

EAZA Husbandry Guidelines for Eurasian Forest Reindeer

Rangifer tarandus fennicus, Lönnberg 1909
and the 2014 European Studbook (ESB)

Leif Blomqvist
Nordens Ark



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Foreword

Forest reindeer have been maintained in European zoos since the early 1970s and a European Studbook (ESB) was established for the taxon in 2001. Despite the long tradition of managing the subspecies in captivity, little has been published on its husbandry and diseases. Although forest reindeer is neither a magnet to zoo visitors nor a highly endangered species in the wild, it is one of three subspecies of wild reindeer from Europe with shrinking population trends in Finland and Russia where it can still be found. In a scenario of a further decline in the wild, it is important to maintain a robust and self-sustaining backup population in captivity if we are to safeguard forest reindeer from extinction.

Summarising the various results which partly are based on a questionnaire sent out to all holders in 2012 by Sara Johansson from Lund university as a part of her examination, this manual will hopefully assist in future husbandry, handling and care of forest reindeer as a part of the subspecies' future management. The guidelines might also provide inspiration and information for those who have an interest in keeping these graceful and amazing animals still roaming in the Taiga belt in the western parts of Russia and in Finland.

I am grateful to Sara Johansson for her assistance in contacting the forest reindeer holders as well as to Sanna Sainmaa from Helsinki Zoo and to Noam Y. Werner, EAZA Deer TAG Chair from the Tisch Family Zoological Gardens in Jerusalem who both have given me constructive and valuable comments of this document. Christopher Godfrey has, like many times before, patiently prevented me from mishandling the English language.

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1. Biology

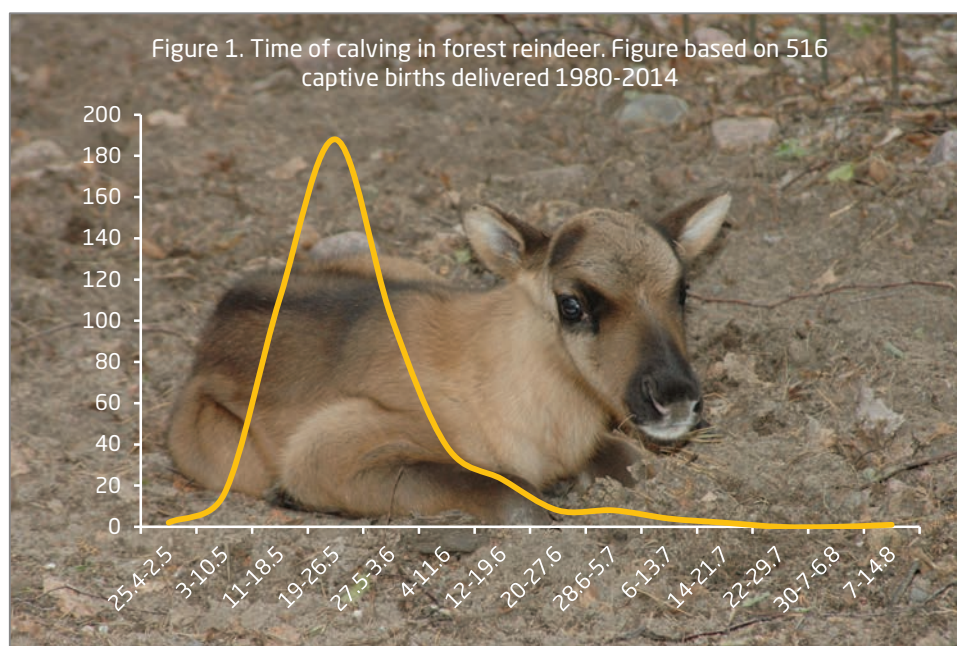
1.1. Taxonomy

The first scientific description of forest reindeer dates from 1909, when the taxon is thought already to have vanished from the Finnish fauna. After examining a stuffed wild reindeer, two skulls and the carcasses of a shot animal, Swedish zoologist Einar Lönnberg came to the conclusion that the wild reindeer in Finland differed significantly from the mountain or tundra reindeer, *Rangifer tarandus tarandus*, and represented a subspecies adapted to a life in dense boreal forests of northern Europe with deep snow cover during the winter months. Lönnberg suggested naming the subspecies *Rangifer tarandus fennicus*, the Finnish forest reindeer. Although later studies have classified the forest reindeer as a species of its own, the taxon is currently unambiguously considered a subspecies of reindeer, *Rangifer tarandus*.

Order:	<i>Artiodactyla</i>
Family:	<i>Cervidae</i>
Genus:	<i>Rangifer</i>
Species:	<i>Rangifer tarandus</i>
Subspecies:	<i>Rangifer tarandus fennicus</i> , Lönnb. 1909
Common name:	(Eurasian) Forest reindeer

1.2. General description

Forest reindeer are notably larger than the other reindeer subspecies. They have long rostrums and long legs with well-branched upright and narrow antlers – all characteristics adapted to a life in dense forests with thick snow-covers in winter. Like all reindeer but unlike other deer species, both sexes grow antlers yearly. Stags drop their antlers in late autumn or early winter when the

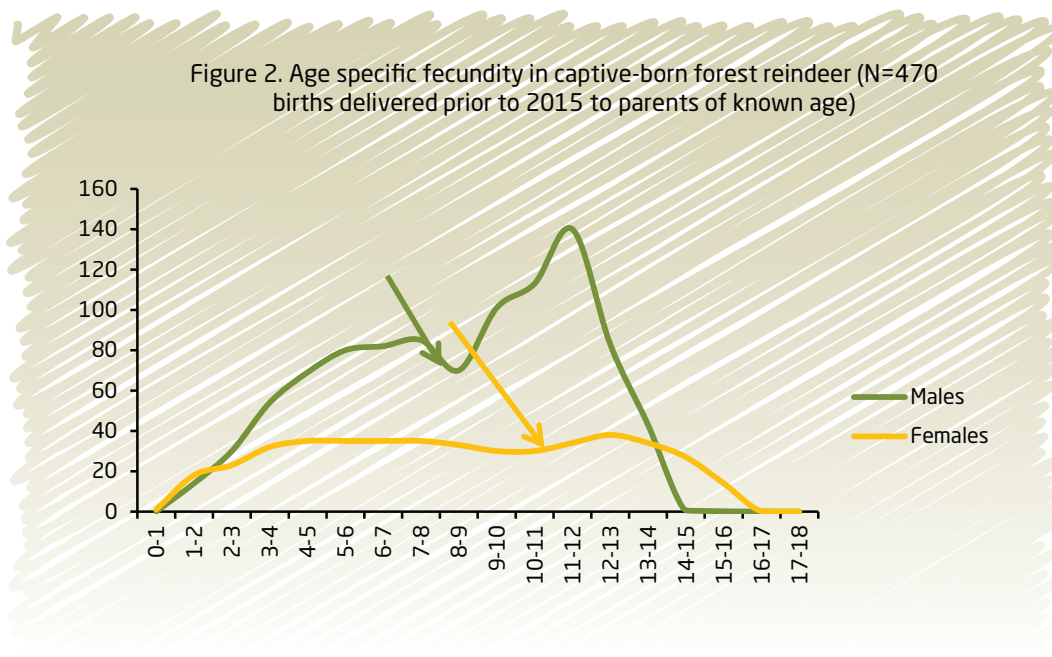


rut is over, while hinds keep their antlers until early summer when the calves are born. Unlike their domestic relatives, forest reindeer show minor colour variation with a darker fur than the other subspecies. Body length varies from 150cm to 210cm, with a shoulder height 15cm higher than in other reindeer from Eurasia, reaching from 85cm to 120cm. Sexual dimorphism is significant and stags can weigh up to 250kg, while hinds seldom exceed 170kg.

1.3. Reproduction

During the rutting season from early September to late October, stags and hinds gather to form rutting herds of ten to 40 animals. The harem stag starts to herd the hinds by charging, chasing and snorting before mating takes place. As the heat continues, the harem stag begins to tire out, and subdominant males have an opportunity to mount unmated females (Kojola 1986), a behaviour that has also been observed among mountain reindeer in Norway, where more stags have been seen to sire calves than was earlier assumed (Röed et al. 2005).

Data from 516 births in captivity shows that forest reindeer are strictly seasonal breeders. All births have taken place from late April to mid-August, with a peak during the second half of May (Figure 1), when 78 per cent of calvings are recorded. Wild females are regarded as fully grown at three years old, while males reach sexual maturity one year later (Heikura et al. 1998). Data from 174 breeding animals of known age shows that in captive conditions, both sexes reach sexual maturity at the age of two years and continue to breed until they have reached 12 years, when fecundity drops significantly (Figure 2). The oldest stag in the studbook to have sired calves was aged 12 years five months, while the oldest captive-bred female was 15 years when she delivered a calf. Twin calves are non-existent or extremely rare in the wild (Härkönen and Bisi



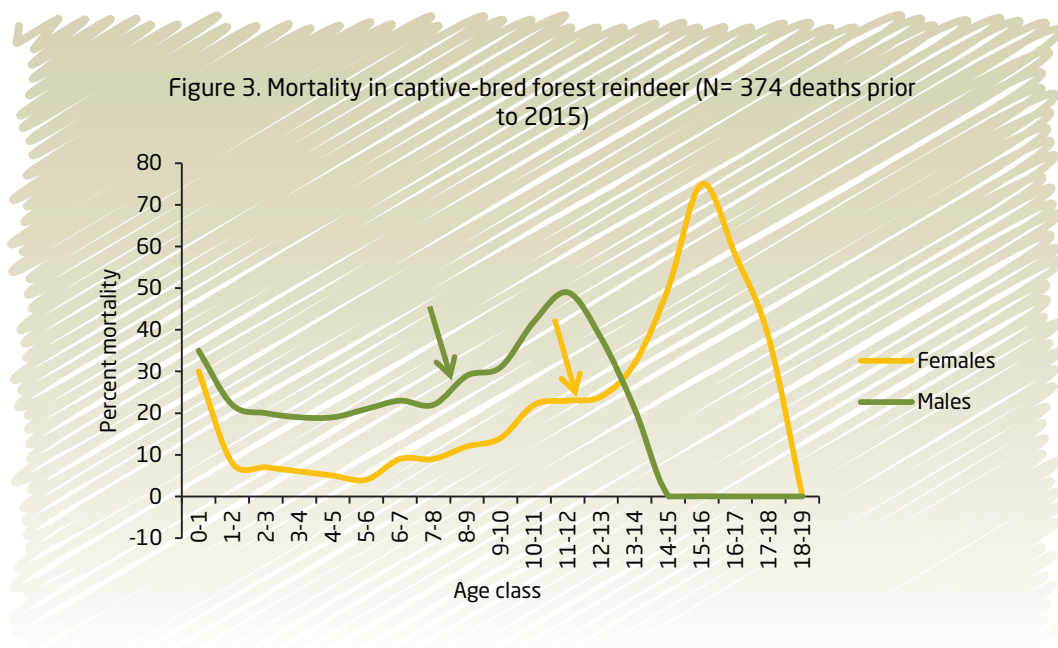
2007; Sihvonen 2013) and have not been recorded in the captive population. The calves follow their dams until the following spring, when the female gives birth to another calf.

The shorter fecundity in males (Figure 2) does not reflect the biological potential in the males, but indicates a management practice where males only are kept in breeding situations for a shorter period to avoid inbreeding in the captive herd. It is, however, unlikely that free-ranging stags have an opportunity to mate when they are older than ten years. It is also important to mention, that the values in the higher age classes, (marked with an arrow in Figure 2), are highly prone to distortion. An animal that manages to reach a particularly high age will represent a high portion of the total number of animals in that age class. If this individual succeeds in breeding at that late stage, it consequently gives a fully distorted view of what animals of that age are

capable of. As a result, the chances of reproduction in this age class become highly inflated and do not show a realistic expectation for animals within the population, but are only a result of using too small a data set.

1.4. Longevity

No information exists on mortality in wild forest reindeer (*Härkönen & Bisi 2007*). Valuable information has, however, been collected from the studbook, where 374 deaths of captive-bred animals of known age have been recorded. The lifespan shows that there is a 33 per cent chance that a calf will not survive its first year of life. After that, both sexes can live for more than ten years. The longest recorded lifespan for a male is 12 years six months, and for a female 16 years one month (Figure 3). As in Figure 2, the values in the higher age classes, here marked with arrows, are based on a few individuals only and they are therefore highly unrepresentative for these age classes.



2. Field data

2.1. Distribution

Forest reindeer were formerly widely distributed across northern Europe, and in the 16th Century they could be found as far south as Poland (*Banfield 1961*). Due to excessive hunting, their numbers dwindled and their distribution range receded rapidly northwards. Currently the species is found only in Finland and in the western parts of Russia, in Russian Karelia and in the regions of Arkhangelsk and Komi.

2.1.1. Finland

The last herds in Finland were observed in the Suomenselkä area in mid-Finland at the end of the 19th Century (*Nieminen and Laitinen 1983*) and in Kainuu in the eastern parts of the country some years later (*Vanninen 1980*). The species was fully protected in Finland in 1913, at a time when it had most probably already become extinct. In the mid-1950s, forest reindeer started to re-populate the country through natural dispersal from Russia. A second back-up population



Figure 4. Helicopters are used for the annual monitoring in Finland.

was established in the central parts of the country through restockings and active population management measures in the early 1980s (*Blomqvist 2008; Blomqvist & Richardson 2012*).

The taxon has been monitored in Finland at regular intervals using helicopters and aircrafts (Figure 4). Until 1997, the *WWF Forest Reindeer Working Group* was responsible for the practical implementation of the aerial counts, but more recently the monitoring has been carried out by

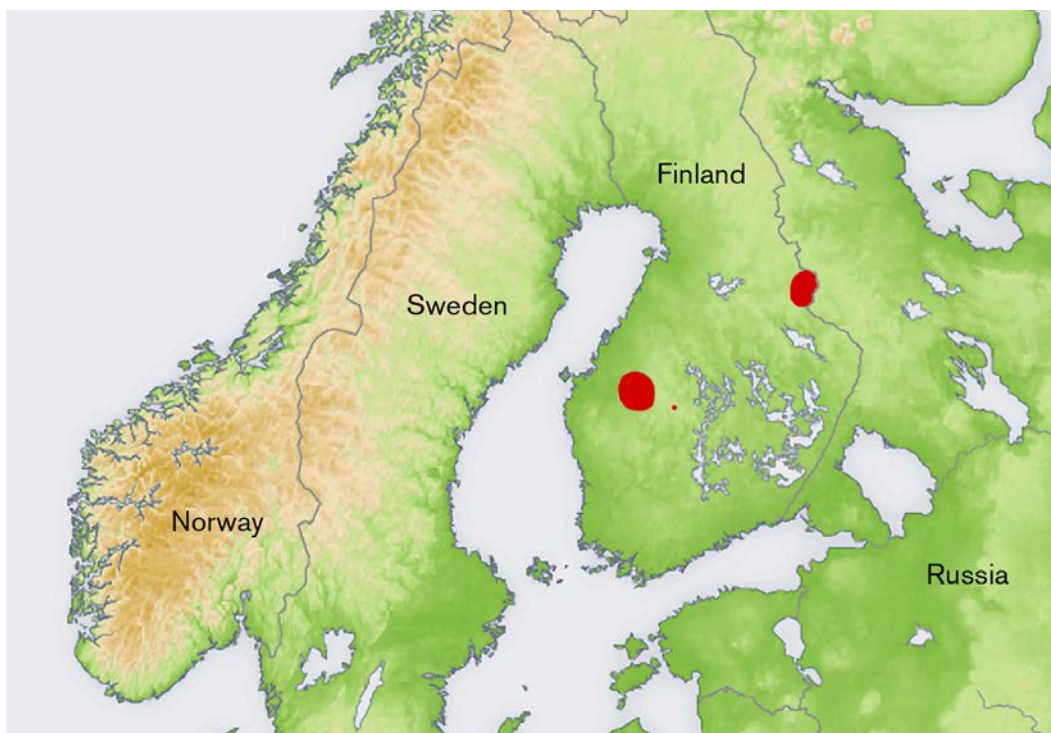
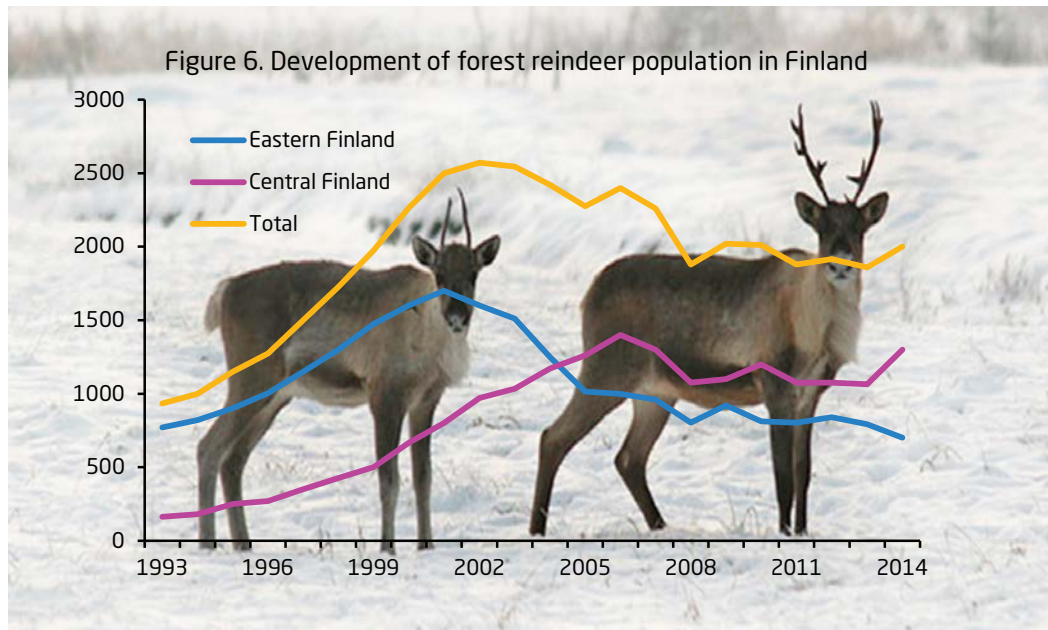


Figure 5. Current distribution of forest reindeer in Finland.

the *Finnish Game and Fisheries Research Institute (RKTL)*. Today the species inhabits two main areas in Finland (Figure 5), with a small fragmented population descending from animals released from Ähtäri Zoo in the 1980s. The Ähtäri population has never exceeded 40 individuals and recent monitoring shows that this population has stagnated and barely exceeds 20 animals.

The eastern population in Kainuu reached a peak in 2001, when it numbered 1,700 heads, but numbers have declined since. The translocated population in Ostrobothnia grew quickly from slightly more than 160 animals in 1992 to 1,000 heads in 2003. Due to over-hunting, this positive population development has, however, stagnated and remains at the same level as a decade ago.

Small fragments were previously also found in Lieksa, in north Karelia, close to the Finnish-Russian border, but since 2005 no sightings have been verified in this area. The fluctuations of the free-ranging population in Finland during the two past decades are summarised in Figure 6.



2.1.2. Russia

The status in Russia is unclear and figures of 6,500 to 7,000 animals were reported from the Russian parts of Karelia in the 1980s when the population was at its largest (*Sirkka 2014; Danilov et al. 2015*). After the break-up of the Soviet Union, poaching increased significantly, not only of forest reindeer but also of moose (*Alces alces*), and according to *Danilov (2005)*, half of the animals that were found dead had been killed by poachers. In the late 1990s, the population had fallen to no more than 3,000 animals, half the number of a decade earlier. Since then the population has continued to stagnate, and the results from the aerial counts in 2003 showed that only 2,500 were left in the Russian parts of Karelia (*Danilov 2003*). The most recent monitoring in the winter of 2014 showed at most 2,400 animals (*Danilov et al. 2015*).

The populations in the Komi- and Arkhangelsk areas have been estimated at 2,500 and 1,500 animals respectively. These numbers are only rough estimates and no reliable data is available from these regions. All recent surveys indicate, however, that the previous population estimates were over-optimistic in these areas too, and that the species in Russia has suffered from ongoing declines with the taxon absent from large areas where it had earlier occurred.

2.2. Habitat

Forest reindeer inhabit separate winter and summer feeding grounds, with yearly migrations in spring and autumn. In summer, forest reindeer feed on fresh green vegetation, while the diet in

winter consists largely of lichen. In summer-times, when there is plenty of fresh green vegetation, the animals migrate to nutrient-rich mires where they graze mainly on grasses, sedges and hay (Härkönen & Bisi 2007). In the autumn, when the vegetation has died down, the species move to dry heath forests in search of lichen. During the cold season, forest reindeer also feed on grass and winter grain cultivations.

2.3. Population and conservation status

The latest published Red List of Finnish species (2010) categorises *Rangifer tarandus fennicus* as *Near Threatened (NT)*. As a result of Finland's accession into the EU, the species was included in *Annex II* of the *European Union Habitats Directive (92/43/EEC)* in 2007 when the directive was revised to include species and habitats from the boreal region. The same year, forest reindeer were included in the Russian national endangered species list (*The Red Book*), giving the species full protection throughout the year in Russia.

The situation for the taxon is further compounded by the fact that it is unclear how far east forest reindeer extend into Russia, and whether much of what is considered their actual range is in fact occupied by mountain and/or semi-domestic reindeer (Anon. 2011). Whether or not the subspecies' range in Russia is as widespread as historical literature states, it would appear that reindeer populations throughout the country are in trouble. Vors and Boyce's study (2009) demonstrates clearly a global decline in many reindeer populations, and for the forest reindeer in Russia there has been a documented decline (Danilov et al. 2015). The lack of population data from some regions in Russia may indicate that control over illegal or excessive hunting is lacking. If the subspecies' status in Russia is as dire as it would appear, the conservation value of the species in Finland increases even more.

2.4. Threats

Although forest reindeer are protected by national laws in the two countries, their total numbers in the wild continue to decline. The reasons for this differ in the two main Finnish sub-populations. Forest reindeer are known to be sensitive to human-induced changes in forest landscapes (Kojola 2009; Kojola 2011), and logging in eastern Finland has reduced the age structure of the forests. On-going loggings and clear-cuttings have created favourable pasture lands for moose, *Alces alces* and at the same time attracted more wolves *Canis lupus* and brown bears *Ursus arctos* to the area. Kojola has shown that calf mortality among forest reindeer is twice as high in areas with dense wolf populations as in areas where wolves occur less frequently (2011), and that the expansion of large carnivores has occurred simultaneously as the reindeer population has declined. With a much lower reproduction potential, forest reindeer are more vulnerable to predation than are moose. Poaching has negative impacts not only on large carnivores, but also on game species such as forest reindeer.

Although the central population in Ostrobothnia has stagnated, the decrease has been less dramatic than in the eastern areas where the number of carnivore densities is higher than in mid-Finland. In Ostrobothnia, the decline has been caused mainly by over-generous hunting quotas between 1998 and 2007. To prevent a further decline, the number of hunting permits issued since 2009 have been reduced markedly. In 2013, hunting licenses were issued for 18 animals that had caused damage to field crops. Eleven of these licenses were used (Sirikka 2014).

In Russian Karelia, forest reindeer have been protected since 2007. Monitoring shows that the species is hunted illegally both for sale and for household needs (Danilov 2005). Local inhabitants in Russian Karelia are not aware of the species' declining status, and herds can easily be detected and hunted using snow-scooters. Despite severe penalties, poaching is still wide-spread and the poaching in Russia has also had negative effects on the Finnish population: one third of the animals spend their winters in Finnish territory and regularly roam across the border to Russia for calving.

In addition to poaching, which is considered the main contributor to the Russian decline, extensive timber logging and clear-cutting have destroyed the lichen heaths that are so crucial to the forest reindeer.

2.5. Conservation actions

2.5.1. Joint Finnish-Russian actions for the Karelian population

The Finnish Game and Fisheries Research Institute has for a number of years used aerial counts to monitor the Finnish population. Several animals have also been radio-collared, which has provided new information on migration behaviour and survival rates of the calves (Figure 7).



Figure 7. Radio collaring has provided new information of the migration routes of forest reindeer in Finland.

Data from the Russian areas of Karelia has in the past not been as accurate as corresponding data from Finland. Because the populations on both sides of the border are closely linked, information from Russia is vital for managing the Finnish population as well. A joint Finnish-Russian forest reindeer project was therefore established in 2013 with the goal of enhancing co-operation between the two countries and clarifying the status of the Karelian population in Russia. Animals in Russia will thus also be collared to monitor migration routes and to determine the key feeding grounds in Russia. The final results will be summarised in a joint Action Plan for the Karelian population with new protected areas in Russia. There has also been much focus on awareness campaigns with web pages, brochures, videos and a touring photographic exhibition.

The fines for poaching in Russia are substantial and have been increased in the past two years, at the same time as the number of game wardens has been increased. Strict regulations for using snow-scooters and official snowmobile routes to which snowmobile riders are directed will hopefully further protect forest reindeer in Russian Karelia.

2.5.2. Reintroduction plans in the Nizhny Novgorod region, Russia

The most dramatic declines in Russia took place in the 1920s, and continued in most of the north-western parts of the country until the end of 1960s. In 1965, an unsuccessful attempt was made to reintroduce semi-domestic reindeer (*Rangifer tarandus sp.*) in the Nizhny Novgorod Oblast.

