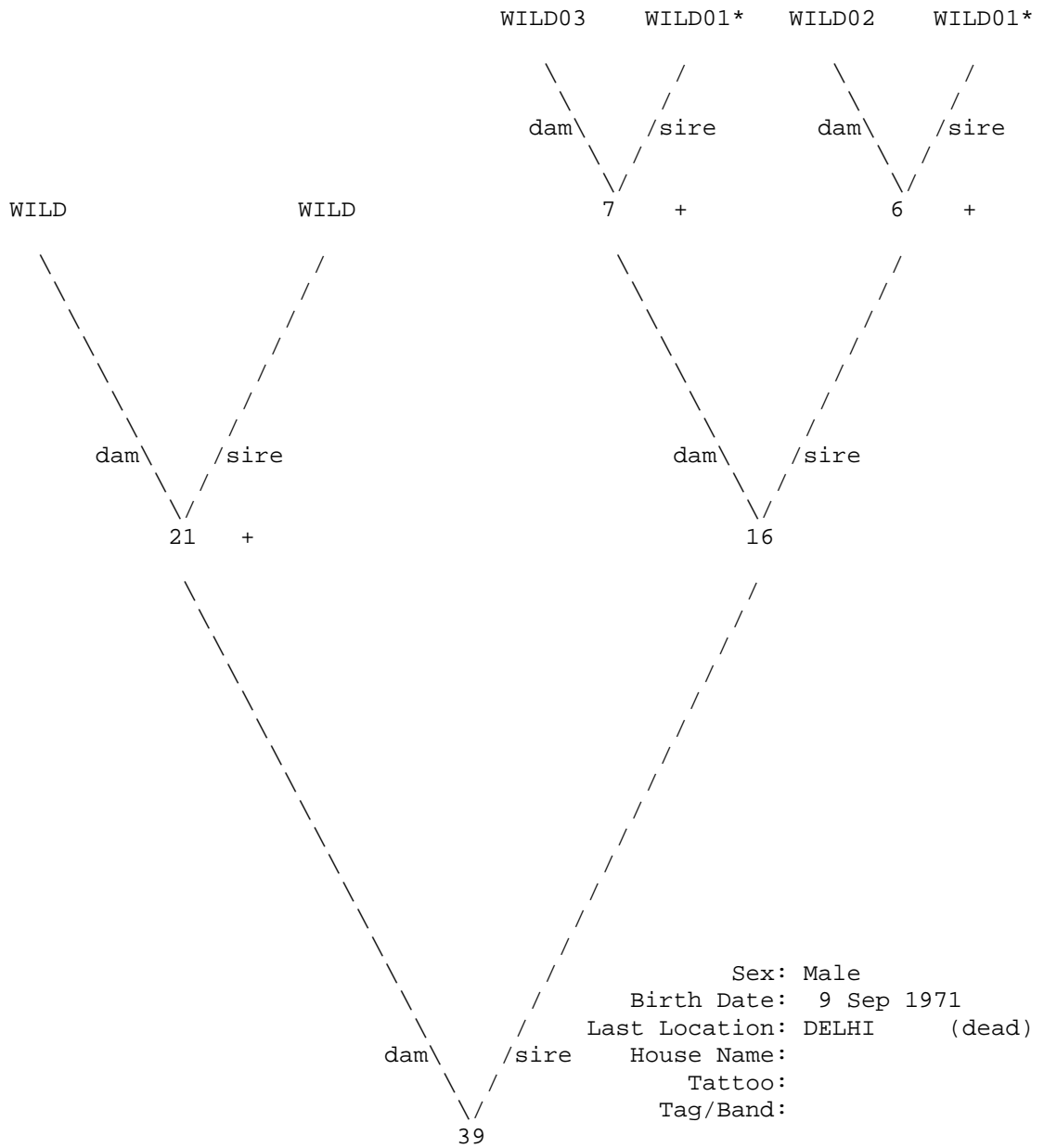
16



Sex: Unknown  
 Birth Date: 7 May 1971  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 39  
 =====

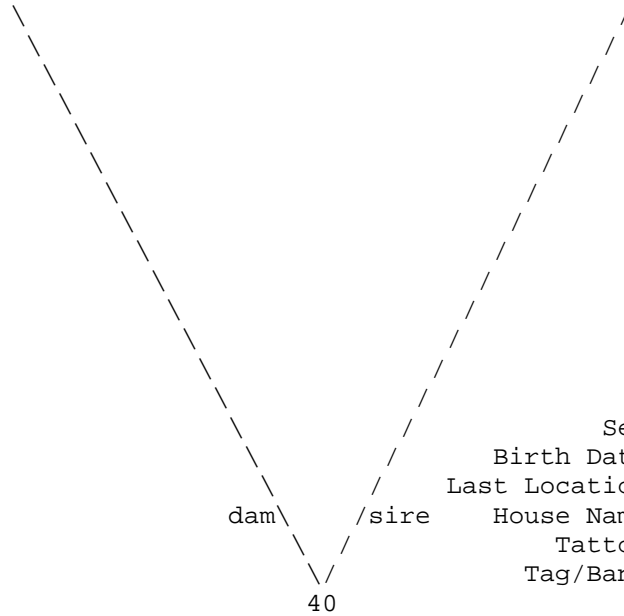


+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 40  
=====

WILDN5

WILDN4

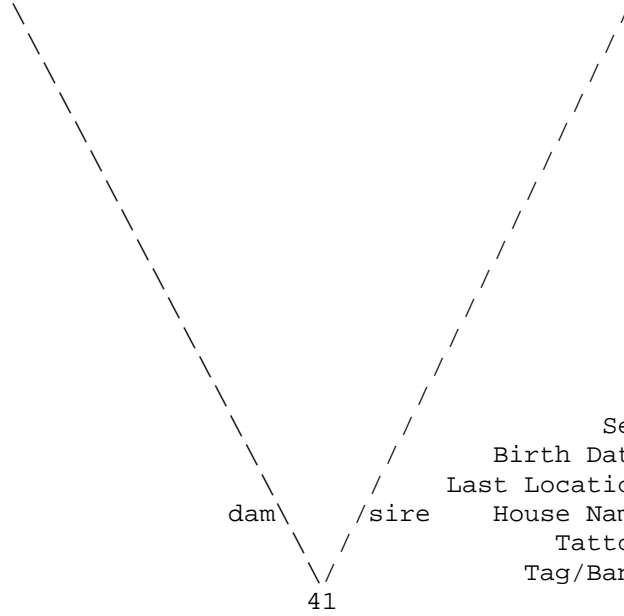


Sex: Male  
Birth Date: ~ 1972  
Last Location: NANDANKAN (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 41  
=====

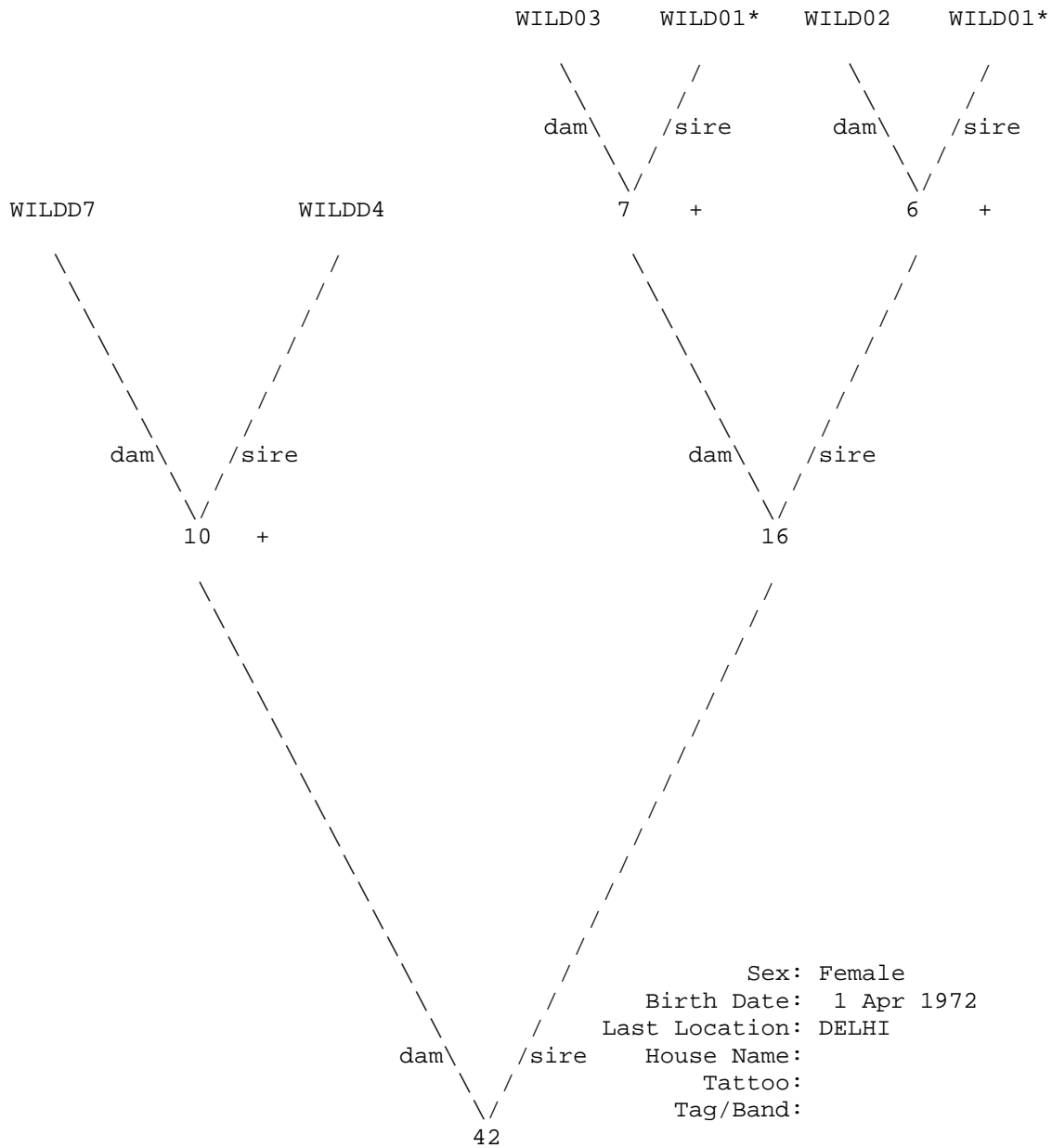
WILDN6

WILDN4



Sex: Female  
Birth Date: ~ 1972  
Last Location: NANDANKAN (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 42  
 =====

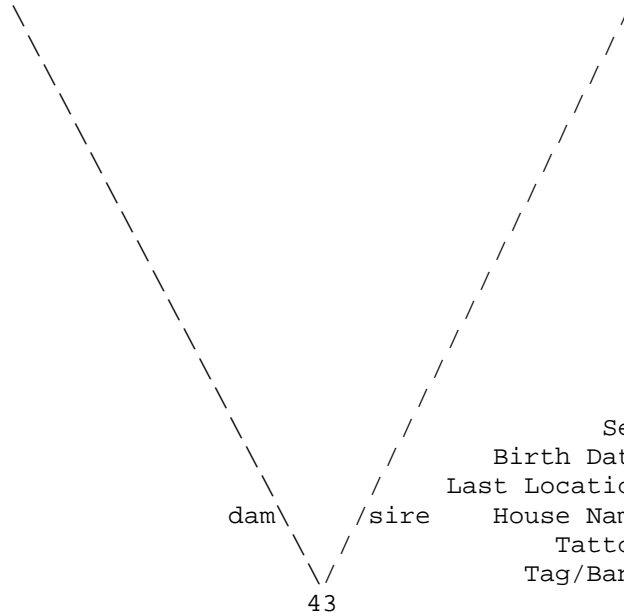


+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 43  
=====

WILDK2

WILDK1

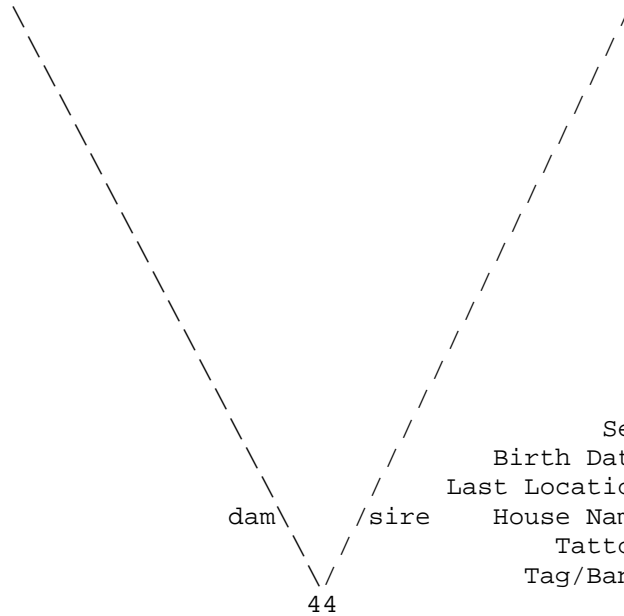


Sex: Male  
Birth Date: ~ 1972  
Last Location: KANPUR (dead)  
House Name: BHOLA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 44  
=====

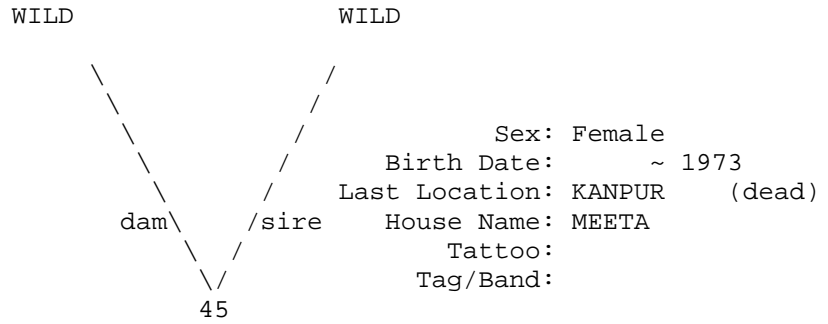
WILDK2

WILDK1

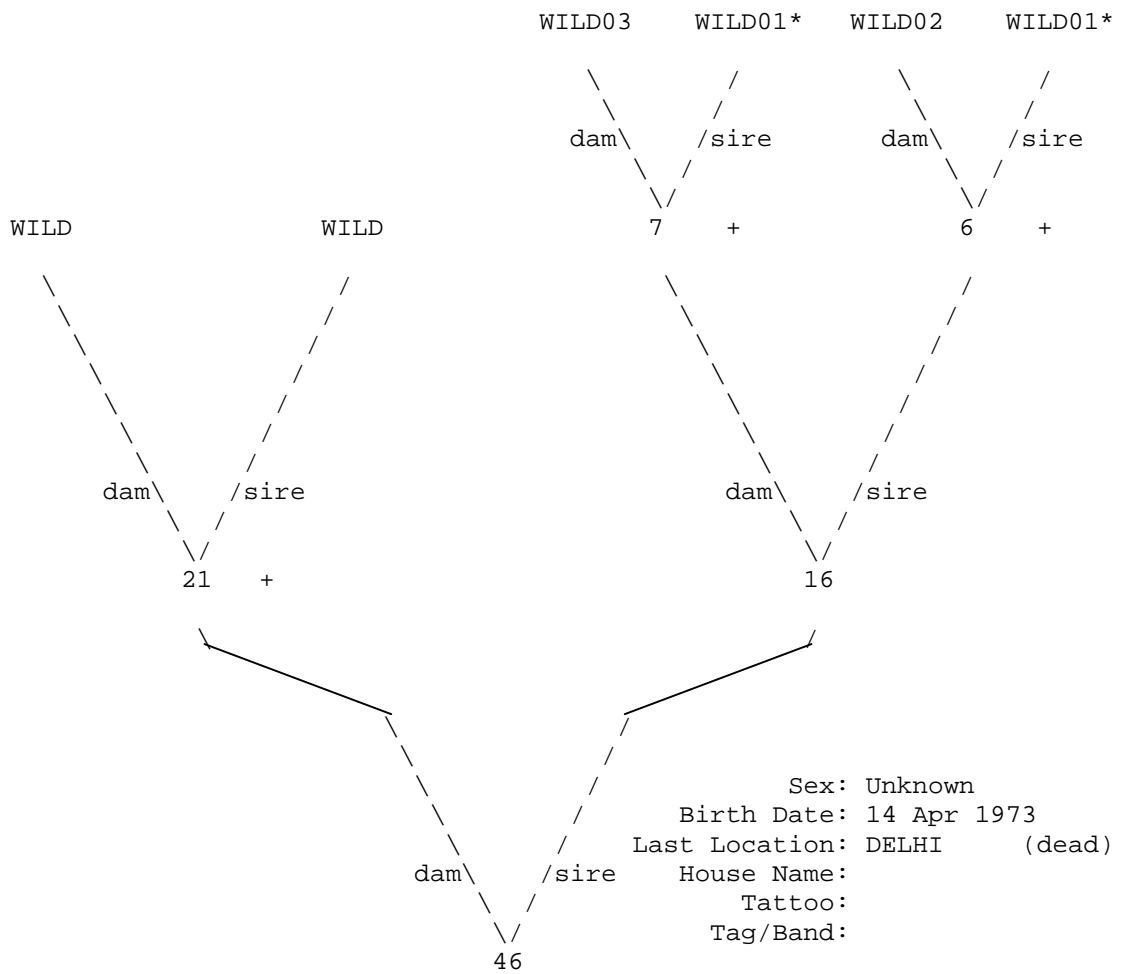


Sex: Male  
Birth Date: ~ 1972  
Last Location: KANPUR (dead)  
House Name: BUDHA  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 45  
 =====

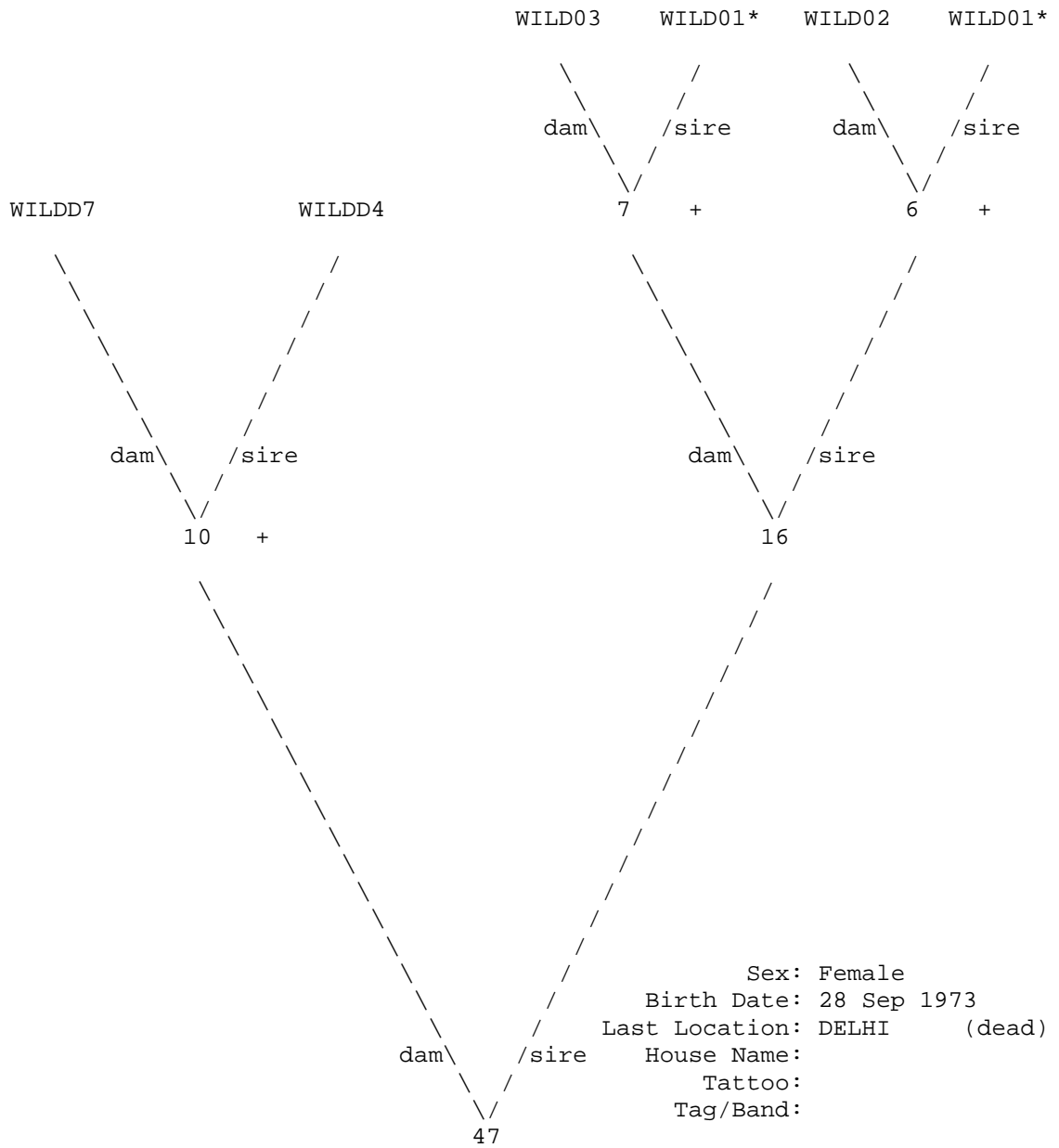


=====  
 Taxon Name: MACACA SILENUS Studbook Number: 46  
 =====



+ Wild-caught... \* Appear more than once...

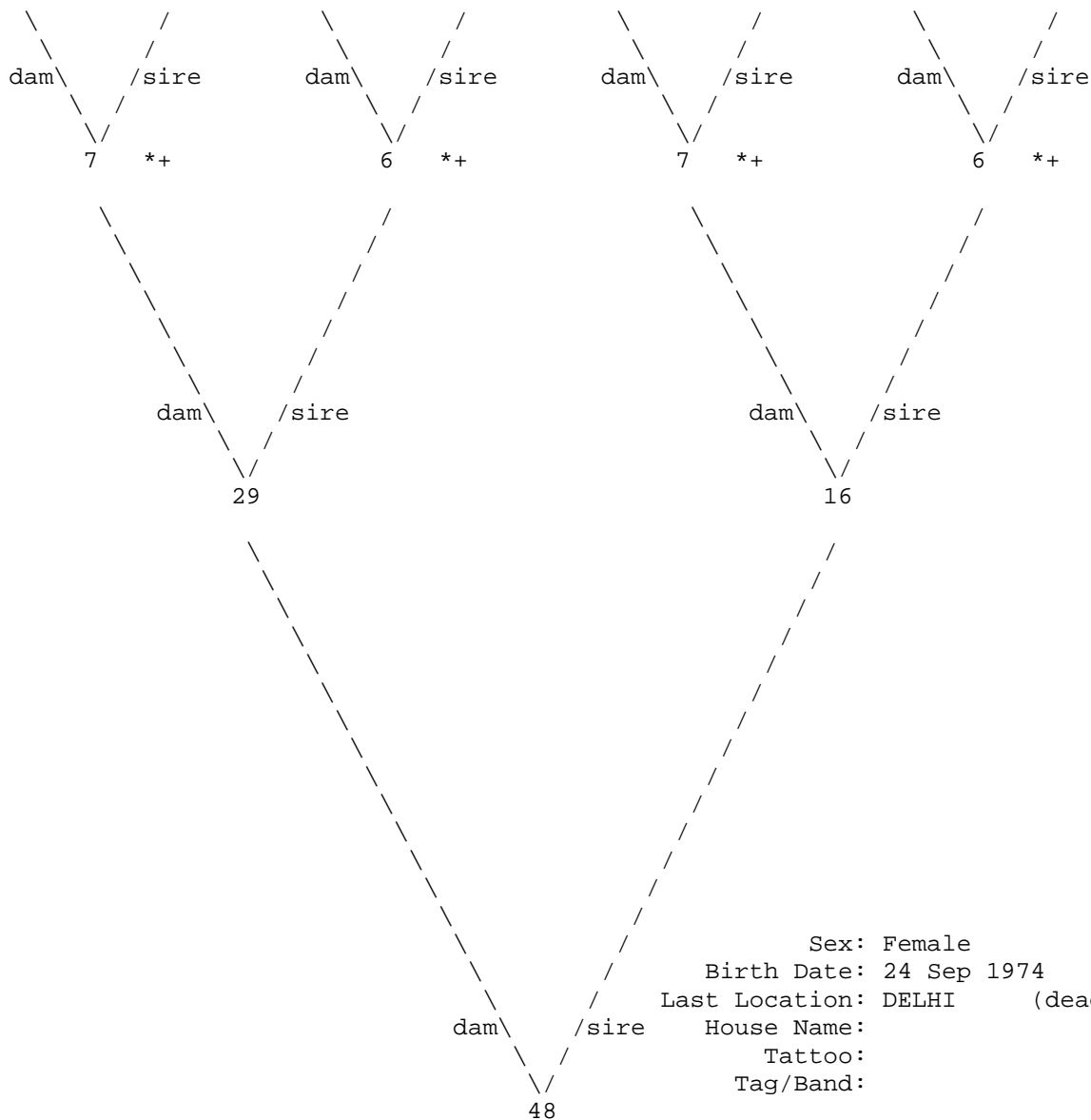
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 47  
 =====



+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 48  
 =====

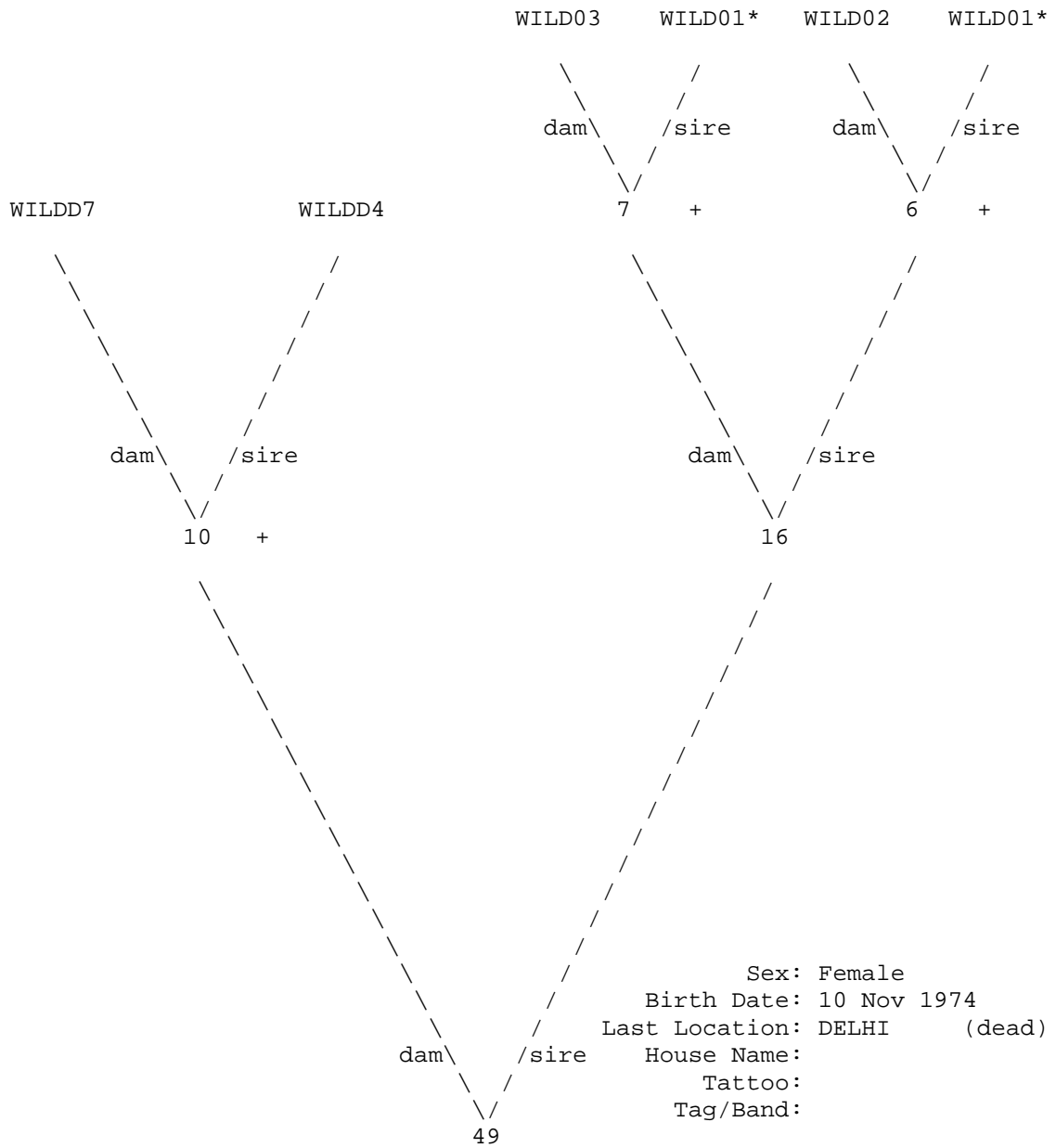
WILD03\* WILD01\* WILD02\* WILD01\* WILD03\* WILD01\* WILD02\* WILD01\*



Sex: Female  
 Birth Date: 24 Sep 1974  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

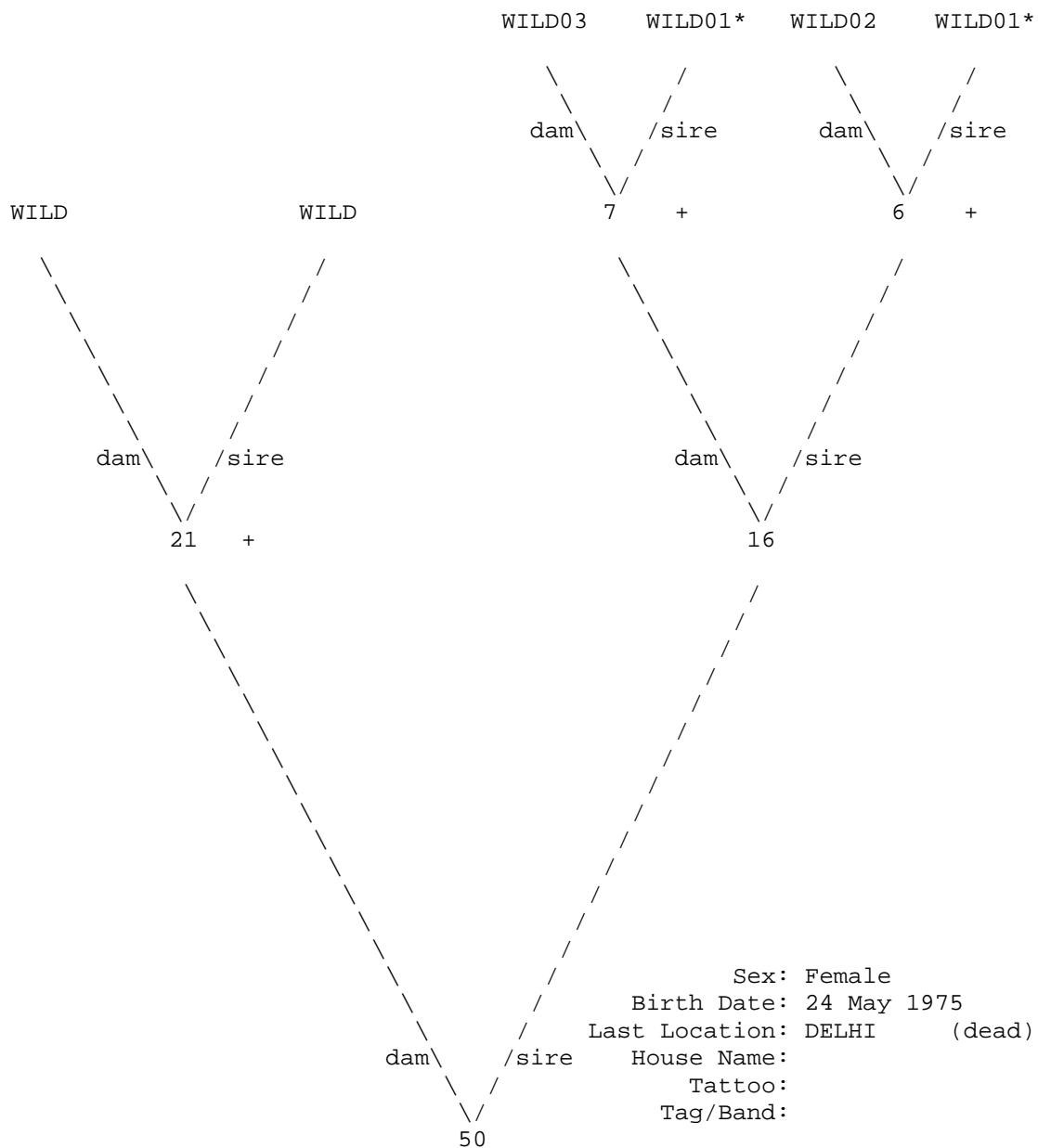
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 49  
 =====



Sex: Female  
 Birth Date: 10 Nov 1974  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 50  
 =====

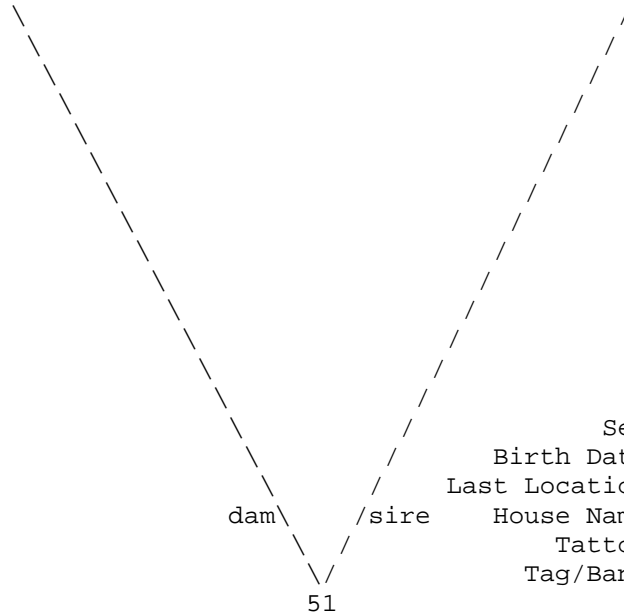


+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 51  
=====

WILD

WILD

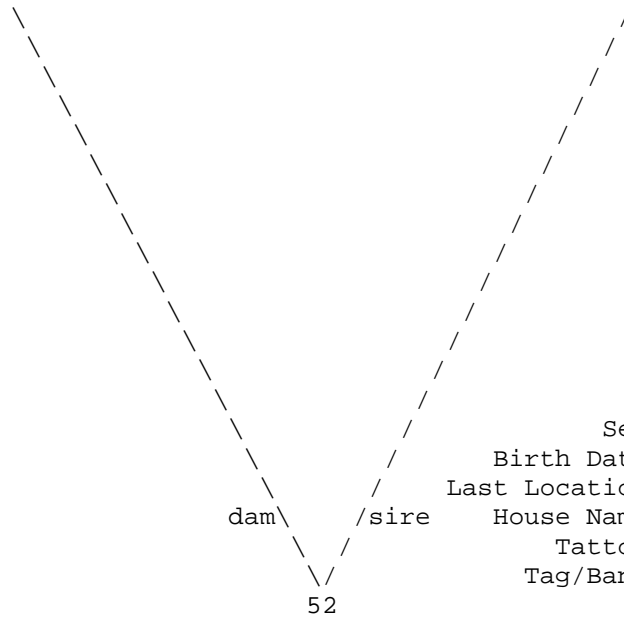


Sex: Male  
Birth Date: ~ 1976  
Last Location: CHATBIR Z (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 52  
=====

WILD

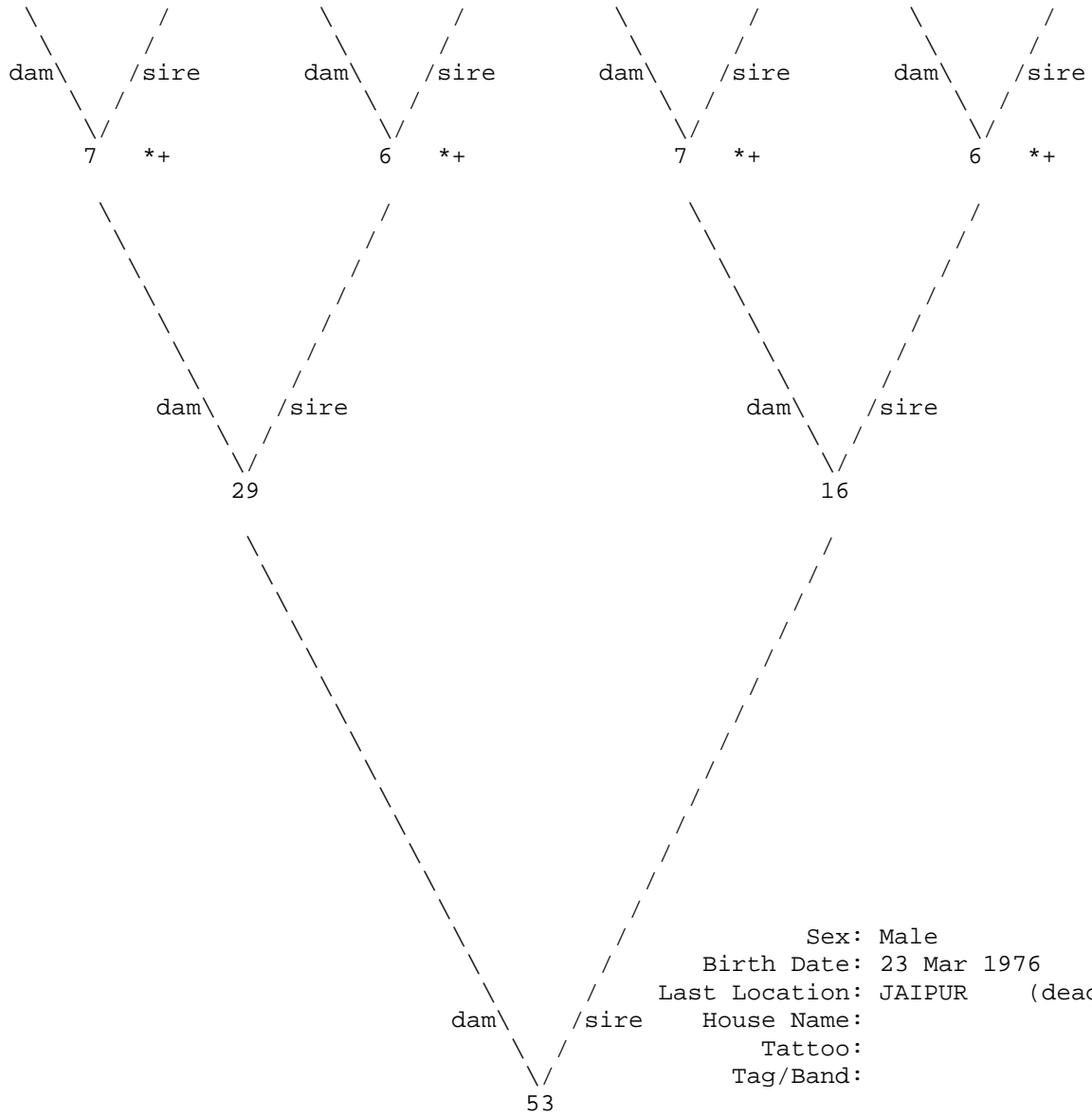
WILD



Sex: Female  
Birth Date: ~ 1976  
Last Location: CHATBIR Z (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 53  
=====

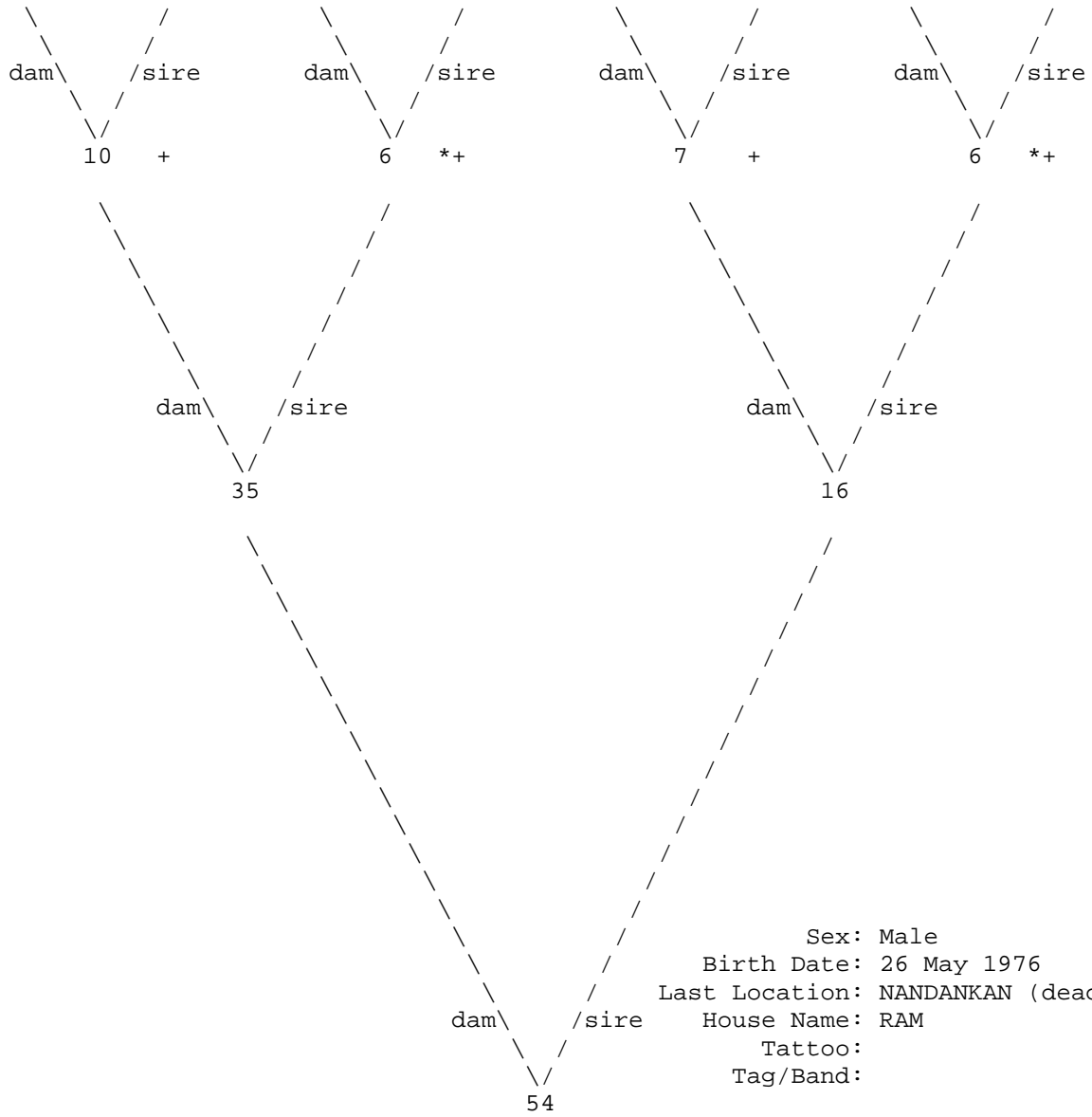
WILD03\* WILD01\* WILD02\* WILD01\* WILD03\* WILD01\* WILD02\* WILD01\*



+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 54  
 =====

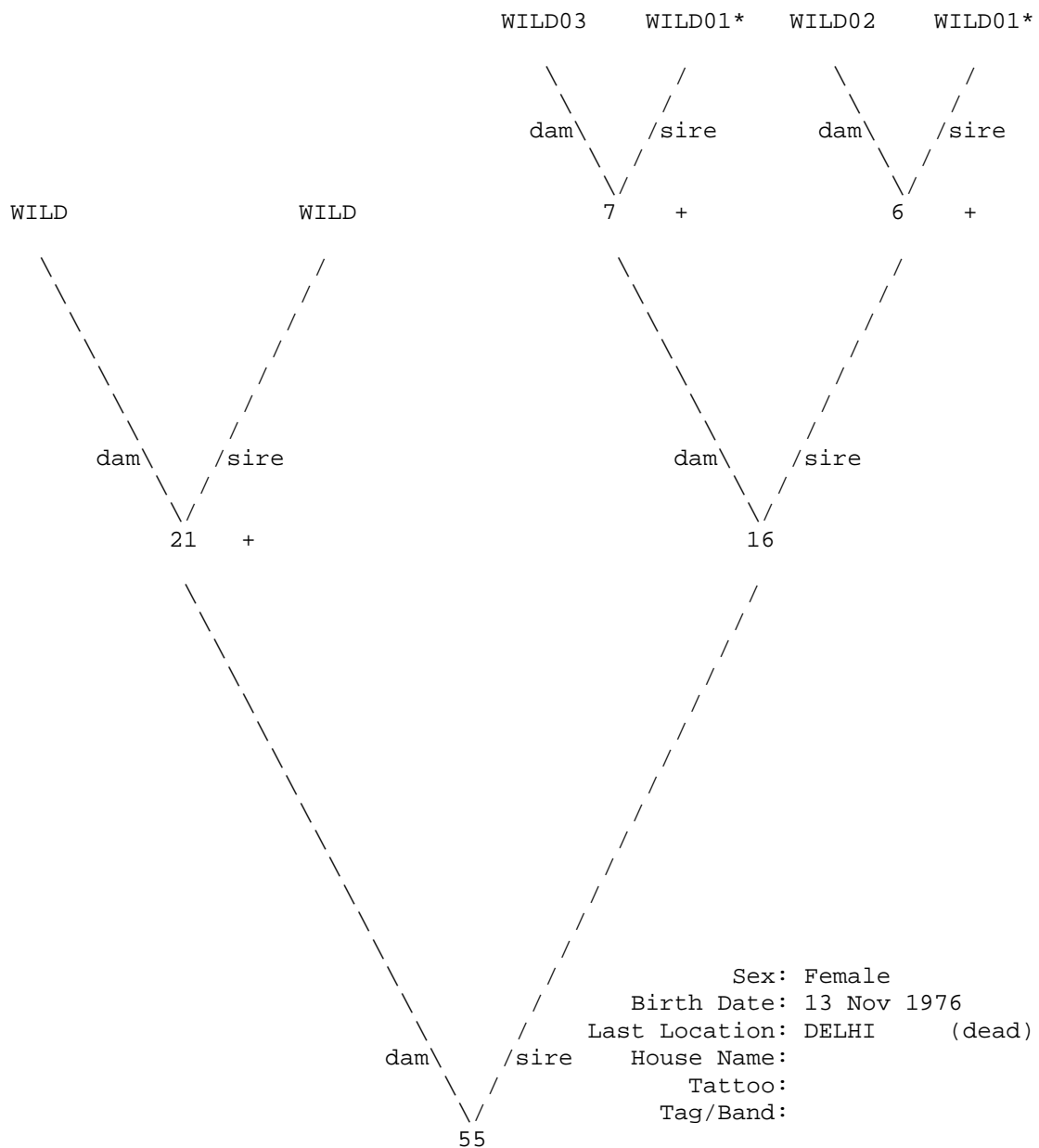
WILDD7 WILDD4 WILD02\* WILD01\* WILD03 WILD01\* WILD02\* WILD01\*



Sex: Male  
 Birth Date: 26 May 1976  
 Last Location: NANDANKAN (dead)  
 House Name: RAM  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

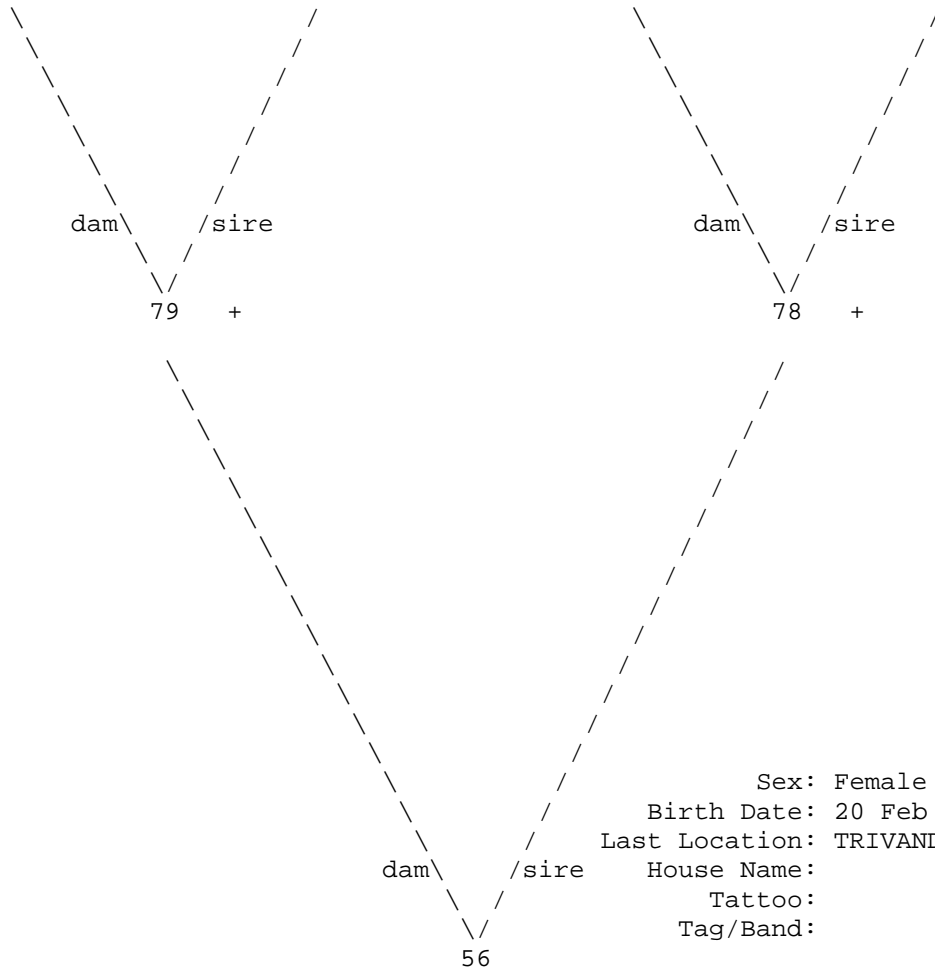
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 55  
 =====



+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 56  
=====

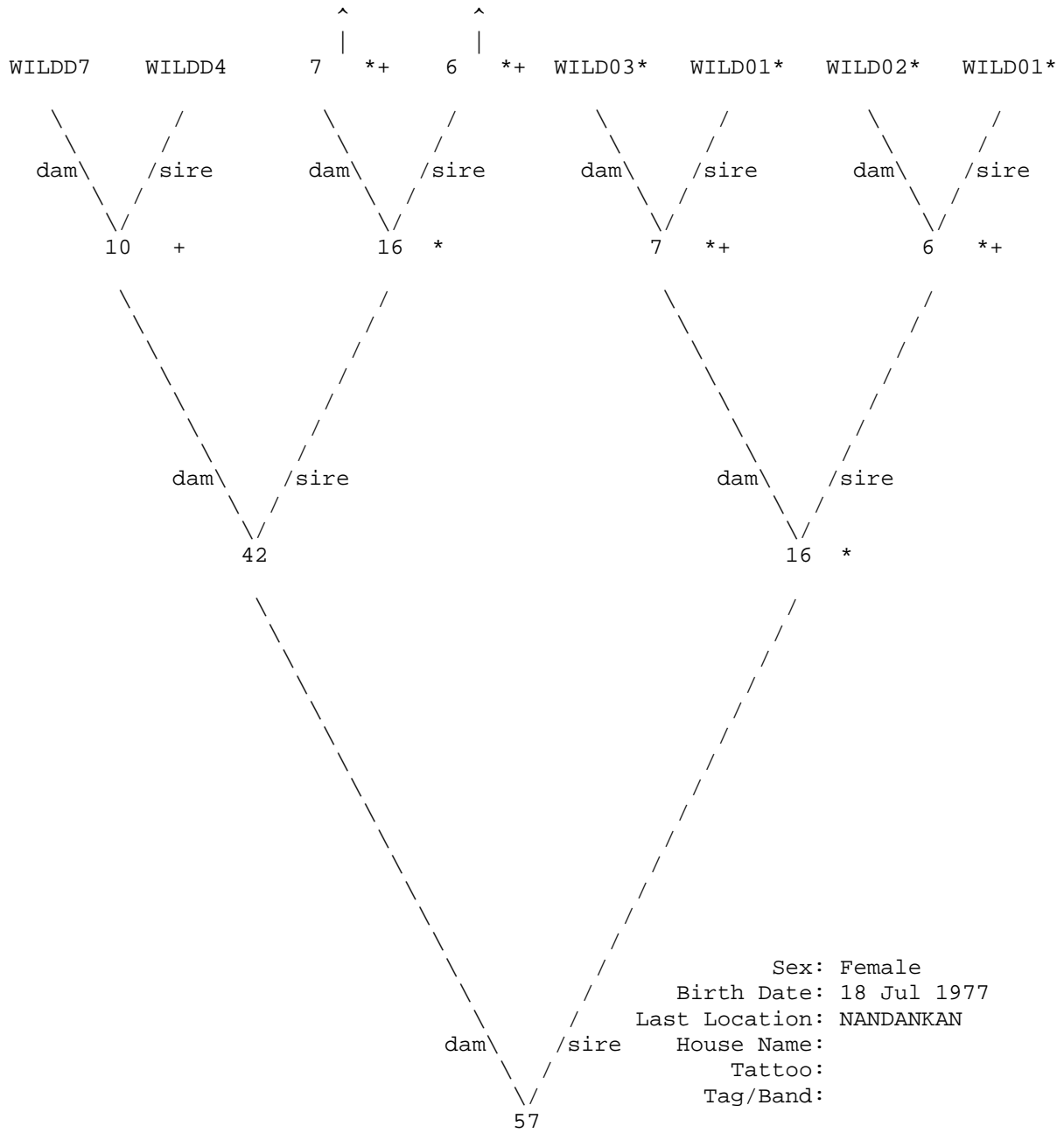
WILD WILD WILD WILD



Sex: Female  
Birth Date: 20 Feb 1977  
Last Location: TRIVANDRU (dead)  
House Name:  
Tattoo:  
Tag/Band:

+ Wild-caught...

