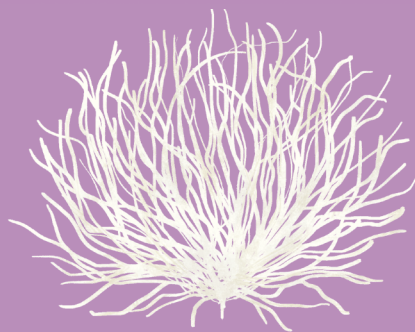


Marie Kotasová Adámková
Matej Ilčík

All about **THE FEATHER**



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B4U PUBLISHING



TUNDRA SWAN

Cygnus columbianus

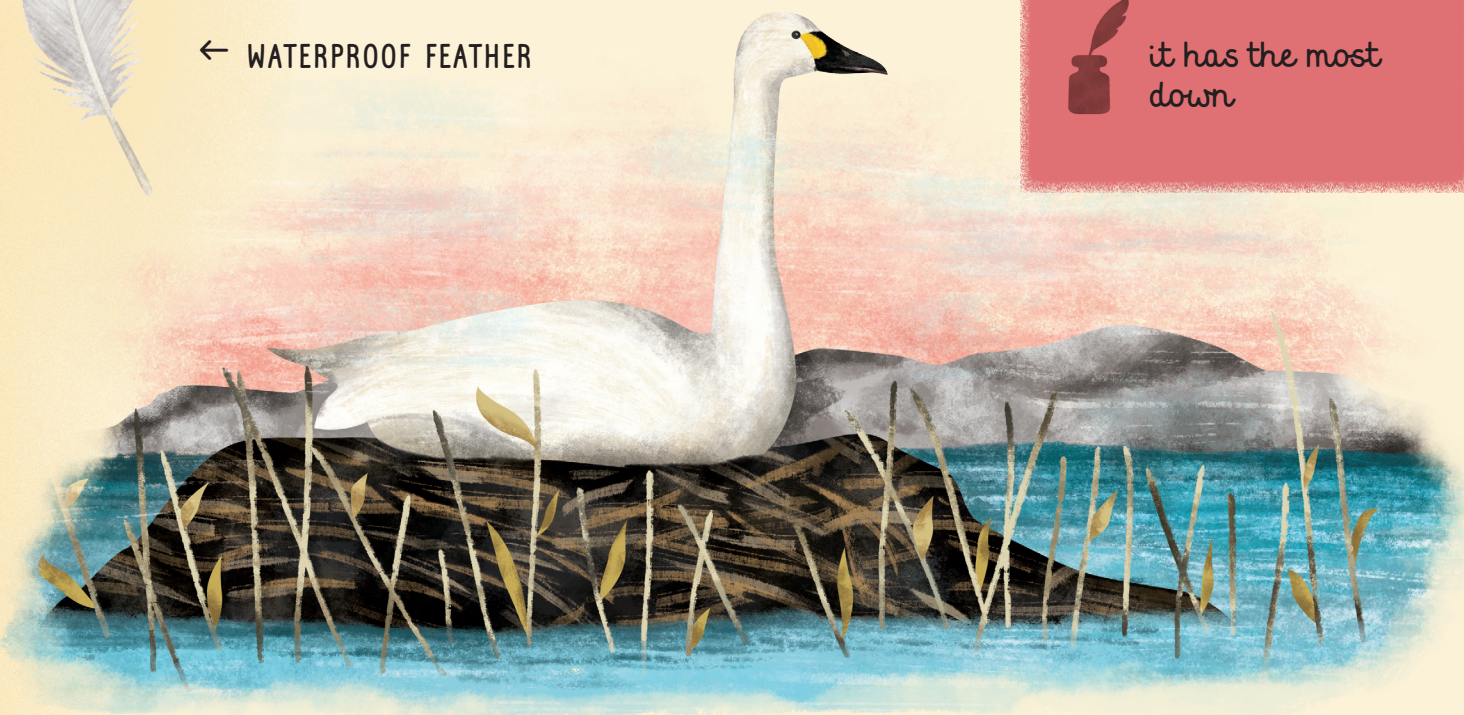


← WATERPROOF FEATHER

A hardy cousin of the better-known mute swan, it lives by ponds and lakes of the Arctic tundras. It can be distinguished from the mute swan by its straight and slightly smaller neck. Could this smallness be protection against the icy winds of its cold home? Its beak is even more remarkable—mostly black, it has a pretty yellow patch next to the eyes. This wild northern beauty is called the tundra swan.

