

the magazine for friends of the Brno Zoo

Zooreport

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May 2022



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Photo: Eduard Stuchlík

UNSALEABLE

EDITORIAL

Dear friends and supporters of the Brno Zoo!

At the beginning of the next Zooreport, let us make a small summary of last year. The continuation of the measures against the Covid-19 pandemic was also overtaken by the beginning of 2021, and the entire first quarter was our zoo closed to the public. Zoological gardens, including ours, have recorded substantial financial losses in the order of millions of Czech crowns. Great thanks go to our fans, people who care about animals and help us manage this period financially. We appreciate your help enormously.

April's novelty in this direction were two very successful projects – Feed an Animal and Wish for an Animal. Donors chose a favorite animal from the list, read information about it and its food composition, and chose one or more ingredients from the menu they paid for. In the Wish for an Animal project, people sent a toll message to someone close or a particular animal. Both zoological garden projects brought the aid of CZK 736,168.

The adoption of animals has grown significantly. While in 2020, the total adoption amounts amounted to almost three million Czech crowns, in 2021, it filled the limit of almost five million. The biggest animal favorites of 2021 were the arctic wolf, meercat, and common raven.

The aid was also aimed at supporting the Rescue Station in Jinačovice. The proceeds of the collection, which in the nine months of its existence amounted to almost 53 thousand Czech crowns, testify that people are not indifferent to



Director of Zoo Brno Martin Hovorka. Photo: Michal Vaňáč

the fate of injured animals. Thank you very much for everything!

And about the public collection once again. New in 2021 is the collection, and we are in it together. Its purpose is to protect endangered species of animals in situ and ex-situ, i.e., in zoos in the Czech Republic and abroad. With the help of donors, the zoo fulfills one of the critical missions of zoos – saving biodiversity on our planet. The collection takes place through a unique collection ticket, by purchasing a ticket that is 3 crowns more expensive than regular admission.

The cycle of life in our zoo has not stopped despite all the inconvenience. It also brought us a lot of joy, especially when breeding rare and endangered species. To great success, we historically rank the first breeding of kea parrots. We were also pleased by a pair of the Sri Lankan leopard, Nayana, and Daan. In June, Nayana gave birth to two young animals, and she took excellent care of them from the first moment. The young of this subspecies of leopard are not often born in

zoos. In our country, we succeeded for the second time in twenty years.

2021 also marked the beginning of the Academy of the third age. We extended the range of holiday activities for young nature lovers to Forest clubs and allowed visitors to the African Summer Festival to experience life on the black continent in a colorful mix of experiences – from that gourmet to the basics of Swahili to handicraft.

And now to this year. You can continue to learn about news from the Mniší Mountain, virtual expeditions, Sentinel, or rescue station from the Zooreport website. This year, it will be published four times online, and at the end of the year, you can look forward to one printed edition.

We managed another specific year. I wish our zoo and its supporters that they can meet at any time and without any restrictions in the following year.

Martin Hovorka
Zoo Brno Director

The lemurs. Ghosts reminiscent of the ancient history of the Earth

The ring-tailed lemur is probably the most famous of lemurs. Photo: Matyáš Slavík



The lemurs are one of the symbols of Madagascar. They do not live anywhere else outside this territory and are different from other primates thanks to millions of years of isolated development. The lemurs on their island managed to occupy virtually any terrestrial environment. Thanks to this, different species have different characteristics and appearances. Therefore, even today, when the representatives of the superfamily Lemuroidea (i.e., exclusively Madagascan lemur primates) are doing perhaps the worst in history, we know about 100 species. The number is far from final and will certainly still change due to the development of scientific procedures and various controversies that accompany the taxonomy.

Most lemurs are smaller, have large eyes, a pointed wet snout, and a long tail. Even though they are primates and thus have common signs, they remind many visitors of zoos rather than "special cats," as we can see from their expositions.

Drummers

The Latin word lemurs came from legends from the period of ancient Rome and were referred to by spooky ghosts. Carl Linné gave the name to the lemurs in 1758 when he included them in his work *Systema Naturae* with the words that the animals are a little similar to peo-

ple who move slowly and at night. For the explanation, Carl Linné was characterized by this description and named the Sunda slow loris, Asian primates of the lorisidae family, who are no longer among the lemurs. The name lemur later remained exclusive to Madagascan primates.

What are they?