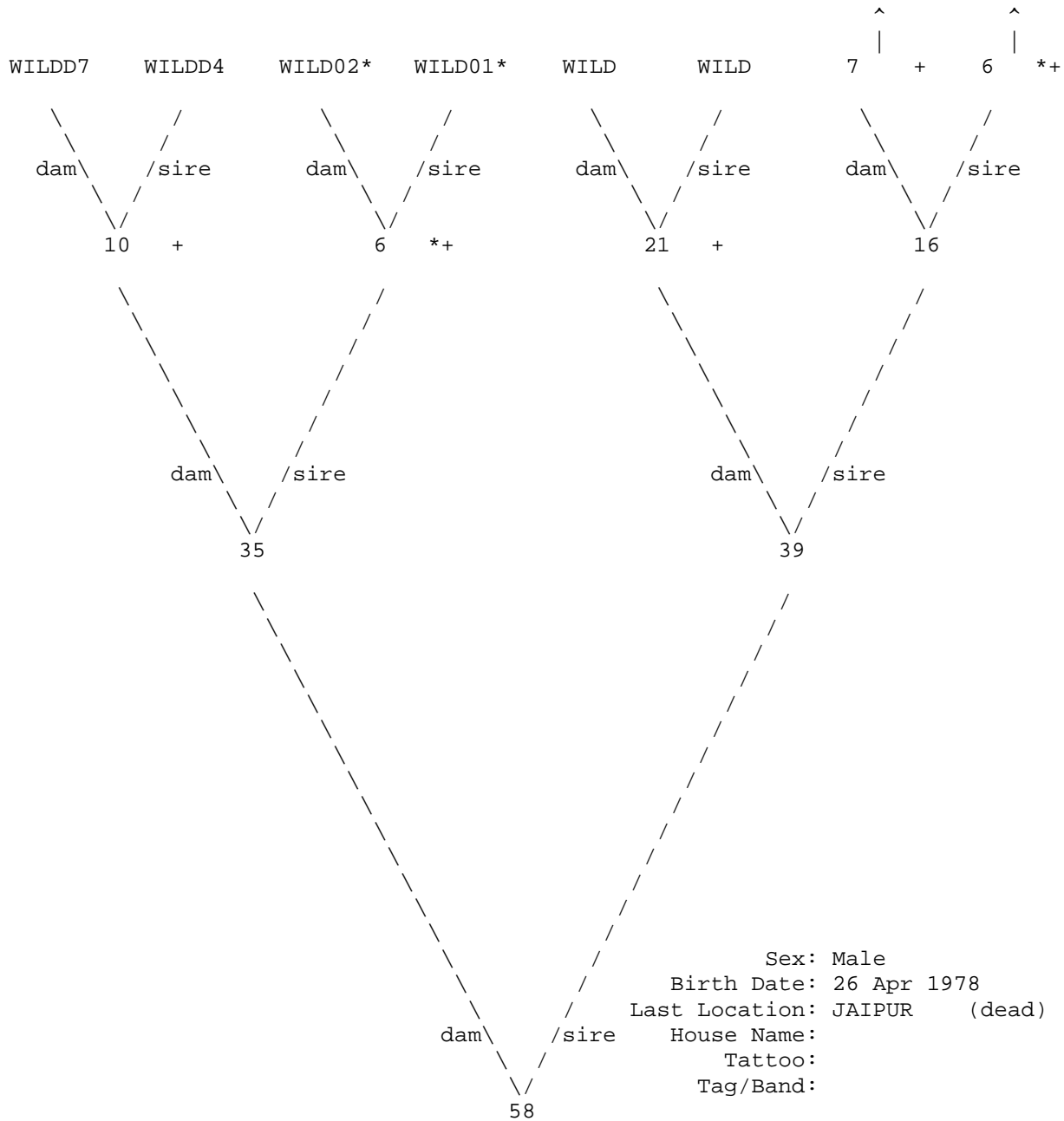
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 57  
 =====



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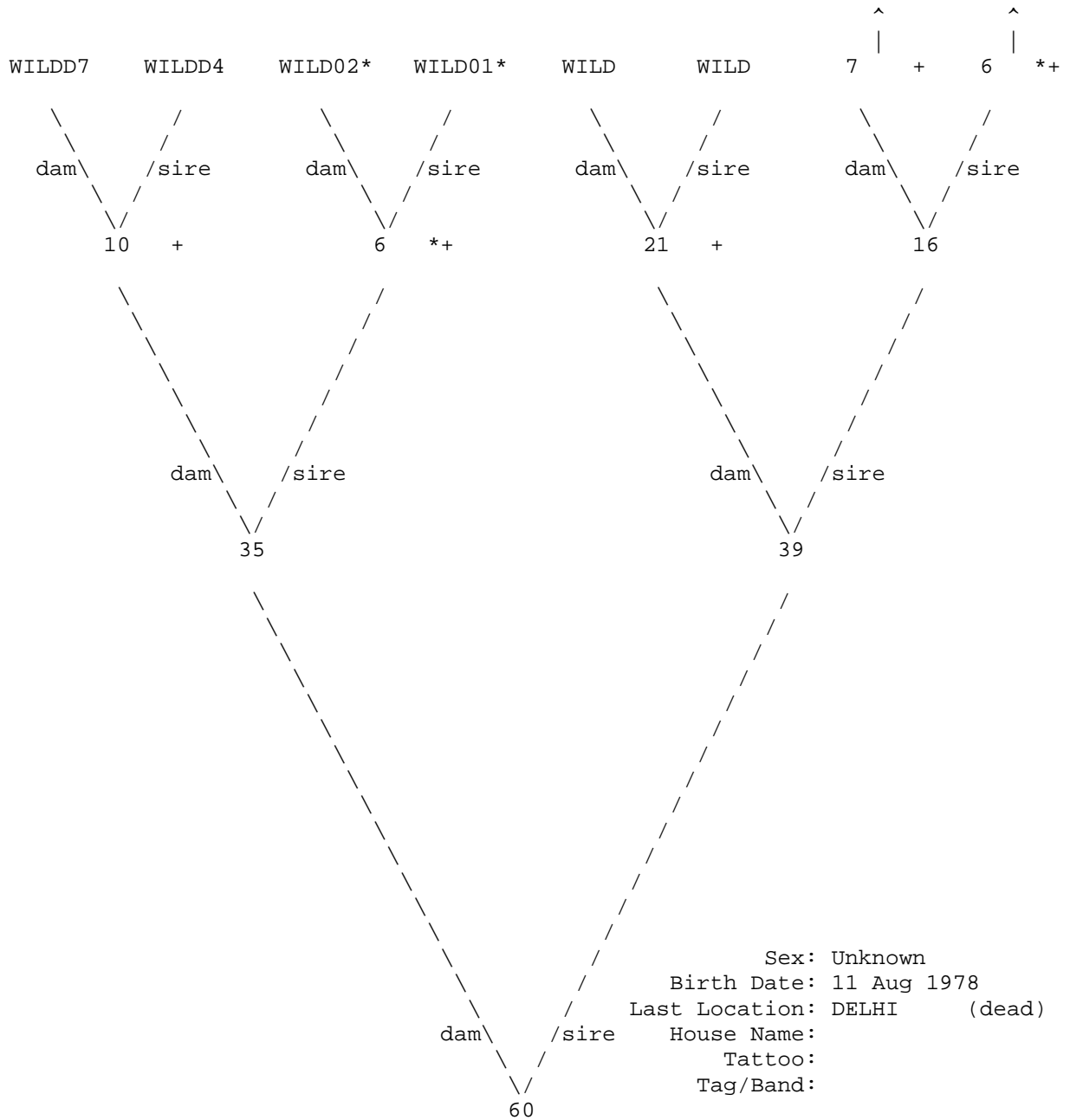
=====
Taxon Name: MACACA SILENUS                               Studbook Number: 58
=====

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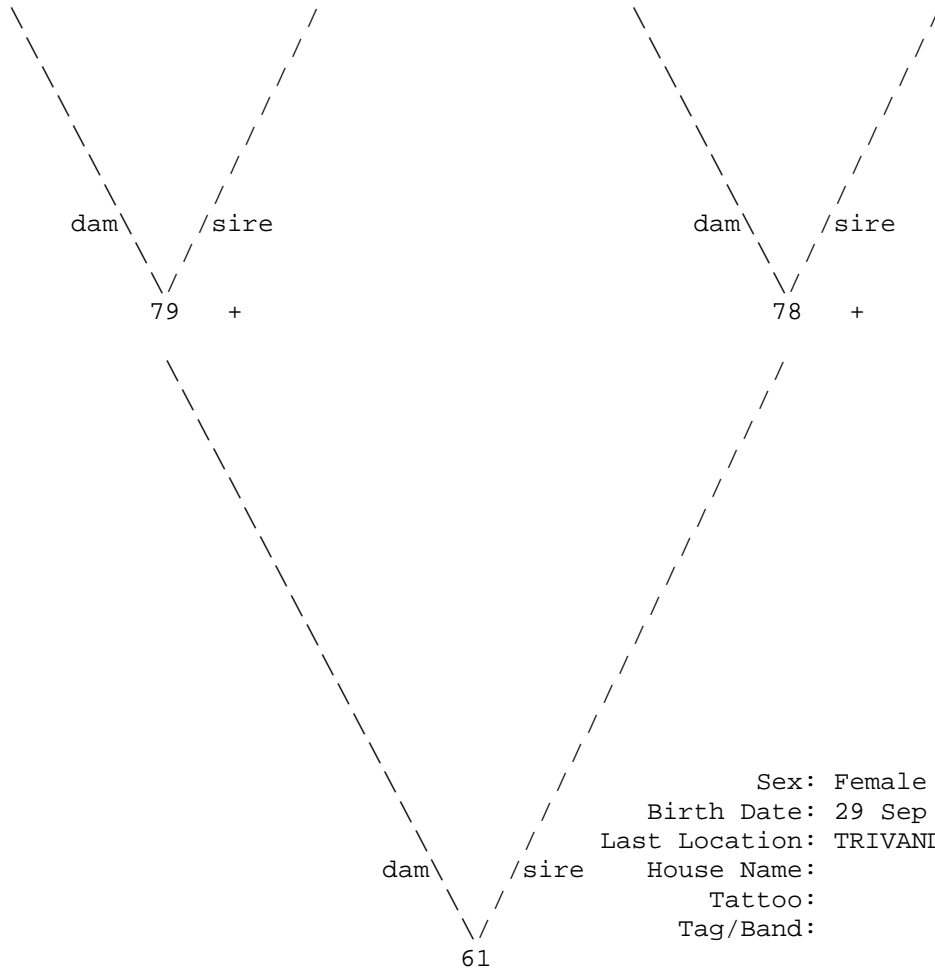
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 60  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 61  
 =====

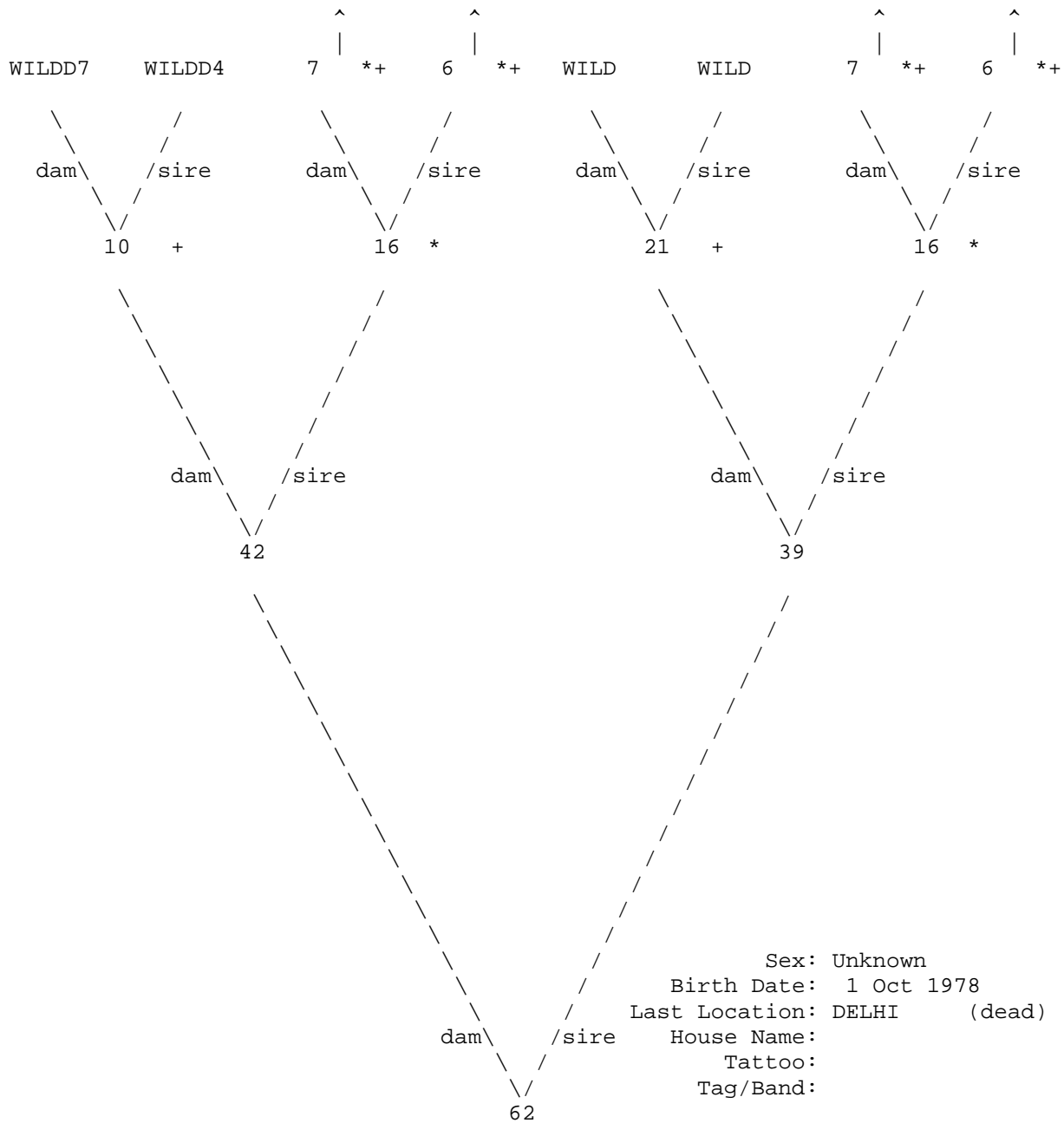
WILD WILD WILD WILD



Sex: Female  
 Birth Date: 29 Sep 1978  
 Last Location: TRIVANDRU (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

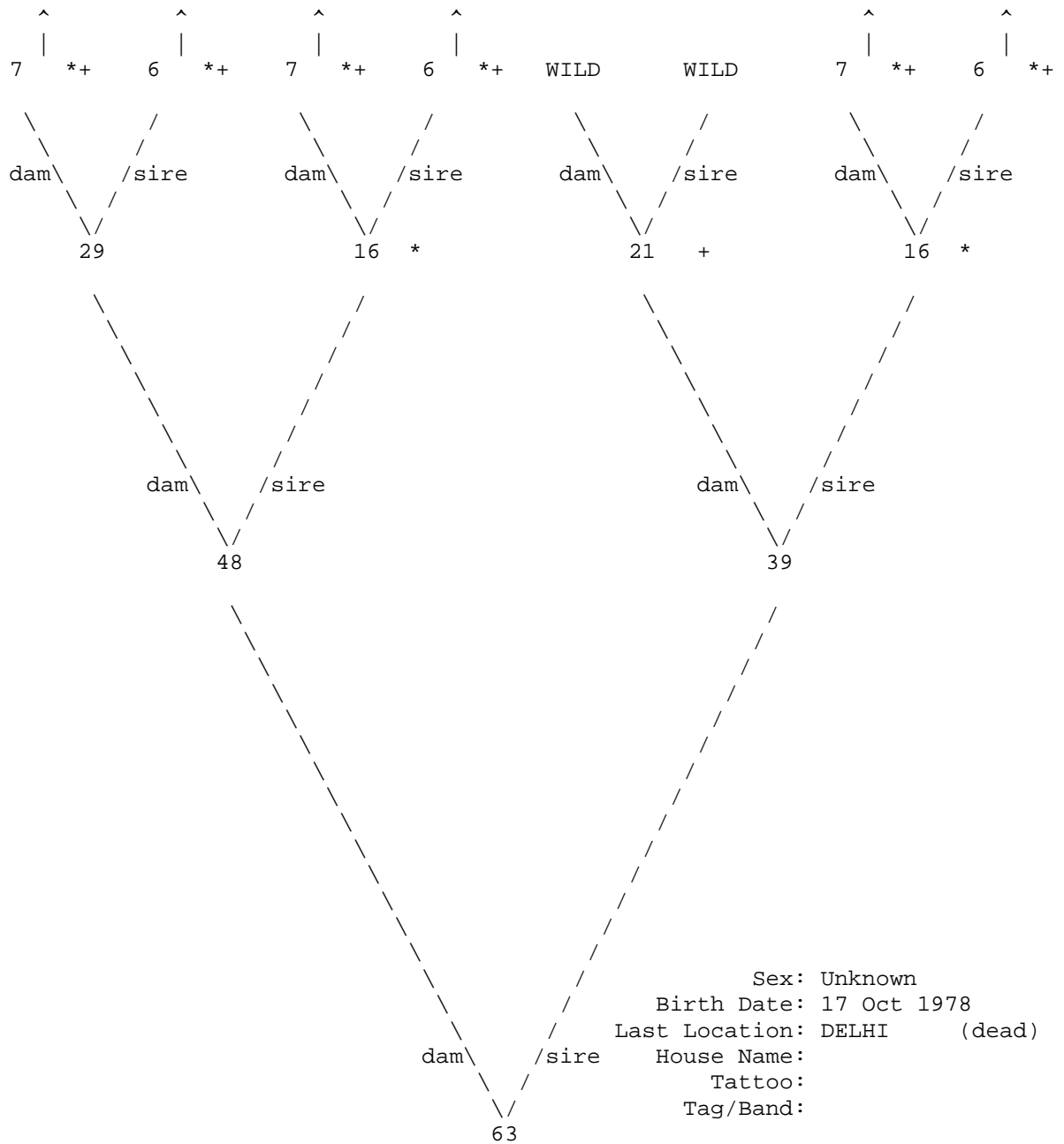
+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 62  
 =====



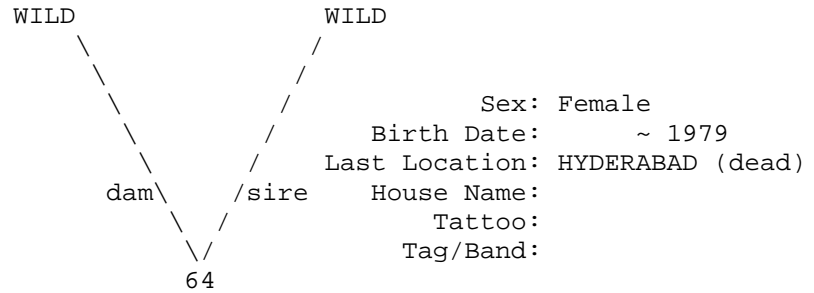
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 63  
 =====

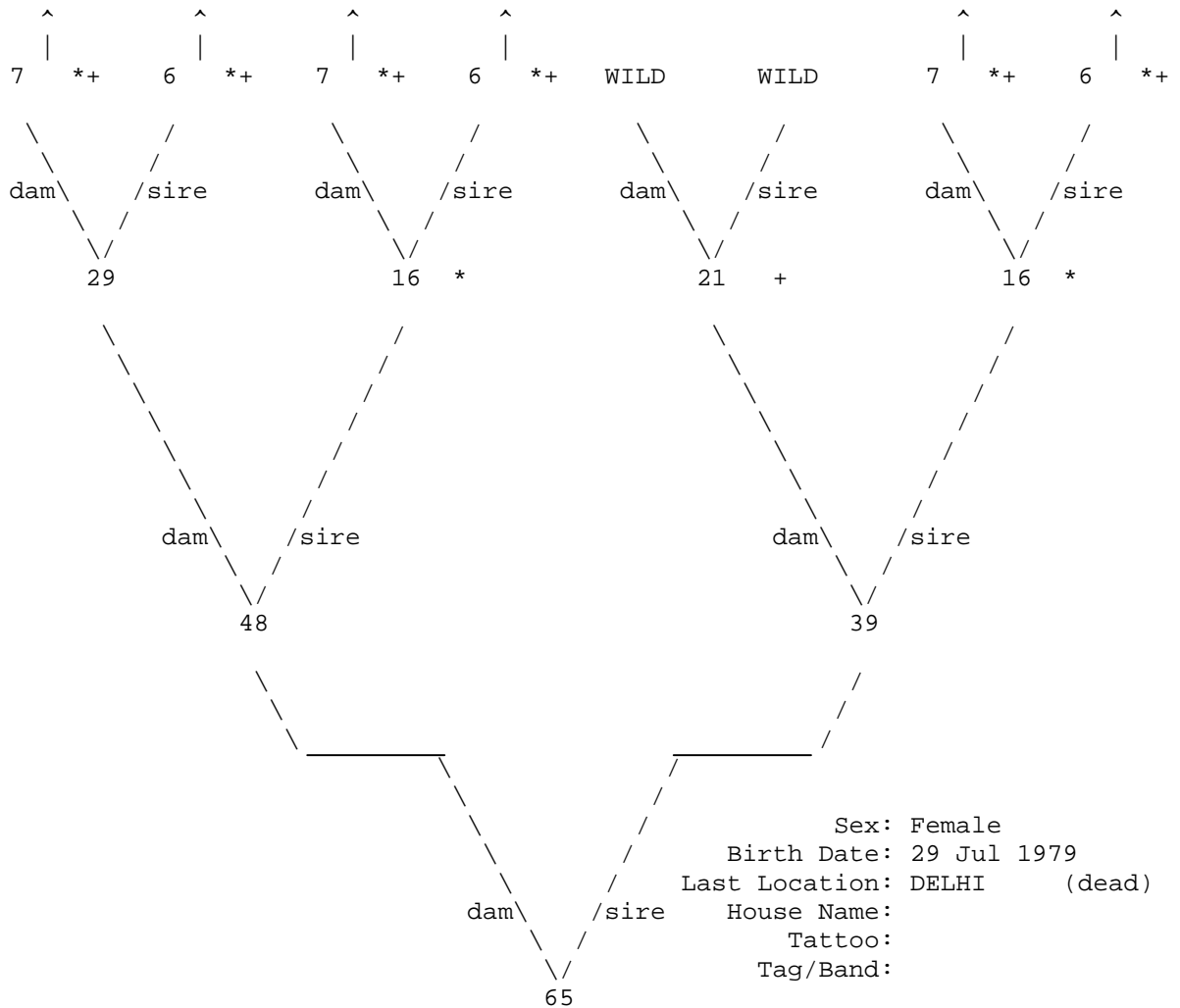


+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 64  
 =====



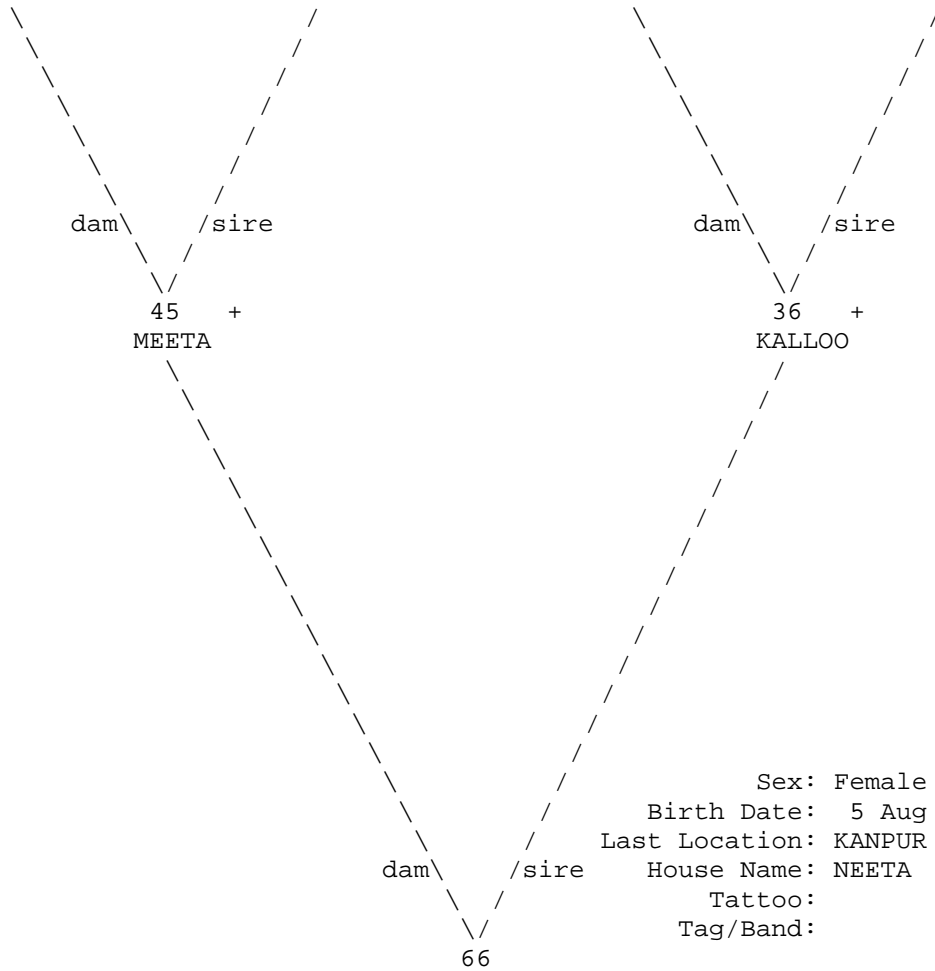
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 65  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

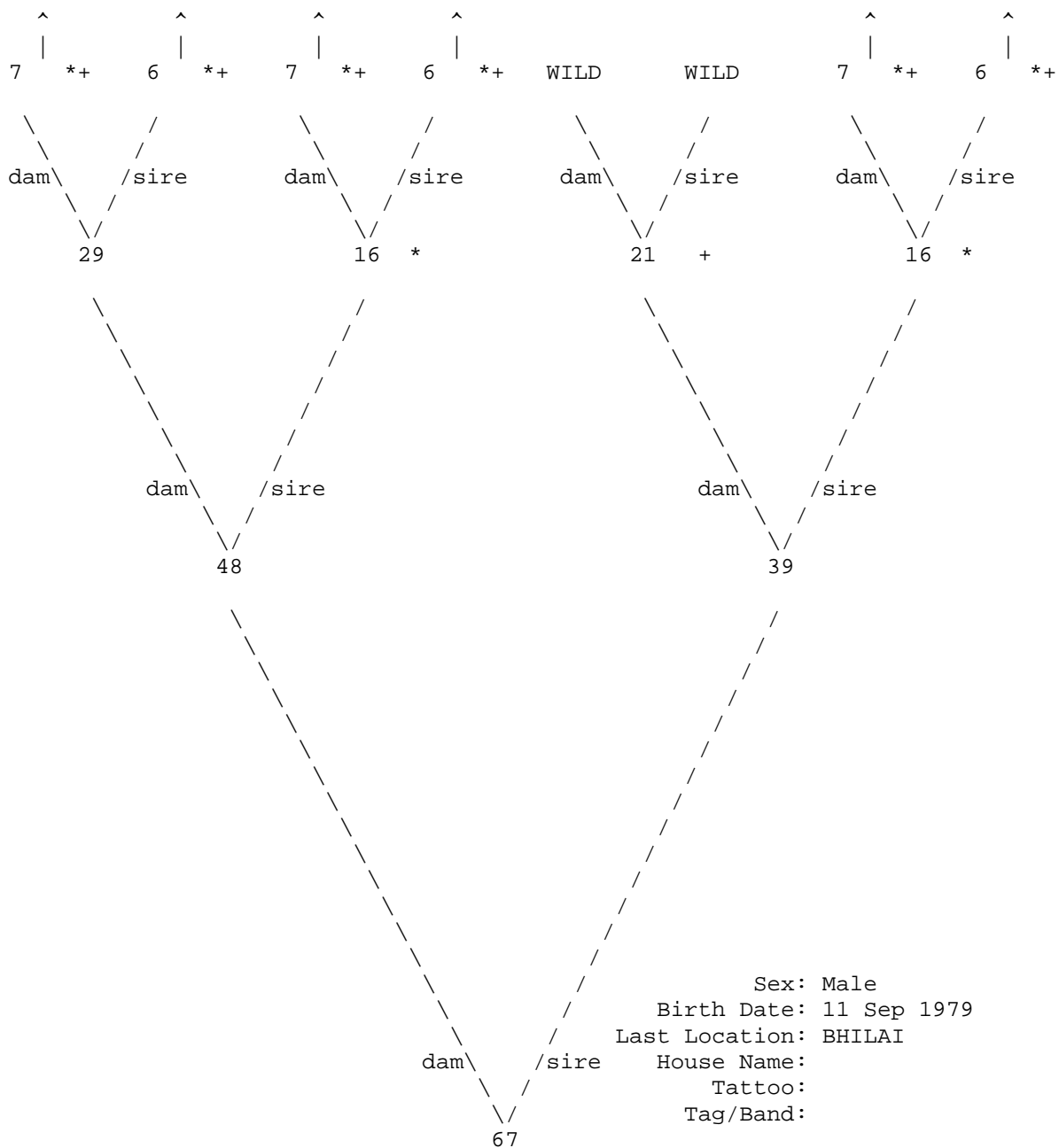
=====  
Taxon Name: MACACA SILENUS Studbook Number: 66  
=====

WILD WILD WILD WILD



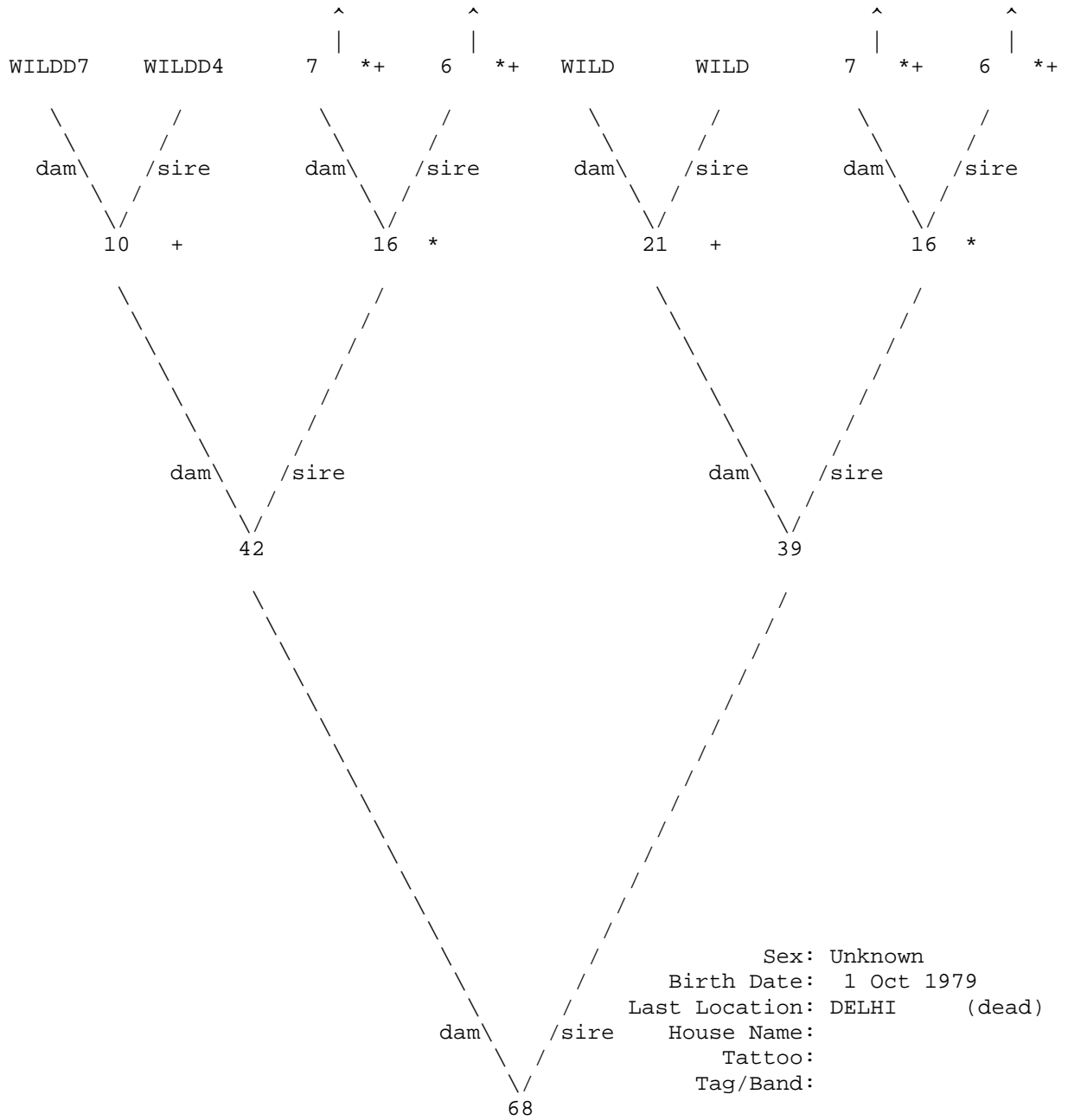
+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 67  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 68  
 =====



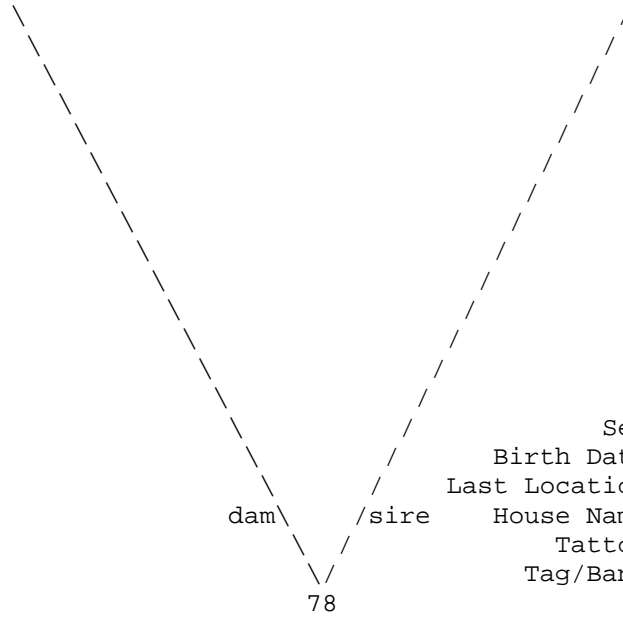
Sex: Unknown  
 Birth Date: 1 Oct 1979  
 Last Location: DELHI (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 78  
=====

WILD

WILD

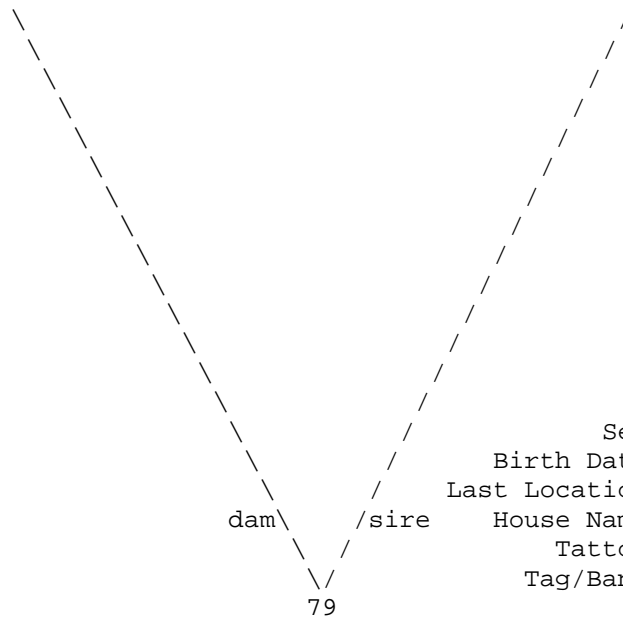


Sex: Male  
Birth Date: ~ 1973  
Last Location: JAIPUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 79  
=====

WILD

WILD

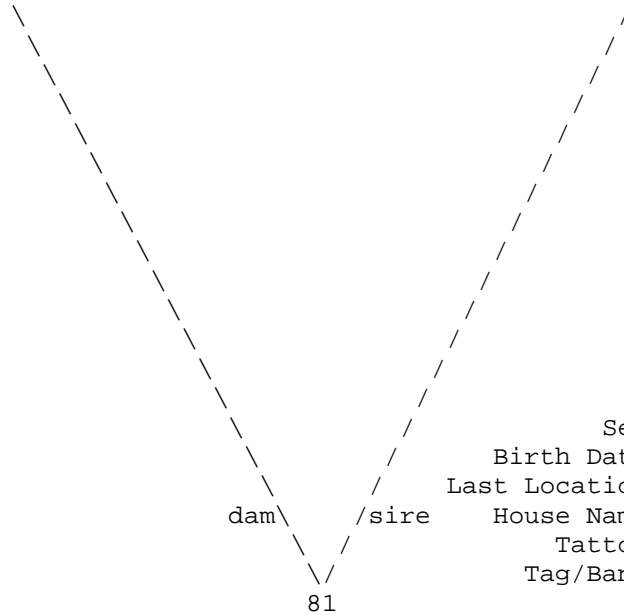


Sex: Female  
Birth Date: ~ 1973  
Last Location: JAIPUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 81  
=====

WILDP2

WILDP1

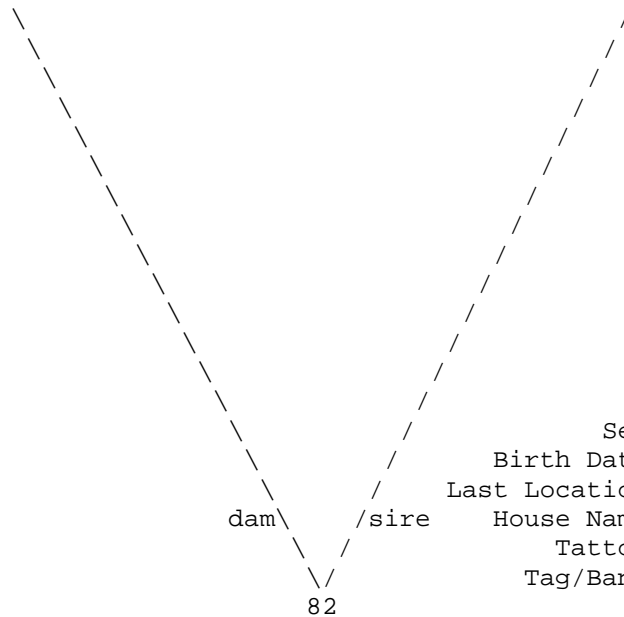


Sex: Female  
Birth Date: ~ 1980  
Last Location: CHATBIR Z (dead)  
House Name: SONI  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 82  
=====

WILDP2

WILDP1



Sex: Male  
Birth Date: ~ 1980  
Last Location: CHATBIR Z (dead)  
House Name: MAHIWAL/BUGGA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 83  
=====

UNK5

UNK1

dam \ /sire

83

Sex: Male  
Birth Date: ????  
Last Location: BANNERGHA  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 86  
=====

WILD

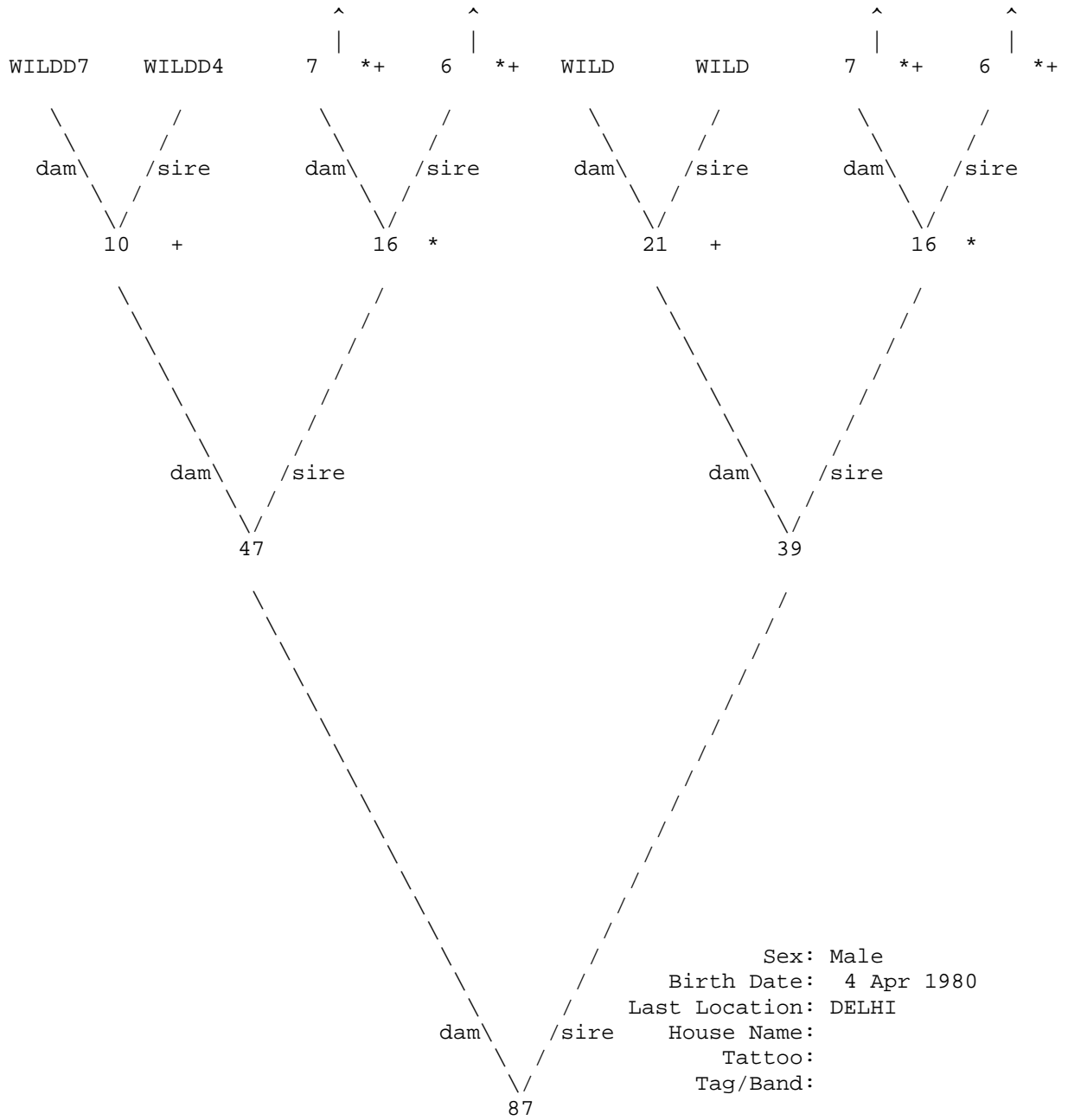
WILD

dam \ /sire

86

Sex: Female  
Birth Date: ~ 1982  
Last Location: MYSORE  
House Name: NETRA  
Tattoo:  
Tag/Band:

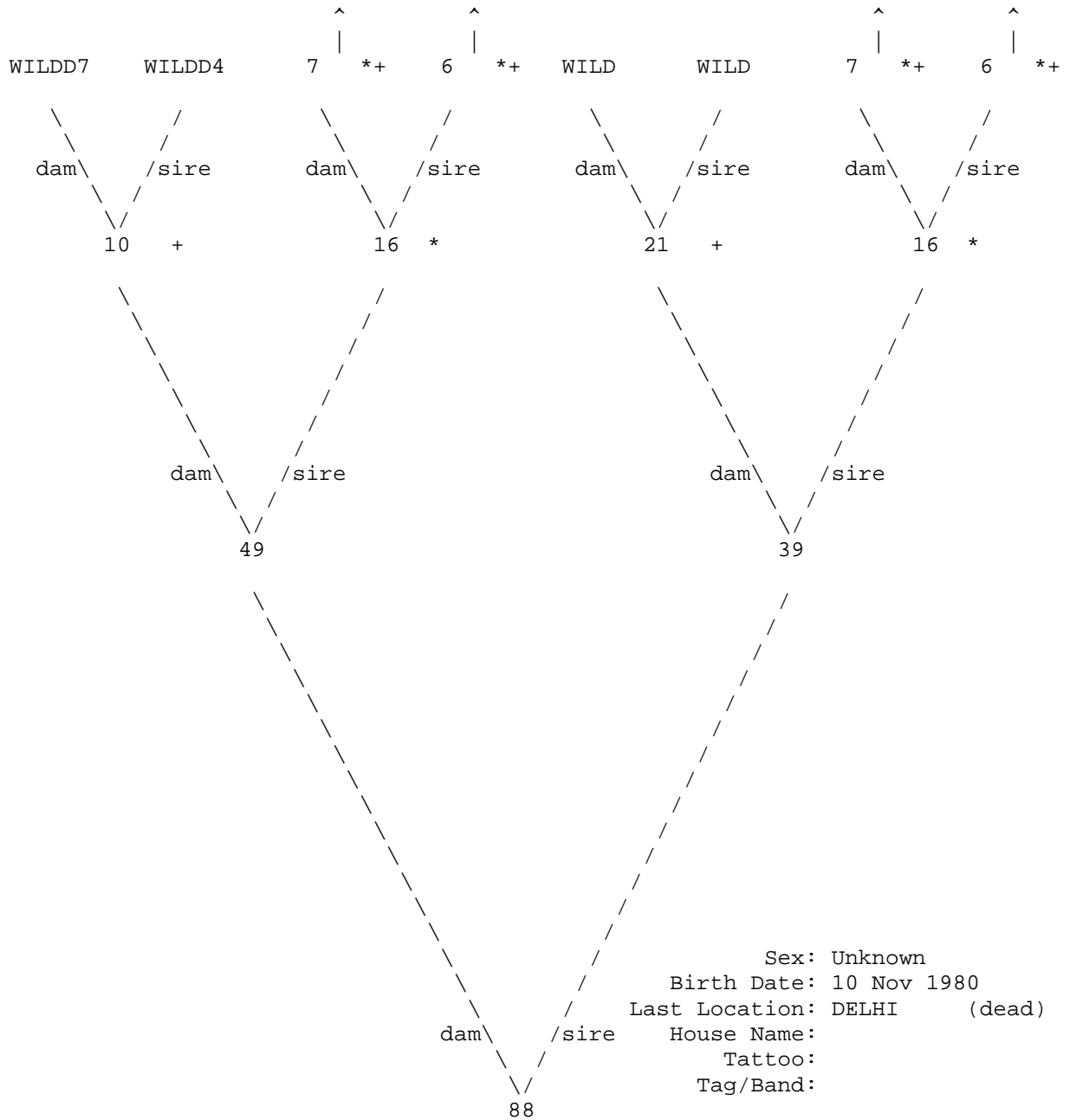
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 87  
 =====



Sex: Male  
 Birth Date: 4 Apr 1980  
 Last Location: DELHI  
 House Name:  
 Tattoo:  
 Tag/Band:

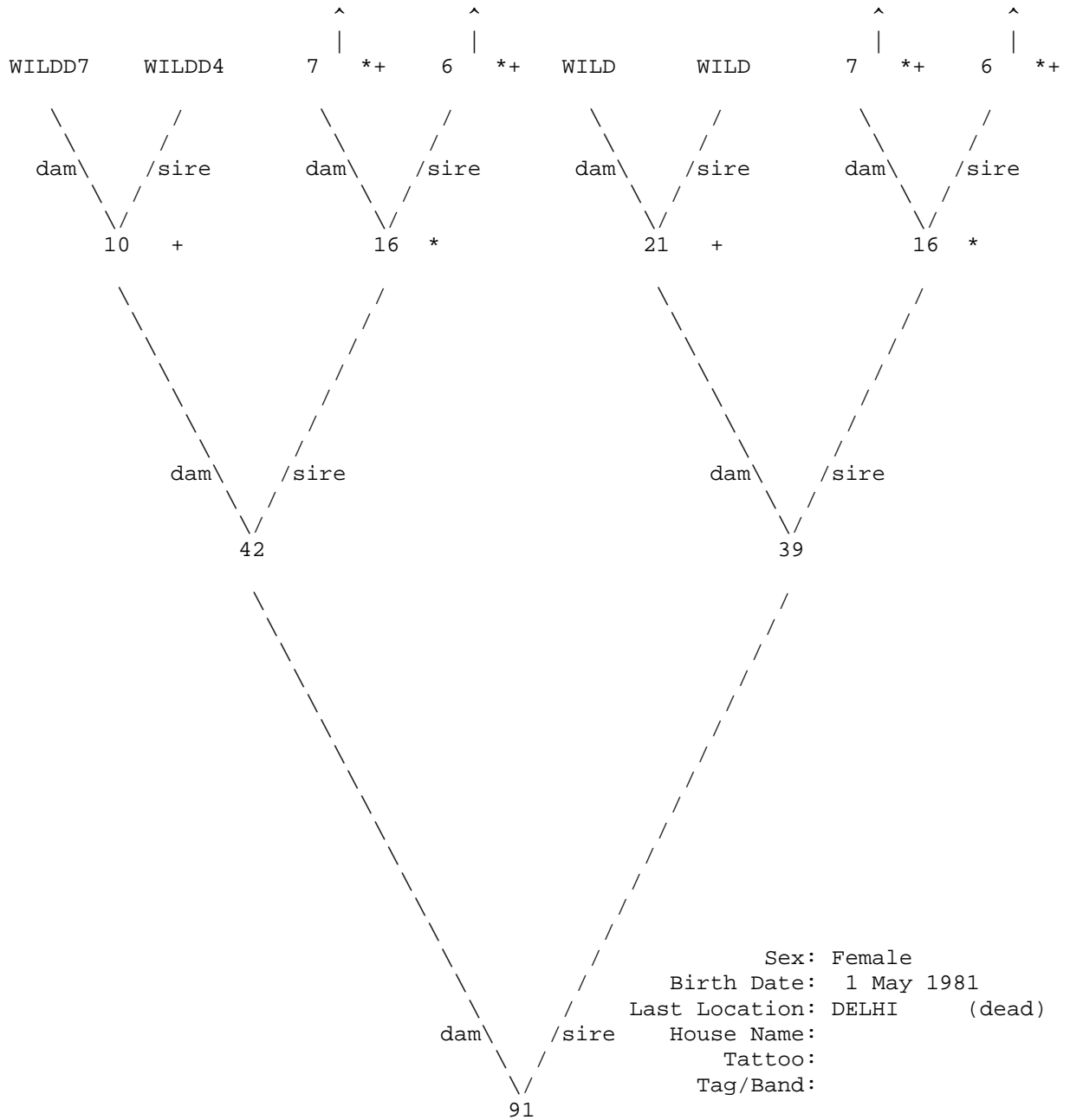
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 88  
 =====



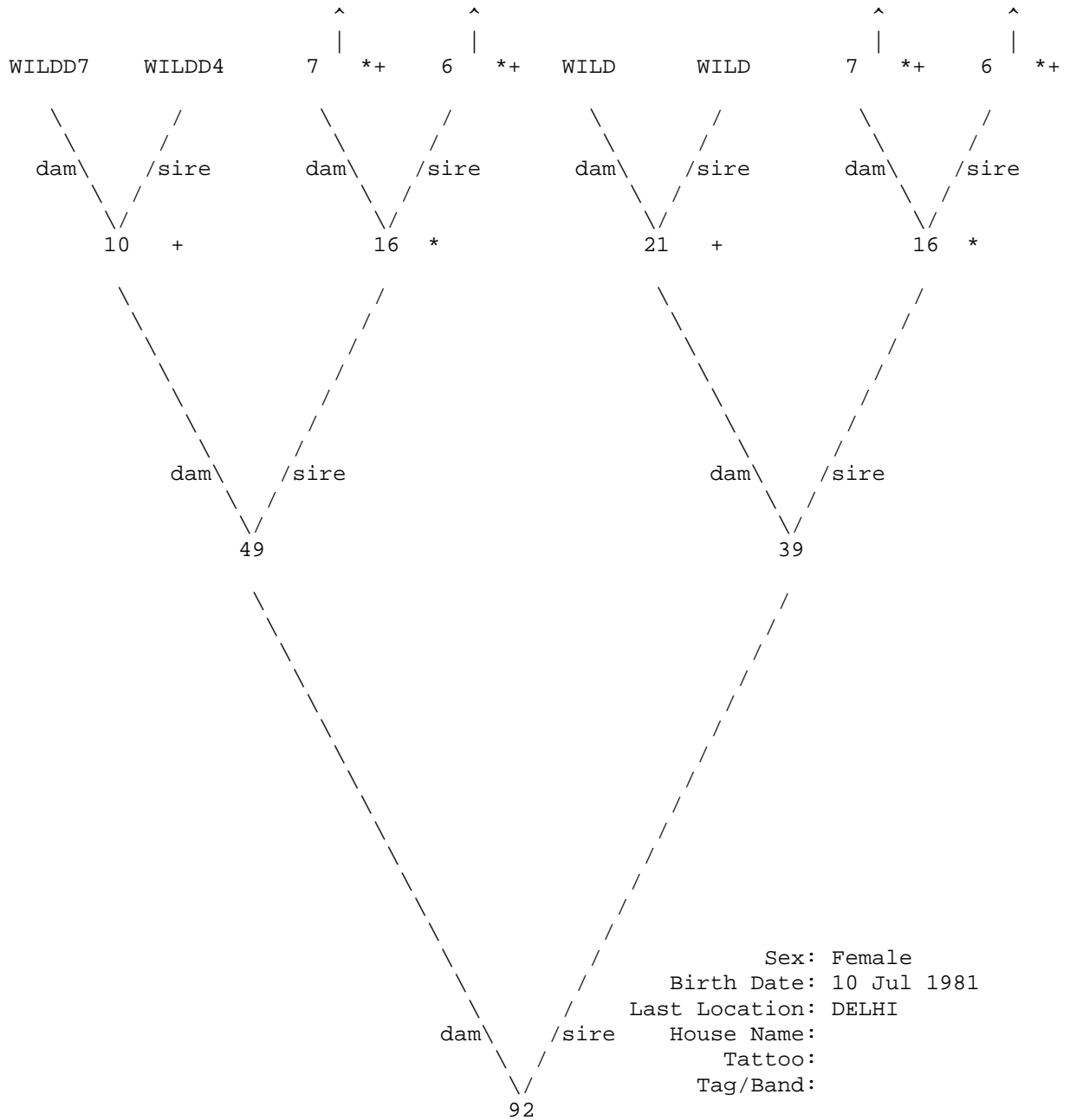
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 91  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 92  
 =====



Sex: Female  
 Birth Date: 10 Jul 1981  
 Last Location: DELHI  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 93  
=====

WILD

WILD

dam \ / sire  
93

Sex: Male  
Birth Date: ~ 1982  
Last Location: HYDERABAD (dead)  
House Name: PAVAN  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 94  
=====

WILDH5

WILDH4

dam \ / sire  
94

Sex: Female  
Birth Date: ~ 1982  
Last Location: HYDERABAD (dead)  
House Name: SUMITRA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 95  
=====

WILDH6

WILDH4

dam \ / sire  
95  
Sex: Female  
Birth Date: ~ 1982  
Last Location: HYDERABAD (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 96  
=====

WILD

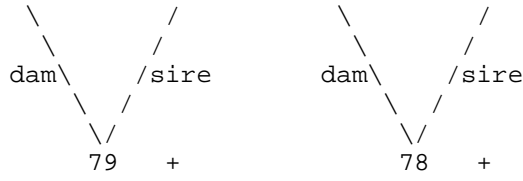
WILD

dam \ / sire  
96  
Sex: Male  
Birth Date: ~ 1982  
Last Location: TRIVANDRU  
House Name: MOHAN  
Tattoo:  
Tag/Band:

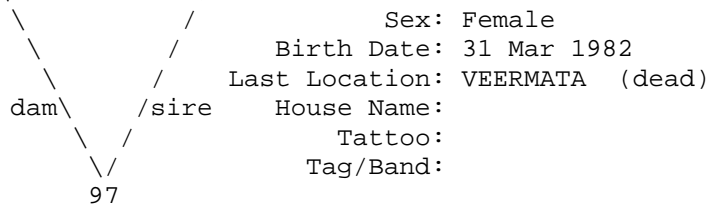
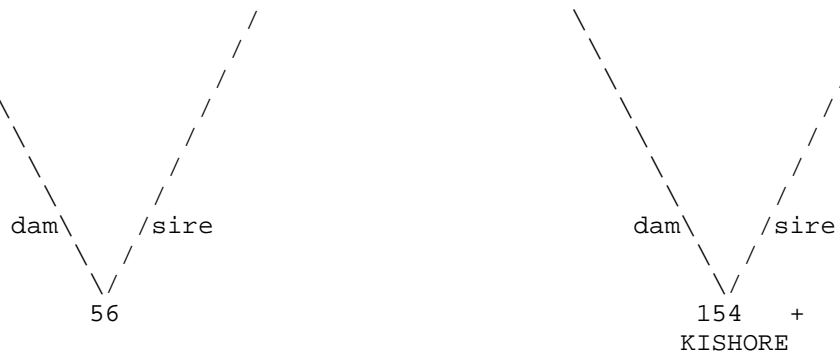
=====  
Taxon Name: MACACA SILENUS

Studbook Number: 97  
=====

WILD            WILD            WILD            WILD

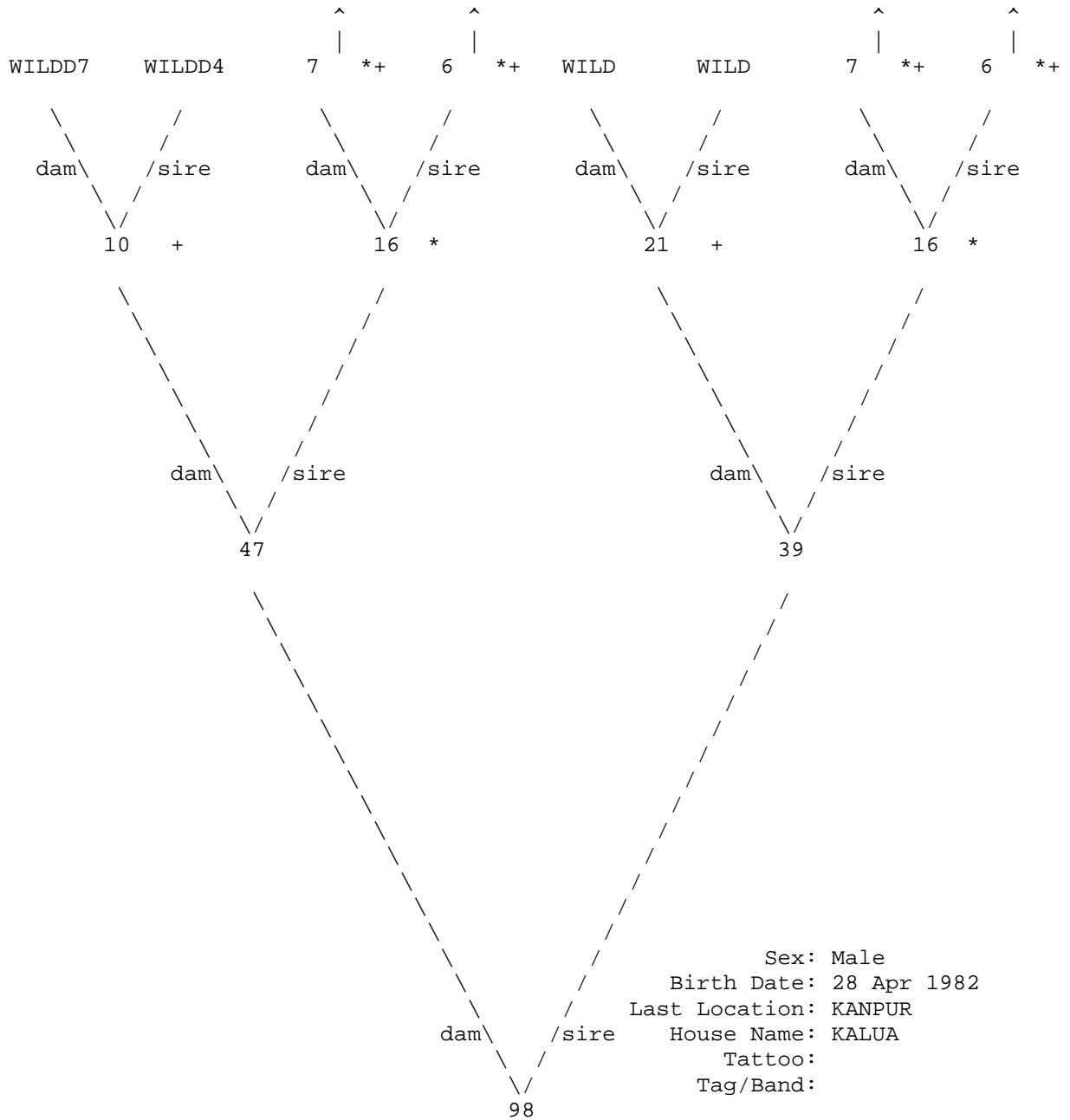


WILD                            WILD



+ Wild-caught...

