

The Speec

Lena Maria Lindén



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Life at Nordens Ark is so good!

When the Brno Zoo staff visited Nordens Ark, they had asked me to introduce the Swedish zoo in this magazine issued by the Brno Zoo. The article was published in previous issue of Zooreport. The Brno colleagues also asked me to write something about myself and my resolution that I'm trying to fulfil in Nordens Ark. I gladly met their request...

I have been watching birds as long as I can remember, and I spent a lot of my childhood and teenager period out in the wild living in a tent with my binoculars. It was therefore quite logical for me to go into the Natural Science and Zoology studies at the University of Gothenburg.

About twenty-two years ago, I was asked to explore the possibilities of building up a "captive breeding center for endangered species" with the Jersey Wildlife Preservation Trust, or Durrell's as it is named today, as a role model. By that time, I was engaged in writing a thesis at the University of Gothenburg, but the challenge to build up an operation focused on conservation felt far more meaningful, so the choice was simple.

I started the project by creating a nonprofit foundation, leasing 127 hectares of land and engaging a zoologist of good international repute. We started with a large loan (money from the bank with high interest!) but with a huge amount of enthusiasm and an extremely committed staff of five people! The King of Sweden made the inaugurating speech of Nordens Ark and pointed out HRH Crown Princess Victoria to be Patron of Nordens Ark.

I must say that the first years were not easy, as we were very short of money and the piece of land we used to expose our animals was nothing but wild nature and hardly any fun for the visitors. All the enclosures were very big, and contained a lot of trees, which made it extremely difficult to see any living sign of the twenty species we managed to keep.

But, I was convinced that our mission and vision were to be focused on conservation; so, instead of trying to please our visitors by making the park more fun, we worked even harder to be involved in some in situ projects. This was a bold choice but, with support from the board, we developed Nordens Ark according to my gut feeling that it should be a field-and research-station. Afterwards, there was



Lena Maria Lindén

no doubt that it was the right decision to have made. We would never have survived as a traditional zoo!

Today we are involved in twelve projects in situ. I am still very committed and I love every single day at work. We are nearly fifty people working together and we are today the owners of 383 hectares of land. That makes our lives busy all year round. We are still politically completely independent, as we do not get (and do not ask for, either) any governmental support. We are open to visitors 365 days per year....all in line with my personal intention. Life at Nordens Ark is so good!

Levaldiden

Lena M Lindén, Dr Ph h c CEO Nordens Ark

Lena Maria Lindén

Had finished her high school studies in 1968 and then started to study zoology, geology and physical geography at the University of Gothenburg. She successfully passed the Bachelor's exam in 1971 and, in 1974, she graduated in zoology. From 1972 to 1980 she worked as first secretary at the Visby diocesan chapter, where her mission was to establish care management plans for 10,000 hectares of land including several nature reserves. Later, she was teaching natural science and math for two years. She gained a university degree in geography at the University of Stockholm in 1981. She also spent one year studying in Saudi Arabia. In 1986 Mrs. Lindén interrupted her doctoral studies at the University of Gothenburg because she was asked to establish a captive breeding centre for endangered species on the west coast of Sweden, called Nordens Ark. She founded the Nordens Ark Foundation in 1988 and became its managing director and CEO. She initiated many rescue and protection programmes, managed to open a farm for native rare breeds, and the wetland with amphibians, reptiles, and birds; she breeds the lesser white-fronted geese, which is one of the most endangered birds in the Arctic. She also worked at the WAZA Animal Welfare and Ethic Committee, WAZA Membership Committee, and the EAZA Council. She is a member of many boards and committees engaged in nature conservation, and she has earned many awards, including that of Honorary Doctor of the University of Gothenburg.



