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ZOO report

the magazine for friends of the Brno Zoo

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The Content

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Kamchatka brown bears

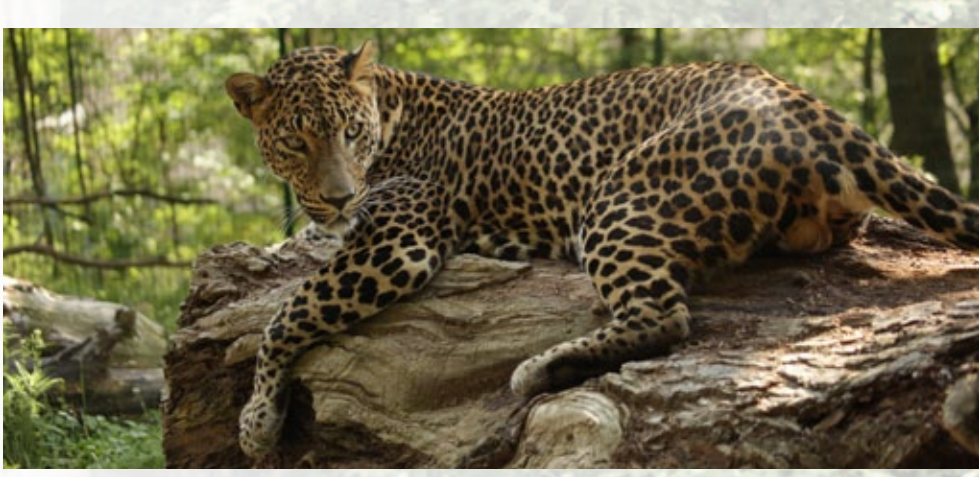
UNSALEABLE

Zoos and the UN Decade of Biodiversity 2011–2020

Good zoos and aquaria have changed substantially in the past 50 years: They have pledged their efforts to ensuring that not only do they provide a great day out for their visitors, but that they also contribute in a significant manner to conservation either ex situ or in situ or both. In addition, they also provide conservation education and conservation research opportunities on their premises. We know we do this – but do our public and our local, regional, and national politicians? What about our media and non-zoo conservation organisations? Are we underselling our activities and, therefore, the role of good zoos and aquaria in the modern world?

Each EAZA member institution does try and get the word out about its fantastic work, but perhaps we can all do this a little better by signing up to be partners in the UN Decade of Biodiversity 2011-2020 (http://www.cbd.int/2011-2020/). EAZA signed up to be a partner in 2011 and, despite highlighting this opportunity to its membership, so far only three EAZA members are additionally listed as partners. Why so few, I wonder? Signing up is straightforward; and becoming a partner means that you can freely publicise your conservation events on the Decade of Biodiversity webpages. This, of course, means that other people and organisations worldwide know what you are doing to help to achieve the global so-called 'Aichi' targets.

So much of what zoos and aquaria are doing on a daily basis is helping to reach the targets, so why not shout about this a bit more? Let's take the first target: *By 2020, at the latest, people should be aware of the values of biodiversity and of the steps they can take to conserve it and use it sustainably.*



Good zoos contribute in a significant manner to conservation. On the photo: a Sri Lankan leopard at the Brno Zoo

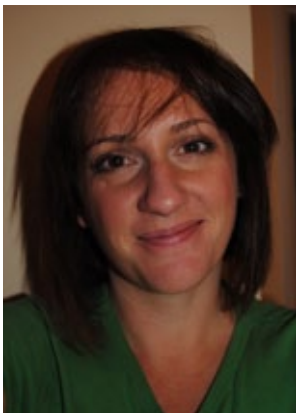
What other non-governmental network in Europe does more to promote the value of biodiversity to ordinary citizens, in such huge numbers, than the collective membership of EAZA? In the past decade, more than 1 billion visits have been made to EAZA zoos and aquaria. In the coming UN Decade of Biodiversity, an estimated 1.4 billion visits will be made to those same zoos and aquaria. In the new 2013-2016 EAZA strategy being developed this summer, educational aims are very much taking their cue from Target 1 above, bringing in us as a community to help to meet that target.

Target 12 states the following: *By 2020, the extinction of known threatened species should have been prevented; and their conservation status, particularly of those most in decline, should have been improved and sustained.*

It is important to note from this target that it does not define the prevention of extinction as being in the wild per se. While it is absolutely true that real conservation success can only be assumed when a species is safe in nature, an important step towards that status is sometimes found through ex situ conservation, which can provide a safety net or rescue function. The valuable work being undertaken by some zoos in securing threatened amphibian populations in captivity, along with efforts to counter the deadly chytrid fungus in the wild, is an example of such work. Target 12 also means that zoos must continue, and indeed increase, their work in supporting field conservation – either through funding of other bodies or by taking part as partners in the field.