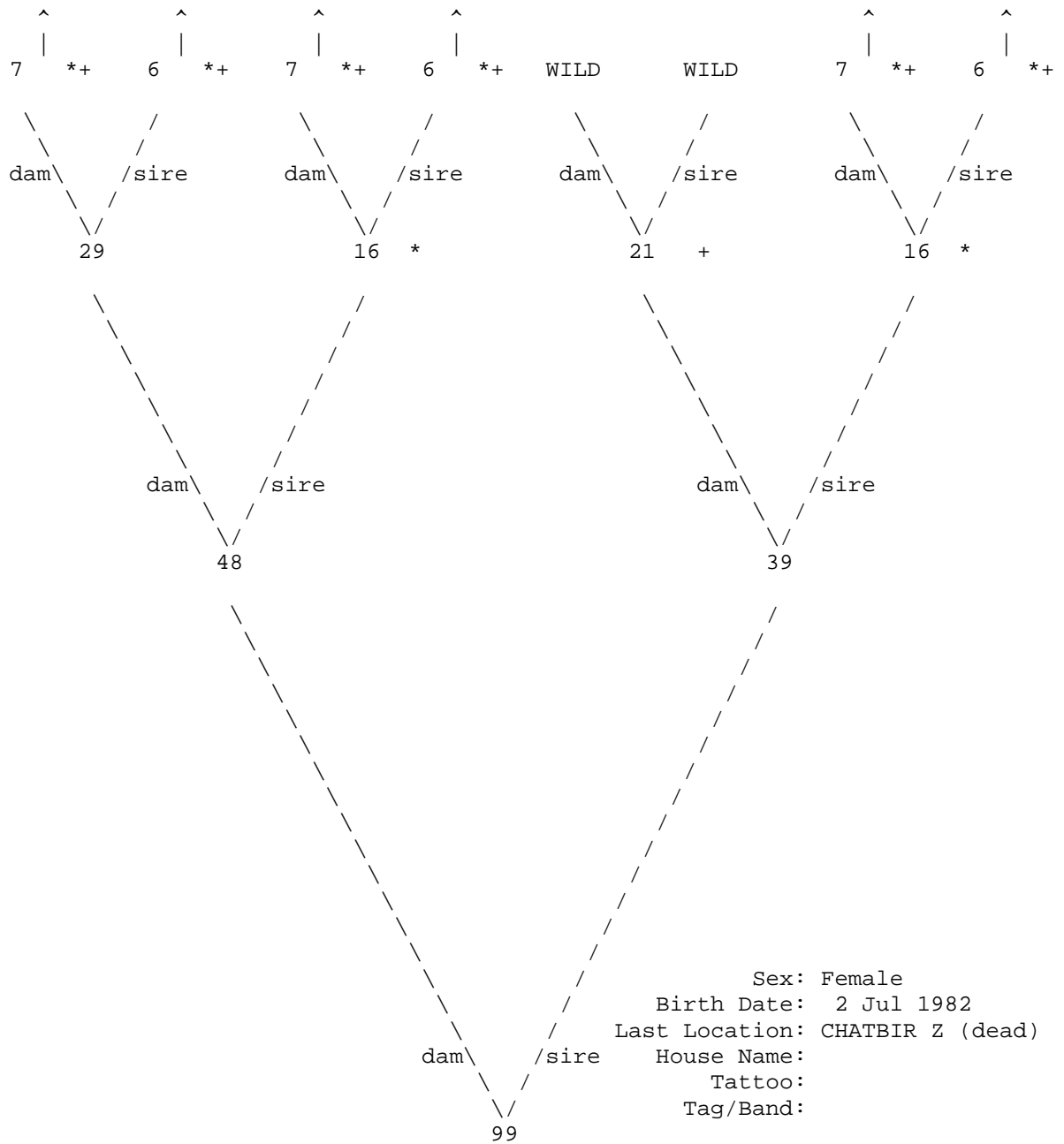
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 98  
 =====



Sex: Male  
 Birth Date: 28 Apr 1982  
 Last Location: KANPUR  
 House Name: KALUA  
 Tattoo:  
 Tag/Band:

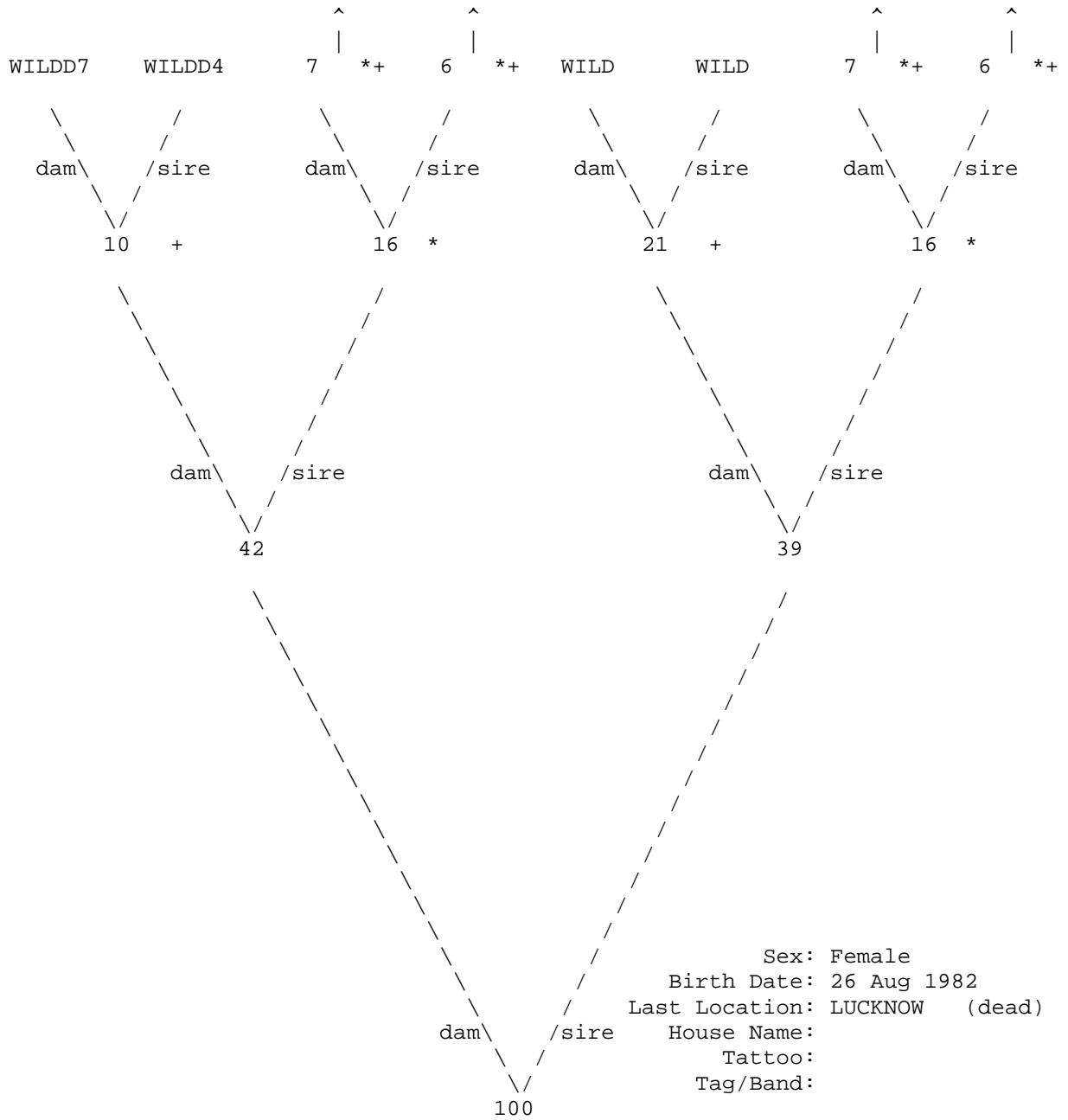
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 99  
 =====



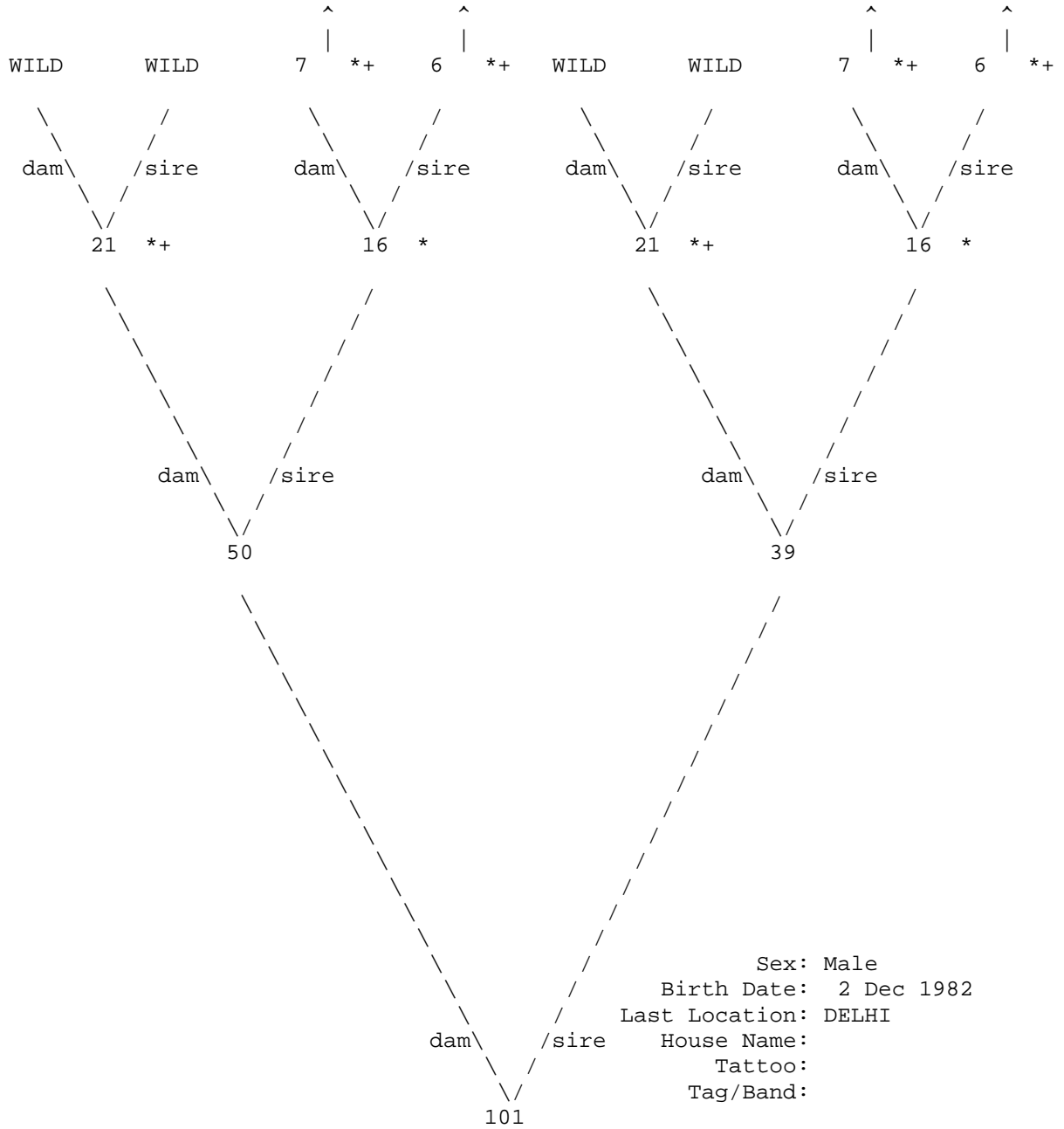
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 100  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 101  
 =====

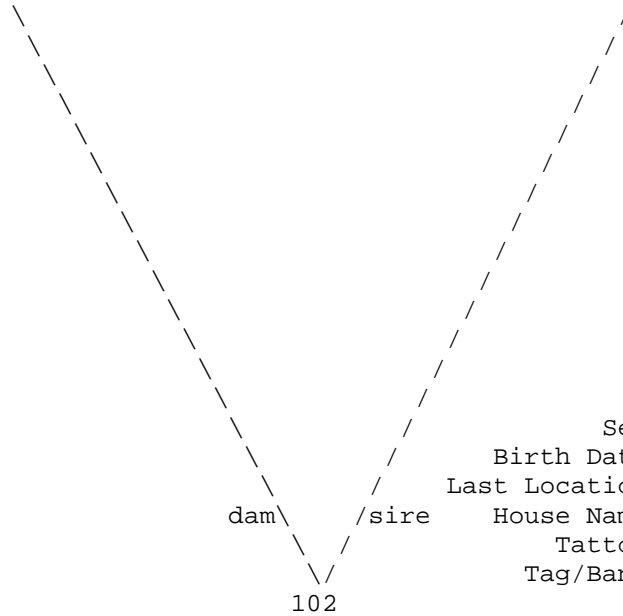


+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 102  
 =====

WILD

WILD



Sex: Male  
 Birth Date: ~ 1983  
 Last Location: PUNE (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

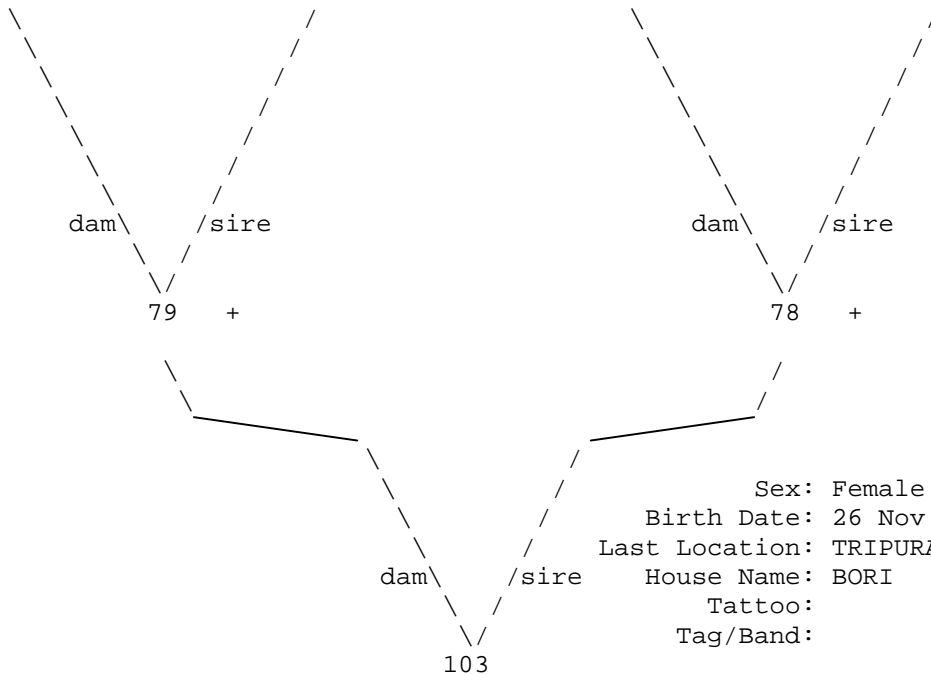
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 103  
 =====

WILD

WILD

WILD

WILD



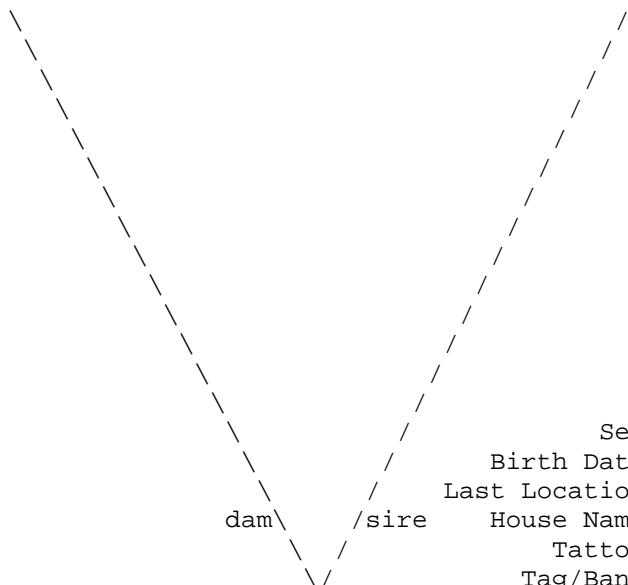
Sex: Female  
 Birth Date: 26 Nov 1982  
 Last Location: TRIPURA (dead)  
 House Name: BORI  
 Tattoo:  
 Tag/Band:

+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 104  
=====

WILD

WILD



dam /sire

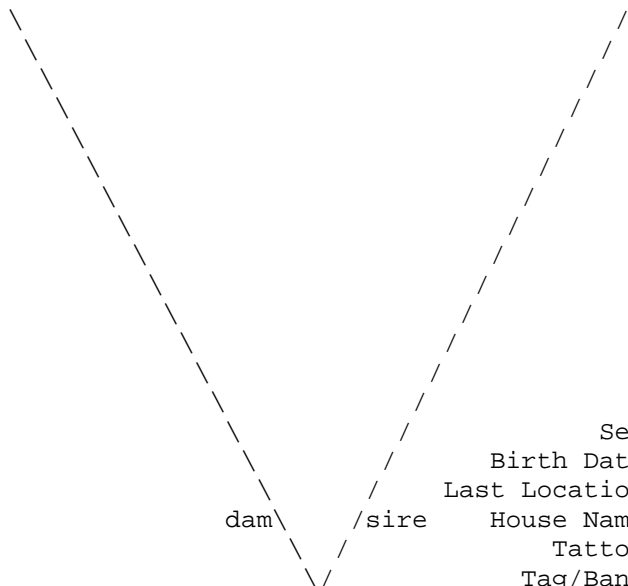
104

Sex: Female  
Birth Date: ~ 1983  
Last Location: ASSAM (dead)  
House Name: JAYA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 105  
=====

WILD

WILD

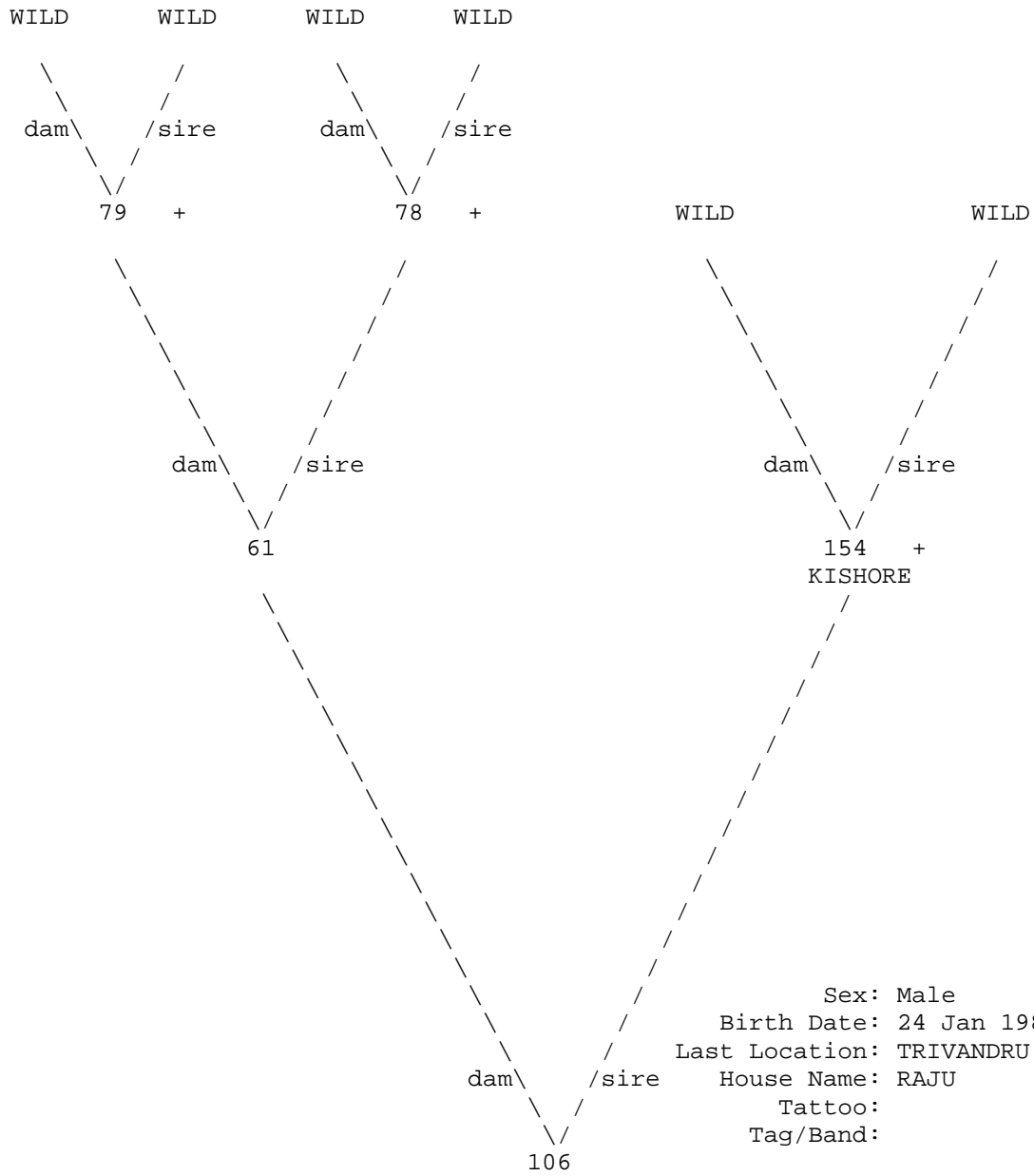


dam /sire

105

Sex: Male  
Birth Date: ~ 1983  
Last Location: KODANAD  
House Name: RAMAN  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 106  
=====



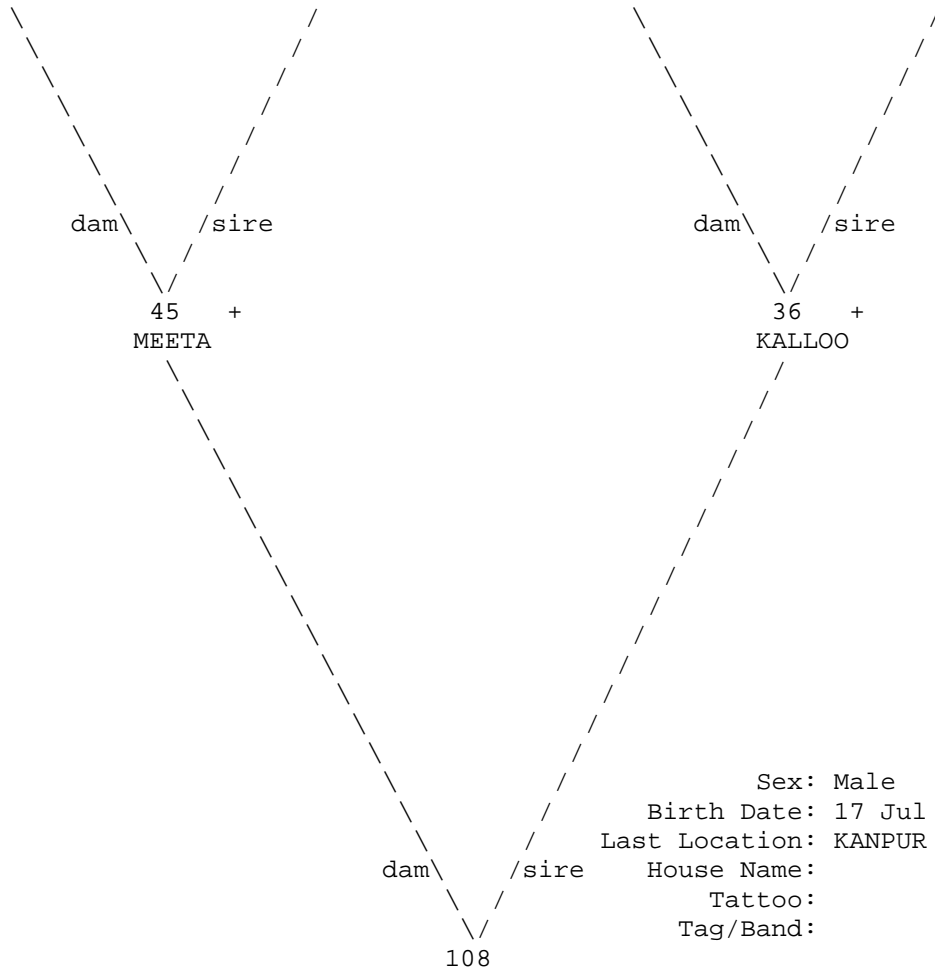
Sex: Male  
Birth Date: 24 Jan 1983  
Last Location: TRIVANDRU (dead)  
House Name: RAJU  
Tattoo:  
Tag/Band:

+ Wild-caught...



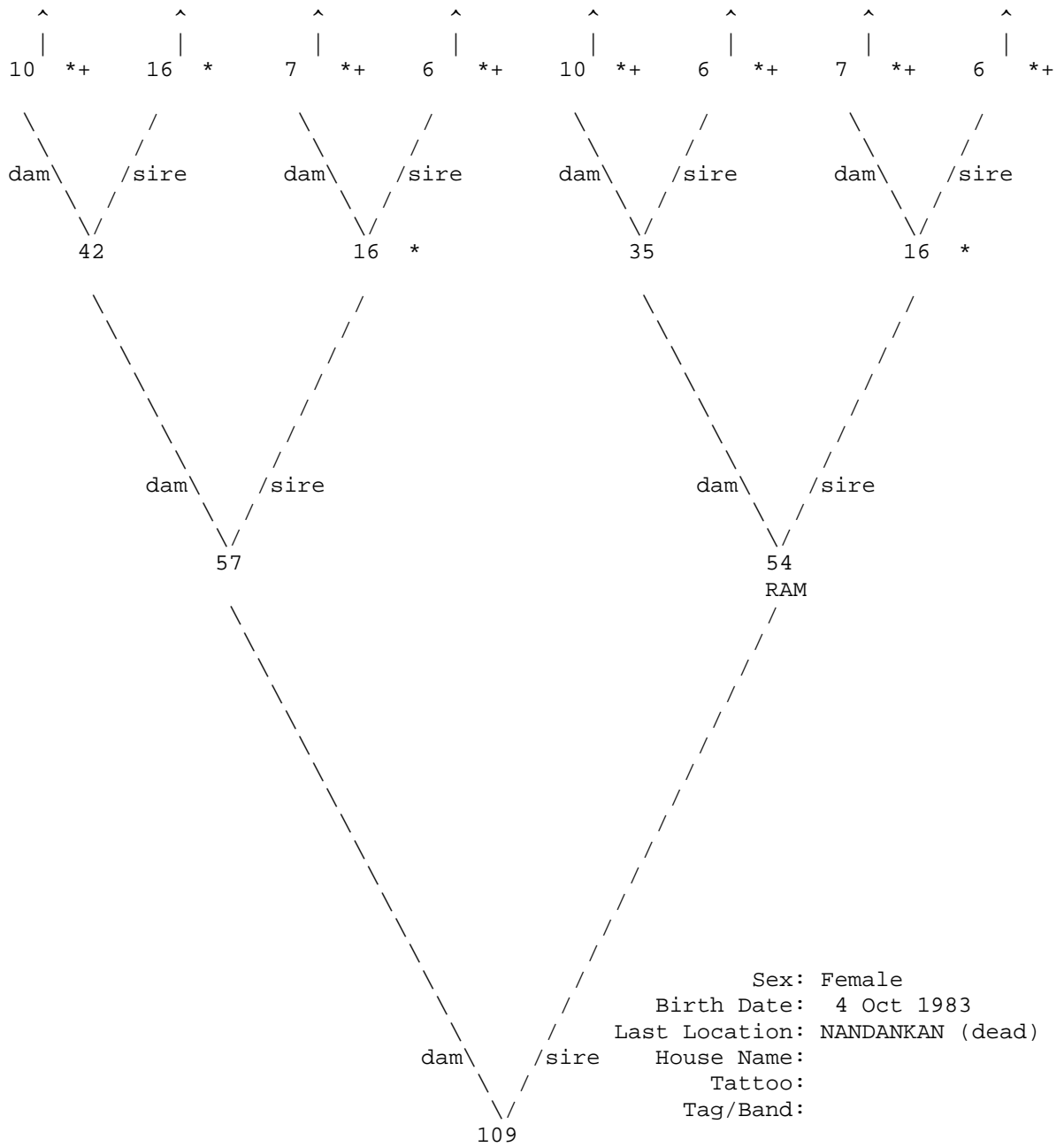
=====  
Taxon Name: MACACA SILENUS Studbook Number: 108  
=====

WILD WILD WILD WILD



+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 109  
 =====



Sex: Female  
 Birth Date: 4 Oct 1983  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 110  
=====

WILDM2

WILDM1

dam \ /sire  
110

Sex: Male  
Birth Date: ~ 1984  
Last Location: MADRAS  
House Name: MOHAN  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 111  
=====

WILD

WILD

dam \ /sire  
111

Sex: Male  
Birth Date: ~ 1984  
Last Location: PARRAS  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS

Studbook Number: 112  
=====

WILD

WILD

dam \

/sire

161 +  
SITA

WILD

dam \

/sire

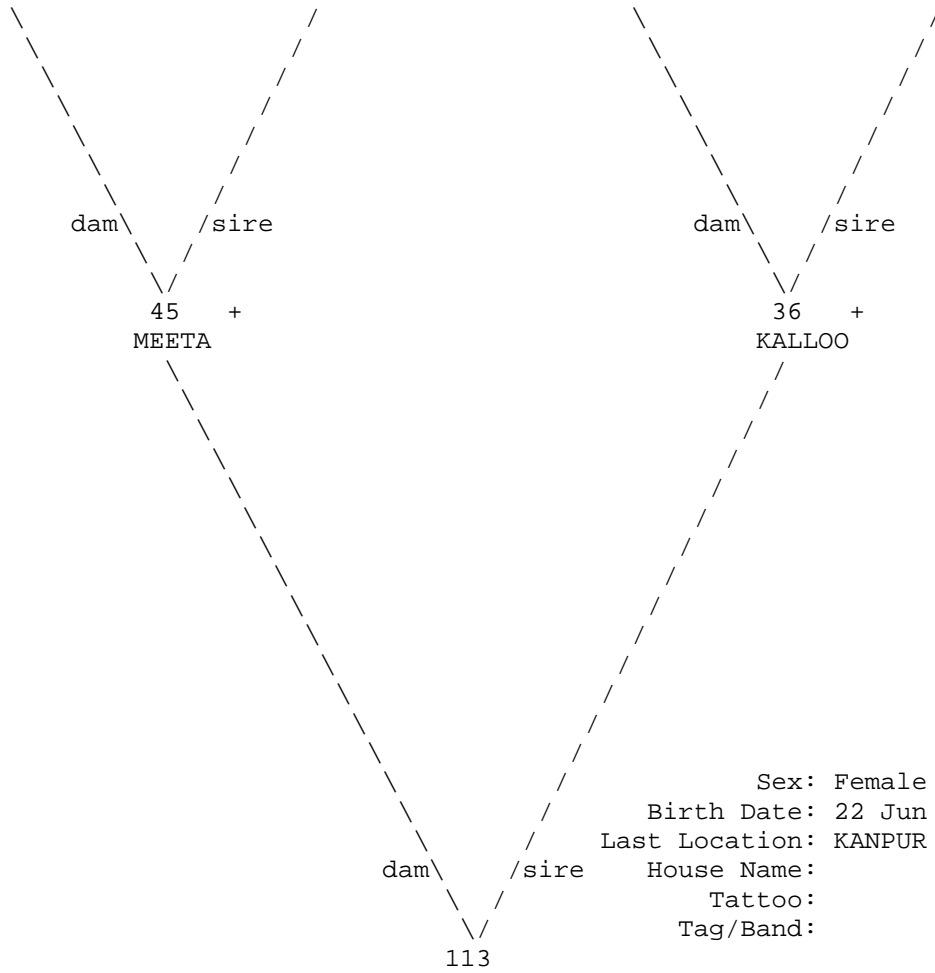
112

Sex: Male  
Birth Date: 19 Feb 1984  
Last Location: TORONTO  
House Name:  
Tattoo:  
Tag/Band:

+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 113  
=====

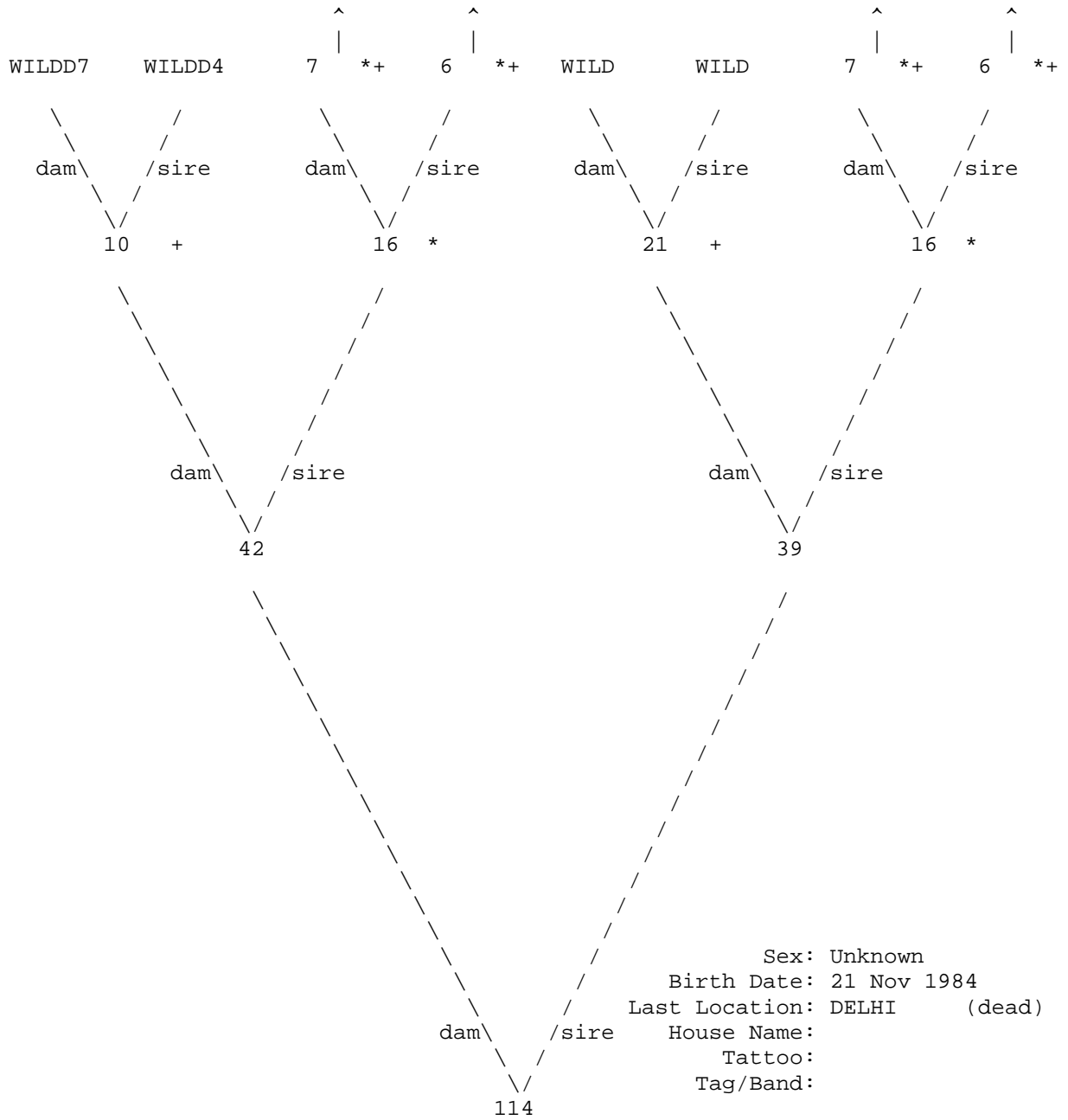
WILD WILD WILD WILD



Sex: Female  
Birth Date: 22 Jun 1984  
Last Location: KANPUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 114  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 116  
=====

WILD

WILD

dam \ /  
sire / \  
116

Sex: Female  
Birth Date: ~ 1985  
Last Location: TRIVANDRU  
House Name: LAXMI  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 117  
=====

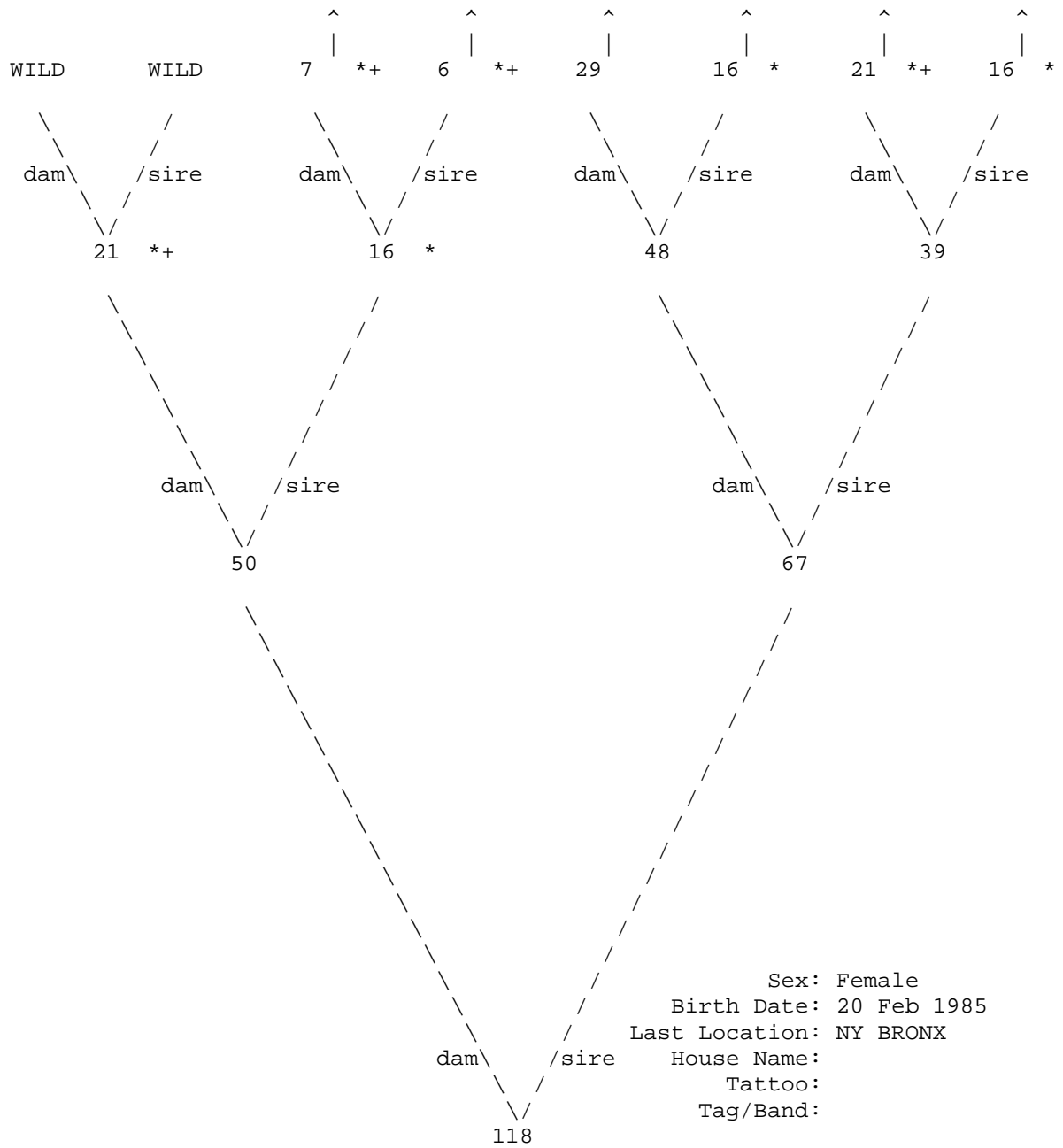
WILD

WILD

dam \ /  
sire / \  
117

Sex: Female  
Birth Date: ~ 1985  
Last Location: HYDERABAD  
House Name: MANI  
Tattoo:  
Tag/Band:

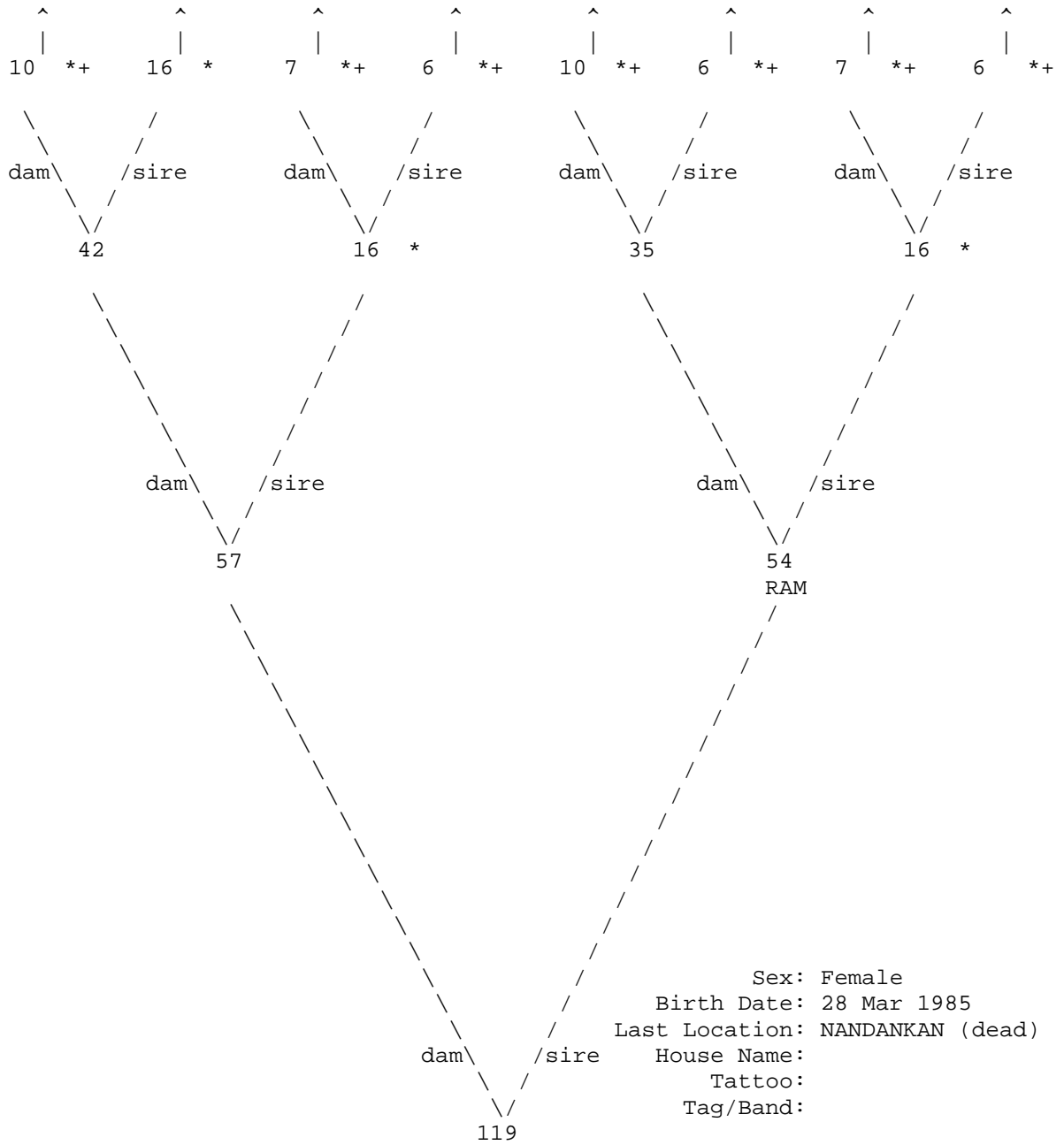
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 118  
 =====



Sex: Female  
 Birth Date: 20 Feb 1985  
 Last Location: NY BRONX  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 119  
 =====



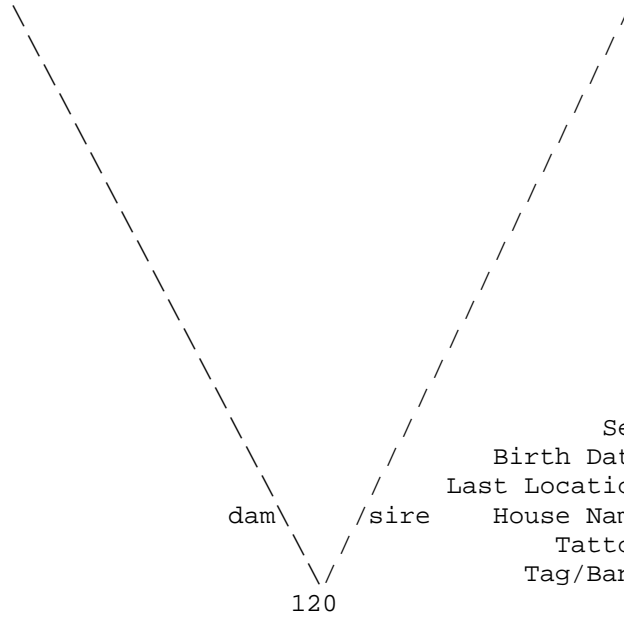
Sex: Female  
 Birth Date: 28 Mar 1985  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 120  
=====

WILDM2

WILDM1

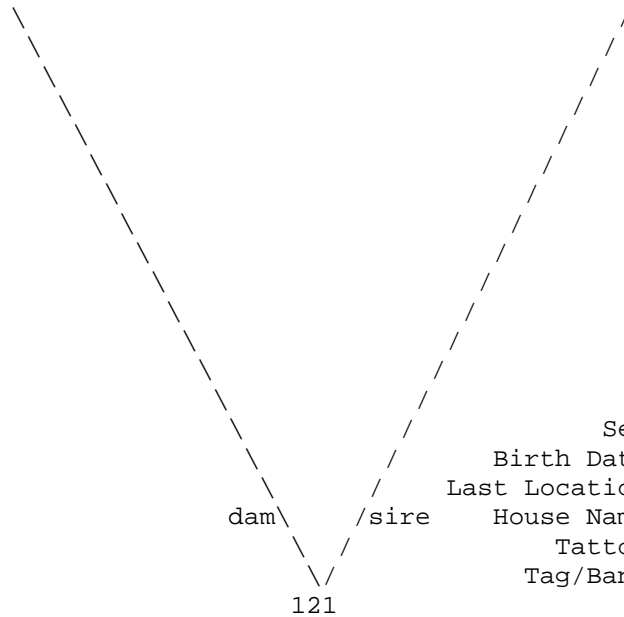


Sex: Female  
Birth Date: ~ 1986  
Last Location: MADRAS (dead)  
House Name: BHAMA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 121  
=====

WILD

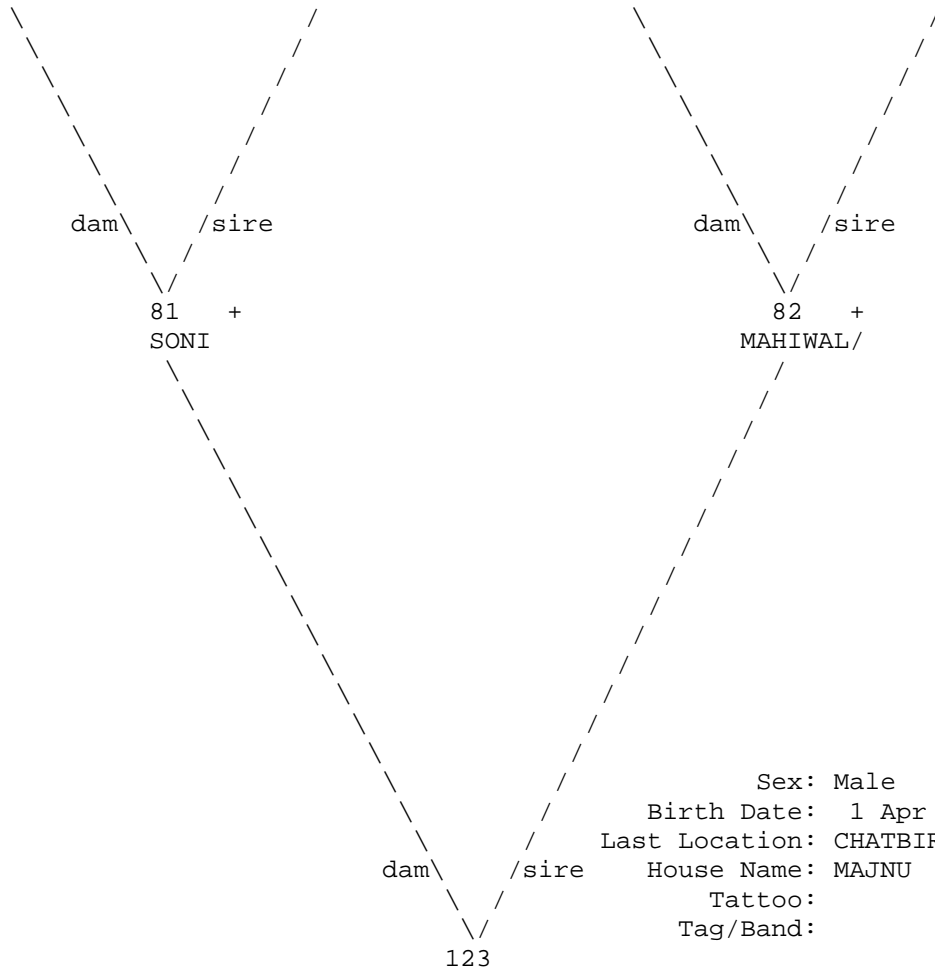
WILD



Sex: Female  
Birth Date: ~ 1986  
Last Location: TRIVANDRU  
House Name: BINDU  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 123  
 =====

WILDP2\*                      WILDP1\*                      WILDP2\*                      WILDP1\*



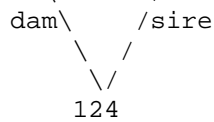
+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 124  
 =====

WILD WILD WILD WILD



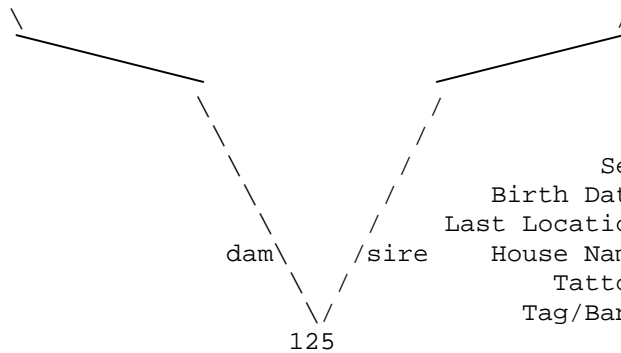
Sex: Male  
 Birth Date: 6 May 1986  
 Last Location: KANPUR  
 House Name:  
 Tattoo:  
 Tag/Band:



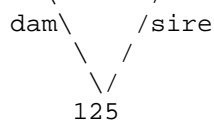
+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 125  
 =====

UNK UNK



Sex: Female  
 Birth Date: ????  
 Last Location: BANNERGHA  
 House Name:  
 Tattoo:  
 Tag/Band:



=====  
Taxon Name: MACACA SILENUS Studbook Number: 126  
=====

WILD

WILD

dam \ /sire  
126

Sex: Male  
Birth Date: ~ 1987  
Last Location: TRIVANDRU  
House Name: GANESH  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 127  
=====

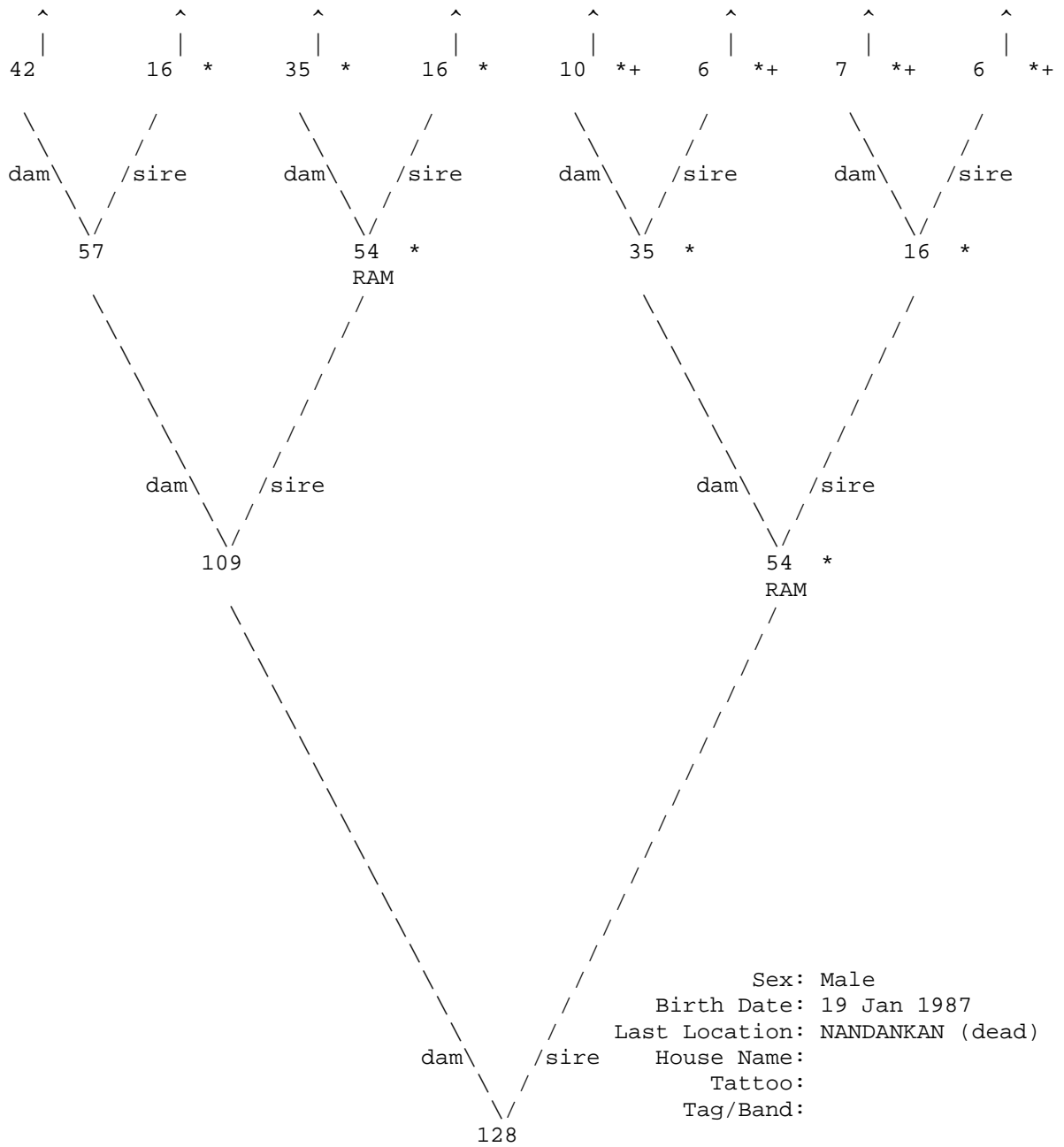
WILD

WILD

dam \ /sire  
127

Sex: Female  
Birth Date: ~ 1987  
Last Location: TRIVANDRU  
House Name: GUNJAN  
Tattoo:  
Tag/Band:

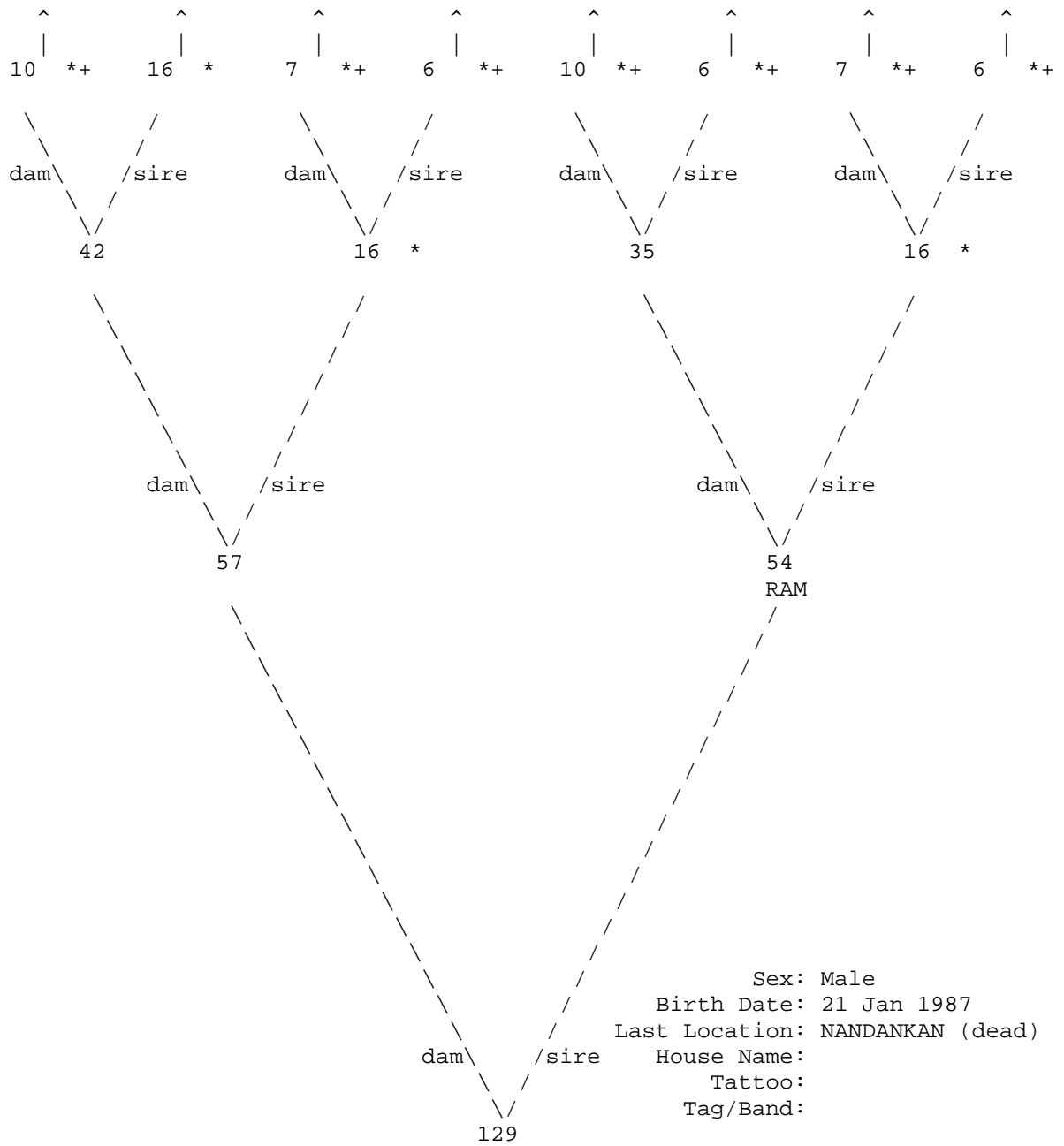
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 128  
 =====



Sex: Male  
 Birth Date: 19 Jan 1987  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

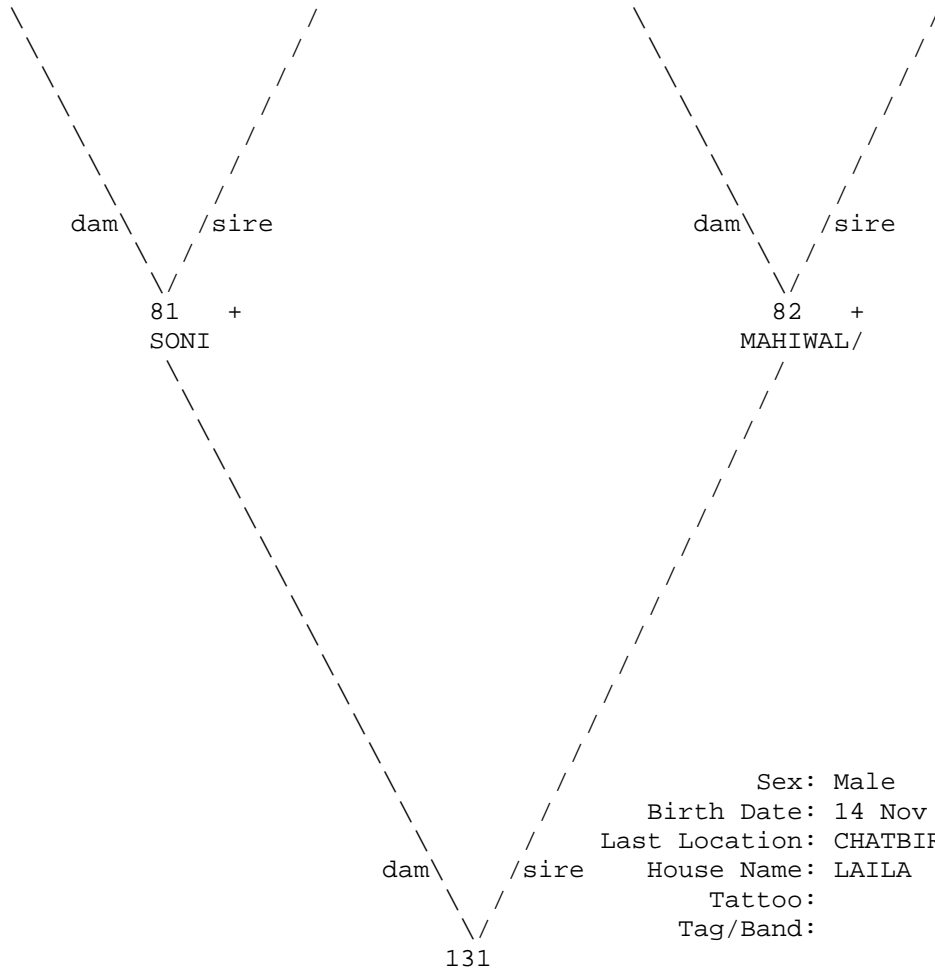
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 129  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

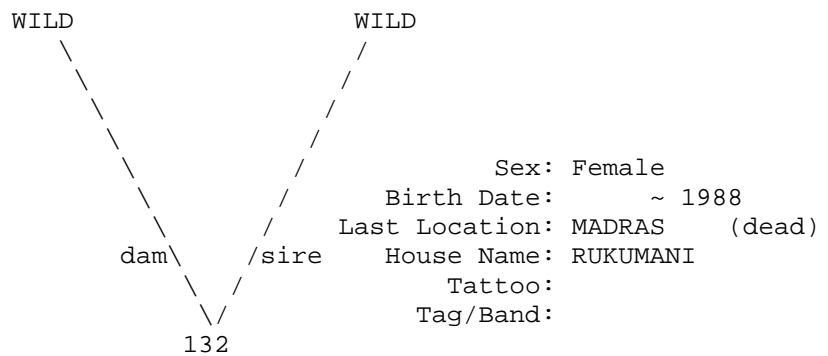
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 131  
 =====

WILDP2\*                      WILDP1\*                      WILDP2\*                      WILDP1\*



+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 132  
 =====



=====  
Taxon Name: MACACA SILENUS Studbook Number: 133  
=====

WILD

WILD

dam \ /  
133

Sex: Male  
Birth Date: ~ 1988  
Last Location: GUINDY (dead)  
House Name: RAMU  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 134  
=====

WILD

WILD

dam \ /  
134

Sex: Male  
Birth Date: ~ 1988  
Last Location: TRIVANDRU  
House Name: RANJAN  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 135  
=====

WILD

WILD

dam \

/sire

104 +  
JAYA

WILD

dam \

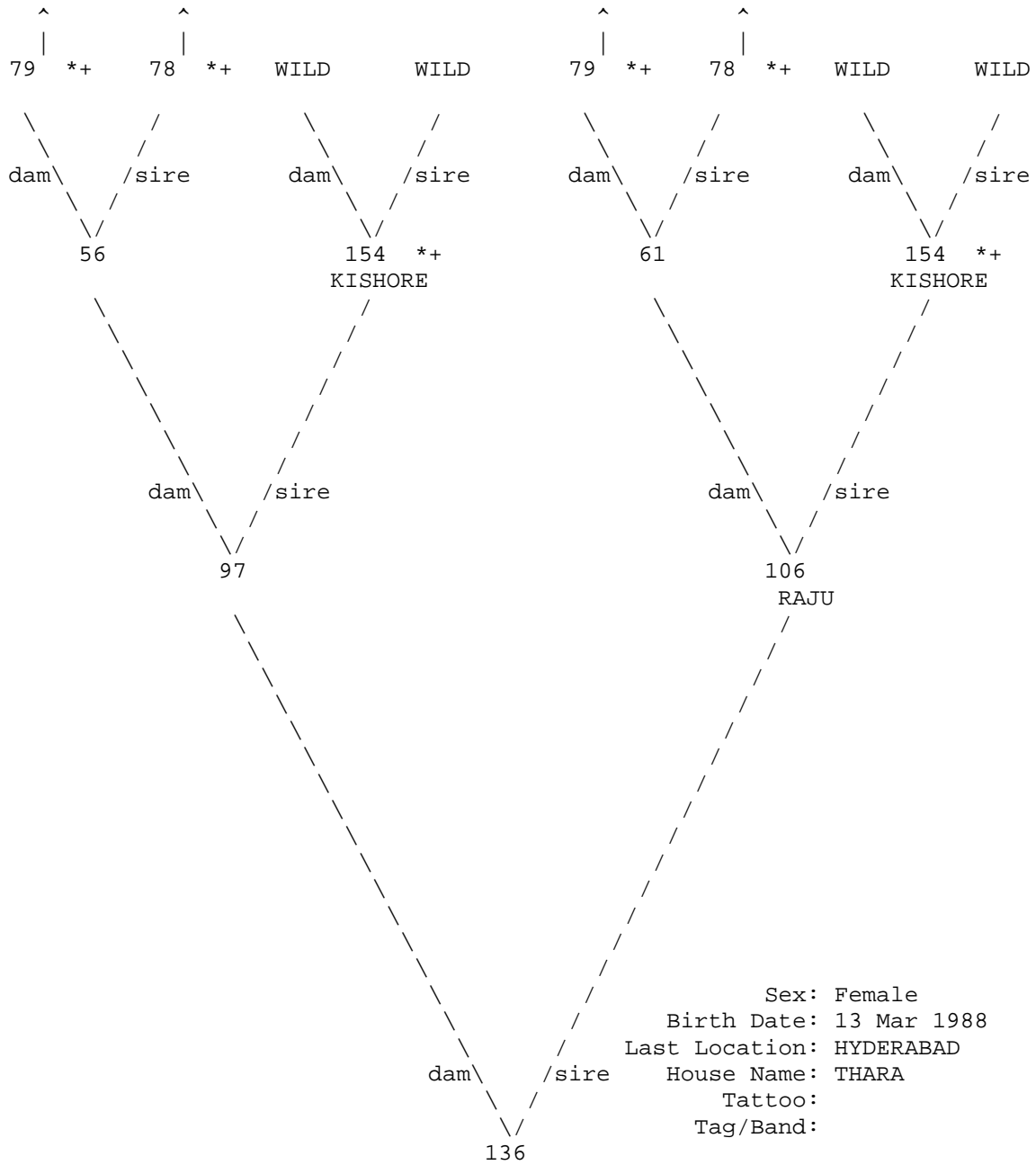
/sire

135

Sex: Female  
Birth Date: 31 Jan 1988  
Last Location: ASSAM  
House Name: MUNI  
Tattoo:  
Tag/Band:

+ Wild-caught...

