



A GREEN
NOTE

A MESSAGE TO CHILDREN FOR
PRESERVING BIODIVERSITY ON
EARTH BY
RAZAN KHALIFA AL MUBARAK



ENDANGERED

Life in the SKY

STRUGGLING TO SURVIVE



هيئة البيئة - أبوظبي
Environment Agency - ABU DHABI





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— STRUGGLING TO SURVIVE

Life in the



Dear Students,

I am sure, by now, you are familiar with the definition of biodiversity - it is all about the variety of life that exists on this Earth. But did you know that scientists estimate that around 5 to 100 million species of organisms call it home? From these, we have only identified 2 million species so far!

The United Arab Emirates is located in a hot arid desert - one of the most fragile ecosystems in the world. Here, the plants and animals are heroes. They are trying to survive against all odds. However, despite the harshest of conditions, the country still manages to support an impressive 800 species of plants, 64 species of terrestrial and marine mammals, 67 species of reptiles and 430 varieties of bird species.

However, as tough as these species are, they still face severe threats. Species extinction around the world is on the rise – 1 out of every 8 birds, 1 out of 4 mammals, 1 out of 3 amphibians, and 75 per cent of the world's fish are under threat. With 31 per cent of the world's forests gone, there is a scarcity of resources provided by forests, such as food and medicine. This also means that animals are losing a safe habitat.

Biodiversity is closely linked to what we breathe, eat, drink and even wear. It is so important to our existence that in fact that we cannot afford to sit around and watch as these species and habitats are being lost. They are vanishing because of many reasons such as pollution, contamination, introduction of alien species and climate change. WE humans played and continue to play a large part in the reasons behind these problems and so WE need to come up with the solution, without further delay.

Protecting our natural heritage and conserving biodiversity is one of our priorities at the Environment Agency - Abu Dhabi. We strongly believe in raising environmental awareness and promoting environmental education. We have already reached out to hundreds of thousands of students, just like you, through our educational programmes. However, this series, developed jointly with TERI – The Energy and Resources Institute, will help us reach even more students to raise their awareness about species around the world, including in the UAE, whose lives are in danger.

I hope that you enjoy reading this series and it helps you to better understand what plants and animals are facing on Earth. Help spread the message far and wide, so that others can also start protecting and conserving our precious biodiversity.

Razan Khalifa Al Mubarak
Secretary General
Environment Agency - Abu Dhabi



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Introduction

Birds and their characteristics: We birds are members of the class "Aves". We have two unique features – feathers on our body and the ability to fly (penguins, kiwis, ostriches, and emus are the only ones among us who cannot fly). Scales on our feet indicate that we are descendants of reptiles.

All of us are two-legged vertebrates. Like you human beings, we are warm-blooded. We have a bony or hard beak and light and hollow bones. We lay eggs with shells, from which our babies hatch.

We eat different kinds of food – nectar, seeds, fruits, insects, fish, small animals, and even waste. We don't stay at one place for too long. Our nest is not our home but a place to lay eggs and nurture the young ones.

Migration: Some of us like ducks live in colder regions in summers and fly thousands of kilometres to warmer areas in search of food during winters. This is known as bird migration. We also migrate in search of locations, where we can make a nest. While migrating, some of us use the Sun as our guide, while others navigate at night, using the stars as a compass.

Why we are important: We peck on flowers for nectar. In doing so, we transfer pollens from one flower to another. This helps in forming seeds, from which new plants grow. Some of us, like hornbills and parakeets, love to eat fruits and later scatter the seeds from which new plants grow. Others like warblers and flycatchers help farmers by eating insects that damage crops. Others, such as domestic chicken, are an important source of food for humans.

Threats to our community: In 2012, 2,193 of us worldwide were in urgent need of conservation. Of these, about 1,313 of us were facing extinction. The threats to us include loss or degradation of habitat (due to human development and spread of agriculture and aquaculture), introduction of alien species (especially cats, snakes, monitor lizards, and so on), environmental pollution (like oil spills), poisoning from pesticides, hunting and trapping (for the caged-bird trade), and climate change.

Birds in the United Arab Emirates (UAE): Altogether 479 of us are found in the UAE. Mynah, red-vented bulbul, house sparrow, and Indian house crow are common in coastal towns and cities. The wadis are home to some of us like the Sand partridge, Indian roller, and Yellow-vented bulbul, while Barbary falcon, Desert lark, and Hume's wheatear dwell in the mountains. In the sandy deserts, you can find Desert eagle owl, Brown-necked raven, and Hoopoe lark. The UAE's coastline is world famous for visiting waterfowls (large aquatic birds), especially long-distance migrants like ringed plover, curlew sandpiper, and sanderling.

Did you know?

- Hummingbirds can fly backward, sideward, and upside down.
- Parrots can see what's behind them without turning their head.
- Pink flamingos get their colour from the algae that they eat.
- The whistling swan is the bird with the most feathers – up to 25,000.
- The brain of migratory birds contains magnetite crystals. This mineral was used to make the world's first compasses.



Greater spotted eagle

I am special

I am one of the commonest large eagles in the UAE. I migrate to the UAE during the winter season, as the weather is warmer in the UAE even during this season. My nest consists of a large platform made of sticks that is constructed in a tree, on a rock face, or even on the ground.

Characteristics

length: 59–71 cm; wingspan: 157–179 cm; body mass: 1.6–2.5 kg

Did you know?

Despite the name greater spotted eagle, it has white spots only when it is young.

These fade away at adulthood.



I am a quiet bird, but my call sounds like a barking "k-y-a-k" or "y-i-p".

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Sadly it is the love of water, marshes, and large wetland spaces which is the greatest threat to the safe future of the greater spotted eagle.

Blast from the past

Like other birds, the greater spotted eagles migrate too during winters. The EAD once tracked the migration cycles of two greater spotted eagles. One of them migrated along the eastern coast of Caspian Sea, while the other travelled along the western coast before reaching southern Russia and northern Kazakhstan. One of these birds covered over 16,000km during its annual migration cycle.

Dark and handsome

I am a medium-sized eagle. Adults are dark brown with slightly paler flight feathers. My underwing coverts are generally darker than flight feathers.

Hunting is fun

I like to hunt small mammals, water birds, frogs, and snakes in swamps and wet meadows. I lay 1-3 eggs in a tree nest.

Threat to me and my kin

I face numerous threats. Shooting and deliberate poisoning are, however, two major threats that I face across parts of Europe, Southeast Asia, and Middle East. Our habitat is destroyed as a result of wetland drainage, afforestation, urbanization, and increased agricultural activity.

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Bali starling

Blast from the past

Lord Walter Rothschild, an English ornithologist, gave the Bali starling its scientific name *Leucopsar rothschildi* in 1910.

Feathery white

I am a medium-sized myna, with a feathery white body. My eyes are surrounded by blue skin while my beak is yellow. I have greyish legs and the ends of my wings are black.

I am the Bali starling, the national bird of the island of Bali in Indonesia. I am the only surviving endangered species of this island. In many parts of Asia, I am known as "myna" or "mynah".