According to the regional Red Data Book, forest reindeer are listed as *Extinct (EX)* in the Nizhny Novgorod region. Reintroductions are planned in the Kerzhensky State Nature Biosphere

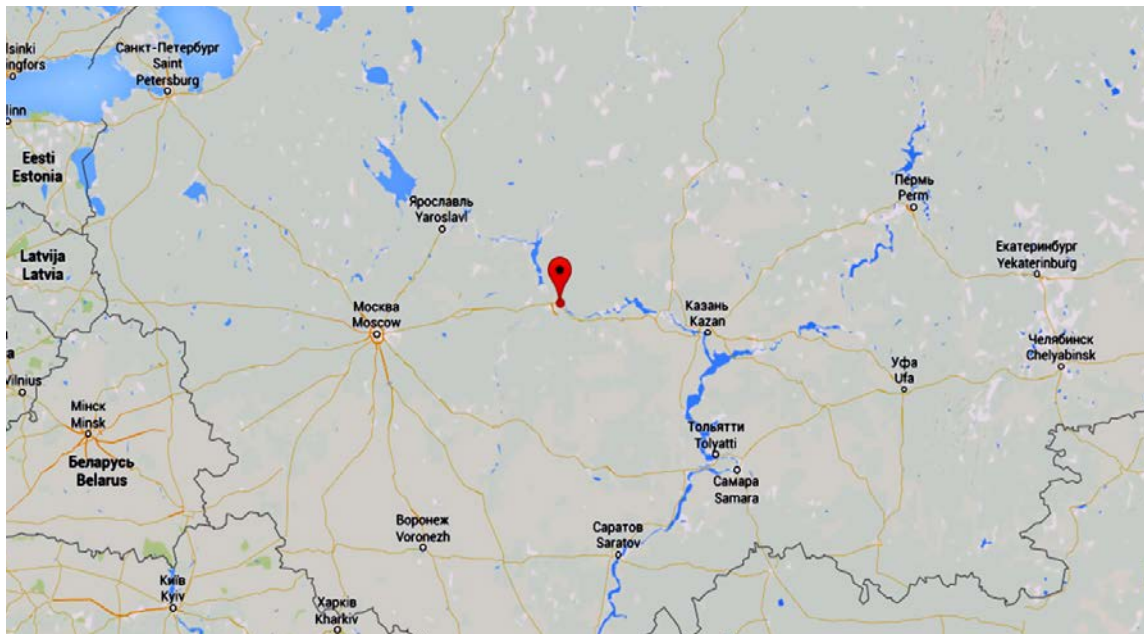


Figure 8. Kerzhensky State Nature Biosphere Reserve

Reserve, established in 1993 as part of the large Kama-Bakkaldinsky wetland complex of international importance (Figure 8). A breeding pool for future reintroductions was established with 2.3 animals from Moscow Zoo in 2014. The animals are kept in a fenced area in Kerzhensky with further imports planned for 2015-2016. The current stock is held in large enclosures for breeding purposes with intention to reintroduce offspring into the 47,000 hectare protected area as soon as the breeding stock is large enough.

2.5.3. New plans for re-stockings in Finland

The Finnish Management Plan (*Ministry of Agriculture and Forestry 2007*) underlines that forest reindeer should be systematically developed and managed so that the viability of the population is ensured and it is maintained at a level where it does not cause damage or disruption to human livelihood and activities in the country. The future management aims to establish additional viable sub-populations with grazing rotation and separate winter feeding grounds which would reduce the risks of diseases that could jeopardise the future of the forest reindeer in the country.

Bisi and Härkönen have emphasized (*2007*) that suitable habitats are available in Finland, and the Suomenselkä-area, where the previous re-stockings took place in the early 1980s, could support a population of up to 5,000 heads alone. As forest reindeer is a potential hunting species, an expansion of the current population is desirable in many areas. Following the recommendations in the Management Plan, potentially new translocation areas have recently been surveyed and future re-stockings have been discussed with stakeholders and local inhabitants. The most suitable areas are found in the western parts of the country where carnivore predation is less abundant than in the east. These areas host only a few wolf packs and could bridge the contemporary populations in the years to come, thereby increasing the demographic and genetic viability of the species in the country (*Kojola et al 2009*).

The planned restocking project will be managed as a Life project and co-financed by the Ministry of Agriculture and Forestry and the Ministry of Environment. Other important stakeholders are: Natural Heritage Services, Finnish Transport Agency, Natural Resources Institute Finland, Reindeer Herder's Association, Finnish Association for Nature Conservation, Finnish Wildlife Agency, WWF Finland and four EAZA zoos that all act as co-ordinating beneficiaries for the re-stocking attempt.

A breeding pool will be established with wild-born individuals mixed with captive-bred animals from the zoos in Ähtäri, Ranua, Helsinki and Nordens Ark in Sweden. Fenced acclimatization

areas where wild-caught and captive-born animals will be bred will be built in proximity of the re-stocking sites. Calves bred in the acclimatization enclosures will be released at the age of two years into two different areas for a number of years. When the re-stockings have stopped, the wild-born animals will be included into the existing zoo-population to increase its gene diversity. To collect young captive-bred animals from 2014-2015, a five hectare large enclosure is currently constructed in Ähtäri Zoo. This enclosure will serve as a transit enclosure until the animals will be transferred to the acclimatization enclosures.

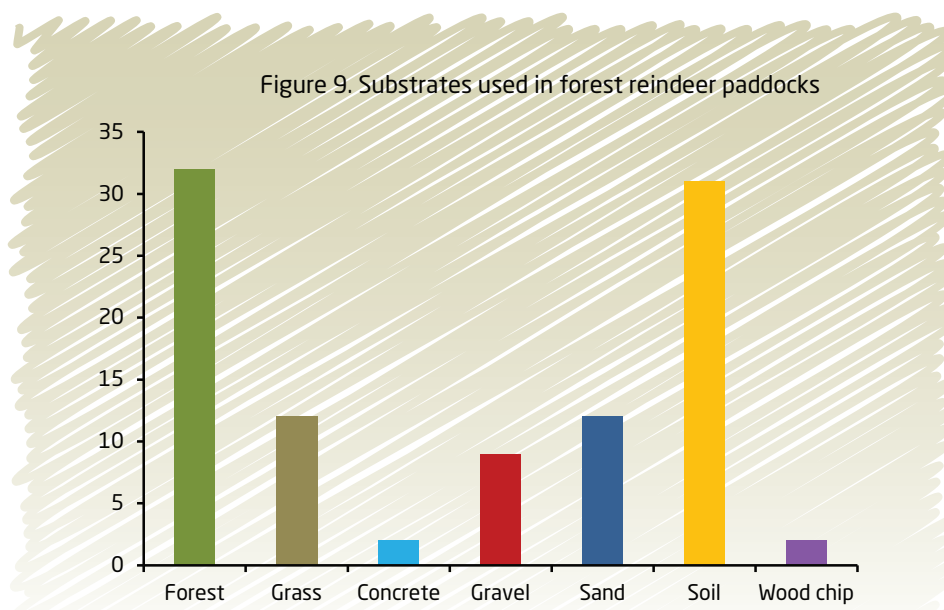
3. Management in captivity

3.1. Enclosures

Native to the boreal forest belt of northern Europe, forest reindeer do not need heated indoor stables. The animals should, however, be provided with shelters against rain, snow and sunshine, where each individual can seek shelter during unfavourable weather conditions.

As all *Rangifer* species undertake annual migrations, the paddock should be spacious with a minimum size of 1,000 m², depending on the number of animals being maintained. The minimum size for keeping reindeer in Sweden and Finland is 3,000 m².

The most appropriate enclosure is a fenced pen with living trees, a rugged ground texture and natural substrate of grass, sand or soil (Figure 9).



The substrate should be cleaned and raked daily, and hard surface areas at feeding places should be dry-cleaned or hosed every day. The height of the fence should be two metres, and no overhang is needed. Dry moats can be used but ditches with vertical walls should be avoided. All moats should have sloping allowing animals an easy exit.

During the rut, stags are extremely aggressive and should be separated before keepers enter the area for daily feeding and cleaning routines. Stags in heat are dangerous when defending their herds, and the aggressive behaviour is also directed towards humans. Special routines therefore need to be employed for keepers managing forest reindeer during the rut. For safety reasons, it is important that keepers have good visibility over as much as possible of the enclosure. Outside the rutting season, stags are no danger to the keepers.

The outdoor boundaries of the enclosure towards public paths should be separated by at least 1,5 metres to prevent the harem stag from attacking the fence during the rut. A separate

enclosure is necessary when animals have to be sedated or immobilised for veterinary reasons, or when new individuals are introduced to the herd. Some females defend their calves furiously when the calf is marked or handled, and for safety reasons it may be worth separating the calf from the dam prior to examination. All enclosures should be adjacent to and interconnected with each other to allow maximum flexibility in combining enclosures or creating separate paddocks. Barriers to protect plantings can include fallen logs and large rocks.

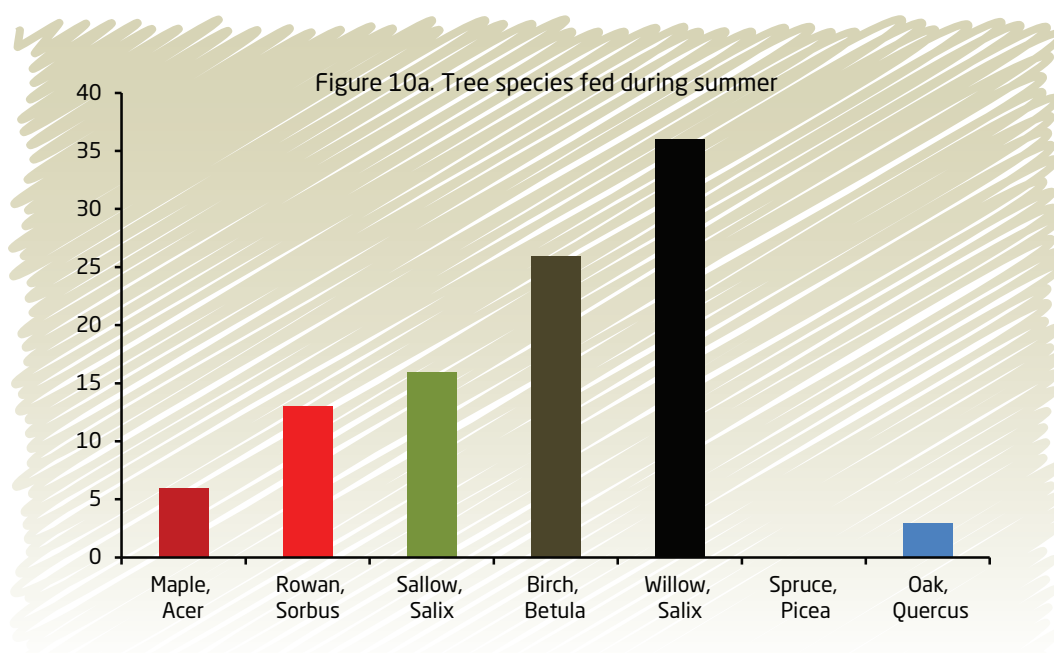
One zoo exhibit forest reindeer together with arctic foxes (*Alopex lagopus*), and Gaiapark has exhibited forest reindeer together with a non-breeding group of red-breasted geese (*Branta ruficollis*) without difficulties. Lesser white-fronted geese (*Anser erythropus*) as well as other non-breeding species of geese can also be kept with forest reindeer.

3.2. Feeding

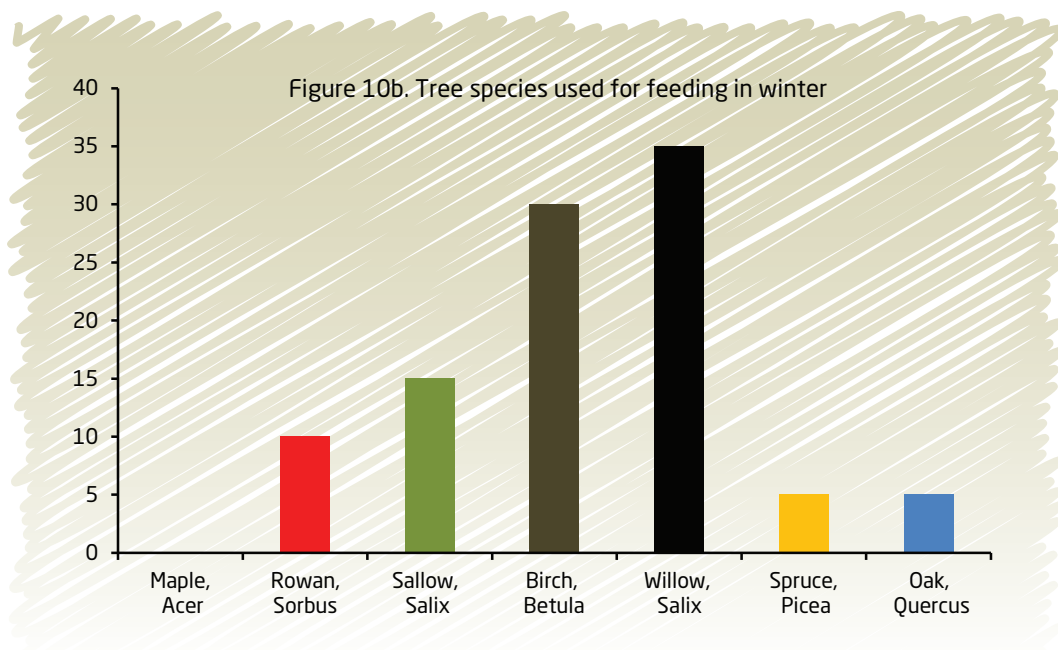
3.2.1. Basic feeding

Forest reindeer have separate winter and summer feeding grounds, with annual migrations taking place in spring and autumn. A diet should be provided that maximises the natural feeding ecology of the species in the wild, with protein-rich food during spring and summer and a more meagre feed during the winter months when food is naturally scarce. The natural history of the species reveals that forest reindeer spend several hours a day locating, consuming and processing their food. Their digestive physiology requires a continuous intake of plant material. The daily food ration should therefore be broken into at least two feeding times per day (one in the morning and one in the afternoon) in order to promote normal digestive processes and to simulate the amount of time animals spend feeding in the wild. Hay should be offered *ad libitum*. Lichens, twigs and sprouts are preferred but when these are scarce, freshly cut grass, hay, root vegetables such as carrots and sugar beets as well as grains can be used. Commonly used grains are wheat and "Betfor" (dried beet fibres and molasses), ranging from 0,5 kg to 1,5 kg per animal. Commercially available reindeer pellets ("Poro Elo" and protein-rich "Kolmården Giraffe", combined with a more meagre pellet, "Kolmården Special", fed during the cold season) can provide most of the nutritional needs for these species and should amount to 1,5 kg to 2 kg per individual. Salt licks should be available for forest reindeer all year round.

For the browsing forest reindeer, freshly cut or dried branches are used both as food and enrichment. During the summer, fresh willow (*Salix ssp.*) and birch (*Betula ssp.*) branches are favoured among forest reindeer holders (Figures 10a). The same branches are also offered as



dried feed during the winter. Based on a questionnaire mailed to the holders, maple (*Acer ssp.*) is used only in summer, and spruce (*Picea ssp.*) only during the winter months (Figure 10b). Browse



can be preserved as dried feed for the winter. The species of tree to be used varies according to the geographical location of the zoo.

Mineral supplements are commonly needed as animals normally do not get all the vitamins and minerals they require. A tea-spoon of selenium should be supplemented once per day. Salt stones and CaCO_3 are offered by all holders keeping forest reindeer.

3.2.2. Methods of feeding

The concentrate portion of the ration should be given at least twice per day. Feeding can take place at set times and in fixed feeding places in hay racks, while fruits, vegetables and lichens can be used as enrichment and spread out in the enclosure. When several animals are maintained in a larger herd, it is important to offer food in multiple places. This ensures that all individuals will have access to the same food items and helps to prevent a single animal from potentially dominating the food and excluding others from the more nutritious components of the diet. Fresh water sources should be constantly accessible, and water changed daily. Drinking water should preferably be offered in automatically filled bowls or continuous-flow devices. Natural pools with stagnant water should be avoided as they can be a source of bacterial overgrowth, toxins and diseases.

3.3. Social structure

Forest reindeer are gregarious, although wild hinds spend the early summer hidden with their calves, only to rejoin the herds at the end of the summer when rutting time approaches. During the rut that peaks in mid-October (*Helle 1977*), animals form herds where mating mostly occurs shortly after sunset (*Kojola 1986*). Once the rut and matings have taken place, herds migrate towards the winter feeding grounds along their traditional migration routes. Forest reindeer migrate in separate small groups ranging from a few animals up to 20 individuals. When forest reindeer start to congregate, the herd size expands, and hundreds of individuals may gather in one location at the winter feeding grounds.

A minimum of one stag and two hinds are recommended to be maintained, although additional females reduce aggression during the rut and prevent the harem stag from exhausting the hinds. Young sub-ordinate males and yearling male calves have to be separated from the herd as harem stags attack not only sub-adult males but often also yearling males. Like most *Cervids*, stags are territorial and it is not possible to maintain more than one stag in an enclosure during the rut, even if the enclosure is large. The herd has a strict hierarchy, based mainly on antler size which determines access to food resources. Introduction of new animals is usually straightforward, although it is important to provide auditory, olfactory and visual exposure between animals before they are introduced to each other.

An equal sex ratio in captive populations is always preferable, since it ensures that the gene pool will receive genes from a larger number of breeders than if the sex ratio is highly skewed (Ballou and Foose 1996). Captive populations of polygamous species such as forest reindeer, where a dominant male controls the breeding, often exhibit a distorted sex distribution with a larger number of females than males. Since the genomes of both sexes are equally important, a shortage of males can result in an over-representation of a few males in the breeding pool. Bachelor herds where the stags at regular intervals are transferred to a breeding situation are therefore highly valuable for the breeding programme. Zoos with only bachelor herds are thus making an equally valuable contribution to the programme as zoos that maintain breeding herds. Currently only Magdeburg Zoo keeps a bachelor herd of forest reindeer, and more zoos and game parks are encouraged to follow Magdeburg's example.

3.4. Breeding

Mating takes place in September–October, with a peak in mid-October. During the rut, harem stags are aggressive and dangerous towards keepers (Figure 11). The harem stag should be separated



Figure 11. Fighting forest reindeer stags during rut.

before anyone enters the enclosure (see 1.3). The inter-birth period in captivity is about 330 days. The gestation period is 227 days (7,5 months) and 78 per cent of calves are born in May (Figure 1). Artificial birth control has not been used, and when pregnancy is not wanted, females are usually separated from the stag during the heat from early September until the end of the year. Male and female calves have an average weight of 7kg. New-born calves should stand up

and walk within one hour of a normal birth. Suckling ought to be seen within the first four hours and should occur frequently. Weak calves are sometimes fed by the dam in a lying position.

3.5. Behavioural enrichment

Most zoos use simple enrichment methods to improve animal welfare and encourage normal ecological behaviour. For forest reindeer, the easiest solution is to provide them with variability in enclosure topography and vegetation. Rock piles, tree trunks, plantings and other barriers reduce aggressive behaviour and lessen social tensions during the rutting season. A variety of feeding strategies are commonly used, with emphasis on natural branches and grass. Lichens, fruits and vegetables are often scattered around the enclosure.

3.6. Handling

3.6.1. Individual identification

EAZA recommends that all studbook-kept animals are individually marked. For *Cervids*, coloured or numbered ear-tags are commonly used. As these can be lost, transponders are advisable as a primary identification method. If artificially looking coloured ear-tags want to be avoided, ear notching can also be used as an identification method. Transponder numbers as well as ear tags, ear notchings and house names should always be informed to the studbook keeper.

3.6.2. Capture and Transport

Forest reindeer are extremely sensitive to stress during transport (*Nieminen and Laitinen 1983*), and deaths have occurred in the course of transfers. Fifty percent of holders use sedation and/or immobilisation (see 3.6.4.) (Figure 12).



Figure 12. Forest reindeer are recommended to be sedated before loading.

Crates designed for reindeer as well as trailers have been used for transporting animals, with trailers being the most successful (Figure 13). Transport of deer species when the antlers are



Figure 13. Trailers are successfully used for transporting forest reindeer.

in velvet is no longer allowed within the EU. If the antlers have moulted, they can be cut before loading. To minimise over-heating, transfers should be avoided during the warm season and warm hours of the day. Ventilation should be adequate in both crates and trailers. When crates are used, they need to be narrow enough to prevent the animal from turning around and falling on its back. Water bowls that can harm animals should be avoided. Water should therefore be offered in bowls which can be removed immediately when the animal has quenched its thirst. During shorter transports, liquid can be offered by giving the animal fresh vegetables such as pieces of carrot or lichen dipped in water. When crates are used, at least one IATA "Live Animals" (Figure 14a) label must be attached to each crate. "This Way Up" (Figure 14b) markings must also be placed on at least two opposite sides of the crate. Consistency of checking routines is vital during transport, and the transporter should always carry a mobile phone when moving forest reindeer.

3.6.3. Veterinary Care

Diseases and parasites affect the mortality of forest reindeer in the wild as well as in captivity. It is possible that climate change will promote the spreading of parasites normally considered tropical towards the north. The *Setaria* tundra nematode spread rapidly and caused mass illness in reindeer in 2003-2005 (Laaksonen *et al.* 2007). This parasite may also have contributed to decline of wild forest reindeer since an estimated quarter of all forest reindeer were infected. The nematode is reported to be especially severe in calves.

At the beginning of the 21st Century, the lymphatic nematode (*Rumenfilaria andersoni*) spread and occurred in 50 per cent of the wild population in central Finland as well as in 71 per cent of the Kainuu population in eastern Finland. The summers of 2002 and 2003 were exceptionally warm in Finland, and it is known that warm summers usually favour the parasite's life cycle making outbreaks of disease possible.

The deer fly (*Lipoptena cervi*) uses forest reindeer as a host. Animals with deer fly parasites experience stress, shake their bodies and rub their fur with their antlers and hooves

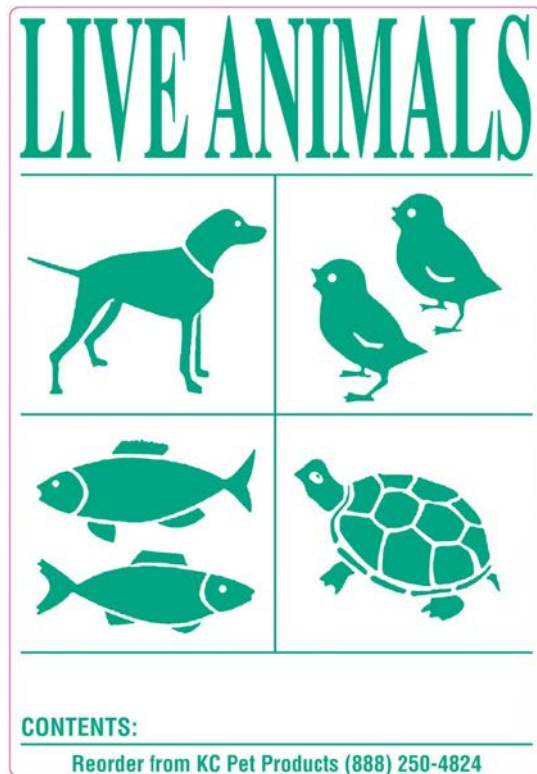


Figure 14a. When crates are used for transporting animals, each crate should be marked with IATA Live Animal labels.

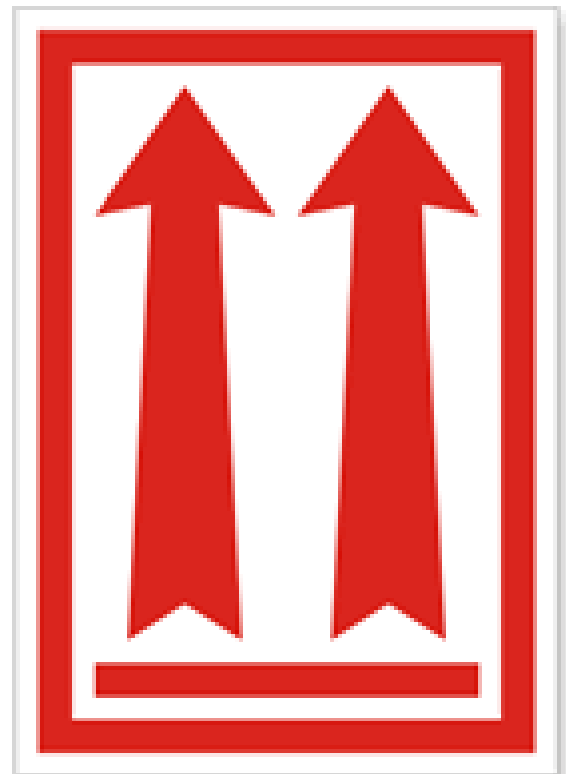


Figure 14b. IATA-Military-Standard-Paper-Label-D1457

(Kynkäänniemi *et al.* 2014). Extensive damage to the coat increases energy use and causes heat loss, harming the animal's welfare. Skin changes also leave the animal open to a variety of infections.

Rangifer have a tendency to aggregate vector-carried diseases such as *plasmosis* and *babesiosis*, caused by *Babesia sp.* from the tick *Ixodes ricinus*. The disease is characterised by loss of feeding, haemorrhagic diarrhoea, pale mucus membranes and dark-red urine. *Babesiosis* has been reported from Gaiapark in Kerkrade (Kik *et al.* 2011), with unpublished cases also reported from Nordens Ark in Hunnebostrand and from Burgers Zoo in Arnhem. In Nordens Ark an adult female and her calf were observed to urinate red urine. The animals were treated with 1ml Imizol (http://www.msd-animal-health.co.uk/Products_Public/Imizol_Injection/Product_data_sheet.aspx). The treatment was successful for the adult, but the calf died within 24 hours.

Other parasites also occur and checks should be conducted twice a year. Because of the species' sensitivity to stress, it might be less harmful not to capture and treat forest reindeer daily unless the symptoms are severe. Parapoxviruses like *Orf virus* and *Pseudocowpox virus* have caused severe outbreaks in semi-wild reindeer in Finland with diminished appetite, drooling, fewer and later erosions and ulcerative lesions in the mouth. Forest reindeer can be susceptible also to other viruses commonly found in cattle and other ruminants.