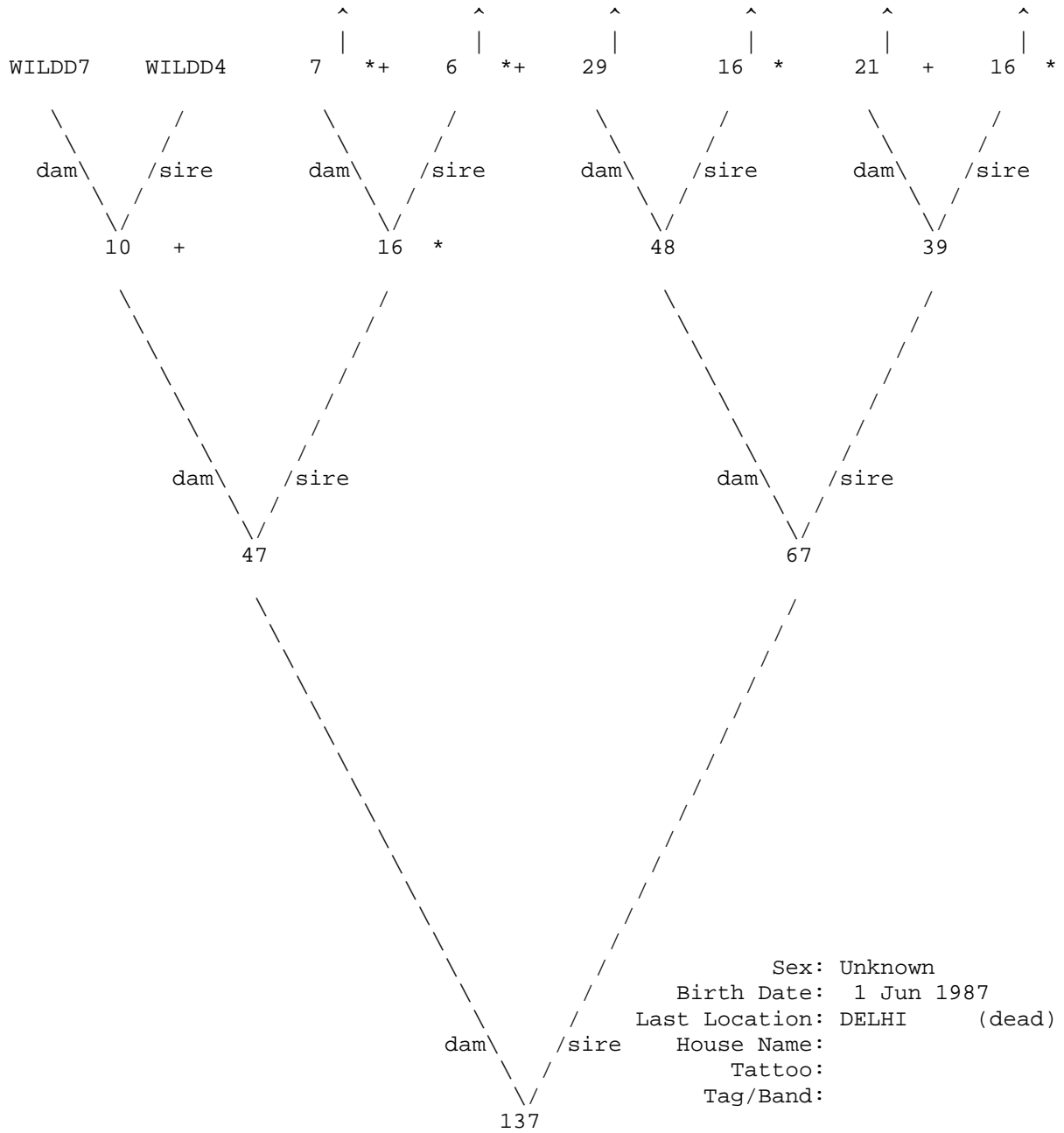
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 136  
 =====



Sex: Female  
 Birth Date: 13 Mar 1988  
 Last Location: HYDERABAD  
 House Name: THARA  
 Tattoo:  
 Tag/Band:

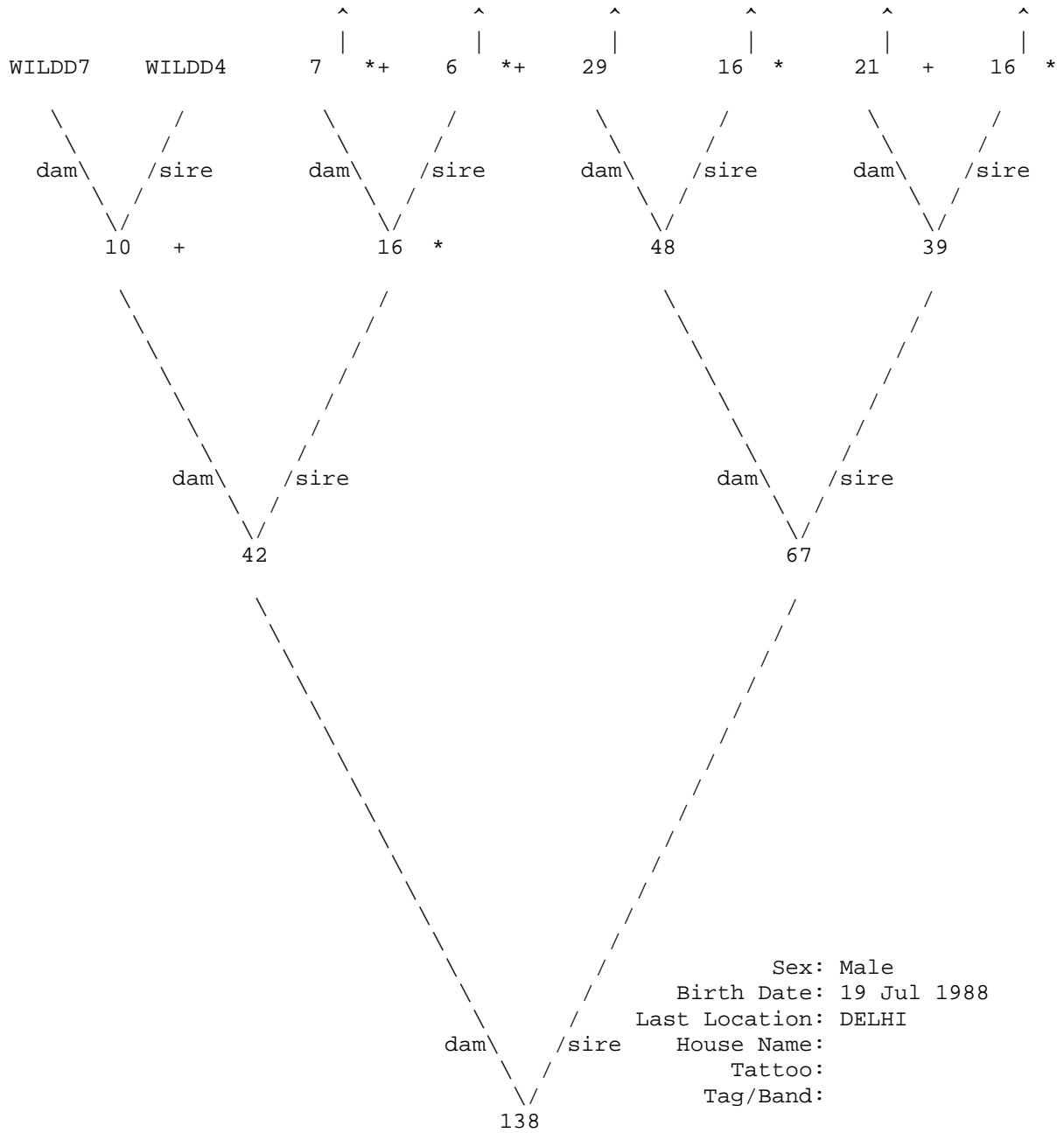
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 137  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

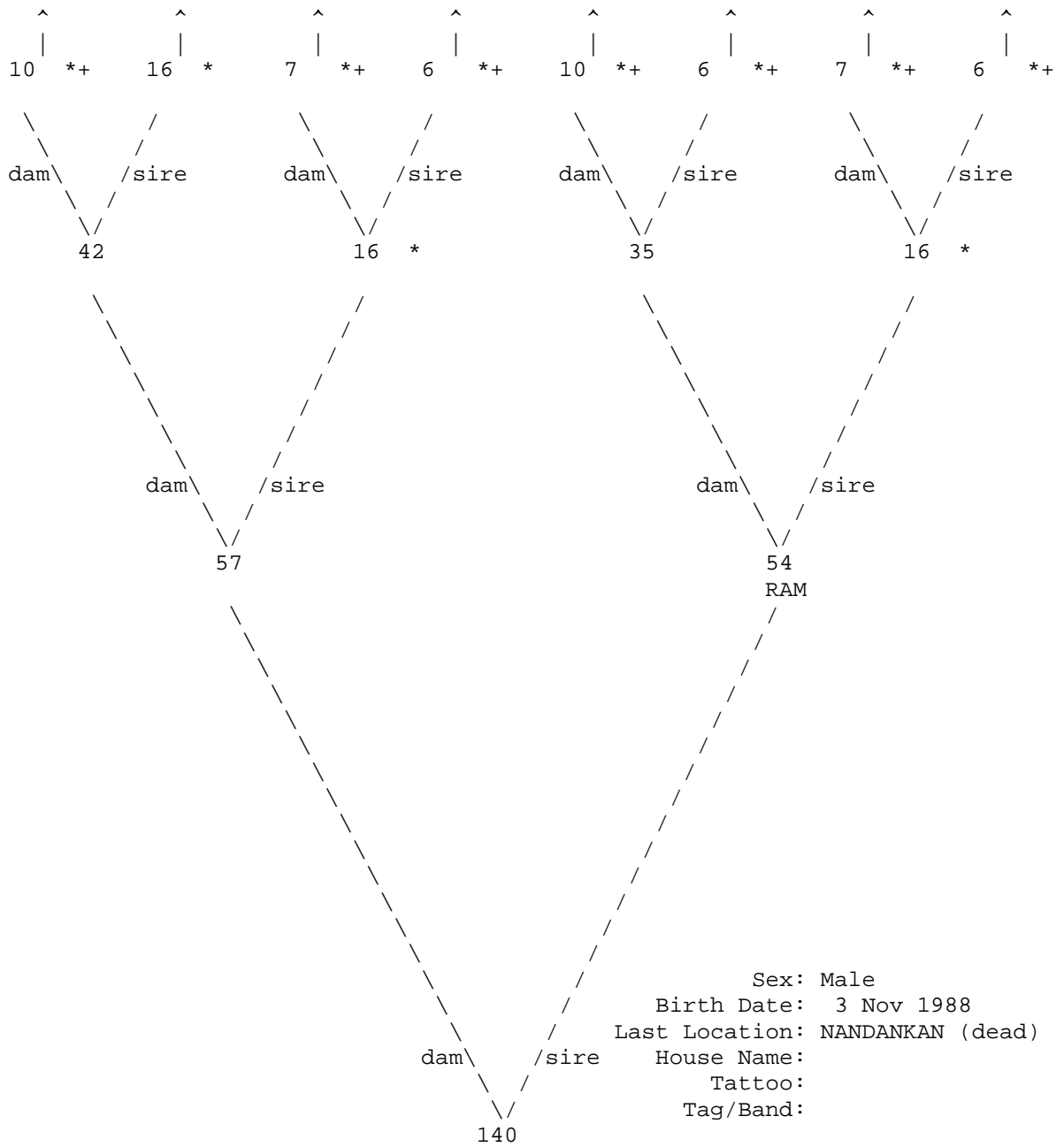
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 138  
 =====



Sex: Male  
 Birth Date: 19 Jul 1988  
 Last Location: DELHI  
 House Name:  
 Tattoo:  
 Tag/Band:

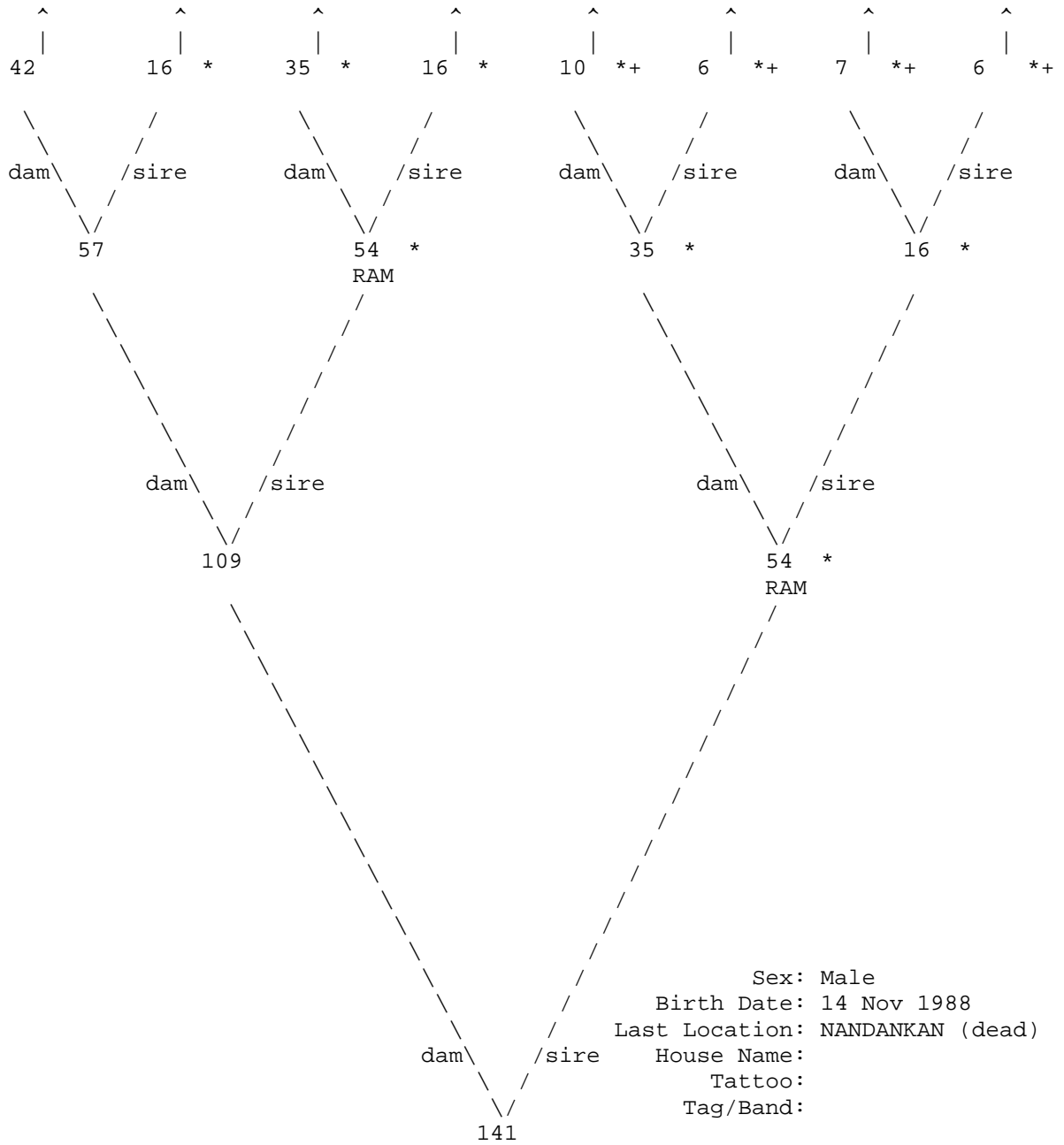
+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 140  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

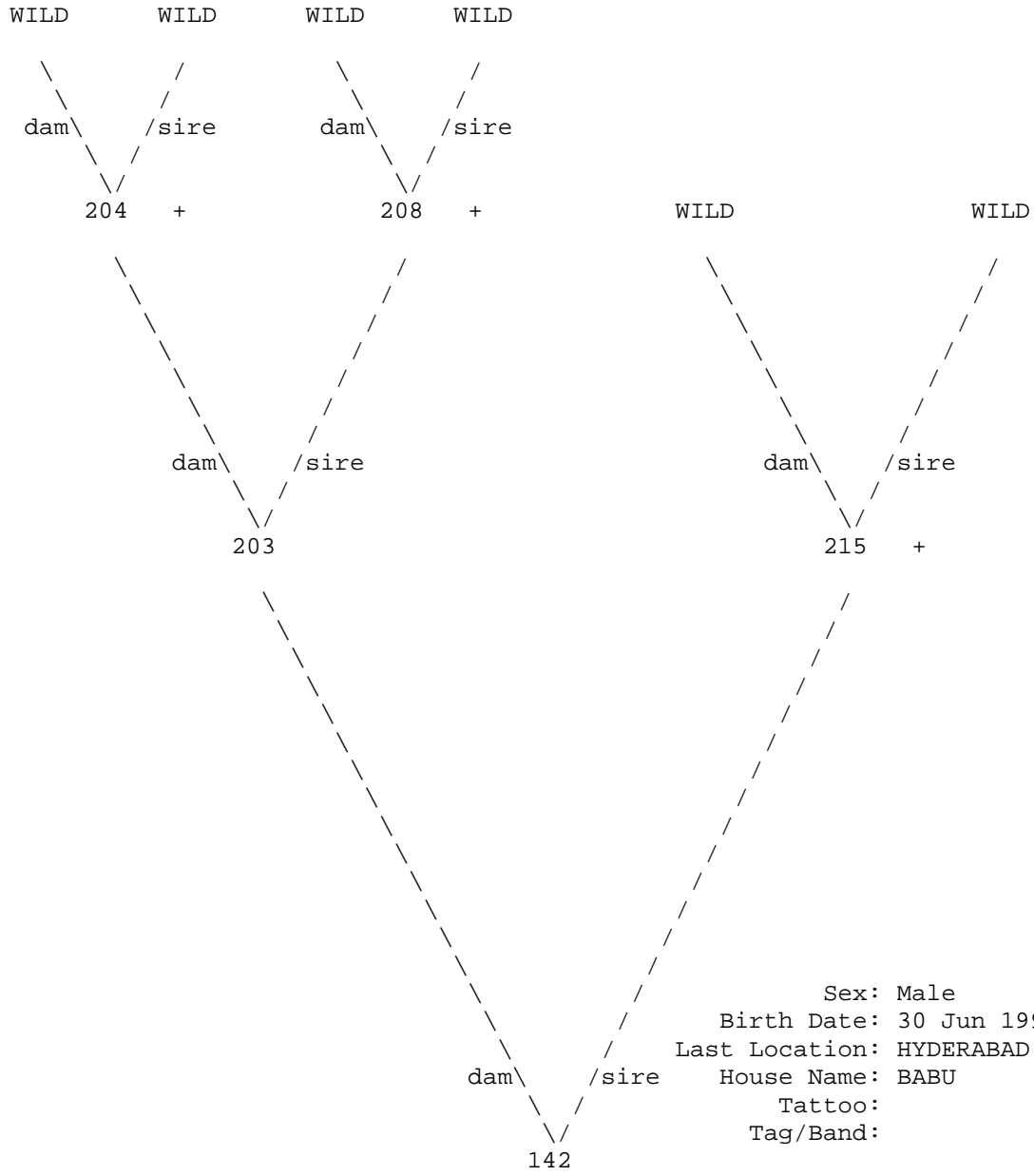
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 141  
 =====



Sex: Male  
 Birth Date: 14 Nov 1988  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

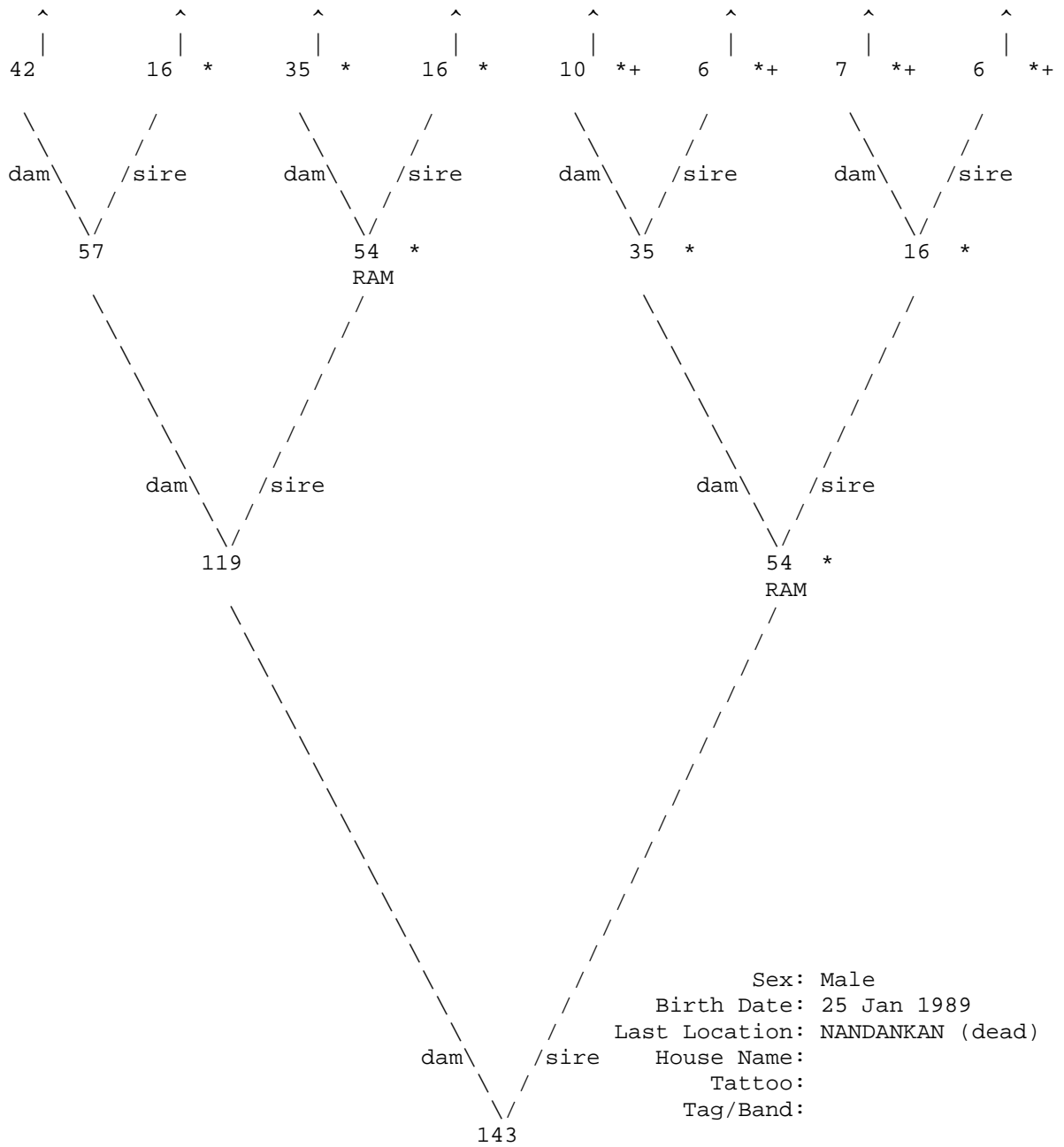
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 142  
 =====



Sex: Male  
 Birth Date: 30 Jun 1990  
 Last Location: HYDERABAD  
 House Name: BABU  
 Tattoo:  
 Tag/Band:

+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 143  
 =====



Sex: Male  
 Birth Date: 25 Jan 1989  
 Last Location: NANDANKAN (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 145  
=====

UNK

UNK

dam \ /sire  
145

Sex: Female  
Birth Date: ????  
Last Location: RANGOON  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 146  
=====

UNK

UNK

dam \ /sire  
146

Sex: Female  
Birth Date: ????  
Last Location: KUALA LUM  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 148  
=====

WILD

WILD

dam \ / sire  
148

Sex: Female  
Birth Date: ????  
Last Location: MADRAS  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 154  
=====

WILD

WILD

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154

Sex: Male  
Birth Date: ~ 1975  
Last Location: MADRAS  
House Name: KISHORE IN TRIV  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 159  
=====

WILD

WILD

dam \ /sire  
159

Sex: Male  
Birth Date: ????  
Last Location: MYSORE  
House Name: MANJA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 160  
=====

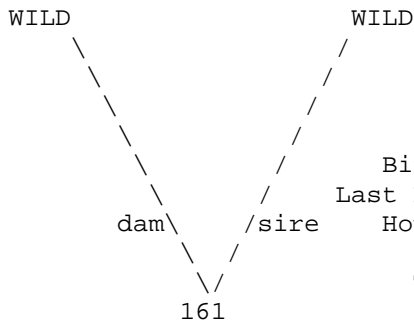
WILD

WILD

dam \ /sire  
160

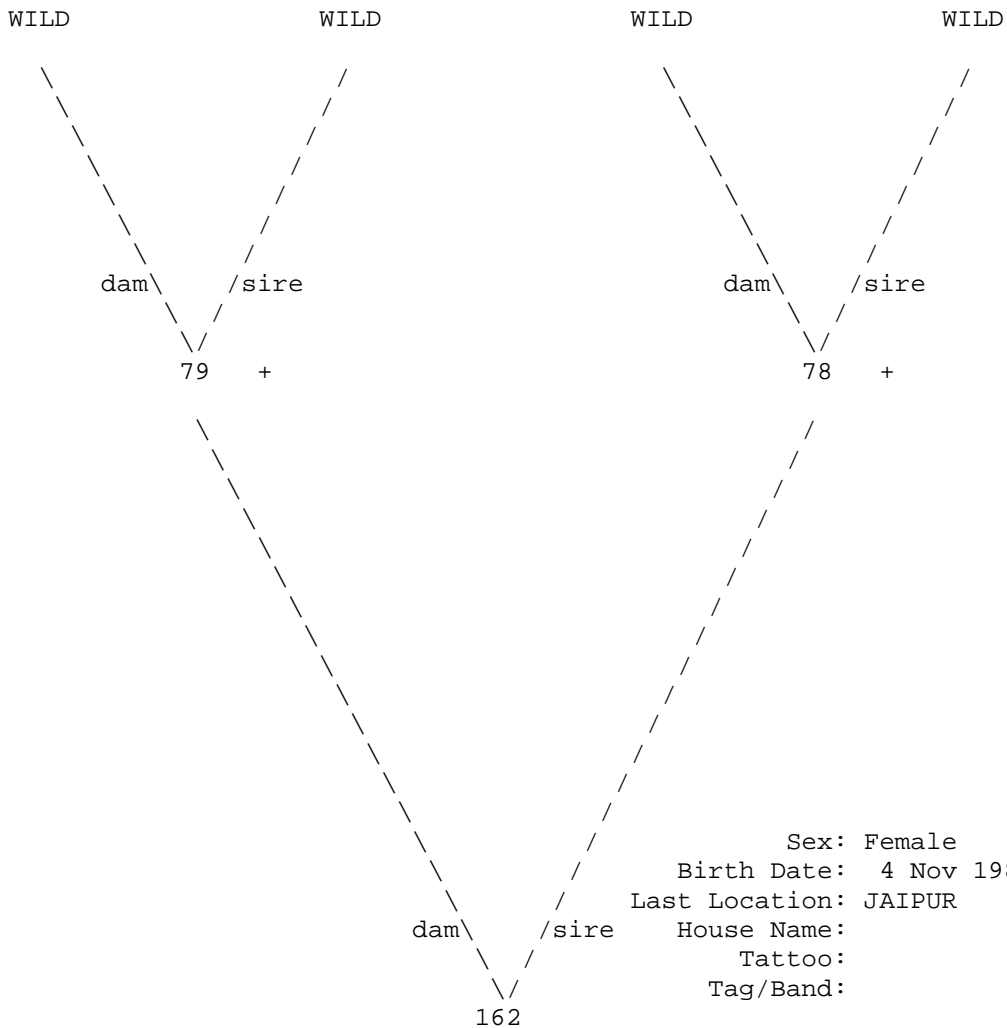
Sex: Female  
Birth Date: ????  
Last Location: TRIVANDRU (dead)  
House Name: LEENA  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 161  
 =====



Sex: Female  
 Birth Date: ~ 1980  
 Last Location: TORONTO (dead)  
 House Name: SITA  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 162  
 =====

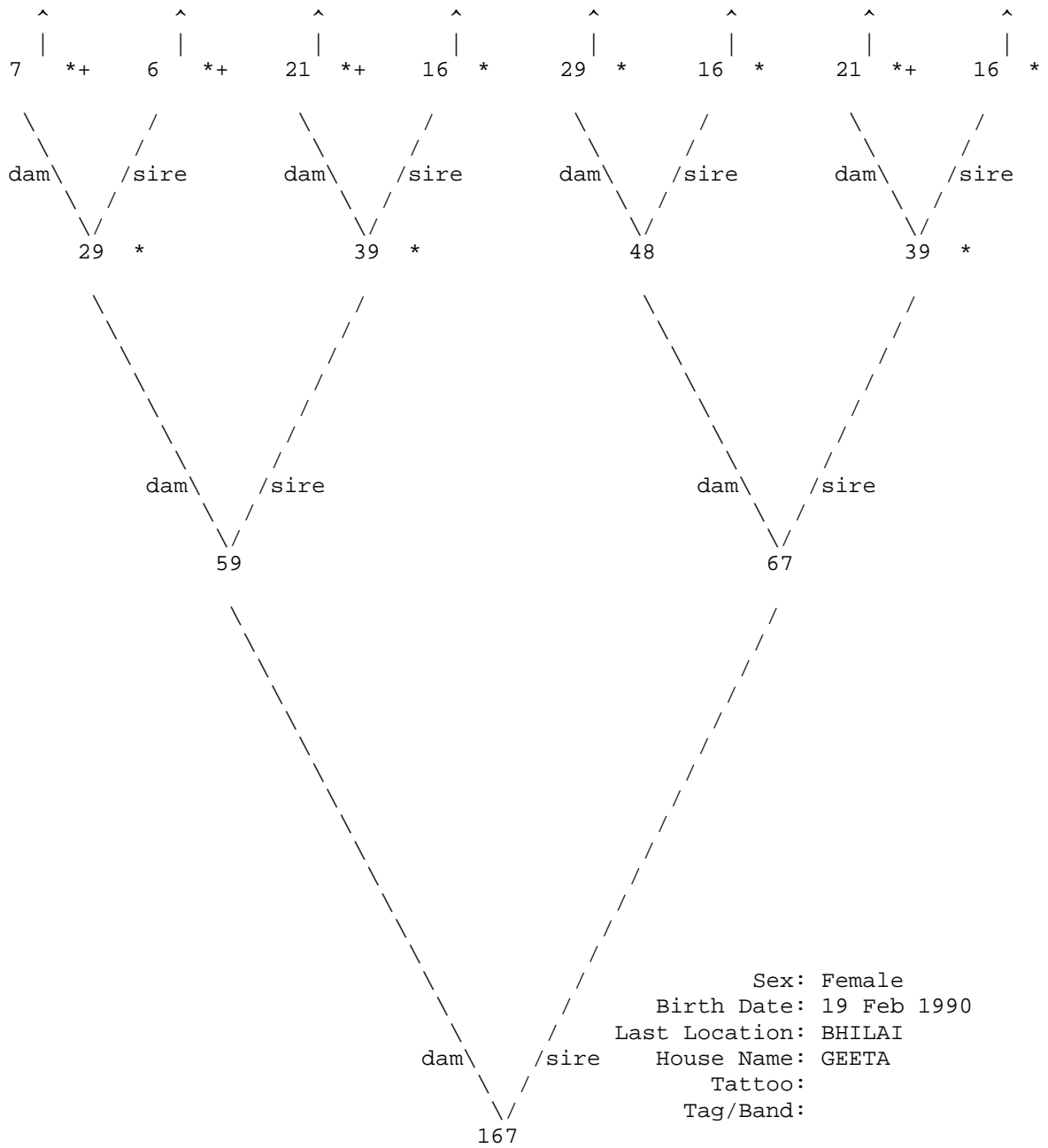


Sex: Female  
 Birth Date: 4 Nov 1988  
 Last Location: JAIPUR (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught...



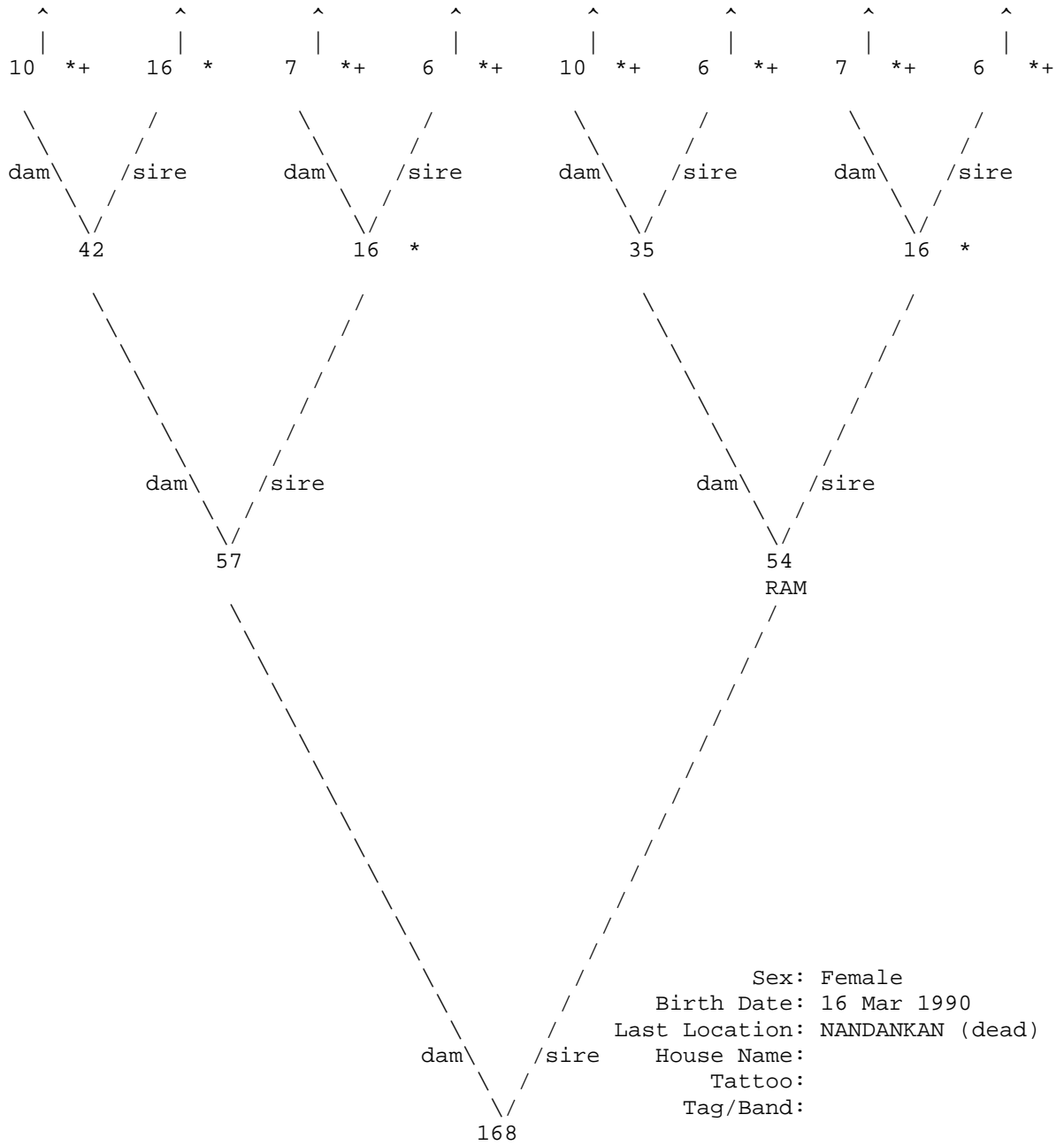
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 167  
 =====



Sex: Female  
 Birth Date: 19 Feb 1990  
 Last Location: BHILAI  
 House Name: GEETA  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

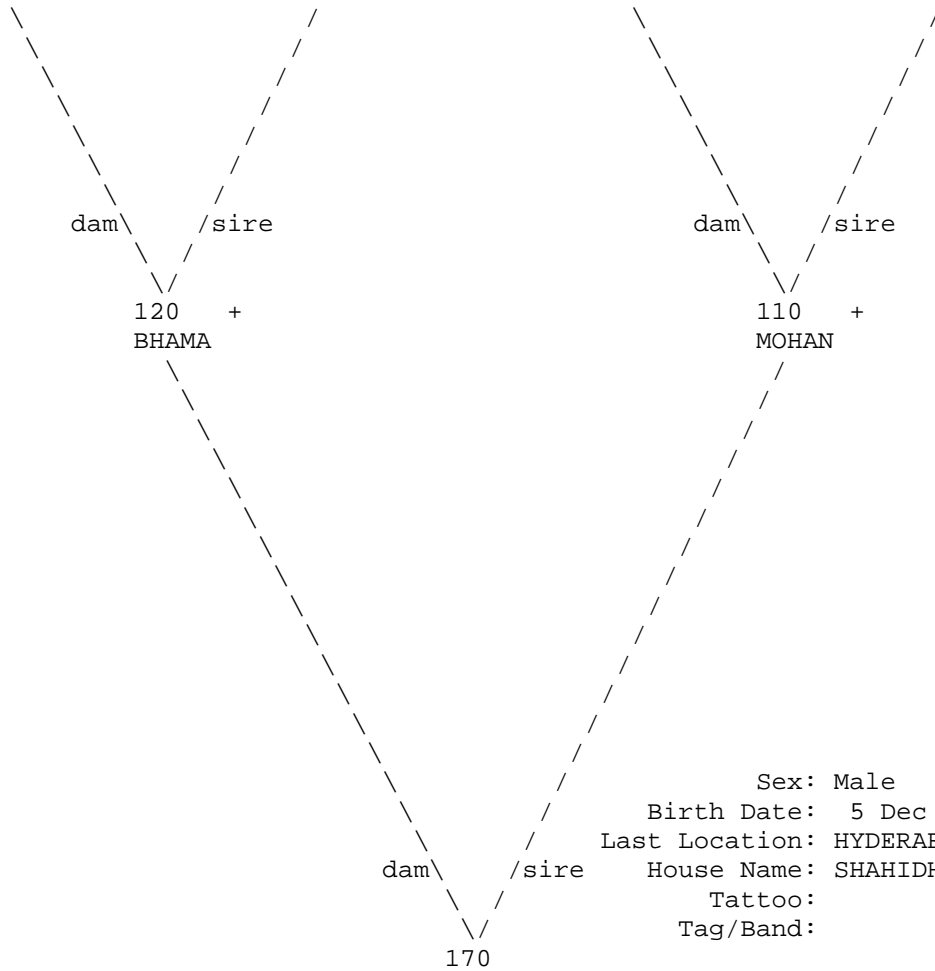
=====  
Taxon Name: MACACA SILENUS Studbook Number: 168  
=====



+ Wild-caught... \* Appear more than once...  
^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 170  
=====

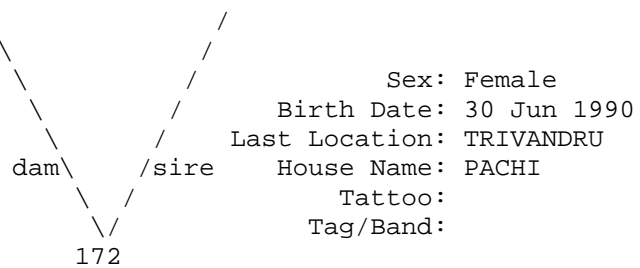
WILDM2\* WILDM1\* WILDM2\* WILDM1\*



+ Wild-caught... \* Appear more than once...

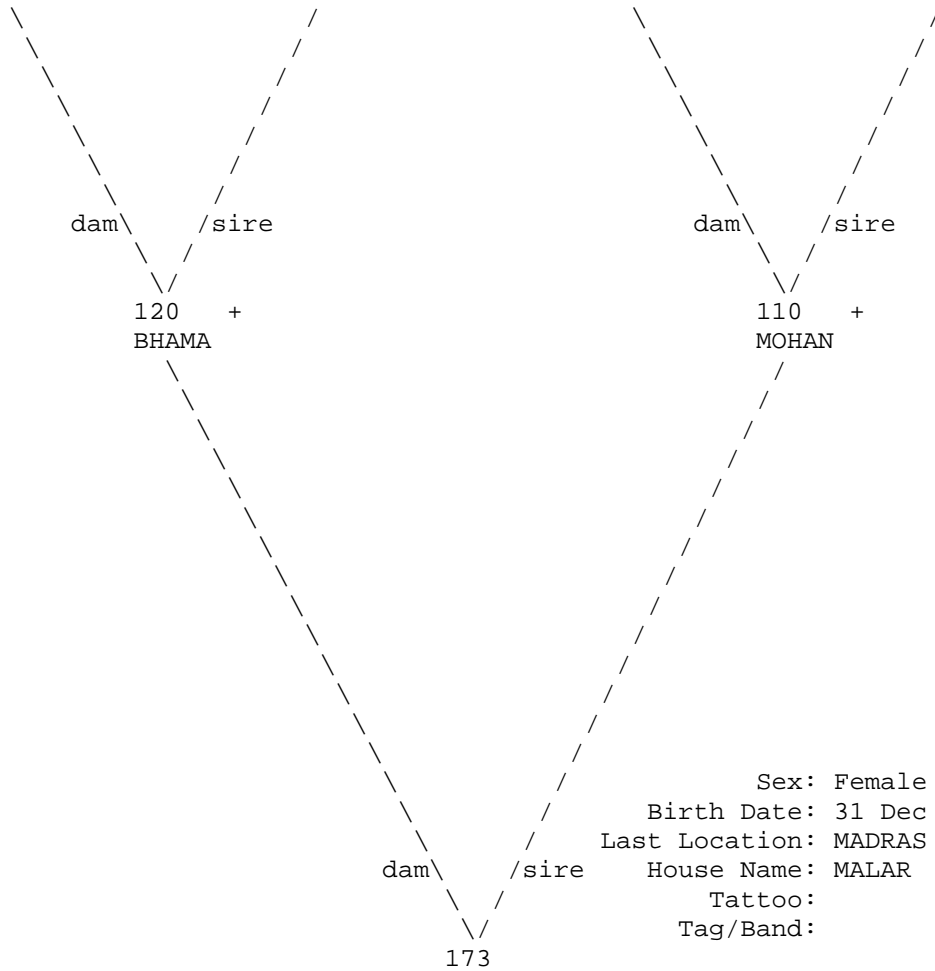
=====  
Taxon Name: MACACA SILENUS Studbook Number: 172  
=====

WILD WILD



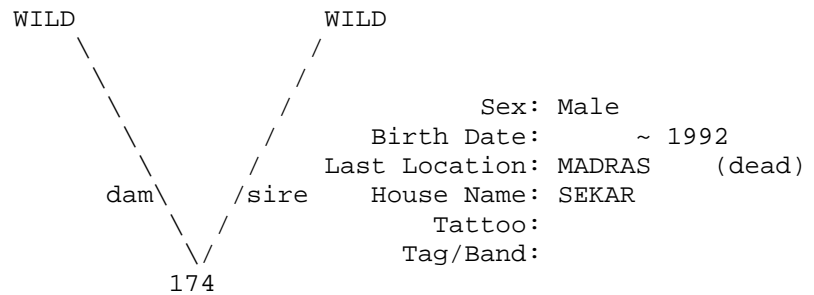
=====  
Taxon Name: MACACA SILENUS Studbook Number: 173  
=====

WILDM2\* WILDM1\* WILDM2\* WILDM1\*



+ Wild-caught... \* Appear more than once...

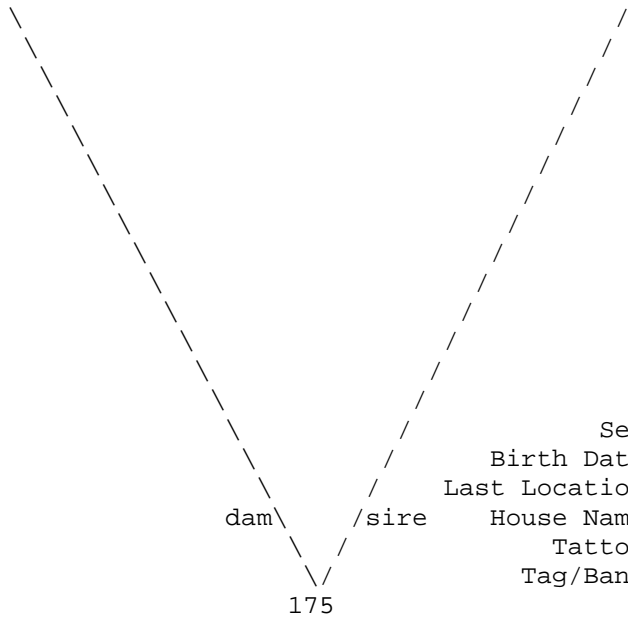
=====  
Taxon Name: MACACA SILENUS Studbook Number: 174  
=====



=====  
Taxon Name: MACACA SILENUS Studbook Number: 175  
=====

WILD

WILD

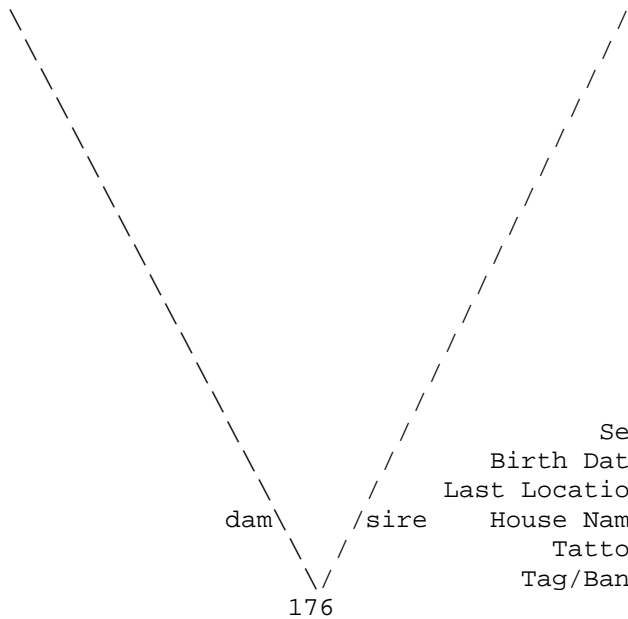


Sex: Female  
Birth Date: ~ 1990  
Last Location: MYSORE  
House Name: PRIYA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 176  
=====

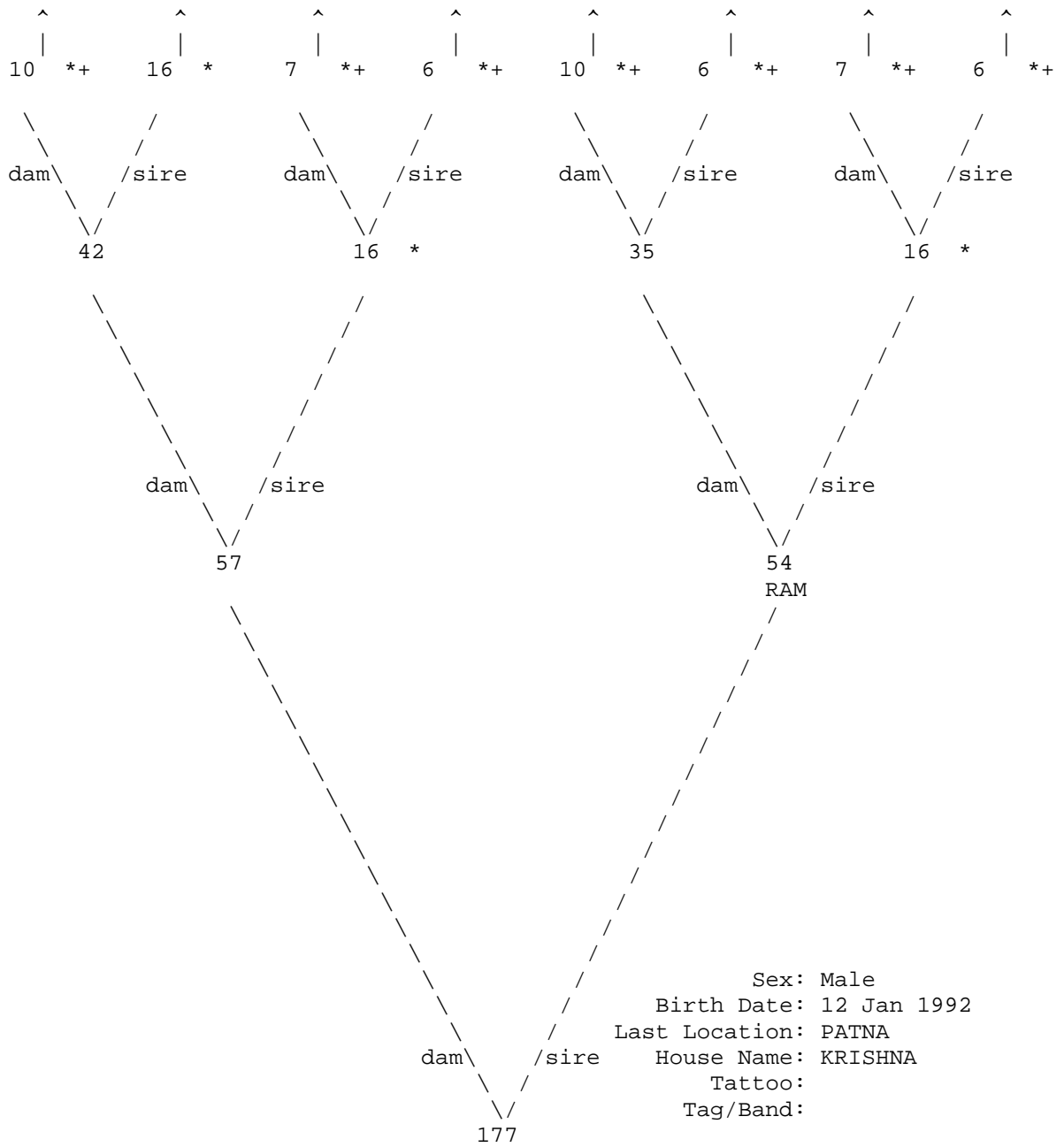
WILD

WILD



Sex: Male  
Birth Date: ~ 1990  
Last Location: MYSORE  
House Name: RAMA  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 177  
 =====

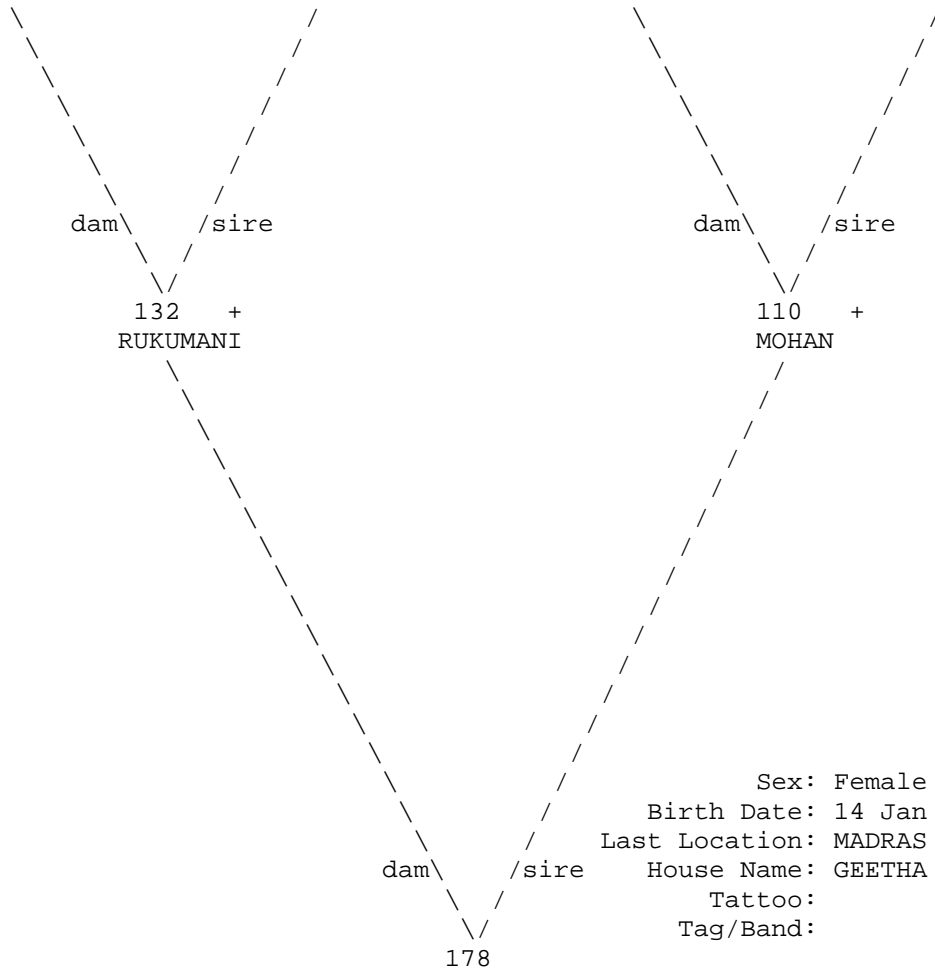


Sex: Male  
 Birth Date: 12 Jan 1992  
 Last Location: PATNA  
 House Name: KRISHNA  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

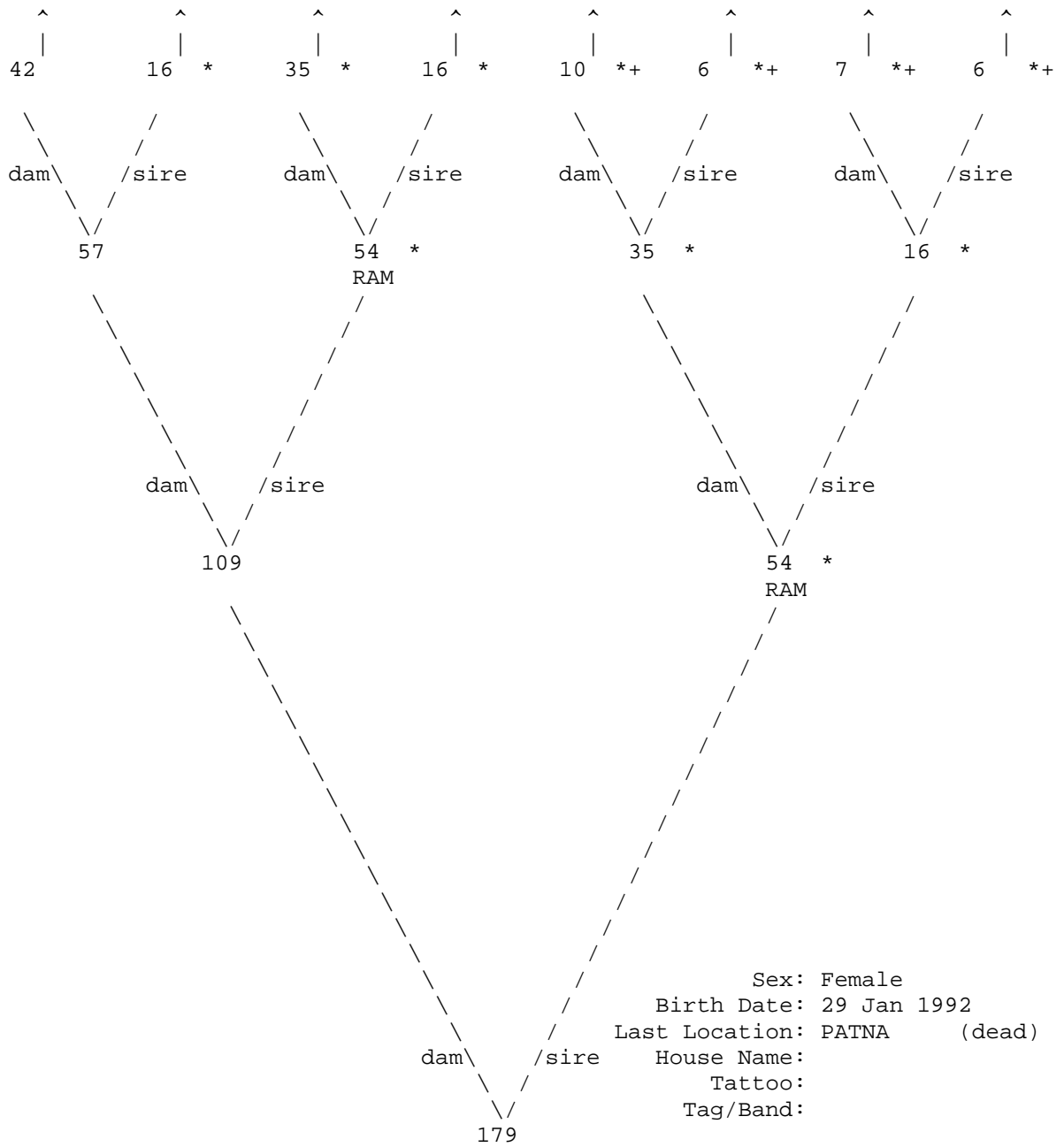
=====  
Taxon Name: MACACA SILENUS Studbook Number: 178  
=====

WILD WILD WILDM2 WILDM1



+ Wild-caught...

