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the magazine for friends of the Brno Zoo

special supplement

ZOO REPORT PROFI

The Content

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UNSALEABLE

It's Necessary to Preserve Threatened Species for Next Generations

It's been already six years since the mankind has begun the journey through the new millennium. However, an indisputable fact remains – just as in the previous years, a number of animals and plants will again die out on Earth this year. It's that sadder that these losses are irreversible and they always drain the nature for ever. One of the main aims for people in the nearest future will be to stop the destruction of the nature and preserve its diversity during the human population growth, so that the necessary quality of life would be maintained.

Ing. Milan Venclík with his dog called Black

The zoos take an important position while carrying this aim out. Already for a long time, the zoos are not just a place, which offers the visitors a short opportunity to look into the animal kingdom. These facilities play a specific role in nature preservation today. The zoos take part in saving endangered species by breeding them and in connection with that, they are more and more often titled as "gene banks" for the future. Their educational character and their appeal on changing the human preferences in favour of the environment conservation are also not negligible. The zoos are the right places for ecological education. The ecological education is as important as the animal breeding nowadays.

I'm glad that Brno has such place, too. Its zoo, which belongs to the most important zoos in the Czech Republic, has a lot of species in its collection that have been almost completely wiped out in wild by man. A CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) rescue centre, which takes care of the animals confiscated from the illegal trade, also works there. CITES, as a part of UN programme targeted on environment, plays an important role in controlling the international trade with plants, animals and items made of their bodies. The Brno Zoo also keeps a rescue station for handicapped animals at disposal.

List of all the activities, with which the Brno Zoo supports the preservation of endangered species for next generations, would be too long for the space that this essay was given. The zoo entered the new millennium with a symbolic step, namely as a regular member of the World Association of Zoos and Aquariums (WAZA). My personal wish is that the activities, which the zoo shows both in favour of the endangered species and the ecological education and scientific research, would be rewarding in growing number of visitors and increasing international prestige.

Ing. Milan Venclík,
Deputy Governor of the South Moravia Region

Ing. Milan Venclík

was born in 1957 in Brno, where he lives till nowadays. He graduated from the Faculty of Technology of the Brno University of Technology and several years later also the Faculty of Mechanical Engineering. After the university, he worked as a technician, later as a director and a chairman of the Prakom Brno Corporation. From 1998 to 2002, he was a vice mayor of the Brno-North district. From 2000 to 2004, he was a member of the Regional Development Council of the South Moravia Region. In 2004, he was elected a Deputy Governor of the South Moravia Region.

In his spare time, he likes to walk his dog in the nature, plays recreationally tennis and golf and listens to classical music.

Great rheas

Three New Pairs of Birds

In the end of May, the Brno Zoo breeders managed to create new pairs of three species of birds that the zoo has kept without the possibility of reproduction so far.

Red-crowned cranes at the back female, in front male

The rarest of them are the Southern cassowaries, the flightless birds of the Palaeognathae superorder, from New Guinea and the most Northern part of Australia. Lately, we have been breeding one cassowary that was born at the Prague Zoo in 1999 and came to us in 2001, classified as a male. One day, a rather surprised keeper found a typically green coloured egg in the exhibit. The discovery that we have a female was pleasurable, because it is easier to find a male for a breeding pair. Colleagues from the Ústí nad Labem Zoo complied with our wishes, because they also had just one cassowary - a male - and they were ready to cooperate. This cassowary was born in Indonesia in 1994. Also this one "changed" its sex – it had been registered as a female till 2005. The sex determination by the cassowaries is probably not that easy, even though there are differences between the sexes – the females are bigger, more coloured and they have a bigger "helmet". But there is a high variability within the species.

