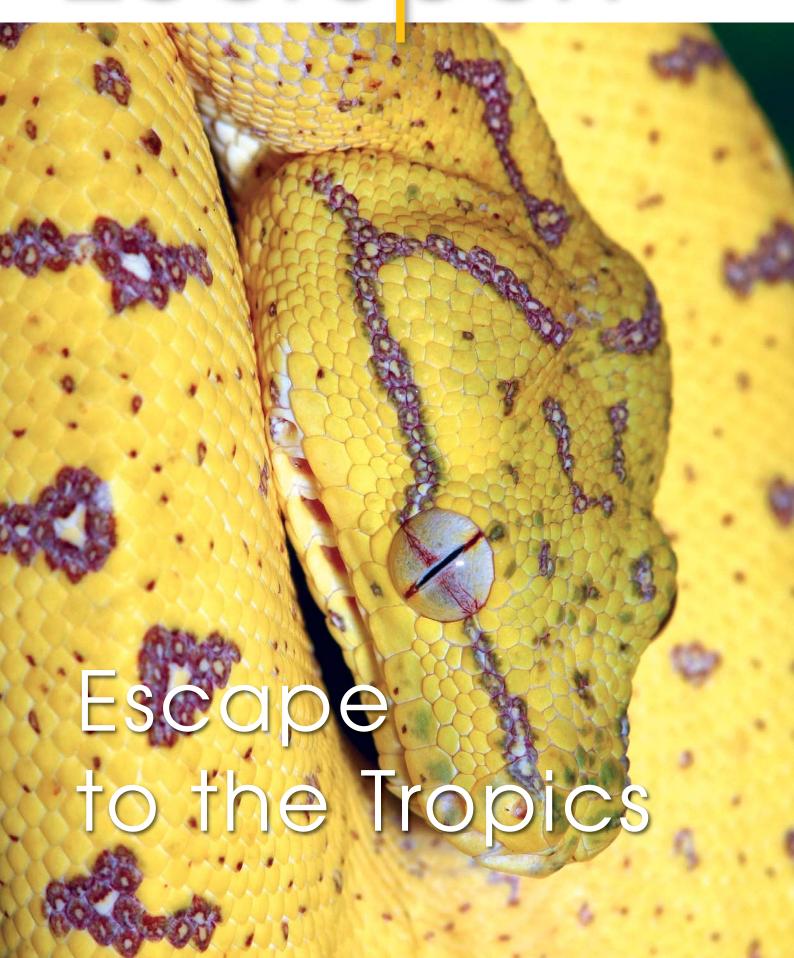
The magazine for friends of the Brno Zoo

No. 1 april 2019



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UNSALEABLE

EDITORIAL

Dear readers and friends of Brno Zoo,

The beginning of the year brought sub-zero temperatures and frequent snow. There is nothing simpler than sitting down by the fireplace with a cup of tea or coffee while watching a favourite movie or series. In the winter, I spend much more time with my pets - common leopard geckos (Eublepharis macularius). They have summer practically all year round. Not that I envy them; but, while it's raining outside, I dream of moving to the hot desert. And in the zoo, you can dream not only of the desert, but also dream of the dense rainforests of South America, Australia, or New Zealand.

In the pavilions, which are still heated, you can observe the life of the rainforest and its trees. Last year, a couple of Javan ferret-badgers (*Melogale orientalis*) were transferred to Brno. These animals live in the trees of the Indonesian forests. This pair is unique to Europe, being the only couple of these rare animals to be found on the old continent, and they are right here, in the Tropical Kingdom Pavilion in Brno. They are soon to be moved to the Tiger Rocks exposition.

In 2018, in the nearby Exotarium Pavilion, we had the second most valuable breeding of young southern three-banded armadillo (*Tolypeutes matacus*). The same pavilion is inhabited by animals from the tropical areas of Australia and New Zealand, by many examples of the



Columbidae family, or by terrarium or aquarium animals from this area, e.g. green tree pythons (*Morelia viridis*) or Roti Island snake-necked turtles (*Chelodina mccordii*), which you cannot see elsewhere in the Czech Republic. They are critically endangered by extinction, the last several live in the wild, with less than three hundred in human care, and four young ones have already hatched in Brno, and there are more than 20 eggs still in our hatchery! Among the rare offspring is the young jaguarundi (*Herpailurus yagouaroundi*).

You will also be invited to popular spring events organized by Brno Zoo. Do not miss Easter in the Zoo, Welcoming Spring, or Magic Zoo!

We look at nature conservation from a tropical point of view. Brno Zoo helps

to protect turtles in Indonesia, and is also involved elsewhere in that region. You will learn an interesting story about the rescue of endangered marine reptiles and also about the swans living wild in southern Moravia who were returned very quickly to their parents thanks to the workers from Jinačovice.

I wish you a gentle start and a long spring in the true sense of the word, with gradually blooming vegetation, and as I have said, pleasant reading by the fireplace, under the blanket, at the terrarium, or wherever your favourite place is.