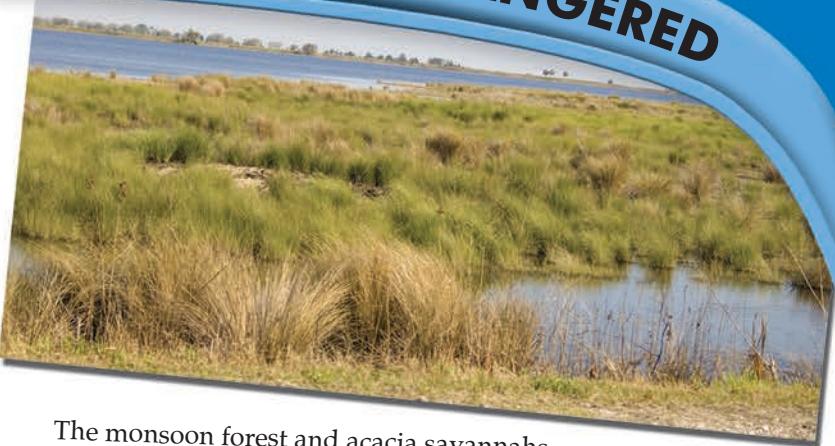
Characteristics Non-migratory; Diurnal



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Treetop dwellers

I live on treetops, occasionally coming down to the forest bed to drink water. Our breeding season is between October and November. During this period, we live in shrubs that often catch fire during forest fires. In the non-breeding season, we move to the edge of savannah forests.



The monsoon forest and acacia savannahs of Indonesia are home to the Bali starling.

Did you know?

The Bali starling is part of a European Endangered Species Programme.

About 700 birds of the species are being bred in zoos. Yet, it is feared that the bird might be extinct in the wild!



Forest fires play a major role in the destruction of the habitat of the Bali starling.

Bird caging

Sold for few thousand dollars, I am a highly valued cage-bird. In the illegal bird trade, several of my friends and family have been trapped and taken away by poachers. I also have to compete with the black-winged starling for food and shelter.



Unsafe in protected areas

Even though the government created a Bali Barat National Park for us, illegal poachers continue to hunt us down. The Bali Starling Project was started to ensure our safety and protect our environment. Recently, a Bali Recovery Plan was started to save us from illegal trade.

Critical
Endangered

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The Bali Barat National Park is spread over 10 per cent of Bali's total land area.

Egyptian vulture

It's easy to recognize me

My pure white plumage, contrasted by my black flight feathers and yellow beak with a black tip, makes me one of the most easily recognizable birds. My featherless face keeps food particles from clinging to plumage. My large and narrow bill has a curved tip to the beak, which helps me in removing the last bits of tissue between bones.



Did you know?

Egyptian vultures use twigs to roll up wool to line their nests.

Characteristics

Length: 47–65 cm; wingspan: 2.7 times the body length



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Our eggs and offsprings

We breed once a year. The timing of the breeding season varies from region to region, but eggs are usually laid between March and May. The female Egyptian vultures incubate the eggs alone for several days, and then the duty to rear the chick is shared by both the parents. Each egg takes 39–45 days to hatch.



Egyptian vultures feed on the eggs of other birds. They break open larger eggs, such as those of ostriches, by throwing pebbles at them.

Blast from the past

The Egyptian vulture was the sacred bird of the pharaohs and is often called "Pharaoh's chicken". Its appearance is immortalized in the Egyptian hieroglyphic alphabet as the letter A.

Problems that we face

Disturbance, lead poisoning (from gunshot), direct poisoning, electrocution (by power lines), collisions with wind turbines, reduced food availability, and habitat change are currently impacting us, primarily across Europe.

Living like a vagabond

We usually nest on rock ledges. We are also known to nest in trees or old buildings when more favourable locations are not available. We, however, prefer open country with variable elevations. You can also find us where you humans live, as we get easy access to food sources there. Our largest colony in the UAE is in Jebel Hafit mountain areas.

Visual hunters

We are purely visual hunters, as we do not use smell to locate food. Rather than sighting prey ourselves, we often notice other vultures circling over a meal. Our group may then perch, and wait above the meal if trees are available nearby, before proceeding to feed.

Helping hand

We feed on potentially disease-causing carcasses, trash, and faeces. So we play an important role in the removal and recycling of organic waste, thereby helping you humans and the environment.

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Chestnut-bellied hummingbird

I am a small hummingbird found in Colombia.

Shining armour

I am a rufous-coloured small hummingbird with a shining reddish-bronze upper body and greyish rump. I have a green neck, chestnut coloured belly and small white legs.

Characteristics

Non-migratory; Diurnal

Blast from the past

A pair of 30 million-year-old fossils from southern Germany are the oldest fossil hummingbirds. The fossils show striking similarity to the present-day hummingbirds.

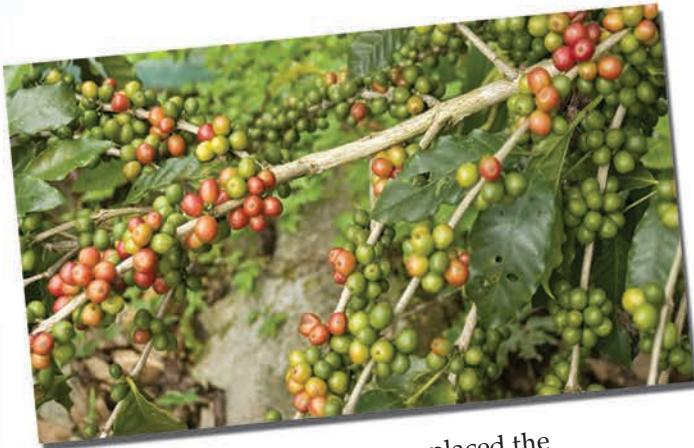
ENDANGERED

We like rivers

I live in the humid forests of Colombia. Recently, I was also sighted in semi-arid ravines, which have low shrubs and trees. Our breeding season is from August to December. We feed on several cultivated crops, primarily guamo. When we make a "grr, grr" sound, it is a warning for our enemies.

Coffee and sugarcane

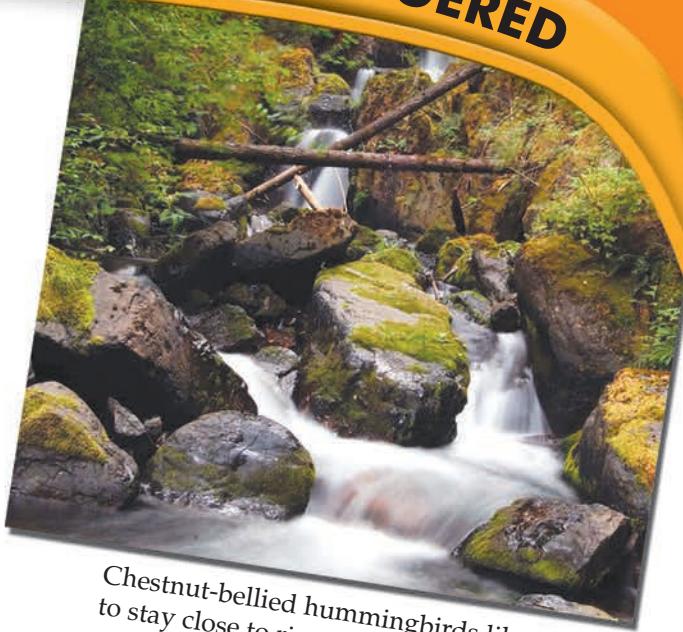
We live in areas that are suitable for plantation and agriculture. One of the main reasons for our declining population is the growing cultivation of coffee and sugarcane. Human activities, including mining and cocaine production, have also damaged our homes.