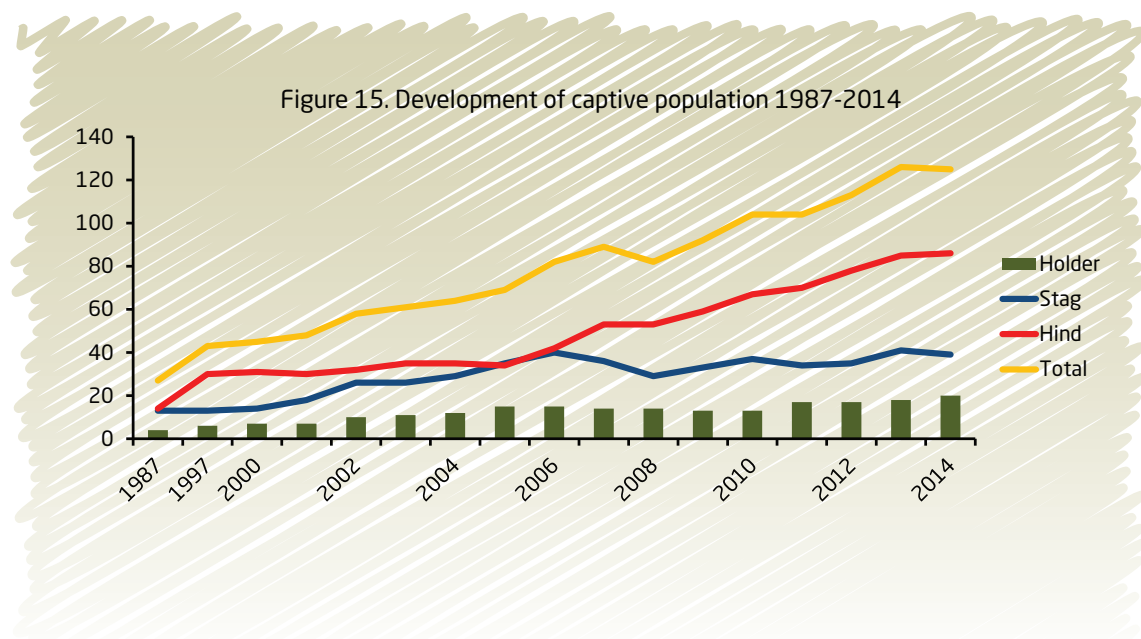
3.6.4. Immobilisation

Forest reindeer are usually immobilised using a medetomidine-ketamine combination where the application can be reversed with atipamezole. Reported dosages show a high degree of variation but based on 47 immobilized animals, Jalanka and Röken (1990) have recommended a dosage of 0,06 mg/kg medetomidine + 0,8 mg ketamine/kg. Atipamezole is usually given four to five times medetomidine dosages and most animals were able to walk in a direct manner within two minutes after the atipamezole injections. The dosages given by Jalanka & Röken are recommended to serve as guidance when forest reindeer are immobilized for the first time. Based on the results, changes can be implemented to gauge which dosages work best for different

individuals. Dosages might also be increased or decreased due to different circumstances (the condition of the animal, possible injury, disease, level of stress, outside temperature and desired anaesthetic depth). During the rut, hormone levels and stress may reduce the effects of the anaesthetics, and anaesthesia should therefore be avoided during early autumns.

3.7. Management in EAZA

Forest reindeer have been kept in captivity since 1973 when the first wild-caught animals arrived at Helsinki Zoo (*Blomqvist & Holthoher 1999*). The captive population has been monitored since this time, and all individuals are of known origin. In 2001, the captive population was upgraded to a European studbook level (*ESB*), which had a significant impact on its future management. As long as the taxon was maintained in only a few institutions, the captive population had only moderate possibilities to expand whereas the growth started to accelerate when *ESB* status was achieved and more collections became interested. Several zoos have during the past decade switched from the semi-domestic form of reindeer, *Rangifer tarandus sp.*, to forest reindeer which is one of the three wild sub-species living on the continent. At the end of 1987, forest reindeer were exhibited in only four Finnish institutions and the captive population totalled 27 individuals. By 2014, the number of animals had increased to 125 individuals, distributed over 20 zoos in 11 countries in the region (Figure 15).



3.7.1. Status of the captive population in 2014

In 2014, two new participants joined the studbook programme: Zoo La Bourbansais (Pleugueneuc) in France imported animals from Berlin, Bern and Nordens Ark, while the Kerzhensky Reserve in Russia started to build up a breeding pool for future reintroduction in the Nizhny Novgorod area by importing five animals from Moscow Zoo (see 2.5.2). The number of participating institutions consequently increased to 20 holders in 2014.

A total of 42 calves were born during the year, 45 per cent of which did not survive. As furthermore 23 sub-adult to adult forest reindeer were lost during the year, the total number of deceased reindeer in the programme was 43.

Due to the large number of lost individuals, the expansion of the captive population levelled off, and at the end of 2014 the total stood at 39 stags and 86 hinds. Apart from the above-mentioned transfers to Pleugueneuc and Kerzhensky, six additional transfers took place in 2014. No potential founders were incorporated into the captive population. A summary of the main changes in the stock is shown in Table 1.

Table 1. Changes in captive forest reindeer population 2014

Participant	Status 1/1/2014	Born	DNS	In	Out	Deaths	Status 1/1/2015
Ahtari/FIN	1.9	0.8	0.6	-	-	0.7	1.10
Arnhem/NL	2.6	2.3	2.2	-	0.1 Salzburg	3.3	1.5
Berlin Zoo/D	2.7	-	-	-	1.0 Liberec 0.1 Pleugueneuc	-	1.6
Bern/CH	1.4	2.0	-	-	0.2 Pleunueneuc	-	3.2
Helsinki/FIN	3.4	1.1	1.1	0.1 Riga	1.0 Riga	2.2	1.4
Hunnebostrand/S	3.6	1.3	1.0	-	1.0 Pleugueneuc 0.2 Kingussie	2.0	1.7
Jarvso/S	4.8	0.1.1	0.0.1	-	-	2.2.1	2.7
Kerkrade/NL	1.8	3.1	0.1	-	-	0.2	4.7
Kerzhensk/RUS	-	-	-	2.3 Moscow	-	-	2.3
Kingussie/UK	2.2	-	-	0.2 Hunnebostrand	-	1.0	1.4
Liberec/CZ	0.2	-	-	1.0 Berlin Zoo	-	1.0	0.2
Lycksele/S	3.5	1.3	0.1	-	-	2.1	2.7
Magdeburg/D	3.0	-	-	-	-	-	3.0
Moscow/RUS	6.10	1.4	0.2	-	2.3 Kerzhensk	0.5	5.6
Pleugueneuc/F	-	-	-	1.0 Hunnebostrand 0.1 Berlin Zoo 0.2 Bern	-	-	1.3
Prague/CZ	1.3	1.0	1.0	-	-	1.0	1.3
Ranua/FIN	3.3	2.1	0.1	-	-	0.2	5.2
Riga/LAT	4.4	0.1	-	1.0 Helsinki	0.1 Helsinki	2.0	3.4
Rotterdam/NL	2.2	1.0	-	-	1.0 Salzburg	-	2.2
Salzburg/AUT	0.2	-	-	1.0 Rotterdam 0.1 Arnhem	-	1.1	0.2
Total	41.85	15.26.1	5.14.1	6.10	6.10	17.25.1	39.86
(in 20 institutions)	(126)	(42)	(20)	(16)	(16)	(43)	(125)

Table 2 illustrates the history of the captive population in numbers. A total of 533 (248.270.15) animals have been entered into the studbook, 38 stags and 87 hinds of which were alive at the end of the year. Among the living animals, 15 males and 53 females are proven breeders. The gene diversity (GD) representing the long-term evolutionary potential of the population, is 0.846 (Table 3), which is equivalent to the diversity of only three randomly caught animals from the wild ($F_{ge} = 3.25$). Fifteen per cent of the GD has consequently been lost during the four decades the taxon has been maintained in captivity.

As a positive correlation exists between GD and the fitness of the population, an influx of new founders into the current population would be highly desirable. To balance the loss of GD taking place through each generation, populations are expected to need an effective size (N_e) of at least 500 individuals. In most populations, the effective size is much smaller than the true population size (N) and wild populations usually have a N_e/N ratio of 0.1, where the N_e is about the size of one-tenth of the true population (N). Among forest reindeer where breeding has been proactively managed to benefit N_e , the N_e/N ratio is 0.33, which falls within the range of 0.2 to 0.4 common for captive populations (Mace 1986).

Despite the fact that the mean inbreeding coefficient (F) is as high as 0.125 and 15 per cent of the GD has been lost, no detrimental effects have been observed in the population. The number of calves born per year has exceeded the number of animals lost and the population has been

Table 2. Forest reindeer data extracted from studbook 2014

	Males	Females	Unknown	Total
Total registered	248	270	15	533
Wild-born	7	10	0	17
Captive-born	241	260	15	516
Living animals	39	86	0	125
Wild-born	1	0	0	1
Captive-born	38	86	0	124
Total number of breeding animals	53	129	0	183
Wild-born	4	5	0	9
Captive-born	49	125	0	174
Number of breeding animals alive	15	53	0	68
Wild-born	1	0	0	1
Captive-born	14	53	0	67

Table 3. Genetic and demographic summary of captive population 1.1.2015

	Current	Potential
Number of founders	4.4	-
Number of living descendants	38.86	
Gene diversity	0.8459	0.9141
Mean kinship (MK)	0.1541	
Fnd genome equivalents (F_{ge})	3.25	5.82
Mean inbreeding coefficient (F)	0.1249	
Generation length in years (T)	6.4	
Percent population change/year (λ)	1.08	
Population size (N)	39.86 (125)	
Effective population size (N_e)	46.76	
N_e/N	0.3653	

growing with an annual rate of eight per cent. Although the population is not at imminent risk of dying out, it has to be remembered, that its status cannot be ascertained in terms of numbers only. Demographic stability, gene diversity and the level of inbreeding are crucial for the health status of the population and requires constant monitoring of small populations like the one for forest reindeer in captivity.

3.7.2. Living forest reindeer population 1.1.2015 as per location. Changes taking place after 1.1.2015 are marked in red.

FOREST REINDEER Studbook

Restricted to: (Rangifer tarandus fennicus)

Report ordered by: current/last location (alphabetic)

Stud#	Sex	Birth Date	Size	Dam	Location	Date	LocalID	Event	Tag/Band	Name	Transponder
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AHTARI - Zoo Ahtari, Ahtari, Finland

223	M	~May 2003	11m	WILD	WILD	PALTAMO AHTARI	9 Mar 2004 9 Mar 2004	NONE 203019	Capture Transfer	500 RED	JARI	985120019072448
324	F	7 May 2008	223	152	AHTARI	AHTARI	7 May 2008	208007	Birth	WHITE 178	VIOLA	985121005529830
375	F	13 May 2010	266	261	JARVZOO AHTARI	JARVZOO AHTARI	13 May 2010 16 Apr 2013	JZM10010 213005	Birth Transfer		GLENDA	968000004326763
388	F	13 May 2010	223	101	AHTARI	AHTARI	13 May 2010	210005	Birth	WHITE 189	JADE	985121018050353
403	F	19 May 2011	223	235	AHTARI	AHTARI	19 May 2011	211001	Birth	WHITE 186	ELVIIRA	
439	F	19 May 2012	266	280	JARVZOO AHTARI	JARVZOO AHTARI	19 May 2012 16 Apr 2013	JZM12006 213003	Birth Transfer	29	GERSTIN	968000004325683
440	F	20 May 2012	266	375	JARVZOO AHTARI	JARVZOO AHTARI	20 May 2012 16 Apr 2013	JZM12007 213004	Birth Transfer	26	GRETA	968000004320483
479	F	20 May 2013	266	375	AHTARI	AHTARI	20 May 2013	213016	Birth	0107	LENITA	985170002270017
504	F	12 May 2014	223	324	AHTARI	AHTARI	12 May 2014	214027	Birth	WHITE 148	VIVA	
505	F	13 May 2014	223	375	AHTARI	AHTARI	13 May 2014	214028	Birth	BLUE 385	FLOORA	
530	F	22 May 2012	223	253	AHTARI	AHTARI	22 May 2012	212004	Birth	328	JAFFA	

Totals: 1.10.0 (11)

ARNHEM - Burgers' Zoo, Arnhem, Gelderland, The Netherlands

198	F	16 May 2003	137	107	HELSINKI ARNHEM	HELSINKI ARNHEM	16 May 2003 27 Feb 2004	203032 611546	Birth Transfer	GREEN 214	UTU	0001D368D5
397	F	17 May 2011	330	307	HUNBSTRND ARNHEM	HUNBSTRND ARNHEM	17 May 2011 13 Apr 2012	211039 616968	Birth Transfer	D.BLUE/D.	BLUMIRKA	977200007675453
407	F	22 May 2011	176	179	ARNHEM	ARNHEM	22 May 2011	616407	Birth			0007023863
408	M	29 May 2011	311	264	BERN ARNHEM	BERN ARNHEM	29 May 2011 20 Sep 2012	B10069 617259	Birth Transfer			756098100543212
430	F	11 May 2012	176	198	ARNHEM	ARNHEM	11 May 2012	617027	Birth			00071AFBB4
490	F	14 May 2014	408	397	ARNHEM	ARNHEM	14 May 2014	2313	Birth			5280934900326

Totals: 1.5.0 (6)

BERLIN ZOO - Zoologischer Garten Berlin Ag, Berlin, Germany

314	M	7 May 2008	176	198	ARNHEM KERKRADE ROTTERDAM MAGDEBURG BERLINZOO	ARNHEM KERKRADE ROTTERDAM MAGDEBURG BERLINZOO	7 May 2008 12 Mar 2009 9 Feb 2010 20 Oct 2011 7 Feb 2013	614626 M08017 107965 443023 M0800020	Birth Transfer Transfer Transfer Transfer		RINUS	000680B219
315	F	17 May 2008	176	210	ARNHEM BERLIN TP BERLINZOO	ARNHEM BERLIN TP BERLINZOO	17 May 2008 3 Feb 2010 24 Mar 2010	614684 M0800018	Birth Transfer Transfer			0006809CDF
322	F	16 May 2008	219	115	RIGA BERLIN TP BERLINZOO	RIGA BERLIN TP BERLINZOO	16 May 2008 26 Feb 2010 24 Mar 2010	M08137 M0800019	Birth Transfer Transfer		RAGNA	428098100000223
343	F	16 May 2009	219	220	RIGA BERLIN TP BERLINZOO	RIGA BERLIN TP BERLINZOO	16 May 2009 26 Feb 2010 24 Mar 2010	M09070 M0900027	Birth Transfer Transfer			428098100000125
393	F	12 Jun 2010	176	315	BERLINZOO	BERLINZOO	12 Jun 2010	M1000015	Birth			0006B2B584
422	F	31 May 2011	355	322	BERLINZOO	BERLINZOO	31 May 2011	M1100025	Birth			0006B2FEB2
425	F	11 May 2012	355	343	BERLINZOO	BERLINZOO	11 May 2012	M1200027	Birth			0006B25C24

Totals: 1.6.0 (7)

BERN - Tierpark Dählholzi, Bern, Switzerland

264	F	28 May 2006	137	120	HELSINKI BERN	HELSINKI BERN	28 May 2006 22 Mar 2007	206043 A70029	Birth Transfer	LIGHT BLUE	9YYLI	968000004143265
284	F	17 May 2007	136	245	BERN	BERN	17 May 2007	A70066	Birth		TULA	968000004442600

311	M	8 Jun 2008	270	200	HELSINKI BERN	8 Jun 2008 16 Nov 2009	208039 A90261	Birth Transfer	PINK 193	AHTI	96800000397344
506	M	28 May 2014	311	264	BERN SALZBURG	28 May 2014 7 Apr 2015	B40093 S2070	Birth Transfer	BLUE		756098100666179
507	M	31 May 2014	311	284	BERN LIBEREC	31 May 2014 29 Apr 2015 3 Aug 2015	B40095 665005	Birth Transfer Death			576098100670143

Totals: 3.2.0 (5)

HELSINKI - Helsinki Zoo, Helsinki, Finland

200	F	25 May 2003	137	51	HELSINKI	25 May 2003	203048	Birth	YELLOW 38	USVA	00012A206C
270	M	31 May 2006	223	152	AHTARI HELSINKI	31 May 2006 30 Oct 2007	206006 207120	Birth Transfer	GREEN 94	JOPPE	985120027711043
369	F	15 May 2010	270	173	HELSINKI	15 May 2010	210012	Birth	GREEN 274/BLCLIO		956000001737456
458	F	20 May 2013	219	220	RIGA HELSINKI	20 May 2013 25 Feb 2014	M13092 214001	Birth Transfer	YELLOW	KRUSA	98570002681727
485	F	3 Jun 2013	270	288	HELSINKI	3 Jun 2013	213044	Birth	WHITE	FINKA	956000008419397

Totals: 1.4.0 (5)

HUNBSTRND - Nordens Ark, Hunnebostrand, Sweden

259	F	19 May 2006	168	145	HUNBSTRND	19 May 2006	206014	Birth	YELLOW/YELLOJORUN		977200004154602
307	F	19 May 2008	116	157	HUNBSTRND	19 May 2008	208031	Birth	VIOLET/VIOLERAJA		977200007078792
330	M	25 May 2008	207	88	BORAS HUNBSTRND	25 May 2008 13 May 2009	HR0030 209007	Birth Transfer		SATO	96800000264431
373	F	26 May 2010	116	145	HUNBSTRND	26 May 2010	210031	Birth		IRMA	977200007465015
378	F	2 Jun 2010	116	259	HUNBSTRND	2 Jun 2010	210061	Birth	GREEN/GREEN	PIRJO	977200007467183
491	F	14 May 2014	330	307	HUNBSTRND	14 May 2014	214012	Birth	ROSA	FINLANDIA	968000010165788
492	F	16 May 2014	330	259	HUNBSTRND	16 May 2014	214015	Birth	WHITE	JETZIN	968000010174269
497	F	29 May 2014	330	373	HUNBSTRND	29 May 2014	214036	Birth	RED	FINKA	968000010166031

Totals: 1.7.0 (8)

JARVZOO - Jarvzoo, Jarvso, Gavleborg, Sweden

158	F	31 May 2001	137	52	HELSINKI JARVZOO	31 May 2001 31 Jan 2002	201040 JZM02003	Birth Transfer	NEONRED 25	URSULA	0001BF225B
261	F	24 May 2006	168	157	HUNBSTRND JARVZOO	24 May 2006 14 May 2007	206018 JZM07031	Birth Transfer	GREEN/GREEN	MIKAELA	977200004210694
266	M	2 Jun 2006	207	204	BORAS JARVZOO	2 Jun 2006 23 Jan 2008	HR0023 JZM08002	Birth Transfer		CIRIUS	968000000272488
350	F	15 Jun 2009	240	279	LYCKSELE JARVZOO	15 Jun 2009 22 Nov 2011	LRTS0902 JZM11029	Birth Transfer		FLORA	
420	F	20 May 2011	240	279	LYCKSELE JARVZOO	20 May 2011 22 Nov 2011	LRTS1103 JZM11028	Birth Transfer		HILDUR	968000003399786
441	F	25 May 2012	240	350	JARVZOO	25 May 2012 24 May 2015	JZM12008	Birth Death		ILONA	
473	M	16 May 2013	266	158	JARVZOO	16 May 2013	JZM13012	Birth		JORM	
474	F	18 May 2013	266	350	JARVZOO	18 May 2013 23 May 2015	JZM13013	Birth Death		JUTTA	
498	F	10 May 2014	266	261	JARVZOO	10 May 2014	JZM14007	Birth	YELLOW 032	KATJA	

Totals: 2.7.0 (9)

KERKRADE - GaiaPark Kerkrade Zoo, Kerkrade, Limburg, The Netherlands

206	F	21 May 2003	116	152	AHTARI ARNHEM KERKRADE	21 May 2003 27 Feb 2004 18 Jan 2005	203006 611548 M03015	Birth Transfer Transfer	0479 RED	JENNA	985120015197951
208	F	29 May 2003	116	101	AHTARI ARNHEM KERKRADE	29 May 2003 27 Feb 2004 18 Jan 2005 19 Apr 2015	203005 611549 M03016	Birth Transfer Transfer Death	0002 YELLOW	JANE	985120016136297
265	F	22 May 2006	136	166	BERN KERKRADE	22 May 2006 3 Sep 2007	A60137 M06111	Birth Transfer		TINA	968000004444253
267	F	22 May 2006	223	101	AHTARI KERKRADE	22 May 2006 20 Apr 2007	206010 M06024	Birth Transfer	213 GREEN	JASSU	985120028553783

317	F	23 May 2008	184	206	KERKRADE	23 May 2008	M08037	Birth	BROWN/BLACK	GAIA 9	0006B8A44E
337	M	17 May 2009	223	235	AHTARI KERKRADE	17 May 2009 5 Nov 2013	209006 M09200	Birth Transfer	258 BLACK	JOHAN	985170002298737
366	F	20 May 2009	184	271	KERKRADE	20 May 2009 4 May 2015	M09049	Birth Death	015	GAIA 15	0006B891A5
367	F	25 May 2009	184	267	KERKRADE	25 May 2009	M09058	Birth	020	GAIA 16	0006C92CB6
509	M	19 Jun 2014	337	317	KERKRADE	19 Jun 2014 1 Sep 2015	M14727	Birth Death	BLUE 88	MIKA	528093490039409
510	M	22 Jun 2014	337	367	KERKRADE	22 Jun 2014	M14729	Birth	YELLOW 049	MATTI	528093490039401
511	M	24 Jun 2014	337	267	KERKRADE	24 Jun 2014 25 Aug 2014	M14732	Birth Death	GREEN	FYNN	528098490039404

Totals: 4.7.0 (11)

KERZHENSK - Zapovednik Kerzhensk, Nizny Novgorod, Russia

462	F	19 May 2013	381	390	MOSCOW KERZHENSK	19 May 2013 4 Dec 2014	130110 462	Birth Transfer			
464	M	20 May 2013	380	387	MOSCOW KERZHENSK	20 May 2013 25 Dec 2014	130112 464	Birth Transfer	135		
517	F	19 May 2014	381	325	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014	140161 517	Birth Transfer			
518	M	19 May 2014	381	390	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014	140162 518	Birth Transfer			
521	F	28 May 2014	380	354	MOSCOW KERZHENSK	28 May 2014 4 Dec 2014	140238 521	Birth Transfer			

Totals: 2.3.0 (5)

KINGUSSIE - Highland Wildlife Park, Kingussie, Highland, Scotland (UK)

247	M	29 May 2005	137	97	HELSINKI KINGUSSIE	29 May 2005 22 Apr 2006	205038 4975	Birth Transfer	GREEN 299	XEPP0	968000002711093
294	F	31 May 2007	228	227	RANUA KINGUSSIE	31 May 2007 4 Apr 2008	207030 5279	Birth Transfer	PURPLE 047	MAIJA	985120032351791
299	F	26 May 2007	223	151	AHTARI KINGUSSIE	26 May 2007 4 Apr 2008	207005 5280	Birth Transfer	BLACK 256	LOLA	246098100189980
455	F	16 May 2013	330	307	HUNBSTRND KINGUSSIE	16 May 2013 8 May 2014 1 Jun 2015	213020 5760	Birth Transfer Death	ROSA		968000010011410
469	F	24 May 2013	330	373	HUNBSTRND KINGUSSIE	24 May 2013 8 May 2014	213041 5759	Birth Transfer	Orange	SAHTI	968000010082569

Totals: 1.4.0 (5)

LIBEREC - Zoologicka Zahrada Liberec, Liberec, Severocesky, Czech Republic

426	F	12 May 2012	330	259	HUNBSTRND LIBEREC	12 May 2012 10 May 2013	212032 665001	Birth Transfer	ROSA/ROSA	YKSI	977200008167014
428	F	14 May 2012	330	307	HUNBSTRND LIBEREC	14 May 2012 10 May 2013	212035 665002	Birth Transfer	WHITE/WHITE	KAKSI	977200008167119

Totals: 0.2.0 (2)

LYCKSELE - Lycksele Djurpark/Zoo, Lycksele, Sweden

278	F	15 May 2007	116	157	HUNBSTRND LYCKSELE	15 May 2007 5 Feb 2008	207020 RANJA	Birth Transfer	GREEN/GREEN	RANJA	977200004321311
279	F	20 May 2007	116	141	HUNBSTRND LYCKSELE	20 May 2007 5 Feb 2008	207024 LRTS0702	Birth Transfer	RED/RED	NUMMI	977200004332858
349	F	6 May 2009	240	278	LYCKSELE	6 May 2009	LRTS0901	Birth		ESTER	968000003415351
374	F	17 May 2010	240	278	LYCKSELE	17 May 2010	LRTS1001	Birth		RITA	968000003432874
413	M	8 May 2011	266	261	JARVZOO LYCKSELE SWEDEN	8 May 2011 22 Nov 2011 4 Mar 2015	JZM11006 LRTS1101	Birth Transfer Release		PONDUS	968000004369225
489	F	1 Jun 2013	413	374	LYCKSELE RANUA	1 Jun 2013 30 Apr 2015	LRTS1301 215005	Birth Transfer	SE039435-001	MAJBRIITT	968000003414806
526	M	14 May 2014	413	374	LYCKSELE	14 May 2014	LRTS1403	Birth	ORANGE		968000003404738
527	F	16 May 2014	413	349	LYCKSELE RANUA	16 May 2014 30 Apr 2015	LRTS1401 215006	Birth Transfer	SE0394350013	CAROLA	968000003468955
528	F	18 May 2014	413	279	LYCKSELE	18 May 2014 10 Apr 2015	LRTS1402	Birth Death		NUMMIKALVEN	968000003401441

Totals: 2.7.0 (9)

MAGDEBURG - Zoologischer Garten Magdeburg, Magdeburg, Sachsen-Anhalt, Germany

272	M	10 Jun 2006	187	202	ARNHEM ROTTERDAM MAGDEBURG	10 Jun 2006 1 Feb 2007 20 Oct 2011	613305 107591 443021	Birth Transfer Transfer		REND	00061BD1B3
273	M	12 Jun 2006	187	179	ARNHEM ROTTERDAM MAGDEBURG	12 Jun 2006 1 Feb 2007 20 Oct 2011	613306 107592 443022	Birth Transfer Transfer			0006654F2D
355	M	6 May 2009	176	198	ARNHEM BERLIN TP BERLINZOO MAGDEBURG	6 May 2009 3 Feb 2010 24 Mar 2010 21 Feb 2013	615211 ESB355 443024	Birth Transfer Transfer Transfer		GUNNAR	0006D0BD91

Totals: 3.0.0 (3)**MOSCOW - Moscow Zoological Park, Moscow, Russia**

325	F	15 May 2008	223	101	AHTARI MOSCOW	15 May 2008 16 Dec 2011	208008 110669	Birth Transfer	WHITE 184	REBEKKA	985121005406388
338	F	19 May 2009	223	253	AHTARI MOSCOW	19 May 2009 16 Dec 2011	209007 110671	Birth Transfer	LILIAC 547	NEELA	
339	F	21 May 2009	223	151	AHTARI MOSCOW	21 May 2009 16 Dec 2011	209008 110672	Birth Transfer	ORANGE/YELLOMAIKKI		
354	F	14 Aug 2009	270	200	HELSINKI MOSCOW	14 Aug 2009 16 Dec 2011	209063 110664	Birth Transfer	PINK	BAJAJAGA	956000001838283
380	M	14 May 2010	219	220	RIGA MOSCOW	14 May 2010 20 Apr 2011	M10148 110182	Birth Transfer		KARLIS	972270000005703
381	M	14 May 2010	219	115	RIGA MOSCOW	14 May 2010 20 Apr 2011	M10149 110183	Birth Transfer		RANTANS	972270000005576
390	F	11 Jun 2010	223	151	AHTARI MOSCOW	11 Jun 2010 16 Dec 2011	210006 110670	Birth Transfer	RED 428		985121018324737
392	F	26 May 2010	228	172	RANUA MOSCOW	26 May 2010 16 Dec 2011	210026 110667	Birth Transfer	GREEN 10	MANJA	985170000342098
461	M	19 May 2013	380	354	MOSCOW	19 May 2013	130109	Birth	132		
463	M	20 May 2013	381	325	MOSCOW	20 May 2013	130111	Birth			
466	M	5 Jun 2013	381	339	MOSCOW	5 Jun 2013	130260	Birth			