Lemurs belong to the suborder of Strepsirhini, a taxonomic company with Galagidae, Loridae, and Daubentonidae. It is an incredibly diverse group of primates that has functionally replaced various other species of animals on the island. Not only are among them the smallest primates (gray mouse lemur) but, in the past, they included enormous animals. Megaladapis was a giant lemur, which did not last long after the settlement of Mada-

gasgar by people who began to dispose of forests. Megaladapis measured up to 160 cm, weighed around 85 kg, and was exclusively herbivorous. He probably disappeared from the world in the 14th or 15th century AD.

Mini and maxi

Today's smallest living lemur is the gray mouse lemur (*Microcebus murinus*). It measures a maximum of 13 cm (without a tail, it has 15 cm) and weighs between 70 and 100 g. Its weight depends on the season because seasonal weather fluctuations are noticeable in the locations of the gray mouse lemur. This was adapted by the gray mouse lemur to his life rhythms so perfectly that it is the only hibernating primate in the world. In the dry season, when food is scarce (it feeds mainly on insects and fruits, flowers, and leaves), it falls into a particular state of dormancy in tree cavities. Sleep can last up to two months, and during that time, the body draws energy from the fat reserves it has under the root of the tail. The opposite in the growth is indri (*Indrii indri* Gmelin, 1788), which weighs 7 to 10 kg and measures 60 to 90 cm. Its diet mainly prefers leaves and fruits and is also interesting in its daily activity and monogamy.

What do lemurs feed on?

Lemurs are far from being just fruit eaters. In fact, on the contrary, if you were to look at the lemur's teeth, you would probably conclude that it has teeth worthy of a beast. Lemurs' diet is as varied as the appearance of the more herbivorous species, especially the leaf-eating indri and sifakas. In addition to leaves, they also consume fruits or flowers. They carefully think about which leaf they choose, eat on the branch, and choose them to be of the highest quality. We should not forget about the lemurs of the genus *Hapalemur*. For example, Lac Alaotra bamboo lemurs are adapted to live on the shores of Lake Alaotra by consuming especially reed, papyrus, and various kinds of carexes. We also know an almost exclusive frugivorous (mainly eating fruits) lemur, the Coquerel's giant mouse lemur (*Mirza coquereli*). But even it occasionally eats insects, especially sap-feeding insects

related to aphids and their droppings. Insects are a popular food of lemurs. Among the insectivorous lemurs, it is necessary to mention the specialist of the aye-aye (*Daubentonia madagascariensis*). Its constantly growing front teeth allow it to penetrate hard skin seeds, as we know in rodents. But at the same time, using its long thin fingers, it can get to the larvae and other food hidden in the bark of trees. We should not forget that some kinds of lemurs like to

look for the resin of trees. If the lemur has digestion problems, it can help by eating a particular type of clay.

Anatomical curiosities

The lemurs have several peculiarities. One of them is the formation of their limbs. The tendons will pinch their fingers by bending the elbow or knee. Therefore, it is not difficult to keep on the branch for a lemur, crouching all they have to do.



Zoos around the world work to maintain healthy lemur populations outside Madagascar. Photo: Eduard Stuchlík



Male black lemur. Photo: Eduard Stuchlík



Males of ring-tailed lemur perfume their pronounced and long tails behind the glands on the front limbs. Photo: Michal Vaňáč



Black-and-white ruffed lemur. Photo: Michal Vaňáč

Lemur's coat is a sign of their health, and they spend a significant part of their day caring for them, whether they are cleaning and combing their coats or socializing with each other. Yes, you read that right. They're combing. The comb is in their mouth, formed by the lower incisors. Besides lemurs, treeshrews or colugos also have a tooth comb. It is quite possible that when brushing the lemur's fur with a toothbrush, the coat is better lubricated by scent gland secretions. However, the specially shaped incisors serve some species as spoons to scrape fruit pulp from the skin or scrape off the vegetable resin.

How do the lemurs talk

The lemurs communicate with sounds, visual signals, and with the help of smells. The second mentioned, visual signals, are probably the least developed. Among other things, because lemurs do not have well-developed fa-

cial muscles, and that is why they instead use body postures in visual communication. Exceptional in many ways, however, is the ring-tailed lemur. Certain facial expressions such as a threatening stare, subordinate baring of teeth, various ear positions, or yawning are also described as part of the threat. We know the playful expression with open muzzle and different teeth baring in hostile behavior in sifakas.