Coffee plantations have replaced the chestnut-bellied hummingbird's habitat

No more

In 2000, a successful search operation was conducted in Soatá in Colombia. Several other research projects have been proposed but remain incomplete. Until humans know enough about our living pattern, needs, and threats, how can they protect our homes?



Chestnut-bellied hummingbirds like to stay close to rivers and streams.



Mining and cocaine production have polluted the rivers where this hummingbird dwells.



Did you know?

One of the conservation efforts to save the hummingbird include the planting of yellow yatago flowers – a dish these birds love to eat!

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Cuban kite

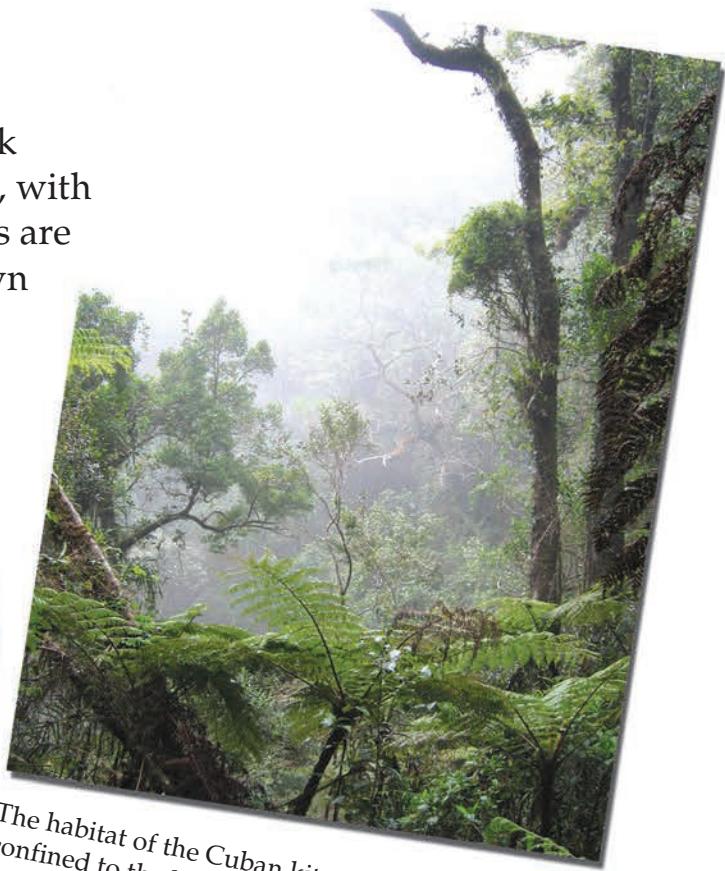
Large kite

I am a large kite with a yellow bill. I am dark grey from above and have a grey underside, with white stripes. I also have a grey tail. Females are brown from above and have a reddish-brown underside. We have oval-shaped wings.



Did you know?

The Cuban kite is thought to be one of the first vertebrate species to start going extinct in the twenty-first century!



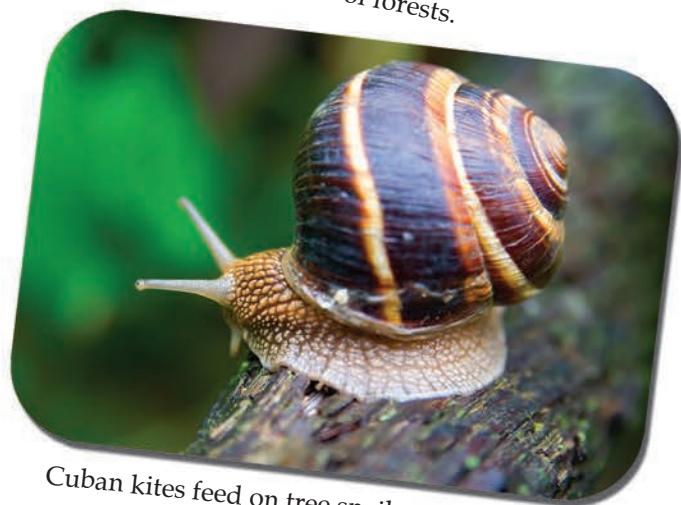
The habitat of the Cuban kite is now confined to the higher reaches of forests.

Montane forests

We live in Montane forests. I used to live freely all over Cuba. Today, I am found in a small area in the east of the island. Our primary source of food are tree snails and slugs.

Innocent predators

Our decline is attributed to habitat destruction and changes in our environment, caused by logging and agriculture. A lot of farmers have us killed because they think we prey on their poultry. Agricultural activities have also reduced the numbers of tree snails, which is a major source of food for us.



Cuban kites feed on tree snails and slugs.

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I belong to the country that is called “the sugar bowl of the world”. Unfortunately, my fate has not been very sweet. I am the Cuban kite, found in the Cuban islands.

No more

Several projects have been started to help us survive. These include protecting our food, researching about our environment, and spreading awareness among local people. Cuban law also bans the hunting of my family members.

Blast from the past

The Cuban kite was thought to be extinct until three of them were found in Cuba.



California condor

Blast from the past

By the 1970s, only 30 California condors remained.

On Easter Sunday in 1987, when the last one was taken into captivity, the species was declared extinct in the wild.

Characteristics

Non-migratory; Diurnal

Have you visited my home – the Grand Canyons? For if you did, you will see a clan of California condors flying over the golden cliffs.



Red eyes

I am a large, black vulture. I have a bald head and a yellowish-red face. My eyes are unique, brownish-red in colour and the wings have a white lining.

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What's special about me?

I am a scavenger bird, which means I feed on the flesh of dead and rotting animals. When I sing, my grunts scare my prey. We live in families where the elder members eat first. Sometimes, I travel over 150 km a day in search of food. Female condors lay a bluish egg during February and March, which hatches in 60 days. As a young condor, I learnt to fly in six weeks but stayed with my parents for two years, before I began living on my own.

Lead poisoning

Being scavenger birds, we eat dead animals. Some of these animals happen to be dead because of bullet shots. These bullets cause lead (a metal used in bullets) poisoning and claim our lives. Trapping, shooting, and tripping over power lines also threaten our lives.



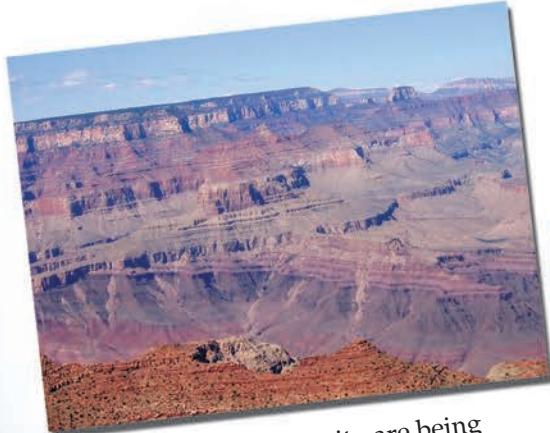
The golden eagle is the California condor's enemy, and often tries to fight for their food.