There are many other goals in the full list of 20 Aichi targets for 2020 to which zoos and aquaria already contribute; and I would urge all directors and their staff to acquaint themselves with these. We contribute to biodiversity conservation in a vast number of ways. I urge you to sign up as partners to the UN Decade of Biodiversity, and to let even more potential collaborators know about your work.

Dr. Lesley Dickie,
Executive Director of the European Association of Zoos and Aquaria

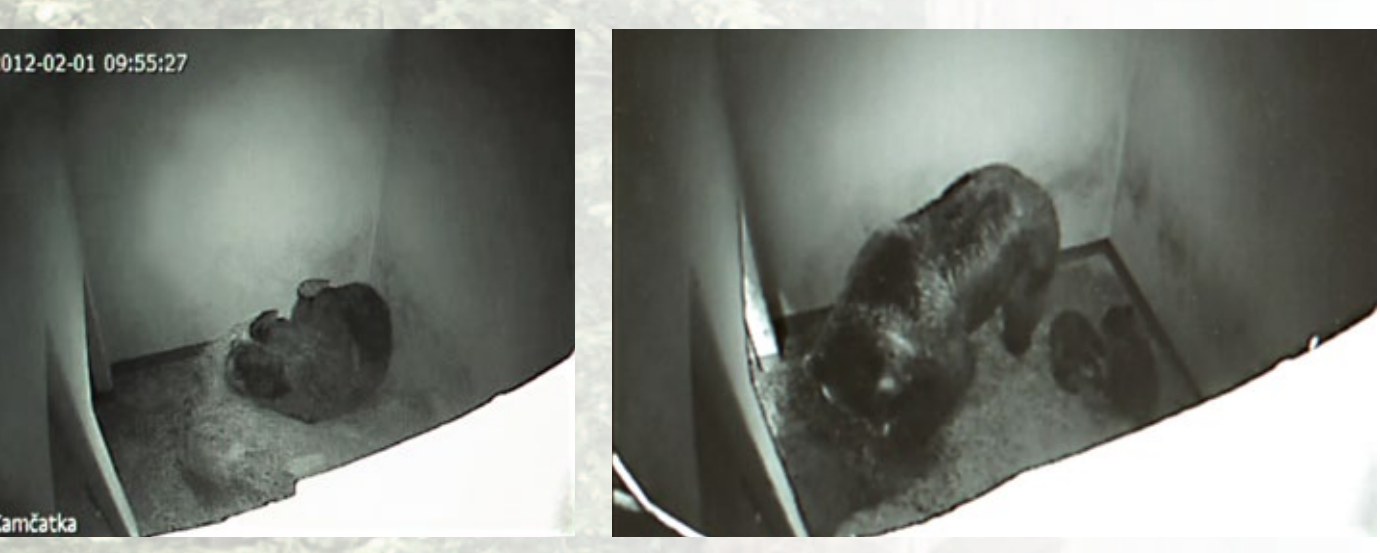


Dr Lesley Dickie

was educated at the universities of Glasgow (BSc Zoology), Cambridge (MPhil Biological Anthropology), and London (PhD). At Queen Mary, University of London, she undertook her PhD work entitled, 'The Behaviour and Reproductive Physiology of the Fossa (Cryptoprocta ferox) in Captivity'.

She began her career in zoos at the Royal Zoological Society of Scotland as a records- and zoo-keeper at Edinburgh Zoo. After completing field work in Madagascar and finishing her doctorate, she began working at the Zoological Society of London, latterly as the Zoo Conservation Programme Manager. Lesley is an editor of the book 'Zoos in the 21st Century: Catalysts for Conservation?' (published August 2007), co-chaired the 2006/07 European Association of Zoos and Aquaria Conservation Campaign and the Madagascar Campaign, Arovako i Madagasikara, and was, until August 2008, the Year of the Frog Global Campaign Manager, working 50% of the time for Amphibian Ark in this capacity, while continuing to develop conservation projects for the Zoological Society of London.

As of 1st August 2008 Lesley, took on her current role as Executive Director of the European Association of Zoos and Aquaria, based in Amsterdam. EAZA is the world's largest zoo and aquarium association, with 345 members in 41 countries. More than 140 million visits are made to EAZA member institutions each year.



An image from the web camera as it relayed images from the Kamchatka brown bear birthing box, taken two days after the birth. The young animals still cannot be seen, as the female was holding them against her body. On the right is an image taken approximately one month later

Kamchatka Brown Bear Female Has Given Birth to Twins

On 30th January 2012, the Kamchatka brown bear female at Brno Zoo gave birth to twins.