We can probably give scent communication in lemurs significantly more importance. Most species have several different scent glands. The exception is the indri, which lacks some essential scent glands and even has a reduced brain area in which odor processing occurs in primates. Small nocturnal lemurs indicate by the urine, larger species mainly by secretions of the mentioned glands. As a marker, some lemurs can also use feces that leave in some particular place. The marking by feces in primates is not so

usual. Therefore it is worth mentioning. The lemurs use scent communication on various occasions, practically constantly marking their surroundings and each other. They can tell their age or sex and specific other characteristics from their scent. Through scent marks, they can communicate with animals that do not meet each other. Like where territories overlap. Let us return to the ring-tailed lemurs in this context. They also use scent signals in fights. They rub their tails with the glands on their wrists and then wave their tails towards their enemies, sometimes intimidating them without fighting.

Of the methods of communication, the acoustic is probably the most interesting to the zoo visitor at the lemur exhibit. Lemurs can make many different sounds, sometimes very loud. For example, a vari can make a sound audible up to a kilometer away. The loudest is the indri, whose voices can be heard

two kilometers away. In recent years, scientists have paid particular attention to their singing because some experts believe they have a sense of rhythm just like humans. Some social species can even sing in pairs or groups. Often it seems as if the singing is contagious. One animal will start, and gradually others will join in. We also know that lemurs can use sound to distinguish the type of predator that threatens them. This can give early warning to other group members (and certain other animals) within earshot.

We should not forget to communicate by touch. Lemurs take care of each other's fur, thus strengthening their group relationships. We call this grooming. And you have undoubtedly encountered this behavior in several other social animals. In particular, the ring-tailed lemur (*Lemur catta*) spends a lot of time in contact and care.

Who hunts lemurs?

We've already established that lemurs can tell what danger they're in. So who can hunt lemurs? The most famous lemur predator is the fossa (*Cryptoprocta ferox*). Just as Madagascar has its typical primates, it also has its typical carnivores. The Madagascan predators (Eupleridae) family includes fossa, falanouc, Malagasy civet, and various kinds of galidiinae. Maybe the names do not tell you anything, but all these animals are certainly worth atten-

tion. Not only for their attractive appearance. The fossa is the largest of all Madagascan carnivores, although today's fossas are noticeably smaller than those that lived on the fourth largest island in the world. It weighs between 5,5 kg and 8,6 kg and measures up to 80 cm. They have retractable claws and movable ankles, thanks to which they can climb very skillfully on trees. The lemurs make up more than half of their diet!

Of course, the fossa is not the only hunter of lemurs. The Madagascan harrier-hawk (*Polyboroides radiatus*) is a significant predator which hunts various birds, rodents, reptiles, insects, and smaller lemur species. The hawks have a unique formation of joints in relatively long legs, which allows them to reach the prey, which tries to hide in the caves and holes. Interestingly, a similar adaptation has the South American crane hawk (*Geranspiza caerulescens*).

Why do zoos pay attention to them

But the most stubborn predators are neither the beasts of prey nor the birds of prey. It is the most widespread primate of the world, namely we people. It may be difficult for us in Europe to believe it, but the lemurs in Madagascar are still part of some people's diet. But Madagascar, while being a sought-after holiday destination and a paradise for nature lovers, is still one of the poorest countries in the world. Almost 70 % of

the population lives in poverty. Where people are doing poorly, nature cannot farewell, and in sensitive island ecosystems, the issue is more complex. An even more significant problem than hunting alone is deforestation's loss of the environment. The destruction of some areas is so rapid and uncontrollable that the extinction of organisms we have not yet seen is very likely. To illustrate, it is enough to recall that in the last 2000 years, practically all endemic animals heavier than 10 kg have disappeared from it. Five lemurs are listed in the 25 most endangered primates of the world, which major conservation organizations draw up every two years.

Therefore, the zoological gardens around the world are working to maintain healthy populations of lemurs outside Madagascar, trying to spread awareness of how the varied and sensitive world of Madagascar is and why the objectives of the experts work on it need to be supported.

Myths and legends

It would be strange if there were no various superstitions and legends around such animals as lemurs. One of the most popular Malagasy legends tells the story of the origin not only of the indri lemur but also of man. Two brothers lived in the forest a very long time ago. One of the brothers got tired of living in the forest and decided to leave and start improving the land. He became the first man. The brother, who remained in the forest, became the first indri. The typical weeping sound made by the indri is said to be a lament over the brother's loss.