Bc. Marek Sláma Zooreport Editor



Javan Ferret-Badgers Are Inconspicuous

In the pavilions of the Brno Zoo you can find several slightly overlooked animals which would be a great shame not to notice. Here, before your very eyes, are animals that you cannot see elsewhere in Europe. This is exactly the case of the Javan ferret-badger (*Melogale orientalis*). An unobtrusive pair of these animals from the *Mustelidae* family arrived here less than half a year ago.



Typical features of Javan ferret-badgers include white stripes on the head and cheeks.



The breeding concept of Brno Zoo deals with evolutionary stages. Thus, in one part of the zoo, there are exhibits of island fauna: At the Tiger Rocks pavilion, visitors can see examples of island species from Indonesia. Among the mammals, there are Sumatran tigers (Panthera tigris sumatrae) and Prevost's squirrels (Callosciurus prevostii) that inhabit the islands of Celebes, Borneo, and Sumatra, as well as the Malay Peninsula. Island species can be quite different from land-based species, often differing in size. An example of this can be seen from a comparison between the Javan ferret-badger and the European badger (Meles

This year we will open an exhibit titled "They Live With Us" at the lower part of the zoo, where the European badger will be presented. Due to the close proximity of the two types of badger, curious visitors will find that Javan ferret-badgers are significantly smaller. They live in branches of trees and shrubs, which is not possible for the European badger, which digs burrows and lives on the ground.

Javan ferret-badgers live on the islands of Bali and Java. There, they are relatively common and are often synanthropic. (In other words, they live close

Tree life. Panji and Candra can often be spotted hanging out on tree branches.

to people.) For the inhabitants of Indonesia, it is very surprising that Czech zoologists regard this animal as a breeding jewel. Likewise, we in Europe find it bizarre that animals that are commonly bred here, such as Barbary sheep (Ammotragus lervia) or North American beaver (Castor canadensis), are treasures for the Indonesians. In return for these two species (specifically for four Barbary sheep and one North American beaver), we received the ferret-badgers Candra and Panji.

In the wild, they are omnivores, eating both plants and animals. The ratio between these food components changes only when some fruits ripen. The female, Candra, has a calm nature, and we can confidently label them as quiet, happy animals.

A New Home

At the airport in Prague, the processing of documents necessary for the transfer of animals has been greatly expanded, so our zoologists provided food (their favourite, bananas) for them to replenish their energy after their long flight. The male approached the banana with distrust, barely sniffing at it. The female grabbed it and began to squeeze it. On the way to Brno, she slowly ate it all. When they arrived and were quarantined, the male, Panji, immediately hid and fell asleep. Candra, on the other hand, sniffed the food dish, settled down, and contentedly started eating. When she was satisfied, she fell asleep, so we knew that she would not have any problem getting used to her new environment. Fortunately, even Panji, who apparently just needed a rest, was taking his food the next day and actively studying his new home.

These animals are not too picky, eating almost anything. Because of this, we monitor the amount of food so they do not fatten too much. Each day they receive both plant and animal ingredients, and the animal portion of the feed is changed daily.

They spent several months in quarantine. All our new animals must pass through this department until the results of various veterinary tests are available. These range from parasitology to bacteriology and virology, including an overall health check. In parasitology, our couple had a mysterious specimen in their faeces with coccidia present, which are parasites inhabiting the digestive tract of animals. The vets and zoologists investigating this have been unable to place these pests in a particular taxon; so they let them proceed through other phases of the life cycle, but they still do not match any known species from this group of parasites. Research continues, but efforts have begun to describe a new species of these parasites.

Javan ferret-badgers rest in tree branches during the day. Just look up a bit higher than you normally would so you don't miss this European rarity, which is here right before your eyes!







Big hairy armadillos cannot curl into a ball, but the defensive function of the skin on their nose and back is obvious.

Ancient Armadillos are Armoured with Keratose Plates

Fauna of the South American tropics are represented in Brno Zoo by a very old group of mammals: armadillos. They are part of the superorder Xenarthra, which may sound like a contradiction, because armadillos have many tiny teeth. However, this term does not refer to the lack of teeth, but to their small differentiation. In recent years, southern three-banded armadillos (Tolypeutes matacus) and big hairy armadillos (Chaetophractus villosus) have been living on Mniší hora. Both couples have offspring, and are very engaging for visitors if they are seen during the active part of the day.

The larger of the two species, the big hairy armadillo, inhabits the exhibit in the middle of the Exotarium Pavilion. They are fast diggers, using their strong claws together with a specialized breathing device. In the wild, they spend most of their lives digging in the soil looking for worms and other underground invertebrates, as well as for smaller vertebrates. In the winter months, they also supplement their diet with various tubers and other nourishing underground parts of plants.

They build their own dens, the exits of which are always interestingly oriented with the direction of the wind, by excavating dirt or digging under thick vegetation. The home lair can be com-

plex, with multiple chambers and emergency exits. They can quickly dig a temporary shelter, which is shallow and has a protective or food storage function. When a predator attacks an armadillo, he quickly leaves the hole in which he lies and turns the fixed plate of horn he wears on his back toward the attacker.