The most distinctive characters of the Southern cassowaries are the wattle and the "helmet". The wattles consist of sharply coloured outgrowths that sag on sides of the neck and are distinct by various tones of red, blue, yellow and white. The "helmet" on their head is a light cellular osseous process. The Cassowaries live in rain forests and also in more open forests in savannas and in secondary vegetation up to 3000 m above sea level. The male alone builds the nest, takes care of the eggs and the young ones; he stays with the female only for several weeks during the mating – the female leaves for another male after having laid the eggs. Because the male is used to be most of the year alone, also the pairs in captivity usually live apart and it's the same in Brno. We put the pair together during the mating, of course.

Another pair was created by the Red-crowned cranes. We got a female as a gift of the Moscow Zoo for the 50th anniversary of the Brno Zoo founding. We got a young male from the Vienna Zoo in May. One year old crane still looked like a fledgling - he was partly covered with russet feathers. The feathers went partly white in the next two months; an adult bird is completely white – except black wingtips, black neck and a red spot on the forehead. The Red-crowned crane comes from Korea, Manchu part of China and Japan. It lives in wetlands. It's the most beautiful kind of crane, often shown in traditional oriental visual art.

Third pair was created by the Greater rheas, which belong, same as the Southern cassowaries, among the flightless birds of the Palaeognathae superorder. They live in South America. The Brno Zoo has been keeping this species since 1998. Until recently, we have kept two females. One of them has died. Then we have imported a pair from the Olomouc Zoo, so now, there is one male and two females walking in the South American exhibit.

We had already been breeding the Greater rheas in the past and now, we'll most probably

Male of Southern cassowary

have young ones again. If only we would have fledglings also by the two species mentioned above, whose descendents do not appear that often.

Bc. Eduard Stuchlík

Photo by: Archive Schönbrunner Tiergarten

A pair of orphaned Indian rhinos from Nepal's Chitwan National Park is the newest addition to the world's oldest zoo

Tiergarten Schönbrunn in Vienna – the world's oldest Zoo

It was on July 21st 1752 when Emperor Franz Stephan I. of Lothringen presented his new menagerie of "rare animals" to his wife Empress Maria Theresia and a few eclectic noble guests. The menagerie consisted of 13 radial segments around a center pavilion, 12 segments constructed as animal enclosures of at least 1300 m^2 each, and each with a small house designed as sleeping quarters for the animals. The 13th segment accommodated the administrational building, which it still does nowadays. At that time the center pavilion was used by the Emperor for having breakfast among his animals, as well as for important negotiations. Now the pavilion is a restaurant from which visitors can observe cheetahs, giraffes, zebras and antelopes in historical ambiance. Between then and now lies a long, changeful history.

Currently Tiergarten Schönbrunn holds around 5100 animals of 480 species on a size of 17 ha. Especially since the founding of the new limited liability company, the Schönbrunner Tiergarten, Ges.m.b.H., in the year of 1991, many improvements in animal husbandry have taken place: new adequate monkey enclosures were built, a new big cat enclosure followed, and also elephant husbandry changed completely. In 1994 the Tyrolian farm was opened which now houses local endangered breeds of domestic animals. Bird husbandry improved by removing small cages and replacing them with large aviaries. In 2002 koalas came to Vienna, new enclosures for Japanese serows, spectacled bears and lions followed, and the rainforest house opened. In 2003 a pair of Giant pandas arrived in Vienna, a research and breeding loan for a ten-year term from the Peoples' Republic of China. They now live in the historic elephant house which has gotten to small for elephants in 1996. The newest addition to the zoo is a 6000 m^2 enclosure for a pair of Indian rhinos from Nepal, which have just arrived this year.

Accoring to Heini Hediger "a zoo is never finished" and there are many more projects to come, one of which is a new spaceous Orang-Utan enclosure in the historically first green house in Schönbrunn - another sizewise increase to the zoo.

Despite all renovations, new additions and modern husbandry it is still necessary to save Tiergarten Schönbrunn as the baroque cultural monument that it is. In 1997 Schönbrunn became a UNESCO cultural heritage site and now attracts almost 2.000.000 visitors a year. It is not only a fascinating recreational spot with modern animal husbandry in historically precious architecture but also supports many conservation projects, carries out research, and fulfils its educational mission.