Sex determination of European ground squirrel

The European Ground Squirrel Conservation at the Brno Zoo

The Brno Zoo has dealt with the protection of the European ground squirrel [Spermophilus citellus] since 2005. It opened a new breeding facility for this species in its premises in 2009. By doing so, it has joined the European Ground Squirrel Conservation Programme in the Czech Republic, which is implemented by the Agency for Nature Conservation and Landscape Protection of the Czech Republic. The main goal of the programme is to preserve existing endangered populations at as high a number of locations as possible in the Czech Republic. The programme also aims at supporting the distribution of the European ground squirrel both naturally, and by founding new colonies. These should be established by introducing individuals that have been bred in a semi-wild way to locations near existing colonies.

The Brno Zoo breeding facility is situated in a natural environment, away from the visitors' route. It is secured against being dug under, and consists of an aviary with a base area of 102.51 m², a length of 20.1 m, a width of 5.1 m, and a height of 1.8-1.9 m. The source of individuals suitable for the preservation breed is a population living at the grassy area of the airport in Vyškov. The local colony has more than six hundred ground squirrels; therefore, the planned catching of approximately 25 individuals cannot influence its future viability. Professionals from the conservation programme team caught six females and four males with the assistance of Brno Zoo workers on 21 July 2009. In order to catch these, they had set live-traps and rope gins.



European ground squirrel in a trap at the Vyškov airport

They checked the traps regularly and treated the caught individuals in a way to minimize any stress factors. We marked the caught ground squirrels with microchips and transported them to Brno Zoo. There we released them to pre-drilled holes in the breeding facility. The outlets from the holes were hidden, so that the ground squirrels could dig other lodges. This method enables successful adaptation to a new environment. In this way, the animals do not experience stressful running about in a breeding facility with no possibility of hiding when they have not yet managed to build their own system of lodges. Our ground squirrels started building during the first days after their release, and they soon stopped using the artificially dug tunnels. During the season, we regularly additionally fed them with carrots, fruit, grain, and insects.

Since the middle of October, their above-ground activity stopped, and the group started the stage

of hibernation. After a successful hibernation, we strengthened our group of ground squirrels. On 8 April 2010, we caught and brought another 8 females and 5 males from the Vyškov airport to Brno Zoo.

We will open the breeding facility after the adaptation and reproduction of these ground squirrels in the following years, and will enable especially young individuals to settle in the terrain outside the zoo and to found a naturally functioning population.

Because of its original way of life, the European ground squirrel is tied up with steppes. It loses an overview of what is happening in the surrounding high growths, and thus becomes a certain kill of predators. It adapts to life in regularly maintained grass cultures in an agricultural landscape. Its radical decrement is connected with the disappearance of cut meadows and maintained pastures, extensive use of chemicals in agriculture, and the leaving fallow of some fields. At present, it only finds refuge at sport airports and golf courses.

The European ground squirrel only occurs in central and south-east Europe, in the previous century, he died out in Poland. According to the IUCN, it belongs among vulnerable species. It has a status of a critically endangered species in the Czech Republic. In 2009, its presence was noted at 34 more-or-less isolated locations.

Mgr. Jiří Dobiaš, Zoologist-specialist



Releasing the caught squirrels into an aviary at the Brno Zoo



National Park May Be Founded at the Křivoklátsko Region

In 1978, the Křivoklátsko Protected Landscape Area (PLA) was declared in the western part of central Bohemia, in the countryside where Czech princes and kings used to spend their leisure time hunting in this area of 628 km². A year before, the territory was included in the UNESCO biospheric reservations and, in 2004, the Křivoklátsko Bird Area was declared inside PLA. The highest point of the area, which is more than 60% covered with forests, is Těchovín (616 m above sea level).