The Kamchatka brown bear pair have lived at Brno Zoo since October 2010, when they were transported here from their home zoo in Rostov-on-Don in Russia; they had already raised young there twice. After their arrival in Brno, we placed them in the freshly completed breeding facility, a dominant exhibit in the entry area of the Beringia complex where animals from northern regions are housed. The breeding facility of the Kamchatka brown bear exhibit contains a birthing box with a built-in camera which monitors what's happening inside, as well as four interconnected sleeping quarters. As well, it is equipped with an area for food preparation, and a room for keepers. It also features a paddock, of course, a lake for the bears to bathe in, and mock geysers and mud volcanoes within the 4,306 m2 enclosure.

We observed the first mating of the male bear, Jelizar, and the female, Kamchatka, at the beginning of March, and the last one as late as towards the end of May. This mating period was much longer than that of polar bears, for instance, who mate within a period of only approximately 14 days. It was therefore hard to determine, even roughly, the expected date for the birth. The length of the gestation period in bears is considered to be from 180 to 266 days - a wide range - as it is mainly influenced by the climate and the accessibility of food. The mother's body adapts to these sorts of problems in such a way that the fertilized embryo might not develop for a certain period. The difficulty of determining the expected date of birth is also amplified by the fact that, with regard to the long fur of these large animals and the relatively small size of the fetus, pregnancy cannot be ascertained visually.

We inclined the most towards a birth date in February, though we couldn't rule out its taking place even as early as the end of November. The entry to the birthing box, cushioned with hay, was thus left continuously open for Kamchatka during the day as well as at night, even when she was still spending time with Jelizar. It was believed that when she was about to give birth she would probably look for this place, as she had spent her short hibernation there the previous winter while Jelizar was resting in his neighbouring sleeping quarters.

A precondition for successful bear breeding is the proper nourishment of the female before the onset of winter. The mother-to-be must add large supplies of fat to her body so that she is able to survive the winter in her underground hiding place and nurse her young. During autumn feeding, we provided an unlimited amount of feed (ad libitum) for the bears, so they fed themselves as much as they liked. The basic components were foodstuffs provided all year round: fruit, vegetables, bread, and oat flakes. As far as meat is concerned, the bears were given only fish (mackerel and herring). The quantity was increased significantly before the winter. Acorns which fell from oak trees growing in the enclosure were an ample food supplement; the bears had eaten them all by the beginning of winter. As ascarids sometimes appear in the digestive tract of predatory mammals, the vet sprayed a preparation effective against parasitic worms into Kamchatka's and Jelizar's mouthes, dehelminthizing them.

At the end of the year, when Kamchatka had consumed enough food, she stopped eating; and, from the middle of January, she started to spend a lot of time in the birthing box. When this occurred, we separated the pair. We decided that Jelizar would spend the winter in a natural way in the enclosure where he had already dug a small burrow, and that Kamchatka would remain in the den by herself: She would have absolute peace there.

The birthing box where the highly pregnant Kamchatka settled was watched by the camera system. However, it was the soft squeaking audible in the servicing corridor that notified us of the birth of the young bears. It was then clear that Kamchatka, curled up in the corner of the birthing box and lying with her back towards the camera, was holding the new arrivals in her paws. We could watch these precious animal nursing moments right from the very beginning on screen. (More information can be found on pages 6 and 7.)

Ing. Miloslav Walter,
warden of the Predatory Mammals section

We Are Protecting Some Animals that Could Disappear from the Foothills

The Orlické Mountains, part of the wall of mountains surrounding the Bohemian basin, are located in the northeast of Bohemia near the international border with Poland. The nature reserve of the same name, the area of which is 204 km^2, consists of mainly mountain ridges, in which the highest peak is Velká Deštná (1,115 m above sea level).

Forests cover 75% of the area of the nature reserve. Originally, mainly herb-rich beech woods grew in the Orlické Mountains although, in the higher-lying ridge areas, there also used to be spruce beech woods. However, from the 15th century, the forests in this area started to be used mainly as a source of fuel for glassworks. At present, extensive faster-growing spruce monocultures can be found in the region, and only fragments remain from the original types of overgrowth. These are found mainly in small protected areas or in the first zone of the reserve.

In recent years, the administration of the reserve has initiated the revitalization of water courses, a step which aims to return them, at least partially, to their natural state. The measures taken include the insertion of large boulders and dead wood into stream beds, and

Photo by Blanka Mikátová

Common viper

the building of pools which are suitable for the lives of endangered species of fish such as the European minnow *(Phoxinus phoxinus)* and the European bullhead *(Cottus gobio)*.

Seven species of amphibians have been discovered so far in the Orlické Mountains. The administration of the nature reserve has gradually built almost one hundred pools of various sizes in which the alpine newt *(Triturus alpestris)*, the smooth newt *(Triturus vulgaris)*, the common frog *(Rana temporaria)*, and the common toad *(Bufo bufo)*, amongst others, currently reproduce.