Within the last 254 years Tiergarten Schönbrunn has managed to rise from an Emperial menagerie to a tourist attraction and preferred recreational spot for Viennese, as well as the country's conservation center. So we will continue to write the history of this traditional Viennese Institution in the sense of animal welfare and conservation. *Dr. Helmut Pechlaner, Director of Tiergarten Schönbrunn*

Photo by: Archive Schönbrunner Tiergarten

Since 2003, a pair of Giant Pandas lives in the historic elephant enclosure.

Schönbrunn Menagerie according to the Nicolaus Jadot's plans from the 18th century.

Eagle owls

Little owl

Eurasian Scops owl

Long-Eared owls

Owls at the Brno Zoo (2)

In the first part of the article about owls at the Brno Zoo, published in the previous issue of Zoore-port, we have reported about Snowy owls, Hawk owls and Barn owls. There remain five more kinds from the Brno collection to describe. All of them can be found in the so-called bird's alley, which is a line of aviaries near the administration building, where we keep the native birds of prey and owls.

The Eagle owl *(Bubo bubo)* is the biggest European owl. This species has a very large habitat that covers almost the whole Eurasia, except the Southern and the most Northern parts. It is relatively abundant in our country; its population is being estimated up to 1000 pairs. It can catch a prey up to the doe's height and it often catches even some other kinds of owls.

The Eurasian Scops owl *(Otus scops)* is critically endangered in the Czech Republic. It is a very small owl with outstanding camouflage dyeing. This night bird blends with bark very well. Owing to its size, it catches mostly insects; it is limited by this kind of prey so much that it is constrained to migrate to Southern areas for the winter. Its habitat is also large, from South Europe it reaches the West Siberia; this owl also lives in the Asia Minor, Middle East and North Africa, from where it migrates as far as to the equatorial Africa. The

A Tawny owl before releasing into wild

A Tawny owls in exposition

A Tawny owl released up the tree

A Tawny owl released in forest

Czech Republic is a border habitat, it acts as a nesting place and these owls live here only from spring to autumn.

The Little owl *(Athene noctua)* is a highly endangered member of our avifauna. It lives in parts of North Africa, in almost whole Europe and in a big part of Asia. It had been nesting in almost every village in our country till the half of the 20th century; it is a synantropic species – it lives near human settlements. Now, it is an object of conservationists' and also zoo workers' attention, because, same as many other species, it is endangered by advancing landscape industrialization with spreading transport, unremitting nor by night. There is a programme for this species that aims to strengthen their decreasing original population. Together with the local chapter of the Czech Union for Nature Conservation in Břeclav, the Brno Zoo is monitoring the occurrence of the Little owl in Southern Moravia for already several years. We do so by recording the male's voices and by detecting their nesting territories. Raising young ones in captivity and them adding some of them into the wild nests should be another step forward. Unfortunately, we are not very successful in rising recently. Our zoo has a pair of the Little owls; the female had laid eggs and incubated them correctly in May 2006, but the embryos have died of unknown reasons at the end of the incubation period.

In the complex of expositions of our birds of prey and owls, the visitors can also see species that are quite common in our country, but due to their night activity, it is not easy to see them. We can rather hear them. One of them is the Long-Eared owl *(Asio otus)*. This bird has such specific feather ears that it is really impossible to mistake it with another owl. We register the Long-Eared owl in the Rescue Station for Handicapped Animals. Usually so-called permanent handicaps are being put into the exhibits from the station, facilities of which are in the hinterland of the zoo. That means these specimens are not able to return to the wild from various reasons, but they can satisfactorily live in the zoo. The Long-Eared owl lives in almost whole Europe, middle Siberia, parts of North Africa and North America.

Similar to the Long-Eared owl by its body size and habitat is the Tawny owl *(Strix aluco)*. Also in this case, the visitors can see specimens born in wild that came to us after they had been found injured. This year, we have already released two recovered Tawny owls found in the Brno area into wild. Also this species is quite common in our nature.

The care of the owls shows us the role of today's zoos in nature preservation.