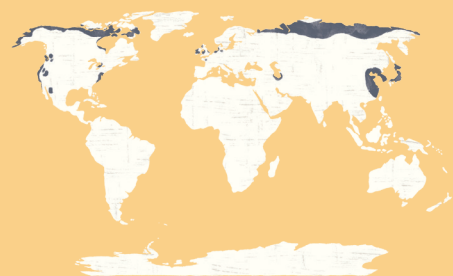


	115–150 cm
	1.65 m–2.16 m
	3.8–10.5 kg
	it has the most down



Occurrence

TUNDRAS BY THE ARCTIC OCEAN



COURTSHIP

The tundra swan is one of the most faithful bird species. When seeking a partner for life, it chooses carefully, as partners should be of the same age and size. And before starting a family, prospective partners must find a few things out about each other. They dance together, shaking their bodies, spreading their wings and elegantly bowing to each other—it's as if they were on a dance floor! At last the time comes to build a nest—from moss, grass and leaves.

ONE BIG FAMILY

Both partners take care of the eggs. As they swap roles, the parent that is about to leave the nest carefully inspects the eggs, while the other hurries to sit on them. After a month, the shell breaks to reveal a tiny cygnet, which makes straight for the water. At first the baby swan follows its mother across the water, as it finds flying difficult. Cygnets stay with their parents for up to two years. They begin to seek a partner between the ages of three and five. Sometimes they take this partner to see their original family.



SWAN OF THE NORTH

We most often see the tundra swan with its head underwater, snacking on aquatic plant life. Whenever it finds a bed of pondweed, of which it is especially fond, it sets about it with such gusto that only its legs and short-tailed rear remain above the water. As its greasy feathers repel water, it can remain in it for as long as it wishes; what's more, its feathers keep it warm. It has the greatest quantity of downy feathers of all birds. Scientists have counted up to 25,000 of them on the body of a single tundra swan. Just imagine!

Whose coat is the best?

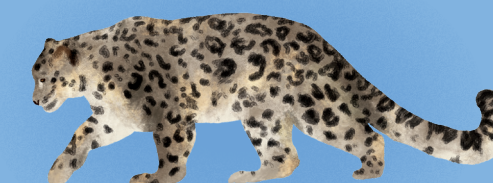
IN HARSH CONDITIONS, GOOD BODY COVERING IS IMPORTANT, NOT ONLY FOR BIRDS BUT FOR MANY MAMMALS TOO.



LONG-TAILED CHINCHILLA



WOLVERINE



SNOW LEOPARD



MUSKOK

AFRICAN PENGUIN

Spheniscus demersus

Exception

ONLY PENGUIN
LIVING IN THE
TROPICS.



← TINY, NARROW
FEATHERS

You would expect penguins to appear in the lands of ice and snow of the southern hemisphere. But African penguins have to resist high temperatures of South Africa. Living in such heat is not easy for it! Luckily, it is cooled by a featherless piece of pink skin on its head, hiding the blood vessels beneath the skin. They are cooled by the air surrounding them and then the blood is distributed throughout the body. Each penguin has a built-in refrigerator. Without it, the penguins would not survive in Africa.