In the wild, they inhabit the central and southern parts of South America except for Patagonia. They enjoy mostly open and partially open habitats. They are able to adapt and live in the countryside, especially in smaller woods. In recent years, they have been intensely hunted, their main enemy being farmers. However, the wild population was able to respond strongly and has effectively overcome this threat. The big hairy armadillo is the less affected species.

No armadillos have a perfect defensive strategy. Only two species of armadillo are able to curl into a ball. Big hairy armadillos cannot. Southern three-banded armadillos and Brazilian three-banded armadillos (Tolypeutes tricinctus) can create an impenetrable protection in a second by curling into a ball, the southern three-banded armadillo's being an almost perfect sphere. This discourages any predator. How can they do that? On their backs, the creased plates of the corneous skin are connected with a flexible skin. They can fully devote themselves to collecting food, which in the wild is comprised almost exclusively of insects, curling when touched or shocked.

Southern three-banded armadillos live in western Brazil, eastern Argentina, Paraguay, and Bolivia in open and par-



Detail of a young southern three-banded armadillo. Photo Michal Vaňáč

tially open biotopes such as pampas or pampas crossings in forests. Their strong claws serve primarily to break down anthills. The sense of smell of most armadillo species is so sensitive that it records the presence of invertebrates up to half a meter below the surface.

In the Exotarium Pavilion, you can see the young female southern threebanded armadillo Júlia, who has twice been a mother. Her first cub was born on July 20th, 2017, a male we named Baboo. Just after he had grown to adult size, he went to reinforce breeding in the zoo in the capital of Latvia, Riga. The second cub, Che, also male, was born on October 6th, 2018, and is still growing. At present, Che and his mother occupy the aforementioned exposure, but in the weeks to come they will be moved to the Tropical Kingdom Pavilion. The father of both cubs, Ricardo, modifies the exposure depending on whether it is a good mating season.

The main threat to armadillos in general is that they are hunted for meat, trading, and subsequent illegal breeding as pets. The big hairy armadillo is threatened by being hunted for the pro-

duction of traditional charango folk music instruments, amongst other things. In the folk culture of the South American continent, these instruments are believed to be a form of liberation of the soul of the armadillos who, all their lives, wish to be charming and singing wildlife creatures. The Bolivian folk tale, "About the Armadillo Who Learned to Sing," can be read in the children's appendix. But the greatest demand for this musical instrument is created by tourists who buy it as a souvenir to bring home.

An important risk to the southern three-banded armadillo is the destruction of its habitat: shrubs and grasslands. In addition, armadillos are threatened by the urbanization of the environment. The construction of new roads increases the risk of a collision with a moving car. When vehicles are near, sensing the vibrations, the armadillo, which can only see poorly, curls up immediately. In nature, the vibration of the soil means the arrival of a predator or an earthquake, both of which are life threatening for armadillos.

At Brno Zoo, on July 13th, 2016, one cub was born, a male who subsequently was sent to Pilsen Zoo.



Young big hairy armadillos grow very fast and soon reach the size of their mothers.

Jana Moravcová takes care of both species of armadillo at Brno Zoo. Here she is pictured with a southern three-banded armadillo. Photo: Petr Šrámek

I cannot say in which species the breeds are more complex or more valuable. At Brno Zoo, two juvenile southern three-banded armadillos were raised, both males, and one male big hairy armadillo. The last juvenile southern three-banded armadillo was gaining almost 100 grams a week at the time of its fastest growth. Today (January 17th, 2019) he weighs exactly one kilogram.

Armadillos are favourites of breeders

As for the armadillos in the Exotarium Pavilion, Ing. Jana Moravcová takes care of them. Her arrival at Brno Zoo dates back to 2012. After studying at Mendel University, she applied for a breeder position and, more than one year later, the job was hers. She learned about monkeys at the Tropical Kingdom, but spent most of her seven years in the Exotarium Pavilion.

In this pavilion, we can meet all classes of vertebrates, such as fish, amphibians, reptiles, birds, and mammals. Which of these is your favourite?

I cannot answer this; The breeder must know the demands of each individual animal, whether a group is closer to him/her or not. But if I had to choose a favourite, I would focus on a group of mammals and birds. I know we should talk about armadillos, so I can't miss them out. They are definitely one of the favourites of all the breeders in our pavilion. It is easy to handle them and, of course, just look at them: It's clear to everyone that they belong among the favourites.

For example, with the nine-banded armadillo (Dasypus novemctincus), there are known cases of claws so strong that they are even able to damage low quality concrete. Are

these species of armadillos in Brno? What are the differences in the breeding of these two species of armadillos?

You would be surprised, but although the big hairy armadillo is smaller than the nine-banded armadillo, it can also damage concrete even if it is not of inferior quality. Therefore, big hairy armadillos must be in a concreted exposition in the middle of the pavilion. When handled, they also produce a typical unpleasant odour, and they have a tendency to become obese. The southern three-banded armadillo has a greater feeding rate than other species of armadillos, such as the giant armadillo (*Priodontes maximus*), which eats ants.