Totals: 5.6.0 (11)**PLEUGUEN - Parc Zoologique De La Bourbansais, Pleugueneuc, Ile-et-Vilaine, France**

452	F	9 May 2013	355	343	BERLINZOO PLEUGUEN	9 May 2011 24 Mar 2014	M1300031 CR3	Birth Transfer			00074-EF37B
454	M	16 May 2013	330	259	HUNBSTRND PLEUGUEN	16 May 2013 25 Apr 2014	213019 CR4	Birth Transfer	WHITE	KOFF	968000010080420
456	F	24 May 2013	311	284	BERN PLEUGUEN	24 May 2013 24 Mar 2014	B30052 CR1	Birth Transfer			756098100629617
457	F	24 May 2013	311	264	BERN PLEUGUEN	24 May 2013 24 Mar 2014	B30053 CR2	Birth Transfer			756098100631100

Totals: 1.3.0 (4)**PRAHA - Zoological Garden Prague, Praha, Czech Republic**

401	M	19 May 2011	219	298	RIGA PRAHA	19 May 2011 28 Oct 2013	M11060 130427	Birth Transfer		LORDS	985170000942082
431	F	17 May 2012	311	284	BERN PRAHA	17 May 2012 9 Oct 2013	B20077 130383	Birth Transfer			7560998100562596
446	F	27 May 2012	270	288	HELSINKI PRAHA	27 May 2012 28 Oct 2013	212016 130428	Birth Transfer		ELOVEENA	
447	F	10 May 2012	316	317	KERKRADE PRAHA	10 May 2012 6 Nov 2013	M12019 130451	Birth Transfer	PINK 001	GAIA 19	528093490007253

Totals: 1.3.0 (4)**RANUA - Ranua Wildlife Park, Ranua, Finland**

227	F	25 May 2004	86	104	RANUA	25 May 2004	204040	Birth	BLUE 66	MIINA	985120021312576
389	M	16 May 2010	223	237	AHTARI RANUA	16 May 2010 20 Nov 2011	210007 211058	Birth Transfer	BLUE 336	JOKKE	985121018247575
418	F	23 Jun 2011	270	200	HELSINKI RANUA	23 Jun 2011 16 Nov 2012	211052 212061	Birth Transfer	RED	DIMMA	956000001734688
480	M	26 May 2013	389	172	RANUA	26 May 2013	213008	Birth	003	MAGNUS	
482	M	3 Jun 2013	389	418	RANUA	3 Jun 2013	213013	Birth	WHITE 006	RIIVI™	

494	M	19 May 2014	389	418	RANUA	19 May 2014	214022	Birth	BLUE 005	MOKKE	
524	M	29 May 2014	389	227	RANUA	29 May 2014	214025	Birth	PURPLE 007	MIKKI	

Totals: 5.2.0 (7)

RIGA - Riga Zoo, Riga, Latvia

298	F	25 May 2007	223	235	AHTARI RIGA	25 May 2007 24 Apr 2008	207004 M07219	Birth Transfer	536 LILAC	LIME	246098100189586
400	F	14 May 2011	219	220	RIGA	14 May 2011	M11059	Birth		RIZIJA	985170000942783
402	F	26 May 2011	219	115	RIGA	26 May 2011	M11064	Birth		KALME	985170000951327
429	M	18 May 2012	270	173	HELSINKI RIGA	18 May 2012 27 Feb 2014	212005 M12290	Birth Transfer		ELMO	956000001842455
459	M	4 Jun 2013	219	298	RIGA	4 Jun 2013	M13096	Birth		LIETUTINS	
468	M	8 Jun 2013	219	402	RIGA	8 Jun 2013	M13101	Birth			
523	F	27 May 2014	219	298	RIGA	27 May 2014	M14119	Birth		LAIMINA	

Totals: 3.4.0 (7)

ROTTERDAM - Rotterdam Zoo, Rotterdam, The Netherlands

187	M	2 Jun 2002	86	38	RANUA ARNHEM ROTTERDAM	2 Jun 2002 28 Mar 2003 1 Feb 2007	202039 610664 107590	Birth Transfer Transfer	89 RED	PUMMEL	985120015276514
332	F	31 May 2008	207	260	BORAS ROTTERDAM	31 May 2008 10 Dec 2010	HR0032 Z10057	Birth Transfer		KAARINA	968000000264431
341	F	26 May 2009	116	141	HUNBSTRND BORAS ROTTERDAM	26 May 2009 12 May 2010 10 Dec 2010	209021 HR0037 Z10058	Birth Transfer Transfer	RED/RED	RITA	977200007250298
532	M	28 May 2014	187	341	ROTTERDAM	28 May 2014	Z14215	Birth			528046000025976

Totals: 2.2.0 (4)

SALZBURG - Salzburg Zoo Hellbrunn, Anif, Salzburg, Austria

416	F	11 May 2011	270	173	HELSINKI SALZBURG	11 May 2011 7 Nov 2013	211007 S1863	Birth Transfer	GREEN 241	DUULI	956000008413264
435	F	20 May 2012	176	202	ARNHEM SALZBURG	20 May 2012 15 Apr 2014	617028 S1933	Birth Transfer			00071AEDDB

Totals: 0.2.0 (2)

TOTALS: 39.86.0 (125)
20 Institutions

Compiled by: Leif Blomqvist thru Nordens Ark
Data current thru: 1 Sep 2015 - European regional
Printed on 1 Sep 2015 using Sparks v1.65

**3.7.3. Births of forest reindeer 1.1.2013-1.1.2015. Animals listed according to stbk. #.
Changes taking place after 1.1.2015 are marked in red.**

**FOREST REINDEER Studbook
Restricted to: (Rangifer tarandus fennicus)**

Stud#	Sex	Birth Date	Sire	Dam	Location	Date	LocalID	Event	Tag/Band	Name	Transponder
451	F	13 May 2013	176	198	ARNHEM	13 May 2013 10 Aug 2013	617604	Birth Death			528093490020463
452	F	9 May 2013	355	343	BERLINZOO PLEUGUEN	9 May 2013 24 Mar 2014	M1300031 CR3	Birth Transfer			00074-EF37B
453	M	15 May 2013	330	378	HUNBSTRND	15 May 2013 13 May 2014	213018	Birth Death	TURQUOISE	LAPIN	968000010014918
454	M	16 May 2013	330	259	HUNBSTRND PLEUGUEN	16 May 2013 25 Apr 2014	213019 CR4	Birth Transfer	WHITE	KOFF	968000010080420
455	F	16 May 2013	330	307	HUNBSTRND KINGUSSIE	16 May 2013 8 May 2014 1 Jun 2015	213020 5760	Birth Transfer Death	ROSA		968000010011410
456	F	24 May 2013	311	284	BERN PLEUGUEN	24 May 2013 24 Mar 2014	B30052 CR1	Birth Transfer			756098100629617
457	F	24 May 2013	311	264	BERN PLEUGUEN	24 May 2013 24 Mar 2014	B30053 CR2	Birth Transfer			756098100631100
458	F	20 May 2013	219	220	RIGA HELSINKI	20 May 2013 25 Feb 2014	M13092 214001	Birth Transfer	YELLOW	KRUSA	98570002681727
459	M	4 Jun 2013	219	298	RIGA	4 Jun 2013	M13096	Birth		LIETUTINS	
460	M	18 May 2013	380	370	MOSCOW	18 May 2013 8 Nov 2013	130108	Birth Death			
461	M	19 May 2013	380	354	MOSCOW	19 May 2013	130109	Birth	132		
462	F	19 May 2013	381	390	MOSCOW KERZHENSK	19 May 2013 4 Dec 2014	130110 462	Birth Transfer			
463	M	20 May 2013	381	325	MOSCOW	20 May 2013	130111	Birth			
464	M	20 May 2013	380	387	MOSCOW KERZHENSK	20 May 2013 25 Dec 2014	130112 464	Birth Transfer	135		
465	M	31 May 2013	355	393	BERLINZOO LIBEREC	31 May 2013 5 Mar 2014 13 Oct 2014	M1300030 665004	Birth Transfer Death			00072-87302
466	M	5 Jun 2013	381	339	MOSCOW	5 Jun 2013	130260	Birth			
467	F	15 Jun 2013	381	338	MOSCOW	15 Jun 2013 20 Oct 2014	130283	Birth Death			
468	M	8 Jun 2013	219	402	RIGA	8 Jun 2013	M13101	Birth			
469	F	24 May 2013	330	373	HUNBSTRND KINGUSSIE	24 May 2013 8 May 2014	213041 5759	Birth Transfer	Orange	SAHTI	968000010082569
470	M	25 May 2013	176	202	ARNHEM	25 May 2013 10 Oct 2014	617669	Birth Death			528093490020424
471	F	9 Jun 2013	408	407	ARNHEM	9 Jun 2013 8 Jul 2013	617685	Birth Death			528093490020405
472	F	10 May 2013	266	261	JARVZOO	10 May 2013 21 Sep 2014	JZM13011	Birth Death			
473	M	16 May 2013	266	158	JARVZOO	16 May 2013	JZM13012	Birth		JORM	
474	F	18 May 2013	266	350	JARVZOO	18 May 2013 23 May 2015	JZM13013	Birth Death		JUTA	
475	M	19 May 2013	266	280	JARVZOO	19 May 2013 19 Nov 2014	JZM13014	Birth Death			
476	F	13 May 2013	223	324	AHTARI	13 May 2013 14 May 2013	213014	Birth Death			
477	M	18 May 2013	223	403	AHTARI	18 May 2013 18 May 2013	213013	Birth Death			
478	F	20 May 2013	223	388	AHTARI	20 May 2013 20 May 2013	213015	Birth Death			
479	F	20 May 2013	266	375	AHTARI	20 May 2013	213016	Birth	0107	LENITA	985170002270017
480	M	26 May 2013	389	172	RANUA	26 May 2013	213008	Birth	003	MAGNUS	
481	F	28 May 2013	389	227	RANUA	28 May 2013 18 Jun 2013	213011	Birth Death	PINK 001	MILJA	
482	M	3 Jun 2013	389	418	RANUA	3 Jun 2013	213013	Birth	WHITE 006	RIIVI™	

483	F	12 Jun 2013	389	411	RANUA	12 Jun 2013 30 Jun 2013	213020	Birth Death	BLUE 004	MINKA	
484	M	26 May 2013	270	369	HELSINKI	26 May 2013 30 Sep 2014	213034	Birth Death	RED	FEODOR	956000008384825
485	F	3 Jun 2013	270	288	HELSINKI	3 Jun 2013	213044	Birth	WHITE	FINKA	956000008419397
486	M	1 Jul 2013	187	341	ROTTERDAM SALZBURG	1 Jul 2013 5 Mar 2014 14 Apr 2014	Z13187 S1908	Birth Transfer Death		SJAAK	528046000025785
487	M	16 May 2013	413	349	LYCKSELE	16 May 2013 16 May 2013	LRTS1303	Birth Death			
488	M	16 May 2013	413	278	LYCKSELE	16 May 2013 24 Apr 2014	LRTS1302	Birth Death			
489	F	1 Jun 2013	413	374	LYCKSELE RANUA	1 Jun 2013 30 Apr 2015	LRTS1301 215005	Birth Transfer	SE039435-001MAJBTRITT		968000003414806
490	F	14 May 2014	408	397	ARNHEM	14 May 2014	2313	Birth			5280934900326
491	F	14 May 2014	330	307	HUNBSTRND	14 May 2014	214012	Birth	ROSA	FINLANDIA	968000010165788
492	F	16 May 2014	330	259	HUNBSTRND	16 May 2014	214015	Birth	WHITE	JETZIN	968000010174269
493	M	18 May 2014	330	378	HUNBSTRND	18 May 2014 18 Jul 2014	214016	Birth Death			
494	M	19 May 2014	389	418	RANUA	19 May 2014	214022	Birth	BLUE 005	MOKKE	
495	M	6 May 2014	270	288	HELSINKI	6 May 2014 3 Jun 2014	214012	Birth Death	GREEN	GOSTA	956000008397242
496	F	15 May 2014	270	369	HELSINKI	15 May 2014 23 May 2014	214023	Birth Death	RED	GADDJA	956000008416734
497	F	29 May 2014	330	373	HUNBSTRND	29 May 2014	214036	Birth	RED	FINKA	968000010166031
498	F	10 May 2014	266	261	JARVZOO	10 May 2014	JZM14007	Birth	YELLOW 032	KATJA	
499	?	17 May 2014	266	420	JARVZOO	17 May 2014 17 May 2014	JZM14014	Birth Death			
500	F	17 May 2014	408	198	ARNHEM	17 May 2014 24 Sep 2014	2314	Birth Death	YELLOW		5280193490032949
501	M	25 May 2014	408	407	ARNHEM	25 May 2014 5 Nov 2014	2317	Birth Death	PURPLE		528093490032988
502	F	30 May 2014	408	202	ARNHEM	30 May 2014 7 Oct 2014	2316	Birth Death	BLUE		528093490020417
503	M	11 Jul 2014	401	431	PRAHA	11 Jul 2014 12 Jul 2014	140253	Birth Death			
504	F	12 May 2014	223	324	AHTARI	12 May 2014	214027	Birth	WHITE 148	VIVA	
505	F	13 May 2014	223	375	AHTARI	13 May 2014	214028	Birth	BLUE 385	FLOORA	
506	M	28 May 2014	311	264	BERN SALZBURG	28 May 2014 7 Apr 2015	B40093 S2070	Birth Transfer	BLUE		756098100666179
507	M	31 May 2014	311	284	BERN LIBEREC	31 May 2014 29 Apr 2015 3 Aug 2015	B40095 665005	Birth Transfer Death			576098100670143
508	F	24 May 2014	337	271	KERKRADE	24 May 2014 24 May 2014	M14670	Birth Death			
509	M	19 Jun 2014	337	317	KERKRADE	19 Jun 2014 1 Sep 2015	M14727	Birth Death	BLUE 88	MIKA	528093490039409
510	M	22 Jun 2014	337	367	KERKRADE	22 Jun 2014	M14729	Birth	YELLOW 049	MATTI	528093490039401
511	M	24 Jun 2014	337	267	KERKRADE	24 Jun 2014 25 Aug 2015	M14732	Birth Death	GREEN	FYNN	528098490039404
512	F	19 May 2014	223	479	AHTARI	19 May 2014 2 Jun 2014	214029	Birth Death	GREEN 248	KUKKA	
513	F	20 May 2014	223	388	AHTARI	20 May 2014 20 May 2014	214049	Birth Death		NOPO	
514	F	21 May 2014	223	403	AHTARI	21 May 2014 22 May 2014	214050	Birth Death		SOPO	
515	F	23 May 2014	223	530	AHTARI	23 May 2014 24 May 2014	214047	Birth Death		AFFA	
516	F	29 May 2014	223	439	AHTARI	29 May 2014 12 Jun 2014	214030	Birth Death	RED 140	ORVOKKI	
517	F	19 May 2014	381	325	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014 13 Jul 2015	140161 517	Birth Transfer Death			
518	M	19 May 2014	381	390	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014	140162 518	Birth Transfer			
519	F	16 May 2014	380	387	MOSCOW	16 May 2014 15 Jun 2014	140160	Birth Death			

520	F	24 May 2014	380	371	MOSCOW	24 May 2014 5 Dec 2014	140237	Birth Death		
521	F	28 May 2014	380	354	MOSCOW KERZHENSK	28 May 2014 4 Dec 2014	140238 521	Birth Transfer		
522	M	12 Jun 2014	408	430	ARNHEM	12 Jun 2014 12 Jun 2014	3108	Birth Death		
523	F	27 May 2014	219	298	RIGA	27 May 2014	M14119	Birth		LAIMINA
524	M	29 May 2014	389	227	RANUA	29 May 2014	214025	Birth	PURPLE 007	MIKKI
525	F	27 Jun 2014	389	172	RANUA	27 Jun 2014 29 Jul 2014	214048	Birth Death	Pink 98	MANNA
526	M	14 May 2014	413	374	LYCKSELE	14 May 2014	LRTS1403	Birth	ORANGE	968000003404738
527	F	16 May 2014	413	349	LYCKSELE RANUA	16 May 2014 30 Apr 2015	LRTS1401 215006	Birth Transfer	SE0394350013CAROLA	968000003468955
528	F	18 May 2014	413	279	LYCKSELE	18 May 2014 10 Apr 2015	LRTS1402	Birth Death		NUMMIKALVEN 968000003401441
529	F	21 May 2014	413	278	LYCKSELE	21 May 2014 21 Dec 2014	LRTS1404	Birth Death		
531	F	23 May 2014	223	440	AHTARI	23 May 2014 2 Jun 2014	214029	Birth Death	248	KUKKA
532	M	28 May 2014	187	341	ROTTERDAM	28 May 2014	Z14215	Birth		528046000025976

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TOTALS: 35.45.1 (81)

**Compiled by: Leif Blomqvist thru Nordens Ark
Data current thru: 1 Sep 2015 - European regional
Printed on 1 Sep 2015 using Sparks v1.65**

3.7.4. Deaths of forest reindeer 1.1.2013-1.1.2015. Animals listed according to stbk. #.
Deaths taking place after 1.1.2015 are marked in red.

FOREST REINDEER Studbook
Restricted to: (Rangifer tarandus fennicus)

Stud#	Sex	Birth Date	Sire	Dam	Location	Date	LocalID	Event	Tag/Band	Name	Transponder
115	F	25 May 1997	86	38	RANUA TALLIN RIGA	25 May 1997 13 Feb 1999 17 May 2007 27 Mar 2013	970012 12906 970572	Birth Transfer Transfer Death	RED 13	RANUA	
172	F	19 May 2000	86	84	RANUA	19 May 2000 14 Oct 2014	200034	Birth Death		MAIRE	
173	F	15 May 2002	137	107	HELSINKI	15 May 2002 25 Mar 2013	202073	Birth Death	RED 73	TAIKA	0001E6F6DB
202	F	30 May 2003	137	52	HELSINKI ARNHEM	30 May 2003 27 Feb 2004 1 Oct 2014	203052 611547	Birth Transfer Death	RED 81	UMUR	0001D24003
208	F	29 May 2003	116	101	AHTARI ARNHEM KERKRADE	29 May 2003 27 Feb 2004 18 Jan 2005 19 Apr 2015	203005 611549 M03016	Birth Transfer Transfer Death	0002 YELLOW	JANE	985120016136297
219	M	28 May 2003	146	158	JARVZOO RIGA	28 May 2003 10 Feb 2005 9 Jun 2014	JZM03012 030405	Birth Transfer Death	L.BLUE 005	YODA-LACIS	000604EDDS
220	F	29 May 2003	148	80	TALLIN RIGA	29 May 2003 17 May 2007 17 Jul 2013	14697 030511	Birth Transfer Death		KAJA	
271	F	2 Jun 2006	223	235	AHTARI KERKRADE	2 Jun 2006 20 Apr 2007 27 Jun 2014	206011 M06025	Birth Transfer Death	529 VIOLET	SIIRI	985120028924974
280	F	23 May 2007	116	145	HUNBSTRND JARVZOO	23 May 2007 5 Feb 2008 5 Oct 2014	207025 JZM08005	Birth Transfer Death	L.BLUE/L.BLUDALIA		977200004185651
288	F	27 May 2007	137	200	HELSINKI	27 May 2007 3 Jun 2014	207068	Birth Death	BLUE 537	ZEITA	968000000263522
295	M	15 May 2007	223	152	AHTARI KINGUSSIE	15 May 2007 4 Apr 2008 28 Sep 2014	207001 5274	Birth Transfer Death	123 WHITE	LENNI	246098100187884
301	M	17 May 2007	187	179	ARNHEM KINGUSSIE	17 May 2007 14 Mar 2008 28 Nov 2013	613841 5255	Birth Transfer Death	GREEN 559	MARTEN	826098101332516
316	M	22 May 2008	176	179	ARNHEM KERKRADE	22 May 2008 12 Mar 2009 19 Nov 2013	614694 M08016	Birth Transfer Death		GAIA 11	000680A173
345	M	20 May 2009	219	298	RIGA	20 May 2009 13 Sep 2014	M09072	Birth Death		LAIMESLACIS	428098100000063
366	F	20 May 2009	184	271	KERKRADE	20 May 2009 4 May 2015	M09049	Birth Death	015	GAIA 15	0006B891A5
370	F	24 May 2010	270	200	HELSINKI MOSCOW	24 May 2010 16 Dec 2011 30 Jul 2013	210021 110662	Birth Transfer Death	YELLOW 677	CUMU	956000002409877
371	F	27 May 2010	270	288	HELSINKI MOSCOW	27 May 2010 16 Dec 2011 15 Jul 2014	210022 110663	Birth Transfer Death	LILAC	CATARIINA	956000001836939
376	M	17 May 2010	266	158	JARVZOO	17 May 2010 6 Mar 2013	JZM10012	Birth Death	40		
383	F	10 May 2010	176	198	ARNHEM SALZBURG	10 May 2010 2 Feb 2011 3 Jan 2014	615777 S1271	Birth Transfer Death		INARI	0006DCF103
387	F	12 May 2010	223	152	AHTARI MOSCOW	12 May 2010 16 Dec 2011 1 Dec 2014	210004 110668	Birth Transfer Death	GREEN 232		9851210183269
394	F	26 Jun 2010	311	264	BERN SALZBURG	26 Jun 2010 25 Oct 2011 20 Mar 2013	B00161 S1493	Birth Transfer Death		HAMNINA	756098100493344
411	F	21 May 2011	228	227	RANUA	21 May 2011 24 Sep 2013	211009	Birth Death	PURPLE 003	MIRJA	
414	M	11 May 2011	266	158	JARVZOO	11 May 2011 22 Aug 2013	JZM11007	Birth Death			
415	M	15 May 2011	266	280	JARVZOO	15 May 2011 7 Aug 2013	JZM11008	Birth Death			

421	M	23 May 2011	355	343	BERLINZOO SALZBURG	23 May 2011 20 Nov 2012 13 Dec 2013	421 S1708	Birth Transfer Death			0006B2A7EE
432	M	20 May 2012	311	264	BERN	20 May 2012 5 Sep 2013	B20078	Birth Death			756098100565740
437	M	23 Jun 2012	355	393	BERLINZOO LIBEREC	23 Jun 2012 10 May 2013 28 Aug 2013	437 665003	Birth Transfer Death	MARIO		0006B275B3
438	M	13 May 2012	266	261	JARVZOO	13 May 2012 3 Dec 2014	JZM12005	Birth Death	IDAR		
441	F	25 May 2012	240	350	JARVZOO	25 May 2012 24 May 2015	JZM12008	Birth Death	ILONA		
442	M	13 Jul 2012	389	227	RANUA	13 Jul 2012 16 Oct 2013	212038	Birth Death	WHITE 010	MIHKU	
444	M	11 May 2012	219	220	RIGA	11 May 2012 21 Apr 2013	M12146	Birth Death		KLINTS	985170002480010
445	M	27 May 2012	219	298	RIGA	27 May 2012 15 Oct 2013	M12148	Birth Death		LAIMINS	985120021918545
448	M	16 May 2012	240	278	LYCKSELE	16 May 2012 1 Feb 2013	LRTS1201	Birth Death			
451	F	13 May 2013	176	198	ARNHEM	13 May 2013 10 Aug 2013	617604	Birth Death			528093490020463
453	M	15 May 2013	330	378	HUNBSTRND	15 May 2013 13 May 2014	213018	Birth Death	TURQUOISE	LAPIN	968000010014918
455	F	16 May 2013	330	307	HUNBSTRND KINGUSSIE	16 May 2013 8 May 2014 1 Jun 2015	213020 5760	Birth Transfer Death	ROSA		968000010011410
460	M	18 May 2013	380	370	MOSCOW	18 May 2013 8 Nov 2013	130108	Birth Death			
465	M	31 May 2013	355	393	BERLINZOO LIBEREC	31 May 2013 5 Mar 2014 13 Oct 2014	M1300030 665004	Birth Transfer Death			00072-87302
467	F	15 Jun 2013	381	338	MOSCOW	15 Jun 2013 20 Oct 2014	130283	Birth Death			
470	M	25 May 2013	176	202	ARNHEM	25 May 2013 10 Oct 2014	617669	Birth Death			528093490020424
471	F	9 Jun 2013	408	407	ARNHEM	9 Jun 2013 8 Jul 2013	617685	Birth Death			528093490020405
472	F	10 May 2013	266	261	JARVZOO	10 May 2013 21 Sep 2014	JZM13011	Birth Death			
474	F	18 May 2013	266	350	JARVZOO	18 May 2013 23 May 2015	JZM13013	Birth Death	JUTTA		
475	M	19 May 2013	266	280	JARVZOO	19 May 2013 19 Nov 2014	JZM13014	Birth Death			
476	F	13 May 2013	223	324	AHTARI	13 May 2013 14 May 2013	213014	Birth Death			
477	M	18 May 2013	223	403	AHTARI	18 May 2013 18 May 2013	213013	Birth Death			
478	F	20 May 2013	223	388	AHTARI	20 May 2013 20 May 2013	213015	Birth Death			
481	F	28 May 2013	389	227	RANUA	28 May 2013 18 Jun 2013	213011	Birth Death	PINK 001	MILJA	
483	F	12 Jun 2013	389	411	RANUA	12 Jun 2013 30 Jun 2013	213020	Birth Death	BLUE 004	MINKA	
484	M	26 May 2013	270	369	HELSINKI	26 May 2013 30 Sep 2014	213034	Birth Death	RED	FEODOR	956000008384825
486	M	1 Jul 2013	187	341	ROTTERDAM SALZBURG	1 Jul 2013 5 Mar 2014 14 Apr 2014	Z13187 S1908	Birth Transfer Death		SJAAK	528046000025785
487	M	16 May 2013	413	349	LYCKSELE	16 May 2013 14 Feb 2014	LRTS1303	Birth Death			
488	M	16 May 2013	413	278	LYCKSELE	16 May 2013 24 Apr 2014	LRTS1302	Birth Death			
493	M	18 May 2014	330	378	HUNBSTRND	18 May 2014 18 Jul 2014	214016	Birth Death			
495	M	6 May 2014	270	288	HELSINKI	6 May 2014 3 Jun 2014	214012	Birth Death	GREEN	GOSTA	956000008397242
496	F	15 May 2014	270	369	HELSINKI	15 May 2014 23 May 2014	214023	Birth Death	RED	GADDJA	956000008416734
499	?	17 May 2014	266	420	JARVZOO	17 May 2014 17 May 2014	JZM14014	Birth Death			