The Křivoklátsko Region contains a unique set of species, and populations which have no equivalent in the Czech Republic and are unique in Europe. The occurrence of a nominate form of the long-horned beetle Phymatodes pusillus pusillus, clover-seed cater weevil Apion rugicolle, or spiders such as Anyphaena furva, the sheet-web weaver Porrhomma rosenhaueri, Agraecina striata, and Wolf spider Arctosa maculata are only known from the Křivoklátsko Region. Generally, Křivoklát animals belong among representatives of a typical fauna of central European warm forest area. Some fauna



Grey long-eared bat

similarity between Křivoklátsko and south Moravia follows with the occurrence of some species such as the Alcathoe bat [Myotis alcathoe], a new species known in Europe only since 2002, and discovered for the first time at the Křivoklátsko Region in the Czech Republic.

Unique vertebrates also include the rare European brook lamprey [Lampetra planeri], known from the Klíčava water course. The smooth newt [Triturus vulgarit] and alpine newt [Triturus alpestris] occur in many small forest ponds and pools. Stable-crested newt [Triturus cristatus] populations prosper at four monitored loca-



View from the Týřovické skály over the Křivoklátsko landscape

tions, and the yellow-bellied toad [Bombina variegata] regularly occupies several pools. In total, we know of the occurrence of twelve amphibian species and eight reptile species, of which the rarest is the tessellated snake [Natrix tesselata], which people often mistakenly consider to be a viper. You can also meet it there as well as at other habitats.

One hundred twenty bird species provably nest at the Křivoklátsko Region, the most important of which are the eagle owl [Bubo bubo] or the honey buzzard [Pernis apivorus] and both kite species [Milvus milvus and M. migrant]. The incised and inaccessible valleys of the Berounka tributaries are a refuge of the black stork [Ciconia nigra]. The sea eagle [Haliaetus albicilla] regularly nests in the Lánská game park and, after some time, the grey falcon [Falco peregrinus] also returned to the region. The fauna of mammals is especially represented by common insect-eating species and rodents, sixteen species of mostly forest bats, and small beasts of prey. Redundant populations of red deer and unoriginal Japanese sika deer, fallow deer, and moufflon sheep highly exceeding standardized numbers create an apple of discord between environmentalists and hunters. The situation is similar with the wild boar.

The most effective enforcement of nature conservation is contained in the plan to declare a Křivoklátsko National Park in the PLA's central

part in an area of 102 km². The main reason for the protection in the proposed national park is to preserve the colourful mosaic of habitats tied up with morphological phenomena territorially connected with the Berounka canyon and its tributaries, and to preserve the forest complex in the warm hilly country of middle elevation, which has no parallel in terms of its size and natural species composition in the interior of the Czech Republic.

Mgr. Anna Hoffmannová, Zoologist of the Křivoklátsko PLA Administration



Black stork





Indian takins



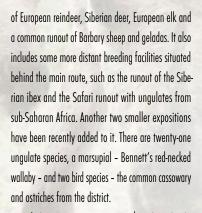
Young Jacob sheep

The Cervidae Forest District Successful Again

The Cervidae Forest District is situated on the western slope of Monk Mountain to the left of the main visitors' route (if we go up the hill). In its centre is a breeding background facility surrounded by runouts



Older young ones of the Milu deer



As in nature, most young are born in spring in the Cervidae Forest District. Some deliveries, however, also occur at the end of winter. This is the season when young of the Barbary sheep, Jacob sheep and Indian takins are born.



Milu deer - a doe and a calf



Second this year's young takin

The first of this year's young appeared in the district on 6 March. They were a Barbary sheep and twins of the Jacob sheep [Ovis amon f. aries]. Unfortunately, their mother refused two of them, and thus we started artificial feeding. The lambs first got the Mikrop ovis alternative milk four times a day with a dose of 1200 ml each time, and we gradually decreased the frequency of feeding to three doses a day and the milk quantity to 1000 ml/day because the small sheep started eating hay and hard fodder. Four females gave birth to eight young Jacob sheep (five males and three females) before the end of April.