A lot of condors die after eating poisoned carcasses.

Captive breeding

The Peregrine Fund has helped save some of us. They rescue the ill and take care of them till they become healthy. After the mating season, they send us back to our homes (captive breeding). The young ones stay protected this way till they become older. Between 1992 and 2003, nearly 154 of my friends came back to our homes in the wild.



Condors bred in captivity are being reintroduced into the wild in California, Arizona, and Mexico.

Did you know?

Native Americans view the California condor as a mythological symbol – some as the creator of the Earth and others as its destroyer!



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Djibouti francolin

Terrestrial bird

I am a small, short-tailed bird, popular at gaming sites. My feet are yellowish-green and the horn is jet black. My body is mostly greyish-brown with orange and white stripes on my belly.

I am a rare terrestrial bird, which means I live on land.



Djibouti francolins love eating berries, seeds, and termites.

Berry eaters

In Djibouti, Africa, I live in only two places both of which are mountainous forests – Mabla Mountains and Forêt du Day in the Goda Massif. Have you ever heard a frog croaking in the forests? Erk-erk-erk? Well, my voice is like that, and it is commonly heard in the Juniper plateau, where juniper trees are abundant. We are monogamous and females lay 5–7 eggs a year. I am a bit shy and am found in dense vegetation.

Deadly rain

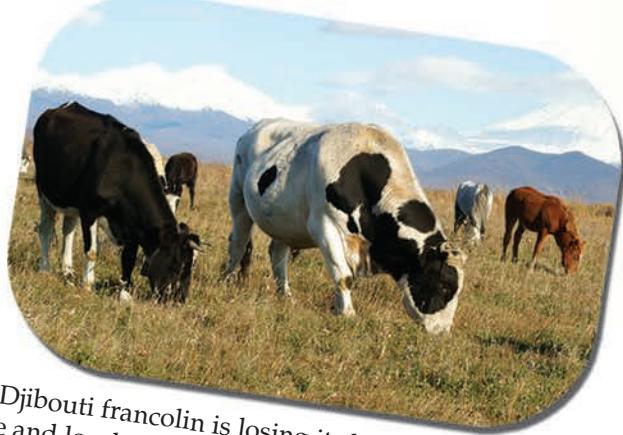
The vegetation of Forêt du Day has all died because the cattle have eaten all the grass. Over grazing has also caused acid-rain. Another cause for our extinction is a fungal disease that has spread rapidly.

Did you know?

The population of the Djibouti francolin declined by more than 90 per cent over the last 20 years.



Most of the trees in the Djibouti francolin's habitat are either dead or dying.



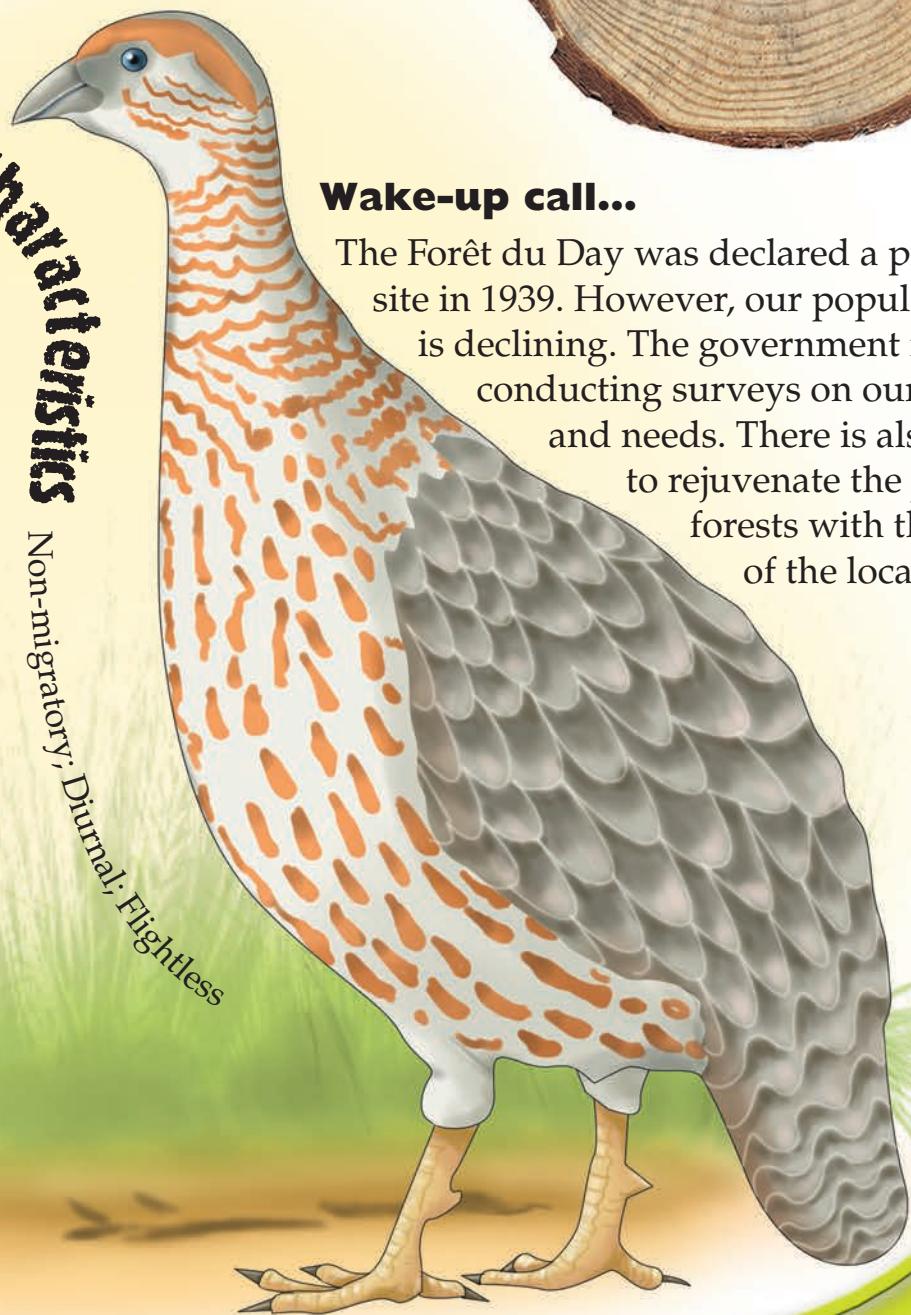
The Djibouti francolin is losing its home to grazing cattle and locals, who have cut trees for wood.

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Do you know where Djibouti is? It is a small country in Africa between Eritrea and Somalia. It is the home of the Djibouti francolin – that's me!!

Characteristics

Non-migratory; Diurnal; Flightless



Blast from the past

Between 1977 and 1983, the population of the Djibouti francolin declined from 5,600 to 1,500.