60-70 cm



wings are
reduced



2.1-3.7 kg

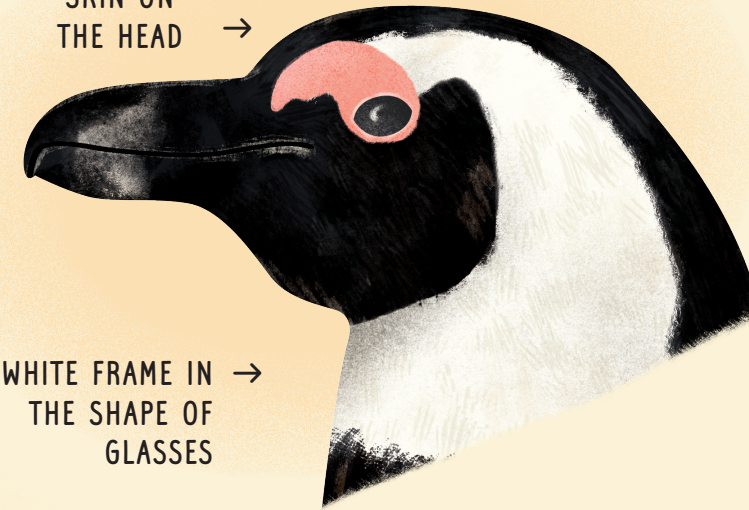


feathers that
do not freeze

WATCH OUT FOR THE SUN

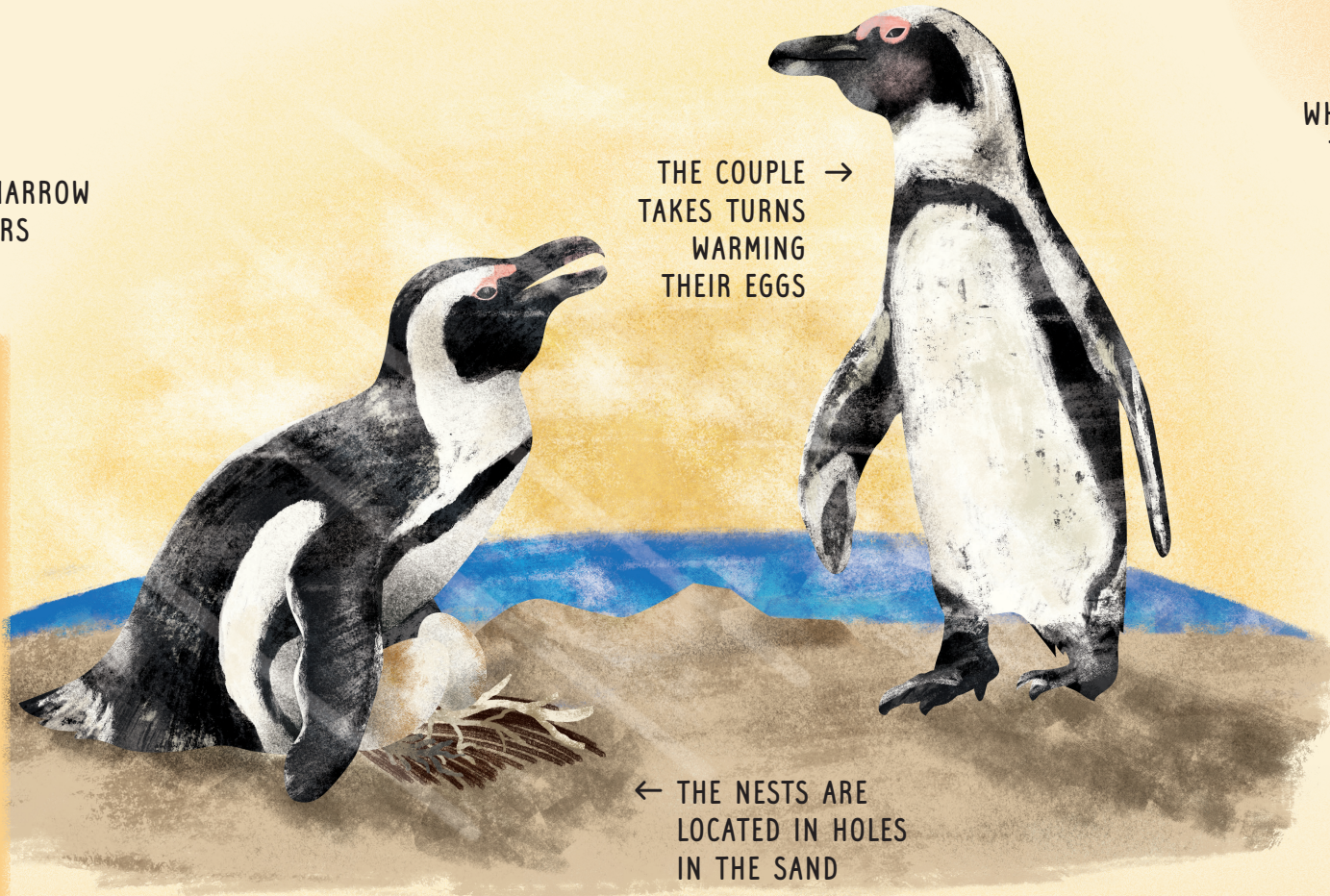
Penguin mother lays 2 eggs in a nest lined with twigs, and while her cold relatives have to protect the eggs from frost, she protects the eggs from high temperatures. The shade is scarce, so parents create it for their eggs to protect them from the sun. Mum and dad take turns looking after the eggs for approximately 40 days and their work is not over even after hatching. For the first month, they feed them the digested food that they eject directly into their beaks, and then go to the nursery where they stay with their other friends until their feathers grow.