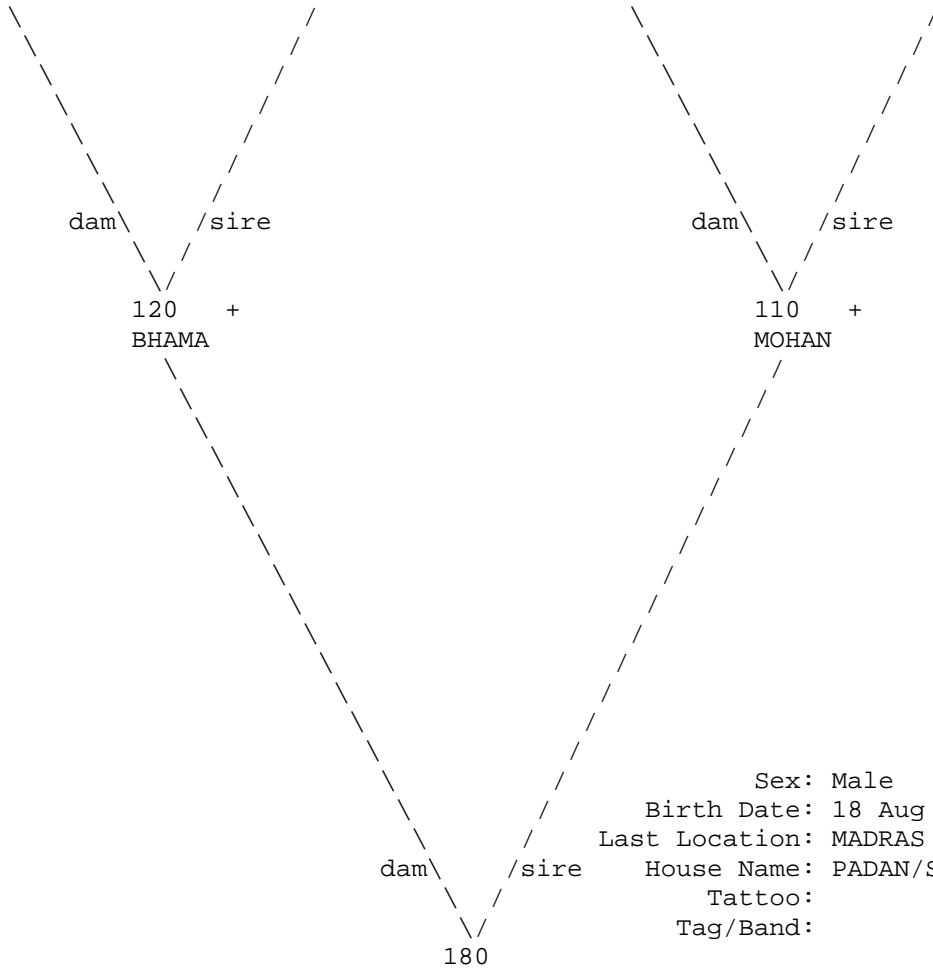
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 179  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 180  
=====

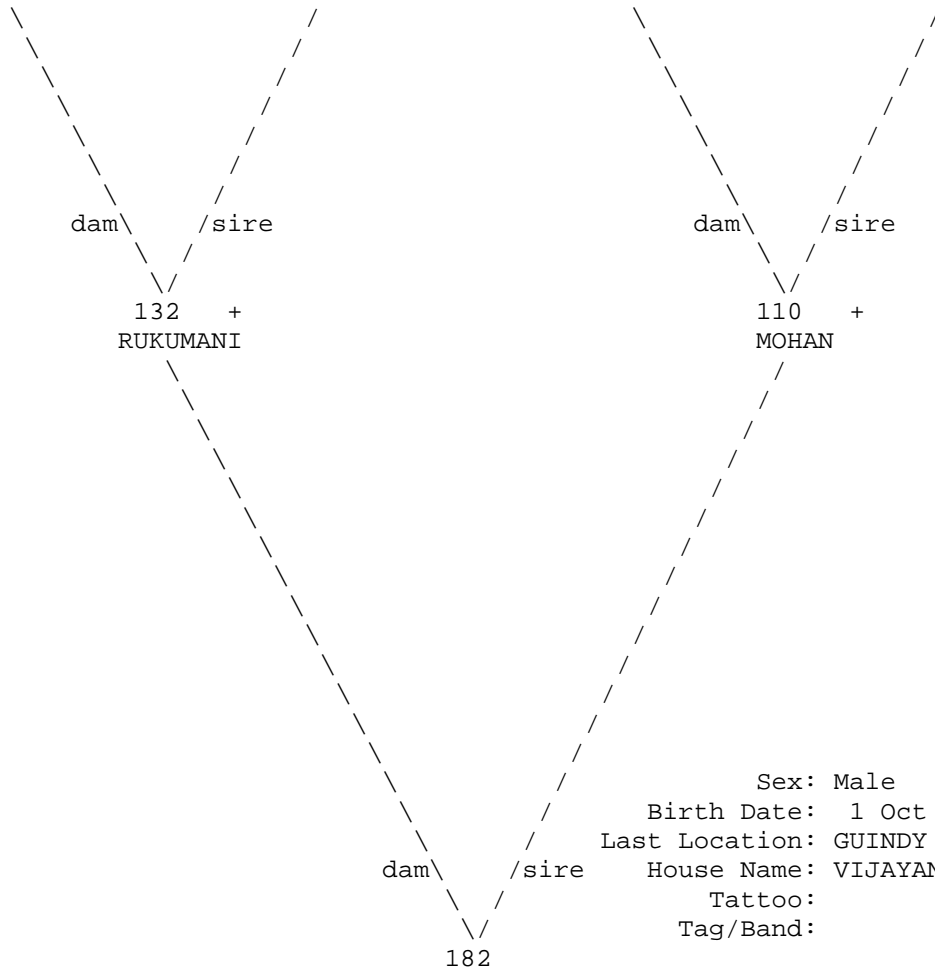
WILDM2\*                    WILDM1\*                    WILDM2\*                    WILDM1\*



+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 182  
=====

WILD WILD WILDM2 WILDM1

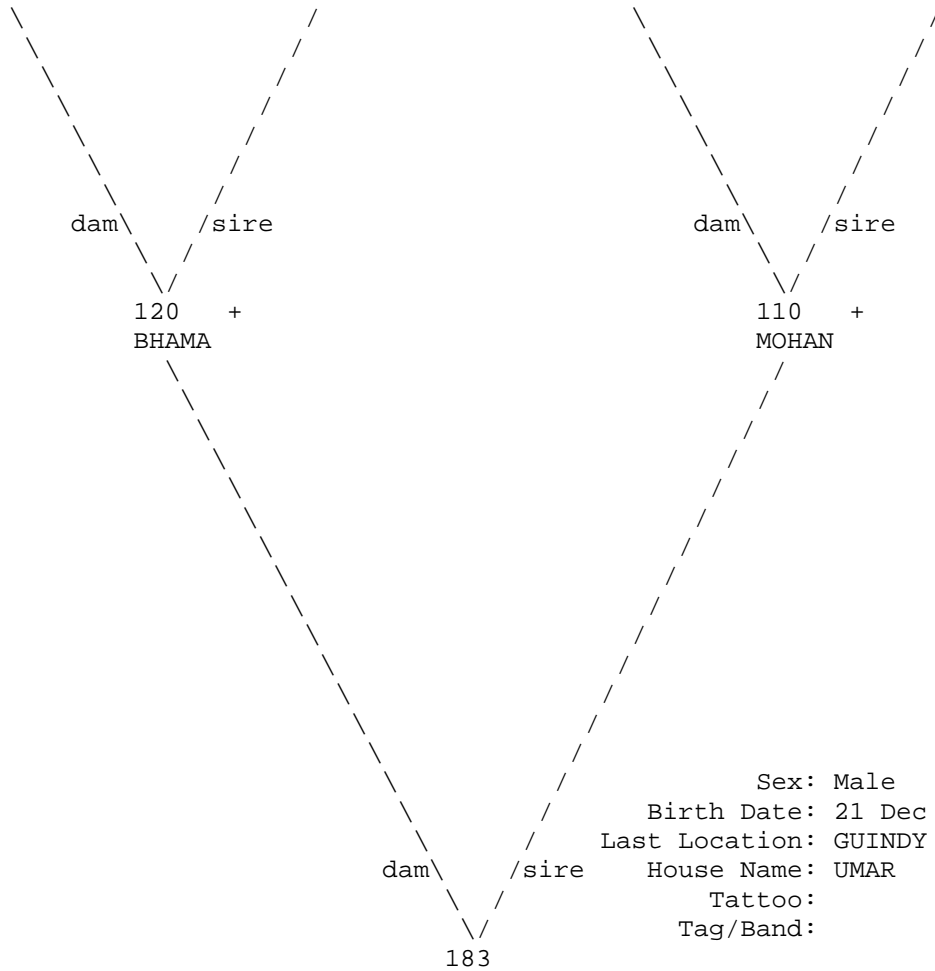


Sex: Male  
Birth Date: 1 Oct 1993  
Last Location: GUINDY  
House Name: VIJAYAN  
Tattoo:  
Tag/Band:

+ Wild-caught...

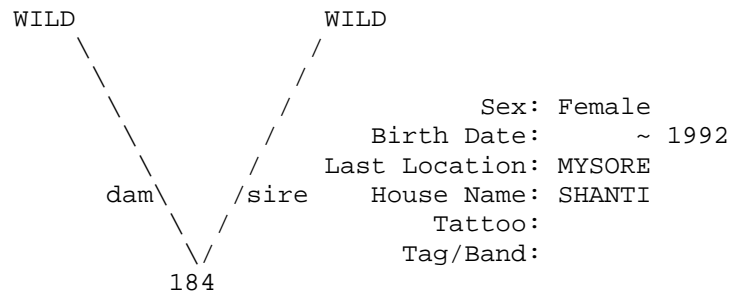
=====  
Taxon Name: MACACA SILENUS Studbook Number: 183  
=====

WILDM2\* WILDM1\* WILDM2\* WILDM1\*



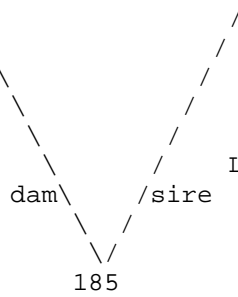
+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 184  
=====



=====  
 Taxon Name: MACACA SILENUS Studbook Number: 185  
 =====

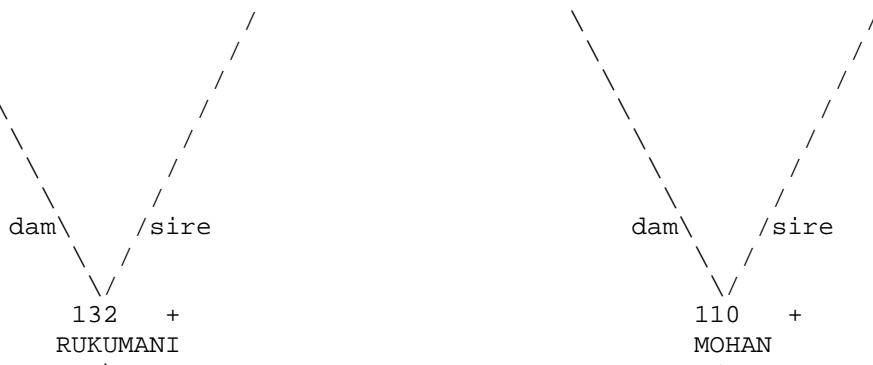
WILD WILD



Sex: Female  
 Birth Date: ~ 1994  
 Last Location: PARRAS  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 186  
 =====

WILD WILD WILDM2 WILDM1

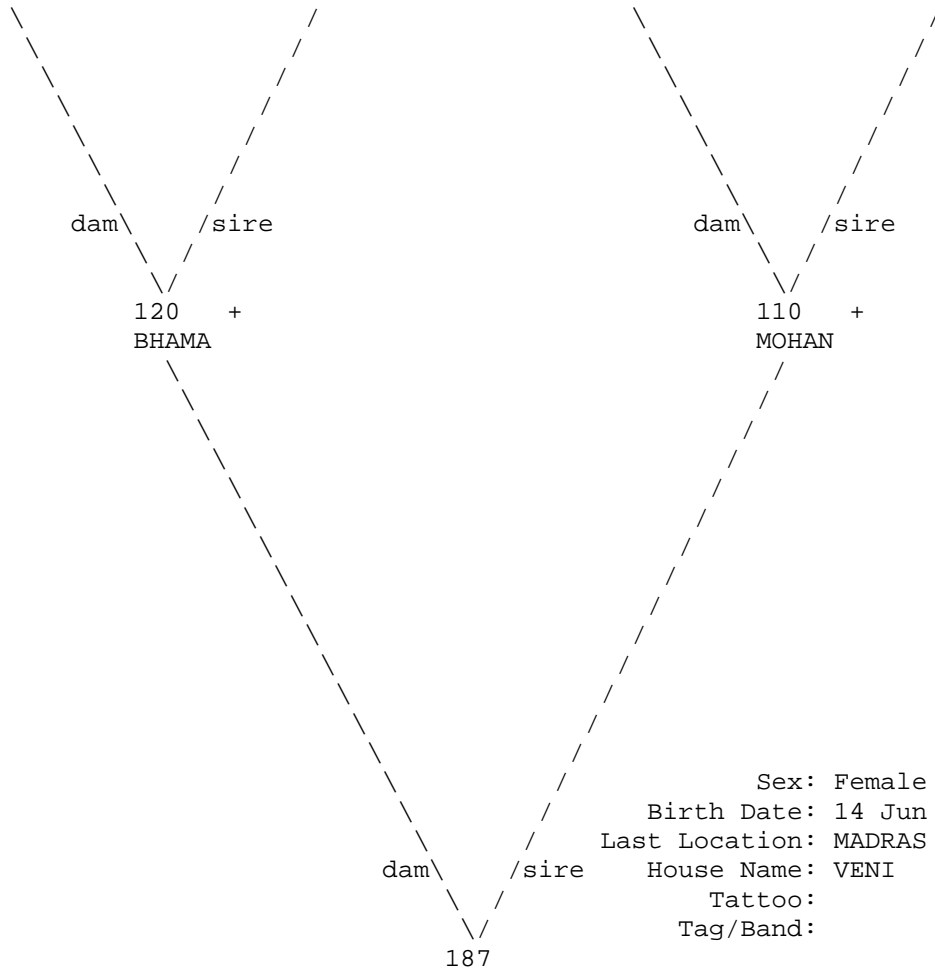


Sex: Male  
 Birth Date: 4 Jan 1995  
 Last Location: TRIVANDRU  
 House Name: SEENU  
 Tattoo:  
 Tag/Band:

+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 187  
=====

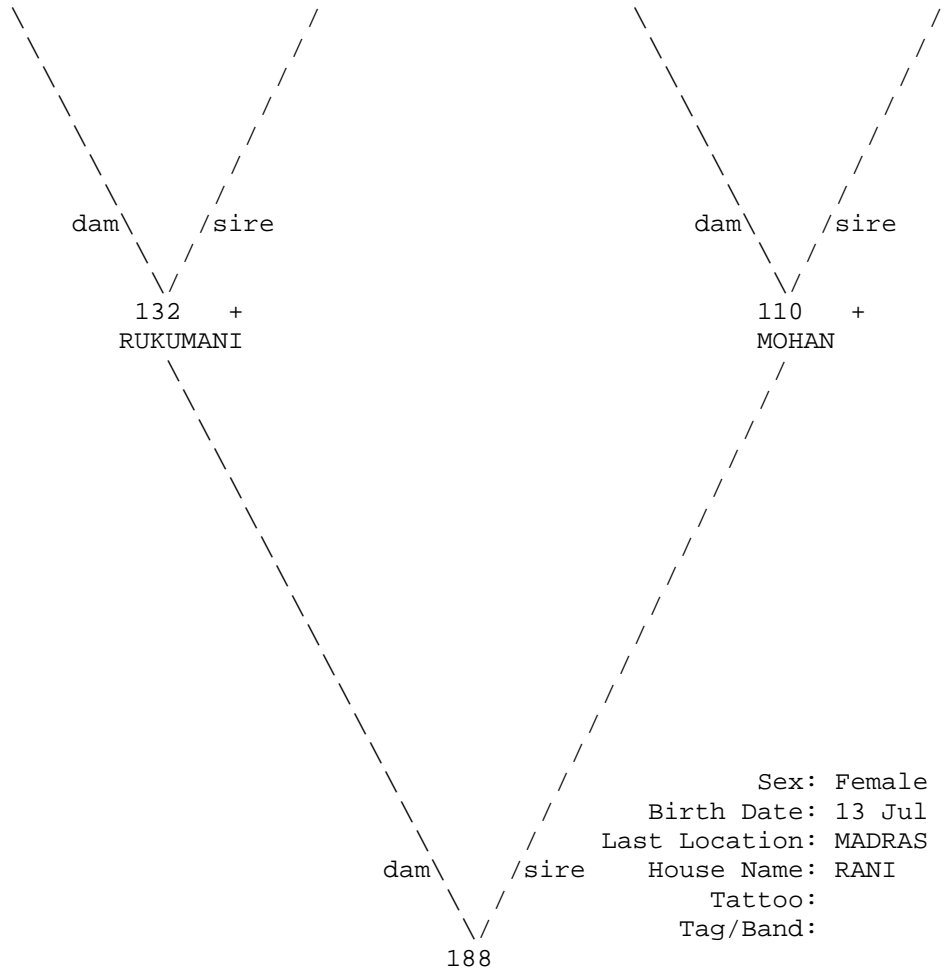
WILDM2\* WILDM1\* WILDM2\* WILDM1\*



+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 188  
 =====

WILD WILD WILDM2 WILDM1

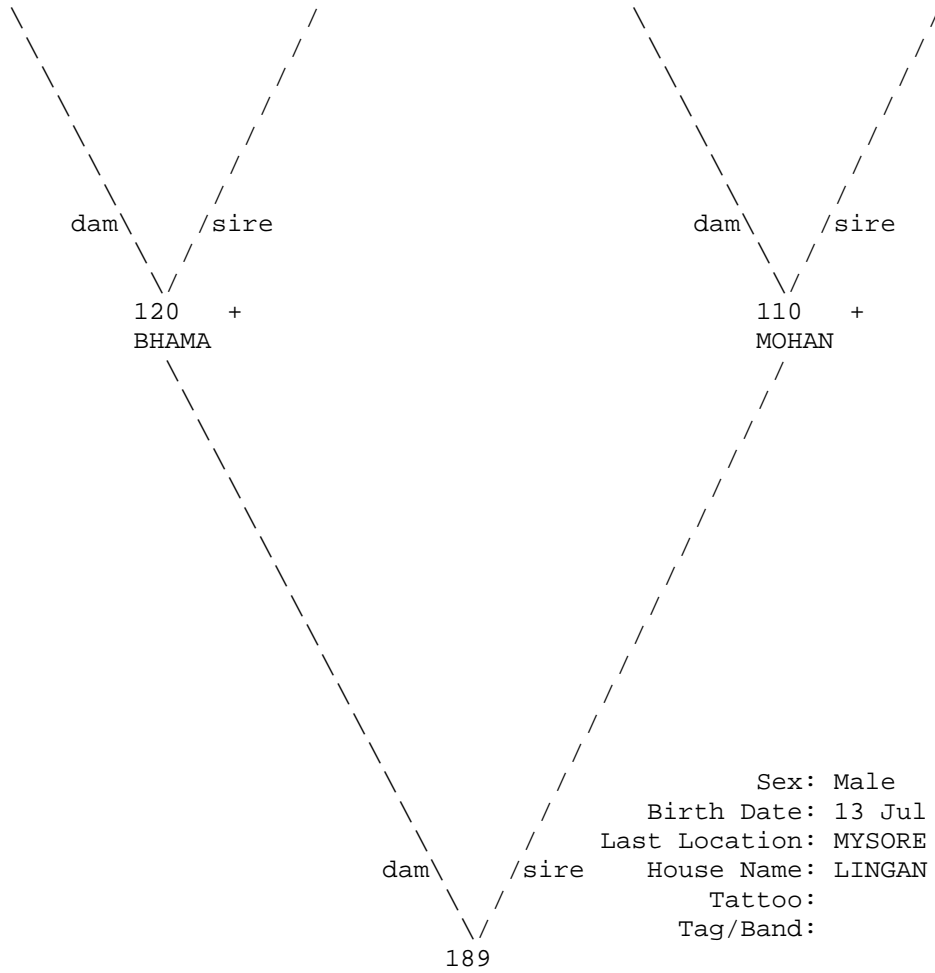


Sex: Female  
 Birth Date: 13 Jul 1996  
 Last Location: MADRAS (dead)  
 House Name: RANI  
 Tattoo:  
 Tag/Band:

+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 189  
=====

WILDM2\*                      WILDM1\*                      WILDM2\*                      WILDM1\*

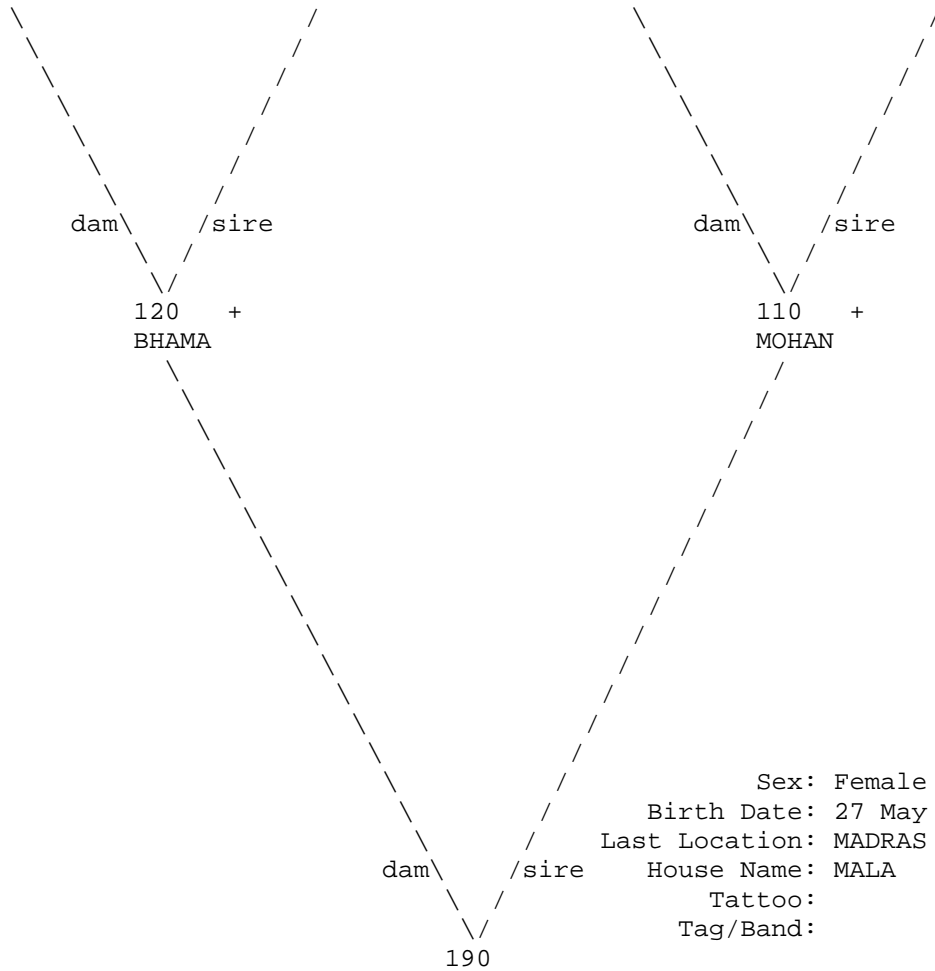


Sex: Male  
Birth Date: 13 Jul 1996  
Last Location: MYSORE  
House Name: LINGAN  
Tattoo:  
Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 190  
=====

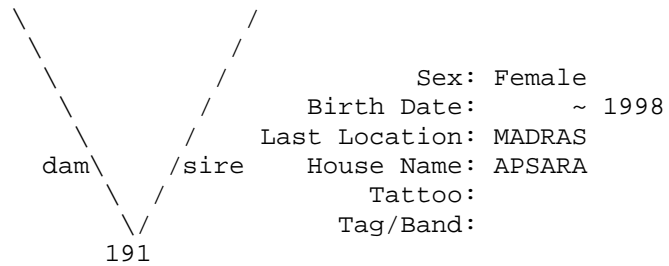
WILDM2\* WILDM1\* WILDM2\* WILDM1\*



+ Wild-caught... \* Appear more than once...

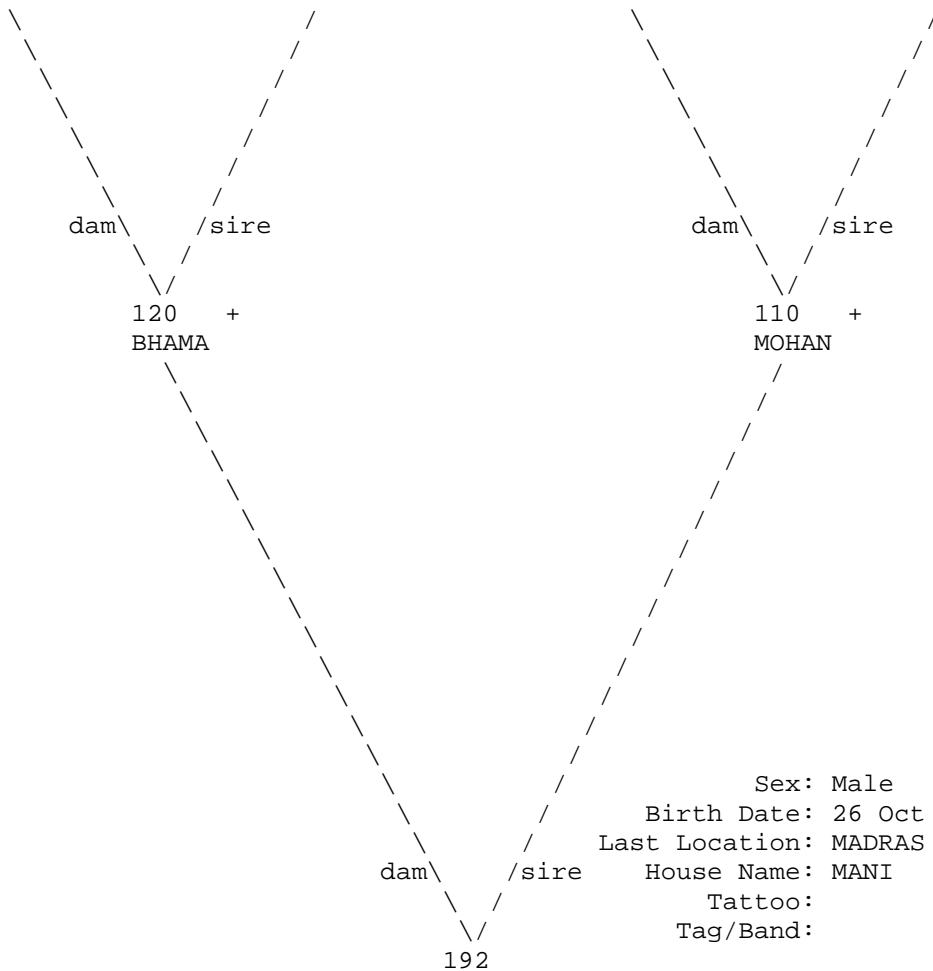
=====  
Taxon Name: MACACA SILENUS Studbook Number: 191  
=====

WILD WILD



=====  
 Taxon Name: MACACA SILENUS Studbook Number: 192  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\*

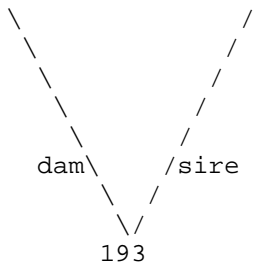


Sex: Male  
 Birth Date: 26 Oct 1999  
 Last Location: MADRAS (dead)  
 House Name: MANI  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 193  
 =====

UNK UNK

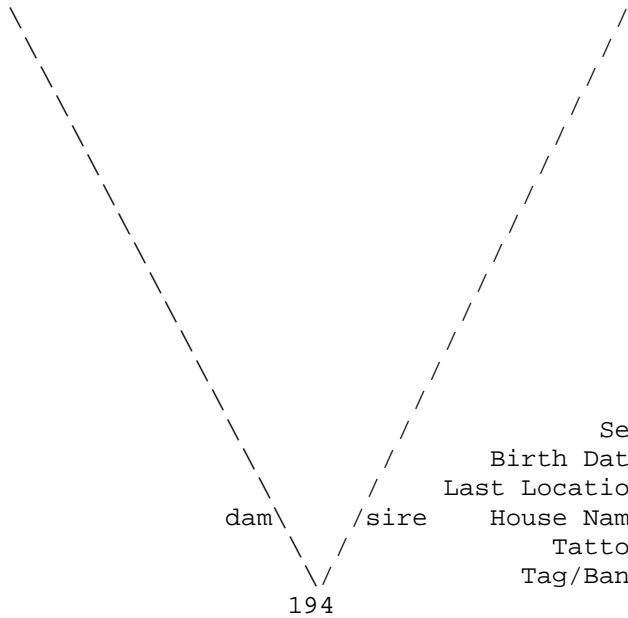


Sex: Female  
 Birth Date: ????  
 Last Location: CHATBIR Z  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 194  
=====

WILD

WILD

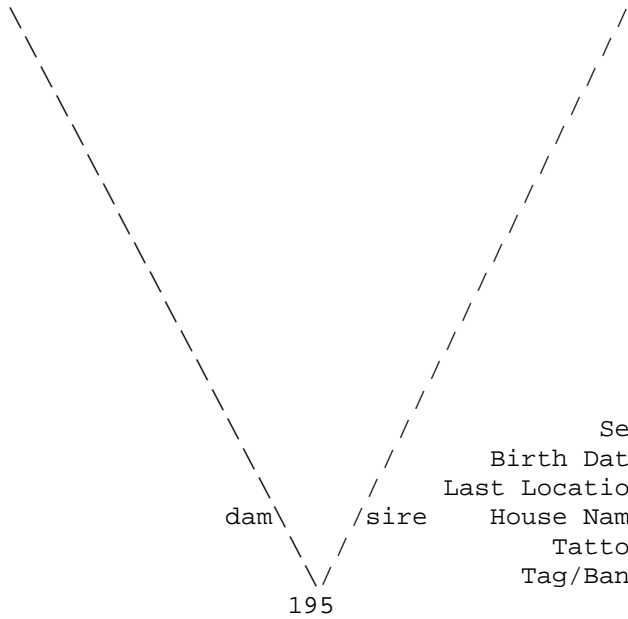


Sex: Male  
Birth Date: ????  
Last Location: CALCUTTA  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 195  
=====

WILD

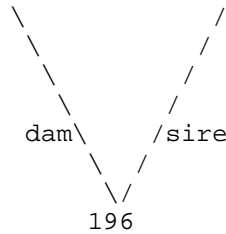
WILD



Sex: Female  
Birth Date: ????  
Last Location: CALCUTTA  
House Name:  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 196  
 =====

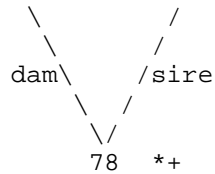
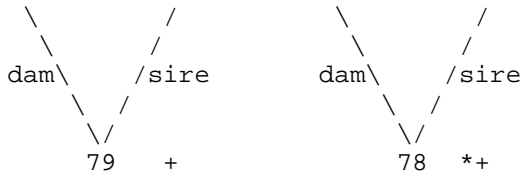
WILD WILD



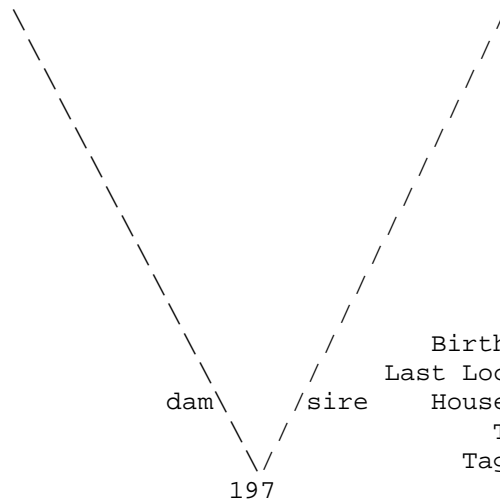
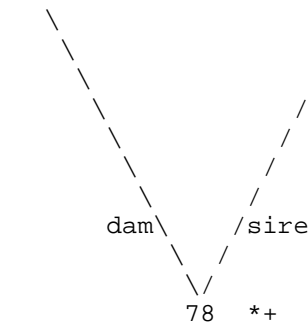
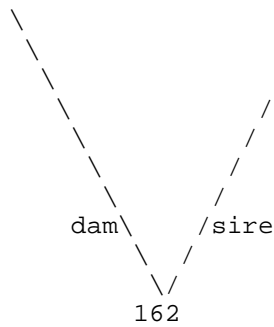
Sex: Male  
 Birth Date: ~ 1980  
 Last Location: VOC PKZOO  
 House Name:  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 197  
 =====

WILD WILD WILD WILD



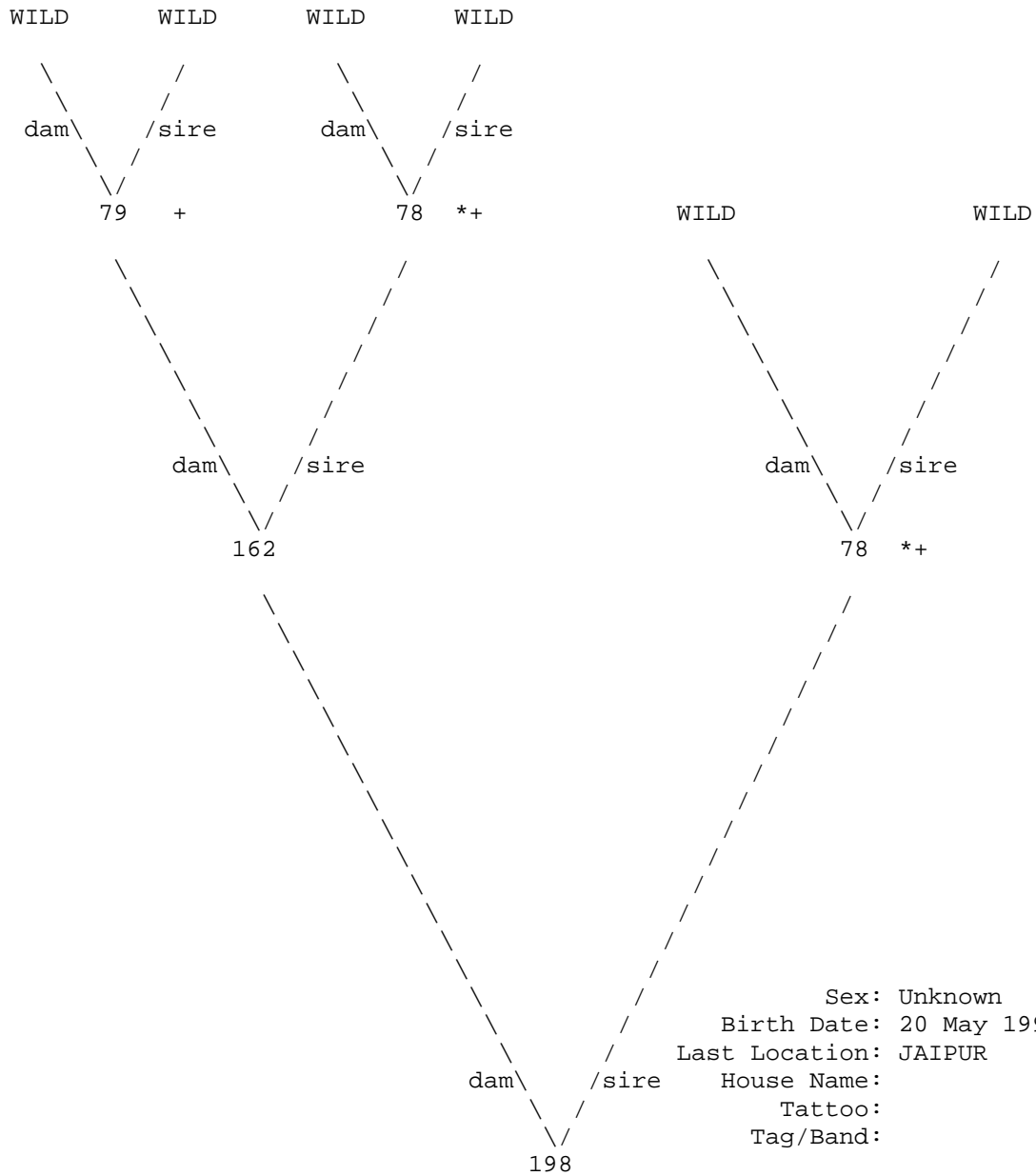
WILD WILD



Sex: Female  
 Birth Date: 11 Dec 1993  
 Last Location: JAIPUR (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

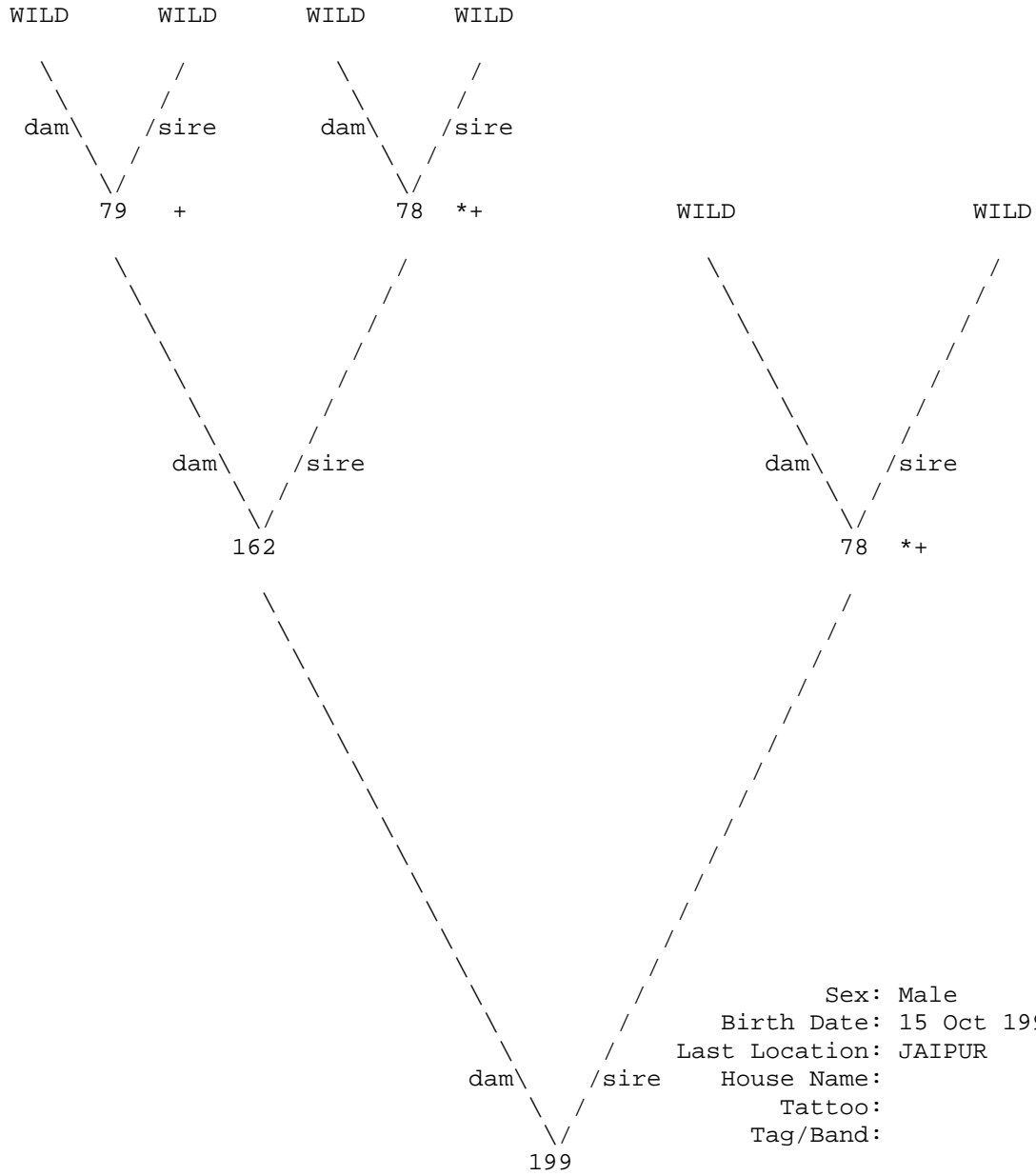
+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 198  
 =====



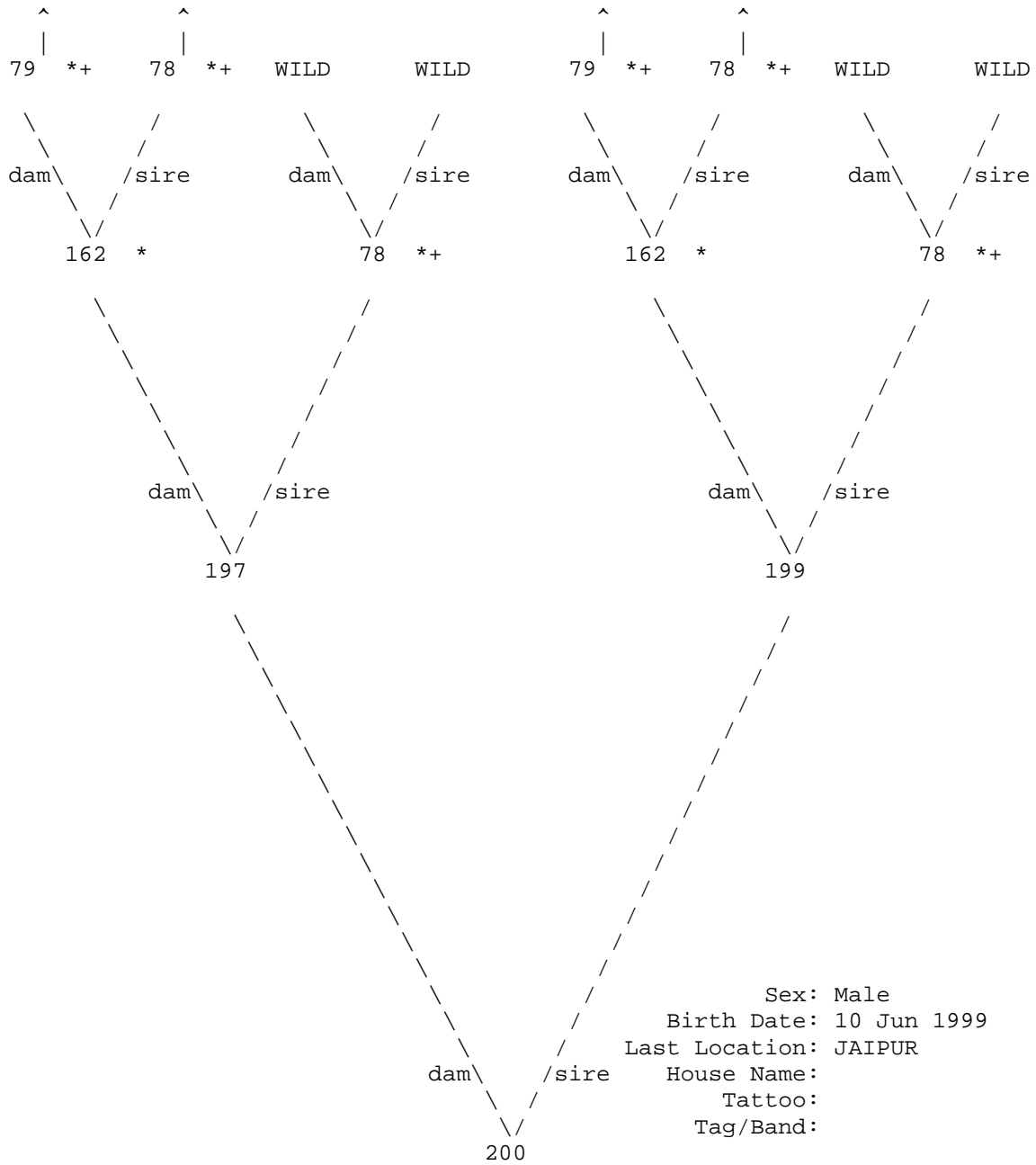
+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 199  
 =====



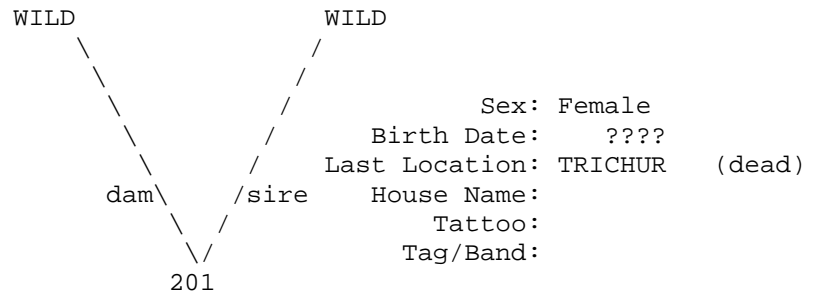
+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 200  
 =====

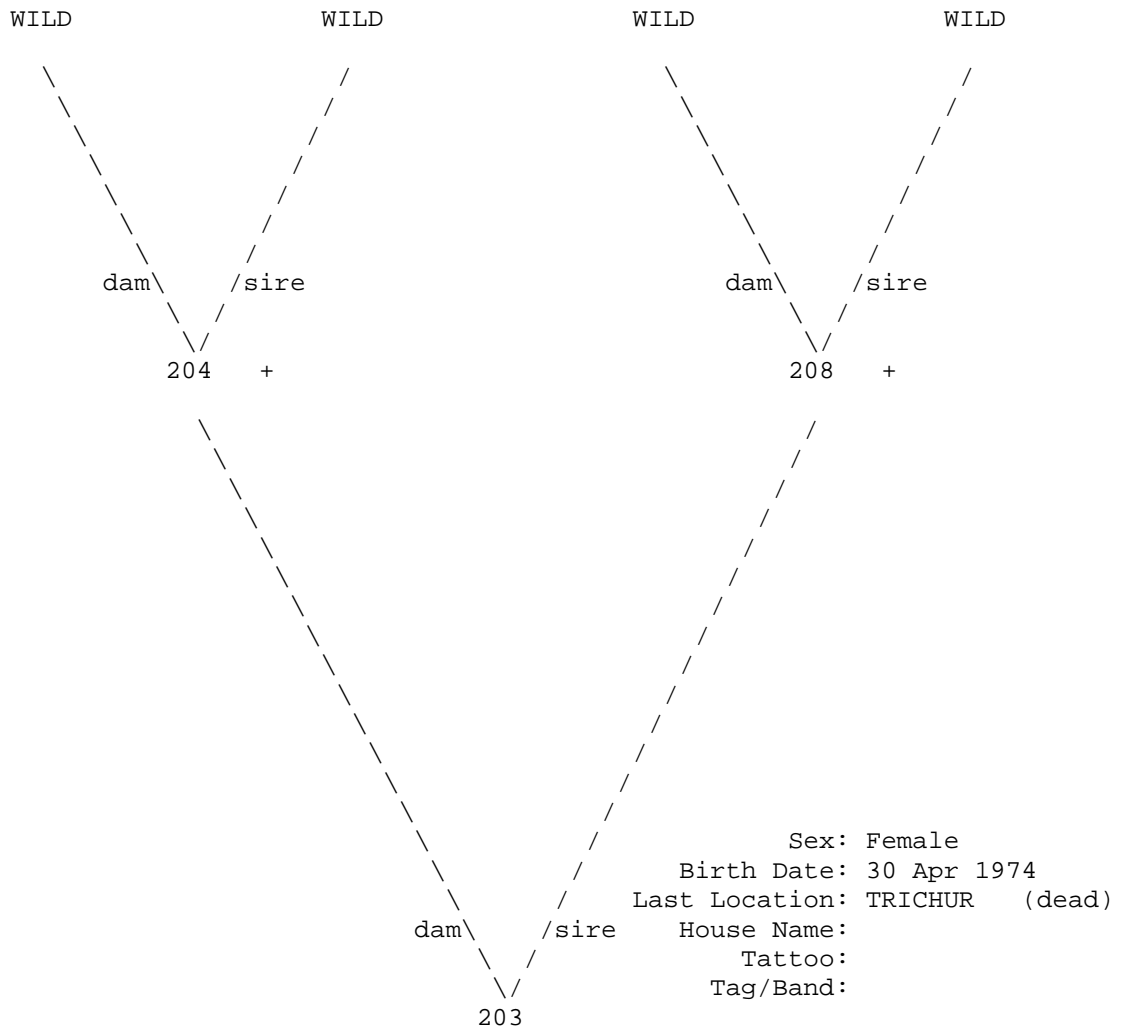


+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 201  
 =====



=====  
 Taxon Name: MACACA SILENUS Studbook Number: 203  
 =====



+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 204  
=====

WILD

WILD

dam \ / sire  
204  
Sex: Female  
Birth Date: ~ 1967  
Last Location: TRICHUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 208  
=====

WILD

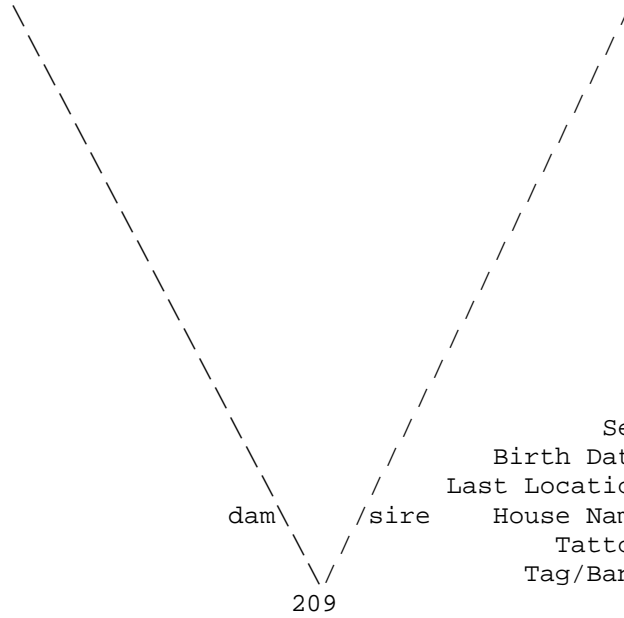
WILD

dam \ / sire  
208  
Sex: Male  
Birth Date: ~ 1955  
Last Location: TRICHUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 209  
=====

MULT2

MULT1

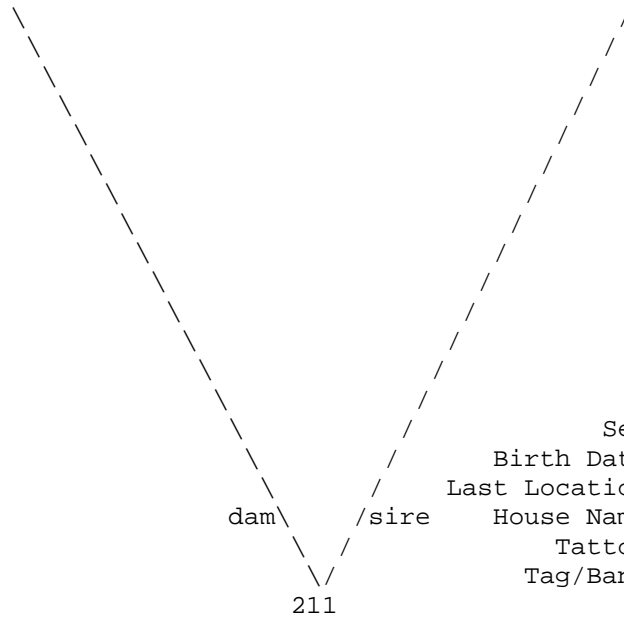


Sex: Unknown  
Birth Date: 11 Oct 1963  
Last Location: DELHI (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 211  
=====

WILDJ4

WILDJ3



Sex: Female  
Birth Date: ~ 1977  
Last Location: KANPUR  
House Name: SEETA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 212  
=====

WILDJ4

WILDJ3

dam \ / sire  
212

Sex: Male  
Birth Date: ~ 1977  
Last Location: JAIPUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 215  
=====

WILD

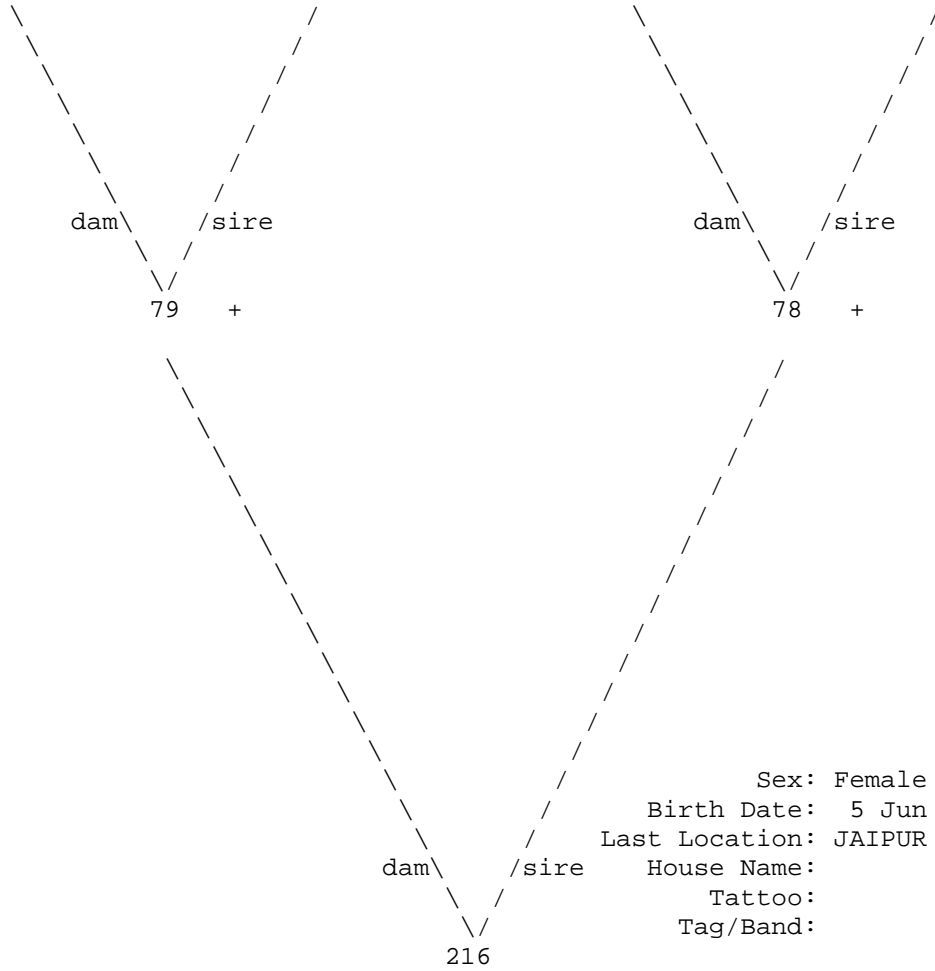
WILD

dam \ / sire  
215

Sex: Male  
Birth Date: ~ 1984  
Last Location: TRICHUR (dead)  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 216  
=====

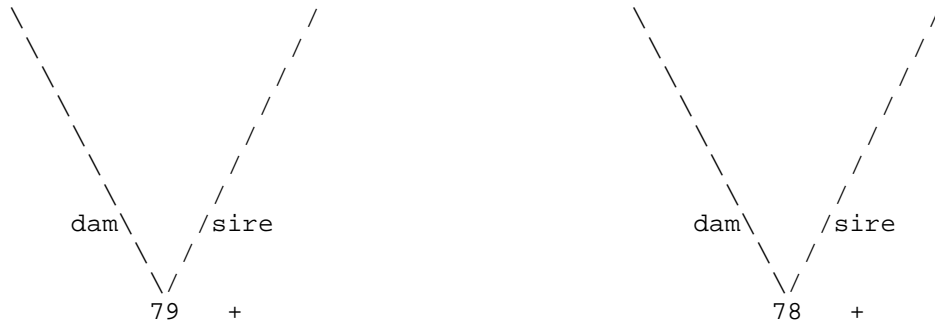
WILD WILD WILD WILD



+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 217  
 =====

WILD WILD WILD WILD

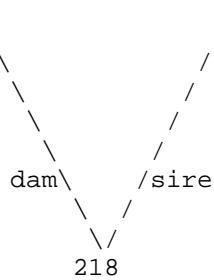


Sex: Female  
 Birth Date: 30 Jan 1986  
 Last Location: JAIPUR (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:  
 dam \ / sire  
 217

+ Wild-caught...