Another legend tells of a man who went hunting in the woods and never returned. His son went looking for him, but he disappeared too. So the other villagers went into the forest to find them, but instead of two men, they met two giant lemurs sitting in a tree.

Many people still see the indri as a sacred animal and do not hunt it for fear that the lemur will turn their weapons against them. In some areas where legends are told, hunting is outright forbidden.

Not every animal is lucky enough to find protection in the legends. The aye-aye has a reputation as the personifica-



Sexual dimorphism is typical for the black lemur. Males have black hair, while females (in the picture) are light brown and have white brushes. Photo: Eduard Stuchlík



The ring-tailed lemurs are on display in the African village. Photo: Eduard Stuchlík

At the Zoo Brno, we currently have five ring-tailed lemurs. Photo: Matyáš Slavík

tion of evil. Seeing an aye-aye is not only bad luck, and it can mean death. According to legend, the aye-aye is said to sneak into the villagers' homes and stick its long finger into their hearts. Another superstition says that if an aye-aye points his long finger at a person, it will mark him for early death. According to the believers, the only way to prevent such events is to kill the aye-aye on sight. Unfortunately, superstitions are believed by many people in Madagascar.

Lemurs at Zoo Brno

Cute cartoon character

Ring-tailed lemur (*Lemur catta*)

Black and white striped tail, dark pointed muzzles, circles around the eyes, and bright fur characterize the most famous lemurs. The ring-tailed lemur is omnivorous, characterized by daily activity and spending a lot of time on Earth compared to other lemurs. At Madagascar, it is mainly found in the south. They feel best in gallery forests (a specific type of tropical forest, especially along watercourses). It is very sociable. Groups of ring-tailed lemurs can have up to 30 members. While resting and sleeping, they like to touch each

other, curled up in a ball next. They also sound off collectively. When one starts to call, others often join it.

In the communication of the ring-tailed lemurs, as is the case with lemurs, and as we have already said above, smell plays an important role. In addition to marking the territory with glandular secretions and urine, they exhibit other behavioral elements associated with scent communication. Males perfume their distinctive long tails using glands on their forelimbs (it looks like they are combing their tails with their paws) and then agitate their scent near another male by shaking the scented tail. The distinctively colored tail plays a role also in visual communication, as the animals often wear it perpendicularly upwards. There may be more than one male in a group, with the females having the final say. However, the hierarchy in the group is divided into males and females. Among males, age and, of course, fitness plays a significant role in their status.

They mainly seek out fruits and leaves in the wild, with tamarind being the most popular. Tamarind fruits make up half of the ring-tailed lemur's diet when available, especially during the dry winter season. In addition to plant food, they also take animal food in invertebrates and small vertebrates.

Even though they breed very well in human care, and you can see ring-tailed lemurs in many facilities, this is an endangered species. In 2017, the ring-tailed lemur population was estimated at 2,000 individuals living in the wild.

At the moment, we are keeping five ring-tailed lemurs at Zoo Brno. All these are males born in March 2012, so they are 10 years old. You can see them in the African village.

Angry millipede instead of repellent

Black lemur (*Eulemur macaco*)

This species inhabits the north-western part of Madagascar, the moist forests of the Sambirano region, and the nearby islands. Sexual dimorphism is typical for the black lemur, and this means that the male and female differ at first sight in appearance, here specifically in coloration. Males have black fur, while females are light brown and have white bristles.

They can live in pairs but also in small groups, in which there is the same number of males as females. It is active day and night. It forages for food in trees and shrubs, where it spends most of its time. During the day, it also roams on the ground, especially in areas with poorer vegetation. The majority of the black lemur's diet consists

of fruits (up to 78 %), and it also consumes flowers, leaves, fungi, insects, and nectar. The black lemur is known to bite venomous millipedes to produce toxins deliberately, and they then rub the millipede on their fur, presumably to protect themselves from parasites.

The black lemur is classified as an endangered species. Four of these lemurs live in Brno Zoo. A single male inhabits the exhibit with the ring-tailed lemurs and is currently an incredible 27 years old (they usually live to 25 years).