FEATHERLESS
SKIN ON
THE HEAD →



WHITE FRAME IN →
THE SHAPE OF
GLASSES

THE COUPLE →
TAKES TURNS
WARMING
THEIR EGGS



← THE NESTS ARE
LOCATED IN HOLES
IN THE SAND

DURABLE FEATHERS

Most penguins feed on prey in the water. How is it possible that the wet feathers do not freeze on them? Scientists have found that penguin feathers are absolutely unique. They have grooves and hooks that connect them, they are very small. In addition, their feathers repel water, creating a perfect non-freezing surface! The African penguin does not fully appreciate the non-freezing feathers in the heat, but is equipped with it just like all its relatives.

Watch out
for them!

THERE ARE MANY ENEMIES
IN SOUTH AFRICA THAT THE
AFRICAN PENGUIN MUST WATCH
OUT FOR.



BROWN FUR SEAL



KELP GULL



CAPE GANET



YELLOW MONGOOSE

Occurrence

COAST OF
SOUTH AFRICA



HOODED PITOHUI

Pitohui dichrous



22-23 cm



30-40 cm



67-76 g



poisonous feathers



BIRDS DO NOT
MAKE THE POISON
← THEMSELVES

BRIGHTLY →
COLOURED
FEATHERS

BLACK TAIL
← FEATHERS

↑
THE PITOHUI
ENJOYS EATING
COLOURED FRUIT

Poison

THE PITOHUI RUBS
OFF THE TOXINS ON
ITS NEST AND EGGS.



A special species of bird is hiding in the Papua New Guinea rain forests. It is as big as a thrush, but is much more colourful. The combination of orange, black and brown colours reveals that it is the hooded pitohui. It is a highly sociable bird, even nesting with all its relatives. What a busy place! In a rain forest full of potential enemies and hungry necks, there is a great advantage in having neighbours who help each other defend their nests and feed their brood. When the pitohui feasts on its favourite fruit, seeds or insects, it is often joined by other bird species and together they make up large flocks.

Occurrence

THE RAIN FORESTS
IN PAPUA NEW GUINEA



FAN OF BEETLES

Most of all, the pitohui enjoys soft-wing flower beetles. They are poisonous, however, with their bodies containing batrachotoxin poison, which can be found, for example, in South American poison dart frogs. How is it possible that the poison will not hurt the pitohui? And what's more it's even protected from it? In short, the pitohui has developed immunity from it. The poison gets from the food into the skin and into the feathers as well. When a human touches the poison with an unprotected hand, it starts tingling and goes numb. The pitohui ranks among the few bird species with poisonous feathers and poisonous skin. Its insides and muscles are much less toxic though.

BLACK-ORANGE →
COLOURED SOFT-
WING FLOWER
BEETLE



PERFECT PROTECTION

If you look at the hooded pitohui, you may think that its feathers resemble the bright colour of a wasp or bee which often serves as a warning. Bingo! Young birds have the same colouring as adults. They are not poisonous yet though, because they develop toxicity during their lives. According to scientists, the adult plumage develops in the young birds so early because they need to be protected from possible predators. Looking poisonous is perfect protection!

Watch out
for them!

THE BIRDS WITH POISONOUS
FEATHERS INCLUDE THE PITOHUI
AND ITS RELATIVE, THE IFRITA.
THE SPUR-WINGED GOOSE HAS
POISONOUS FLESH.



LITTLE SHRIKE-THRUSH



NORTHERN VARIABLE POTOHUI



BLUE-CAPPED IFRIT



SPUR-WINGED GOOSE

INDIAN PEAFOWL

Pavo cristatus

ORNAMENTAL →
CROWN



← PEAFOWL
CAN FLY

The peafowl is one of the best-known bird species. It can only be found, however, in the wild in India and Sri Lanka. In its natural habitat, it lives mainly in forests and bushes where it feeds on seeds, plants, various invertebrates and occasionally pecks up a frog or a snake. Both males and females have a crown which, together with the long "train" of feathers, imparts them with a royal appearance. They live in small flocks, standing out a mile, and like to demonstrate their majesty with a loud call.