Ing. Daniel Zeller, Ph.D.

A Polar bear cools itself during filling of the pool

Reflecting the Hot Summer

During this year's hot summer, people asked us more often, how do the animals stand the heat and what do we do for them to survive the high temperatures. We don't have to take any measures. But we have to observe the animals to have enough water to drink and operating shelters that protect the animals not only from sleets and snowstorms, but also from impertinent July sunbeams. We also have to control the food not to be too energy substantial.

Human experience that the best way to stand the heat is in the water is not quite valid in the animal kingdom. Animals have more superior thermoregulation mechanisms. At the Brno Zoo, they mostly outlast the heat period relaxing in shades of full-grown trees. In water, except water turtles and water birds, we can usually see only the tapir or the polar bear; moist places in exhibit are searched by the elks, who spend long hours in water or mud in wild. We have been hosing water only at two lamas that could still hardly find some shade in the new Children's Zoo.

The high temperatures bear on animals similarly as on people, but animals stand them better, because they are adapted to life in wild and thus they can overbear the temperature fluctuations better. The heavy coat protects the animal both from cold and heat and sunshine. The shower would not help such animal, the water does not reach the skin; it would rather do more harm – the fur could get mowburnt. How do the reindeer outlast the heat? They lie in the shade and they show no concern for the water sprayer that irrigates the grass in the exhibit.

Water is the element for the Polar bears, it is certainly comfortable for them to sense the surroundings that is colder then air at least by their nose and paws. We can deduce from the individual approach of our two Polar bears that they don't get much cooler by jumping into the pool: the female can spend long hours in the water, while the male calmly lies under the rock overhang. Even such species as the Polar bears can stand the heat; it is quite warm even in the Arctic in the summer after all. The Polar bears are being kept even in zoos in subtropical or even tropical regions, e.g. the Singapore Zoo even breeds them.

Animals have various kinds of thermoregulation developed. The mammals cool themselves by increased perspiration. The ungulates perspire by their whole body surface; the beasts only by their paws, so that other animals could not smell them during the husit. The body temperature can be decreased by, e.g. rapid breathing with slightly open mouth and tongue out; well perfused big ears, e.g. by the fennecs, are also effective. The elephants can wave their large vascular ears intensively. The hippos excrete a slime that protects their body surface from the UV radiation and also the bright gnu's fur reflects the sunbeams.

The birds don't have the sweat glands, but they also know how to resist the heat. The rapid breathing with slightly open beak is common by birds. Many bird species have their specific cooling mechanisms, e.g. the pelicans vibrate the jugular wattle, the marabous piss on their legs and the vaporising fluid cools them.

The animals adapt themselves to the heat by decreasing or changing their day activity, e.g. the reptiles and some rodents even fall into "summer" sleep.

Jan Kameník

Alpaca (left) and lama in shower

Rare Iguanas from Madagascar Were Born

We have reached another breeding success of an all-European importance at the Tropical Kingdom pavilion, known for its rearing of rare lizards, e.g. Rhino iguanas, Cuban iguanas or Jackson's chameleons. After two-and-half-months long incubation, two Collared iguanids *(Oplurus cuvieri)* were born on 27th July 2006, as a second generation born in captivity. Third descendant arrived from the second egg laying on 21st August. The parents come from the Rotterdam Zoo, which was the only zoo in Europe to breed this species so far. The Brno group consists of two males and one female. Although this species doesn't stand out with colourfulness or body magnificence, it surely deserves our attention. After all, 95% of Madagascar reptiles, including iguanas, are endemic species; at the same time, the mass burnout of the forests quickly reduces their living space. *(red)*

Collared iguanid (a young one)

A show case with a rhino skull

Display Called Let's Save the Rhinos!