Lemur from the tree crowns

White-headed lemur (*Eulemur albifrons*)

In the northeast of Madagascar, the white-headed lemur inhabits tree crowns in both lowland and mountain forests. Even in this species, we observe differences in coloration of males and females, and females do not have the distinctive white hair on their faces and foreheads as males do.

The white-headed lemur is active almost any day or night. It is omnivorous, and as with other species, the composition of its diet depends primarily on the season and supply. Differences are also determined by the period of the individual's life. Females in the wild consume more flowers during gestation, more flowers and young leaves during the nursing period of the young and consume more full-grown leaves outside the reproductive period. They form small groups of between 3 and 12 individuals in which, unlike other lemurs, the females do not have the final say. The white-headed lemur is listed as a vulnerable species on the IUCN list.

We keep a few white-headed lemurs at Brno Zoo. Visitors can see a 25-year-old male and a 16-year-old female.

A critically endangered fruit lover

Black-and-white ruffed lemur (*Varecia variegata*)

In nature, the black-and-white ruffed lemur lives high in treetops in eastern Madagascar's rainforests. The species is divided into three subspecies, which differ in occurrence and appearance. They are active almost exclusively during the day. It feeds mainly on fruits, which make up the vast majority of its

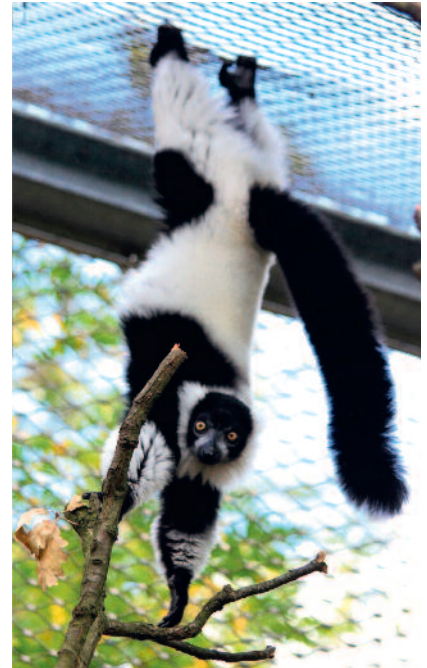
diet (up to 92%) in the wild. However, it also likes to feed on flowers and nectar and leaves and seeds.

Vari lemurs echo with loud raspy squawks and calls, including communal group chants or calls announcing the movement of a group or perhaps alerting a predator. The size and composition of the group vary with conditions (e.g., food availability). Thus, groups may break up into, for example, individual pairs in various ways, and these may later meet again and live together. A unique feature of black-and-white ruffed lemurs is parental care. Not only do black-and-white ruffed lemurs give birth in clutches of 1 to 5 young, but the young do not initially ride on their parents but remain in the nest. They are cared for by the mother, who spends most of her time with them in the early days. Males also help care for such a large brood, especially in small groups and where paternity is certain. There have been observations of mutual care of young by unrelated mothers by forming communal nests.

In nature, they can meet with red ruffed lemurs. It is classified as a critically endangered species because it is a favorite prey to hunters and because of the destruction of the environment for farming purposes.

The Brno Zoo is home to two females of subspecies of *Varecia variegata variegata*.

Ing. Eva Karbanová



2021 at Zoo Brno

It has become a tradition that in the first issue of Zooreport in a given year, we remind ourselves what the attendance in the previous year looked like. This time we will make no exception, either. Mainly to thank you all for your patronage.

The annual attendance at Brno Zoo last year was 266,605 people. This is a comparable attendance (a few thousand higher) to 2020, even though in 2021, the zoo was closed for more than three months due to the covid-19 pandemic. "The highest attendance this year was again recorded in the holiday months, but compared to last year, the last quarter also saw higher attendance," commented spokesperson Monika Brindzáková.

We will also take a closer look at adoptions. Through them, people sup-

ported the garden with a total of CZK 4,961,251.

The most popular animals in adoption include:

arctic wolf – 93 contributors

meercat – 65 contributors

common raven - 62 contributors

Zoo Brno's educational and awareness-raising activities:

We have already written about SEV Sentinel, but we will add a few more details here. More than 250 educational programs were held on the zoo grounds

and the Patrol in 2021, attended by almost 5,000 children.

Eight thousand five hundred children used the Zoo Brno worksheets, and the circles at Mniší Mountain reached over 250 people. Five hundred children visited our suburban camps during the school holidays, and another 500 of them went through last year's novelty of the Brno Zoo – Forest Clubs.