500	F	17 May 2014	408	198	ARNHEM	17 May 2014 24 Sep 2014	2314	Birth Death	YELLOW		5280193490032949
501	M	25 May 2014	408	407	ARNHEM	25 May 2014 5 Nov 2014	2317	Birth Death	PURPLE		528093490032988
502	F	30 May 2014	408	202	ARNHEM	30 May 2014 7 Oct 2014	2316	Birth Death	BLUE		528093490020417
503	M	11 Jul 2014	401	431	PRAHA	11 Jul 2014 12 Jul 2014	140253	Birth Death			
508	F	24 May 2014	337	271	KERKRADE	24 May 2014 24 May 2014	M14670	Birth Death			
509	M	19 Jun 2014	337	317	KERKRADE	19 Jun 2014 1 Sep 2015	M14727	Birth Death	BLUE 88	MIKA	528093490039409
511	M	24 Jun 2014	337	267	KERKRADE	24 June 2014 25 Aug 2015	M14732	Birth Death	GREEN	FYNN	528098490039404
512	F	19 May 2014	223	479	AHTARI	19 May 2014 2 Jun 2014	214029	Birth Death	GREEN 248	KUKKA	
513	F	20 May 2014	223	388	AHTARI	20 May 2014 20 May 2014	214049	Birth Death		NOPO	
514	F	21 May 2014	223	403	AHTARI	21 May 2014 22 May 2014	214050	Birth Death		SOPO	
515	F	23 May 2014	223	530	AHTARI	23 May 2014 24 May 2014	214047	Birth Death		AFFA	
516	F	29 May 2014	223	439	AHTARI	29 May 2014 12 Jun 2014	214030	Birth Death	RED 140	ORVOKKI	
517	F	19 May 2014	381	325	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014 13 Jul 2015	140161 517	Birth Transfer Death			
519	F	16 May 2014	380	387	MOSCOW	16 May 2014 15 Jun 2014	140160	Birth Death			
520	F	24 May 2014	380	371	MOSCOW	24 May 2014 5 Dec 2014	140237	Birth Death			
522	M	12 Jun 2014	408	430	ARNHEM	12 Jun 2014 12 Jun 2014	3108	Birth Death			
525	F	27 Jun 2014	389	172	RANUA	27 Jun 2014 29 Jul 2014	214048	Birth Death	Pink 98	MANNA	
528	F	18 May 2014	413	279	LYCKSELE	18 May 2014 10 Apr 2015	LRTS1302	Birth Death		NUMMIKALVEN	
529	F	21 May 2014	413	278	LYCKSELE	21 May 2014 21 Dec 2014	LRTS1404	Birth Death			
531	F	23 May 2014	223	440	AHTARI	23 May 2014 2 Jun 2014	214029	Birth Death	248	KUKKA	
533	F	10 Jul 2012	223	324	AHTARI	10 Jul 2012 7 Apr 2014	212035	Birth Death	446		

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TOTALS: 30.38.1 (69)

Compiled by: Leif Blomqvist thru Nordens Ark
Data current thru: 1 Sep 2015 - European regional
Printed on 1 Sep 2015 using Sparks v1.65

3.7.5. Transfers of forest reindeer 1.1.2013-1.1.2015. Transfers taking place after 1.1.2015 are marked in red.

FOREST REINDEER Studbook
Restricted to: (Rangifer tarandus fennicus)
Dates: 1 Jan 2013 - 1 Jan 2015
Event: Transfers

Stud#	Sex	Birth Date	Sire	Dam	Location	Date	LocalID	Event	Tag/Band	Name	Transponder
314	M	7 May 2008	176	198	ARNHEM	7 May 2008	614626	Birth		RINUS	000680B219
					KERKRADE	12 Mar 2009	M08017	Transfer			
					ROTTERDAM	9 Feb 2010	107965	Transfer			
					MAGDEBURG	20 Oct 2011	443023	Transfer			
					BERLINZOO	7 Feb 2013	ESB314	Transfer			
337	M	17 May 2009	223	235	AHTARI	17 May 2009	209006	Birth	258 BLACK	JOHAN	985170002298737
					KERKRADE	5 Nov 2013	M09200	Transfer			
355	M	6 May 2009	176	198	ARNHEM	6 May 2009	615211	Birth		GUNNAR	0006D0BD91
					BERLIN TP	3 Feb 2010		Transfer			
					BERLINZOO	24 Mar 2010	ESB355	Transfer			
					MAGDEBURG	21 Feb 2013	443024	Transfer			
375	F	13 May 2010	266	261	JARVZOO	13 May 2010	JZM10010	Birth		GLENDA	968000004326763
					AHTARI	16 Apr 2013	213005	Transfer			
401	M	19 May 2011	219	298	RIGA	19 May 2011	M11060	Birth		LORDS	985170000942082
					PRAHA	28 Oct 2013	130427	Transfer			
416	F	11 May 2011	270	173	HELSINKI	11 May 2011	211007	Birth	GREEN 241	DUULI	956000008413264
					SALZBURG	7 Nov 2013	S1863	Transfer			
426	F	12 May 2012	330	259	HUNBSTRND	12 May 2012	212032	Birth	ROSA/ROSA	YKSI	977200008167014
					LIBEREC	10 May 2013	665001	Transfer			
428	F	14 May 2012	330	307	HUNBSTRND	14 May 2012	212035	Birth	WHITE/WHITE	KAKSI	977200008167119
					LIBEREC	10 May 2013	665002	Transfer			
429	M	18 May 2012	270	173	HELSINKI	18 May 2012	212005	Birth		ELMO	956000001842455
					RIGA	27 Feb 2014	M12290	Transfer			
431	F	17 May 2012	311	284	BERN	17 May 2012	B20077	Birth			7560998100562596
					PRAHA	9 Oct 2013	130383	Transfer			
435	F	20 May 2012	176	202	ARNHEM	20 May 2012	617028	Birth			00071ADEDB
					SALZBURG	15 Apr 2014	S1933	Transfer			
437	M	23 Jun 2012	355	393	BERLINZOO	23 Jun 2012	437	Birth		MARIO	0006B275B3
					LIBEREC	10 May 2013	665003	Transfer			
						28 Aug 2013		Death			
439	F	19 May 2012	266	280	JARVZOO	19 May 2012	JZM12006	Birth	29	GERSTIN	968000004325683
					AHTARI	16 Apr 2013	213003	Transfer			
440	F	20 May 2012	266	375	JARVZOO	20 May 2012	JZM12007	Birth	26	GRETA	968000004320483
					AHTARI	16 Apr 2013	213004	Transfer			
446	F	27 May 2012	270	288	HELSINKI	27 May 2012	212016	Birth		ELOVEENA	
					PRAHA	28 Oct 2013	130428	Transfer			
447	F	10 May 2012	316	317	KERKRADE	10 May 2012	M12019	Birth	PINK 001	GAIA 19	528093490007253
					PRAHA	6 Nov 2013	130451	Transfer			
452	F	9 May 2013	355	343	BERLINZOO	9 May 2013	452	Birth			00074-EF37B
					PLEUGUEN	24 Mar 2014	CR3	Transfer			
454	M	16 May 2013	330	259	HUNBSTRND	16 May 2013	213019	Birth	WHITE	KOFF	968000010080420
					PLEUGUEN	25 Apr 2014	CR4	Transfer			
455	F	16 May 2013	330	307	HUNBSTRND	16 May 2013	213020	Birth	ROSA		968000010011410
					KINGUSSIE	8 May 2014	5760	Transfer			
456	F	24 May 2013	311	284	BERN	24 May 2013	B30052	Birth			756098100629617
					PLEUGUEN	24 Mar 2014	CR1	Transfer			
457	F	24 May 2013	311	264	BERN	24 May 2013	B30053	Birth			756098100631100
					PLEUGUEN	24 Mar 2014	CR2	Transfer			
458	F	20 May 2013	219	220	RIGA	20 May 2013	M13092	Birth	YELLOW	KRUSA	98570002681727
					HELSINKI	25 Feb 2014	214001	Transfer			
462	F	19 May 2013	381	390	MOSCOW	19 May 2013	130110	Birth			
					KERZHENSK	4 Dec 2014	462	Transfer			
464	M	20 May 2013	380	387	MOSCOW	20 May 2013	130112	Birth	135		
					KERZHENSK	25 Dec 2014	464	Transfer			
465	M	31 May 2013	355	393	BERLINZOO	31 May 2013	M1300030	Birth			00072-87302
					LIBEREC	5 Mar 2014	665004	Transfer			
						13 Oct 2014		Death			
469	F	24 May 2013	330	373	HUNBSTRND	24 May 2013	213041	Birth	Orange	SAHTI	968000010082569
					KINGUSSIE	8 May 2014	5759	Transfer			
486	M	1 Jul 2013	187	341	ROTTERDAM	1 Jul 2013	Z13187	Birth		SJAAK	528046000025785
					SALZBURG	5 Mar 2014	S1908	Transfer			
						14 Apr 2014		Death			

489	F	1 Jun 2013	413	374	LYCKSELE RANUA	1 Jun 2013 30 Apr 2015	LRTS1301 215005	Birth Transfer	SE039435-001MAJBTRIT	96800003414806
506	M	28 May 2014	311	264	BERN SALZBURG	28 May 2014 7 Apr 2015	B40093 S2070	Birth Transfer	BLUE	756098100666179
507	M	31 May 2014	311	284	BERN LIBEREC	31 May 2014 29 Apr 2015 3 Aug 2015	B40095 665005	Birth Transfer Death		576098100670143
517	F	19 May 2014	381	325	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014 13 Jul 2015	140161 517	Birth Transfer Death		
518	M	19 May 2014	381	390	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014	140162 518	Birth Transfer		
521	F	28 May 2014	380	354	MOSCOW KERZHENSK	28 May 2014 4 Dec 2014	140238 521	Birth Transfer		
527	F	16 May 2014	413	349	LYCKSELE RANUA	16 May 2014 30 Apr 2015	LRTS1401 215006	Birth Transfer	03943500138 CAROLA	

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TOTALS: 11.19.0 (30)

Compiled by: Leif Blomqvist thru Nordens Ark
Data current thru: 1 Sep 2015 - European regional
Printed on 1 Sep 2015 using Sparks v1.65

3.7.6. Historical listing of forest reindeer kept in captivity 1973-1.1.2015 according to EAZA studbook numbers. Reported changes taking place after 1.1.2015 are marked in red.

FOREST REINDEER Studbook
Restricted to: (*Rangifer tarandus fennicus*)

Stud#	Sex	Birth Date	Sire	Dam	Location	Date	LocalID	Event	Tag/Band	Name	Transponder
1	F	????	WILD	WILD	KUHMO	18 Mar 1973	NONE	Capture		210	
						18 Mar 1973	730046	Transfer			
						21 Mar 1973		Death			
2	F	????	WILD	WILD	KUHMO	18 Mar 1973	NONE	Capture		209	
						18 Mar 1973	730047	Transfer			
						2 Sep 1977		Death			
3	M	????	WILD	WILD	AMMANSAAR	17 Dec 1976	NONE	Capture			
						17 Dec 1976	760040	Transfer			
						17 Jul 1981		Death			
4	F	????	WILD	WILD	SUOMUSSAL	21 Apr 1979	NONE	Capture			
						21 Apr 1979	790076	Transfer			
						3 May 1979		Death			
5	F	????	WILD	WILD	KIVIJARVI	13 Jan 1984	NONE	Capture		EMMI	
						13 Jan 1984	770001	Transfer			
						26 Jun 1991	EMMI	Release			
6	M	~ 1972	WILD	WILD	SUOMUSSAL	28 Jan 1976	NONE	Capture		PEKKA	
						28 Jan 1976	760004	Transfer			
						5 Sep 1984		Death			
7	F	~ 1976	WILD	WILD	SUOMUSSAL	21 Apr 1979	NONE	Capture	GREEN 109	LOUHI	7F7F272E01
						21 Apr 1979	790015	Transfer			
						16 Aug 1991		Death			
8	F	~ 1978	WILD	WILD	KUHMO	4 Jan 1984	NONE	Capture		EMMA	
						4 Jan 1984	780001	Transfer			
						2 Sep 1986		Death			
9	M	~ 1979	WILD	WILD	JUNTUSRAN	29 Jan 1981	NONE	Capture	0101	EETU	
						29 Jan 1981	790001	Transfer			
						24 Apr 1990	0101	Release			
10	F	30 May 1980	6	7	HELSINKI	30 May 1980	800019	Birth		VIUHAHTAJA	
						10 Sep 1986		Death			
11	M	26 May 1981	6	7	HELSINKI	26 May 1981	810024	Birth			
						24 Apr 1983		Death			
12	M	30 May 1982	6	7	HELSINKI	30 May 1982	820028	Birth		VANTTU	
						26 Jan 1988		Death			
13	M	10 Jun 1982	6	10	HELSINKI	10 Jun 1982	820032	Birth	YEL 13	TOPPONEN	
						30 May 1988		Death			
14	F	25 May 1983	6	7	HELSINKI	25 May 1983	830035	Birth	GREEN 42	LIISA	
						14 Nov 1990		Death			
15	M	30 May 1983	6	10	HELSINKI	30 May 1983	830039	Birth			
						29 Feb 1988		Transfer			
						21 Mar 1990		Death			
16	F	~ 1984	WILD	WILD	UNKNOWN	1 Mar 1987	NONE	Capture		VERUSKA	
						2 Mar 1987	VERUSK	Transfer			
						1 Mar 1988	VERUSK	Transfer			
						1 Sep 1993		Death			
17	M	22 May 1984	9	8	AHTARI	22 May 1984	840003	Birth	HO725	EMPPU	
						3 May 1989	H0725	Release			
						6 Jun 1989	H0725	Capture			
						6 Jun 1989	840003	Transfer			
						19 Sep 1989	H0725	Release			
						26 Dec 1989	H0725	Capture			
18	F	12 Jun 1984	6	7	HELSINKI	12 Jun 1984	840044	Birth	GREEN 110	MILKA	7F7F273043
						13 Mar 1997		Death			
19	M	14 Jun 1984	6	10	HELSINKI	14 Jun 1984	840046	Birth	GREEN 5	RUDOLF	
						29 Feb 1988	HR0001	Transfer			
						20 Jul 1993		Death			
20	F	~ 1985	WILD	WILD	KUHMO	28 Mar 1987	NONE	Capture		NIINA	7F7F266122
						28 Mar 1987	870002	Transfer			
						21 Nov 1994	NIINA	Transfer			
						1 Jan 1995		Death			
21	M	27 May 1985	12	10	HELSINKI	27 May 1985	850054	Birth	GREEN 4	TROLLE	
						7 Nov 1990		Death			
22	F	6 Jun 1985	9	8	AHTARI	6 Jun 1985	850002	Birth		LIINU	
						6 May 1992	LIINU	Release			
23	F	6 Jun 1985	9	5	AHTARI	6 Jun 1985	850003	Birth		LEENU	
						6 May 1992	LEENU	Release			

24	M	10 Jun 1985	12	14	HELSINKI	10 Jun 1985 5 Jun 1990	850081	Birth Death	GREEN 95	PEKKA II	
25	F	2 Jul 1985	12	7	HELSINKI	2 Jul 1985 10 Mar 1992	850072	Birth Death	GREEN 138	HELGA	
26	M	~ 1986	WILD	WILD	KUHMO RANUA OULU UNIV	28 Mar 1987 28 Mar 1987 27 Oct 1990 1 Jan 1991	NONE 870001 NESTOR	Capture Transfer Transfer Death		NESTORI	
27	F	11 May 1986	9	5	AHTARI MAAHERRAN	11 May 1986 11 May 1993	860005	Birth Release	NAMU		
28	F	20 May 1986	9	8	AHTARI MAAHERRAN	20 May 1986 19 May 1988	860017	Birth Release	NEKKU		
29	M	23 May 1986	12	7	HELSINKI	23 May 1986 1 Jul 1986	860052	Birth Death			
30	M	25 May 1986	12	18	HELSINKI	25 May 1986 3 Jun 1986	860060	Birth Death			
31	M	28 May 1986	12	10	HELSINKI	28 May 1986 22 Jul 1986	860103	Birth Death			
32	M	20 May 1986	9	22	AHTARI MAAHERRAN	20 May 1986 6 May 1992	860004	Birth Release			
33	M	9 Jun 1986	12	14	HELSINKI	9 Jun 1986 12 Jul 1986	860083	Birth Death			
34	M	22 May 1987	WILD	16	OULU RANUA	22 May 1987 18 May 1994 4 Jul 1994	OULULA 940001	Birth Transfer Death		OULULAINEN	
35	F	24 May 1987	12	7	HELSINKI BORAS	24 May 1987 29 Feb 1988 21 Jul 1996	870073 HR0002	Birth Transfer Death		VAJA	
36	M	27 May 1987	12	18	HELSINKI HUNBSTRND	27 May 1987 13 Dec 1989 10 Dec 1990	870074 890123	Birth Transfer Death	GREEN 55	VIMMEL	
37	M	28 May 1987	12	25	HELSINKI HUNBSTRND RANUA	28 May 1987 14 Dec 1989 16 Mar 1991 15 Oct 1993	870075 890112 910001	Birth Transfer Transfer Death	GREEN 56	RASKEN	
38	F	30 May 1987	26	20	RANUA	30 May 1987 5 Nov 2002	870003	Birth Death		NELLI	
39	F	20 May 1988	12	25	HELSINKI HUNBSTRND	20 May 1988 17 May 1989 28 Sep 1990	880026 890030	Birth Transfer Death	GREEN 79	ESTER	
40	M	27 May 1988	12	7	HELSINKI HUNBSTRND	27 May 1988 17 May 1989 16 Sep 1998	880033 890029	Birth Transfer Death	GREEN 78	RUDOLF	00-0015-C035
41	M	30 May 1988	12	18	HELSINKI	30 May 1988 1 Dec 1988	880034	Birth Death	GREEN 77		
42	M	18 Jun 1988	12	14	HELSINKI	18 Jun 1988 18 Jun 1988	880060	Birth Death			
43	F	16 May 1989	9	27	AHTARI	16 May 1989 18 Dec 2002	890001	Birth Death		MANTA	
44	F	18 May 1989	9	23	AHTARI MAAHERRAN	18 May 1989 24 Apr 1990	890002 0264	Birth Release	0125		
45	F	19 May 1989	24	25	HELSINKI HUNBSTRND	19 May 1989 28 Feb 1992 30 Sep 1995	890040 920011	Birth Transfer Death	GREEN 96	BABA JAGA	00-0016-BFF6
46	F	21 May 1989	9	22	AHTARI MAAHERRAN	21 May 1989 24 Apr 1990	890003 0264	Birth Release			
47	M	23 May 1989	24	18	HELSINKI	23 May 1989 29 May 1989	890041	Birth Death			
48	M	24 May 1989	24	7	HELSINKI HUNBSTRND	24 May 1989 30 Jan 1993 26 Dec 1994	890042 930005	Birth Transfer Death	GREEN 16	TORFUS	00-0011-3604
49	F	29 May 1989	24	14	HELSINKI HUNBSTRND	29 May 1989 14 Dec 1989 16 May 2001	890043 890113	Birth Transfer Death		ELSA	00-0026-9486
50	F	6 Jun 1989	26	20	RANUA OULU UNIV RANUA	6 Jun 1989 5 Dec 1989 1 Jan 1990	890001 NEITO	Birth Transfer Death		NEITO	
51	F	17 May 1990	21	7	HELSINKI	17 May 1990 10 Nov 2003	900039	Birth Death	LILA 12	POHJAN AKKA	00-00F602E7
52	F	18 May 1990	21	18	HELSINKI	18 May 1990 10 Nov 2003	900041	Birth Death	YELLOW 32	SAGA	0000111-B8D
53	M	19 May 1990	17	23	AHTARI HELSINKI	19 May 1990 10 Nov 1992 17 Nov 1997	900001 920194	Birth Transfer Death		MARA	

54	F	23 May 1990	9	27	AHTARI	23 May 1990 9 May 2001	900002	Birth Death	0018	INKA	
55	M	28 May 1990	21	14	HELSINKI	28 May 1990 15 Feb 1992	900044	Birth Death	GREEN 111	VAINO	
56	F	1 Jun 1990	21	25	HELSINKI HUNBSTRND	1 Jun 1990 20 Jun 1991 1 Jul 1991	900050 910102	Birth Transfer Death	GREEN 119	AINO	7F7F264E26
57	F	7 Jun 1990	9	5	AHTARI	7 Jun 1990 3 Aug 2004	900003	Birth Death	0023	IITU	
58	M	1 Jul 1990	40	39	HUNBSTRND BORAS	1 Jul 1990 22 Sep 1993 26 Sep 1993	900095 HR0006	Birth Transfer Death		RUTGER	00-000E-0776
59	F	3 Jul 1990	26	38	RANUA OULU UNIV	3 Jul 1990 27 Oct 1990 1 Jan 1991	900001 NUNNU	Birth Transfer Death		NUNNU	
60	M	18 May 1991	17	27	AHTARI SIKOSUO	18 May 1991 6 May 1992	910003 0044	Birth Release	0044	MOSSE	
61	F	22 May 1991	17	22	AHTARI SIKOSUO	22 May 1991 6 May 1992	910004 0045	Birth Release	0045	MIRKA	
62	?	24 May 1991	21	7	HELSINKI	24 May 1991 24 May 1991	910119	Birth Death			
63	M	26 May 1991	21	25	HELSINKI HUNBSTRND BORAS	26 May 1991 28 Feb 1992 8 Oct 1993 1 Aug 2000	910063 920010 HR0007	Birth Transfer Transfer Death		ISLAK	00-0015-80BA
64	M	26 May 1991	19	35	BORAS HUNBSTRND BORAS	26 May 1991 13 Nov 1992 4 Nov 1998 6 Sep 1999	HR0003 920167 HR0003	Birth Transfer Transfer Death		ROMEO	00-0013-7CDE
65	F	27 May 1991	17	5	AHTARI MAHERRAN	27 May 1991 26 Jun 1991	910005 0048	Birth Release	0048	MIRABELL	
66	F	5 Jun 1991	21	45	HELSINKI	5 Jun 1991 13 Apr 1999	910077	Birth Death	RED 23	ILONA	00-00F72B1B
67	F	10 Jun 1991	26	38	RANUA	10 Jun 1991 18 Sep 1999	910002	Birth Death		NASTA	
68	M	16 Jun 1991	21	18	HELSINKI HUNBSTRND BORAS	16 Jun 1991 28 Feb 1992 4 Nov 1998 6 Feb 1999	910094 920009 HR0008	Birth Transfer Transfer Death	RED/YELLOW	ILJA	00-0014-724F
69	M	23 May 1992	17	27	AHTARI	23 May 1992 2 Sep 1999	920002	Birth Death		MANU	
70	M	24 May 1992	19	35	BORAS HUNBSTRND	24 May 1992 22 Sep 1993 5 Oct 1998	HR0004 930182	Birth Transfer Death		VALLE	
71	M	25 May 1992	40	49	HUNBSTRND	25 May 1992 26 Aug 1992	920093	Birth Death			
72	F	25 May 1992	17	43	AHTARI MAHERRAN	25 May 1992 11 May 1993	920001 0085	Birth Release	0085	MIA	
73	F	29 May 1992	48	51	HELSINKI	29 May 1992 6 Oct 2001	920081	Birth Death	YEL 63	JULIA	00000D4B86
74	F	30 May 1992	48	18	HELSINKI HUNBSTRND	30 May 1992 30 Jan 1993 6 Aug 2003	920073 930006	Birth Transfer Death	GREEN 153	JENNY	00-0011-E54D
75	M	6 Jun 1992	48	52	HELSINKI TALLIN	6 Jun 1992 19 Dec 1996 30 Jan 1997	920082 12090	Birth Transfer Death	PINK 8	JANKA-JOONAS0000144FBE	
76	F	6 May 1993	40	49	HUNBSTRND	6 May 1993 29 Nov 2000	930026	Birth Death	RED 49/WHITEMARJA		0001E6F78A
77	M	15 May 1993	17	UNK	AHTARI	15 May 1993 17 May 1993	930006	Birth Death	0144		
78	F	18 May 1993	48	18	HELSINKI	18 May 1993 18 Nov 2003	930023	Birth Death	ORANGE 1	KLEO	0000F615CA
79	M	22 May 1993	48	52	HELSINKI TALLIN	22 May 1993 19 Dec 1996 8 Sep 1997	930031 12092	Birth Transfer Death	LILA 4	KLYYVARI	000097521A
80	F	24 May 1993	48	51	HELSINKI TALLIN	24 May 1993 19 Dec 1996 15 Oct 2004	930032 12091	Birth Transfer Death	LBLUE 4	KARPALO	0000F7BAF5
81	M	24 May 1993	19	35	BORAS HUNBSTRND	24 May 1993 15 Sep 1994 12 Nov 1997	HR0005 940207	Birth Transfer Death	94207	VILLE	00-000D-2487
82	M	31 May 1993	48	66	HELSINKI	31 May 1993 1 Jun 1993	930049	Birth Death			