Wake-up call...

The Forêt du Day was declared a protected site in 1939. However, our population is declining. The government is now conducting surveys on our population and needs. There is also a plan to rejuvenate the juniper forests with the help of the local people.

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Grenada dove

I am the national bird of Grenada Island in the Pacific Ocean. I am the Grenada dove.

Blast from the past

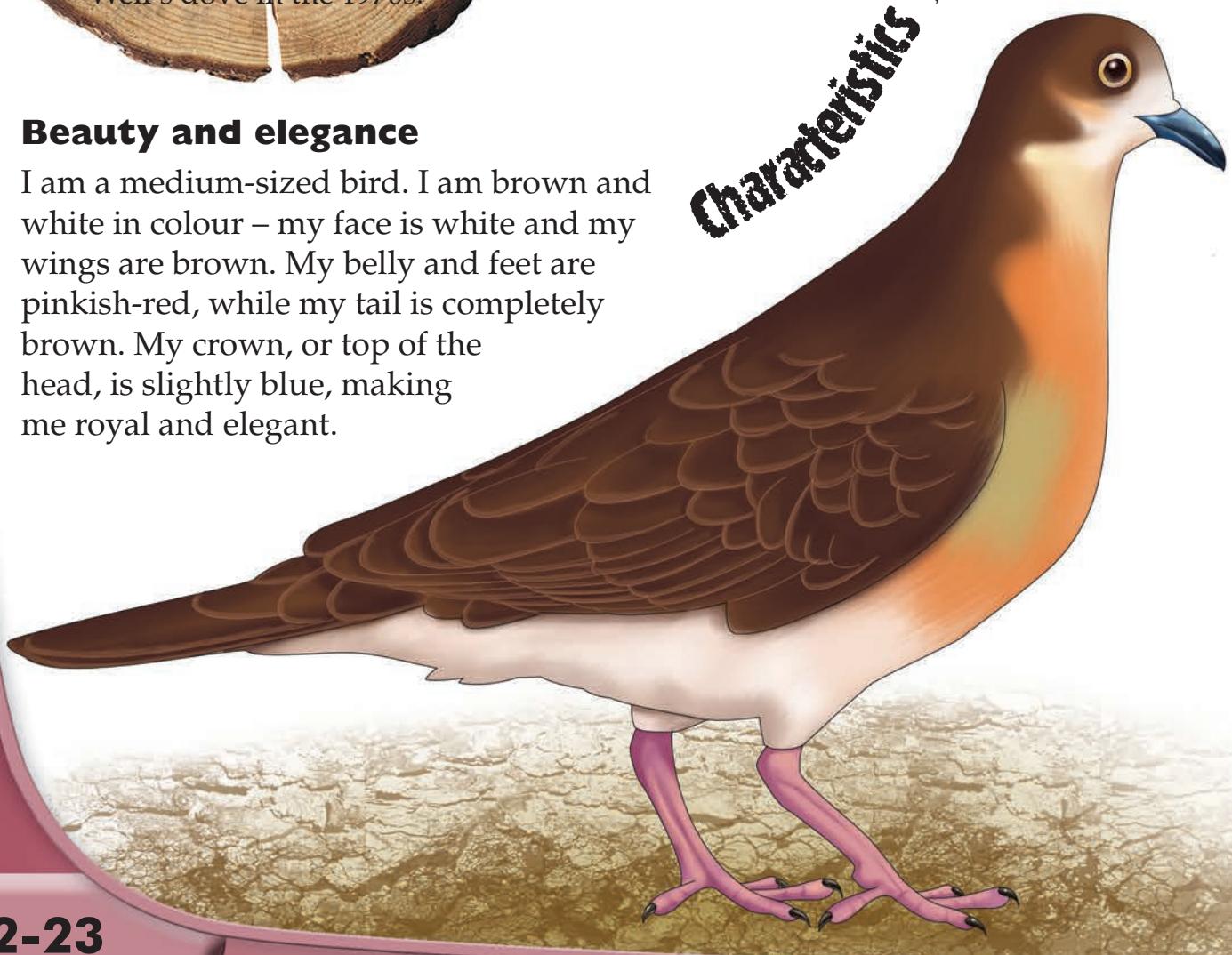
I have had several names over the years. I was called the Pea dove in the 1800s and Well's dove in the 1970s.

Beauty and elegance

I am a medium-sized bird. I am brown and white in colour – my face is white and my wings are brown. My belly and feet are pinkish-red, while my tail is completely brown. My crown, or top of the head, is slightly blue, making me royal and elegant.

Characteristics

Non-migratory; Diurnal



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On the beach, in the rain

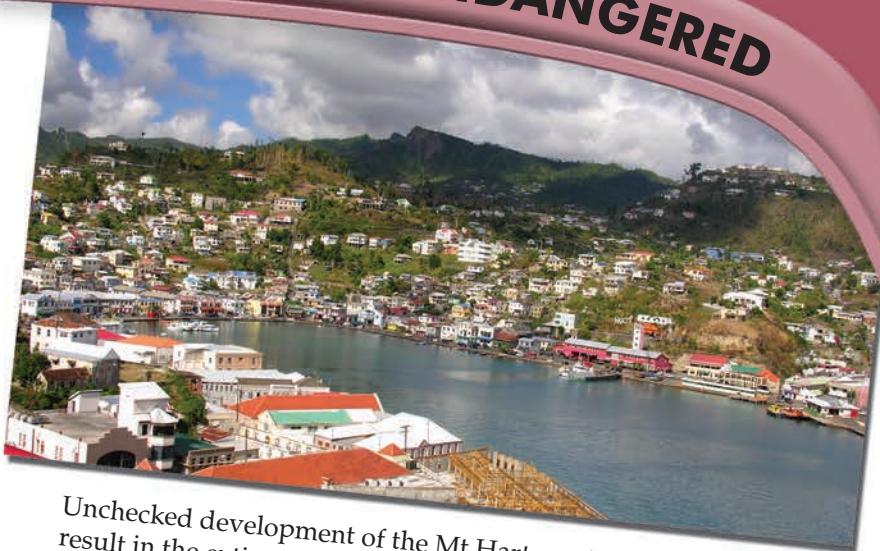
I am found on the Grenada Island near Mt Hartman Estate. I live in places with dry coastal vegetation, generally thorny scrubs and bushes. I breed during the rainy season. My voice is a characteristic increasing mournful "hoo-hoo". Since we live so close to the ocean, we are severely affected by storms and tsunamis.

Hurricane and homeless

In 2004, the devastating hurricane Ivan killed most of our population. Our nests were swept away and several plants were destroyed. In addition, most of our habitat has been used for charcoal production. The government has also sold a part of our home to make a luxury hotel. Most of us have been separated and our homes are under threat from humans and nature.

Protection plan

Since I am the national bird, the government has spread awareness about me. A four-year plan was completed in 2006, which aimed to protect us from extinction. The Mt Hartman Estate and neighbouring areas have also been declared as protected sites.



Unchecked development of the Mt Hartman Estate could result in the extinction of the Grenada dove.