As far as reptiles are concerned, the most abundant species in the Orlické Mountains is probably the viviparous lizard *(Zootoca vivipara)*. The common European viper *(Vipera berus)* is relatively frequent, too. Many vipers are coloured black in this region (melanism). Thanks to their black colour, they can reach their "operating temperature" faster in the mountain environment. A typical sign which makes vipers easy to distinguish, the zigzag line on their back, is missing in black-coloured vipers. The protection of the reptiles' habitat is necessary for their survival. From this point of view, the conditions offered by the nature reserve in terms of forest-free biotopes are very precious - moorland, sunny slopes with scattered bushes, piles of stones, old ruins, and former quarries.

Up to now, more than two hundred birds have been observed in the Orlické Mountains, of which more than half (122) are nesting species. The Orlické Záhoří bird region, which is part of the Natura 2000 system, was created to protect the corncrake *(Crex crex)*. It is home to one of our strongest populations of that species (up to thirty regularly calling males every year). Measures taken to support the population of corncrakes include the creation of waterlogged areas in the flood plains of the Divoká Orlice River which are suitable for the nesting of this species.

Concerning mammals, it is mainly representatives of the Chiroptera order that deserve one's attention. Seven kinds of bat are recorded quite regularly at the wintering places here. These are located in extensive underground areas, in old mines as well as in the ruins of frontier fortifications from World War II. For example, the rare Geoffroy's bat *(Myotis emarginatus)* spends the winter in Hanička fortress as well as in some other places in the Orlické Mountains.

Intensive forestry and agricultural production in the foothills of the Orlické Mountains have a negative influence on the animal community. The pressure of civilization is growing ever stronger. Therefore, consistently protected areas are often the only option for a species seeking a final place of refuge.

RNDr. Blanka Mikátová,
Zoologist of the Administration
of the Orlické Mountains Nature Reserve

Photo by Josef Hájek

The Kunštát Chapel stands on the main ridge of the Orlické Mountains at a height of 1,035 m above sea level. There is an upland moor with a typical plant community in its neighborhood

Photo by Blanka Mikátová

Greater mouse-eared bats

Kamchatka brown bears love water

The Little Bears Are Staying with Their Mother

At the beginning of this year, visitors to the Kamchatka brown bear enclosure at Brno Zoo were only able to view the male bear, Jelizar. The female, Kamchatka, was spending all her time in the birthing box, where she was looking after two cubs born on 30th January 2012. It was only later that she ventured out with her children into the adjoining sleeping quarters or the paddock. The almost historic day when we released the mother and her cubs into the outdoor enclosure occurred on 25th May. Since then, the feeding of Kamchatka and her little cubs has been taking place with a commentary four times a week (Tuesdays, Thursdays, Saturdays and Sundays, always at 10 am) and has become a big attraction for visitors. The male lives separately from the rest of his family and alternates with them in the outdoor enclosure. If we unite the whole family then it will be when the boys have grown up a bit and their mother has stopped nursing them.

But let's go back to when the raising of the young bears began. Kamchatka looked after her young with great care, and the keepers tried to provide the mother and her babies with the best environment possible. The air in the birthing box had an optimum temperature of around 10 °C and 40 to 60 % humidity. There was almost absolute darkness there (weak light also reaches the winter hiding places of bears); the camera focused on the den recorded images using only the infra-red spectrum of electromagnetic waves.

In the first days after the birth, Kamchatka mainly held her cubs with her paws against places where they could best gain warmth from her body – in her armpits and groin. In these places, the fur of female bears is very thin and so is the layer of subcutaneous fat. When she put her little bears on their bedding, she pulled hay gently over them as protection. The young bears drank their mother's milk at intervals which could be distinguished according to the sounds they were making. At first, they screamed loudly; however, the frequency and intensity of screaming gradually decreased and there were fewer responses. When drinking, the young cubs could choose from three pairs of nipples with which Mother Nature had equipped the female bear – two pairs on the breast and one on the stomach. (Therefore, complications with access to food occur only when more than three young are nursed.) For approximately the first six weeks, the lives of bear cubs also depend on their mother's massaging their stomach and anal areas so that their digestive tracts can be emptied. Kamchatka's intensive licking of the young was recorded in rich detail by the camera system. One of many other observations which was interesting was an experience from the 30th day after the birth, when we spotted the shining points of the baby bears' eyes on the monitor: The cubs had opened their eyes for the first time. (The young are born blind.)