In which species of armadillo are the offspring more complex or perhaps more valuable?

New Reptiles can be Found in the Exotarium Pavilion

In nature, we can find many fantastic-looking animals that have unbelievable features, shapes, or colours. Among these extraordinary animals are the green tree python (*Morelia viridis*) and the Roti Island snakenecked turtle (*Chelodina mccordii*), both of which you can see in the Exotarium Pavilion. Snake-necked turtles inhabit the Indonesian island of Roti. Because of the very limited area of occurrence and the associated small number of individuals, they are a critically endangered species. They have a distinctly long neck and are very active.

On the contrary, the pythons are usually resting in the branches of trees. Their exhibit is shared with spotted blue-eyes (*Pseudomugil gertrudae*) and empire gudgeons (*Hypseleotris compressa*). These fish can be seen mainly in the lower part of the terrarium. All these species are found in tropical areas at the northern tip of Australia and around nearby Indonesian islands.

Green tree pythons are distinctly coloured in youth and adulthood. For predators attacking by ambush, this is a seemingly unfavourable strategy. As it happens, the first appearance deceives. When a female of this species lays eggs, she stays with them during the whole time of incubation, heating them with her muscle tremors. After hatching, youngsters have a conspicuous bright yellow-to-red colour with brown spots. This works as mimicry, a colouring which makes the python better hidden in its native environment.

Young snakes make their first trip in life at the edge of woods and semiopen habitats, where they hunt insects and small vertebrates, especially skinks (family *Scincidae*). In these places, their yellowish-brown camouflage is a significant advantage, because there is more dead vegetation than in the tree branches, due to drier conditions. At about one to two years of life, young snakes start to be tinted with green shades, and their hunting habits are changing. Young pythons migrate to the forest, specifically to trees, wrapping their entire bodies around the head and the axis of a branch. In this position, they sleep and rest most of their lives. When the pythons in our terrarium begin to crawl along the branches, our breeders know that the last feeding has been digested, and they prepare a new mouse for the snakes' next meal.

In nature, usually only once in several weeks do they climb out of the trees to feed. In shrubs and lower vegetation, they lie in wait to ambush their prey, which they quickly bite and strangle.

In South America, to which we are dedicating a large part of this ZooReport magazine, there is a snake very similar to the green tree python, with like demands on the environment, ways of hunting, and looks. This snake is the

emerald tree boa (*Corralus caninus*), with which pythons are often confused. The main differences between the two are that the adult emerald tree boa has white dots on its body, and also more visible thermo-resceptive holes in its lower lip scales. This is an example of convergent evolution, where ecologically and morphologically similar animals develop in similar environments but at different, historically separate, parts of the Earth.

Threatened by humans

In the second part of the Exotarium Pavilion, also in a tank, is one of the most precious and most endangered



The colour of the young green tree python begins to change.



Two females and one male are now shown in one of the exhibits of the Exotarium Pavilion.

animals alive on our planet. This is the Roti Island snake-necked turtle, which can live both in water and on land. In the wild, their number is estimated to be in the order of only some dozens of individuals; and in zoos all over the world, there are fewer than 300. Our biggest achievement is the successful breeding of four young from the end of last summer. In the Czech Republic, these turtles can be seen only in Brno Zoo. There is also one kept by Prague Zoo. Overall, this breeding is historically the first in the UCSZOO (Union of Czech and Slovak Zoos).

Roti Island snake-necked turtles inhabit only a few locations on the island of Roti, which is north of Australia. They feed on invertebrates and small vertebrates. Their long neck plays a significant role in hunting. They hide in the mud under stones or in vegetation and wait for prey to appear. As soon as it comes into close proximity, the turtle shoots out its neck and snatches it into its sharp jaws. They can also orient themselves very well spatially, and are good at estimating distance. Having a long neck carries one

These little snakes are not active animals, but they are also interesting on account of the position in which they relax. The adults are coloured green. disadvantage, namely the inability to pull it into its carapace, only being able to fold it beneath the front protrusion of the plastron (the upper part of the shell).

As a new species, Roti Island snakenecked turtles were described only in 2000 on the basis of genetic and geographical differentiation from New Guinea snake-necked turtles (*Chelodina novaeguineae*), which are residents of central Papua New Guinea. Immediately afterwards, they were classified as a critically endangered species. With constant pressure from pet hunters and smugglers, their population size is decreasing, which can lead to their rapid eradication in nature. Domestic breeding undertaken because of a demand for pets can result in the disappearance of an animal species. This would not be the first time this has happened. It must not be forgotten that most recently captured individuals can suffer from stress. lack of water, or damage to the carapace, and can die. This is not only due to the amateur approach of hunters but, above all, a total lack of interest in nature conservation by local authorities. The main demand, not only for this rare species, stems from North America and Europe.