Thank you once again!

Monika Brindzáková

The second most famous animal in the zoo is the meercat. Photo: Matyáš Slavík

Most adoptions were recorded for the arctic wolf. Photo: Matyáš Slavík





The Brno Zoo has acquired a unique species of fish and, for the first time, has bred the precious gidgee skink

When we have already said how well we did last year and thanks to you, we will return to one more transport, which is worth remembering. Twenty individuals of the La Palma pupfish arrived from the Netherlands Mniší Mountain. It is a scarce fish that no longer exists in the wild and only is bred in six zoological gardens in Europe. And that's not all.

"We are now the only garden in the Czech Republic that breeds this extinct species in the wild, and we hope for its reproduction. Therefore, these immature fish are currently in the back of the garden, where they will have more peace. Visitors cannot see them, but the garden is thus fulfilling one of its main missions, namely the preservation of species diversity," commented Petr Šrámek, the garden's curator of fish and reptile breeding, on the new zoo inhabitants.

La Palma Pupfish (*Cyprinodon longidorsalis*) is a small fish that grows to a maximum size of five centimeters in adulthood. The species originally lived in a single artesian spring in Mexico. Due to the increasing water consumption for agriculture, the water table gradually dropped, and the spring subsequently dried up. This resulted in a deterioration in the living conditions for



The excellent breeding success of Zoo Brno is also the first breed of gidgee skink.
Photo: Petr Šrámek



In Brno, 20 individuals of La Palma pulpfish arrived from the Netherlands. Photo: Petr Šrámek



We are now the only garden in the Czech Republic that breeds this species extinct in nature. Photo: Petr Šrámek

this and three other fish species. Two of them survive in zoo aquariums, and two have become extinct.

Youngs of Gidgee Skink

The excellent breeding success of Zoo Brno is also the first breed of gidgee skink. Two young animals of this rare reptile were born in mid-September and are unique breeding within the entire Union of Czech and Slovak Zoological Gardens. Interestingly, this reptile does not lay eggs, but it gives birth to live young, almost identical miniatures of adult individuals. "For breeding, it is essential to set up the breeding pair correctly because it is complicated to determine the sex of this species' individuals. Even in the wild, the young often stay with their parents, which is unusual for reptiles. Together, they form a functional group with the parent pair at its core and gradually several generations of offspring," Šrámek added.

Gidgee skink (*Egernia stokesii*) is a reptile with a barbed tail that serves

as a defense against predators and also helps it to wedge itself into crevices in rocks and trees where it lives. In the wild, it inhabits the dry Australian out-back.

Attractive offspring in 2021 include nine hatchlings of the visually beautiful Roti Island snake-necked turtle, the second offspring in Brno Zoo, and nine hatchlings of the rubber eel, which despite looking like a snake, belongs among amphibians.

The Roti Island snake-necked turtle (*Chelodina McCord*) inhabits only the tiny Indonesian island of Roti in the wild, where it can be found in just a few dozen square kilometers of lakes and swamps. Growing up to 24 centimeters in length, the female lays 13 eggs measuring 30 x 20 millimeters. It feeds on insects, small fish, and tadpoles. It hunts by sticking its head out (quickly stretching its neck) and grabbing its prey. It is primarily active at night. The Roti Island snake-necked turtles are critically endangered on the Red List of Threatened Species. Humans are the main threat to turtles. In addition to habitat loss, they face illegal hunting for the pet trade. The species is already wholly extinct in the wild and will not become extinct due to human care.

Rubber eel (*Typhlonectes natans*) is native to South America and can grow up to 60 centimeters long. They move in the water by undulating their entire body, and it is typical for males to have a suction cup at the end of their body to attach to the female during mating. Visitors can see them at the Zoo Brno in the Exotarium.

Monika Brindzáková

We were able to rejoice at nine young Roti Island snake-necked turtles. Photo: Petr Šrámek

The Roti Island snake-necked turtle inhabits only a tiny Indonesian island of Roti. Photo: Petr Šrámek

The rubber eels move in the water by the waves of the whole body. Photo: Petr Šrámek



The eagles were replaced by threatened kites and storks

The Brno Zoological Garden has prepared a novelty in the form of a presentation of endangered species of migrating birds. The bald eagle in the circular aviary at the bottom of the complex was replaced by critically endangered black kites, and the black stork was added to the exposition.

