Wildlife Photographer of the Year 2019

Descriptive Audio Tour

Stop 1: Welcome

Welcome to *Wildlife Photographer of the Year*!

Organized by the Natural History Museum in London, England for the past 55 years, this is the oldest, most prestigious nature photography competition in the world. We're proud to present the exhibition at the Royal Ontario Museum for the 7th consecutive year. I'm Burton Lim, assistant curator of mammalogy — and I'm honoured to curate this year's first North American showing.

This year, over 48,000 images were submitted by professional and amateur photographers, representing 100 nationalities. An internationally recognized panel of 9 judges selected 100 of the best submissions for display in the exhibition. They also awarded 19 category winners and 2 grand title winners as the most memorable and striking. These images capture the fragility and beauty of the natural world.

This exhibition is divided into 6 sections. Some sections feature *single* images, exploring diverse themes such as: Animal Behaviours that enhance our understanding of an animal's life in the wild; Portraits that invite us to look closer and gain new perspectives on the subjects; and Habitats that explore an animal's intricate relationship with its environment. Other sections feature *collections* of images, including Photojournalism that convey compelling stories about the natural world, and Portfolios that focus on outstanding images dealing with a specific subject matter. My personal favourite is the Young Photographers section, which showcases a new generation of visual communicators who are less than 18 years old!

This descriptive audio tour highlights 12 photographs throughout the exhibition. We selected them because their stories resonated with us, and we felt that they were worth looking into with more detail. In addition to my voice, you'll also hear from Tina Weltz, a ROM photographer, and William Olenek, who won last year's ROM young photographer competition. Each stop is identified by a number on the floor that you enter on your smartphone to get a deeper dive into the photo.

We'll set the scene of the image and share some insights from the photographer, but we will also offer other perspectives related to the biology of the wildlife and how the picture was captured.

We hope you enjoy this guided tour and gain a new appreciation of our natural world and the power of visual communication to inspire and stimulate the public discourse.

Stop 2: *Cool Drink* by Diana Rebman

The exhibition begins with the Animal Behaviour section. The images here are grouped into categories for birds, mammals, invertebrates, which are animals without a backbone, and amphibians and reptiles. They capture scenes of the ongoing struggles for survival in nature — including predator-prey interactions, foraging for food, and defending territory.

This image is named "Cool drink", taken by Diana Rebman, an American, on the island of Hokkaido in Japan. It's a highly commended photo in the Bird Behaviour category.

Here, a long-tailed tit is caught in mid-flight while momentarily hovering below an icicle to take a bite off the icicle's tip. Its white belly and the white underside of its outstretched wings contrast starkly with the black on the front edge of the wings and along the mid-line of the tail feathers. Also pure black are the feet, eyes, and bill.

The long-tailed tit is a small bird with a body length of about 6 cm (or just over 2 inches) long. As alluded to by its common name, the tail is as long as, or longer than, the body. It is a common species widely distributed across Europe and Asia. This species remains active through the winter feeding on insects and spiders, but is also known for nibbling at icicles to avoid dehydration. They usually flock in groups of 20 and each will take quick turns at the frozen treat. And when the sun comes out or temperatures rise a bit, the birds will start sipping the drops of water as the icicle melts.

The photographer Diana Rebman endured extremely cold temperatures of -20°Celsius (or -4°Fahrenheit) for hours on end — coping with freezing cold finger

tips to take pictures of what she called a “well-choreographed dance” by a group of long-tailed tits taking advantage of this icicle. Her secret weapon was a cable release attached to the camera, which captured the special moment when her fingers may have been too numb from the cold to react in time. The show ended when one over-zealous bird clung to the icicle for a split-second too long and broke it off.

Stop 3: *The moment* by Yongqing Bao

“The moment” is a photograph by Yongqing Bao from China. This image is the Joint Winner of the Mammal Behaviour category. It captures the exact moment a Tibetan sand fox surprises a Himalayan marmot emerging from a burrow. The marmot is pirouetting on the ball of its left foot, turning away from the fox and ready to bolt out through the right side of the frame. The fear on its face is apparent. Its mouth is open and its front toes fully splayed. The fox is momentarily startled, but its legs are bent and its body is low to the ground, ready to pounce. Its head is cocked to one side with the eye eerily fixed on the prey.