The display called Let's Save the Rhinos!, enabled in the cellars of the Permanent Aquaristic Exhibition from 18th May to the end of this year, is the Brno Zoo's contribution to the rhinos saving campaign of the same name, declared by the European Associations of Zoos and Aquaria (EAZA). A skull of an Indian rhino that lived at the Dvůr Králové Zoo is probably the most attractive item. Also the displayed shin and brachial bones belong to this specimen. In the show case, we also may find a skull casting of a Woolly rhino that lived in our region and fragments of its elbow and brachial bones. Both the findings from the Šipka cave and the rhino's bones from the zoo were lent by the Moravian Museum. The mission of the display is to inform the public about the critical rhinos' situation in most places of their habitat and that everyone of us can contribute to their saving, e.g. by buying souvenirs with a rhino motive offered in the shop At the Tiger at the Brno Zoo. Part of the sale earnings is transferred to the accounts of the saving programmes. The display also introduces a list of up to now declared campaigns for saving wild animals and shows the works of the children's competition on the subject of rhinoceros. *(red)*

Bisons: Larger Exhibit and Another Young One

The Brno Zoo breeds the Bisons, the well known bovine even-toed ungulates from North America, since its foundation; since then, a lot of young ones were born on the "Mniší hora" hill. The present breeding group consists of three females born in Brno (the oldest one in 1983 and the two younger ones in 2001) and a young male (born in 2002), originally from the Prague Zoo. Immediately afterwards creating this group, the male proved himself as a sufficient progenitor of the new breeding. The first arrival came on 11th June 2005 and another one on 18th October this year. Both the young ones are females. The male, three females and one year old heifer were in an alternate exhibit (previous camel and guanaco exhibit) at the time of the birth of this year's young one, because their original exhibit was being enlarged and further adapted. They all returned to their place on 16th September, when the new area was inaugurated. The ugly metal bars disappeared and the animals are divided from the visitors only by a moat now. We placed a wooden fence on the remaining bars on the opposite side of the exhibit, the hayloft near the exhibit got a new shape and an Indian village was built behind it. *(red)*

A young bison is guarded also by its father

Geladas and Barbary sheep

The Geladas prefer to rest on a big stump.

Heiko, the youngest of the three Geladas

New Barbary Sheep and Gelada Exhibit

After the renewed Children's Zoo, the common exhibit of the Barbary sheep *(Ammotragus lervia)* and the Geladas *(Theropithecus gelada)* became another novelty this year. It was made by adaptation and enlargement of the original Barbary sheep exhibit. We have built a heated dormitory for the Geladas, equipped the enclosure with electric fence, covered the tree trunks, so that the animals wouldn't browse the bark and placed collars on the trees near the fence that prevent the apes to climb up the treetops and jump over the fence. We also have brought rocks into the exhibit, on which the Geladas like to relax. There is a group of fourteen Barbary sheep, including this year's and last year's young ones, and three Geladas in the exhibit.

We may find common exhibits of Barbary sheep and Geladas, Rhesus monkeys or other kinds of medium sized apes in other zoos, too – often, we can watch one or two apes riding on the back of satisfied Barbary sheep. The Barbary sheep don't have the typical goatee, but they have a long mane on the neck and forelimbs. They come from the mountains of North Africa from Morocco to Sudan, where they climb up to 2500 m above sea level.

We classify the land apes Geladas to the Baboons. They live on rocky hillsides and grassy plains of the high mountains in Ethiopia and Eritrea at the height of 1700 - 4500 m above sea level. The name Gelada probably comes from an Arabian word that means "mane". The males have long hair on their back and shoulders that create a sort of mane. They weigh about 20 kg, their body is about 70 cm long and the tail may be up to 50 cm long; the females are smaller, they weigh about 15 kg. A red blaze on the chest bounded by white hair is their distinctive mark. This blaze turns even redder and the white pimples bordering the blaze swell up by the females during the mating season. The Geladas eat almost exclusively grass; it makes more than 90% of their food during more rainy periods and when the grass seed ripen, these seed make 70% of their daily ration. They scrape out rootlets and bulbs during drier periods. The Geladas also eat fruits, blooms, leaves, insects and small mammals.