Only about 66–120 Grenada doves survived
hurricane Ivan.

Did you know?

Doves help each other while building their nests. The male dove stands on the female's back and gives her the nest material. She uses that material and weaves a nest.



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Himalayan quail

Blast from the past

The Himalayan quail was last sighted in 1876. It is hoped that the bird still exists and that more of them will be found through detailed surveys.

Have you ever been to the snowy Himalayan mountains in India? This is where I, the Himalayan quail, live.

Characteristics

Non-migratory; Diurnal



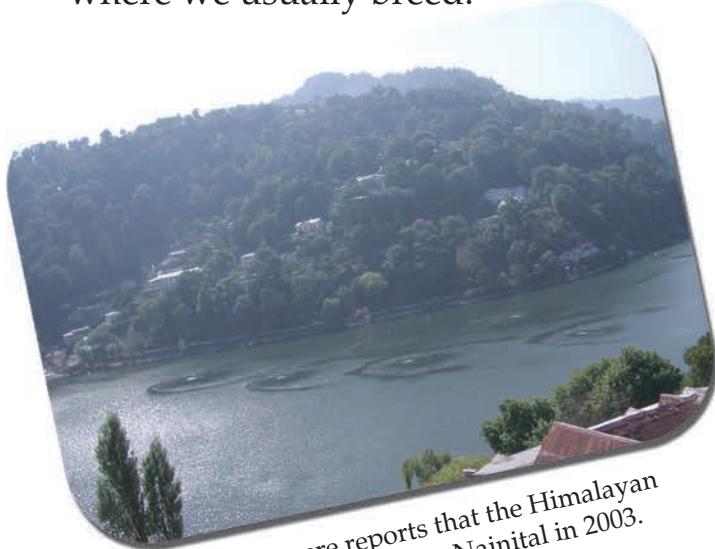
Little red riding hood

I am an extremely small bird of the mountains. I am as small as a mobile phone! My entire body is grey, except for my legs and beak, which are bright red. The females in our family are greyish-brown. I am known for my shrill voice.

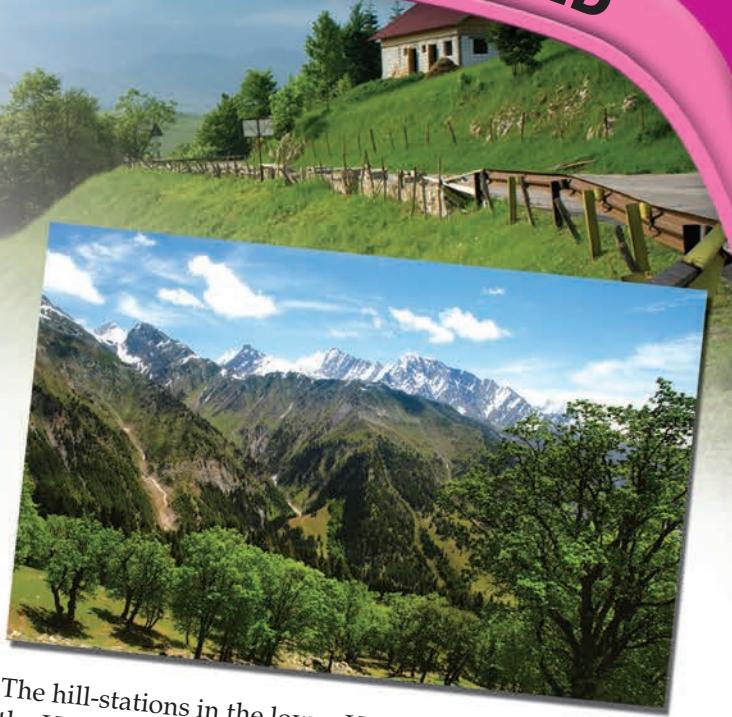
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Find me in the grass

I live on mountain slopes, at great heights up to 2,400 m. I am usually hard to identify in the long grass growing on the mountainside. Even though we are very few in numbers, we live in families of six. I am particularly lazy and do not wander far. My longest journey has been to the northwestern mountains, where we usually breed.



There were reports that the Himalayan quail was sighted in Nainital in 2003.



The hill-stations in the lower Himalayas were home to the Himalayan quail.

Hunting us down...

I live near Nainital and Mussoorie, both of which are hill stations in India, and I was frequently hunted for sport. Then, limestone was discovered near our homes. The cutting of trees and clearing of grass to allow limestone to be dug out killed several of my friends.

Cheer pheasants come to the rescue

Since we have been hunted for over a 100 years now, very few of us remain. The cheer pheasant, who is our good friend and neighbour, is slightly better-off. So, the forest officers are trying to find us with the help of the cheer pheasants. These days, several environmentalists, men and women, who care about nature, are convincing hunters to stop killing us.

Did you know?

The Himalayan quail was the most popular bird hunted by the British when they were in India.



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Juan Fernandez firecrown

Firebrand

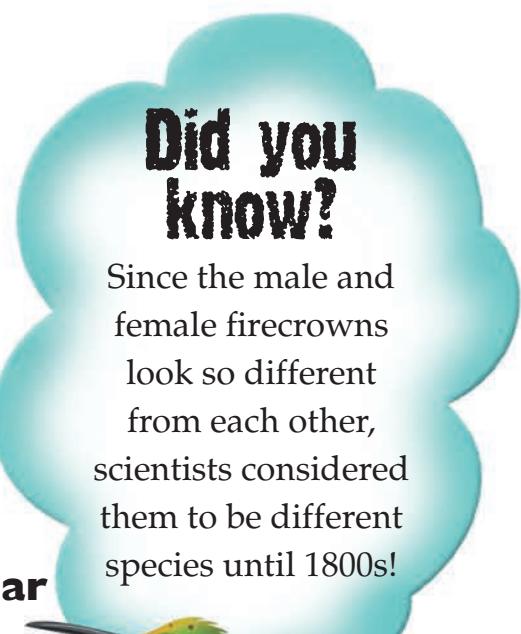
If you spot a rusty, brownish-orange bird in a green jungle, then you have spotted me – the Juan Fernandez firecrown! With soot-grey feathers and a reddish-yellow crown, I strike out from my surroundings, almost like fire. Females of my kind have a bluish-green crown and dark green spots on their underbelly.



Juan Fernandez firecrows are nectarivorous, and eat insects too.

We love nectar

I live in forests and eat plants and garden flowers. I have a loud, rasping voice. The males in my family have territories, which they control and defend. The females lay two to three eggs every year.



Since the male and female firecrows look so different from each other, scientists considered them to be different species until 1800s!



Rabbits have eaten away most of the plants the firecrown used to feed on.

Rabid rabbit

In 1930, rabbits were introduced in our native forests. They ate away most of the plants and flowers. Our food sources started depleting. Being so brightly coloured, we are easily spotted and hunted. Several plants, such as the elm-leaf blackberry, have also displaced the plants we eat.

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Reserved and protected

The Juan Fernandez Islands was declared a national park in 1935. In 1977, our native forests were declared a UNESCO Biosphere Reserve. From 1997, the government has begun restoring our habitat by removing harmful plants and animals.