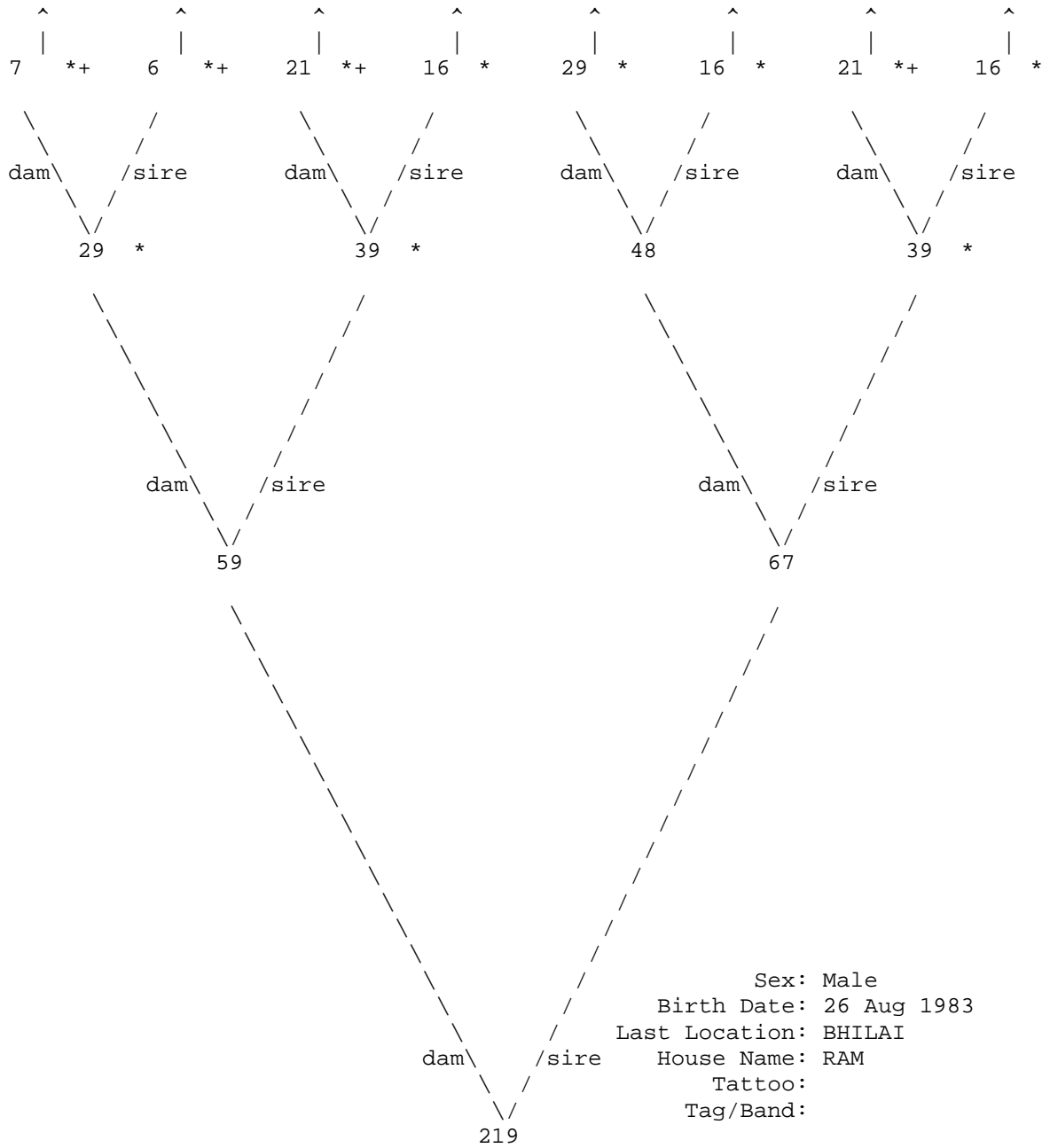
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 218  
 =====

WILD WILD



Sex: Male  
 Birth Date: ~ 1986  
 Last Location: TRICHUR (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:  
 dam \ / sire  
 218

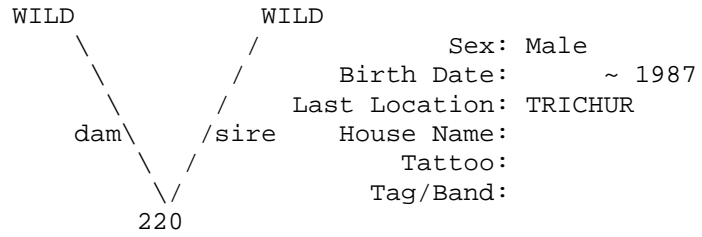
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 219  
 =====



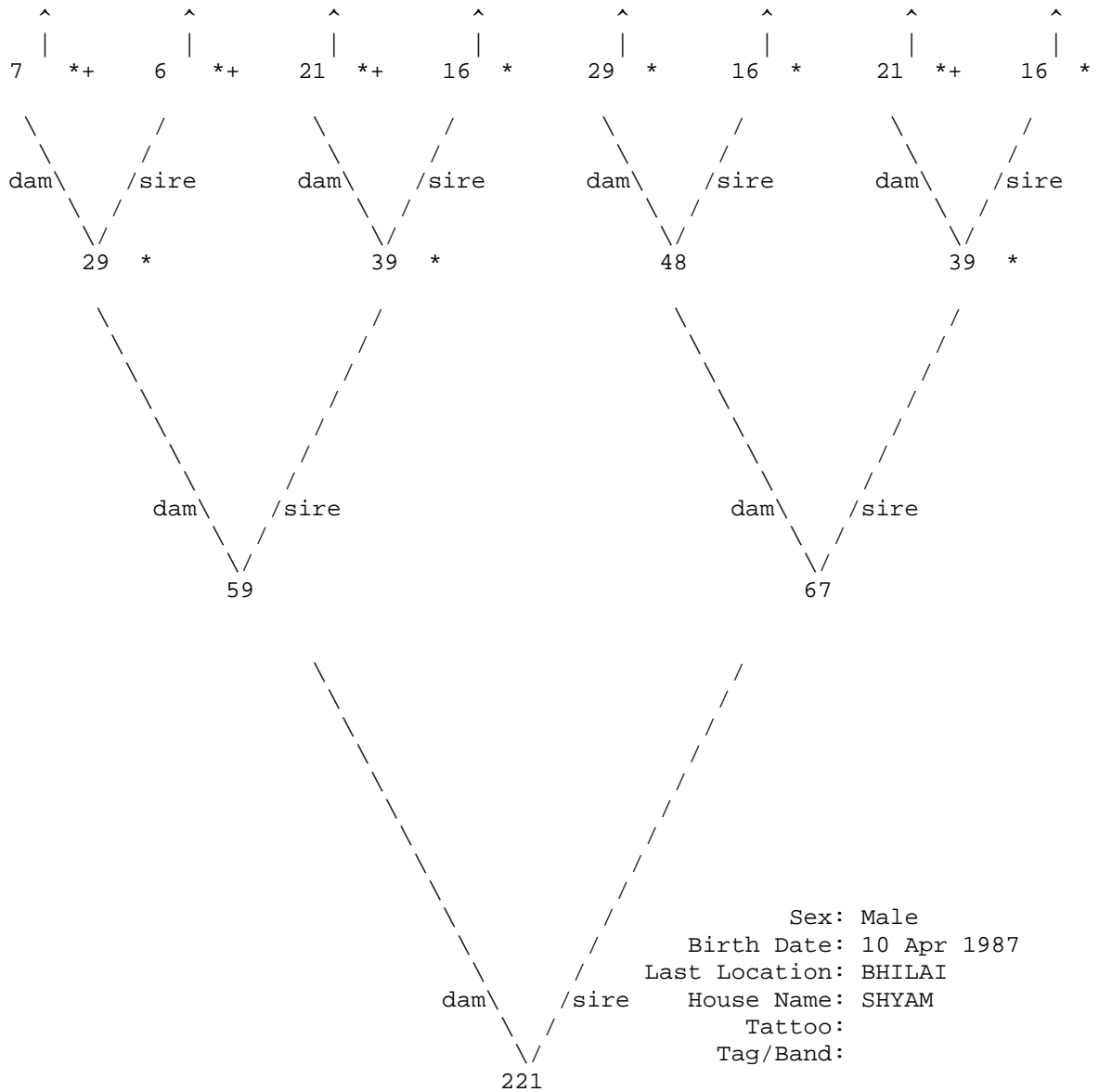
Sex: Male  
 Birth Date: 26 Aug 1983  
 Last Location: BHILAI  
 House Name: RAM  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 220  
 =====



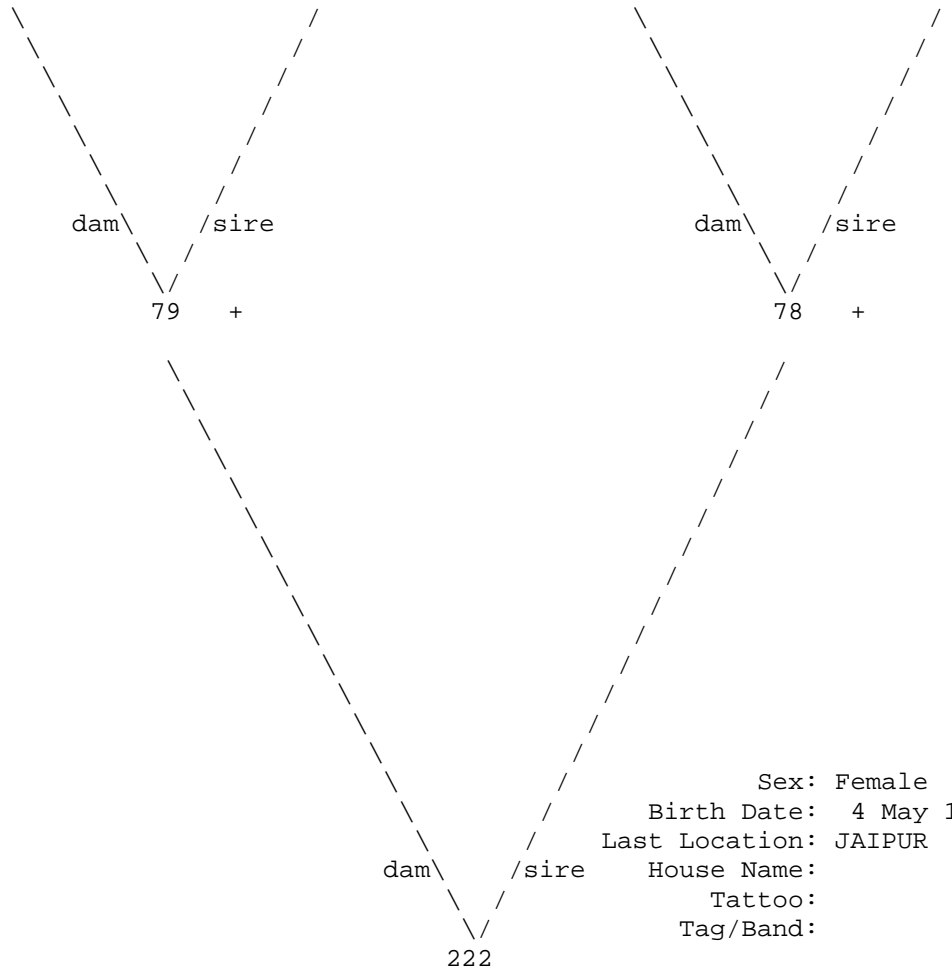
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 221  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 222  
 =====

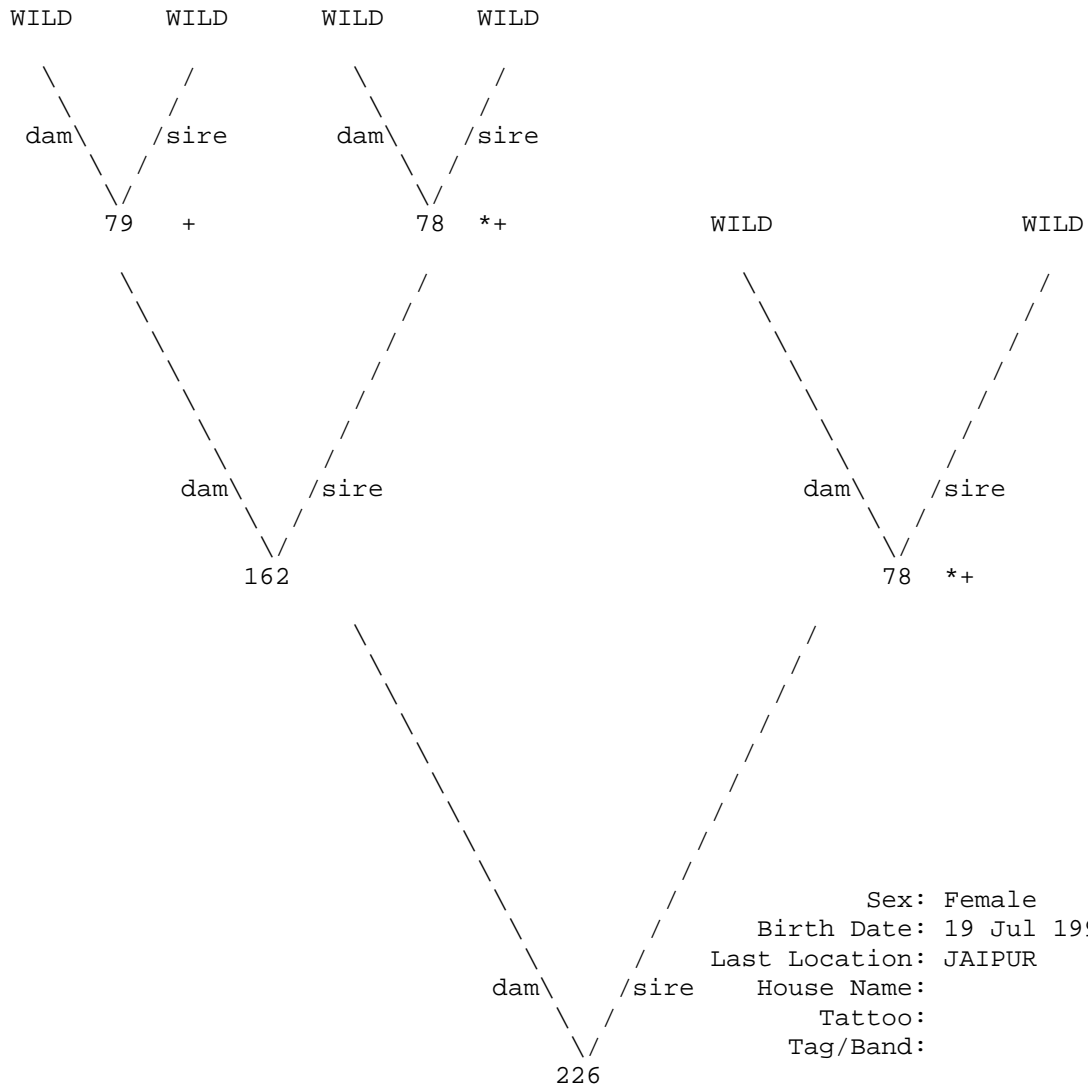
WILD WILD WILD WILD



Sex: Female  
 Birth Date: 4 May 1987  
 Last Location: JAIPUR (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

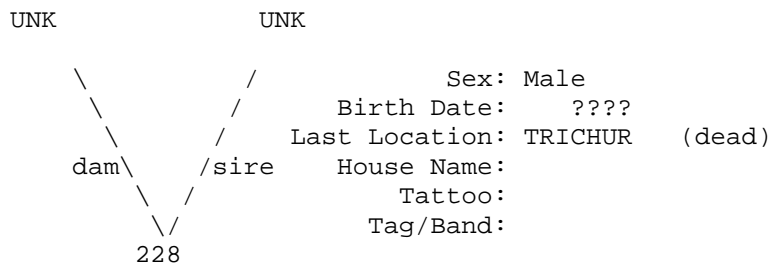
+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 226  
=====



+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 228  
=====



=====  
Taxon Name: MACACA SILENUS Studbook Number: 229  
=====

UNK

UNK

dam \ /sire  
229

Sex: Male  
Birth Date: ????  
Last Location: TRIVANDRU  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 230  
=====

UNK

UNK

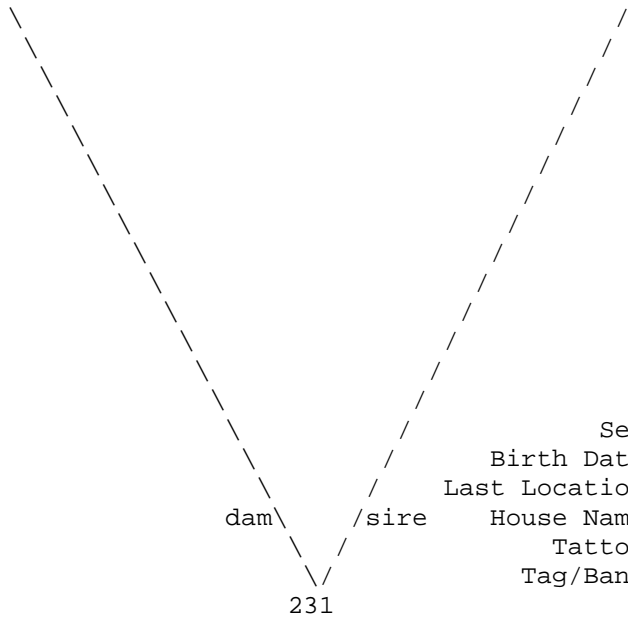
dam \ /sire  
230

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

=====  
Taxon Name: MACACA SILENUS Studbook Number: 231  
=====

UNK

UNK



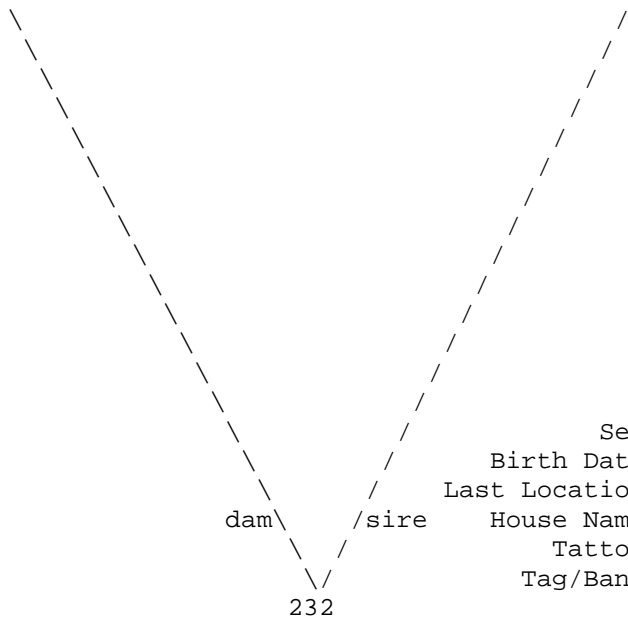
Sex: Female  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:

231

=====  
Taxon Name: MACACA SILENUS Studbook Number: 232  
=====

UNK

UNK



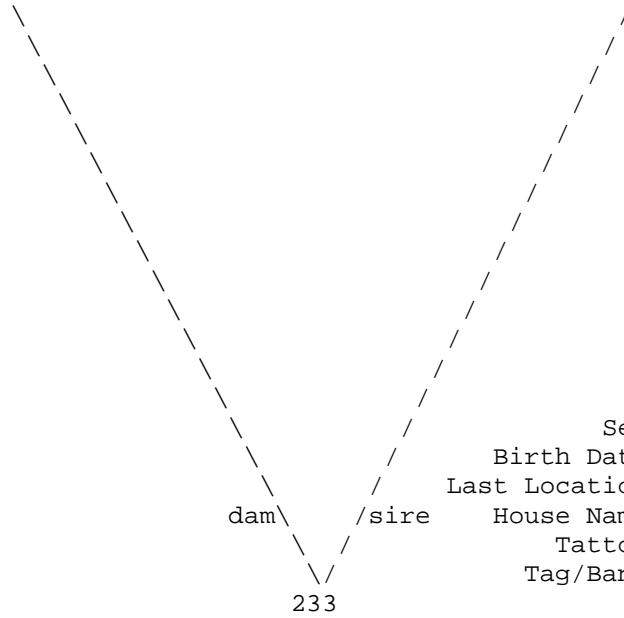
Sex: Female  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:

232

=====  
Taxon Name: MACACA SILENUS Studbook Number: 233  
=====

UNK

UNK

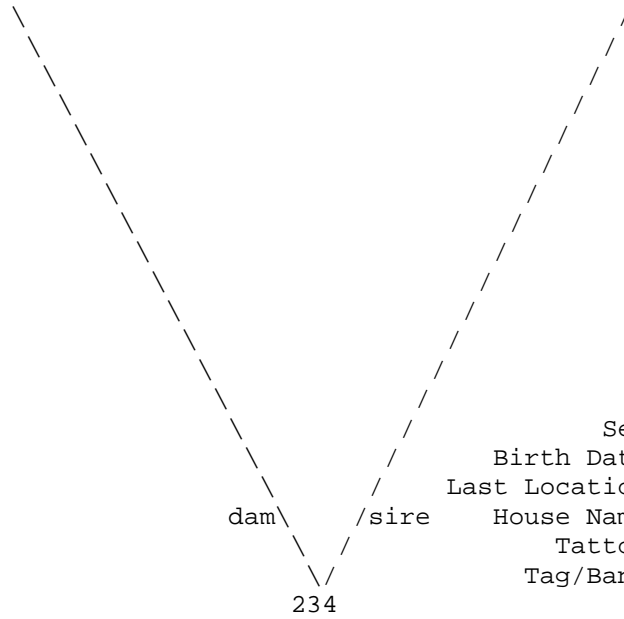


Sex: Female  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 234  
=====

WILD

WILD



Sex: Female  
Birth Date: ~ 1970  
Last Location: VEERMATA (dead)  
House Name: REENA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 235  
=====

UNK

UNK

dam \ /sire

235

Sex: Male  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 236  
=====

UNK

UNK

dam \ /sire

236

Sex: Male  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 237  
=====

UNK

UNK

Sex: Female  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:  
dam \ /sire  
237

=====  
Taxon Name: MACACA SILENUS Studbook Number: 238  
=====

WILD

WILD

Sex: Female  
Birth Date: ~ 1974  
Last Location: VEERMATA (dead)  
House Name: MEENA  
Tattoo:  
Tag/Band:  
dam \ /sire  
238

=====  
Taxon Name: MACACA SILENUS Studbook Number: 239  
=====

WILD

WILD

dam \ /sire

239

Sex: Male  
Birth Date: ~ 1975  
Last Location: VEERMATA (dead)  
House Name: JANI  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 240  
=====

UNK

UNK

dam \ /sire

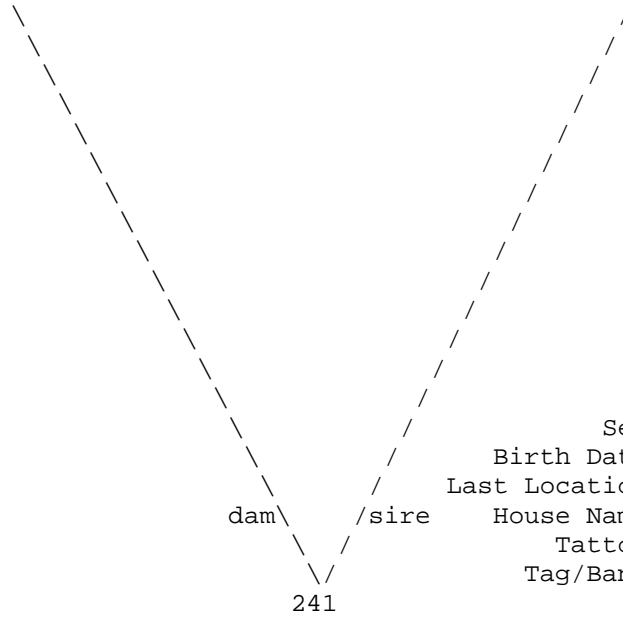
240

Sex: Female  
Birth Date: ????  
Last Location: TRICHUR  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 241  
=====

UNK

UNK



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

=====  
Taxon Name: MACACA SILENUS Studbook Number: 242  
=====

UNK

UNK



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

=====  
Taxon Name: MACACA SILENUS Studbook Number: 243  
=====

WILD

WILD

dam \ / sire  
243

Sex: Female  
Birth Date: ~ 1985  
Last Location: MADRAS (dead)  
House Name: RADHA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 244  
=====

UNK

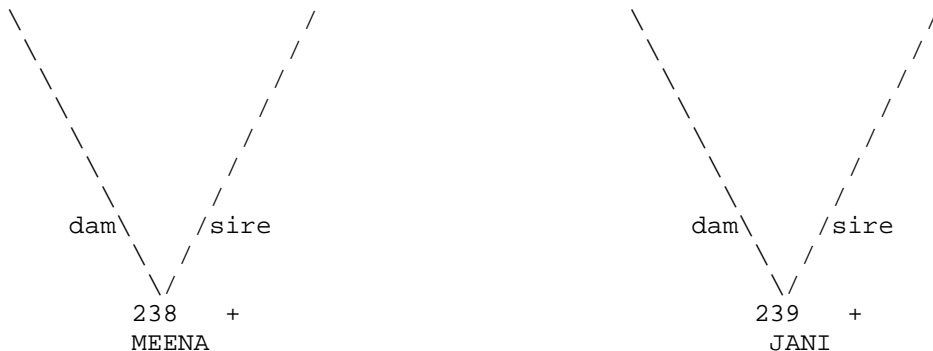
UNK

dam \ / sire  
244

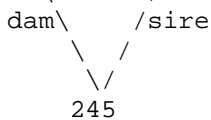
Sex: Male  
Birth Date: 31 Mar 1986  
Last Location: TRIVANDRU (dead)  
House Name: RAVI  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 245  
 =====

WILD WILD WILD WILD



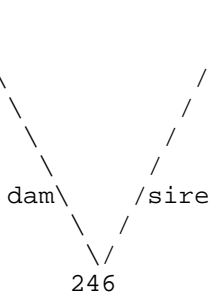
Sex: Male  
 Birth Date: ????  
 Last Location: VEERMATA (dead)  
 House Name: RAM  
 Tattoo:  
 Tag/Band:



+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 246  
 =====

WILD WILD



Sex: Male  
 Birth Date: ~ 1991  
 Last Location: MADRAS (dead)  
 House Name: KAMRAJ  
 Tattoo:  
 Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 248  
=====

WILD

WILD

dam \ / sire  
248

Sex: Male  
Birth Date: ~ 1991  
Last Location: MYSORE  
House Name: KRISHNA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 251  
=====

WILD

WILD

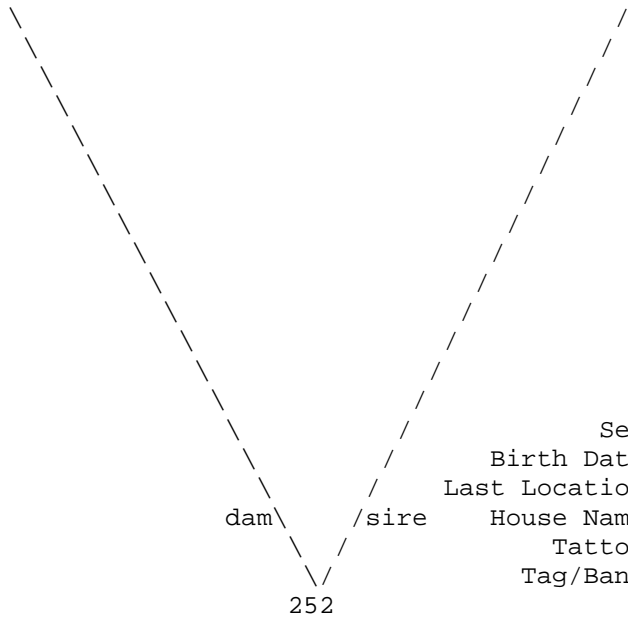
dam \ / sire  
251

Sex: Female  
Birth Date: ????  
Last Location: PATNA  
House Name: BASANTI  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 252  
=====

WILD

WILD

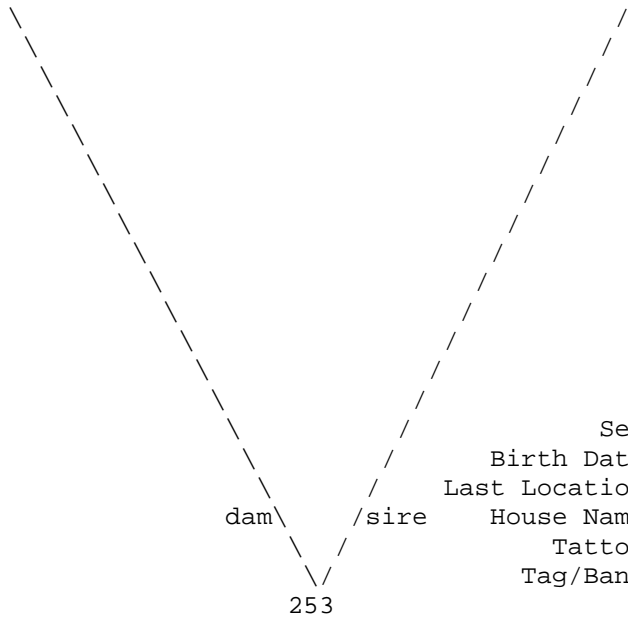


Sex: Male  
Birth Date: ~ 1997  
Last Location: MADRAS (dead)  
House Name: MANI/ragav  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 253  
=====

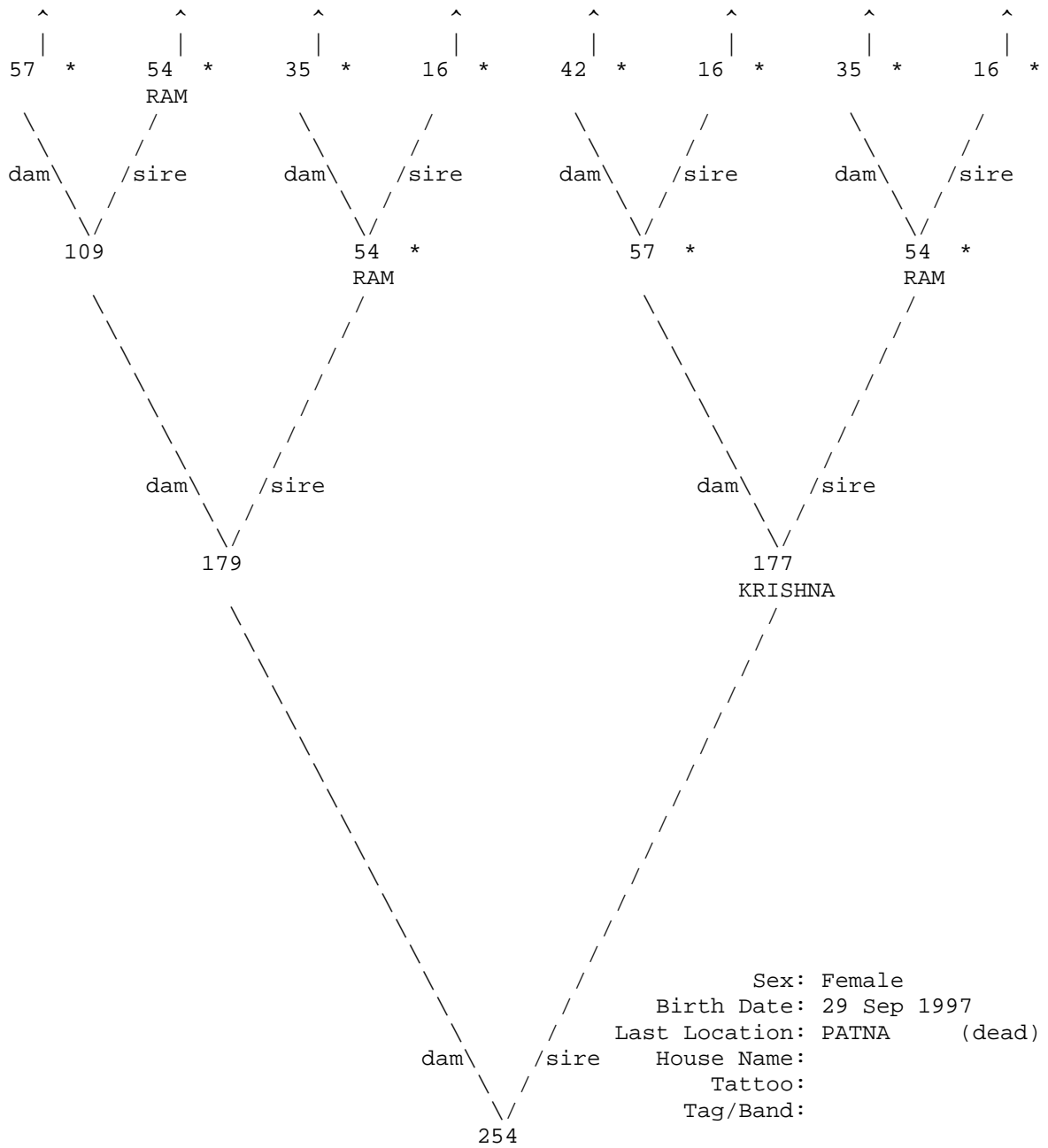
WILD

WILD



Sex: Female  
Birth Date: ~ 1997  
Last Location: MYSORE  
House Name: GEETHA  
Tattoo:  
Tag/Band:

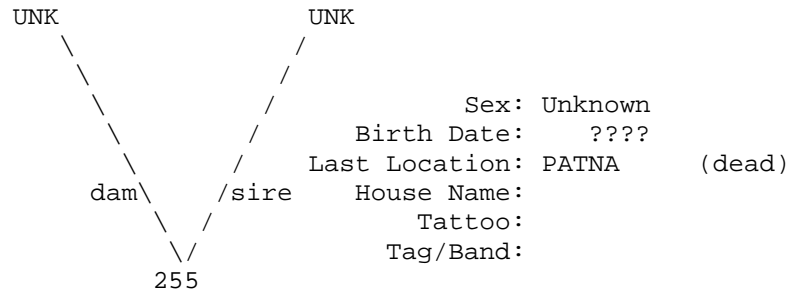
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 254  
 =====



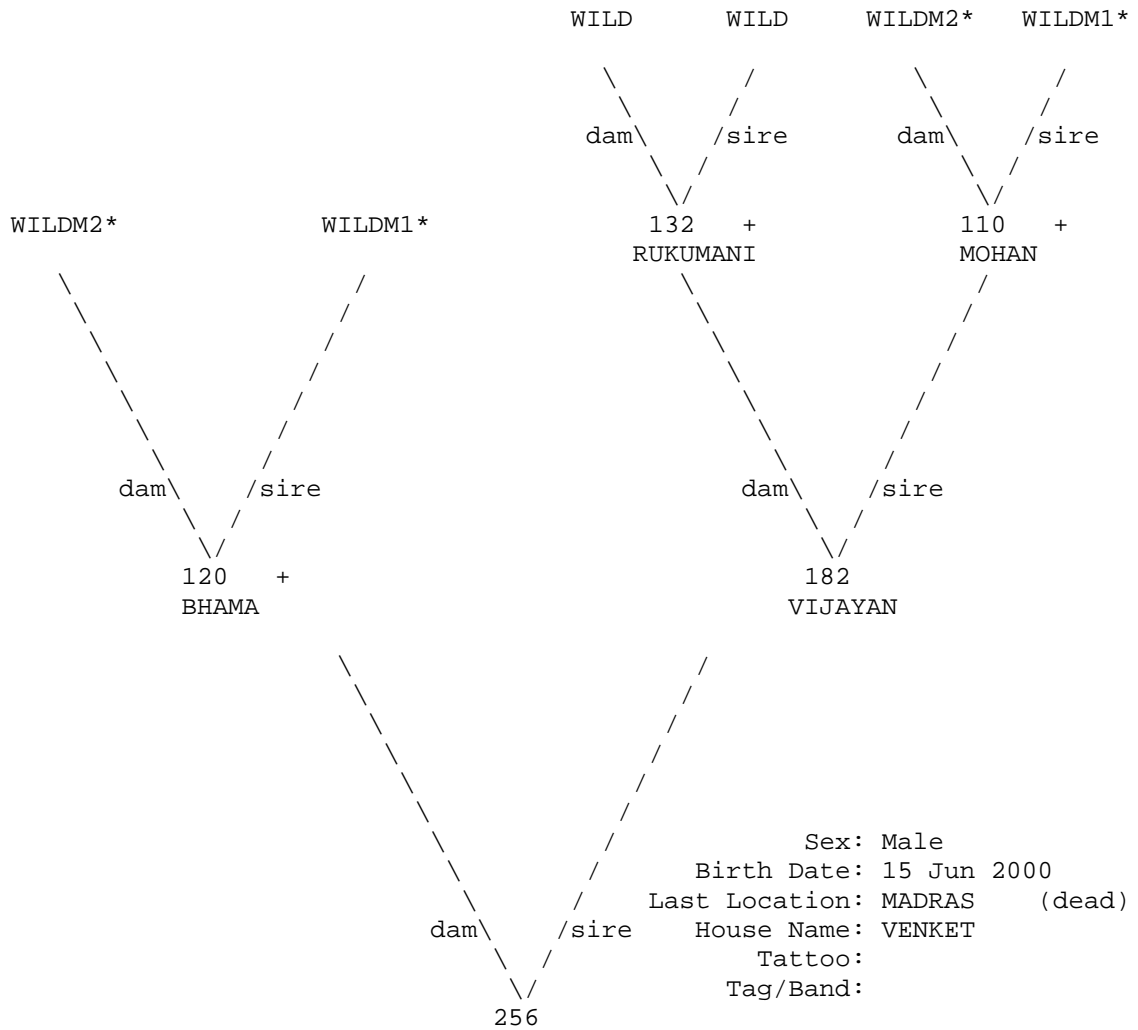
Sex: Female  
 Birth Date: 29 Sep 1997  
 Last Location: PATNA (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

\* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 255  
 =====



=====  
 Taxon Name: MACACA SILENUS Studbook Number: 256  
 =====

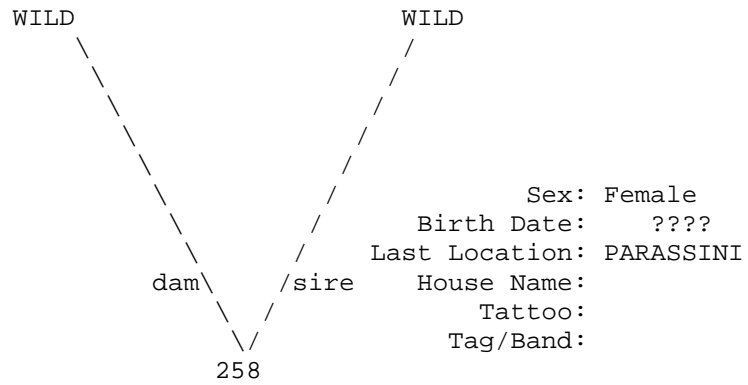


+ Wild-caught... \* Appear more than once...

```

=====
Taxon Name: MACACA SILENUS                               Studbook Number: 258
=====

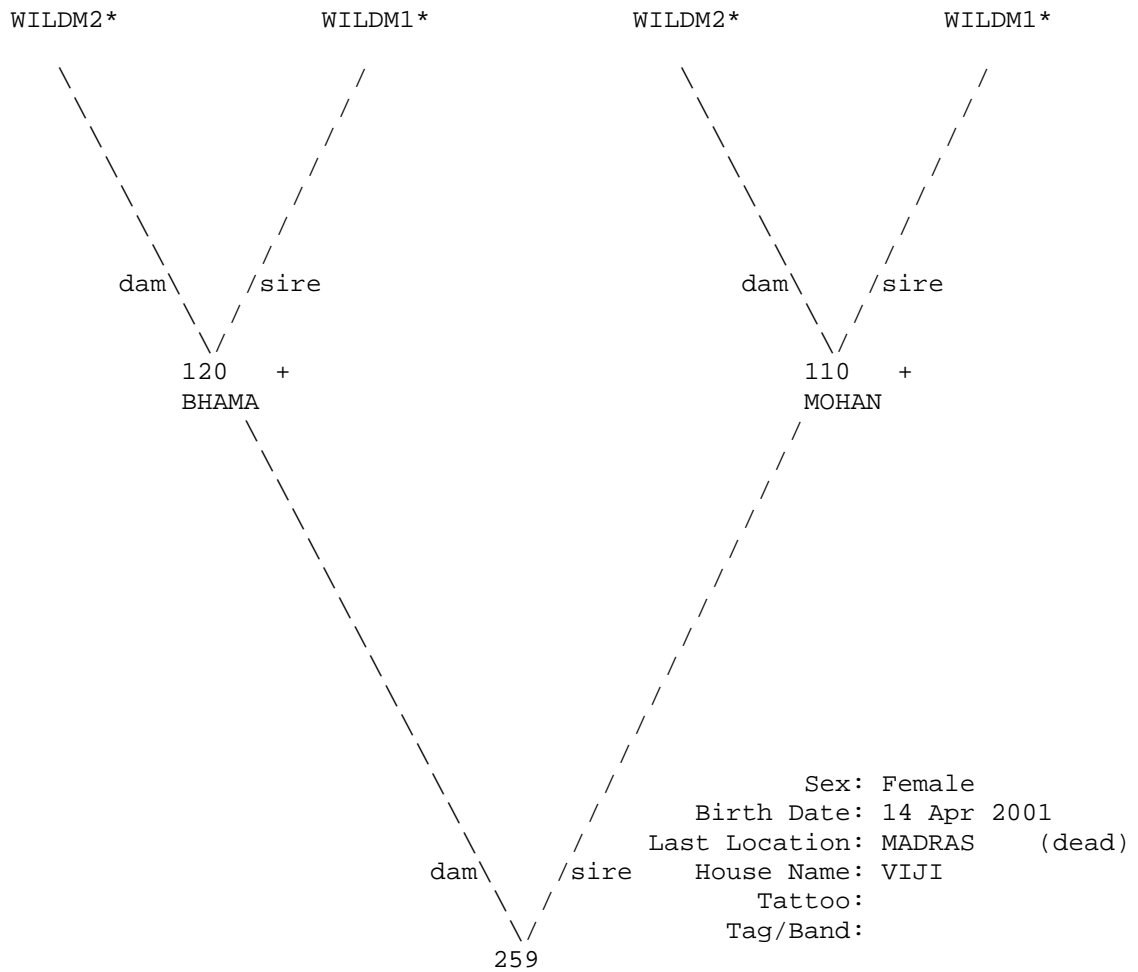
```