← LONG SIDE
FIBRES



0.86–2.12 m



1.4–1.6 m



2.7–6 kg



feathers raised
into a fan

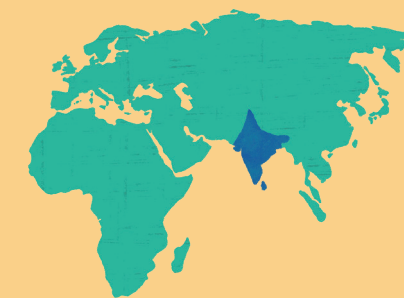
200 EYES

The long train is not formed of tail feathers as it might seem. In fact, it consists of almost 200 elongated upper tail coverts. It can raise this feather finery into a large fan, showing the brightly coloured eyes. The more eyes there are on the male's fan, the more attractive he is to females. His pride stands out most in a ritual dance which no single peafowl lady can resist!



Occurrence

INDIA AND SRI LANKA



DUST BATH

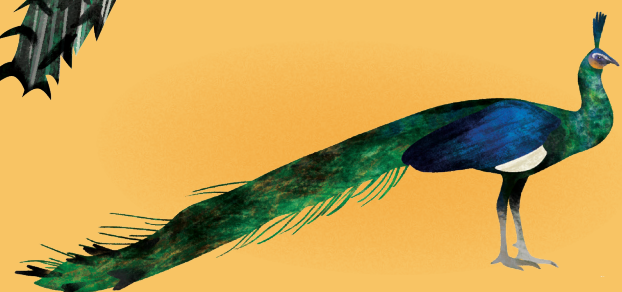
The peafowl is always thirsty, so it usually stays near water. But it does not bathe in it! If it gets wet by accident, its feathers are so heavy that it has to immediately hide in a safe place and wait until it dries. If they encounter a predator at that moment, the heavy feathers would prevent them from flying! This is why the peafowl enjoys dust baths rather than water baths. Dust works like dry shampoo and cleans the plumage perfectly. Then it only has to grease the feather finery, and the hygiene process is complete.



↑
RICH FAN MEANS MORE
SUCCESSFUL COURTSHIP



← LESS MARKED
FEMALE



GREEN PEAFOWL



WHITE INDIAN PEAFOWL



CONGO PEAFOWL

Blue, greens and white peafowls

THE PEAFOWL COMES IN MANY COLOURS. THE INDIAN PEAFOWL IS KNOWN AS THE BLUE PEAFOWL. THE WHITE PEAFOWL HAS BEEN BRED FROM THIS SPECIES. IN CONTRAST, THE GREEN PEAFOWL AND THE CONGO PEAFOWL ARE SEPARATE SPECIES.

BRAMBLING

Fringilla montifringilla



13.5–16 cm



26 cm



17–30 g



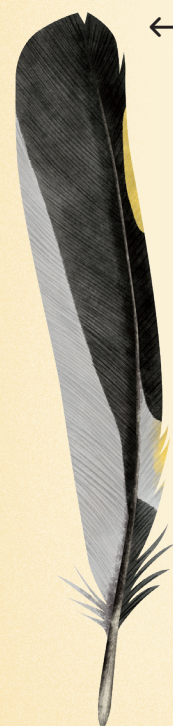
changes plain and mating plumage

↑
LEGS
ADAPTED
TO CLIMBING



MALES
WEDDING SUIT
↓

Changes
THEY CHANGE
COLOUR AFTER
MATING.



← TAIL FEATHER

Birch and willow forests in the far north are abundant in food in the summer. The great diversity of seeds, berries and insects attracts various birds. One of them is the brambling. It swiftly climbs trees and shrubs and sometimes flies down, searching the ground with its beak to find something to eat. The male will undoubtedly catch your eye at first sight, even though his plumage comes in subdued shades of grey, white, orange and brown. Due to the black head, neck and back, the male looks like a groom in a wedding suit.