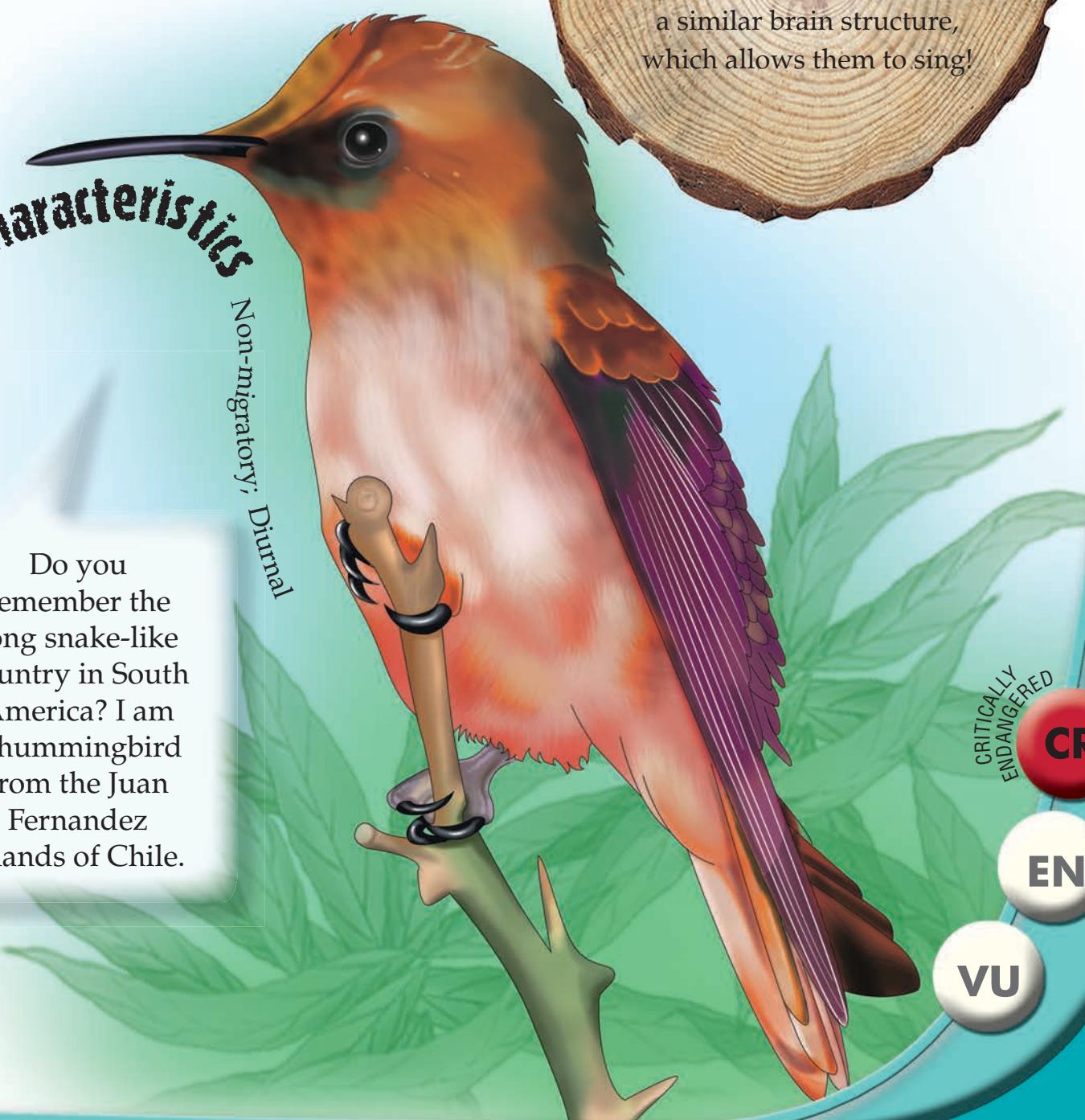
Blast from the past

Scientists have found that parrots, hummingbirds, and songbirds have evolved a similar brain structure, which allows them to sing!

Characteristics

Non-migratory; Diurnal

Do you remember the long snake-like country in South America? I am a hummingbird from the Juan Fernandez Islands of Chile.



Philippine eagle

King of birds

I am often referred to as Haribon, or “the king of birds”. I am one of the biggest eagles in the world. I am dark brown in colour, with big, brown feathers and a white belly. My yellow legs have powerful claws, with which I hunt my prey.

I am one of the largest and rarest birds of prey. My wingspan is almost 2 m! I am the Philippine eagle – the national bird of the Philippines.

Characteristics

Non-migratory; Diurnal



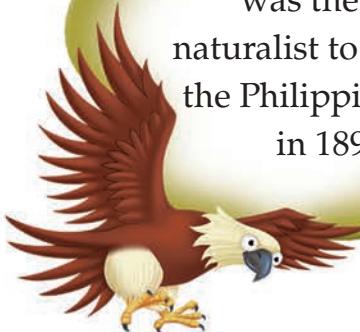
Blast from the past

The scientific name of the Philippine eagle, *Pithecophaea*, means “monkey-eating bird” in Greek. Early scientists thought that the bird’s staple diet was monkeys, but it was later found that it preferred flying lemurs!

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Did you know?

Jeffrey Whitehead was the first naturalist to discover the Philippine eagle in 1896.



The Philippines has lost 90 per cent of its rainforests. This has proved especially hard for the Philippine eagle's survival.

Rainforest dwellers

I live on the Luzon, Samar, Leyte, and Mindanao islands of the Philippines. We are a small family, with only 82–233 pairs breeding each year. Our shrill whistles are easily identifiable. Like other eagles, we are monogamous. Females lay one egg, usually in September. Both parents look after the chicks for the next 17 months.

No trees...

Most of us live in the forests. Humans are cutting trees for agriculture and other needs, leaving us homeless. Also, with fewer trees holding the soil, the rains cause mudslides and floods, creating more problems for us.



The Philippine Eagle Foundation, established in 1987, has raised 21 Philippine eagles in the last 20 years.



Deforestation has increased the occurrence of floods, further harming the population of the Philippine eagle.

Eagle foundation

The Philippine Eagle Foundation is an organization set up by the government to protect us. Several protected parks, like the Mt Kitanglad and Mt Apo, aim to protect our homes and save us from extinction.

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Liberian greenbul

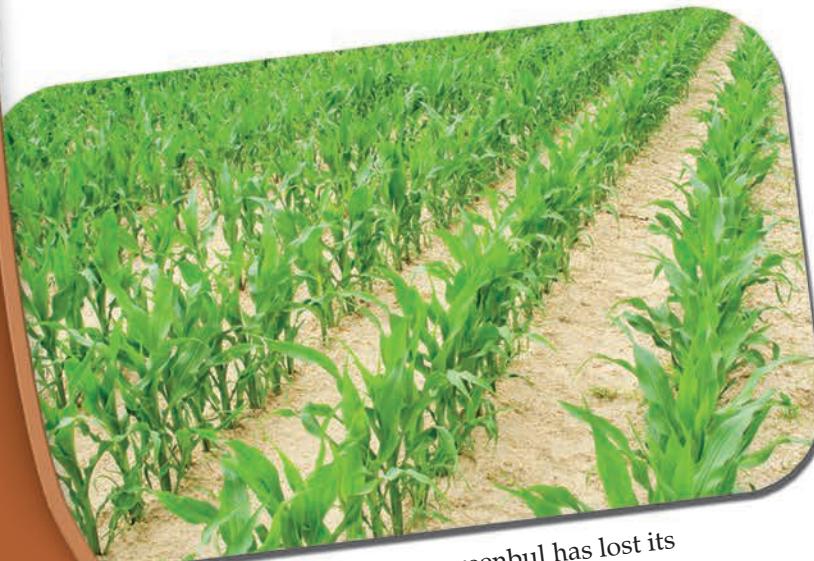
Did you know?