On 9 March, the group of Indian takins [Budorcas taxicolor taxicolor] was enlarged, with two females delivering on that same day. Unfortunately, one of them, a primipara, was unable to take care of her young, and it died the following day. The other female is looking after her female baby, which is the first takin successfully bred by a mother who was born in our zoo. (We have already spoken about this event in the previous edition of Zooreport). But this was not the only young one. We were also pleased by the twelve-year-old female, Růžena, alias Resi, who gave birth to a small male on 5 April. The young takins have made friends, play and frisk about together in the runout, rest next to each other, and only look for their mothers when they want to drink milk. Viewing them brings about joy and satisfaction: We have not had two young takins born and bred in the same year in our zoo before.

Our Milu deer [Elaphurus davidianus] regularly breed in April. This year, two does gave birth, on 6 and 14 April. Both the young are males and the deliveries





A doe and a calf of the Siberian deer

were without complications. Young Barbary sheep, which usually see the world as early as February or March, were born in April this year.

The first of them (a male) was born on 8 April and the second (a female) on 10 April. We expected that twins would be born to the female because of the size of its abdomen. But only a single young was born, which was significantly larger than the other. At the end of April, we expected deliveries of the European reindeer [Rangifer tarandus]. The Pepina female, which comes from Ranua Zoo in Finland, differs from the other reindeer by a lighter fur colour. She delivered first. The delivery was supervised and the baby saw the world precisely at twelve o'clock on 20 April. Its mother was weak after the delivery, but took good care of her young. She licked it, and thus removed the after-birth. Then she approached the baby so that it was able to drink.

After three hours, the young one was able to drink standing, and to follow its mother. On the next day, it ran around the whole runout, with its mother watching at every step. She greatly disliked our observations of her baby during the first two weeks, and drove us away from it. We only ascertained the sex of the young after some time. It is a female. Right at the beginning of the following month – on 3 May – other two reindeer females, Pražanda and Mája, gave birth. They must have delivered early in the morning because, at our morning animal inspection, both the young were already walking in the runout. By observing them from a distance, we learnt that one of them is female and the other, male. The father is Vašek, a male born in our zoo in 2005.

Until the present, only one or two young reindeer in the Brno Zoo bred. That three of them bred this year was

probably caused by a change in fodder. Since December 2008, we have changed to the feed ratio used in the Olomouc Zoo, where breeders have a lot of experience breeding reindeer and optimizing their feeding ratios. According to them, we have increased the quantity of granules for reindeer, adding the type of granules used for race horses. Fresh browse and moss also form an important part of the fodder.

In May, young of the Siberian ibex [Capra sibirica] were born. Their deliveries gradually incurred on 14 May, when a male was born, and on 20 May, when another two females were born. The newest young one in the district is a male of the Siberian deer [Cervus canadensis sibiricus] born on 2nd June.

Last year we already mentioned in our magazine a pious number of young appearing in the forest district every year. The trend continues uninterrupted, 2010 will have had the highest number of species ever reproduced during a single season.

Lubomír Gala, Gamekeeper at the Cervidae Unit



A young reindeer tries to get to its feet approximately two hours after its birth



Young Siberian deer



Siberian ibex



European reindeer





Světla Vítková opening the Dreamnight 2009

Memory of Světla Vítková...

Not only family members but also many friends, acquaintances, and colleagues were deeply touched by the decease of Mgr. Světla Vítková from this world. The manager of the Station of Young Scientists, who undoubtedly belonged to the most important figures of the Brno Zoo team, died after a short serious disease on 21 April 2010. She was 65 years old.

We recall Iška, as she wished to be called (it was a nickname from her childhood), as an immensely energetic, organisationally capable woman with unbridled enthusiasm. She seemed to be the same on her last working day as well. When we learnt she wanted to "go on sick leave" we believed it was a nonserious



Světla Vítková guiding an excursion to the rescue station



Světla Vítková and a Guinea pig with children from Elpis

short-term illness.