Both of these mammals are high-altitude species typically found above 3,000 metres (or about 10,000 feet) in elevation. They live primarily in grassy alpine habitats. The Tibetan sand fox is active year-round, preying on small to medium-sized vertebrates, which are animals with backbones, but also scavenging on larger carcasses. The Himalayan marmot hibernates in a burrow during the winter and emerges during the spring when the photo was taken. Although they are not in the picture, this female fox had 3 hungry cubs to feed.

Yongqing Bao was trained in ecology, but is now a professional photographer with the Qilian Mountains Nature Conservation Association of China in the heartland of his subject species. Yongqing used a super-long telephoto lens (800mm) to zoom into his scene. The aperture was wide open to let in as much light as possible, and the background is kept blurry to concentrate on the showdown. With this large lens, he needed a tripod to steady the camera, and used a fast shutter speed to stop the encounter in mid-action without blurring. The detail is amazing with the dew visible on the blades of grass and also kicked up into the air during the surprise attack.

Stop 4: Tactile Panel

Have you ever wondered how photographers take dramatic close-up images of animals in their natural habitats?

It depends on the type of camera lens the photographer uses. In this touchable display, we compare two types of lenses – telephoto and wide-angle. Go ahead and touch it!

On the left, you'll find information on a telephoto lens. In the graphic in the bottom left, we have the example of a 300 mm telephoto lens. Here it is used to take a photo of a chipmunk 2 metres (or about 6 ½ feet) away, for a close-up shot. This is very useful when you want to avoid disturbing the animal, or otherwise cannot get close to it.

On the right, you'll find another type of lens that can be used for taking close-up photographs. This example is a 24 mm wide-angle lens. You can see or feel on the graphic that this lens is much shorter than the one of the left. The wide angle lens allows you to take an image when the subject is much closer, say if the chipmunk is only 12 cm (or 5 inches) away from you. It's a good choice when there's an opportunity to set up the camera without being intrusive or when you want to take a photograph underwater, where light levels decrease quickly. Wide-angle lenses are also good for landscape photography.

Both lenses can create beautiful images where the subject fills the frame. What you use will depend very much on where you are, and how close you can get to your subject.

Curious about the types of lenses the photographers in the exhibition used? On the bottom right of each photograph, you'll see a label with the technical specifications. Look for the number measured in millimetres – this is the focal length of the lens, which is the distance between the lens and the film or sensor of the camera when the subject is in focus. If the focal length is higher than 60 mm, it's most likely a telephoto lens, which means the photographer was far away when they took the photo. In contrast, if the focal length is lower than 50 mm, that's likely a wide-angle lens, which means that the photographer was very close to their subject. What we see with our eyes is very similar to a camera with a lens of 50 – 60 mm.

Stop 5: *War dance* by Victor Tyakht

"War dance" by Victor Tyakht from Russia is in the Amphibians and Reptiles Behaviour category.

This image shows 2 toad-headed agamas caught in mid-stride, running and bounding side by side in a competition over their desert domain. The lizards are light brown, with enough variation in shades that they are still visible against the sandy terrain. Their scaly bodies are speckled like the sand, but the tails have ringed stripes ending in a dark tip. The agama on the left looks like it's doing push-ups while one hind leg kicks up sand. The one on the right is completely off the ground, leaping in mid-air with its tail hooked around its competitor's tail as if to trip it up.

Toad-headed agamas are common in dry, hot habitats and are territorial lizards that aggressively defend their desert environments. They will protect their territory by racing around in competition and also curl their tails over their backs in menacing poses reminiscent of scorpions. Agamas are insect-eating animals that usually spend the hot day underground in burrows.

The photographer, Victor Tyakht, has put the viewer at eye level with these reptiles. He used a fast shutter speed of 1/2,000 sec to freeze the frame with no blurring. But what is also amazing with this shot is that Victor was holding the camera free-hand without the benefit of a stabilizing tripod. It's a head-on picture filling the frame, so there was probably only one fleeting chance for this perfect composition.

Stop 6: *Lucky break* by Jason Bantle

Hi, I'm Tina Weltz – photographer at the ROM. We are now in the Habitats section and Urban Wildlife category.