83	F	12 May 1994	40	49	HUNBSTRND	12 May 1994 31 May 1994	940139	Birth Death				
84	F	17 May 1994	17	57	AHTARI RANUA	17 May 1994 17 Oct 1994 22 Oct 2003	940004 940002	Birth Transfer Death	0139	MAILA		
85	M	18 May 1994	40	45	HUNBSTRND	18 May 1994 9 Jun 1994	940140	Birth Death				
86	M	18 May 1994	17	54	AHTARI RANUA	18 May 1994 17 Oct 1994 28 Jan 2004	940005 940003	Birth Transfer Death	0140	EERIKKI		
87	F	19 May 1994	53	51	HELSINKI	19 May 1994 16 Dec 1996	940046	Birth Death		LAKKA		
88	F	20 May 1994	53	18	HELSINKI BORAS	20 May 1994 23 Mar 1999 11 May 2010	940050 HR0009	Birth Transfer Death	BLUE 5	LOITSU	0000F7719A	
89	M	21 May 1994	17	43	AHTARI	21 May 1994 29 Sep 2000	940003	Birth Death	0141	KONSTA		
90	M	23 May 1994	53	52	HELSINKI	23 May 1994 6 Sep 1995	940054	Birth Death		LOIMU		
91	F	28 May 1994	53	66	HELSINKI HUNBSTRND	28 May 1994 9 Sep 1997 30 Oct 1999	940058 970223	Birth Transfer Death	RED 38	LYSTI	00-00F542CD	
92	M	13 May 1995	40	49	HUNBSTRND BORAS	13 May 1995 24 Feb 1999 29 Oct 1999	950003 HR0011	Birth Transfer Death		ERKKI	00-0071-0447	
93	M	14 May 1995	17	57	AHTARI	14 May 1995 3 Jun 1996	950005	Birth Death	0151	MAINI		
94	F	18 May 1995	53	51	HELSINKI HUNBSTRND	18 May 1995 9 Sep 1997 2 Sep 2009	950035 970224	Birth Transfer Death	D.BLUE/GREENMAGDALENA		00-00F5EDDD	
95	F	18 May 1995	17	43	AHTARI	18 May 1995 14 Jun 1995	950006	Birth Death	0152			
96	F	21 May 1995	17	54	AHTARI	21 May 1995 3 Jun 1996	950007	Birth Death		MIMMI		
97	F	27 May 1995	53	52	HELSINKI	27 May 1995 6 Feb 2008	950036	Birth Death	L.BLUE 88	MIELIKKI	000061CCB8	
98	F	14 May 1996	68	76	HUNBSTRND	14 May 1996 9 Oct 2000	960143	Birth Death	0136 YEL	IRENE		
99	M	19 May 1996	68	74	HUNBSTRND	19 May 1996 20 May 1996	960147	Birth Death	0129			
100	M	20 May 1996	17	57	AHTARI	20 May 1996 30 Oct 1996	950008	Birth Death				
101	F	20 May 1996	69	54	AHTARI	20 May 1996 22 Oct 2010	960001	Birth Death	0169	JANIKA		
102	M	22 May 1996	53	73	HELSINKI HUNBSTRND BORAS LUND	22 May 1996 9 Sep 1997 27 Sep 2000 27 Jan 2004 19 May 2006	960060 970225 HR0012 NAUKKU	Birth Transfer Transfer Transfer Death		NAUKKU	00-0061CFF0	
103	F	25 May 1996	53	80	HELSINKI BORAS ROTTERDAM	25 May 1996 23 Mar 1999 10 Dec 2010 18 Jul 2012	960061 HR0010 Z10056	Birth Transfer Transfer Death	NEONRED 24	NEITO	0000F76245	
104	F	25 May 1996	53	66	HELSINKI RANUA	25 May 1996 27 Sep 2000 11 Dec 2008	960062 200059	Birth Transfer Death	PINK 49	NANNA	00-0096-3639	
105	F	25 May 1996	86	38	RANUA HELSINKI HUNBSTRND	25 May 1996 14 Mar 1997 9 Sep 1997 9 Oct 1998	960002 970008 970226	Birth Transfer Transfer Death	PINK 48	MELLU	00-00F5C57B	
106	F	1 Jun 1996	68	49	HUNBSTRND	1 Jun 1996 13 Jun 2001	960167	Birth Death	0140 BLUE	RENEE	00-01BC-D40E	
107	F	5 Jun 1996	86	67	RANUA HELSINKI	5 Jun 1996 14 Mar 1997 16 Nov 2005	960001 970009	Birth Transfer Death	BLACK 17	MANTA	00-00F61121	
108	F	16 May 1997	68	49	HUNBSTRND	16 May 1997 1 Nov 2000	970023	Birth Death		SANDRA		
109	F	17 May 1997	68	76	HUNBSTRND	17 May 1997 29 May 1997	970024	Birth Death				
110	F	19 May 1997	68	74	HUNBSTRND	19 May 1997 28 May 1997	970025	Birth Death				
111	M	26 May 1997	53	52	HELSINKI OULU UNIV	26 May 1997 26 Mar 1999 15 Sep 2004	970045 111	Birth Transfer Death	RED	ORM	00-0096-42EC	

112	M	26 May 1997	53	78	HELSINKI OULU UNIV	26 May 1997 26 Mar 1999 10 Sep 2001	970046 112	Birth Transfer Death	PINK	ONNI	00-00F7-1EAA
113	F	23 May 1997	53	73	HELSINKI	23 May 1997 31 May 2004	970047	Birth Death	BLUE 55	OKRA	00-00F6-0C17
114	F	23 May 1997	86	67	RANUA TALLIN	23 May 1997 13 Feb 1999 23 Mar 2001	970011 12905	Birth Transfer Death	RED 12	PEKKALA	
115	F	25 May 1997	86	38	RANUA TALLIN RIGA	25 May 1997 13 Feb 1999 17 May 2007 27 Mar 2013	970012 12906 970572	Birth Transfer Transfer Death	RED 13	RANUA	
116	M	20 May 1997	69	54	AHTARI BORAS HUNBSTRND	20 May 1997 16 Mar 2005 20 Sep 2006 17 Dec 2009	970003 HR0022 206057	Birth Transfer Transfer Death	0193	INTO	985120023495474
117	M	21 May 1997	69	43	AHTARI	21 May 1997 28 May 1997	970004	Birth Death			
118	F	23 May 1988	17	22	AHTARI	23 May 1988 3 May 1989	880006	Birth Death		PILLI	
119	M	16 May 1998	53	51	HELSINKI	16 May 1998 9 Nov 1998	980026	Birth Death			
120	F	30 May 1998	53	66	HELSINKI	30 May 1998 17 Jun 2008	980041	Birth Death	PINK 63	PETRA	000061D739
121	F	14 May 1998	68	106	HUNBSTRND	14 May 1998 1 Jun 1998	980130	Birth Death	ORANGE 15/ORRENATE		
122	F	16 May 1998	68	98	HUNBSTRND	16 May 1998 19 May 1998	980129	Birth Death		IRRA	
123	M	6 Jun 1998	69	57	AHTARI	6 Jun 1998 29 Dec 1998	980012	Birth Death		KEIRA	
124	M	6 Jun 1998	69	54	AHTARI	6 Jun 1998 25 Aug 2002	980001	Birth Death	244	KRISTOFER	
125	?	18 Jun 1998	69	101	AHTARI	18 Jun 1998 20 Jun 1998	980022	Birth Death			
126	?	12 Jul 1998	69	43	AHTARI	12 Jul 1998 15 Jul 1998	980023	Birth Death			
127	M	19 May 1998	68	74	HUNBSTRND	19 May 1998 12 Oct 2001	980206	Birth Death	ORANGE 18/D.JONNY		00-01E7-0947
128	M	29 Jun 1998	81	105	HUNBSTRND BORAS	29 Jun 1998 28 Jan 2004 9 Oct 2004	980205 HR0019	Birth Transfer Death	ORANGE 38/GRMELKER		977200004967746
129	M	15 May 1998	86	67	RANUA TALLIN	15 May 1998 13 Feb 1999 2 May 2000	980041 12904	Birth Transfer Death	YELLOW 16	JUSSI	
130	M	26 May 1999	102	94	HUNBSTRND	26 May 1999 28 May 1999	990114	Birth Death			
131	F	29 May 1999	92	74	HUNBSTRND	29 May 1999 22 Aug 2001	990115	Birth Death		JENNYFER	00-01BC-7245
132	M	31 May 1999	102	91	HUNBSTRND TALLIN	31 May 1999 8 Nov 2000 9 Sep 2002	990116 13601	Birth Transfer Death	GREEN 1/BROWLYCOS		00-01E7-078E
133	?	20 May 1999	69	54	AHTARI	20 May 1999 22 May 1999	990016	Birth Death			
134	?	7 Jun 1999	69	101	AHTARI	7 Jun 1999 20 Jun 1999	990017	Birth Death			
135	F	30 May 1987	9	5	AHTARI SIKOSUO	30 May 1987 3 May 1989	870001 OLGA	Birth Release		OLGA	
136	M	10 May 1999	86	67	RANUA BERN	10 May 1999 10 May 2002 2 Apr 2009	990004 A20080	Birth Transfer Death		LEIF	985100009850461
137	M	21 May 1999	86	84	RANUA HELSINKI	21 May 1999 9 Dec 1999 24 Sep 2007	990005 990117	Birth Transfer Death	RED 15	RUDOLPH	0001BCA7B4
138	F	15 May 1999	86	114	TALLIN	15 May 1999 15 May 1999	13020	Birth Death			
139	F	8 Jun 1999	86	115	TALLIN	8 Jun 1999 9 Jun 1999	13072	Birth Death			
140	F	17 May 2000	102	49	HUNBSTRND	17 May 2000 24 Aug 2000	200029	Birth Death		ELVIRA	
141	F	18 May 2000	102	106	HUNBSTRND	18 May 2000 10 Nov 2010	200030	Birth Death		RENATE	0604-4F13
142	M	24 May 2000	102	76	HUNBSTRND	24 May 2000 18 Oct 2000	200034	Birth Death		MARCUS	

143	F	25 May 2000	102	98	HUNBSTRND	25 May 2000 2 Sep 2009	200035	Birth Death		IRIS	
144	F	26 May 2000	102	108	HUNBSTRND	26 May 2000 18 Oct 2000	200044	Birth Death		SANDY	
145	F	28 May 2000	102	74	HUNBSTRND	28 May 2000 24 Aug 2011	200045	Birth Death	ROSA/YELLOW	JENNICA	0604-FAC9
146	M	15 Jul 2000	102	94	HUNBSTRND JARVZOO	15 Jul 2000 9 Apr 2002 23 Sep 2007	200166 JZM02007	Birth Transfer Death	ROSA/WHITE	MAGNUS	0604-3520
147	M	8 Jun 2000	129	80	TALLIN	8 Jun 2000 21 Aug 2002	13505	Birth Death			
148	M	11 Jun 2000	129	115	TALLIN	11 Jun 2000 30 Sep 2003	13514	Birth Death			
149	F	27 May 1988	17	23	AHTARI SIKOSUO	27 May 1988 3 May 1989	880004 PULLA	Birth Release		PULLA	
150	M	15 May 2000	89	54	AHTARI	15 May 2000 30 Jun 2000	200002	Birth Death			
151	F	29 May 2000	89	101	AHTARI	29 May 2000 22 Oct 2011	200003	Birth Death	0578	MAISA	
152	F	2 Jun 2000	89	43	AHTARI	2 Jun 2000 26 Aug 2010	200004	Birth Death	0577	JESSIKA	
153	F	20 May 2001	137	107	HELSINKI JARVZOO	20 May 2001 31 Jan 2002 22 Apr 2006	201011 JZM02001	Birth Transfer Death	RED 91	UMBRA	0001E6F431
154	F	24 May 2001	137	113	HELSINKI	24 May 2001 1 Sep 2001	201028	Birth Death		SINIKKA	
155	F	26 May 2001	137	120	HELSINKI JARVZOO	26 May 2001 31 Jan 2002 5 Aug 2002	201029 JZM02002	Birth Transfer Death	BLACK 80	SUSSU	000-1BF31AB
156	M	29 May 2001	137	97	HELSINKI JARVZOO LUND	29 May 2001 31 Jan 2002 18 Sep 2002 30 Jan 2004	201030 JZM02004 SULO	Birth Transfer Transfer Death	VIOLET 64	SULO	0001BCB555
157	F	30 May 2001	127	106	HUNBSTRND	30 May 2001 3 Jan 2012	201033	Birth Death	WHITE/WHITE	REA	01B0-D2B9
158	F	31 May 2001	137	52	HELSINKI JARVZOO	31 May 2001 31 Jan 2002	201040 JZM02003	Birth Transfer	NEONRED 25	URSULA	0001BF225B
159	M	9 Jun 2001	137	51	HELSINKI	9 Jun 2001 22 Jun 2001	201046	Birth Death			
160	?	11 Jun 2001	128	94	HUNBSTRND	11 Jun 2001 11 Jun 2001	201045	Birth Death			
161	M	25 Jun 2001	128	74	HUNBSTRND LUND	25 Jun 2001 25 Sep 2002 10 Feb 2004	201054 JERKER	Birth Transfer Death	WHITE/D.BLUEJERKER		00-01BC-BO74
162	M	25 May 2001	102	88	BORAS LUND	25 May 2001 25 Sep 2002 22 Jun 2003	HR0013 SVERKE	Birth Transfer Death		SVERKER	00-0605-D792
163	F	12 Jun 2001	102	103	BORAS	12 Jun 2001 13 Sep 2001	HR0014	Birth Death			
164	M	22 May 2001	86	38	RANUA BERN	22 May 2001 10 May 2002 27 Jan 2006	201016 A20081	Birth Transfer Death			985100009816554
165	?	27 May 2001	86	84	RANUA	27 May 2001 27 May 2001	201017	Birth Death			
166	F	8 Jul 2001	86	104	RANUA BERN	8 Jul 2001 10 May 2002 24 May 2009	201035 A20082	Birth Transfer Death		ELINA	968000003881410
167	F	14 Jun 1988	17	5	AHTARI SIKOSUO	14 Jun 1988 3 May 1989	880005 PALLI	Birth Release		PALLI	
168	M	12 May 2001	116	43	AHTARI JARVZOO LUND HUNBSTRND	12 May 2001 31 Jan 2002 18 Sep 2002 28 Jan 2004 18 Dec 2006	201007 JZM02005 SALO 204001	Birth Transfer Transfer Transfer Death	0580	SALO	08870692
169	M	20 May 2001	116	101	AHTARI JARVZOO LUND	20 May 2001 31 Jan 2002 18 Sep 2002 10 Jun 2003	201006 JZM02006 581	Birth Transfer Transfer Death	0581	SOLO	08870694
170	F	13 May 2001	124	57	AHTARI	13 May 2001 4 Aug 2001	201005	Birth Death	592	CAMILLA	
171	?	18 May 2000	86	38	RANUA	18 May 2000 18 May 2000	200033	Birth Death			
172	F	19 May 2000	86	84	RANUA	19 May 2000 14 Oct 2014	200034	Birth Death		MAIRE	

173	F	15 May 2002	137	107	HELSINKI	15 May 2002 25 Mar 2013	202073	Birth Death	RED 73	TAIKA	0001E6F6DB
174	M	22 May 2002	128	141	HUNBSTRND	22 May 2002 15 Jun 2002	202009	Birth Death	BLACK/WHITE		752098101088197
175	F	22 May 2002	128	141	HUNBSTRND	22 May 2002 22 May 2002	202010	Birth Death	BLACK/RED		7520998101083042
176	M	26 May 2002	128	145	HUNBSTRND ARNHEM ROTTERDAM ARNHEM	26 May 2002 25 Mar 2003 19 Jan 2004 1 Feb 2007 12 Oct 2012	202032 610676 106773 610676	Birth Transfer Transfer Transfer Death	BLACK/YELLOWJARI		752098101077544
177	M	30 May 2002	128	94	HUNBSTRND	30 May 2002 30 May 2002	202038	Birth Death			
178	M	24 May 2002	137	113	HELSINKI ARNHEM ROTTERDAM	24 May 2002 28 Mar 2003 23 Jan 2004 14 Mar 2006	202074 610667 106779	Birth Transfer Transfer Death	GREEN 75	TIETŽJŽ	96700000851297
179	F	27 May 2002	137	97	HELSINKI ARNHEM	27 May 2002 28 Mar 2003 21 May 2012	202077 610673	Birth Transfer Death	BLUE 99/66	TUULIKKI	0001E7053A
180	M	27 May 2002	137	51	HELSINKI ARNHEM	27 May 2002 28 Mar 2003 28 Mar 2003	202078 610674	Birth Transfer Death	YELLOW 28	TAPIO	0001BF2891
181	M	28 May 2002	137	52	HELSINKI ARNHEM	28 May 2002 28 Mar 2003 28 Mar 2003	202076 610672	Birth Transfer Death	RED 91	TIERA	0001BCDF6D
182	F	28 May 2002	137	120	HELSINKI ARNHEM	28 May 2002 28 Mar 2003 28 Mar 2003	202082 610675	Birth Transfer Death	GREEN 206	TAIJA	0001F68F9A
183	M	2 Jun 2002	137	78	HELSINKI	2 Jun 2002 2 Jun 2002	202083	Birth Death			
184	M	7 Jun 2002	128	143	HUNBSTRND ARNHEM ROTTERDAM KERKRADE	7 Jun 2002 24 Mar 2003 19 Jan 2004 2 Feb 2007 20 Nov 2008	202050 610677 106774 M02007	Birth Transfer Transfer Transfer Death	BLACK/L.GREENELIS		752098101092814
185	M	16 Jun 2002	128	74	HUNBSTRND ARNHEM ROTTERDAM	16 Jun 2002 24 Mar 2003 19 Jan 2004 23 Feb 2007	202066 610678 106775	Birth Transfer Transfer Death	BLACK/L.BLUEJORMA		752098101087579
186	?	17 May 2002	86	84	RANUA	17 May 2002 17 May 2002	202040	Birth Death			
187	M	2 Jun 2002	86	38	RANUA ARNHEM ROTTERDAM	2 Jun 2002 28 Mar 2003 1 Feb 2007	202039 610664 107590	Birth Transfer Transfer	89 RED	PUMMEL	985120015276514
188	M	8 Jun 2002	86	172	RANUA	8 Jun 2002 9 Jun 2002	202042	Birth Death			
189	M	15 Jun 2002	86	104	RANUA ARNHEM ROTTERDAM	15 Jun 2002 28 Mar 2003 23 Jan 2004 8 Apr 2009	202041 610666 106778	Birth Transfer Transfer Death	67 BLUE		985120016278390
190	F	17 May 2002	124	43	AHTARI	17 May 2002 29 May 2005	202002	Birth Death	0600 lilac	METTE	
191	F	29 May 2002	116	101	AHTARI ARNHEM	29 May 2002 28 Mar 2003 11 May 2003	202004 610665	Birth Transfer Death	0203	JENNI	985100010398311
192	F	30 May 2002	124	151	AHTARI	30 May 2002 18 Dec 2002	202003	Birth Death		MIISA	
193	M	24 May 2002	116	152	AHTARI ARNHEM ROTTERDAM EUROPA HANSURLES	24 May 2002 28 Mar 2003 23 Jan 2004 17 Oct 2005 8 Apr 2008 4 May 2008	202005 610668 106780 M02001	Birth Transfer Transfer Transfer Transfer Death	WHITE 101	JESSE	985100010239300
194	M	21 May 2002	102	103	BORAS	21 May 2002 22 May 2002	HR0015	Birth Death			
195	M	16 Jun 2002	102	88	BORAS LUND	16 Jun 2002 10 Oct 2003 12 Oct 2003	HR0016	Birth Transfer Death			0001747623
196	M	5 Jun 2002	132	80	TALLIN	5 Jun 2002 10 Sep 2005	14290	Birth Death			
197	M	25 Jun 2002	132	115	TALLIN	25 Jun 2002 27 Sep 2002	14301	Birth Death			
198	F	16 May 2003	137	107	HELSINKI ARNHEM	16 May 2003 27 Feb 2004	203032 611546	Birth Transfer	GREEN 214	UTU	0001D368D5

199	M	23 May 2003	137	113	HELSINKI HILVARENB EUROPA KERKRADE EUROPA HANSURLES	23 May 2003 1 Mar 2004 1 Oct 2004 18 Jan 2005 24 Jan 2007 8 Apr 2008 7 Jun 2008	203046 ME0329 M03112 M03014 M03112	Birth Transfer Transfer Transfer Transfer Death	WHITE 25	HUNK	0001D22E59
200	F	25 May 2003	137	51	HELSINKI	25 May 2003	203048	Birth	YELLOW 38	USVA	00012A206C
201	F	27 May 2003	137	97	HELSINKI ARNHEM	27 May 2003 27 Feb 2004 3 Jun 2005	203049 611545	Birth Transfer Death	NEON RED 60	UNNE	000135BC8B
202	F	30 May 2003	137	52	HELSINKI ARNHEM	30 May 2003 27 Feb 2004 1 Oct 2014	203052 611547	Birth Transfer Death	RED 81	UMUR	0001D24003
203	?	30 May 2003	137	52	HELSINKI	30 May 2003 30 May 2003	203053	Birth Death			
204	F	20 May 2003	102	88	BORAS	20 May 2003 25 May 2008	HR0017	Birth Death		VIRPI	
205	M	27 May 2003	102	103	BORAS	27 May 2003 11 Sep 2003	HR0018	Birth Death			
206	F	21 May 2003	116	152	AHTARI ARNHEM KERKRADE	21 May 2003 27 Feb 2004 18 Jan 2005	203006 611548 M03015	Birth Transfer Transfer	0479 RED	JENNA	985120015197951
207	M	22 May 2003	116	57	AHTARI BORAS	22 May 2003 16 Mar 2005 29 Aug 2008	203003 HR0021	Birth Transfer Death	0211 GREEN	ISAK	985120015218902
208	F	29 May 2003	116	101	AHTARI ARNHEM KERKRADE	29 May 2003 27 Feb 2004 18 Jan 2005 19 Apr 2015	203005 611549 M03016	Birth Transfer Transfer Death	0002 YELLOW	JANE	985120016136297
209	M	26 May 2003	128	157	HUNBSTRND	26 May 2003 21 Jul 2003	203070	Birth Death	RED/WHITE	REIDAR	752098101095335
210	F	30 May 2003	128	141	HUNBSTRND ARNHEM	30 May 2003 6 Mar 2004 6 Apr 2011	203027 611564	Birth Transfer Death	RED/PINK	NIVALA	752098101086067
211	M	31 May 2003	128	74	HUNBSTRND	31 May 2003 10 Jun 2003	203028	Birth Death	RED/L.BLUE	JENS	752098101086563
212	M	2 Jun 2003	128	145	HUNBSTRND	2 Jun 2003 12 Jul 2003	203029	Birth Death	RED/YELLOW	JOKER	752098101084715
213	M	11 Jun 2003	128	143	HUNBSTRND HILVARENB EUROPA	11 Jun 2003 6 Mar 2004 1 Oct 2004 11 Oct 2007	203037 ME0330 M03111	Birth Transfer Transfer Death	RED/RED	ISTVAN	752098101085380
214	M	30 Jun 2003	116	151	AHTARI HILVARENB EUROPA	30 Jun 2003 1 Mar 2004 1 Oct 2004 17 Oct 2006	203004 ME0331 M03110	Birth Transfer Transfer Death	BLACK 269	KNACKEBROT	985120016279643
215	F	20 Jun 2003	128	94	HUNBSTRND	20 Jun 2003 20 Jun 2003	203047	Birth Death			
216	M	1 Jul 2003	164	166	BERN	1 Jul 2003 3 Jul 2003	A30212	Birth Death			
217	M	10 May 2003	86	104	RANUA	10 May 2003 4 Oct 2005	203066	Birth Death		JUIPPI	
218	F	17 May 2003	146	153	JARVZOO LYCKSELE	17 May 2003 22 Feb 2005 1 Dec 2007	JZM03010 LRTS0301	Birth Transfer Death	L.BLUE 003	YSTER	
219	M	28 May 2003	146	158	JARVZOO RIGA	28 May 2003 10 Feb 2005 9 Jun 2014	JZM03012 O30405	Birth Transfer Death	L.BLUE 005	YODA-LACIS	000604EDDS
220	F	29 May 2003	148	80	TALLIN RIGA	29 May 2003 17 May 2007 17 Jul 2013	14697 O30511	Birth Transfer Death		KAJA	
221	F	8 Jun 2003	148	115	TALLIN	8 Jun 2003 15 Jun 2003	14859	Birth Death			
222	M	~May 2003ñ1m	WILD	WILD	PALTAMO AHTARI	9 Mar 2004 9 Mar 2004 3 Jun 2004	NONE 203018	Capture Transfer Death	108 WHITE	SAULI	985120019073612
223	M	~May 2003ñ1m	WILD	WILD	PALTAMO AHTARI	9 Mar 2004 9 Mar 2004	NONE 203019	Capture Transfer	500 RED	JARI	985120019072448
224	M	13 May 2004	128	157	HUNBSTRND	13 May 2004 24 May 2004	204013	Birth Death	L.BLUE/WHITE		977200005025130
225	M	16 May 2004	137	107	HELSINKI RIGA	16 May 2004 18 Mar 2005 18 May 2008	204036 O40407	Birth Transfer Death	YELLOW 40	MAINENENS	968000002535494
226	M	23 May 2004	137	113	HELSINKI	23 May 2004 31 May 2004	204042	Birth Death			