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=====
Taxon Name: MACACA SILENUS                               Studbook Number: 259
=====

```

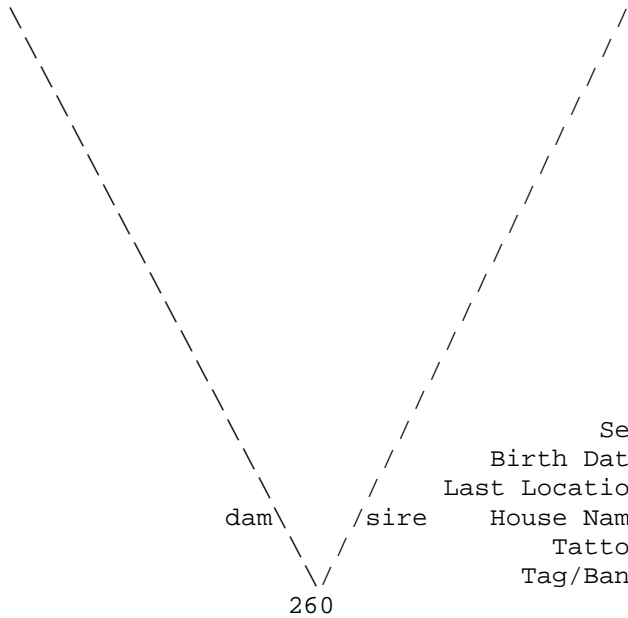


+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 260  
=====

WILD

WILD

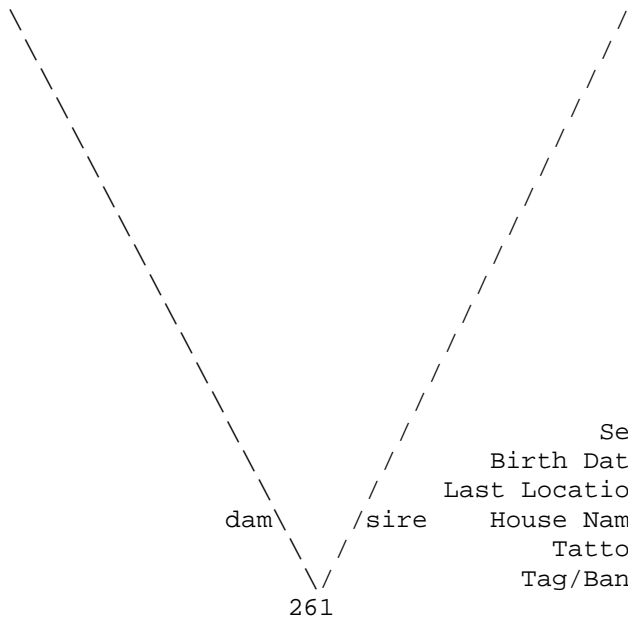


Sex: Female  
Birth Date: ~ 2001  
Last Location: MADRAS (dead)  
House Name: RAMYA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 261  
=====

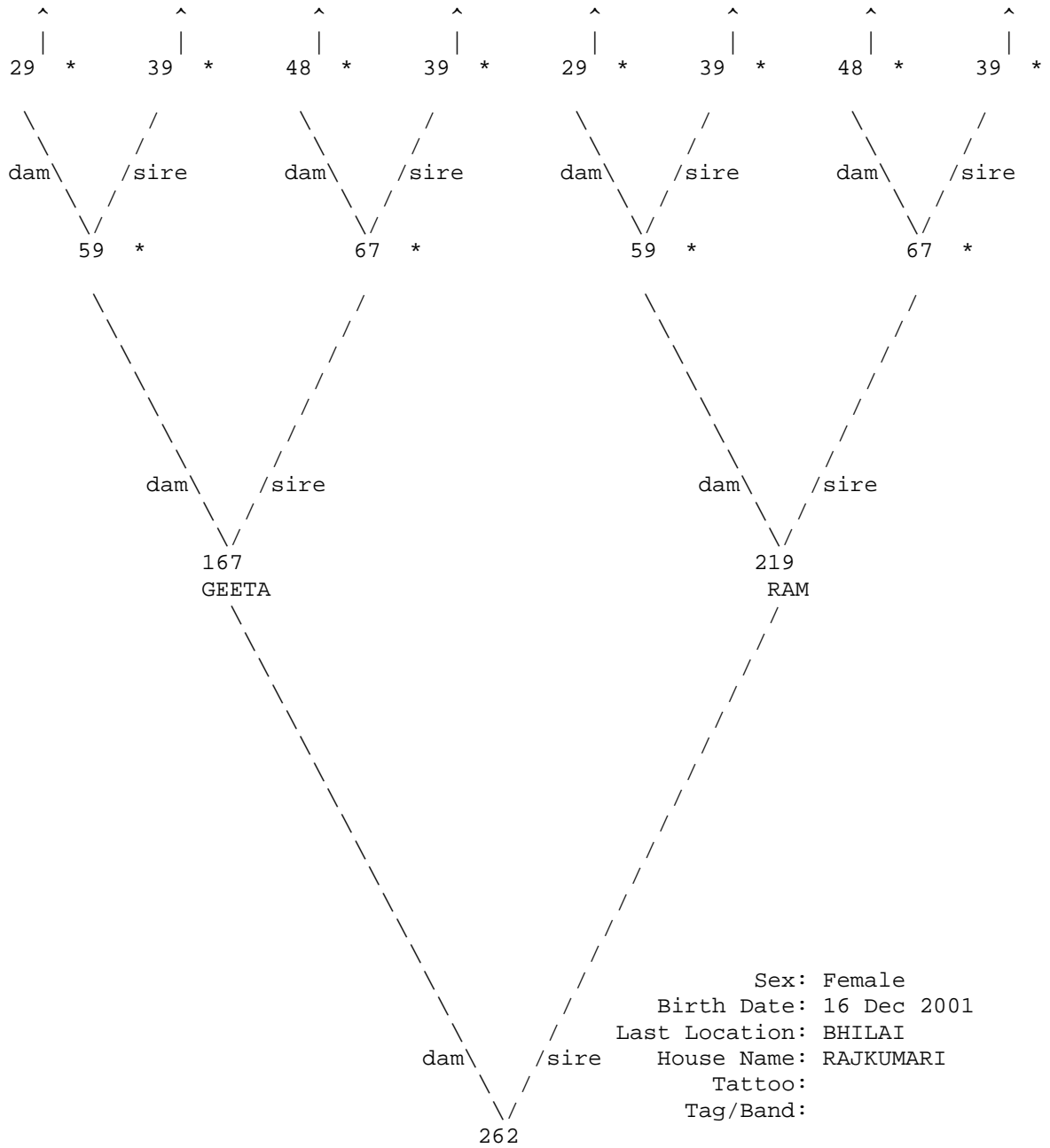
WILD

WILD



Sex: Female  
Birth Date: ~ 2001  
Last Location: MYSORE  
House Name: ANKITHA  
Tattoo:  
Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 262  
 =====

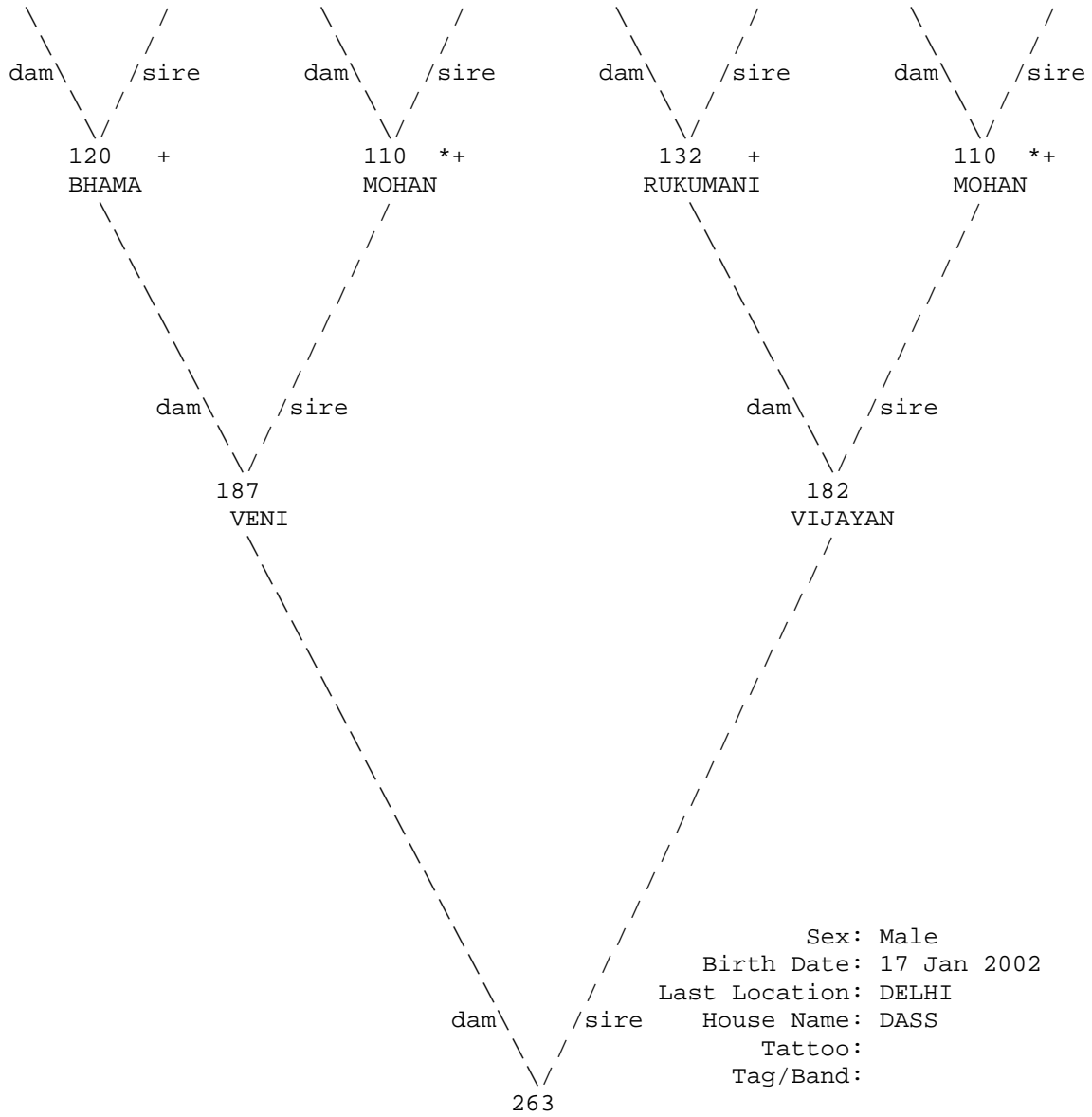


Sex: Female  
 Birth Date: 16 Dec 2001  
 Last Location: BHILAI  
 House Name: RAJKUMARI  
 Tattoo:  
 Tag/Band:

\* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 263  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*



Sex: Male  
 Birth Date: 17 Jan 2002  
 Last Location: DELHI  
 House Name: DASS  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...



=====  
Taxon Name: MACACA SILENUS Studbook Number: 265  
=====

WILD

WILD

dam \ / sire  
265

Sex: Male  
Birth Date: ~ 2002  
Last Location: MYSORE  
House Name: ASWATH  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 266  
=====

WILD

WILD

dam \ / sire  
266

Sex: Male  
Birth Date: ????  
Last Location: TRIVANDRU  
House Name: RAJESH  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 267  
=====

WILD

WILD

dam \ / sire  
267

Sex: Male  
Birth Date: ????  
Last Location: TRIVANDRU  
House Name: KIRAN  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 268  
=====

WILD

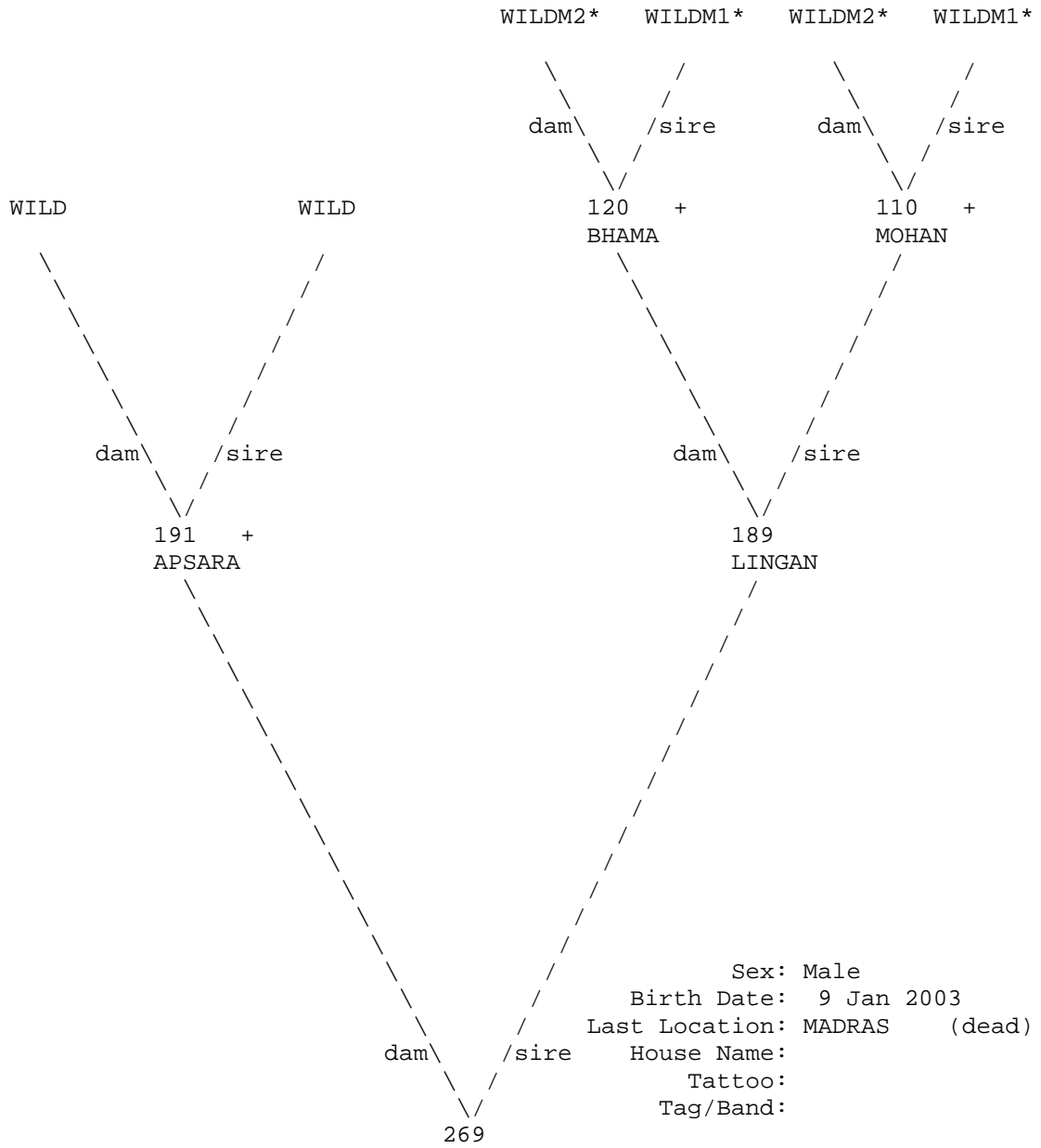
WILD

dam \ / sire  
268

Sex: Female  
Birth Date: ????  
Last Location: DELHI (dead)  
House Name: RANI  
Tattoo:  
Tag/Band:

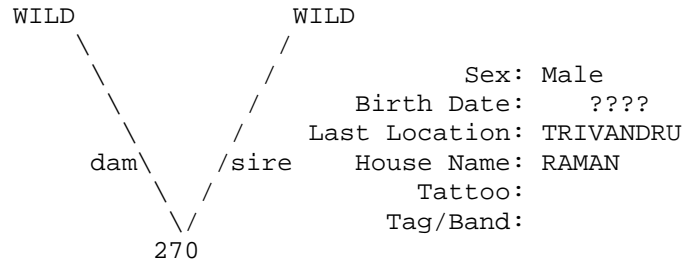
=====  
Taxon Name: MACACA SILENUS

Studbook Number: 269  
=====



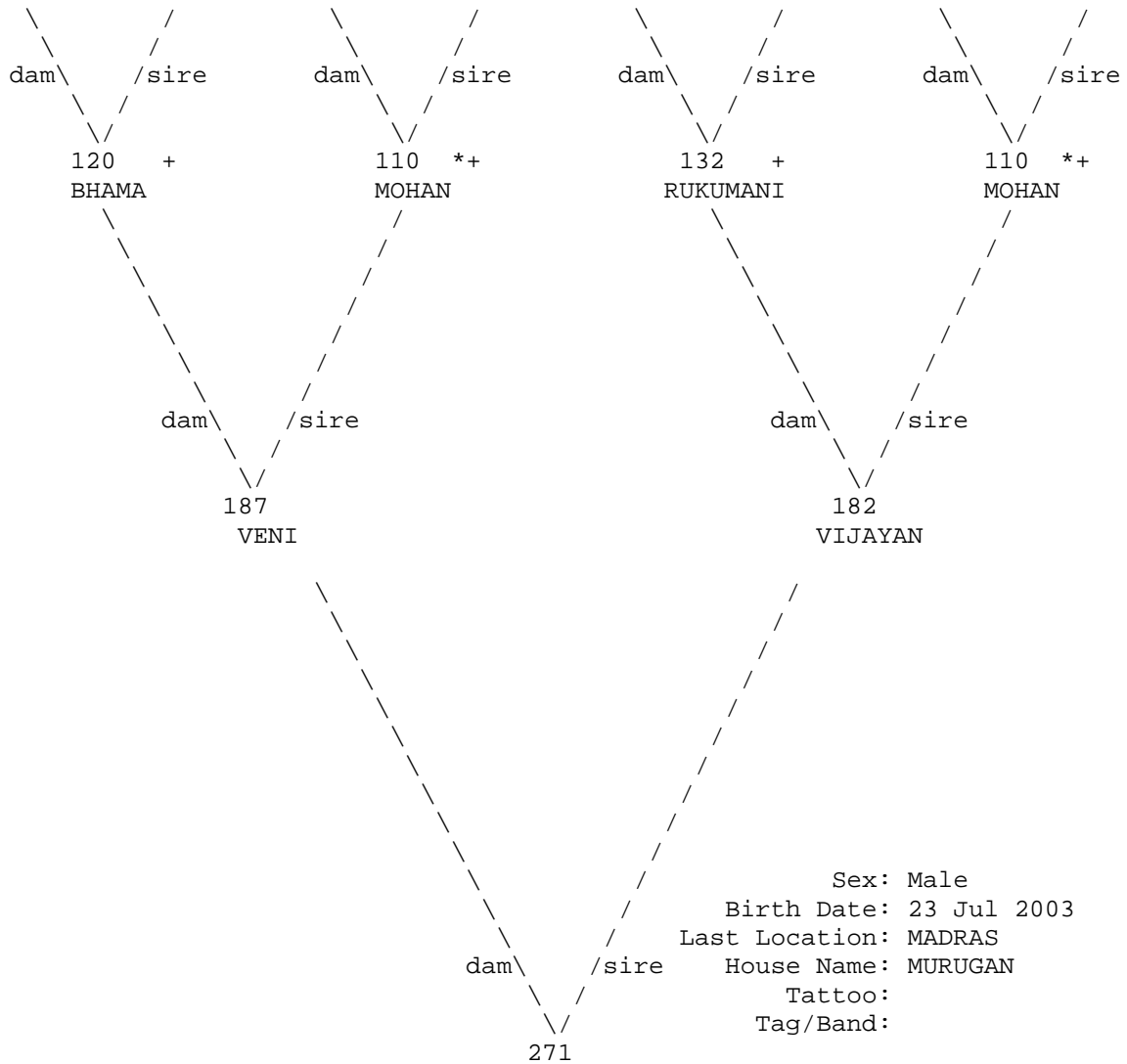
+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 270  
 =====



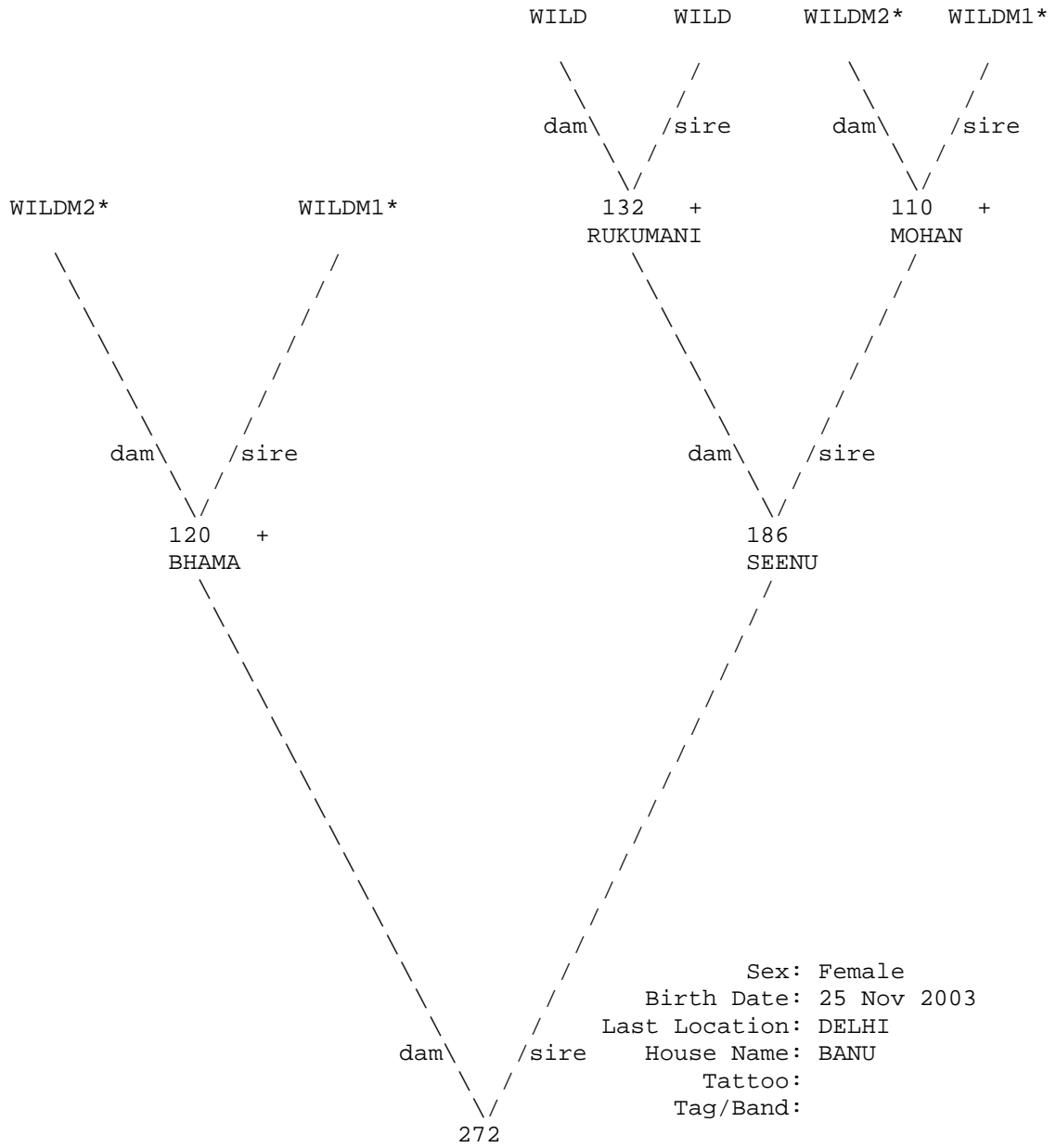
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 271  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*



+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 272  
 =====

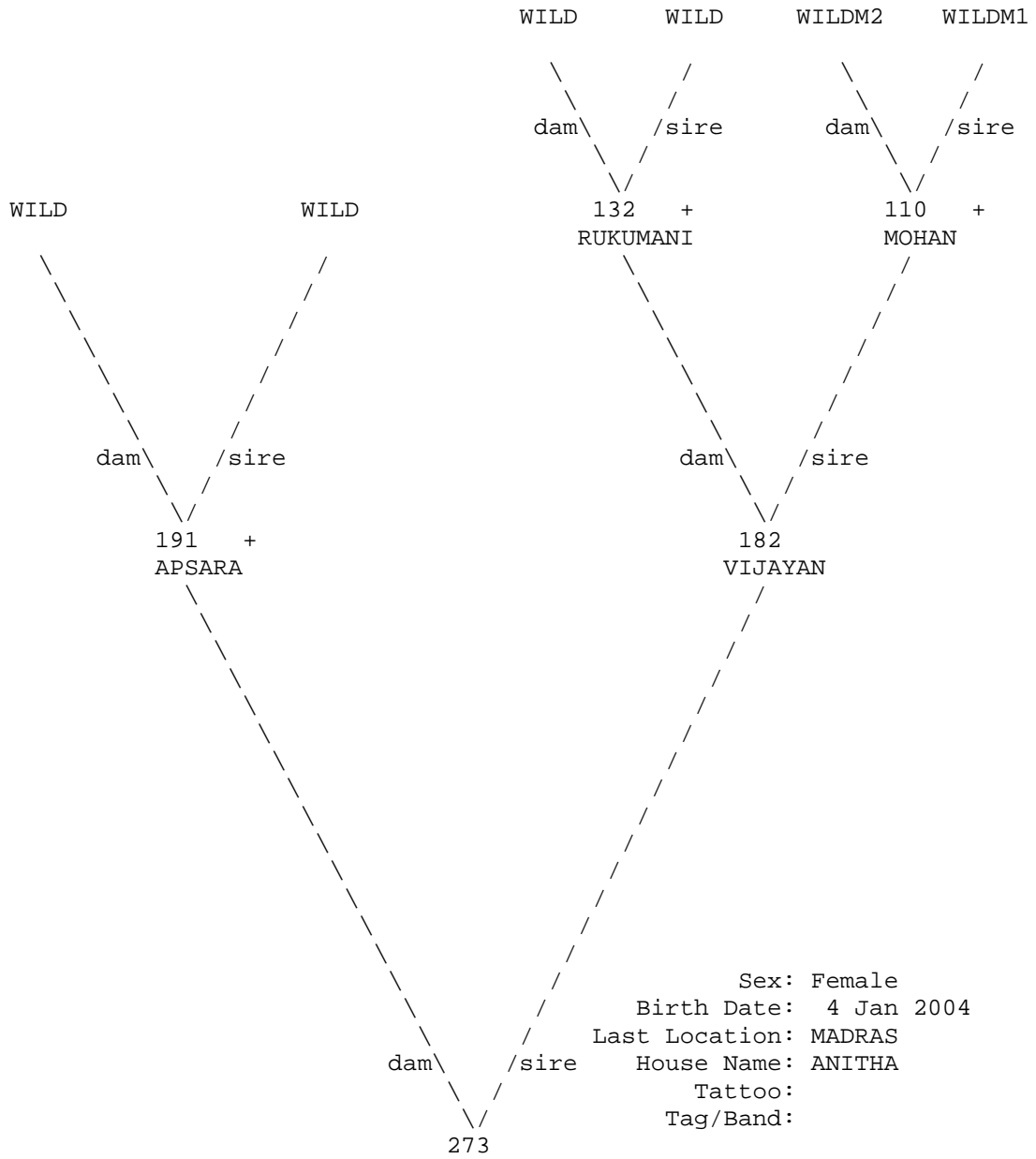


Sex: Female  
 Birth Date: 25 Nov 2003  
 Last Location: DELHI  
 House Name: BANU  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS

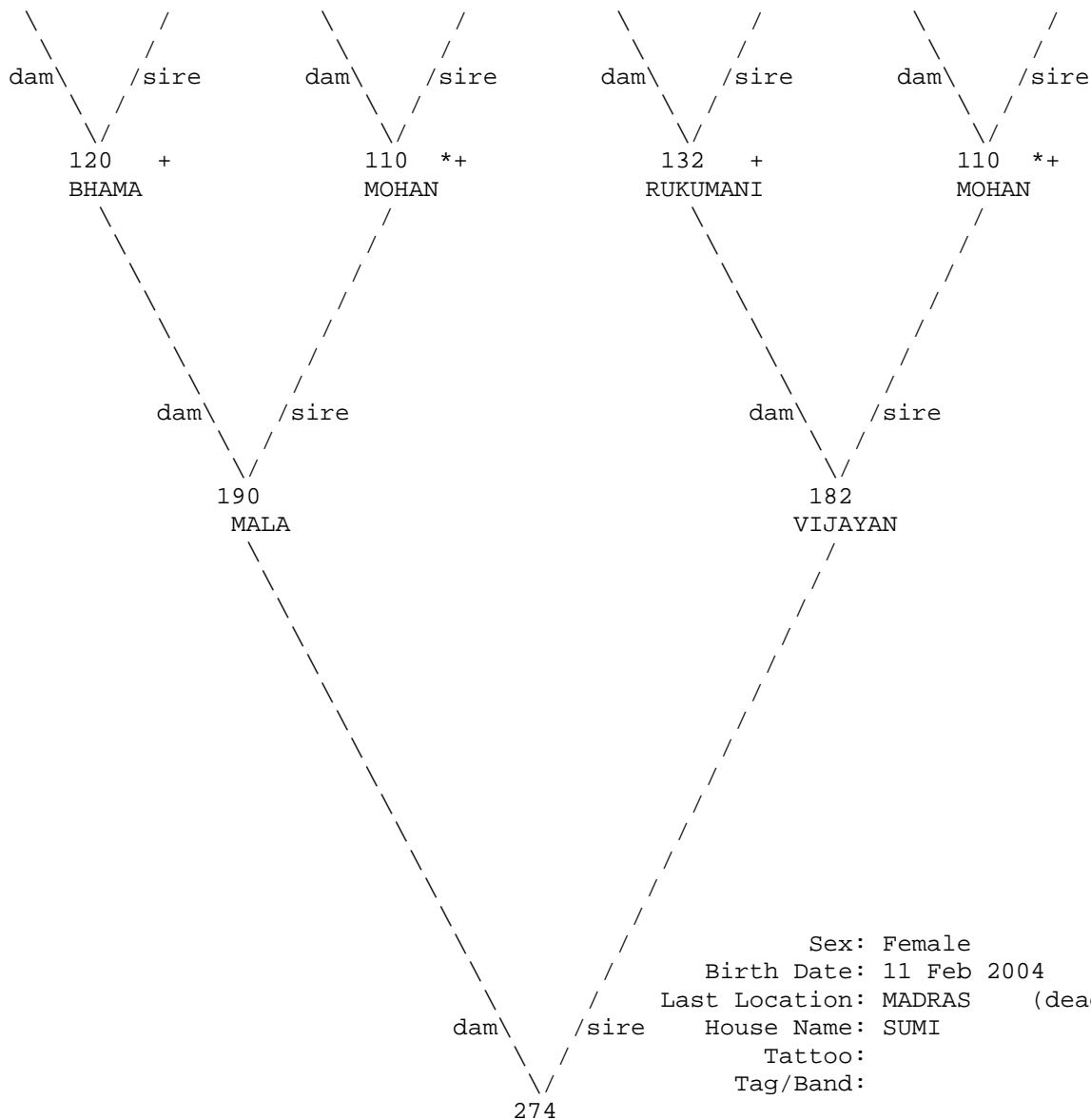
Studbook Number: 273  
=====



+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 274  
 =====

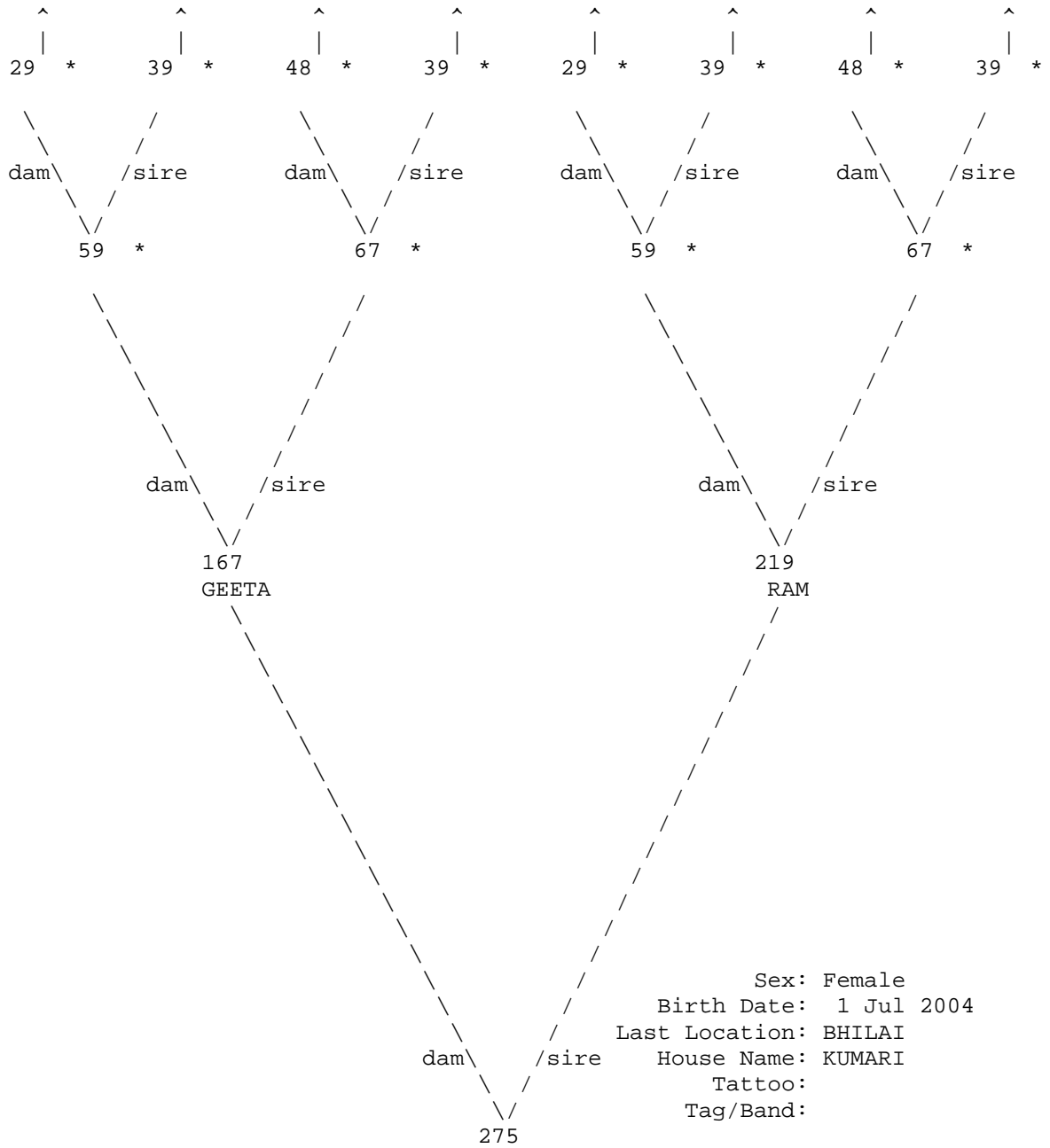
WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*



Sex: Female  
 Birth Date: 11 Feb 2004  
 Last Location: MADRAS (dead)  
 House Name: SUMI  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

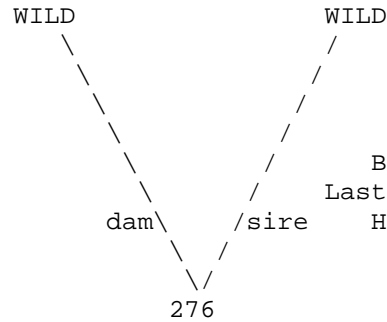
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 275  
 =====



Sex: Female  
 Birth Date: 1 Jul 2004  
 Last Location: BHILAI  
 House Name: KUMARI  
 Tattoo:  
 Tag/Band:

\* Appear more than once...  
 ^ Pedigree continues beyond top of page...

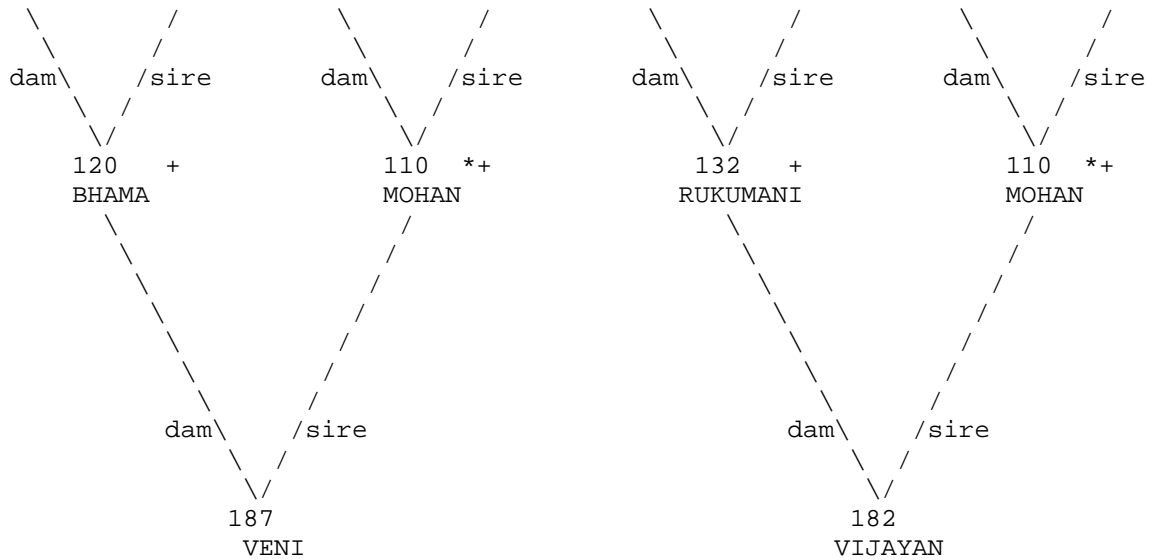
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 276  
 =====



Sex: Male  
 Birth Date: ~ 2004  
 Last Location: MYSORE  
 House Name: APPU  
 Tattoo:  
 Tag/Band:

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 277  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*

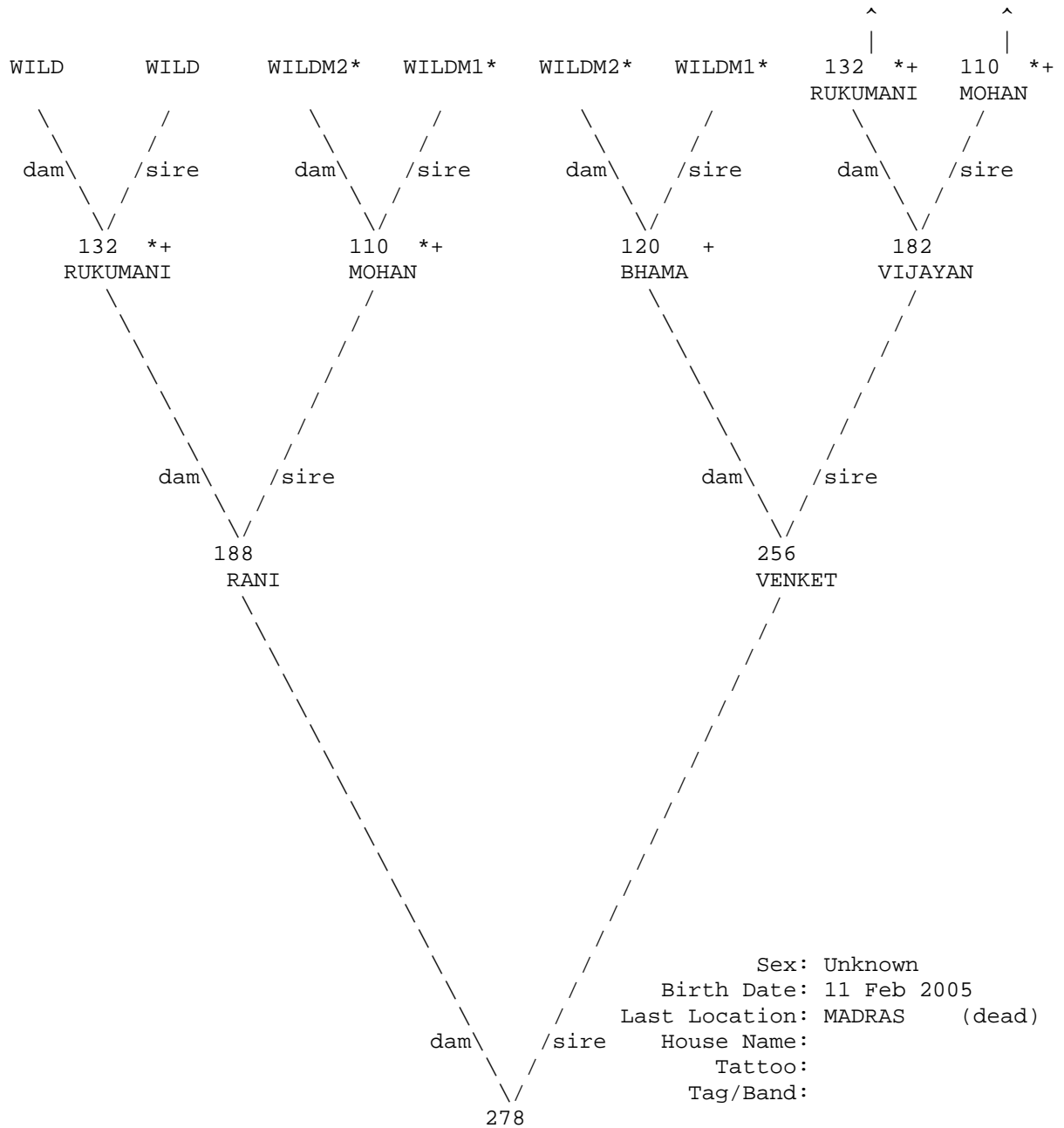


Sex: Female  
 Birth Date: 16 Aug 2004  
 Last Location: MADRAS  
 House Name: SINDHU  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS

Studbook Number: 278  
=====

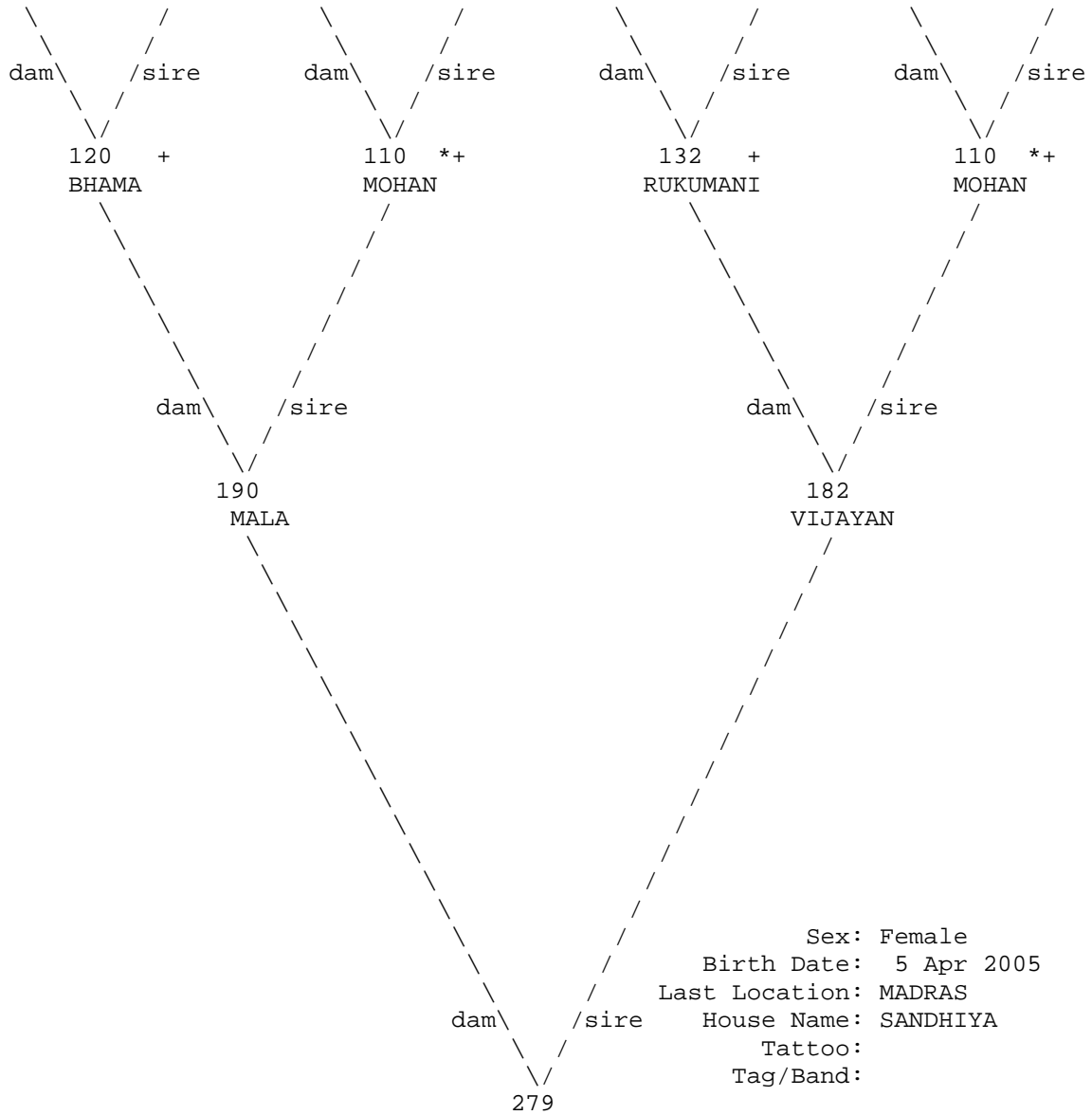


Sex: Unknown  
Birth Date: 11 Feb 2005  
Last Location: MADRAS (dead)  
House Name:  
Tattoo:  
Tag/Band:

+ Wild-caught... \* Appear more than once...  
^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 279  
=====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*



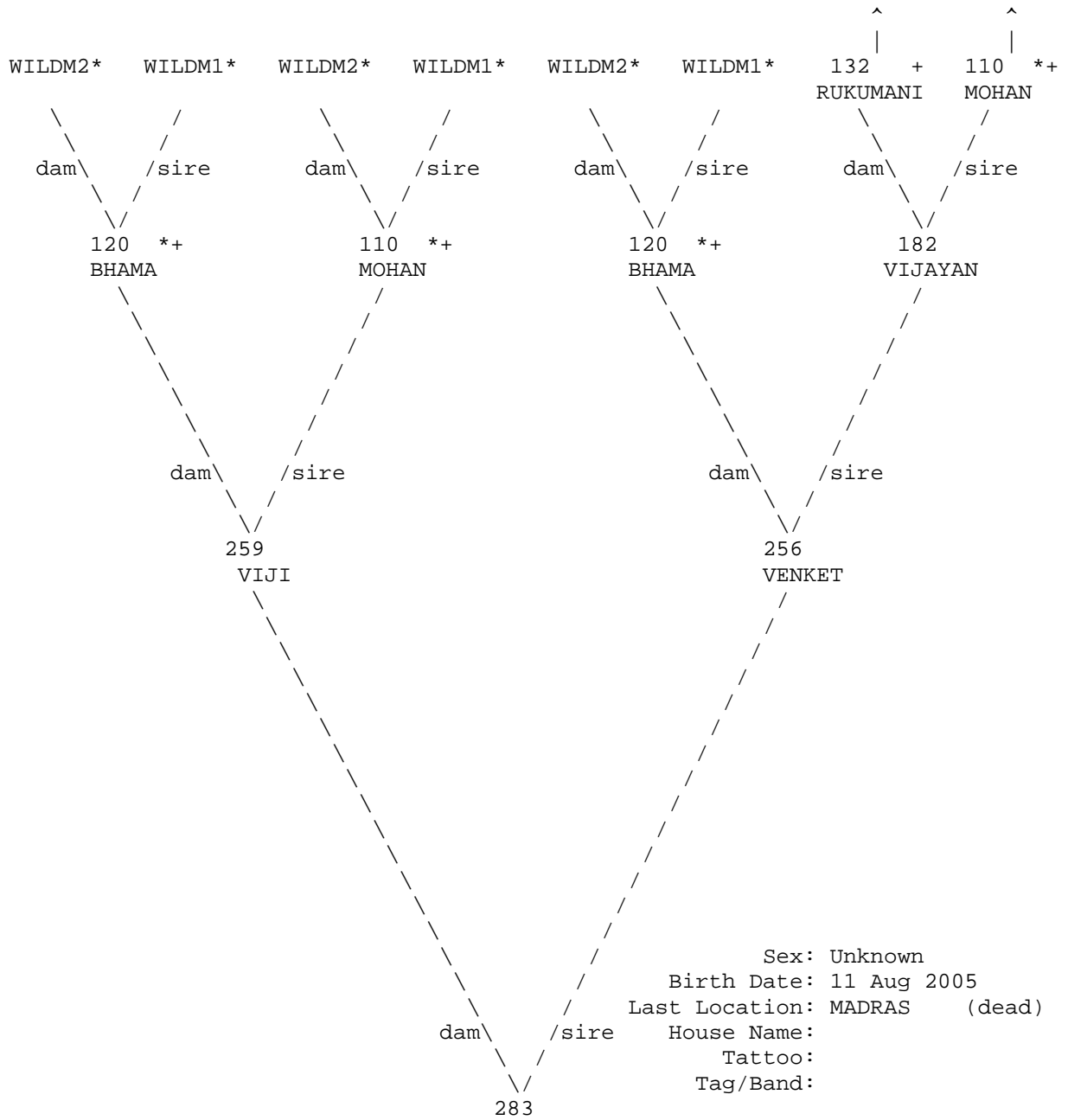
Sex: Female  
Birth Date: 5 Apr 2005  
Last Location: MADRAS  
House Name: SANDHIYA  
Tattoo:  
Tag/Band:

+ Wild-caught... \* Appear more than once...





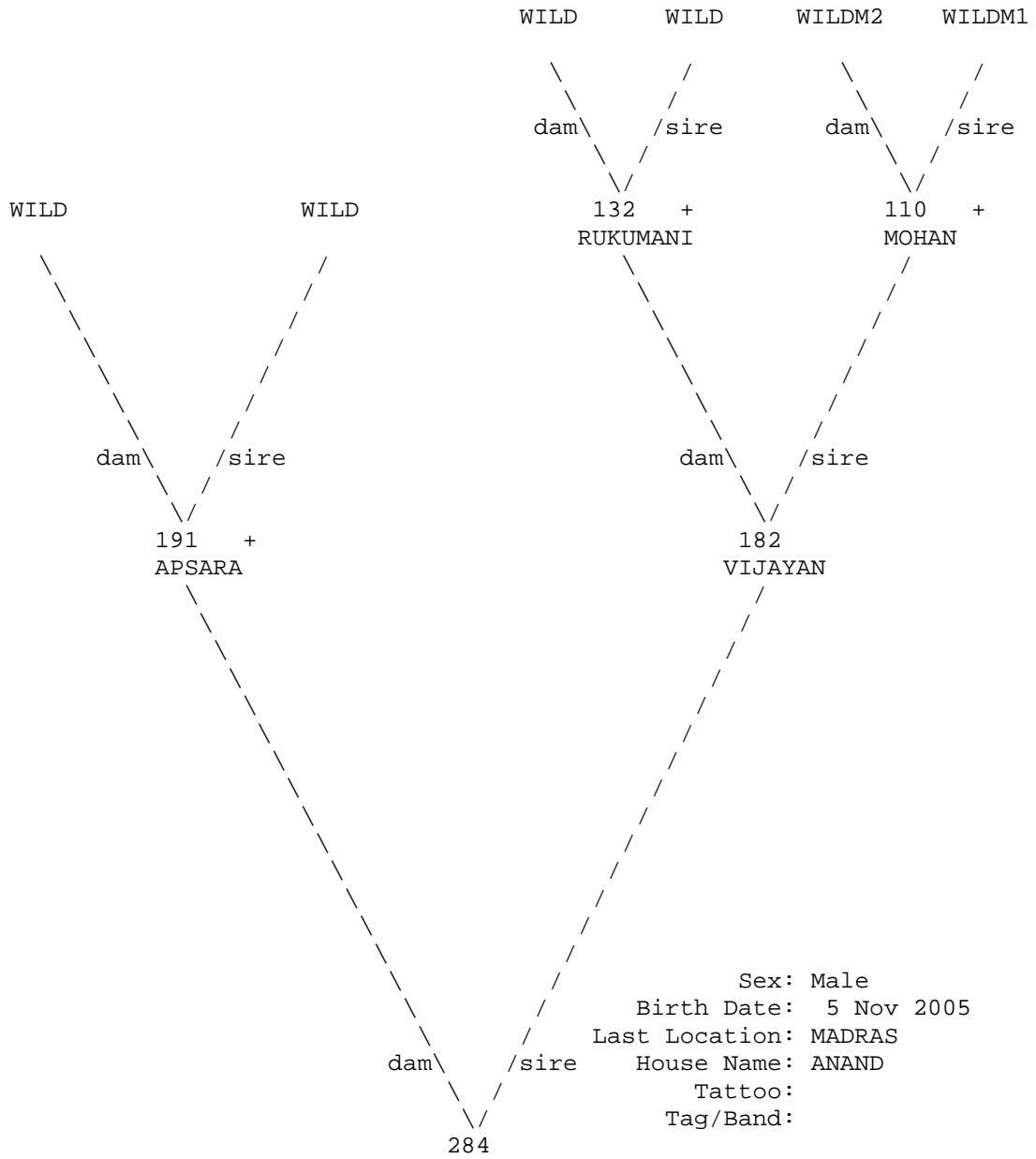
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 283  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS

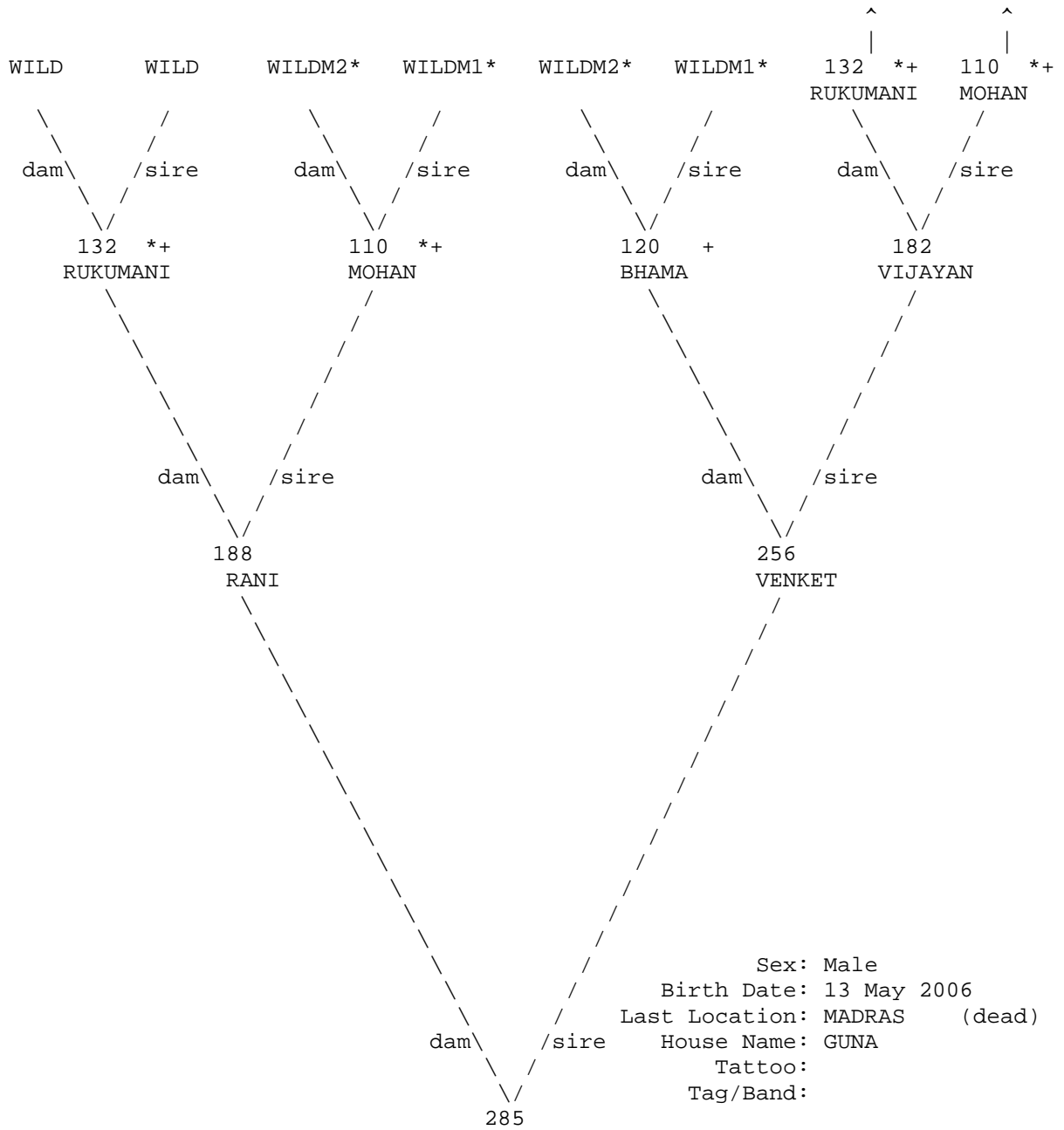
Studbook Number: 284  
=====



+ Wild-caught...

=====  
Taxon Name: MACACA SILENUS

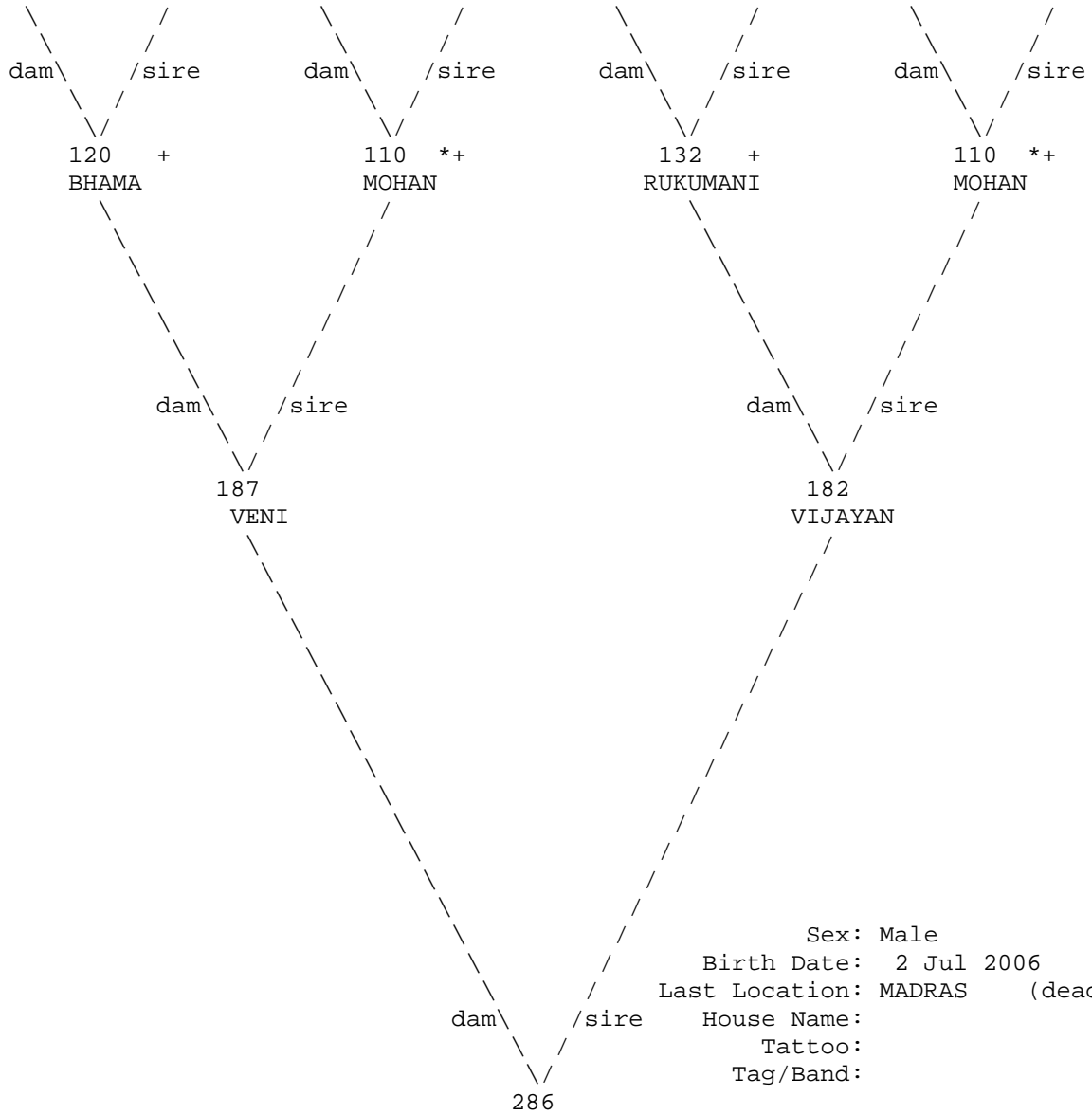
Studbook Number: 285  
=====



+ Wild-caught... \* Appear more than once...  
^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 286  
 =====

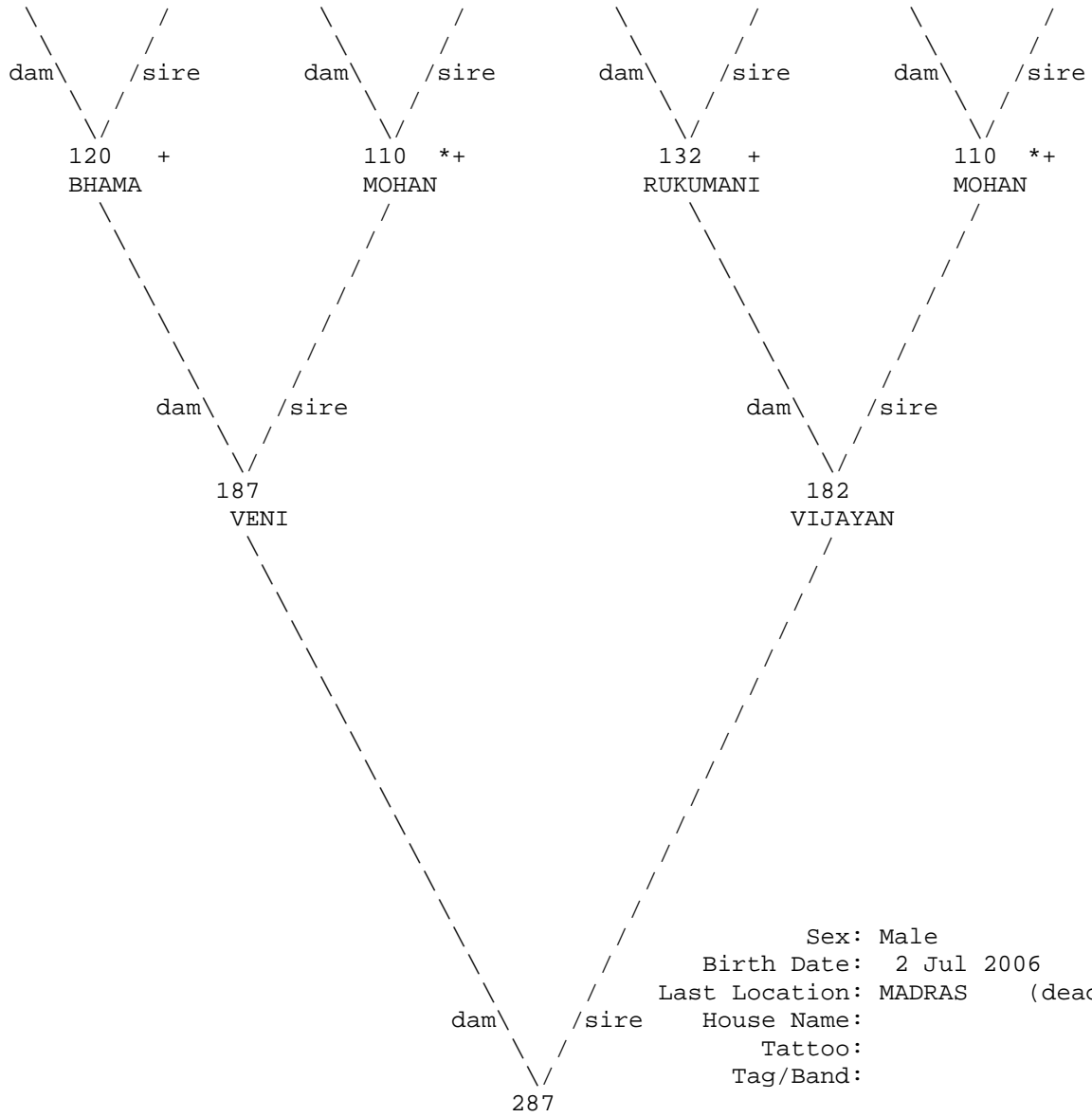
WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*



+ Wild-caught... \* Appear more than once...

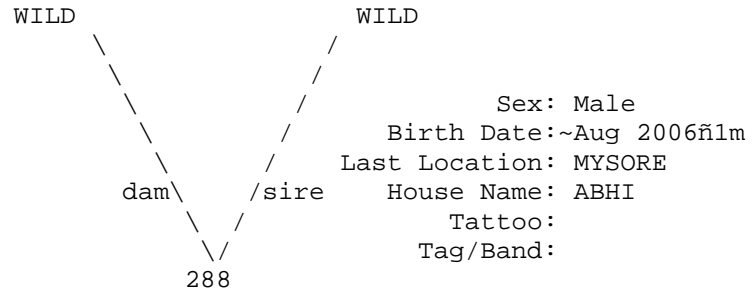