This section starts with a *really wild* picture entitled Lucky Break, by Canadian Jason Bantle — in it, a raccoon has squeezed its head through a hole in the front windshield of a car! I love this photo because the black masked raccoon is staring directly at the camera with a look of, "What have I gotten myself into?" The brown dilapidated vehicle is an early 70s Ford Pinto. Abandoned in a grassy field

near a forest, it needs a new paint job, the antenna is broken off, and half the grill is missing, but the wipers and headlights still seem to be intact.

This image was captured in rural Saskatchewan, but everybody living in a North American city, particularly in Toronto, loves to hate these masked bandits. Notorious for strewing the organics from your green bin halfway across the lawn every night, raccoons are just trying to eke out a living — like everyone else. In urban areas, some of them do get quite large and strut around the neighbourhood as if they own it. They can also be found living in attics. But in the wild, raccoons are smaller and leaner because food sources aren't as readily available. Here, they usually sleep in tree hollows or rock crevices. Raccoons are quite adaptable with where they den and what they eat — they are true omnivores, able to consume just about any plant or animal matter.

For several years, the mother raccoon had used this car to raise her family, and the photographer knew this. The only way in is through a hole in the windshield big enough for the raccoon, but too small for a typical predator like a coyote. This year, there were 5 young ones (or kits) in the back seat, which Jason could hear playing around while he was in his hiding spot waiting for the chance to capture this exact moment. At dusk, the mother had stuck her head through the hole to begin her nightly foraging, but then momentarily stopped to survey the outside scene. This opportunity of stillness enabled the photographer to use a slower shutter speed (0.4 seconds) with a tripod, letting in the fading light to finally get his crystal-clear shot of the humorous departure.

Stop 7: *The challenge* by Françoise Gervais

For the Animals in their Environment category, the photograph called "The Challenge" by Françoise Gervais from Canada was chosen as a Highly Commended image.

Set against the background of a rocky scree slope, in the lower right corner of the frame is a lone polar bear — looking like a white speck against a textured black background. But there is enough detail in the image to see that the bear is in mid-stride, trudging uphill with its left front leg reaching up to a rock as if to check out the sturdiness of the next foothold. Its left hind leg is firmly planted on a rock

below… and, because we can't see the top of the hill, we know that the bear still has a long way to go.

Polar bears have been greatly impacted by climate change, and warmer temperatures are decreasing the Arctic sea ice, which is essential for hunting seals – its main food source. This species is a top-level predator in the marine ecosystem. It's also an iconic symbol for wildlife and has great cultural significance to the Indigenous peoples of northern Canada. The photograph was taken on Baffin Island in Nunavut. Due to climate change, polar bears need to search for alternative food sources, including birds and their eggs. It's estimated that the polar bears on the island stay on land 20-30 days longer than 2 decades ago.

Françoise Gervais, the photographer, was bobbing around in a boat trying to steady herself for this image. Although using a telephoto lens, she wasn't after a zoomed-in photo of a picture-perfect polar bear, but rather wanted to communicate a different message. Françoise says, "Even one of the most impressive predators can look insignificant and vulnerable in the immensity and inhospitality of this landscape."

Stop 8: *Sleeping like a Weddell* by Ralf Schneider

The photo "Sleeping like a Weddell" is by Ralf Schneider from Germany, and appears in the Black and White Portraits category.

Here, a seal with mottled fur, white splotches on a dark short-haired body, lies on its side with its eyes closed and front flippers crossed over its chest. A slight smile seems to be creeping up at the corners of its mouth, as if it's experiencing a deep-sleep dream. The photo is tightly cropped from the torso to the head, which contrasts sharply against the icy white background. The details of the ice suggest that the seal has been there for a while because the contours of the body fit with the smoothness of its cool bed.

The Weddell seal is found around Antarctica, the most southerly distribution of any breeding mammal. It is a relatively large seal at about 3 metres (or 10 feet) long and averaging 500 kilograms (or more than 1,000 pounds). These seals have a thick layer of blubber that keeps them warm. Their primary diet is large fish,

and they can dive to 600 metres (or about 2,000 feet) and stay under water for nearly one and a half hours.

Snapping pictures from a boat, Ralf Schneider used a telephoto lens to get a tight shot of the seal snoozing on the ice. His portrait style gives a sense of personality and intimacy to the seal.