227	F	25 May 2004	86	104	RANUA	25 May 2004	204040	Birth	BLUE 66	MIINA	985120021312576
228	M	29 May 2004	137	97	HELSINKI RANUA	29 May 2004 15 Oct 2005 17 Oct 2011	204045 205078	Birth Transfer Death	PINK 118	VISA	968000002716565
229	F	30 May 2004	137	173	HELSINKI	30 May 2004 1 Jun 2004	204046	Birth Death			
230	F	21 May 2004	128	141	HUNBSTRND	21 May 2004 11 Jun 2004	204023	Birth Death	L.BLUE/PINK	RISTI	977200004970373
231	M	22 May 2004	128	145	HUNBSTRND RIGA	22 May 2004 10 Feb 2005 30 Apr 2008	204024 040404	Birth Transfer Death	L.BLUE/YELLOJURMO		977200004947072
232	M	10 Jun 2004	137	120	HELSINKI	10 Jun 2004 11 Jun 2004	204077	Birth Death			
233	F	21 May 2004	102	88	BORAS	21 May 2004 18 Oct 2004	HR0020	Birth Death		VANJA	
234	F	22 May 2004	136	166	BERN	22 May 2004 30 May 2004	A40103	Birth Death			00060D81AA
235	F	17 May 2004	116	152	AHTARI	17 May 2004 22 Oct 2011	204002	Birth Death	YELLOW 013	SORJA	
236	F	24 May 2004	116	101	AHTARI	24 May 2004 19 Jun 2004	204003	Birth Death	486 RED	NUPPU	
237	F	2 Jun 2004	116	151	AHTARI	2 Jun 2004 22 Oct 2011	204001	Birth Death	RED 489	SIRU	985120023309778
238	M	11 May 2004	146	153	JARVZOO RIGA	11 May 2004 10 Feb 2005 4 Jun 2008	JZM04013 040399	Birth Transfer Death	011	SUDRABS	000602E977
239	M	18 May 2004	146	158	JARVZOO RIGA	18 May 2004 10 Feb 2005 11 Nov 2008	JZM04014 040402	Birth Transfer Death	012	BRALIS	00060429C8
240	M	5 Jun 2004	128	143	HUNBSTRND LYCKSELE	5 Jun 2004 1 Mar 2005 28 Aug 2012	204068 LRTS0401	Birth Transfer Death	L.BLUE/L.BLUESA		977200005082706
241	M	1 Jun 2004	86	172	RANUA	1 Jun 2004 4 Oct 2005	204066	Birth Death	RED 16	MANU	985120022009081
242	F	22 May 2005	136	166	BERN	22 May 2005 4 Jun 2005	A50114	Birth Death			
243	M	25 Apr 2005	116	101	AHTARI KINGUSSIE	25 Apr 2005 22 Apr 2006 28 Jul 2007	205003 4973	Birth Transfer Death	RED 492	JAKKE	985120022248681
244	M	26 May 2005	137	120	HELSINKI KINGUSSIE	26 May 2005 22 Apr 2006 13 Feb 2009	205034 4974	Birth Transfer Death	RED 88	XULKA	968000002694098
245	F	20 May 2005	168	145	HUNBSTRND BERN	20 May 2005 27 Apr 2006 18 May 2009	205021 A60062	Birth Transfer Death	YELLOW/YELLOJUNNI		977200004103900
246	M	24 May 2005	168	141	HUNBSTRND KINGUSSIE	24 May 2005 22 Apr 2006 31 Jul 2007	205022 4976	Birth Transfer Death	L.BLUE/L.BLURAJMO		977200004981751
247	M	29 May 2005	137	97	HELSINKI KINGUSSIE	29 May 2005 22 Apr 2006	205038 4975	Birth Transfer	GREEN 299	XEPPPO	968000002711093
248	M	30 May 2005	137	107	HELSINKI TALLIN	30 May 2005 28 Apr 2006 26 Aug 2006	205039 16099	Birth Transfer Death	L.BLUE 79	XAMPO	968000002716970
249	M	1 Jun 2005	137	200	HELSINKI	1 Jun 2005 3 Jun 2005	205041	Birth Death			
250	F	16 May 2005	146	158	JARVZOO LYCKSELE	16 May 2005 23 Oct 2005 14 Nov 2005	JZM05009 LRTS0502	Birth Transfer Death		DOLLY	
251	M	9 Jun 2005	146	153	JARVZOO	9 Jun 2005 19 Sep 2007	JZM05010	Birth Death	LIGHT BLUE 1BORE		
252	F	26 May 2005	116	151	AHTARI	26 May 2005 11 Jun 2005	205004	Birth Death	WHITE 113	URHO	
253	F	1 Jun 2005	116	152	AHTARI	1 Jun 2005 19 Sep 2012	205005	Birth Death	ORANGE 601	JAANA	
254	M	27 May 2005	187	179	ARNHEM EUROPA HANSURLES	27 May 2005 21 Dec 2005 8 Apr 2008 13 Oct 2008	612637 M05012	Birth Transfer Transfer Death		BJORN	000618C2E3
255	M	28 May 2005	187	202	ARNHEM EUROPA HANSURLES	28 May 2005 21 Dec 2005 8 Apr 2008 12 May 2008	612638 M05013	Birth Transfer Transfer Death	GREEN	BORG	00061C323F
256	F	2 Jun 2005	187	201	ARNHEM	2 Jun 2005 2 Jun 2005	612644	Birth Death			

257	M	5 May 2005	146	218	LYCKSELE	5 May 2005 22 Jan 2007	LRTS0501	Birth Death		DALLE	
258	F	20 May 2006	137	173	HELSINKI BERN	20 May 2006 22 Mar 2007 22 Aug 2008	206031 A70028	Birth Transfer Death	VIOLET 92	YNNI	968000004171702
259	F	19 May 2006	168	145	HUNBSTRND	19 May 2006	206014	Birth	YELLOW/YELLOJORUN		977200004154602
260	F	23 May 2006	168	141	HUNBSTRND BORAS	23 May 2006 18 Apr 2007 18 Sep 2008	206017 HR0026	Birth Transfer Death	RED/RED	RAUNI	977200004131838
261	F	24 May 2006	168	157	HUNBSTRND JARVZOO	24 May 2006 14 May 2007	206018 JZM07031	Birth Transfer	GREEN/GREEN	MIKAELA	977200004210694
262	F	26 May 2006	137	97	HELSINKI	26 May 2006 6 Aug 2007	206040	Birth Death		YLLIKKI	
263	M	27 May 2006	137	200	HELSINKI KINGUSSIE	27 May 2006 7 Apr 2007 17 Jul 2007	206042 5105	Birth Transfer Death	GREEN 220	YLERMI	968000004142934
264	F	28 May 2006	137	120	HELSINKI BERN	28 May 2006 22 Mar 2007	206043 A70029	Birth Transfer	LIGHT BLUE	9YYLI	968000004143265
265	F	22 May 2006	136	166	BERN KERKRADE	22 May 2006 3 Sep 2007	A60137 M06111	Birth Transfer		TINA	968000004444253
266	M	2 Jun 2006	207	204	BORAS JARVZOO	2 Jun 2006 23 Jan 2008	HR0023 JZM08002	Birth Transfer		CIRIUS	968000000272488
267	F	22 May 2006	223	101	AHTARI KERKRADE	22 May 2006 20 Apr 2007	206010 M06024	Birth Transfer	213 GREEN	JASSU	985120028553783
268	M	23 May 2006	223	151	AHTARI KINGUSSIE	23 May 2006 7 Apr 2007 8 May 2007	206008 5104	Birth Transfer Death	526 GREEN	LUKAS	985120029034388
269	M	26 May 2006	223	237	AHTARI KINGUSSIE	26 May 2006 7 Apr 2007 30 Apr 2007	206009 5103	Birth Transfer Death	212 GREEN	ILKKA	985120028918205
270	M	31 May 2006	223	152	AHTARI HELSINKI	31 May 2006 30 Oct 2007	206006 207120	Birth Transfer	GREEN 94	JOPPE	985120027711043
271	F	2 Jun 2006	223	235	AHTARI KERKRADE	2 Jun 2006 20 Apr 2007 27 Jun 2014	206011 M06025	Birth Transfer Death	529 VIOLET	SIIRI	985120028924974
272	M	10 Jun 2006	187	202	ARNHEM ROTTERDAM MAGDEBURG	10 Jun 2006 1 Feb 2007 20 Oct 2011	613305 107591 443021	Birth Transfer Transfer		REND	00061BD1B3
273	M	12 Jun 2006	187	179	ARNHEM ROTTERDAM MAGDEBURG	12 Jun 2006 1 Feb 2007 20 Oct 2011	613306 107592 443022	Birth Transfer Transfer			0006654F2D
274	M	14 Jun 2006	207	88	BORAS	14 Jun 2006 31 Jan 2008	HR0024	Birth Death		LAURI	968000000290542
275	M	2 Jul 2006	207	103	BORAS	2 Jul 2006 26 Jun 2007	HR0025	Birth Death		PATTI	968000003001057
276	M	19 May 2006	146	158	JARVZOO	19 May 2006 27 Mar 2007	JZM06005	Birth Death	LIGHT BLUE	2CASPER	
277	M	28 Apr 2006	240	218	LYCKSELE	28 Apr 2006 4 Nov 2009	LRTS0601	Birth Death		MOJELS	
278	F	15 May 2007	116	157	HUNBSTRND LYCKSELE	15 May 2007 5 Feb 2008	207020 RANJA	Birth Transfer	GREEN/GREEN	RANJA	977200004321311
279	F	20 May 2007	116	141	HUNBSTRND LYCKSELE	20 May 2007 5 Feb 2008	207024 LRTS0702	Birth Transfer	RED/RED	NUMMI	977200004332858
280	F	23 May 2007	116	145	HUNBSTRND JARVZOO	23 May 2007 5 Feb 2008 5 Oct 2014	207025 JZM08005	Birth Transfer Death	L.BLUE/L.BLUDALIA		977200004185651
281	M	12 May 2007	146	158	JARVZOO BORAS	12 May 2007 19 May 2009 19 May 2009	JZM07008 HR0033	Birth Transfer Death	0023	DINKEL	
282	M	24 May 2007	137	120	HELSINKI KINGUSSIE	24 May 2007 11 Mar 2008 11 Mar 2008	207060 5232	Birth Transfer Death		ZAKARIAS	
283	F	25 May 2007	137	173	HELSINKI	25 May 2007 18 Feb 2008	207061	Birth Death		ZAANA	
284	F	17 May 2007	136	245	BERN	17 May 2007	A70066	Birth		TULA	968000004442600
285	F	25 May 2007	136	166	BERN	25 May 2007 25 May 2007	A70086	Birth Death			
286	M	5 Jun 2007	116	143	HUNBSTRND	5 Jun 2007 21 Nov 2007	207045	Birth Death	GREEN/GREEN	ISO	977200004307636
287	M	29 May 2007	207	103	BORAS	29 May 2007 22 May 2009	HR0027	Birth Death		UKKO	968000000320150
288	F	27 May 2007	137	200	HELSINKI	27 May 2007 3 Jun 2014	207068	Birth Death	BLUE 537	ZEITA	968000000263522

289	F	28 May 2007	137	97	HELSINKI	28 May 2007 6 Feb 2008	207069	Birth Death		ZENJA	
290	M	7 Jun 2007	207	204	BORAS	7 Jun 2007 14 Jun 2007	HR0028	Birth Death		PEKKA	96800000321315
291	M	19 Jun 2007	207	88	BORAS	19 Jun 2007 18 Jul 2007	HR0029	Birth Death		JARI	96800000305707
292	F	25 May 2007	228	172	RANUA KINGUSSIE	25 May 2007 4 Apr 2008	207027 5278	Birth Transfer 20 Apr 2008	PURPLE 47	MAIJA	985161000493581
293	F	26 May 2007	228	104	RANUA KINGUSSIE	26 May 2007 4 Apr 2008 16 Sep 2008	207028 5276	Birth Transfer Death	PINK 75	METTE	985161000681462
294	F	31 May 2007	228	227	RANUA KINGUSSIE	31 May 2007 4 Apr 2008	207030 5279	Birth Transfer	PURPLE 047	MAIJA	985120032351791
295	M	15 May 2007	223	152	AHTARI KINGUSSIE	15 May 2007 4 Apr 2008 28 Sep 2014	207001 5274	Birth Transfer Death	123 WHITE	LENNI	246098100187884
296	F	18 May 2007	223	101	AHTARI KINGUSSIE	18 May 2007 4 Apr 2008 18 Sep 2008	207002 5277	Birth Transfer Death	125 WHITE	LUMI	246098100192818
297	M	21 May 2007	223	237	AHTARI KINGUSSIE	21 May 2007 4 Apr 2008 13 Jun 2008	207003 5275	Birth Transfer Death	550 LILAC	LEXA	246098100191688
298	F	25 May 2007	223	235	AHTARI RIGA	25 May 2007 24 Apr 2008	207004 M07219	Birth Transfer	536 LILAC	LIME	246098100189586
299	F	26 May 2007	223	151	AHTARI KINGUSSIE	26 May 2007 4 Apr 2008	207005 5280	Birth Transfer	BLACK 256	LOLA	246098100189980
300	M	15 May 2007	187	202	ARNHEM KINGUSSIE	15 May 2007 14 Mar 2008 15 Aug 2009	613836 5254	Birth Transfer Death	GREEN 558	HAKAN	000680D54B
301	M	17 May 2007	187	179	ARNHEM KINGUSSIE	17 May 2007 14 Mar 2008 28 Nov 2013	613841 5255	Birth Transfer Death	GREEN 559	MARTEN	826098101332516
302	F	15 May 1993	17	43	AHTARI	15 May 1993 10 Oct 1994	930018	Birth Death			
303	F	21 May 1993	17	54	AHTARI WILD	21 May 1993 11 May 1995	930019 NONE	Birth Release		MILLA	
304	M	20 May 2007	199	208	KERKRADE KINGUSSIE	20 May 2007 14 Mar 2008 25 Sep 2008	M07042 5253	Birth Transfer Death	003	LOEKIE	826098101334122
305	M	17 May 2007	240	218	LYCKSELE BORAS	17 May 2007 7 Oct 2009 6 Nov 2009	LRTS0703 HR0034	Birth Transfer Death		MOJJE	968000003396259
306	F	3 Jun 2007	223	253	AHTARI	3 Jun 2007 4 Jun 2007	207009	Birth Death		MUSTIKKA	
307	F	19 May 2008	116	157	HUNBSTRND	19 May 2008	208031	Birth	VIOLET/VIOLEERAJA		977200007078792
308	F	20 May 2008	116	259	HUNBSTRND	20 May 2008 23 Jun 2008	208032	Birth Death	D.BLUE/D.BLUJAANA		977200007082169
309	F	26 May 2008	116	145	HUNBSTRND BORAS	26 May 2008 12 May 2010 27 May 2010	208033 HR0035	Birth Transfer Death	WHITE&WHITE	JUULIA	977200007074513
310	F	29 May 2008	116	141	HUNBSTRND	29 May 2008 16 Jun 2008	208057	Birth Death	RED/RED	RAILI	977200007091808
311	M	8 Jun 2008	270	200	HELSINKI BERN	8 Jun 2008 16 Nov 2009	208039 A90261	Birth Transfer	PINK 193	AHTI	96800000397344
312	F	19 Jun 2008	270	173	HELSINKI	19 Jun 2008 17 Dec 2010	208041	Birth Death		AINO	
313	F	19 Jun 2008	136	264	BERN	19 Jun 2008 15 Jul 2010	A80154	Birth Death		SATU	968000003877957
314	M	7 May 2008	176	198	ARNHEM KERKRADE ROTTERDAM MAGDEBURG BERLINZOO	7 May 2008 12 Mar 2009 9 Feb 2010 20 Oct 2011 7 Feb 2013	614626 M08017 107965 443023 M0800020	Birth Transfer Transfer Transfer Transfer		RINUS	000680B219
315	F	17 May 2008	176	210	ARNHEM BERLIN TP BERLINZOO	17 May 2008 3 Feb 2010 24 Mar 2010	614684 M0800018	Birth Transfer Transfer			0006809CDF
316	M	22 May 2008	176	179	ARNHEM KERKRADE	22 May 2008 12 Mar 2009 19 Nov 2013	614694 M08016	Birth Transfer Death		GAIA 11	000680A173
317	F	23 May 2008	184	206	KERKRADE	23 May 2008	M08037	Birth	BROWN/BLACK	GAIA 9	000680A44E
318	M	25 May 2008	184	271	KERKRADE	25 May 2008 26 May 2008	M08039	Birth Death			

319	M	20 May 2008	228	104	RANUA	20 May 2008 22 Apr 2009	208017	Birth Death	PURPLE	MANE	
320	F	22 May 2008	228	227	RANUA MOSCOW	22 May 2008 16 Dec 2011 19 Dec 2011	208018 110665	Birth Transfer Death	PINK 76	MIMMU	985170000345666
321	M	22 May 2008	228	172	RANUA	22 May 2008 31 Aug 2011	208019	Birth Death	L.BLUE 61	MAURI	985141000521628
322	F	16 May 2008	219	115	RIGA BERLIN TP BERLINZOO	16 May 2008 26 Feb 2010 24 Mar 2010	M08137 M0800019	Birth Transfer Transfer		RAGNA	428098100000223
323	F	16 May 2008	219	220	RIGA	16 May 2008 18 May 2008	M08140	Birth Death			
324	F	7 May 2008	223	152	AHTARI	7 May 2008	208007	Birth	WHITE 178	VIOLA	985121005529830
325	F	15 May 2008	223	101	AHTARI MOSCOW	15 May 2008 16 Dec 2011	208008 110669	Birth Transfer	WHITE 184	REBEKKA	985121005406388
326	M	18 May 2008	223	235	AHTARI	18 May 2008 23 Jun 2008	208009	Birth Death			
327	M	18 May 2008	223	151	AHTARI	18 May 2008 19 May 2008	208011	Birth Death			
328	M	21 May 2008	223	253	AHTARI	21 May 2008 9 Jun 2008	208010	Birth Death		JASPER	
329	F	13 Jun 2008	223	237	AHTARI	13 Jun 2008 14 Jun 2008	208012	Birth Death			
330	M	25 May 2008	207	88	BORAS HUNSTRND	25 May 2008 13 May 2009	HR0030 209007	Birth Transfer		SATO	968000000264431
331	M	26 May 2008	207	103	BORAS	26 May 2008 20 Aug 2008	HR0031	Birth Death		PAAVO	968000000282531
332	F	31 May 2008	207	260	BORAS ROTTERDAM	31 May 2008 10 Dec 2010	HR0032 Z10057	Birth Transfer		KAARINA	968000000264431
333	M	19 May 2009	116	259	HUNSTRND BORAS	19 May 2009 12 May 2010 7 Jul 2010	209008 HR0036	Birth Transfer Death	YELLOW/YELLOJARMO		977200007249951
334	M	22 May 2009	270	173	HELSINKI	22 May 2009 9 Sep 2011	209019	Birth Death	LIGHT RED 12	BIRKA	956000001960080
335	M	9 May 2009	223	152	AHTARI	9 May 2009 16 Mar 2012	209004	Birth Death	344 BLUE	JUSTUS	
336	M	13 May 2009	223	101	AHTARI RANUA	13 May 2009 5 May 2011 7 May 2011	209005 211003	Birth Transfer Death	534 LILAC	NIKLAS	985170000956519
337	M	17 May 2009	223	235	AHTARI KERKRADE	17 May 2009 5 Nov 2013	209006 M09200	Birth Transfer	258 BLACK	JOHAN	985170002298737
338	F	19 May 2009	223	253	AHTARI MOSCOW	19 May 2009 16 Dec 2011	209007 110671	Birth Transfer	LILIAIC 547	NEELA	
339	F	21 May 2009	223	151	AHTARI MOSCOW	21 May 2009 16 Dec 2011	209008 110672	Birth Transfer	ORANGE/YELLOMAIKKI		
340	M	22 May 2009	116	157	HUNSTRND	22 May 2009 10 Nov 2010	209018	Birth Death	WHITE/WHITE	ROOPE	977200007248398
341	F	26 May 2009	116	141	HUNSTRND BORAS ROTTERDAM	26 May 2009 12 May 2010 10 Dec 2010	209021 HR0037 Z10058	Birth Transfer Transfer	RED/RED	RITA	977200007250298
342	F	28 May 2009	116	145	HUNSTRND	28 May 2009 9 Jun 2009	209022	Birth Death	ORANGE/ORANGJUVA		977200007247072
343	F	16 May 2009	219	220	RIGA BERLIN TP BERLINZOO	16 May 2009 26 Feb 2010 24 Mar 2010	M09070 M0900027	Birth Transfer Transfer			428098100000125
344	F	19 May 2009	219	115	RIGA	19 May 2009 8 Jul 2009	M09071	Birth Death			428098100000001
345	M	20 May 2009	219	298	RIGA	20 May 2009 13 Sep 2014	M09072	Birth Death		LAIMESLACIS	428098100000063
346	F	10 May 2009	266	261	JARVZOO ALM N	10 May 2009 5 Apr 2011	JZM09008 FINA	Birth lft		FINA	
347	M	18 May 2009	266	158	JARVZOO ALM N	18 May 2009 5 Apr 2011 11 May 2012	JZM09009 FREJ	Birth Transfer Death	L.BLUE 034	FREJ	
348	M	24 May 2009	266	280	JARVZOO ALM N	24 May 2009 5 Apr 2011 19 Jul 2011	JZM09010 FIGARO	Birth Transfer Death	L.BLUE 035	FIGARO	
349	F	6 May 2009	240	278	LYCKSELE	6 May 2009	LRTS0901	Birth		ESTER	968000003415351
350	F	15 Jun 2009	240	279	LYCKSELE JARVZOO	15 Jun 2009 22 Nov 2011	LRTS0902 JZM11029	Birth Transfer		FLORA	968000004367726
351	F	14 Jun 2009	247	294	KINGUSSIE	14 Jun 2009 21 Jun 2009	5402	Birth Death			

352	M	20 May 2009	228	172	RANUA	20 May 2009 31 Aug 2011	209020	Birth Death		MAKE	985141000521659
353	M	22 May 2009	228	227	RANUA	22 May 2009 31 Aug 2011	209021	Birth Death		MIKE	985141000521629
354	F	14 Aug 2009	270	200	HELSINKI MOSCOW	14 Aug 2009 16 Dec 2011	209063 110664	Birth Transfer	PINK	BAJAJAGA	956000001838283
355	M	6 May 2009	176	198	ARNHEM BERLIN TP BERLINZOO MAGDEBURG	6 May 2009 3 Feb 2010 24 Mar 2010 21 Feb 2013	615211 ESB355 443024	Birth Transfer Transfer Transfer		GUNNAR	0006D0BD91
356	F	12 May 2009	176	202	ARNHEM	12 May 2009 10 Sep 2009	615212	Birth Death			0006D0E709
357	F	16 May 2009	176	179	ARNHEM	16 May 2009 23 Jun 2009	615213	Birth Death		SANNE	0006D0F52C
358	M	~ 2007	WILD	WILD	RUSSIA MOSCOW	20 Jul 2008 31 Jul 2008 9 Nov 2009	NONE 80490	Capture Transfer Death		VASKA	
359	F	~ 2007	WILD	WILD	RUSSIA MOSCOW	19 Jul 2008 31 Jul 2008 16 Sep 2008	NONE 80491	Capture Transfer Death			
360	F	~ 2006	WILD	WILD	RUSSIA MOSCOW	17 Jul 2008 31 Jul 2008 10 Oct 2008	NONE 80492	Capture Transfer Death			
361	M	11 May 2009	136	245	BERN	11 May 2009 18 May 2009	A90109	Birth Death			
362	?	21 May 2009	136	166	BERN	21 May 2009 21 May 2009	A90125	Birth Death			
363	M	30 May 2009	136	264	BERN	30 May 2009 15 Sep 2010	A90134	Birth Death			756098100485399
364	M	19 May 2009	184	206	KERKRADE	19 May 2009 16 Jun 2009	M09047	Birth Death	019	GAIA 13	0006C92F5A
365	M	19 May 2009	184	208	KERKRADE	19 May 2009 21 Dec 2010	M09048	Birth Death	018	GAIA 14	0006B880A9
366	F	20 May 2009	184	271	KERKRADE	20 May 2009 4 May 2015	M09049	Birth Death	015	GAIA 15	0006B891A5
367	F	25 May 2009	184	267	KERKRADE	25 May 2009	M09058	Birth	020	GAIA 16	0006C92CB6
368	M	3 Jun 2009	184	265	KERKRADE SALZBURG	3 Jun 2009 2 Feb 2011 1 Jul 2012	M09059 S1272	Birth Transfer Death	0021	KIVALO	0006B89AD6
369	F	15 May 2010	270	173	HELSINKI	15 May 2010	210012	Birth		GREEN 274/BLCLIO	956000001737456
370	F	24 May 2010	270	200	HELSINKI MOSCOW	24 May 2010 16 Dec 2011 30 Jul 2013	210021 110662	Birth Transfer Death		YELLOW 677 CUMU	956000002409877
371	F	27 May 2010	270	288	HELSINKI MOSCOW	27 May 2010 16 Dec 2011 15 Jul 2014	210022 110663	Birth Transfer Death	LILAC	CATARIINA	956000001836939
372	M	24 May 2010	116	157	HUNBSTRND	24 May 2010 20 Sep 2011	210023	Birth Death		GREEN/GREEN LEIF	977200007463295
373	F	26 May 2010	116	145	HUNBSTRND	26 May 2010	210031	Birth		IRMA	977200007465015
374	F	17 May 2010	240	278	LYCKSELE	17 May 2010	LRTS1001	Birth		RITA	968000003432874
375	F	13 May 2010	266	261	JARVZOO AHTARI	13 May 2010 16 Apr 2013	JZM10010 213005	Birth Transfer		GLENDA	968000004326763
376	M	17 May 2010	266	158	JARVZOO	17 May 2010 6 Mar 2013	JZM10012	Birth Death	40		
377	F	22 May 2010	266	280	JARVZOO	22 May 2010 24 May 2010	JZM10017	Birth Death			
378	F	2 Jun 2010	116	259	HUNBSTRND	2 Jun 2010	210061	Birth		GREEN/GREEN PIRJO	977200007467183
379	M	29 May 2010	270	312	HELSINKI	29 May 2010 3 Jun 2010	210027	Birth Death			
380	M	14 May 2010	219	220	RIGA MOSCOW	14 May 2010 20 Apr 2011	M10148 110182	Birth Transfer		KARLIS	972270000005703
381	M	14 May 2010	219	115	RIGA MOSCOW	14 May 2010 20 Apr 2011	M10149 110183	Birth Transfer		RANTANS	972270000005576
382	M	15 May 2010	219	298	RIGA MOSCOW	15 May 2010 20 Apr 2011 24 Sep 2011	M10150 110184	Birth Transfer Death		LUDIS	972000010031433
383	F	10 May 2010	176	198	ARNHEM SALZBURG	10 May 2010 2 Feb 2011 3 Jan 2014	615777 S1271	Birth Transfer Death		INARI	0006DCF103