"Our garden started with the breed of the bald eagle in 2014 and managed to breed one young. However, harmonization of breeding pairs, placement of young animals, and, last but not least, their strong territoriality are problematic in this species. No additional species could be kept in breeding conditions during their exposure. All of this was the reason for ending the

breeding and changing the whole concept, which enabled the aviary to be filled with attractive animal species and at the same time to support campaigns for the protection of migratory species of birds," said Martin Hovorka, Director of the Zoo Brno.

For the last eagle male, we found a location in Zoo Liberec. At the end of 2021, two males and two females of the

black kite arrived from France. "The black kite is also nesting solitary, but the pairs are much more tolerant of each other than the eagle. In the Czech Republic, the kite is one of the critically endangered species. During spring and autumn, it is possible to observe massive migration of up to hundreds of individuals of this kind between the wintering and breeding grounds. The black storks are in a similar situation. Unfortunately, a huge problem is their mass

Black kites are critically endangered.
Photo: Roman Kočí



shooting during the migration period," said Petr Suvorov, curator of birds breeding at Brno Zoo.

The whole concept will also be represented in the adjacent exhibition by two other species of migratory birds, namely smews and Baer's pochards. Both are endangered species of fish-eating diving ducks of the Far East. "While the range of the smew extends into Europe and the Czech Republic is also among its wintering grounds, the Baer's pochard lives only in a small area in the Far East and winters in China, as does, for example, the Manchurian crane. This species is critically endangered throughout its range and is the subject of a rescue program within EAZA," Suvorov added.

Monika Brindzánková



Black kites have replaced bald eagles.
Photo: Roman Kočí



The breeding of the bald eagles at the Zoo Brno finished. Photo: archive of Zoo Brno

A colorful year at the Jinačovice rescue station

The year 2021 at the station was again diverse and brought us new experiences. An example was the capture of three otters from the Svatka River in Veverská Bítýška.

We received a call from a gentleman living near the river saying that he had heard otters whistling at the end of June. We also learned from him that he occasionally sees a cub on the bank, but only sporadically, because the little otter hides in the dense vegetation growing around the river.

Of course, we did not hesitate and drove to the place he described to us. The first problem was that it was locat-

ed behind a factory and was very difficult to access. After a thorough assessment of the situation, the gentleman and I suggested that there were more cubs. Unfortunately, the second problem was that they had most likely lost their mother and were starving. So we had to arm ourselves with a scythe and cut our way through the nettles and touch-me-nots around the river. It was a jungle, and the mother otter knew

that this was where the cubs would be safe.

On the first day, we missed the cubs. After all, it could also be just that the mother is hunting somewhere longer and returns. But even on the second day, the situation didn't improve. On the contrary, we heard from more people, and it even got to the point that, unfortunately, the first cub was brought to us in the morning and was attacked by a dog during a walk. Despite all our care, we were unable to help it.

We immediately drove back to the site, there was no more waiting, and we



The little male otters gradually grew as if out of water. Photo: Simona Blahoňovská

The main component of the otter diet consists of fish. Photo: Simona Blahoňovská



managed to capture the remaining otters. They were emaciated and hungry, and we found out they were two males. We put the cubs in a hay cage and hooked up a heat source to dry them out. The coaxing began for a rubber pacifier and spare milk.

The mother otter stays in the wild with the cubs for almost a year before becoming independent and learning to hunt. Fortunately, it didn't take long for the cubs to start drinking, and they also gradually gained weight. At first, we presented them with finely chopped fish, and later we gave them whole fish. In the wild, fish make up 90 percent of the otters' diet, with the remaining 10 percent going to other animals (crayfish, frogs, birds, snakes, and others). In time, we could switch entirely from a dairy diet to fish.

The cubs grew and thrived in the large water tank, and since the station is not equipped to hold otters for long periods, colleagues from the Vlašim rescue station took them to their exhibit with running water and a large pool. There they prepared them for release back into the wild. And we should add that the number of otters in the Czech Republic is rising.