The Geladas communicate between each other intensely. For that, they use not only wide range of noises, but also mimicry, for which they use the bright eyelids and curling of the upper lip. They live in larger groups made of separate harems. We may find even 600 apes together. The Geladas, registered in the Red List of Threatened Species, are admittedly protected, but the farmers still kill them. They are truly protected only in the Semien Mountains National Park, where the major part of this species' population lives.

All of the three geladas in Brno come from the NaturZoo Rheine in Germany and they all are males – they should be a genetic reserve. The oldest is Fricek, born on 14th November 1984; nowadays, he is the oldest Gelada kept in European zoos. (The Geladas live to 30 years in captivity.) The other two males are much younger, Helge was born on 11th November 1999 and the youngest one, Heiko, on 21st October 2000.

In the European zoos, the breeding of the Geladas is controlled by the European Endangered species Programme coordinator; according to him, it is currently not appropriate to create new breeds – that's why he allowed to bring only males from Rheine to Brno. But if the group in Brno will be doing well, it is possible that a need for reproduction will occur also in this breed in future.

Mgr. Jana Kantorová

Polar Bears in New Exhibit

It was almost a historical step for the Brno Zoo, when the Polar bears moved from the place, where they had lived since their arrival six years ago, to a large natural area after the Brown bears on 5th June. The often criticized exposition, where the beasts lived in confined space with concrete floor and high concrete walls, disappeared forever. At the same time, the change of their home will bring better conditions to other animals, too. The baboons, whose present dormitory is already obsolete, will move to the abandoned Polar bears' exhibit that will satisfy the apes well after an adaptation. And as the Geladas already moved from the monkey's pavilion to a new exhibit, the chimpanzees' living space will be enlarged several times. In the end, the Brown bears will improve their position as well; we have moved them to another zoo for the time being. In after years, we will build a new exhibit for them, even bigger than they had so far.

The first steps of the Polar bears in their new home were shy – they didn't know the view to the surroundings. After a while, they started to play with a piece of frozen meat and after a half hour, the white giants encouraged themselves to jump into the pool; they were also quite exhilarated throwing the meat into the pool to take it out again...

The Brno Zoo gained the two Polar bears in 2000. The male called Umka came from the Alma-Ata Zoo, Kazakhstan, where he was born in 1998; he was bred artificially. The female Kora, almost at the same age, comes from the Sankt Petersburg Zoo, Russia; she was bred by her mother. In Brno, the animals came to a breeding facility that indeed fulfilled the standards for this species, but the quite small exhibit was sunk under the level of surrounding terrain, which is improper for bears and also the concrete design was not a nice decoration.

Polar bears with a piece of frozen meat

We have noticed the first mating in 2003 and then in 2004. Kora became pregnant the next year and she gave birth to two cubs on 1st December 2005. Unfortunately, both died, even though we tried to prepare calm surroundings for the female. The Polar bears will find much better conditions in the new exhibit. Only the zoos in Prague and Brno have a chance to breed a new generation of the Polar bears; other Czech zoos don't breed them, only the Ostrava Zoo keeps one female.

The Polar bears live in the coastal areas of Arctic from Alaska through Canada, Greenland and the Spitsbergen to Siberia and the Arctic Ocean islands. They mostly feed on meat of caught seals, in summer, they eat carrions of walruses and whales beached from the sea and they vary their menu by berries in tundra. Together with the Kodiak bear and the Siberian Brown bear, it is the biggest land beast; it may weigh up to 800 kg and the erect body may be up to 3,3 m tall – these proportions apply only to males.

Numbers of the Polar bears in wild have plunged in the middle of the last century, there were only about 5000 specimens left after an uncontrolled hunting. Today, the hunting is under control and the present population rose to about 40 000 specimens. But there arises another danger for them: the seals populations, their main food component, decrease; the natural food chain is being corrupted by chemical pollution that already affects even the Artic and the mining and oil production damages the places, where the bears use to have their lairs.

Bc. Eduard Stuchlík

First bath in the new exhibit

Red-crowned cranes