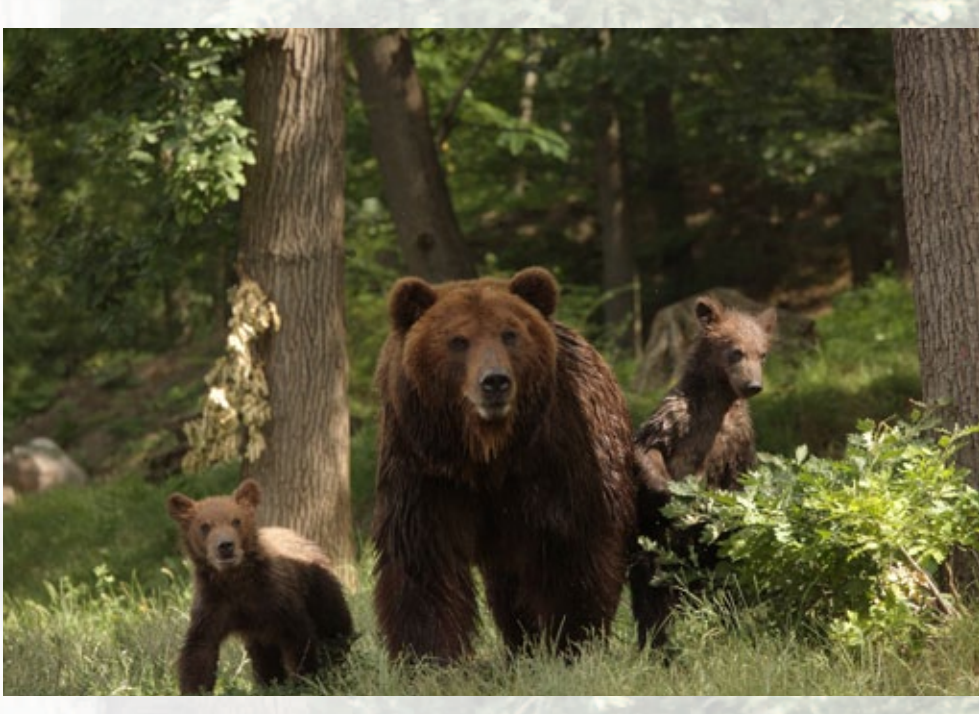
In about the middle of February, Kamchatka went to the neighbouring sleeping quarters, brought back cabbage and apples which had been lying there since before the birth, and ate them gradually. (Even in the wild, mother bears sometimes leave the den in order to find something to eat.) However, she otherwise spent the early stage of nursing mostly in a half-sleep, pressing her young to her body or with them attached to her nipples. The baby bears only

Resting by the spring

dared to move away from their mother during the second half of March, on what was approximately the 50th day after their birth. They also played together more and more. It was a great pleasure for us to watch their fights and arguments. From the 10th of April, Kamchatka became more active and began guiding her young. It was possible to catch her sitting in the corner and pressing the cubs towards her more and more often. We started to switch on artificial lighting during the day in the neighbouring boxes, and from 12th April we started providing supplementary food (fruit and vegetables) for the mother bear in the sleeping quarters neighbouring the birthing box. At the beginning, she just peeked out for a short while and then pulled her food inside. She retained her aggressiveness and had to be handled with caution. At that time, the young started to leave the birthing box, and we could see them for the first time directly, without any recording media. Another step was that we opened the entrance to the paddock, and the cubs could see the blue sky for the first time. They only came out for short times at first, and remained close to their mother's legs all the while. However, as time went on, they turned into more daring individuals who ran into the daylight themselves to get a piece of bread. From the food offered, the young bears preferred bread and oat flakes, then fruit, and finally fish as the last choice.

We first separated the young from their mother on 26th April. We had to vaccinate and deworm them, which is a standard part of the veterinary care that is performed for all young animals at the zoo in order to maintain hygiene standards. We managed to do this by trickery. First, Kamchatka went to the courtyard where food was lying as bait, leaving the little bears behind. We then quickly closed the passage from the den to the courtyard, took the cubs, and carried them to a vet, who declared that their health was good, discovered their sex, and announced: "We have two boys!" Then he sprayed a deworming preparation into their mouths and injected under the skin a vaccine which is effective against parvovirus, distemper, hepatitis, leptospirosis, and rabies. He also inserted an identification chip under the skin of each one, and weighed them, finding them exactly the same weight – ten kilos. (A report about the christening of the baby bears is on the following page.)