Iška came from Dubňany near Hodonín, but she lived in Brno since she was 6. As a child, she attended a group of young biologists in the Brno Zoo lead by the legendary Professor Bruno Valoušek. She graduated from the Pedagogical Faculty, taught at a comprehensive school, later gained qualification in the field of special pedagogy, and started work with handicapped children. She was especially interested in zoo-therapy, which is defined as a method of comprehensive physiotherapy with the support and presence of animals. She visited social-care institutes with pets such as ferrets, rabbits, or guinea pigs, where children could experience direct contact with live, four-legged creatures. This extended their emotional sphere and generally was beneficial for their life. She also continued this activity after she started work in the zoo in 2004. She often visited the Elpis Special School in Brno-Židenice and some other similar institutions, where she led special educational programmes with animals. These were practiced according to individual plans focused on individual children. Some of the children were afraid in the beginning but, after some time, their shyness changed to joy from at meeting with the "aunt" and her animals. Even children suffering from quite serious handicaps accompanied, e.g., by a loss of speaking revived after some time and started to be interested in their surroundings and form their first words and sentences. Iška presented her experience in this difficult field and results of her work at zoo-therapeutic symposiums organized by the University of South Bohemia.

She was one of the people who have a wide range of activities. Before she came to the zoo, she had led

a scientific group at the Station of Young Scientists for several years. Later, she established a clubroom as a physiotherapeutic area in the station for children from Elpis. She also enabled them to participate in holiday stays in the zoo together with healthy children. Additionally, she visited old people's homes with animals and invited clients from these homes to the zoo for pre-Christmas meetings with a cultural programme. She organized a similar event for them during one year - the Day of Seniors, with a journey by a small train and commented tour of the expositions. She also undertook trips with animals outside the zoo in relation to various cultural events in the city, such as a workshop held by the Brno National Theatre at the occasion of the Janáček symposium in 2008. Iška planned many similar activities for the future as well. At the end of June 2010, for example, she was going to give a lecture on zoo-therapy within the Intercanis and Interfelis exhibitions.

We missed her at many other occasions such as the Night of Dreams. Soon after her joining the zoo, she became the moving spirit of preparations for holding this event, which is always held by many foreign and Czech zoos for handicapped children and their families on the first June Saturdays. The Night of Dreams was held for the first time thanks to her support in Brno in 2005. This year the visitors of the Night of Dreams – unless they had received the sad news before – learnt from the invitation card that Světla Vítková would not be able to welcome them from the stage At the Camel, or to accompany them around the zoo, which is full of attractions for children on that specially captivating, romantically lit evening.

Eduard Stuchlik





Bringing a whelp out of the lodge

The Arctic Wolves Have Given Birth to Young for the Third Time

We only found out when we vaccinated this year's young Arctic wolves [Canis lupus arctos] on 18 June how many had been born. We took ten puppies into God's light from the lodge where they had been successfully hidden from us! It was a joyful finding, especially since this was the third time that the Arctic wolves have reproduced in the Brno Zoo. They had six cubs last year and two the year before. Breeding this wolf subspecies commenced in Brno Zoo in 2007 with the arrival of a male Atila from Sóstó Zoo in Hungary, and females Alex and Claire from Amnéville Zoo in France.

We are thankful for the high number of the young this year. This is due to the fact that both females delivered. This also occurred last year; but then, the dominant, so-called alpha, female smothered the cubs of the subordinate female. It is common in nature that only the alpha female delivers young, due to the scarcity of food in the rough Arctic. Also, the number of its young is smaller than in captivity, usually two or three. If the second female delivers in the wild, the other wolves kill its offspring. This year, there has been a significant shift in the mutual relationships of the members of the Brno pack. Both the females delivered in a single lodge and are bringing up their young together. More details on this year's breeding of wolf cubs are given on page 11.