384	M	19 May 2010	176	202	ARNHEM	19 May 2010 7 Jun 2010	615810	Birth Death			0006CA06C7
385	M	22 May 2010	176	179	ARNHEM	22 May 2010 12 Jun 2011	615811	Birth Death			0006C9E941
386	F	15 Jun 2010	116	141	HUNBSTRND	15 Jun 2010 21 Sep 2010	210069	Birth Death	L.BLUE/L.BLUINEZ		9772000074644999
387	F	12 May 2010	223	152	AHTARI MOSCOW	12 May 2010 16 Dec 2011 1 Dec 2014	210004 110668	Birth Transfer Death	GREEN 232		9851210183269
388	F	13 May 2010	223	101	AHTARI	13 May 2010	210005	Birth	WHITE 189	JADE	985121018050353
389	M	16 May 2010	223	237	AHTARI RANUA	16 May 2010 20 Nov 2011	210007 211058	Birth Transfer	BLUE 336	JOKKE	985121018247575
390	F	11 Jun 2010	223	151	AHTARI MOSCOW	11 Jun 2010 16 Dec 2011	210006 110670	Birth Transfer	RED 428		985121018324737
391	F	25 May 2010	228	227	RANUA MOSCOW	25 May 2010 16 Dec 2011 19 Dec 2011	210025 110666	Birth Transfer Death	RED 94	MINJA	985170000341232
392	F	26 May 2010	228	172	RANUA MOSCOW	26 May 2010 16 Dec 2011	210026 110667	Birth Transfer	GREEN 10	MANJA	985170000342098
393	F	12 Jun 2010	176	315	BERLINZOO	12 Jun 2010	M1000015	Birth			0006B2B584
394	F	26 Jun 2010	311	264	BERN SALZBURG	26 Jun 2010 25 Oct 2011 20 Mar 2013	B00161 S1493	Birth Transfer Death		HAMNINA	756098100493344
395	M	1 Jul 2010	311	284	BERN	1 Jul 2010 29 Apr 2011	B00168	Birth Death		JALO	756098100489913
396	M	14 Jul 2010	311	313	BERN	14 Jul 2010 14 Jul 2010	B00173	Birth Death			
397	F	17 May 2011	330	307	HUNBSTRND ARNHEM	17 May 2011 13 Apr 2012	211039 616968	Birth Transfer	D.BLUE/D.BLUMIRKA		977200007675453
398	F	29 May 2011	330	145	HUNBSTRND	29 May 2011 13 Apr 2012	211050	Birth Death	ORNANGE/ORANSINIKKA		977200007666722
399	M	5 Jun 2011	330	157	HUNBSTRND	5 Jun 2011 7 Jun 2011	211067	Birth Death		LENNART	
400	F	14 May 2011	219	220	RIGA	14 May 2011	M11059	Birth		RIZIJA	985170000942783
401	M	19 May 2011	219	298	RIGA PRAHA	19 May 2011 28 Oct 2013	M11060 130427	Birth Transfer		LORDS	985170000942082
402	F	26 May 2011	219	115	RIGA	26 May 2011	M11064	Birth		KALME	985170000951327
403	F	19 May 2011	223	235	AHTARI	19 May 2011	211001	Birth	WHITE 186	ELVIIRA	
404	F	6 Jun 2011	223	253	AHTARI	6 Jun 2011 7 Jun 2011	211002	Birth Death	GREEN 228		
405	M	21 May 2011	176	198	ARNHEM	21 May 2011 11 Jun 2011	616405	Birth Death			0007025344
406	M	21 May 2011	176	202	ARNHEM	21 May 2011 22 Jul 2011	616406	Birth Death			0007022588
407	F	22 May 2011	176	179	ARNHEM	22 May 2011	616407	Birth			0007023863
408	M	29 May 2011	311	264	BERN ARNHEM	29 May 2011 20 Sep 2012	B10069 617259	Birth Transfer			756098100543212
409	F	31 May 2011	311	284	BERN	31 May 2011 2 Jun 2011	B10077	Birth Death			
410	F	15 May 2011	266	346	ALM N	15 May 2011 10 Jun 2011		Birth Death			
411	F	21 May 2011	228	227	RANUA	21 May 2011 24 Sep 2013	211009	Birth Death	PURPLE 003	MIRJA	
412	M	23 May 2011	228	172	RANUA	23 May 2011 3 Sep 2012	211010	Birth Death		MARTTI	
413	M	8 May 2011	266	261	JARVZOO LYCKSELE SWEDEN	8 May 2011 22 Nov 2011 4 Mar 2015	JZM11006 LRTS1101	Birth Transfer Release		PONDUS	968000004369225
414	M	11 May 2011	266	158	JARVZOO	11 May 2011 22 Aug 2013	JZM11007	Birth Death			
415	M	15 May 2011	266	280	JARVZOO	15 May 2011 7 Aug 2013	JZM11008	Birth Death			
416	F	11 May 2011	270	173	HELSINKI SALZBURG	11 May 2011 7 Nov 2013	211007 S1863	Birth Transfer	GREEN 241	DUULI	956000008413264
417	M	30 May 2011	270	354	HELSINKI	30 May 2011 19 Jun 2011	211008	Birth Death			
418	F	23 Jun 2011	270	200	HELSINKI RANUA	23 Jun 2011 16 Nov 2012	211052 212061	Birth Transfer	RED	DIMMA	956000001734688

419	M	13 May 2011	240	278	LYCKSELE	13 May 2011 1 Feb 2012	LRTS1102	Birth Death			
420	F	20 May 2011	240	279	LYCKSELE JARVZOO	20 May 2011 22 Nov 2011	LRTS1103 JZM11028	Birth Transfer	HILDUR		968000003399768
421	M	23 May 2011	355	343	BERLINZOO SALZBURG	23 May 2011 20 Nov 2012 13 Dec 2013	421 S1708	Birth Transfer Death			0006B2A7EE
422	F	31 May 2011	355	322	BERLINZOO	31 May 2011	M1100025	Birth			0006B2FEB2
423	M	4 Jun 2011	355	315	BERLINZOO	4 Jun 2011 6 Jun 2011	423	Birth Death			
424	?	20 May 2011	316	366	KERKRADE	20 May 2011 21 May 2011	M11054	Birth Death	GAIA 18		
425	F	11 May 2012	355	343	BERLINZOO	11 May 2012	M1200027	Birth			0006B25C24
426	F	12 May 2012	330	259	HUNBSTRND LIBEREC	12 May 2012 10 May 2013	212032 665001	Birth Transfer	ROSA/ROSA	YKSI	977200008167014
427	?	16 May 2012	355	315	BERLINZOO	16 May 2012 16 May 2012	427	Birth Death			
428	F	14 May 2012	330	307	HUNBSTRND LIBEREC	14 May 2012 10 May 2013	212035 665002	Birth Transfer	WHITE/WHITE	KAKSI	977200008167119
429	M	18 May 2012	270	173	HELSINKI RIGA	18 May 2012 27 Feb 2014	212005 M12290	Birth Transfer		ELMO	956000001842455
430	F	11 May 2012	176	198	ARNHEM	11 May 2012	617027	Birth			00071AFBB4
431	F	17 May 2012	311	284	BERN PRAHA	17 May 2012 9 Oct 2013	B20077 130383	Birth Transfer			7560998100562596
432	M	20 May 2012	311	264	BERN	20 May 2012 5 Sep 2013	B20078	Birth Death			756098100565740
433	M	25 May 2012	330	378	HUNBSTRND	25 May 2012 26 May 2012	212042	Birth Death		PEKKA	
434	F	28 May 2012	330	373	HUNBSTRND	28 May 2012 14 Jun 2012	212089	Birth Death	L.BLUE	ISIS	977200008175630
435	F	20 May 2012	176	202	ARNHEM SALZBURG	20 May 2012 15 Apr 2014	617028 S1933	Birth Transfer			00071ADEDDB
436	M	9 Jun 2012	355	322	BERLINZOO	9 Jun 2012 14 Jul 2012	436	Birth Death			0006828C4F
437	M	23 Jun 2012	355	393	BERLINZOO LIBEREC	23 Jun 2012 10 May 2013 28 Aug 2013	437 665003	Birth Transfer Death		MARIO	0006B275B3
438	M	13 May 2012	266	261	JARVZOO	13 May 2012 3 Dec 2014	JZM12005	Birth Death		IDAR	
439	F	19 May 2012	266	280	JARVZOO AHTARI	19 May 2012 16 Apr 2013	JZM12006 213003	Birth Transfer	29	GERSTIN	968000004325683
440	F	20 May 2012	266	375	JARVZOO AHTARI	20 May 2012 16 Apr 2013	JZM12007 213004	Birth Transfer	26	GRETA	968000004320483
441	F	25 May 2012	240	350	JARVZOO	25 May 2012	JZM12008	Birth		ILONA	
442	M	13 Jul 2012	389	227	RANUA	13 Jul 2012 16 Oct 2013	212038	Birth Death	WHITE 010	MIHKU	
443	M	16 Jul 2012	389	172	RANUA	16 Jul 2012 4 Sep 2012	212039	Birth Death	LILIAC 57	MAHKU	
444	M	11 May 2012	219	220	RIGA	11 May 2012 21 Apr 2013	M12146	Birth Death		KLINTS	985170002480010
445	M	27 May 2012	219	298	RIGA	27 May 2012 15 Oct 2013	M12148	Birth Death		LAIMINS	985120021918545
446	F	27 May 2012	270	288	HELSINKI PRAHA	27 May 2012 28 Oct 2013	212016 130428	Birth Transfer		ELOVEENA	
447	F	10 May 2012	316	317	KERKRADE PRAHA	10 May 2012 6 Nov 2013	M12019 130451	Birth Transfer	PINK 001	GAIA 19	528093490007253
448	M	16 May 2012	240	278	LYCKSELE	16 May 2012 1 Feb 2013	LRTS1202	Birth Death			
449	M	25 May 2012	240	279	LYCKSELE	25 May 2012 5 Nov 2012	LRTS1201	Birth Death			
450	?	10 Jan 2012	247	299	KINGUSSIE	10 Jan 2012 10 Jan 2012	5570	Birth Death			
451	F	13 May 2013	176	198	ARNHEM	13 May 2013 10 Aug 2013	617604	Birth Death			528093490020463
452	F	9 May 2013	355	343	BERLINZOO PLEUGUEN	9 May 2013 24 Mar 2014	M1300031 CR3	Birth Transfer			00074-EF37B
453	M	15 May 2013	330	378	HUNBSTRND	15 May 2013 13 May 2014	213018	Birth Death	TURQUOISE	LAPIN	968000010014918

454	M	16 May 2013	330	259	HUNBSTRND PLEUGUEN	16 May 2013 25 Apr 2014	213019 CR4	Birth Transfer	WHITE	KOFF	968000010080420
455	F	16 May 2013	330	307	HUNBSTRND KINGUSSIE	16 May 2013 8 May 2014 1 Jun 2015	213020 5760	Birth Transfer Death	ROSA		968000010011410
456	F	24 May 2013	311	284	BERN PLEUGUEN	24 May 2013 24 Mar 2014	B30052 CR1	Birth Transfer			756098100629617
457	F	24 May 2013	311	264	BERN PLEUGUEN	24 May 2013 24 Mar 2014	B30053 CR2	Birth Transfer			756098100631100
458	F	20 May 2013	219	220	RIGA HELSINKI	20 May 2013 25 Feb 2014	M13092 214001	Birth Transfer	YELLOW	KRUSA	98570002681727
459	M	4 Jun 2013	219	298	RIGA	4 Jun 2013	M13096	Birth		LIETUTINS	
460	M	18 May 2013	380	370	MOSCOW	18 May 2013 8 Nov 2013	130108	Birth Death			
461	M	19 May 2013	380	354	MOSCOW	19 May 2013	130109	Birth	132		
462	F	19 May 2013	381	390	MOSCOW KERZHENSK	19 May 2013 4 Dec 2014	130110 462	Birth Transfer			
463	M	20 May 2013	381	325	MOSCOW	20 May 2013	130111	Birth			
464	M	20 May 2013	380	387	MOSCOW KERZHENSK	20 May 2013 25 Dec 2014	130112 464	Birth Transfer	135		
465	M	31 May 2013	355	393	BERLINZOO LIBEREC	31 May 2013 5 Mar 2014 13 Oct 2014	M1300030 665004	Birth Transfer Death			00072-87302
466	M	5 Jun 2013	381	339	MOSCOW	5 Jun 2013	130260	Birth			
467	F	15 Jun 2013	381	338	MOSCOW	15 Jun 2013 20 Oct 2014	130283	Birth Death			
468	M	8 Jun 2013	219	402	RIGA	8 Jun 2013	M13101	Birth			
469	F	24 May 2013	330	373	HUNBSTRND KINGUSSIE	24 May 2013 8 May 2014	213041 5759	Birth Transfer	Orange	SAHTI	968000010082569
470	M	25 May 2013	176	202	ARNHEM	25 May 2013 10 Oct 2014	617669	Birth Death			528093490020424
471	F	9 Jun 2013	408	407	ARNHEM	9 Jun 2013 8 Jul 2013	617685	Birth Death			528093490020405
472	F	10 May 2013	266	261	JARVZOO	10 May 2013 21 Sep 2014	JZM13011	Birth Death			
473	M	16 May 2013	266	158	JARVZOO	16 May 2013	JZM13012	Birth		JORM	
474	F	18 May 2013	266	350	JARVZOO	18 May 2013 23 May 2015	JZM13013	Birth Death			
475	M	19 May 2013	266	280	JARVZOO	19 May 2013 19 Nov 2014	JZM13014	Birth Death		JUTTA	
476	F	13 May 2013	223	324	AHTARI	13 May 2013 14 May 2013	213014	Birth Death			
477	M	18 May 2013	223	403	AHTARI	18 May 2013 18 May 2013	213013	Birth Death			
478	F	20 May 2013	223	388	AHTARI	20 May 2013 20 May 2013	213015	Birth Death			
479	F	20 May 2013	266	375	AHTARI	20 May 2013	213016	Birth	0107	LENITA	985170002270017
480	M	26 May 2013	389	172	RANUA	26 May 2013	213008	Birth	003	MAGNUS	
481	F	28 May 2013	389	227	RANUA	28 May 2013 18 Jun 2013	213011	Birth Death	PINK 001	MILJA	
482	M	3 Jun 2013	389	418	RANUA	3 Jun 2013	213013	Birth	WHITE 006	RIIVI™	
483	F	12 Jun 2013	389	411	RANUA	12 Jun 2013 30 Jun 2013	213020	Birth Death	BLUE 004	MINKA	
484	M	26 May 2013	270	369	HELSINKI	26 May 2013 30 Sep 2014	213034	Birth Death	RED	FEODOR	956000008384825
485	F	3 Jun 2013	270	288	HELSINKI	3 Jun 2013	213044	Birth	WHITE	FINKA	956000008419397
486	M	1 Jul 2013	187	341	ROTTERDAM SALZBURG	1 Jul 2013 5 Mar 2014 14 Apr 2014	Z13187 S1908	Birth Transfer Death		SJAAK	528046000025785
487	M	16 May 2013	413	349	LYCKSELE	16 May 2013 14 Feb 2014	LRTS1303	Birth Death			
488	M	16 May 2013	413	278	LYCKSELE	16 May 2013 24 Apr 2014	LRTS1302	Birth Death			
489	F	1 Jun 2013	413	374	LYCKSELE RANUA	1 Jun 2013 30 Apr 2015	LRTS1301 215005	Birth Transfer	SE039435-001MAJBRIIT		968000003414806
490	F	14 May 2014	408	397	ARNHEM	14 May 2014	2313	Birth			5280934900326

491	F	14 May 2014	330	307	HUNBSTRND	14 May 2014	214012	Birth	ROSA	FINLANDIA	968000010165788
492	F	16 May 2014	330	259	HUNBSTRND	16 May 2014	214015	Birth	WHITE	JETZIN	968000010174269
493	M	18 May 2014	330	378	HUNBSTRND	18 May 2014 18 Jul 2014	214016	Birth Death			
494	M	19 May 2014	389	418	RANUA	19 May 2014	214022	Birth	BLUE 005	MOKKE	
495	M	6 May 2014	270	288	HELSINKI	6 May 2014 3 Jun 2014	214012	Birth Death	GREEN	GOSTA	956000008397242
496	F	15 May 2014	270	369	HELSINKI	15 May 2014 23 May 2014	214023	Birth Death	RED	GADDJA	956000008416734
497	F	29 May 2014	330	373	HUNBSTRND	29 May 2014	214036	Birth	RED	PINKA	968000010166031
498	F	10 May 2014	266	261	JARVZOO	10 May 2014	JZM14007	Birth	YELLOW 032	KATJA	
499	?	17 May 2014	266	420	JARVZOO	17 May 2014 17 May 2014	JZM14014	Birth Death			
500	F	17 May 2014	408	198	ARNHEM	17 May 2014 24 Sep 2014	2314	Birth Death	YELLOW		5280193490032949
501	M	25 May 2014	408	407	ARNHEM	25 May 2014 5 Nov 2014	2317	Birth Death	PURPLE		528093490032988
502	F	30 May 2014	408	202	ARNHEM	30 May 2014 7 Oct 2014	2316	Birth Death	BLUE		528093490020417
503	M	11 Jul 2014	401	431	PRAHA	11 Jul 2014 12 Jul 2014	140253	Birth Death			
504	F	12 May 2014	223	324	AHTARI	12 May 2014	214027	Birth	WHITE 148	VIVA	
505	F	13 May 2014	223	375	AHTARI	13 May 2014	214028	Birth	BLUE 385	FLOORA	
506	M	28 May 2014	311	264	BERN SALZBURG	28 May 2014 7 Apr 2015	B40093 S2070	Birth Transfer	BLUE		756098100666179
507	M	31 May 2014	311	284	BERN LIBEREC	31 May 2014 29 Apr 2015 3 Aug 2015	B40095 665005	Birth Transfer Death			576098100670143
508	F	24 May 2014	337	271	KERKRADE	24 May 2014 24 May 2014	M14670	Birth Death			
509	M	19 Jun 2014	337	317	KERKRADE	19 Jun 2014 1 Sep 2015	M14727	Birth Death	BLUE 88	MIKA	528093490039409
510	M	22 Jun 2014	337	367	KERKRADE	22 Jun 2014	M14729	Birth	YELLOW 049	MATTI	528093490039401
511	M	24 Jun 2014	337	267	KERKRADE	25 Aug 2015 25 Aug 2015	M14732	Death Death	GREEN	FYNN	528098490039404
512	F	19 May 2014	223	479	AHTARI	19 May 2014 2 Jun 2014	214029	Birth Death	GREEN 248	KUKKA	
513	F	20 May 2014	223	388	AHTARI	20 May 2014 20 May 2014	214049	Birth Death		NOPO	
514	F	21 May 2014	223	403	AHTARI	21 May 2014 22 May 2014	214050	Birth Death		SOPO	
515	F	23 May 2014	223	530	AHTARI	23 May 2014 24 May 2014	214047	Birth Death		AFFA	
516	F	29 May 2014	223	439	AHTARI	29 May 2014 12 Jun 2014	214030	Birth Death	RED 140	ORVOKKI	
517	F	19 May 2014	381	325	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014	140161 517	Birth Transfer			
518	M	19 May 2014	381	390	MOSCOW KERZHENSK	19 May 2014 4 Dec 2014	140162 518	Birth Transfer			
519	F	16 May 2014	380	387	MOSCOW	16 May 2014 15 Jun 2014	140160	Birth Death			
520	F	24 May 2014	380	371	MOSCOW	24 May 2014 5 Dec 2014	140237	Birth Death			
521	F	28 May 2014	380	354	MOSCOW KERZHENSK	28 May 2014 4 Dec 2014	140238 521	Birth Transfer			
522	M	12 Jun 2014	408	430	ARNHEM	12 Jun 2014 12 Jun 2014	3108	Birth Death			
523	F	27 May 2014	219	298	RIGA	27 May 2014	M14119	Birth		LAIMINA	
524	M	29 May 2014	389	227	RANUA	29 May 2014	214025	Birth	PURPLE 007	MIKKI	
525	F	27 Jun 2014	389	172	RANUA	27 Jun 2014 29 Jul 2014	214048	Birth Death	Pink 98	MANNA	
526	M	14 May 2014	413	374	LYCKSELE	14 May 2014	LRTS1403	Birth	ORANGE		968000003404738
527	F	16 May 2014	413	349	LYCKSELE RANUA	16 May 2014 30 Apr 2015	LRTS1401 215006	Birth Transfer	SE0394350013CAROLA		968000003468955
528	F	18 May 2014	413	279	LYCKSELE	18 May 2014 10 Apr 2015	LRTS1402	Birth Death		NUMMIKALVEN	968000003401441

529	F	21 May 2014	413	278	LYCKSELE	21 May 2014 21 Dec 2014	LRTS1404	Birth Death			
530	F	22 May 2012	223	253	AHTARI	22 May 2012	212004	Birth	328	JAFFA	
531	F	23 May 2014	223	440	AHTARI	23 May 2014 2 Jun 2014	214029	Birth Death	248	KUKKA	
532	M	28 May 2014	187	341	ROTTERDAM	28 May 2014	Z14215	Birth			528046000025976
533	F	10 Jul 2012	223	324	AHTARI	10 Jul 2012 7 Apr 2014	212035	Birth Death	446		
534	?	10 Apr 2015	337	208	KERKRADE	10 Apr 2015 10 Apr 2015	M015042	Birth Death			
535	?	22 Apr 2015	408	407	ARNHEM	22 Apr 2015 22 Apr 2015	6472	Birth Death			
536	?	2 May 2015	337	366	KERKRADE	2 May 2015 2 May 2015	M15069	Birth Death			
537	M	18 May 2015	389	418	RANUA	18 May 2015	215013	Birth	WHITE 007	BONDI	
538	M	13 May 2015	330	259	HUNBSTRND	13 May 2015	215014	Birth	YELLOW	JAHKI	752098100702414
539	M	15 May 2015	330	307	HUNBSTRND	15 May 2015	215015	Birth	LILLIAC	RAKKI	752098100700395
540	M	12 May 2015	381	325	MOSCOW	12 May 2015	150195	Birth			
541	M	12 May 2015	380	354	MOSCOW	12 May 2015	150196	Birth			
542	F	15 May 2015	381	390	MOSCOW	15 May 2015	150206	Birth			
543	M	17 May 2015	380	339	MOSCOW	17 May 2015	150207	Birth			
544	M	19 May 2015	311	284	BERN	19 May 2015	B50088	Birth			7560981006969824
545	F	21 May 2015	429	402	RIGA	21 May 2015 21 May 2015	N15071	Birth Death			
546	F	18 May 2015	401	447	PRAHA	18 May 2015	150147	Birth			900032001749464
547	F	19 May 2015	401	446	PRAHA	19 May 2015	150148	Birth			900032001749463
548	M	18 May 2015	330	378	HUNBSTRND	18 May 2015	215017	Birth	GREEN	PLAKKI	752098100699548
549	F	24 May 2015	330	373	HUNBSTRND	24 May 2015	215025	Birth	BLUE	VIINI	752098100701846
550	F	22 May 2015	311	264	BERN	22 May 2015	B50104	Birth			756098100688686
551	F	14 May 2015	413	278	LYCKSELE	14 May 2015	LRTS1501	Birth		RANDIS	
552	F	16 May 2015	413	349	LYCKSELE	16 May 2015 30 Jun 2015	LRTS1504	Death	YELLOW	ALVA	
553	M	17 May 2015	413	374	LYCKSELE	17 May 2015	LRTS1502	Birth	ORANGE	PONTA	
554	M	18 May 2015	413	279	LYCKSELE	18 May 2015	LRTS1503	Birth		NUDUS	
555	F	24 May 2015	389	227	RANUA	24 May 2015	215030	Birth	DARK PURPLE	MINIPENNI	
556	M	18 May 2015	270	369	HELSINKI	18 May 2015 23 May 2015	215027	Birth Death			
557	M	26 May 2015	429	400	RIGA	26 May 2015	M15077	Birth			
558	F	21 May 2015	270	485	HELSINKI	21 May 2015	215028	Birth	WHITE	HILLA	934000007103
559	M	27 May 2015	270	458	HELSINKI	27 May 2015	215029	Birth			
560	M	30 May 2015	266	261	JARVZOO	30 May 2015	JZM15030	Birth			968000010110947
561	M	30 May 2015	337	317	KERKRADE	30 May 2015 28 Jun 2015	M15109	Birth Death	Blue 051	SVEN	528257000009151
562	F	31 May 2015	408	198	ARNHEM	31 May 2015	6531	Birth			528257000003282
563	?	1 Jun 2015	247	455	KINGUSSIE	1 Jun 2015 1 Jun 2015	5861	Birth Death			
564	M	2 Jun 2015	381	338	MOSCOW	2 Jun 2015	150253	Birth			
565	F	2 Jun 2015	266	420	JARVZOO	2 Jun 2015	JZM15029	Birth	035		
566	F	22 May 2015	266	350	JARVZOO	22 May 2015	JZM15020	Birth	034		
567	M	15 May 2015	223	479	AHTARI	15 May 2015	215031	Birth	WHITE 170	MAXI	
568	?	5 Jun 2015	337	265	KERKRADE	5 Jun 2015 27 Jun 2015	M15121	Birth Death			
569	F	5 Jun 2015	337	267	KERKRADE	5 Jun 2015	M15122	Birth			
570	F	7 Jun 2015	337	206	KERKRADE	7 Jun 2015	M15123	Birth			
571	M	15 May 2015	223	440	AHTARI	15 May 2015	215032	Birth	BLUE 309	ALVAR	
572	M	18 May 2015	223	439	AHTARI	18 May 2015 13 Aug 2015	215033	Birth Death			
573	F	18 May 2015	223	375	AHTARI	18 May 2015 24 Jun 2015	215034	Birth Death	RED	JASMIN	

574	F	16 May 2015	266	158	JARVZOO	16 May 2015	JZM15018	Birth	035			
575	?	24 May 2015	266	441	JARVZOO	24 May 2015	JZM15019	Birth Death				
576	?	23 May 2015	266	474	JARVZOO	23 May 2015	JZM15021	Birth Death				
577	M	3 Jun 2015	429	298	RIGA	3 Jun 2015	M15136	Birth				
578	M	29 May 2015	401	431	PRAHA	29 May 2015	150198	Birth Death				
579	F	16 Jun 2015	337	367	KERKRADE	16 Jun 2015	M15160	Birth	WHITE 013	GAIA 31	529257000009158	
580	M	9 May 2015	408	430	ARNHEM	9 May 2015	6491	Birth Death				
581	F	29 May 2015	187	341	ROTTERDAM	29 May 2015	Z15118	Birth		SJAKIRA	528210004193881	
582	F	7 Jun 2015	413	489	RANUA	7 Jun 2015	215055	Birth Death				
583	?	19 May 2015	381	462	KERZHENSK	19 May 2015	583	Birth Death				

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TOTALS: 271.290.22 (583)

Compiled by: Leif Blomqvist thru Nordens Ark
 Data current thru: 1 Sep 2015 - European regional
 Printed on 1 Sep 2015 using Sparks v1.65

3.7.7. Holders' Glossary - FOREST REINDEER Studbook

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