Following their arrival in Brno, three snake-necked turtles lived in the background of the Tropical Kingdom pavilion, where one of the females laid eggs at the end of the summer. Of the four eggs, after a four-month incubation at temperatures around 30°C, the young were hatched. Their gender is still unknown; it can be reliably determined in adulthood by the shape and length of the tail, and the overall size and shape of the carapace. Our young turtles live away from the zoo's visitor access in a tank that simulates typical conditions of their natural environment, with lush vegetation and small stones under which they can hide.



Our Jaguarundi Kitten is Growing Up Fast

A skilled climber with a long body and a long tail lives secretly in the wild. In the Brno pavilion of monkeys, it's worthwhile to spend some time carefully observing the jaguarundis (Herpailurus yagouaroundi), of which there are now two in the exhibit – a mother and son. The breeding of this animal in zoos is the exception rather than the rule, and this small forest cat is kept by only four Czech institutions – the zoos in Děčín, Prague, Ostrava, and Brno – with nine animals in total. This is why Czech zoologists decided to exchange males with different breeders. Their hopes were realised by the Brno couple – female Fiona and male Chaco – when Fiona gave birth to a kitten on November 18 last year, just after the arrival of a new Ostrava male.

The Czech Republic ranks among the most important breeders of these small animals. Now there are jaguarundi kept in 19 institutions in Europe, totalling 45

individuals. However, litters of offspring can be counted on the fingers of one hand. For the last decade, two kittens have been raised at Prague Zoo (2011,



First veterinary inspection of little Conkon. Photo: Michal Vaňáč

2013) and three at Brno Zoo (twins 2015, one 2018). That is why the decision was made to exchange males, which, hopefully, will bring the expected revival of the breed. So a male from Ostrava Zoo arrived in Brno in the autumn, but Fiona was already pregnant.

Pregnancy is hardly observable in these cats. They usually have one kitten, which is small relative to their body size, and therefore its movements are not visible from the outside. Expectant mothers hide in a cavity in a tree or in an abandoned nest, and give birth there. They are very aggressive against any intruders in the wild, and it's the same when they are in human care. It was only thanks to this behaviour that the breeder suspected that a kitten had been born, which was soon confirmed. Fiona defended her kitten, and kept it under her close supervision.

The kitten is growing quickly: It weighed about 150 grams at birth, and in January it was already 530 grams. We could only find the exact weight during the first veterinary inspection. After vaccination, we released the kitten back to his mother, already having named him Conkon.

Breeder Mariana Hubíková, who has been working in monkey pavilions for more than ten years, talks about small jaguarundi cats with great enthusiasm. "They are beautiful but very shy animals. The female Fiona, mother of the kitten, is especially averse to contact. As soon as she sees me, she starts to hiss and protects her young. In the character of the little Conkon, however, youthful curiosity and fearlessness predominate. When his mom is not looking, I can get him out and at least visually check him," says Mariana. "Conkon is a permanent surprise for me. In January, about a week after the inspection, he began to hiss at me like his mother. Her genes will show in him soon," Mariana said with a smile.

The small jaguarundi feline lives in South American forests, has an elongated long-tailed body, and is, perhaps surprisingly, the closest relation to cougars (*Puma concolor*) and cheetahs (*Acinonyx jubatus*). It lives on the forest floor and mostly feeds on small vertebrates or birds' eggs, tending to hunt mainly on the ground.



Easter decorations in Kamchatka house. Photo: Michal Vaňáč

Spring at the Zoo Will Include Entertainment, Traditions, and Knowledge

This spring, you can find events for families with children that support Moravian traditions, fun days for children, and school competitions. In short, anyone looking for a spring program at Zoo Brno will find something.

For events with an interesting program for children, you can first look forward to "Spring Welcoming." On Saturday, March 23rd, we traditionally overthrow Morana and decorate the Easter tree. Bidding farewell to winter is symbolised by the sacrifice of a straw dummy of Morana, which represents winter. It is overthrown in the zoo by having the children bombard it with paper balls. Traditionally, it is thrown into the river and carried away by the stream. Decorating an Easter tree is a way of welcoming spring, symbolizing the diversity and beauty of re-emerging life.

Then, on April 2nd, schoolchildren's brains will be worked hard. Educational staff prepare for them a popular or-

nithological competition, "Birds' Day for Schools." Pupils of the second level of elementary schools and the corresponding grades of the multi-year grammar schools can take part. The thorny issues will deal with the protection of bird species and will also be related to the EAZA Campaign, "Silent Forest," which focuses on the bird fauna of Southeast Asia.

On Tuesday, April 16th, pupils of the same age may dive into the mysteries of zoology in an unusual way: They will practice their knowledge of nature in English and compare it with other schools. The event is organized by zoo educators and students of Grammar School Slovanské náměstí Brno.

From Easter Friday, April 19th through Easter Monday, April 22nd, visitors can not only visit some exotic animals, but can also participate in genuine holiday activities. For children, there will be an Easter egg hunt to search for the 1,000 eggs which will be hidden throughout the zoo. And a spring cleansing awaits the sheep when, after a long winter, we will rid them of their wool.