Young wolves in front of the cameras

Beaver Was Taken Away by Chaloupek

From the beginning of the year to May, the Rescue Station for Handicapped Animals, which forms part of the Brno Zoo, received more than 120 injured, disoriented, or abandoned individuals, or young delivered from the surrounding countryside or urban areas of cities and villages. The majority of them were birds, e.g., the European buzzard, Eurasian kestrel, long-eared owl, grey owl, and black woodpecker. Mammals included, e.g., the Eurasian badger or common noctule, common bat, and parti-coloured bat.

Firemen from Lanžhot brought us a ten-dayold European beaver baby on 19 May, which was separated from its family by floods. The small beaver had not been able to find the way to its native lodge. We consulted about fodder for the beaver infant with Barbara Mertine, from the Austrian Donau-Auen National Park. She is known for the successful breeding of beavers. She recommended Sunar infant milk enriched with pasteurized cream and ground fruit with a "Children Nutrition" trademark. Once the orphan strengthened, it changed over to fresh branches with leaves and buds. We release treated or grown up individuals from our station back to the countryside. Our small beaver was, however, an extraordinary case. With regard to its early entrance into human care, it would not be able to adapt to life in the wild, especially as young beavers live with their parents for up to

three years. We have transferred the beaver to members of the rescue station in Pavlov, where Václav Chaloupek, a director, script-writer, and breeder, can use it for his works. This well-known animal enthusiast took the beaver from Brno Zoo on 18 June. It is thus possible that after the TV series, "Otter Boy," there might be a "Beaver Boy" series. (red)



Václav Chaloupek with a beaver from the rescue station at the Brno Zoo





On 18 May, we released three palm cockatoos [Probosciger aterrimus] (Gmelin, 1788) to one of the recently refurbished expositions in the exotic bird pavilion. Their origin is unclear. They come from a suspicious consignment of eight individuals seized by customs officers in Olomouc in 2006. They were designated as state property in 2008, and an environmental inspection allocated them to the care of the Prague Zoo. Our zoo has also been interested in breeding this species. Thus, one male and two females have been transferred with the consent of the Ministry of the Environment from the Prague Zoo to the Brno Zoo. Both zoos have the status of a CITES rescue centre, the mission of which is to provide asylum to animals coming from the black market, or seized from breeders that cannot prove that they have relevant authorisation for breeding.

The palm cockatoos, rare and breeder-appreciated parrots, fascinate visitors by their unusual appearance. They are the biggest representatives of the cockatoo family [Cacatuidae]. They weigh from 910 to 1200 g, and their total length ranges from 51 to 64 cm. They have black



◆ Palm cockatoos



feathering with a bluish gloss. Their heads are decorated with a crest of long back-turned feathers, and they have strong grey-black beaks, bigger than their skulls, which can crack even the hardest nut. A featherless blaze on their faces is covered with skin of various shades of meat-red colour. The shade depends on the subspecies as well as on the state of the bird. It is deeper during the period of mating, and lighter when the birds are in a worse condition.

The native home of palm cockatoos is New Guinea and some adjacent islands. They also live in the northernmost promontory of the Australian continent - Cape York. Three to four subspecies have been described, which do not differ much from each other. (Our birds obviously belong to a nominate subspecies.) They live in wet virgin forests up to the elevation of 1300 m above sea level, and they are quite clear-cut food specialists, highly sensitive to chemically treated crops. They especially feed on seeds or whole fruit,

particularly of palms. We mostly serve them various nuts palm, macadam, hazel, pecan, cedar, pistachio, and Brazil nuts, and also almonds, peanuts, corn cobs, grain, and special granules. They do not like citruses, bananas, mangos, and broccoli here; therefore, we have tried new kinds of fruit and vegetables. They move in smaller groups around the virgin forest and they only live in couples for the period of nesting. They build their nest in tree holes, where females usually lay a single egg only. (The biggest possible laying is three eggs). The young hatch out after 28-33 days of incubation. Parents gradually strew the nest hole with wooden chips, the layer of which grows deeper. Thus, the young are continually in a clean environment. Breeding in captivity is rare. It is unsuccessful especially because the adults usually do not have an optimal composition of food. The palm cockatoos live up to the age of fifty.