Occurrence

NORTHERN EUROPE AND ASIA



WINTER JACKET

After the breeding period, males moult into a less conspicuous garment and become more similar to females. The head and back are no longer all black but orange with black spots. At that time, winter is coming to the north, and the brambling knows it will start snowing soon. It is high time to travel south in this new winter coat. In the winter, the brambling becomes a wanderer that roams the countryside and looks for its favourite food—beechnuts. If there is a lot of snow, the brambling has to continue south. It is unable to reach food under the thick snow cover. It flies to protected areas to prevent loss of heat and energy. It rests and sleeps in, for example, coniferous trees growing in the lee. In these areas, you can encounter up to 20 million birds at once. Incredible!



LOOKING FOR
FOOD
↓

↑
WINTER SUIT

WHEN SPRING COMES BACK

If bramblings survive the winter, they put on the wedding suit again. They look for partners in small groups and then select a suitable nest site with them. Both partners protect the nest fiercely. The female guards the immediate vicinity of their home, while the male's task is more complicated—he has to defend the entire nesting territory. Bramblings fight other representatives of the same species, various predators and cuckoos trying to lay their own eggs into the brambling's nest.

Nordic insects

NORDIC FORESTS ARE VERY RICH IN VARIOUS INSECTS, WHICH IS A GREAT SOURCE OF FOOD NOT ONLY FOR BIRDS. THERE ARE ALSO A LOT OF MOSQUITOS AND WOOD-DESTROYING INSECTS.



MOSQUITO



MELANOPHILA ACUMINATA



AUTUMNAL MOTH



MONOCHAMUS SARTOR

SPECTACLED OWL

Pulsatrix perspicillata



The spectacled owl lives in the forests of Central and South America. It nests in the hollows of old full-grown trees and watches its prey while sitting on the branches. It is mostly active at night, but you can sometimes see it hunting during the day. It occasionally catches a small mammal, insects or a bat. It can also catch crabs, frogs and birds, including little owls. The spectacled owl is a very fearsome predator. As soon as it spots its prey from its lookout, it quickly flies down towards it, grabs it and brings the freshly caught lunch back to its favourite branch.



43-52 cm



76-91 cm



500-1250 g



chicks covered in powder down feathers

ADULT OWL →
ON WATCH

OWL CHICK
↓



SPECIFIC POWDER →
FEATHER



Predator

GREAT SIGHT MAKE
OWLS SUCCESSFUL
HUNTERS.

Occurrence

CENTRAL AND SOUTH AMERICA



BORN IN THE RAIN

The spectacled owl reproduces at the turn of the dry and wet seasons. The timing is perfect! The female lays 1 to 2 eggs, and the chicks hatch after 36 days. Usually, only one of them survives and therefore has the full attention of the parents who mainly try to teach the chick hunting skills. The rainy season provides plenty of opportunity for training and food for the whole family, which sticks together for a year until the chick becomes independent.



BALLS OF PLUSH

Baby spectacled owls, as well as all owls, are born blind and deaf. Their bodies are covered with grey-white powder down feathers. They hatch looking like that. In one or two weeks, they grow the second layer of down, which makes them look like balls made of plush. This plumage is called mesoptile. It differs from contour feathers because the barbs do not grow from the stem but directly from the feather base. Chicks grow regular contour feathers later.

Double jacket

THE DUAL POWDER DOWN FEATHERS ARE TYPICAL NOT ONLY FOR ALL OWL SPECIES BUT ALSO FOR LOONS AND ANSERIFORMES.



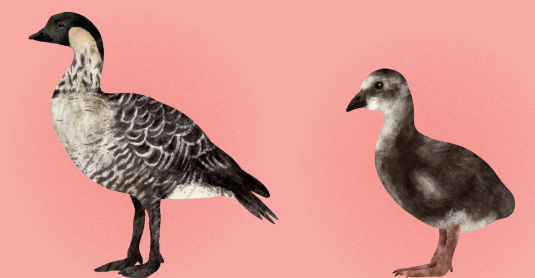
COMMON LOON



BOREAL OWL



HORNED SCREAMER



NENE



All about **THE FEATHER**

Written by Marie Kotasová Adámková

Illustrated by Matej Ilčík

A feather lies under a tree. Who could it belong to? Blow on it and watch it float up to the sky, as light as... well, a feather! Feathers are as diverse as the birds that wear them to suit their habitat. So the lovely eider of the North has warm feathers, the white-throated dipper greasy ones, a penguin on the ice plains feathers that won't freeze. Learn about the most interesting species in the bird kingdom and their feathers – on a large-format poster too!

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