Mniší hora will be transformed into a Magic Zoo for one day, April 28th. Games with magical themes, musical performances, and a barbecue are all waiting for you if the weather is good. There's nothing to worry about, all the witches in our zoo are nice and friendly, so don't expect any horror!

Also amongst the spring activities is "Science Day," this year with the theme, "Save Yourself!" Students from the Secondary School of Chemistry will introduce children and adults to the most endangered animals and habitats. They will show and describe how extinct animal species looked: You will see, for example, a life-size woolly rhinoceros (*Coelodonta antiquitatis*). What do we need to do to save what we have left behind? Is it better to try, or do nothing? Are we witnessing the beginning of the sixth mass extinction? You'll find out on Wednesday 1st May.





In the Park Below Špilberk, Spring is Welcomed with a Wide Range of Activities

Educational workers of the Environmental Education Centre Hlídka 4 in the park under the dominating feature of Brno, Špilberk Castle, are preparing a series of events for the public and school groups. During the spring months, together with your children, you can go back in time to find out how our ancestors preserved their traditions, whether for spring or for the Easter holidays.



Playing Orff instruments strengthens creativity in children, and they can try this on Hlídka.

Tradition belongs to modern society as well

A couple of days after the beginning of spring, March 22nd, come to visit Brno! Even though you would not expect it in a big city, nature is also awakening here. Birds are slowly returning from warmer areas and, in the evenings, you can sometimes see bats flying. We're ready to welcome spring with symbolic plush animals: Children can sing to them, play Orff instruments, and make small decorations for their home such as small wooden rabbits and other natural items; and, with their parents, they can decorate a flower pot, which will last through Easter as an ornament. To make children aware of how fragile nature is, especially in the city, they can become little carpenters by constructing bird boxes from a kit. Through their manual work, they will come to realise how much nature protection is needed in the city, and that it is not even very difficult to help in this. Throughout the program, quizzes will be prepared for the inquisitive children; and, for the smallest ones, we have "spring unlocking" with a special key.

In the month of April, when the weather is better, children can go on a trip to a one-day suburban camp to see their favourite horses. The trip to the ranch in Ivanovice will be held on Saturday, April 13th. Schoolchildren will be able to visit the saddlery workshop and stables, and will find out how complicated it is to care for these beautiful animals. When they try grooming, they will see that cleaning a horse stable is hard work. As a reward



At Children's Day on Kraví hora, children always enjoy the activities.

for their inquisitiveness and listening, they will get a ride around the area. Then, in the afternoon, if the weather is good, there will be a camp fire where they can play and sing while sausages are being cooked.

On Green Thursday, we are preparing demonstrative examples of Easter customs from both Moravia and Bohemia for children of all ages. A full day program will be available: Girls and boys will colour eggs with a natural dye, namely onion peel. There will also be an Easter ornament in the shape of a circle, symbolising the birth of life; while the rods, ribbons, and eggs used to decorate it represent growing life and the awakening of nature in spring with which Easter is inherently connected. We'll introduce you to some widespread customs, and maybe you will learn some customs with which you are not yet familiar.

Ecology ahead!

For the past several years, Hlídka has been cooperating with the environmental organization Lipka, which organizes Earth Day on Kraví hora. The locations of various non-profit organizations with activities for adults and children, some with small refreshments or competitions, are spread all over the slope of Kraví hora from the planetarium to the square Náměstí míru. Children will be able to perform a variety

of tasks or take part in physical activities, receiving a small reward for their participation. In previous years, visitors have dealt with topics such as "Wildlife behind Windows," or "We Cannot Live without Ground," or "We Cheer For Fauna." Do not miss this already traditional and popular event! Environmental enthusiasts and nature advocates are looking forward to seeing you on April 27th at Kraví hora from 10 am to 6 pm. In the same period, on May 3rd, there is another interesting opportunity for the

keen minds of young ecologists and natural scientists. This is the first round of a nationwide competition for school teams, "Golden Leaf." The Centre for Environmental Education Hlídka is also part of the organization of the 47th year of the competition under the auspices of the Czech Union of Nature Conservation. School teams can sign up until the end of March. Six-member teams will go through the zoo, where they will be given challenging tasks and questions at several sites on various science topics, including geology and meteorology. The best of them will go to the regional round of this competition, which will be held in Hodonín.

How does a fair trade breakfast taste? You can find out on Saturday May 11th! In cooperation with the non-profit organization, "Na Zemi," we are preparing a picnic where you can also get acquainted with the animal inhabitants of Hlídka. On that day, you will learn not only about turtle Majda or chameleon Leon, but also about how dishonestly big corporations sometimes treat farmers in developing countries. It is precisely thanks to the purchase of Fair Trade products, which are somewhat more expensive, yet still affordable, that we can all help small farmers to attain dignified living conditions. Fair Trade focuses not only on fair conditions for growers, but also on adhering to sustainable development.



A fair trade breakfast is enhanced by the environment of the Hlídka gardens in the city centre.