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 287  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*

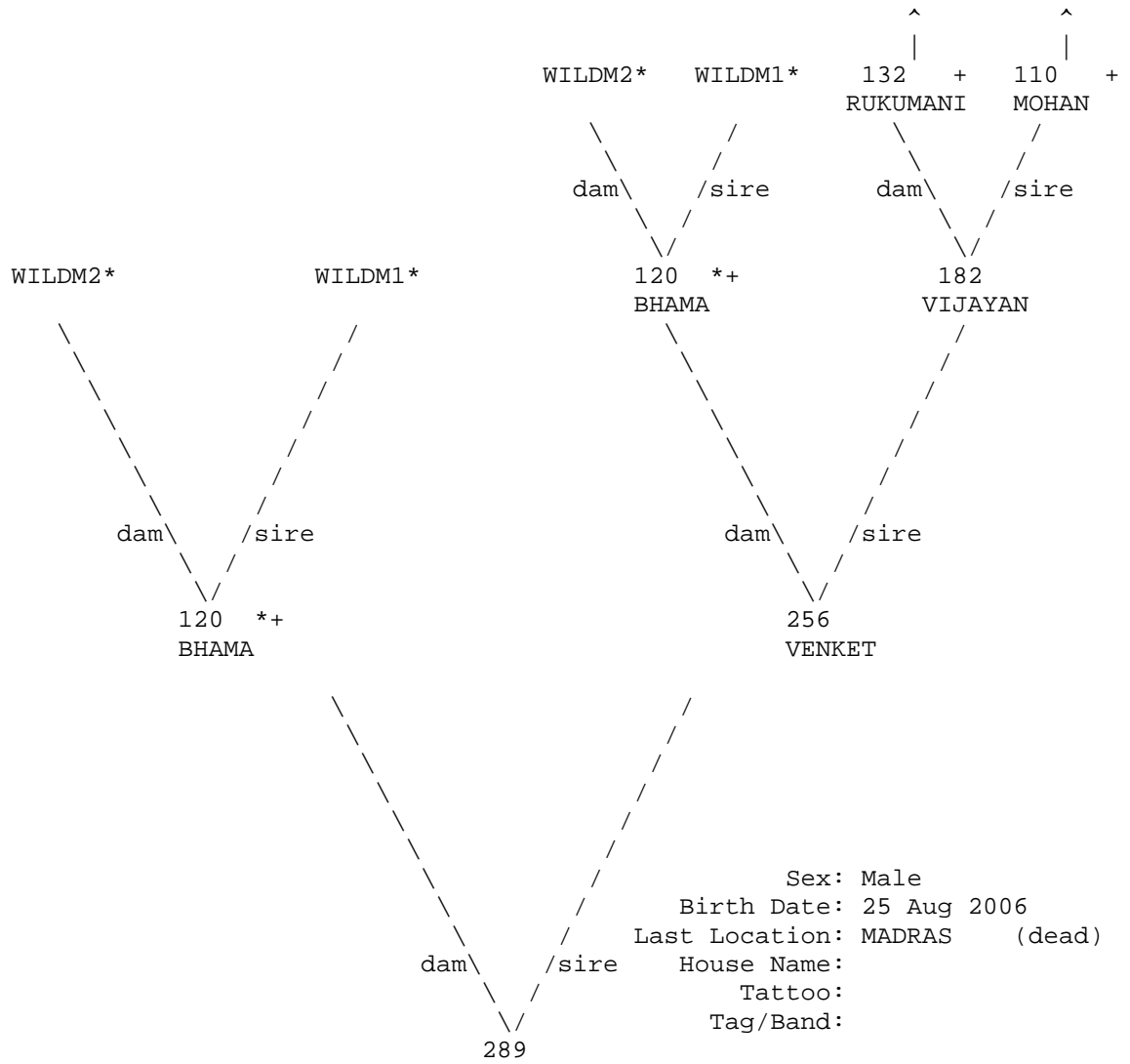


+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 288  
 =====



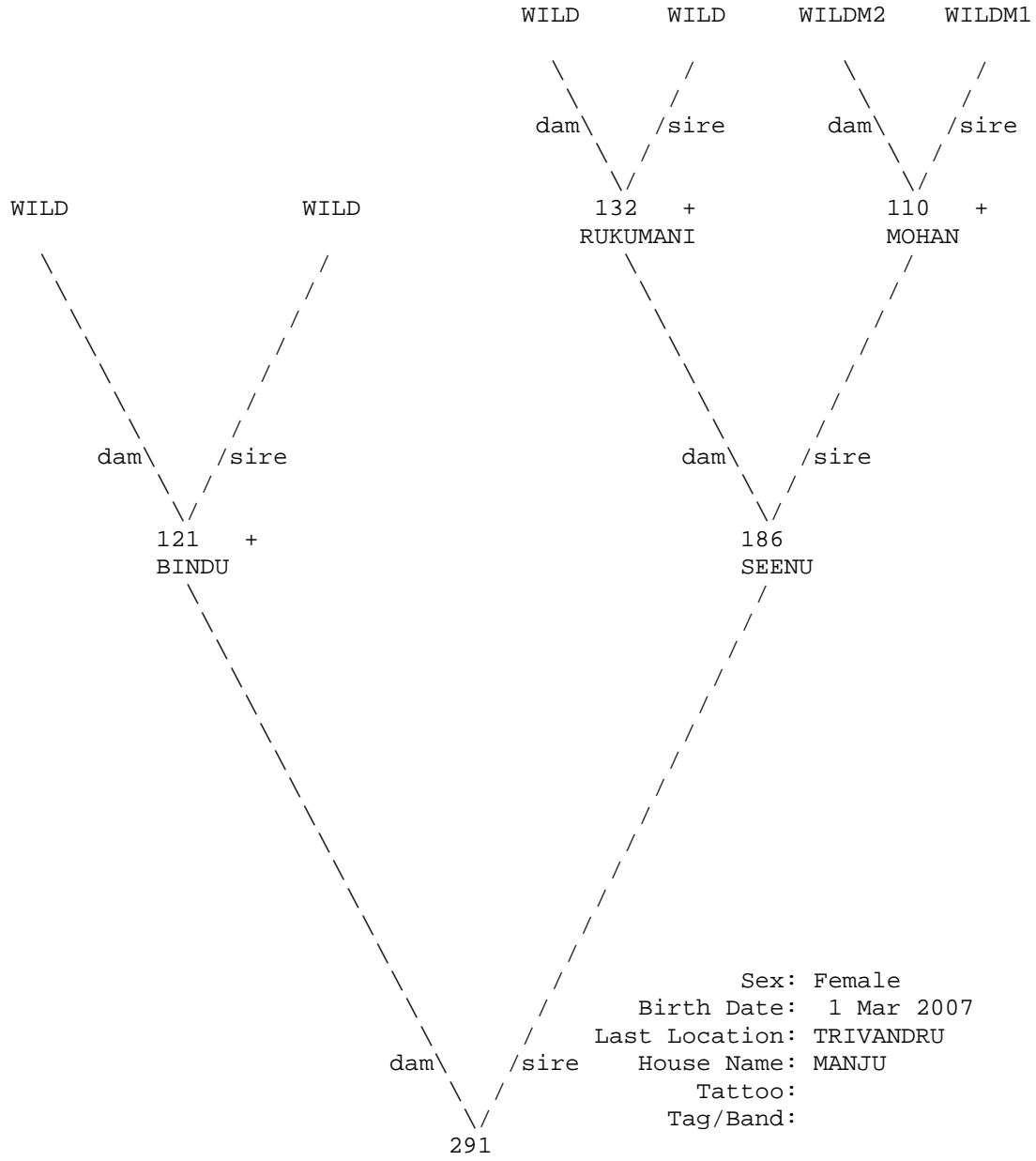
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 289  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

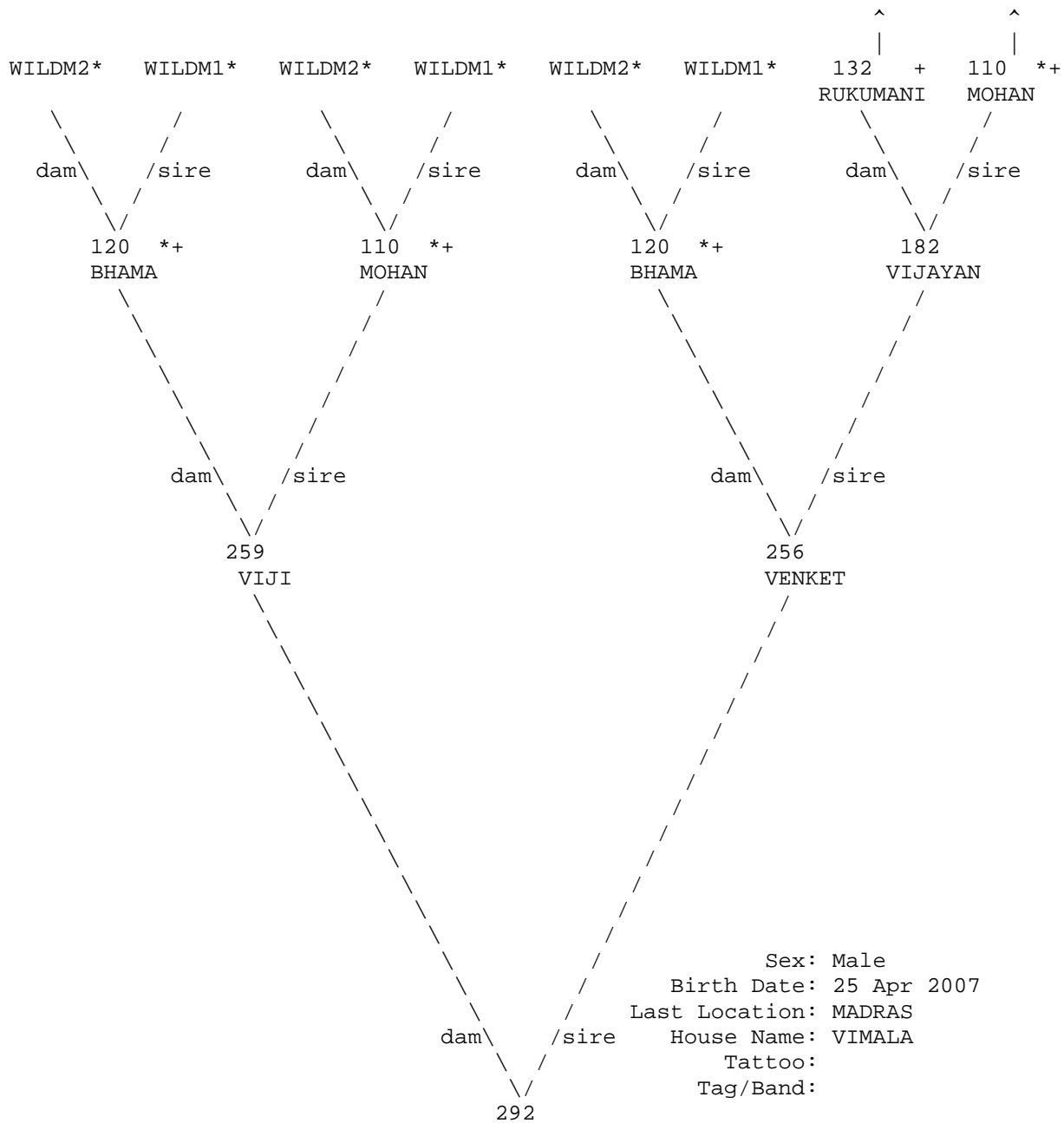


=====  
 Taxon Name: MACACA SILENUS Studbook Number: 291  
 =====



+ Wild-caught...

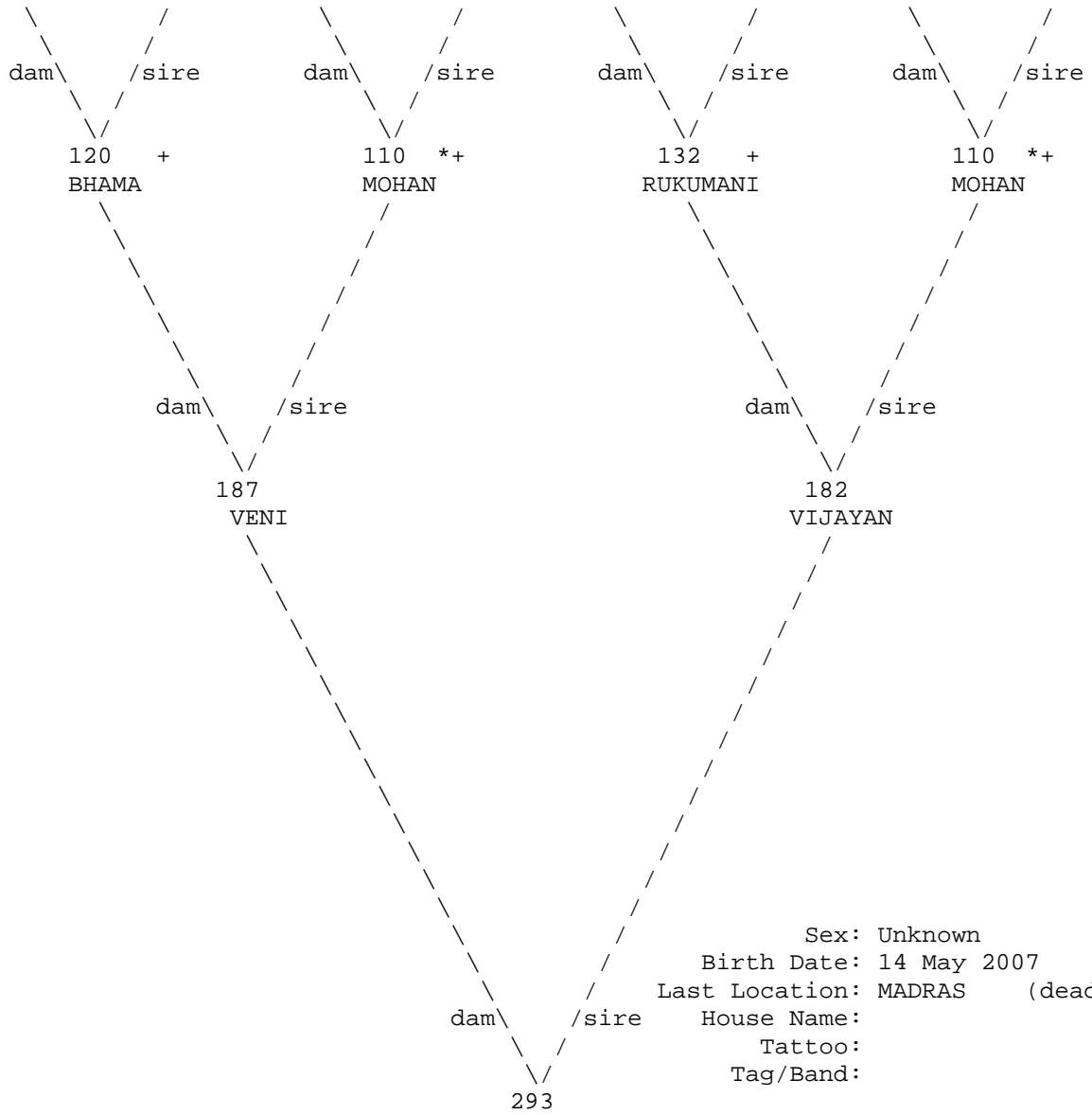
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 292  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 293  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*

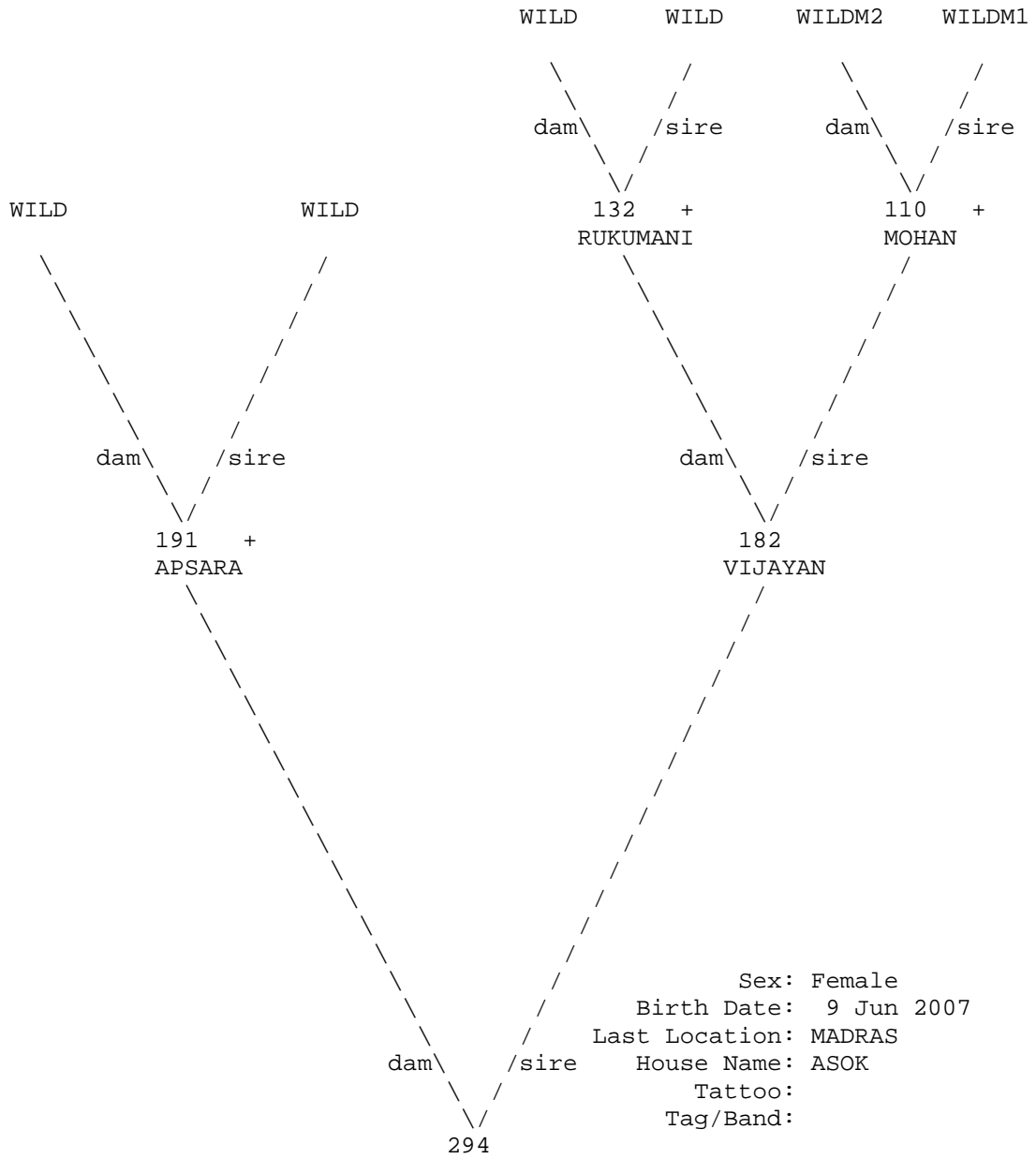


Sex: Unknown  
 Birth Date: 14 May 2007  
 Last Location: MADRAS (dead)  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...

=====  
Taxon Name: MACACA SILENUS

Studbook Number: 294  
=====



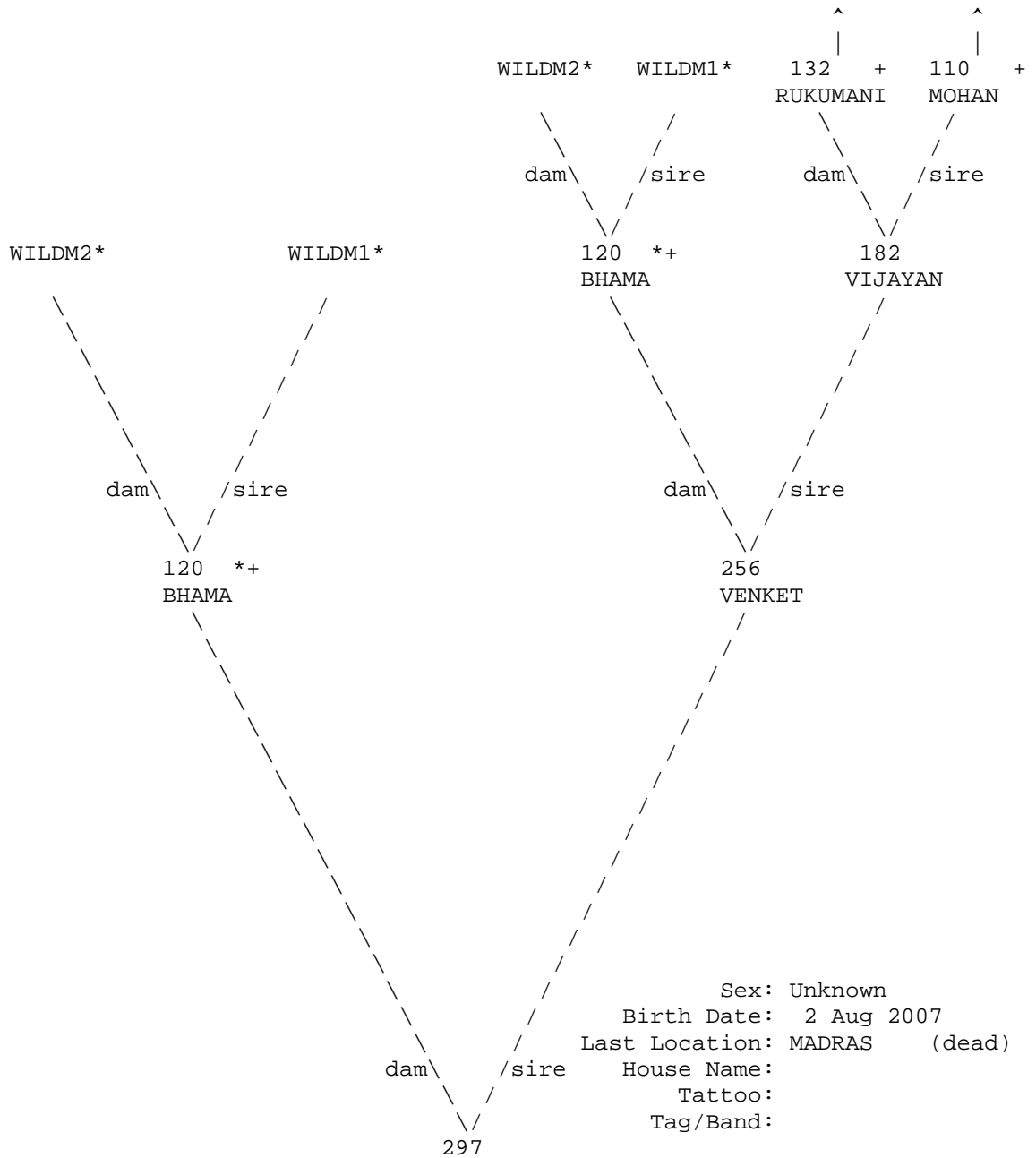
+ Wild-caught...





=====  
Taxon Name: MACACA SILENUS

Studbook Number: 297  
=====

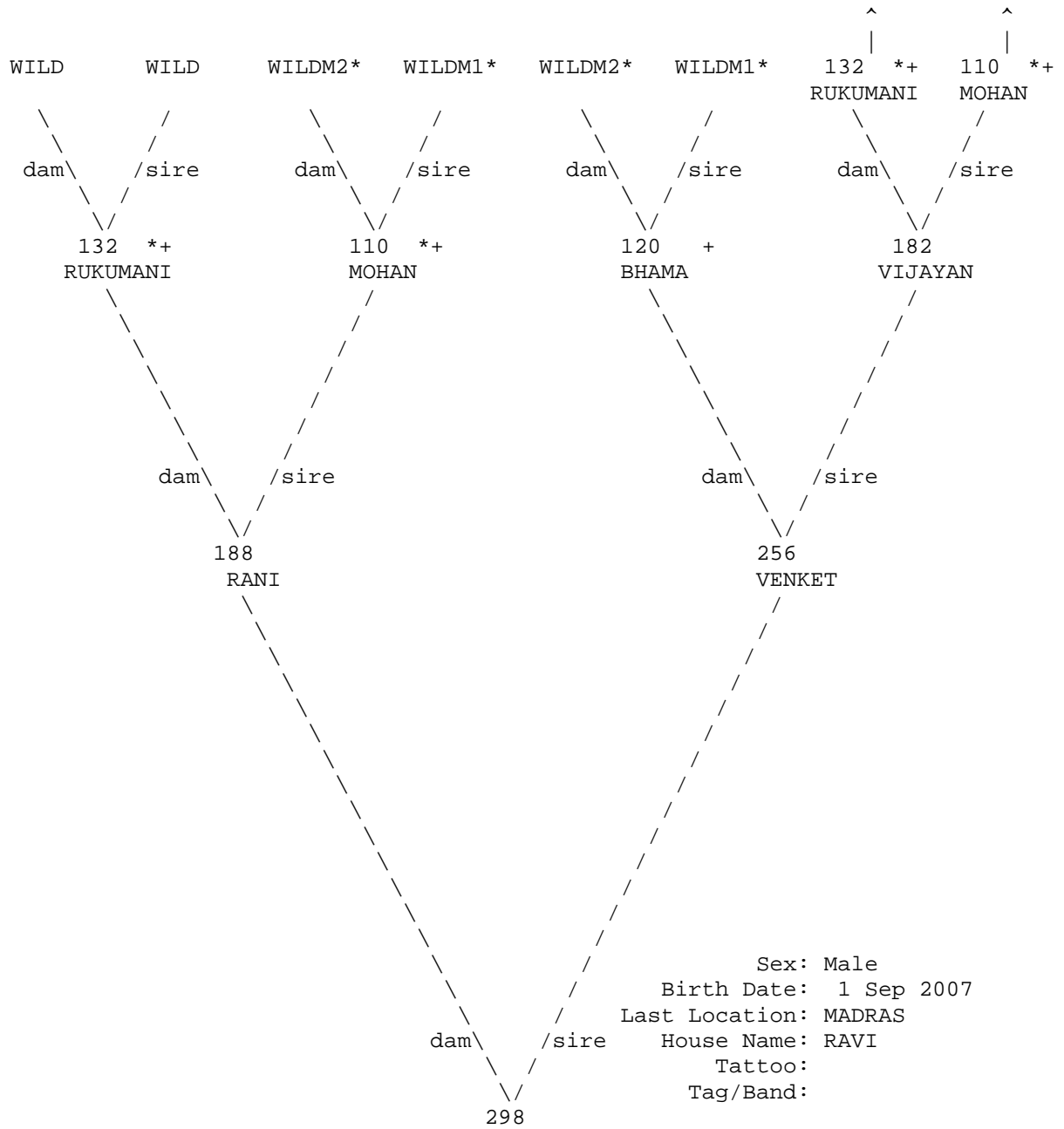


+ Wild-caught... \* Appear more than once...

^ Pedigree continues beyond top of page...

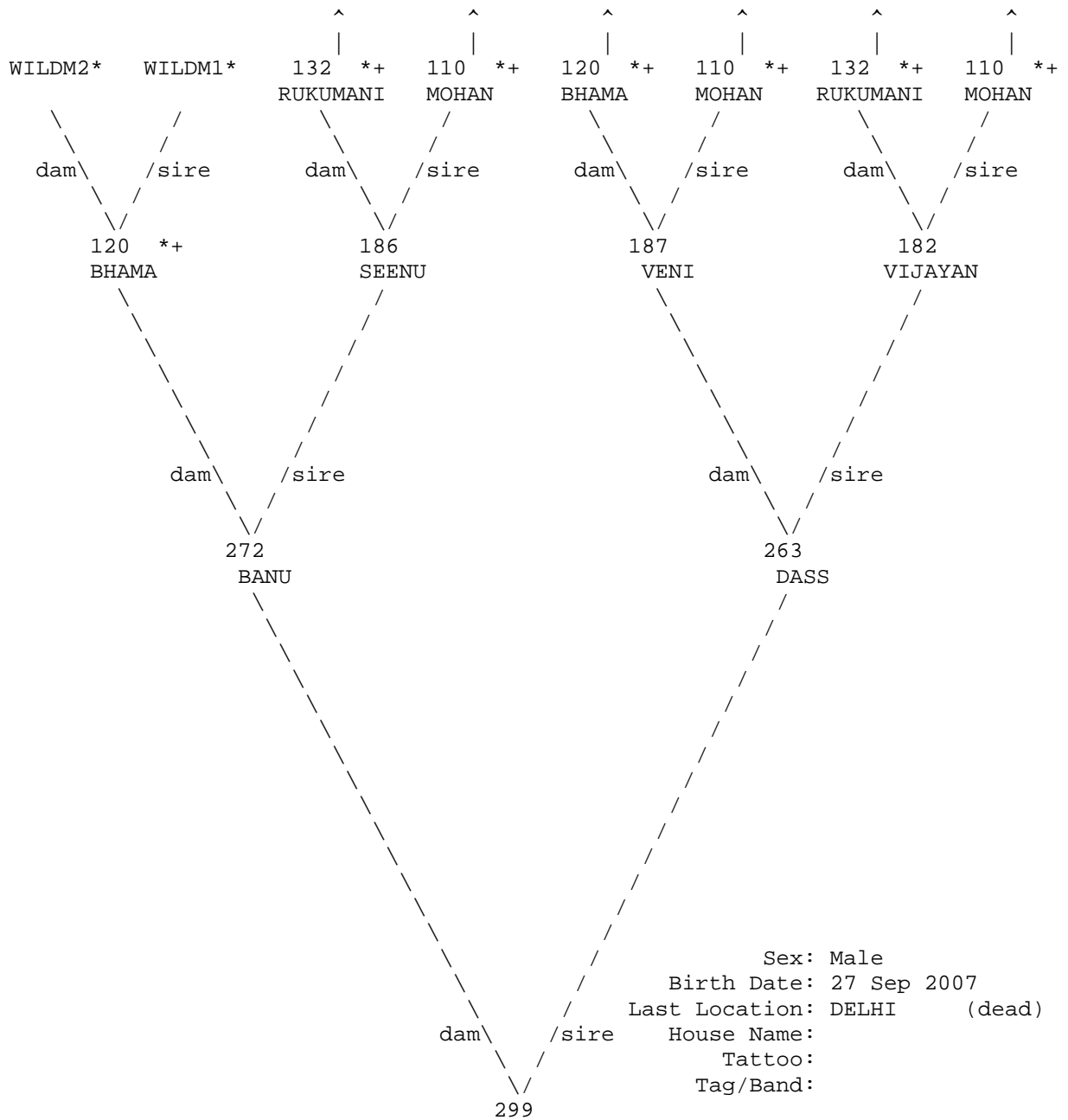
=====  
Taxon Name: MACACA SILENUS

Studbook Number: 298  
=====



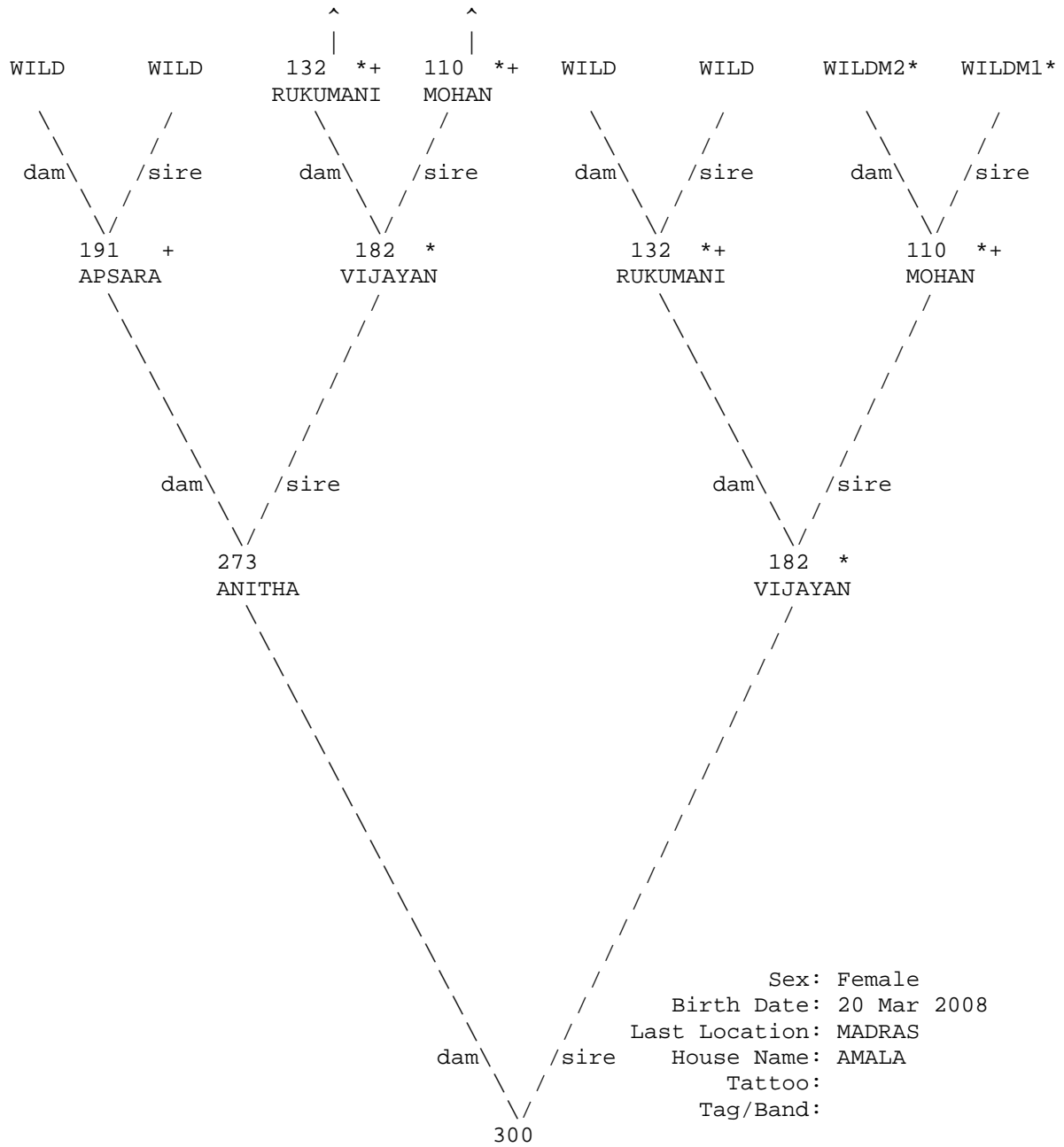
+ Wild-caught... \* Appear more than once...  
^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 299  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 300  
 =====

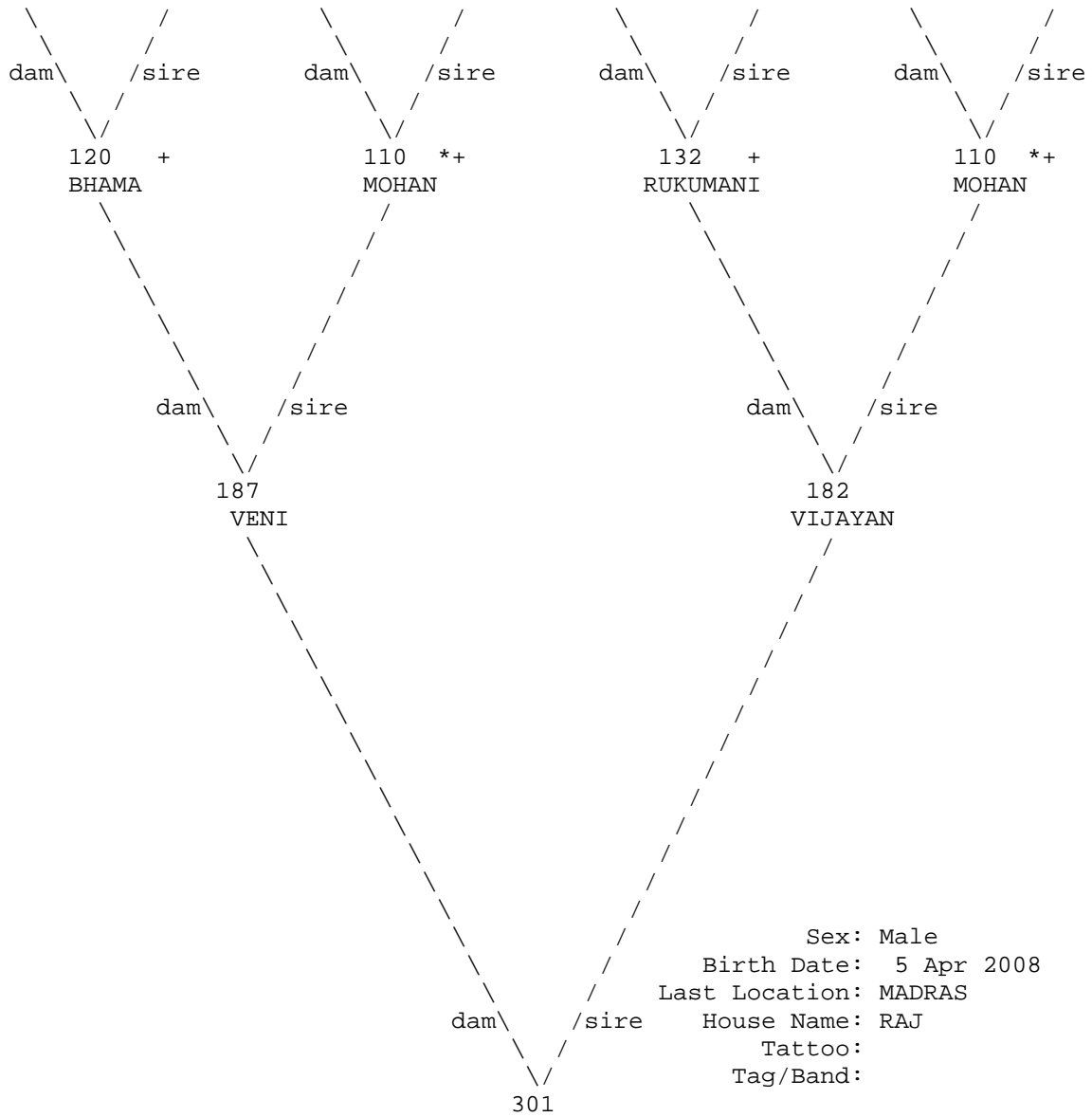


Sex: Female  
 Birth Date: 20 Mar 2008  
 Last Location: MADRAS  
 House Name: AMALA  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

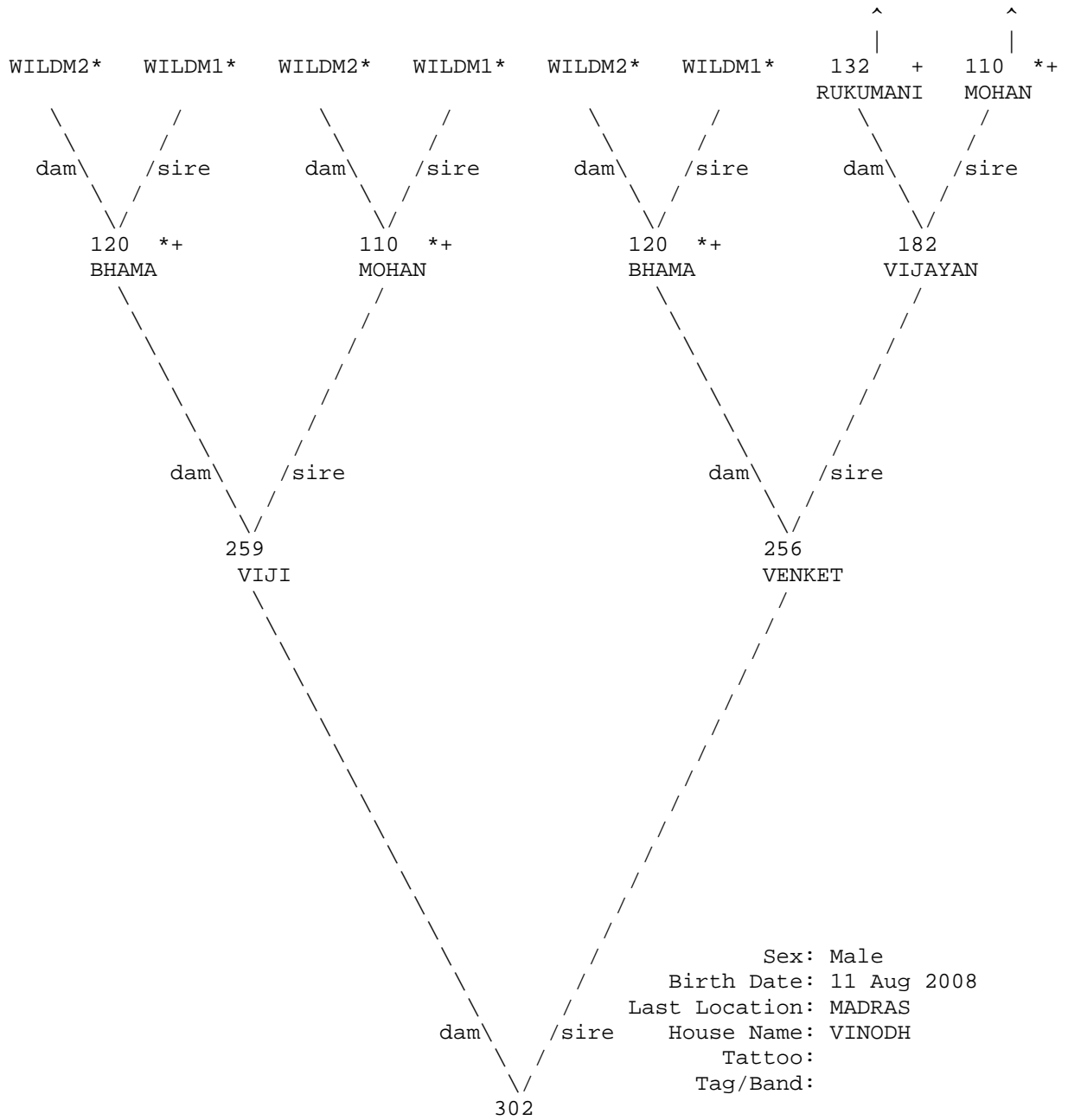
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 301  
 =====

WILDM2\* WILDM1\* WILDM2\* WILDM1\* WILD WILD WILDM2\* WILDM1\*



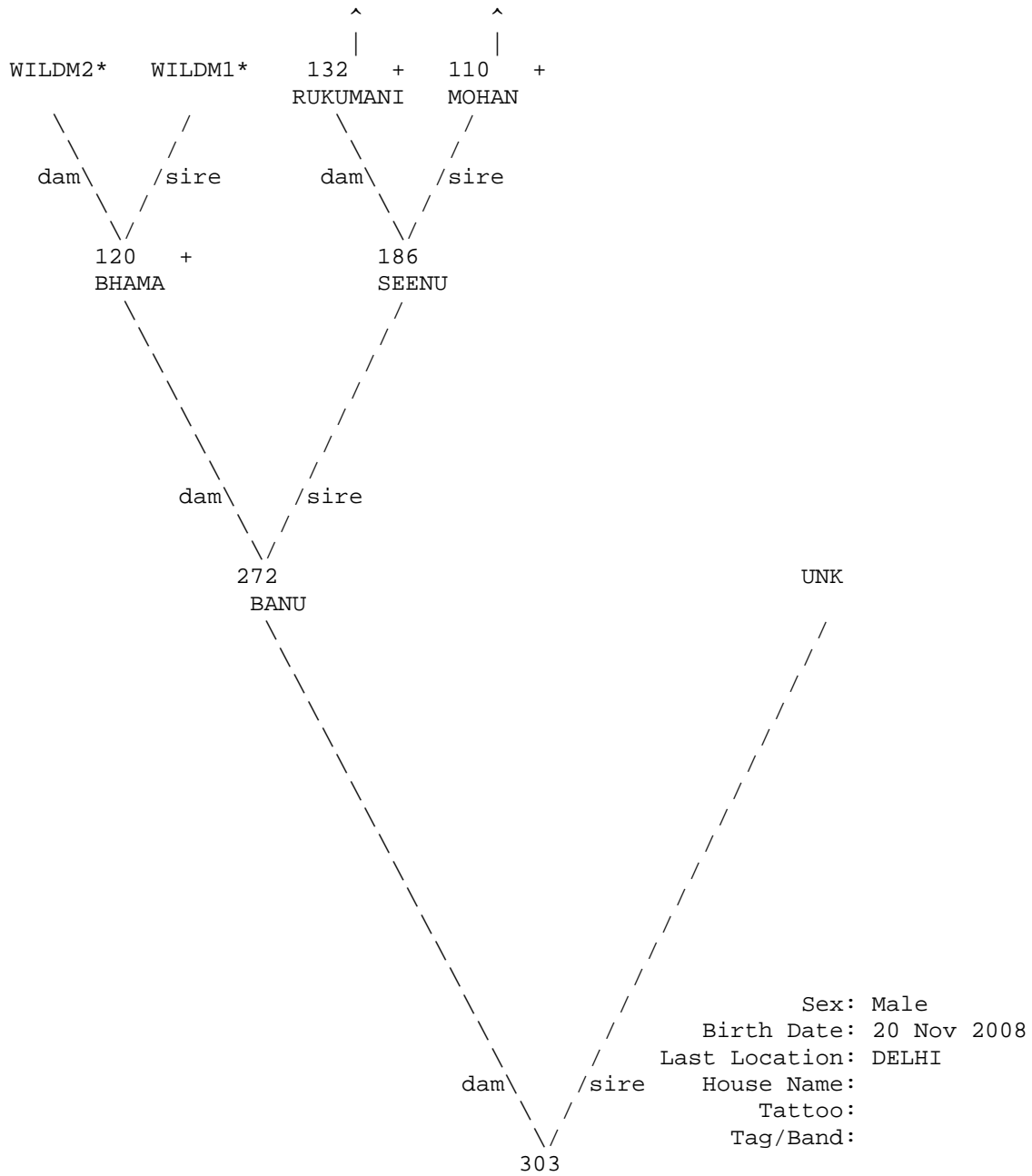
+ Wild-caught... \* Appear more than once...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 302  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

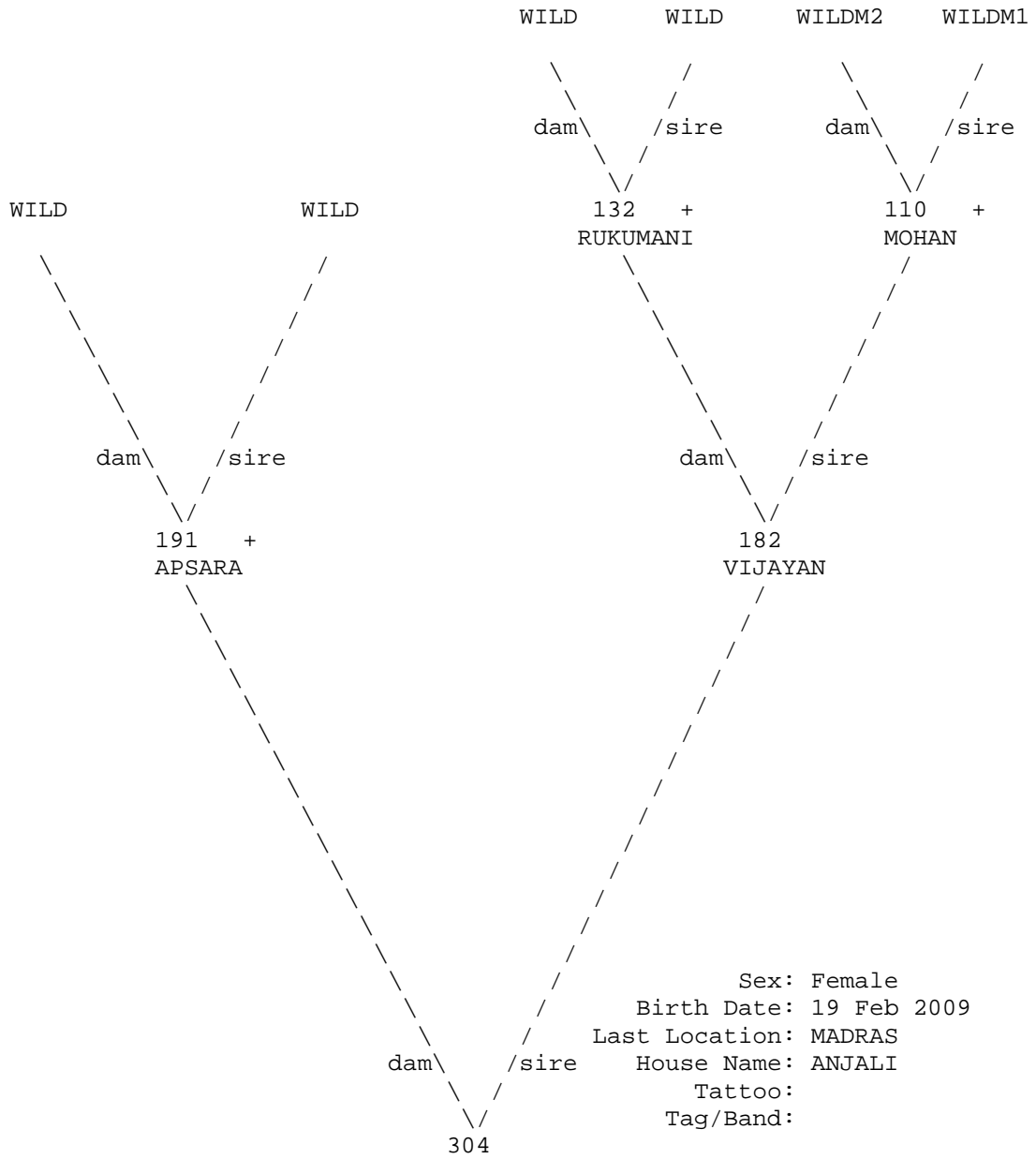
=====  
 Taxon Name: MACACA SILENUS Studbook Number: 303  
 =====



+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS

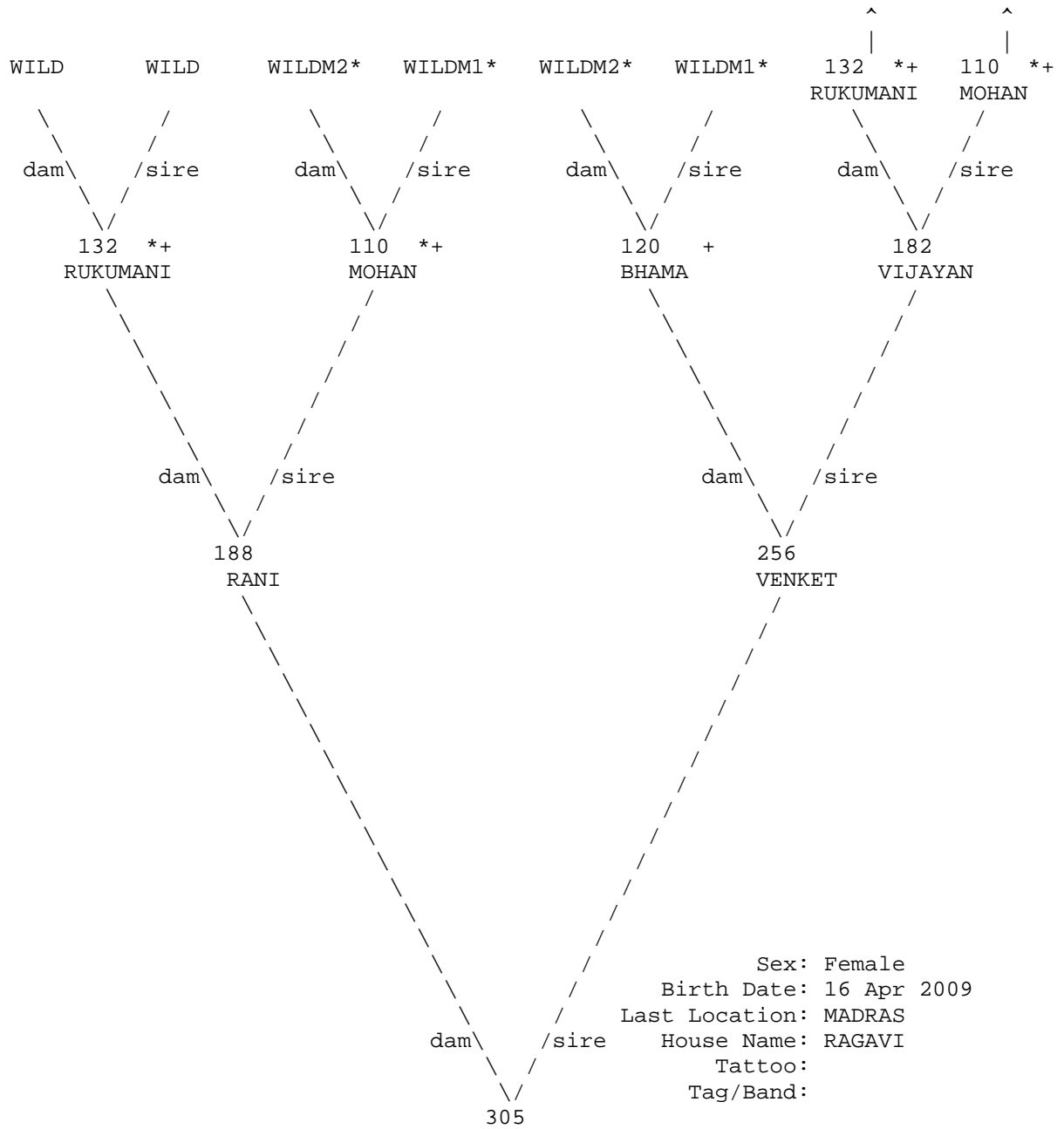
Studbook Number: 304  
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+ Wild-caught...

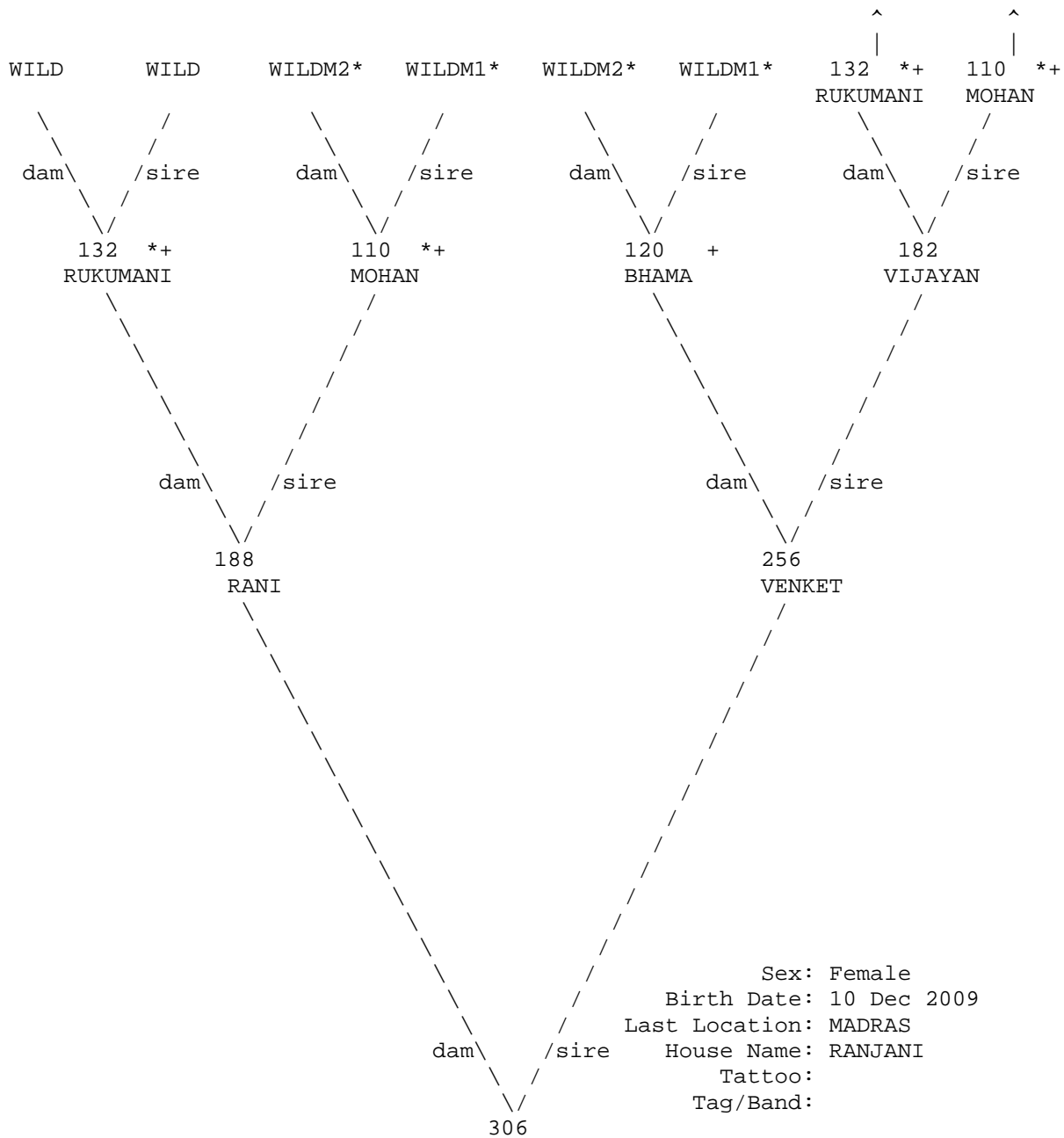
=====  
Taxon Name: MACACA SILENUS

Studbook Number: 305  
=====



+ Wild-caught... \* Appear more than once...  
^ Pedigree continues beyond top of page...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 306  
 =====

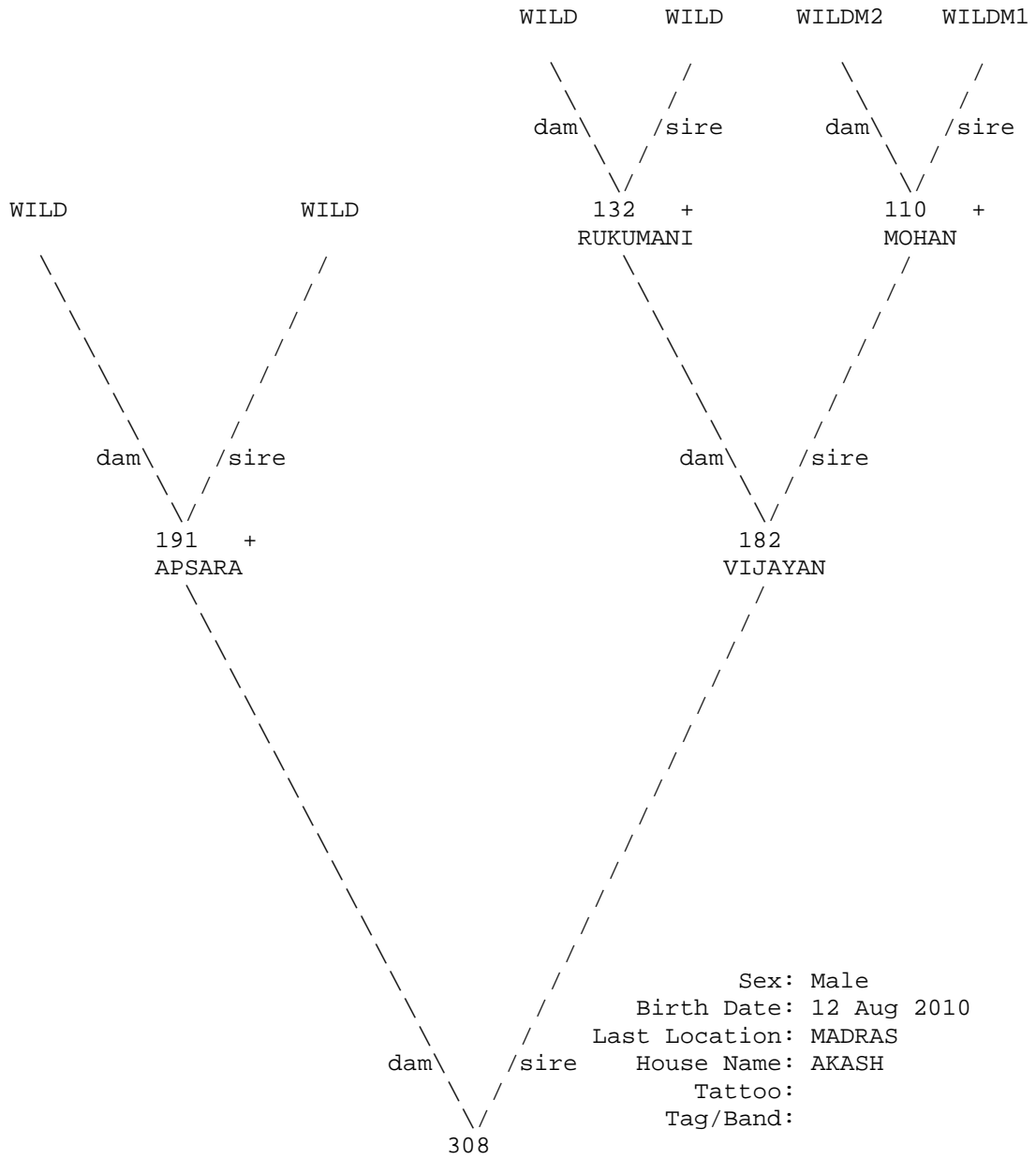


+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...



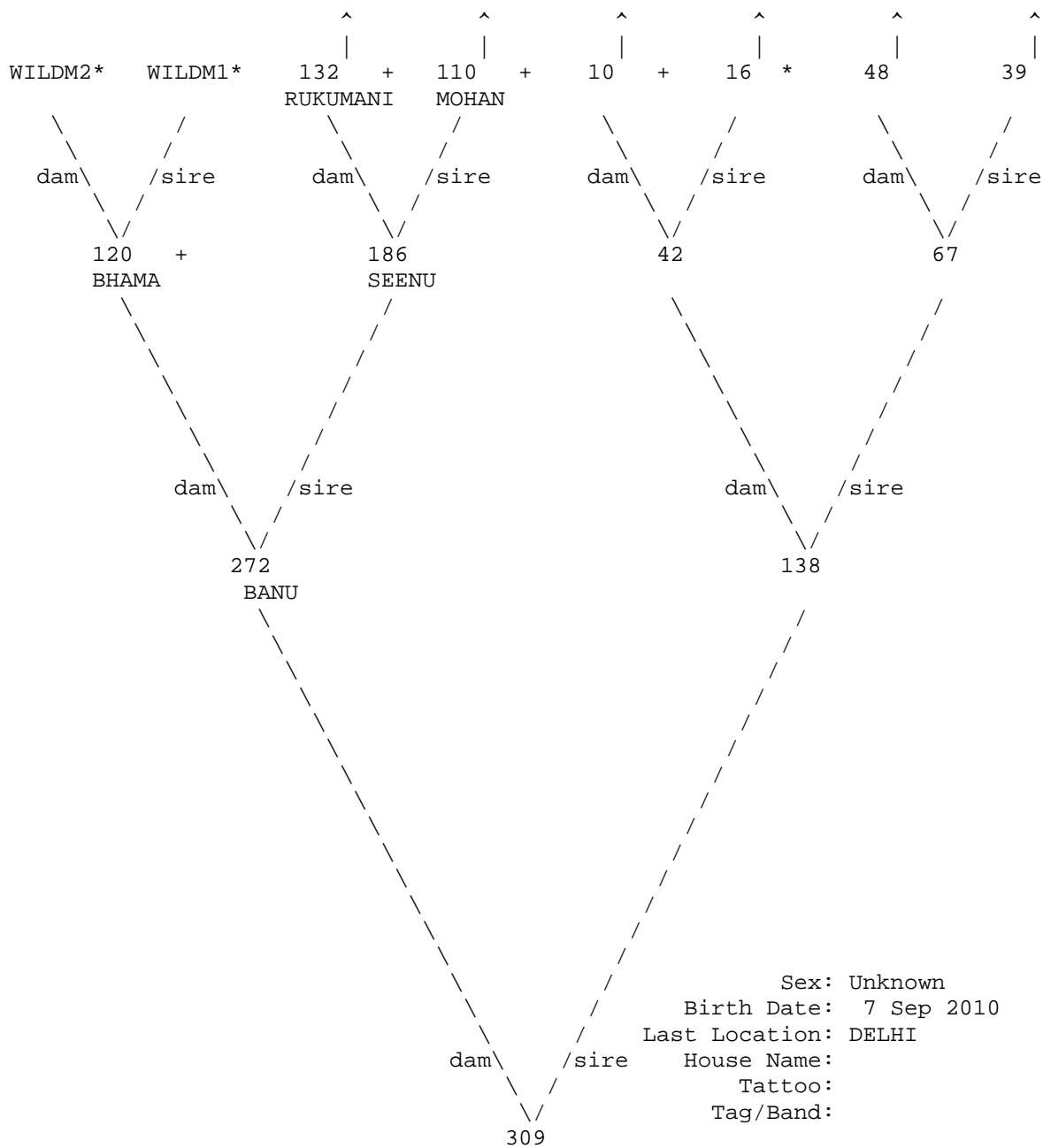
=====  
Taxon Name: MACACA SILENUS

Studbook Number: 308  
=====



+ Wild-caught...

=====  
 Taxon Name: MACACA SILENUS Studbook Number: 309  
 =====



Sex: Unknown  
 Birth Date: 7 Sep 2010  
 Last Location: DELHI  
 House Name:  
 Tattoo:  
 Tag/Band:

+ Wild-caught... \* Appear more than once...  
 ^ Pedigree continues beyond top of page...

=====  
Taxon Name: MACACA SILENUS Studbook Number: 310  
=====

WILD

WILD

dam \ /sire

310

Sex: Female  
Birth Date: ????  
Last Location: PATNA  
House Name: RADHA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 311  
=====

UNK

UNK

dam \ /sire

311

Sex: Female  
Birth Date: ????  
Last Location: PATNA  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS

Studbook Number: 312  
=====

WILD

WILD

dam \ /sire

312

Sex: Female  
Birth Date: ????  
Last Location: TRIVANDRU  
House Name: RADHA  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS

Studbook Number: 313  
=====

WILD

WILD

dam \ /sire

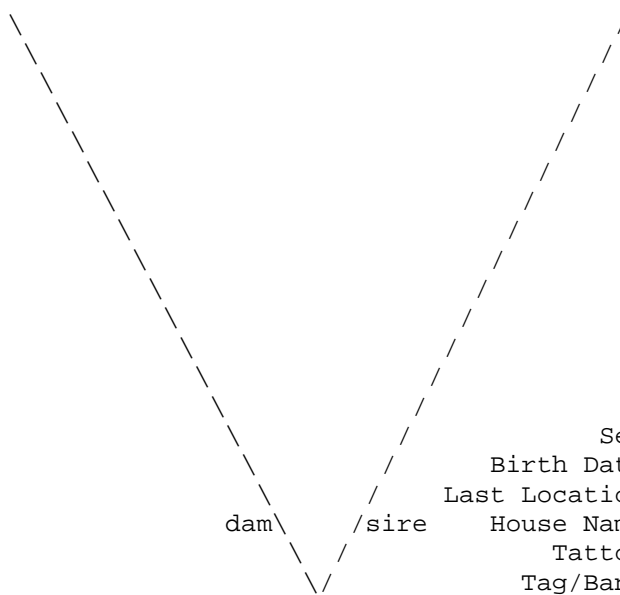
313

Sex: Male  
Birth Date: ????  
Last Location: TRIVANDRU  
House Name: KUTTAN  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 314  
=====

WILD

WILD



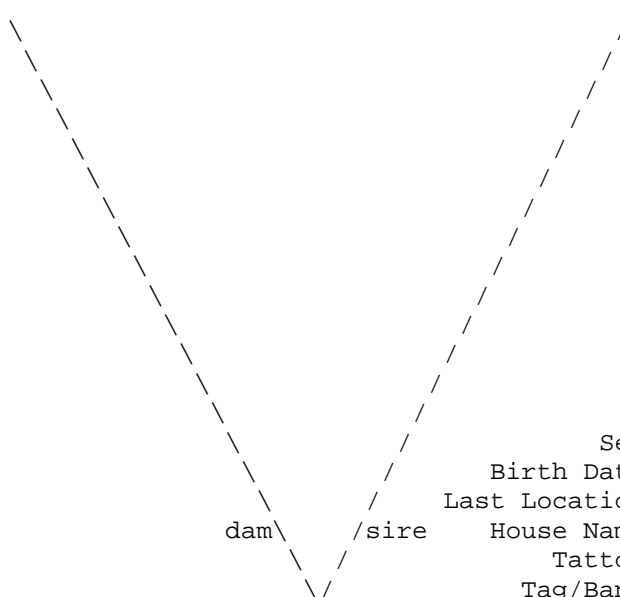
Sex: Female  
Birth Date: ????  
Last Location: SHILLONG  
House Name:  
Tattoo:  
Tag/Band:

314

=====  
Taxon Name: MACACA SILENUS Studbook Number: 315  
=====

WILD

WILD



Sex: Female  
Birth Date: ????  
Last Location: SHILLONG  
House Name:  
Tattoo:  
Tag/Band:

315

=====  
Taxon Name: MACACA SILENUS Studbook Number: 316  
=====

WILD

WILD

dam \ / sire  
316  
Sex: Male  
Birth Date: ????  
Last Location: SHILLONG  
House Name:  
Tattoo:  
Tag/Band:

=====  
Taxon Name: MACACA SILENUS Studbook Number: 317  
=====

UNK

UNK

dam \ / sire  
317  
Sex: Male  
Birth Date: ????  
Last Location: LUCKNOW  
House Name:  
Tattoo:  
Tag/Band:

Compiled by: Manjari Malviya thru Wildlife Institute of India  
Data current thru: 22 Sep 2011 Indian regional  
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