The year 2021, in a nutshell

Last year, we assisted in 546 animal cases representing 1,009 individuals representing 73 species. The number of animals admitted increased. In 2021, more prominent groups (colonies) of bats had been admitted. Therefore the numbers of total admissions are higher, and hedgehogs' and birds' admissions have also increased significantly. The most commonly recruited species were Mammals, widespread pipistrelle bats (335), and European hedgehogs (127 individuals). Of birds, the most common were blackbirds (60), great tits (34), common kestrels (33), mallards (25), and song thrushes (21). We took in animals numbering 20 specially protected species, of which 4 species belonged to bats (common pipistrelle, common noctule, particolored bat, and serotine bat).

Animals received from the area of Kuřimsko and Rosice, i.e., from the area covered by the National Network of Rescue Stations, accounted for about 70 percent (730 individuals), which is a higher proportion than in previous years.

Simona Blahoňovská



In 2021, a European pond turtle also entered the rescue station. Photo: Simona Blahoňovská



Last year we also looked after a hawk. Photo: Simona Blahoňovská



We care about squirrel pups every year. Photo: Simona Blahoňovská

SEV Sentinel organizes events for everyone

The Center for Environmental Education (SEV) Sentinel has been operating at the Zoo Brno since 2014. In case anyone does not know about this great place in Špilberk, we will first introduce our remote workplace in more detail. Plus, we'll add some tips on the significant events it hosts.

SEV Sentinel is located in Špilberk Park in a reconstructed historical building of the former castle powder room. It is now in its eighth year of offering schools and the public interactive educational programs, special interest groups, outreach events, holiday suburban camps, and other educational services. Also popular are the parent center's programs, such as information about the Fairtrade movement, coupled with fairtrade tea and coffee tasting, the Frogs Club - a self-guided exercise session for parents and children in our children's gym, and the Mouse's Small Creation Club, held every Wednesday under the guidance of a

tutor. The well-equipped playroom is also very popular with the children. The parent center and all SEV Sentinel programs are only possible at your own risk, and there is a real risk that the children will not want to go home. In 2021, the Sentinel was awarded the Nature Garden certificate. Children widely use the garden environment in educational programs and clubs, and visitors to the children's center come here to relax and gain new inspiration for building their gardens.

Events for children and adults

On Friday, June 3, you can look forward to the already traditional **Fairy-**

tale Park, which will take you from the center of ecological Education Sentinel to Špilberk Castle, where you will meet the king or queen in the ceremonial surroundings of the castle chapel and the children will be rewarded for the tasks performed.

In recent years, SEV Sentinel has expanded its offer of adult education. These are three four-hour programs intended primarily for teachers of kindergartens and primary schools, leisure teachers and Environmental education coordinators, or other interested parties. All of these programs are accredited by the Ministry of Education for further training of teaching staff, and their graduates receive a certificate.

The accredited program **Experiments for the youngest** brings exam-

SEV Sentinel building. Photo: SEV Sentinel



ples of simple and aids of undemanding activities in chemistry and other natural sciences suitable for younger children (kindergarten and 1st grade of Elementary school). The advantage is that in the vast majority, such substances and materials are used in these experiments, which are not dangerous to children and can usually be found in the kitchen.

To distinguish the most common birds of our nature according to their appearance and their singing, you will learn a program of **Practical knowledge of bird species**. During the excursion to Špilberk Park, you will learn

about the life and behavior of ordinary birds, and the knowledgeable lecturer will also answer other curious questions of the participants. We also organized an excursion with winter bird watching for seniors in the Third-age Academy.

While the above two programs occur in the SEV Sentinel premises and in the Špilberk Park, the last of the accredited programs, called Zoo as an aid in education, takes place in the Zoo Brno the Mniší Mountain. The graduate of this seminar will learn in detail about the offer of Zoo Brno for pupils of the 1st-

grade elementary schools and will be able to use this offer (guided excursions, teaching programs, worksheets, etc.) in the preparation of their teaching.

The offer of the Sentinel resort is, therefore, really varied. Whether you are teachers who want to get new knowledge and inspiration or have children for whom you are looking for valuable leisure time, try to visit us at Sentinel 4, Brno, and see for yourself. You can also find more information on our website www.sevhlidka.cz or www.facebook.com/sevhlidka.

Zuzana Musilová



We also keep several animals, including domestic ones, at the Sentinel. Photo: SEV Sentinel

In 2021, the Sentinel was awarded the Nature Garden certificate. Photo: SEV Sentinel



We organize events directly at the Sentinel and in the park under Špilberk. Photo: SEV Sentinel

We can also do chemical experiments. And how! Photo: SEV Sentinel



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