The Return of Two Swans Ranks Among the Successes at Jinačovice



The male (in the foreground) and the female happily disappear with all their cygnets.

The Jinačovice Wildlife Rescue Station receives a large number of passerines (birds) or small mammals every year. Among the rarely represented groups there are, of course, predators, one of which you read about in the previous issue, and big birds. In September last year, thanks to the conscious intervention of passing drivers and police officers in Brno, two young mute swans (*Cygnus olor*) arrived in Jinačovice. They were apparently found after one of their first flying attempts ended in an emergency landing on the road.

Superstitious people believe that Friday the thirteenth is an unfortunate date, but for these young swans it was Thursday September 13th last year. On the busy road at the shopping centre in Ivanovice, Brno, passing drivers saw two unusually coloured swans. They therefore reported this phenomenon to the Metropolitan Police, who urgently summoned the animal rescue. Arriving members of Pet

Emergency Brno rescue service saw the birds in "young clothes," as this coloration of plumage is called. Fortunately, the whole situation happened in the morning when the traffic was light. The police captured the birds with help from the animal rescuers. They then transported them to our rescue station in Jinačovice.

The frightened and vulnerable youngsters surrendered themselves to

the care of the rescuers. This behaviour is totally atypical, indicating either a disease or, as in this case, a high degree of stress caused by the new, unnatural, hostile environment in which the youngsters found themselves on the road. If youngsters try to fly and the wind blows them elsewhere, the degree of stress is not at all surprising; hence, their reaction.

We need to determine the health of each incoming animal by comparing it with similar creatures. We found that these two had been very well cared for by their parents, and their health was optimal. Immediately afterwards, we tried to determine from which pond the birds originally came. The waters of Brno reservoir and Srpek Pond near Kuřim were considered. We also



The cygnets were completely disoriented, so we let them rest for a while in the quarantine premises in Jinačovice.

thought of several ponds in Brno-Jehnice.

After a quick visit, we found only couples with more youngsters in Kuřim and the dam, so the loss of two youngsters would have been unlikely. In Jehnice, as we went around the third pond, we were slowly losing faith in finding the swan family when, suddenly, a swan couple with one youngster appeared in the distance. We were still not sure whether this could be what we were looking for, but we had hope. We quickly put the youngsters in crates and brought them to the pond to discover if this was the correct pond and the correct family.

When the old male swan, who was swimming on the pond, noticed us, he looked on suspiciously and watched us closely. The moment we pulled open the crate and he heard the joyful whistle as the cygnets began to call their parents, it was clear! The male answered the young greetings and swam towards us. Bingo! It was the correct swan family!

The youngsters shot out of the shipping boxes and, after a touching welcome, the whole family calmed down and swam to the farthest end of that local pond.

Not all stories from our rescue station have happy endings, but this is one of those that motivates people to keep working, because nothing is more valuable than saving such beautiful birds.

Those few hours resulted in the survival of these two swans.

We are very grateful to all those involved for not being indifferent to the fate of these wild birds. They were in a very vulnerable situation, and we are glad we were able to rescue some of our fauna

Mute swan (*Cygnus olor*): What is it and what threatens it?

Swans are among the great Anseriformes, alongside ducks and geese. It is predominantly a non-migratory species, which means that it winters in the Czech Republic, though part of the population flies to warmer areas. They spend most of their time on water-ways. On land, they move awkwardly owing to their great weight and relatively short limbs. You can see swans individually, in couples, or as family groups of parents and cygnets. One family is regularly seen on the Svratka River, in the section between the Kníničský and Bystrcký bridges. They collect food both on and below the water surface, filtering it from the liquid through their beaks in the characteristic way of Anseriformes.

Their nest is made of reeds in thickets near the water. Males are very aggressive at nesting time, especially when defending their nesting territory. The male does not differ distinctly from the female, the only difference being the heavily observable bulge on the beak with which the males are decorated. In flight, swans can be recognised by their typical hissing sound and the unusually large size of their wings.

The most common cause of swan hospitalisation in rescue stations is wing wounds, which are mainly caused by their crashing into high-voltage lines. Secondly, fishing hooks can get stuck in their beaks, or they can swallow them while searching for food. Often, too, these majestic birds are poisoned by food given by ignorant people.

MVDr. Radek Ficek Simona Blahoňovská Rescue station for wildlife at Brno Zoo, Jinačovice



Father quickly arrives, intending to defend his young.



This year's first patient was a young olive ridley sea turtle, which we named Sade. She came to us after being rescued from the black market in Bali. Photo: Elisa Janata

Turtles in Indonesia are Supported by the Centre Founded with the Help of Brno Zoo

Turtles are one of the oldest terrestrial vertebrates. Sea turtles, for example, live in an aquatic environment, although their eggs have to be laid on land. The centre for the rescue and rehabilitation of turtles was created after ten years of effort with the help of donations organised by Brno Zoo and also with financial help from the City of Brno. The centre also includes facilities for teaching. It is 11,380 km from the South Moravian metropolis.