Black and white photography is typically a stylistic choice made by the artist. By choosing this monochromatic look, the image immediately has a strong impact. Schneider's control over the tonal range in this image is incredible – it almost gives the impression it's a pencil sketch.

Stop 9: *The wall of shame* by Jo-Anne McArthur

Jo-Anne McArthur from Canada photographed "The wall of shame" in Texas, which is part of the Wildlife Photojournalism category.

The focal point of this image is a brown snakeskin just slightly off-centre, pinned vertically to a white wall. A snakeskin half the size appears in the upper right corner. Stamped all around are 19 pairs of blood-stained handprints with the signed names of the people who prepared the skins. Several of the prints are small and probably from children.

Each year, the Sweetwater Rattlesnake Roundup in Texas – the largest such event in the world – captures tens of thousands of rattlesnakes. After the heads of the snakes are cut off, people can pay to skin them and then place their mark beside their handiwork. Festival supporters claim it is important to control the population of venomous snakes. But animal welfare groups argue it is cruel and puts the long-term survival of rattlesnakes at risk.

The photographer, Jo-Anne McArthur, observes, "So many of the bloodied handprints are those of children." She finds this to be the most unsettling aspect of the picture. This is the power of thought-provoking images. They make us stop and consider how our actions can impact wildlife. We can transform the natural world for better or for worse.

This photo of the controversial event was taken with a wide-angle lens not only to capture the range of participation, but also to document the signatures.

Stop 10: *The climbing dead* by Frank Deschandol

"The climbing dead" was photographed in Peru by Frank Deschandol from France and appears in the Plants and Fungi Environments category.

In this image, three antenna-like projections sprout from the body of a long-snouted beetle called a weevil. The weevil is clinging to a green plant stem at the bottom centre of the frame. The frontal shot makes the bulbous, orange-tipped, black-stalked projections look like a pitchfork. The insect's glazed, black eyes indicate it's dead. The *real* antennae of the weevil are bent on the head, looking like legs. But the 3 pairs of actual legs come from the underside of the body — progressively out of focus in the photo, and clamped onto the stem.

Beetles and ants are known to be attacked by Zombie fungus. Feeding on the innards of the insects, these parasites slowly kill their hosts who finally stop moving – literally dead in their tracks, locked onto vegetation. After using up the food supply, the fungus sprouts from the exoskeleton of the insect — emerging as long external fruiting bodies with capsule-shaped tips. These eventually burst and release millions of tiny spores to infect new prey with the aid of wind.

Photographer Frank Deschandol spotted his bizarre discovery at night in the Amazon rainforest. He knew the weevil was already dead and would therefore still be there the next morning when natural light would be better. This situation also allowed him to use a long exposure of 1 second to soften the background. He used an aperture setting of f5.6 for a depth of field that focused on the head of the weevil and the bright orange rounded tips. The thorax section of the body and the base of the antenna-like projections protruding from it are all out of focus.

Stop 11: *Humming surprise* by Thomas Easterbrook

Hi, my name is William Olenek and I was last year's winner of the ROM Youth Wildlife Photographer of the Year award. I will show you some awesome pictures

from the Young Photographers section, which has three age categories under 18 years old.

The first photo is by Thomas Easterbrook from Britain, the winner of the 10 years and under category. He took this picture in France and named it "Humming surprise."

This close shot shows a greyish-brown moth with blurred wings flapping away to keep it suspended in air. Its long, thin, straw-like mouth part is bent at a right-angle, dipping into a flower for some sweet nectar. The bright red flower rises from the lower right corner of the picture. The green background is out of focus, giving a nice colourful palette.

Moths usually fly at night, but hummingbird hawkmoths are different because they fly during the day. They also see better than other moths. This hawkmoth looks like a hummingbird flying and is easily mistaken for one. In addition, you can hear a hum when the wings beat fast (around 85 times per second). Its resemblance to the hummingbird's appearance and sound gave this moth its name.

The humming noise is what captured the attention of the Youth Photographer Thomas Easterbrook to this moth. He waited and watched as it sipped nectar from different flowers. Finally the moth got close to him, and he was ready. He pulled the shot off not only by filling the frame with both hawkmoth and flower, he also captured the body in focus with blurry wings— just as it was taking a drink.