The Red Book of IUCN ranks the palm cockatoo among the little-affected species (the Least Concern category). At Cape York, however, they can be endangered by the loss of habitat in near future due to bauxite mining. The natives in New Guinea, where approximately 3,000 couples nest, catch them to trade in the black market. An extraordinary demand for this species raises the price, which can be hundreds of thousands of Czech crowns per bird.

Because of this, trade in palm cockatoos has been included in the strictest degree of protection - CITES I according to the Washington Convention. The European Association of Zoos and Aquaria established a European Endangered Species Programme (EEP) for the palm cockatoo. The European Breed Book is kept by the French de Beauval Zoopark, and there is also a North American Regional Breed Book.



Young wolves collected in a box before the vaccination

We Took Out Ten Contended Wolf Cubs

Breeders in the Brno Zoo have carefully monitored this year's reproduction cycle of the Arctic wolf. A kind of climax to this was the catching of ten wolf cubs and their chipping, vaccination, and de-parasitation.

We noted the signs of the females' being on heat in February and March. It is not easy to recognize that a bitch wolf has delivered. At the turn of April and May, females have long winter fur, so a swollen mammary gland cannot be seen. We can only observe contamination around the genitals. We can also be guided by the behaviour of adult animals: If a person comes near, the wolves divert attention from the lodge where the young are placed by keeping away from it. The young stay in the lodge for the first two weeks after delivery, and are very calm. A lodge is checked by a breeder by approaching it and listening. Weak, happy voices signal that the young have been given suck from their mother. When nothing is heard next time, a breeder pokes with a stick into the lodge, and the young are heard again. A pack does not usually actively defend a lodge and holds off, assuming that an intruder will leave soon. A man need not worry about the Arctic wolf. If it is in distress, e.g., driven to a corner it cannot escape from, a typical reaction follows: It curls up into a ball and puts its head on the ground without trying to defend itself.

According to our monitoring, the first female delivered on 30 April, and the other one on 4 May. We could not ascertain the total number of the young for a long time. After they started to appear around the lodge, they continuously appeared and disappeared underground, and we could only count how their

numbers increased on the following days: four, six, nine... It began to be obvious that the young of both females prosper in the lodge, and last year's tragedy has been forgotten. Confidence among the members of the pack has significantly deepened since then; wolves started expanding the underground lodge and have dug another two entrances into it.

The time of "compulsory" vaccination of the young approached. However, it was not possible to catch the wolf cubs. When anyone approached them, they disappeared to the safety of the lodge. We underwent the first exploration of the underground on 26 May. The two swiftest members of the breeding team alternated in trying to crawl through a narrow entrance. They found out that the lodge splits after approximately two meters, and the puppies were outside their reach, in a side cave.

We only managed to vaccinate the young at the second attempt, on 18 June. Our "speleologists", equipped with a catching loop and a head torch, were also supported by a volunteer, the slimmest breeder. In the meantime, the wolves had extended the lodges and connected them, so the underground system was accessible to all three exits. This time, the breeders got deeper. Their whole bodies disappeared in the lodge, crawling out immediately afterwards dragging small puppies. We put them in a box at the paddock until we had ten of them. We searched the lodge and walked around the runout once again to exclude the possibility that a young one could be hidden somewhere.

The examination confirmed the very good health condition of the puppies. We gradually passed them to a vet at the paddock. Each pup got an injection of vaccines against distemper, rabies, and other diseases,



Vet dosing a de-parasitation vaccine



The last vaccinated young wolves before their return into the run-out

and swallowed a preparation for alimentary track deparasitation. The vet treated their body surface with a spray against ectoparasites, and took a scraping from their mouths for a potential genetic analysis. He marked each of the puppies with an identification microchip. We also determined the sex: six of the young are males, and four are females.

> Ing. Miloslav Walter, Gamekeeper in the Beast of Prey Department