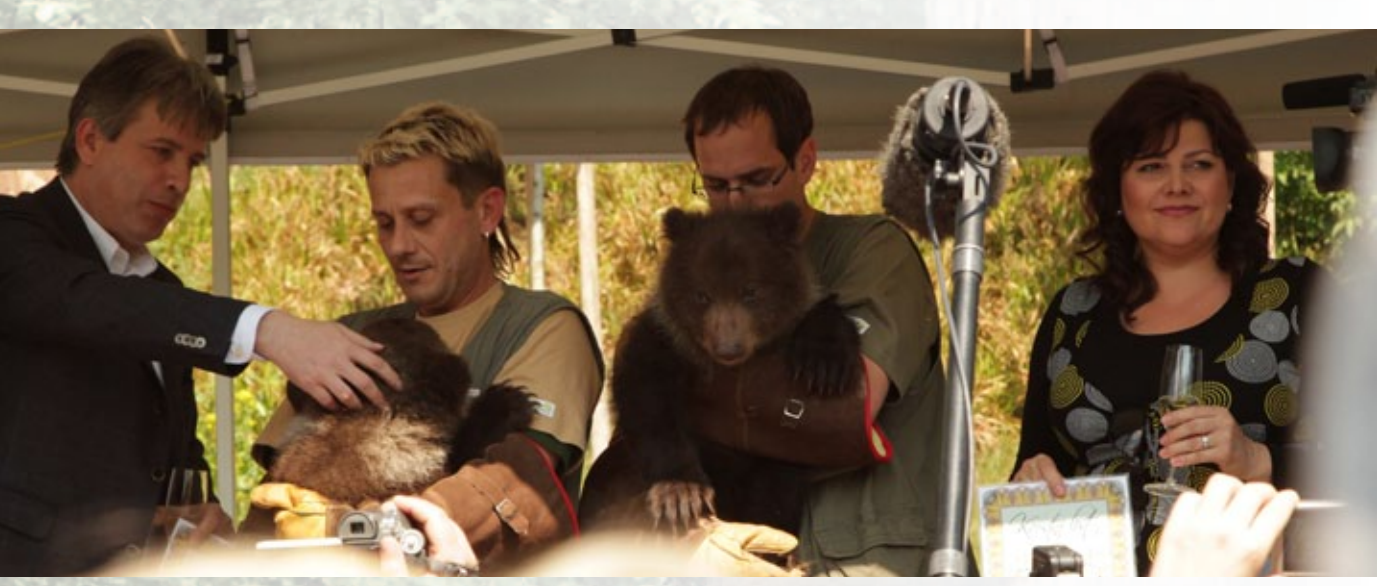
Ing. Miloslav Walter,
warden of the Predatory Mammals section



The female bear tries to keep her children under control at all times

The playful cubs often enjoy teasing each other

When the little bears climb up a tree trunk, the mother gets agitated because she can't follow them, and patiently waits for them to climb back down



The mayor of Brno, Roman Onderka, became Toby's godfather, while the second little bear was christened Kuba by singer Ilona Csáková

Toby the bear cub

The Little Bears Were Named Kuba and Toby

The Kamchatka brown bear twins born at Brno Zoo in January this year were christened by the mayor of Brno, Roman Onderka, and singer Ilona Csáková on 8th May, which is an important holiday in the Czech Republic.

About ten thousand visitors came to the zoo that day. The ceremony, which took place on the stage in front of the entrance to the Beringia exhibit complex, was the first occasion on which the public could see the long-expected bear cubs with their own eyes. Up until then, they had known the bears only from broadcasts from the web camera that was placed in the birthing box or from TV reports and photos in the press taken during the first vaccination.

The christening was the climax of the specially arranged afternoon programme, which started with a series of feedings with commentaries at various enclosures and finished at the Kamchatka brown bear enclosure where the father of the closely watched cubs appeared in his full glory and majesty.

The programme officially commenced at 2 p.m. with a performance by the Dětský sbor Brno (Brno Children's Choir). The young singers, who were dressed in white and held fluffy teddy bears in their hands, focused on the theme of these popular predatory mammals. For example, one of the pieces presented was called Bear Jazz. After the choir had finished singing, the programme continued with performances by Ilona Csáková, Karel Gott Revival, a drum group from the Kociánka social care institute, and a juggler from the Divadlo Kufr theatre.

In the meantime, the separation of the mother from her young took place successfully, and the keepers carried the bears to the stage where the godparents were already waiting, pushing through a cordon of spectators to the sound of excited shouting. The young bears, held in the arms of two strong men, then watched calmly and with interest as champagne ran down the christening certificate. Ilona Csáková christened one of the bears Kuba, and Roman Onderka became the godfather of Toby. The names were chosen by the public in a poll via electronic mail, Facebook, the zoo web pages, and other Internet media or radio surveys. The names Kuba and Toby beat those of Bruno and Tigil every time. About fifteen thousand people decided on one of three pairs of names, which had been selected from 1,075 ideas sent to the zoo.

After the christening, the keepers walked through the crowd along a narrow aisle with the baby bears, with the shutters of the visitors' cameras clicking for the last time. In front of the entrance to the den, the vet revaccinated the cubs, who we then we returned quickly to their rightfully angry mother. Even though it was only for a short while, it was already the second time we had stolen that which means everything to her - her beloved descendants.