In nearly two years, we rescued and released 30 sea turtles back into the sea. The majority of these were green sea turtles (*Chelonia mydas*, an endangered species) and olive ridley sea turtles (*Lepidochelys olivacea*, a vulnerable species). Hawksbill sea turtles (*Eretmochelys imbricata*) are very rare, and are one of the critically endangered species of global fauna.

The whole project, named Kura Kura, first started in 2007. It took ten years for a successful outcome, namely the opening of a rescue centre in Toy-

We celebrated the beginning of the year by returning three turtles into the wild.

Photo: Elisa Janata

apakeh Village on Nusa Penida Island on May 9th, 2017. This long duration is not surprising, given the communication necessary with local authorities and the meeting of stringent rules for turtle protection. In eight outdoor pools, turtles can recover from tumour surgery or the removal of plastics from their bodies. Local workers also receive turtles that have been rescued from illegal exportation, and allow them to recover from the conditions in which they had to suffer. Once the turtles arrive, parasites are also removed, which improves their health and increases the chances of their longer survival. In order to whet their appetites, these patients receive their food in perforated dead coral. It's a way of enriching their free time and maintaining their natural behaviour so that they can eventually be returned to the sea.



New Animals in the Zoo

During this year, you can look forward to seeing new species of animals from both cold and tropical areas in the zoo. Siberian weasels (*Mustela sibirica*), corsac foxes (*Vulpes corsac*), and barramundi (*Scleropages leichardtii*) will enhance the collections in various parts of the zoo. For the first time ever in the history of Mniší hora, sharks will be here, specifically the short-tail nurse shark (*Pseudoginglymostoma brevicaudatum*).

Barramundis have supplemented the collection of Australian fauna in the Exotarium Pavilion.

You probably won't recognise the names of these first three animals, as they are what they are called in their homelands and also by professional biologists in the Czech language.

The Siberian weasel is a small animal from cold regions in northern Asia. It is golden-yellow. Another of the few creatures of this colour is the yellow-throated marten (*Martes flavigula*), which lives much further south and is not so often hunted for its fur, unlike the Siberian weasel.

Siberian weasels, along with corsac foxes, inhabit the Beringia exhibit, which features fauna of the cold areas in the northern hemisphere with an emphasis on the regions around the Bering Strait. This is where a land bridge between Alaska and Siberia existed during the last ice age, enabling animal migration to take place.

Due to the natural occurrence of corsac foxes, their location in the zoo will be in the planned future part of the zoo which will be dedicated to Himalayan mountain fauna. Corsac foxes are small, with a distinctively furry coat. They live in Central Asia, especially in cold deserts and semi-deserts.

In the aquarium collection, there has been a rapid increase of both species and individuals in recent years. Two short-tail nurse sharks have acclimatised and will inhabit one of the marine aquariums of the Tropical Kingdom Pavilion.

In the other pavilion that focuses on the tropical fauna of our planet, the Exotarium, lives the barramundi, which is an Asian sea bass. Rare inhabitants will be the Queensland lungfish (*Neoceratodus forsteri*), which belongs to a unique group of fish that can survive out of water under dry conditions. Among the other inhabitants of this pavilion is the galah (*Eolophus roseicapilla*), an Australian bird which is one of two species of cockatoos which we keep. It can be identified by the pink cap on its head.

Another Australian animal we keep is an interesting marsupial, the common brushtail possum (*Trichosurus vulpecula*). They live on the forest floor in the south of the Australian continent and on nearby islands. They are resistant to the cold, and their size is unusual, as they can weigh up to four kilograms.

The galah is one of the interestingly coloured cockatoo species. ▼



Brno Zoo Experienced a Record Year

In 2018, we welcomed a total of 330,118 people to Brno Zoo, the most since 1997, when we began keeping an accurate record of all visitors. April was the month with the most visitors (56,021), and was also the fourth best month since 1997. More than 52,000 people arrived in July, though the number of visitors dropped significantly in August, when only 41,000 people visited us, almost 12,000 fewer than in 2017.





The April weather attracted visitors to the zoo. Ring-tailed lemurs also enjoyed the sunny days

Photo: Michal Vaňáč

Another attraction was the Ceylon leopard's twins.

"The last most successful year was 2008, until now. It was just when we introduced the first offspring of polar bear Cora – Bill and Tom. We value each visitor who comes. At the same time, the growing interest in Brno Zoo commits us to continue the promised expansion of the whole area, including reconstruction and the construction of new exhibits," said Martin Hovorka, the Director of Brno Zoo.

"We know from feedback from visitors that last year's lion cubs (born at the end of 2017) were the most interesting for them. We also understand the importance of the new exhibits we completed in recent years. A significant factor influencing visitor traffic was weather. This helped us especially in spring, but in summer, mainly in August, the heat caused below-average visitor traffic," said Hovorka.



One of the hits for last year's visitors were the lion cubs, Anoona and Akashinga.



in Brio Zoo

19. 4. - 22. 4. 2019

- Easter egg hunt
- Easter workshops
- traditional crafts
- Easter path





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