Stop 12: *Night glow* by Cruz Erdmann

In the 11-14 Years Old category, "Night glow" was the winning photo by Cruz Erdmann from New Zealand.

A colourful squid fills this picture, with the darkness of the ocean as a backdrop. The squid is swimming from the upper left to the lower right of the photo. It is iridescent, with gold spots covering most of its head and arms, and wrapping around its body in bands. Glowing patches of blue appear throughout its entire body with two thin fins along the length. One large eye is surrounded by blue,

while the top of its head has a splash of green. Below, 4 small arms and 4 large arms extend forward.

Bigfin reef squids are common in the Indian Ocean and western Pacific Ocean. They are also commercially fished for human consumption. These squids have complex patterns of colours produced by pigmented and reflective skin cells, which they can voluntarily control. During mating, their colour patterns become distinctive to indicate a willingness to partner up. Posturing is also involved in courtship rituals.

Cruz Erdmann was diving with his father one evening when he saw this bigfin reef squid. Using specialized underwater housing for his camera, he was prepared for *anything* in Lembeh Strait off of North Sulawesi in Indonesia. A strobe light enabled him to take 4 photos before the squid swam off into the black expanse of the sea. With a high aperture, Cruz managed to get the complete animal in focus. Its vibrant colours light up this nighttime image.

Stop 13: *Early riser* by Riccardo Marchegiani

The winner of the 15-17 year-old category is Italian Riccardo Marchegiani's photo called "Early riser".

Here, a female gelada monkey is walking on all four legs along the edge of a cliff. Her baby's head is just visible, poking out from the comfort of the mother's chest as she strides forward. The infant looks directly at the camera while the mother warily eyes the photographer, an intruder in her territory. A baboon-like primate, this monkey has a coarse scruffy coat of dark brown fur, with some light brown patches on the underside, upper legs, and the base of her tail. Her face is bare and leathery.

Gelada monkeys live only in the grassy highlands of northern Ethiopia. At night, they descend over cliffs to sleep on ledges for safety. During the day, these monkeys spend most of their time socializing and grazing on their primary diet of grass. A baby spends its first month clutching the mother's chest. It then moves onto her back until about a half year old, when it can move around on its own. Gelada populations have been declining over the years and their habitat is being reduced by the expansion of agricultural areas.

Teenage photographer Riccardo Marchegiani staked out his position before sunrise in the hopes of seeing geladas waking up to go to their feeding grounds. His perseverance paid off and the baby was an added bonus. He captured a close-up of the pair with a wide-angle lens — and used a flash on low power to add a bit of pop, so they would stand out from the mountain ranges in the background.

Stop 14: *Fluff formation* by Stefan Christmann

We conclude our tour with a photograph by Stefan Christmann from Germany, who won the Wildlife Photographer Portfolio Award for a collection of 6 images. The photo we'll be focusing on is titled "Fluff formation".

In this photo, about 50 emperor penguin chicks tightly huddle with their heads bowed down to conserve heat. But one, then another, break formation by raising their heads above the masses. Their backs are grayish white, with clumps of condensed ice particles visibly forming on their feathery down. They have black heads with a white mask around the eyes and under the mouth.

When chicks are about 2 months old, their parents go hunting for fish to feed them, often swimming up to 500 km (or 300 miles) before coming back. While the adults are away, the chicks instinctively cluster together to stay warm in the bone-chilling Antarctic weather. But they don't have the experience of age to know how to gather most efficiently and keep their heads down like their parents do … since kids will be kids no matter what the species, a few will always break the rules and raise their heads above the cluster. Parents locate their young by recognizing their unique vocalizations — then regurgitate a meal to them.

Taking pictures in Antarctica exposes a photographer to some of the most extreme conditions in the world. Temperatures can drop below -40 degrees Celsius (the same in Fahrenheit). Stefan Christmann says, "When I took off my gloves to focus the lens, the cold felt like needles piercing my fingertips." Nevertheless, he did *not* use a tripod to take this picture, and set the shutter release at the slowest speed suggested for hand-holding a camera.

Thanks for visiting Wildlife Photographer of the Year! We hope you enjoyed the exhibition, and the rest of your visit to the ROM!