Eduard Stuchlík

Brno Children's Choir, whose members regularly take part in performances at Brno's National Theatre (among other events), sang at the christening of baby bears Kuba and Toby

Polar Bears: Preparation for the Winter Starts in the Spring

This year, most visitors arriving at Brno Zoo first head for the brown bear exhibit. While they are enjoying watching the large female, Kamchatka, and her frolicking young, many of them will remember that there were other bear young - polar bears - which could also be seen at this zoo several years ago. They are eager to find out how the legendary pair, Cora and Umca, are doing. They are quite pleasantly surprised to learn that these polar bears spend most of the day together, communicating very actively with one another and entertaining themselves with various games in the swimming pool, as water is their natural element. For example, they throw pieces of ice with fish and fruit frozen inside, which have been provided by the keepers, into the water - and then fight for the goodies.

Cora (left) and Umca

The bears' preparation for the winter period spent in their den starts very soon, one can almost say at the end of spring. In early June, when bears eat the most, Cora and Umca each consumed ten kilos of meat (mainly beef but also sometimes horse meat) every day. We also provided fish for them (mackerel). Apart from that, each of them received half a kilo of fish fat and other supplementary food daily. (Afterwards, bears gradually take smaller and smaller doses of food until shortly before the onset of winter, when they eat hardly anything.) The creation of a sufficient supply of subcutaneous fat is particularly important for the female. If she is pregnant, she will remain in the den for several months in the winter, and it is risky to provide supplementary food for a female who is looking after her young, at least during the first phase of breeding. We cannot know whether Cora is pregnant. However, our breeders noticed our polar bears mating several times at the end of March and beginning of April. *(red)*

Dreamnight Was Once Again Full of Experiences

On the first Friday of July, Dreamnight at the Zoo - an event organized for handicapped children and their families - took place again at our zoo, as well as at many other zoos both in Europe as well as on other continents. It was the eighth such event in Brno. From 6 p.m., the zoological gardens belonged only to about two thousand invited guests.

Dog handlers from Brno's Municipal Police demonstrated training techniques during the Night of Dreams

The main action took place at the amphitheatre named "At the Camel's Enclosure", where individual artistic performances were combined with live music from the country band New Stuntmans. The Mimi Fortunae dance theatre shone with the pre-première of their scenic composition *Hallelujah*, while the Komíňáček group in their folk costumes showed examples of folklore from around Brno. The theatre Divadlo Kordb captured the souls of both young and old with its fairy tale about Sinbad; and the Abanico dance group performed first a dance marathon and then a polka.

Although Dreamnight extended throughout the zoo, there wasn't a single location that didn't offer the guests fun experiences. The Children's Zoo was particularly busy; all of its swings, seesaws, climbing frames, and bouncy attractions were fully occupied. The farmyard with its domestic animals was also popular, and anyone interested could try his hand at rodeo riding behind the stables. Pony riding was available for children at the Indian Village near the bison enclosure. Skills were tested at the creative workshop at the Safari viewpoint, which also played host to dog handlers from Brno's Municipal Police, who showed just how well trained their four-legged helpers are. At six places - near the tigers, giraffes, bison, squirrel monkeys, peccaries, and meerkats - guests could watch the animals feeding, accompanied by a commentary. The pavilions were open and the tigers' sleeping quarters were lit up until 10 pm. *(red)*

Sand cats

The Topics at the Meeting of Six Commissions Included Sand Cats

About fifty keepers from almost all member zoos of the Union of Czech and Slovak Zoological Gardens, as well as specialists from other institutions, participated in a common meeting of the members of six specialized commissions, which was held at Brno Zoo from 17th to 20th April this year.

The Union of Czech and Slovak Zoological Gardens, founded in 1990, is a group of twenty zoos. Its mission is to share professional experience, establish international connections, and influence society as a whole. Twenty-eight specialized commissions, managed by a coordinator, operate within the Union. The permanent commission members are representatives of member zoos appointed by their directors.

The Brno meetings of commissions for large cats, small cats, Old World monkeys, gibbons and apes, lemurs, and New World monkeys mostly took place in the audio-visual hall of the zoo's administrative building. However, some of them occurred in the evening, enlivened by the provision of refreshments and the projection of photographs and films from trips to exotic countries. These meetings were held in the open air, in the courtyard of the Beringia exhibit, surrounded by the Kamchatkan houses.

A meeting of the commission typically commences in the form of an overview, in which the representatives of individual zoos acquaint their colleagues with the current situation as regards the breeding of species managed by the given committee at their zoological gardens. Afterwards, the keepers and zoologists who have registered their own papers take the floor. Their topics included, e.g., the current situation with the range of the South China tiger, and the possibility of returning predatory mammals to the wild. Most commissions also discussed animal feed, particularly the sustenance of monkeys.

The first block of papers covered at the small cats commission meeting was by Brno Zoo's Michal Balcar, who gave a presentation on the breeding of sand cats. As he emphasized, our zoo has now succeeded in naturally breeding the sand cat for the third time. Four young were born in 2010 – three males and one female. The grown-up males have left for Nesles Zoo in France, while the female has gone to Zamość Zoo in Poland. Our sand cats also had kittens in 2009. At that time, two males and one female were born. One pair of these went to Tallinn Zoo in Estonia, and the remaining male went to Ohrada Zoo in South Bohemia. The first natural breeding in Brno took place in 2000.

It is definitely planned that the breeding of sand cats will continue at Brno Zoo. According to the coordinator of the small cats commission, Mgr. Jiří Novák of Ostrava Zoo, we are playing a key role in their ongoing their breeding. Our breeding pair – the female, Eva, born at Krakow Zoo in Poland in 2007, and the male, Osiris, born at Bristol Zoo in Britain in 2002 – are still of reproductive age. At present, Brno Zoo is the only member of the Union which breeds this species. Only Ohrada Zoo keeps another sand cat, a male, so far unpaired, which was born in Brno.

One of the many papers at the Brno meeting that caught the listeners' interest was that presented by RNDr. Milada Řeháková-Petrů, Ph.D., from Děčín Zoo. She had managed to rediscover a critically endangered endemic species on the Philippine island of Dinagat, the Dinagat Island cloud rat (*Crateromys australis* Musser, Heaney & Rabor, 1985). Up until now, this rat was known only from one example found in 1975. Numerous scientific expeditions have been searching for it in vain for the thirty years since its discovery. Perhaps its second meeting with a zoologist was also the last one, as Doctor Řeháková pointed out that the habitat of the Dinagat Island cloud rat is endangered by the mining of nickel, which is preceded by the cutting down of primeval forests.

Eduard Stuchlík

Milada Řeháková's lecture on the rediscovery of the Dinagat Island cloud rat, illustrated by a video recording, took place at the Beringia exhibit courtyard among the Kamchatkan houses. The projection screen is ready and we are waiting for dusk...

The young Steller's sea eagles in their nest

Steller's Sea Eagle Pair Have Raised Two Chicks

Hundreds of baby animals are born every year at Brno Zoo. We consider the greatest breeding success so far this year to be the birth and successful raising of a pair of young Steller's sea eagles *(Haliaeetus pelagicus)*.

Our pair, brought together in 2008 and made up of a thirteen-year-old male and an eighteen-year-old female, seem very promising. They began their attempts to breed in 2009 with the laying of two unfertilized eggs. Last year, another two were laid, one of them fertilized, and we were able to celebrate our first breeding success. Our prediction that another two eggs would appear in the nest this year, and that both would be fertilized, was fulfilled. The female began sitting on 28th February, right after the laying of the first egg. After two days we found another egg in the nest.

The natural raising of young eagles is often accompanied by what is termed Cainism, where the earlier-born chick pecks its younger sibling to death in its attempts to gain enough food for itself, or simply prevents the younger one from eating until it dies of starvation. It is possible to avoid these problems in a zoo environment by preparing doses of feed which have an optimum composition. Also, Cainism is less common when there is only a short time between births, which was the case at our zoo. Given these two factors, we decided to leave the raising of both young completely up to their parents, whatever the consequences.

The young eagles first saw the light of day on the 5th and 6th of April. The mother was of course very strict in watching her territory, so even simple feeding was an adventure for us. Long months after the birth of their young, these adult raptors loudly protected their nest (and indeed, the whole aviary), quite prepared to attack any 'invaders' with their beaks and claws. We provided the eagles with an unlimited supply of food comprised of quails, feathered poultry, ungutted rabbits, and fish. Feeding with foodstuffs that include feathers, fur, internal organs, and bones is necessary for the successful development of young eagles.

In June, the young birds still differed from their parents in their so-far uncoloured feathers and lighter-coloured beaks, though they were approaching the same size as the adult birds and thus took up almost all the room in the nest, which they had yet to leave. The older baby was noticeably bigger, and was more often seen

Just before they started to fly, the young eagles set out on a walk along their perch, which extends from their nest across almost the whole aviary

standing up in the nest to practice waving its wings. At the end of the month both young eagles had gained enough courage for a walk along their perch, which extends from their nest across almost the whole aviary.

Our breeding pair constantly work with great inventiveness to improve their nest. This year, for the first time, they used clumps of grass as bedding. This inventiveness is perhaps the foremost characteristic of the pair. They also deserve praise this year for managing to bring up two chicks so well.

Ing. Miloslav Walter,
Warden of the Predatory Mammals section

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