The habitats of greenbuls vary, not just because of physical differences, but also because of variation in their songs!



Sing song

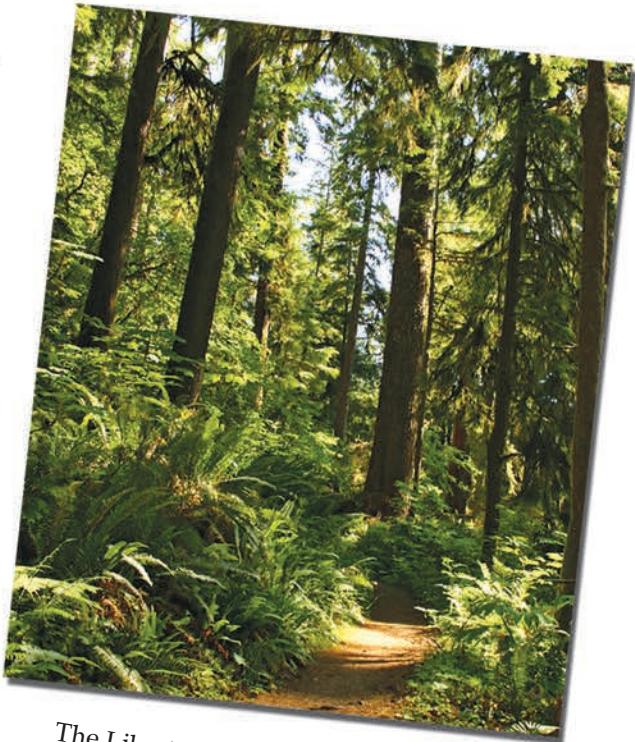
We live in the Guinea rainforests of Liberia on branches of trees, 4–5 m above the ground. I am a songbird, which means my vocal organs can produce different sounds.



The Liberian greenbul has lost its natural habitat to small farms.

Yellow-throated olive greenbul

I am a small, olive and yellow greenbul. My belly is yellow while my wings are olive-green with yellow spots. My look-alike, the Icterine greenbul, is a distant cousin.



The Liberian greenbul is a rainforest species, but now dwells in the zone between evergreen and semi-deciduous forests.

Food for thought

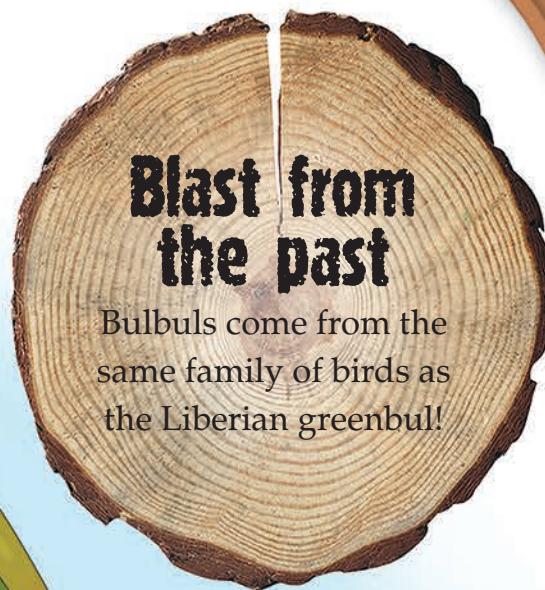
Recent logging has taken away our homes from us. Trees are being cut and forestland is being used for agriculture. The civil war in Liberia has forced people into our forests.

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About 250 of us live along the Cavalla River in the Grand Gadeh County of southern Liberia, Africa. I am the Liberian greenbul.

Characteristics

Non-migratory; Diurnal



Blast from the past

Bulbs come from the same family of birds as the Liberian greenbul!



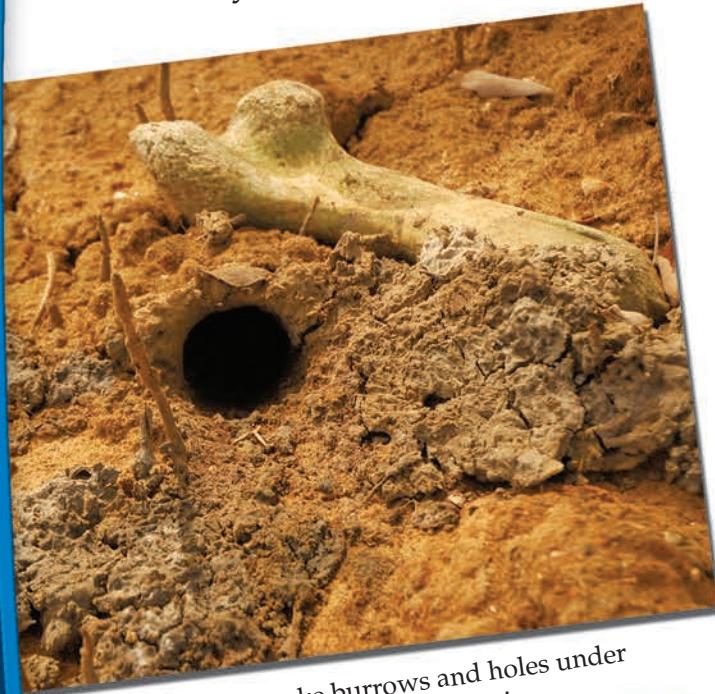
Stop war

The civil war in Liberia, which occurred in the 1990s, has greatly hampered conservation efforts. However, some of us are being taken to safer habitats, where we can reproduce and live a safer life. Some scientists are conducting research on our taxonomic origin, to ascertain which species we belong to.

Jamaica petrel

My blue mountain home

Since my home was in the Blue Mountains, the locals also call me "Blue Mountain duck". I am a medium-sized bird. My entire body is sooty-brown, excepting the end of my tail, which is white.



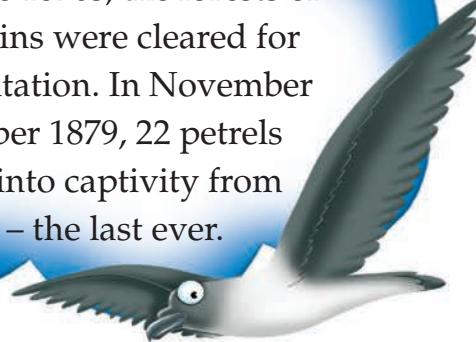
Jamaican petrels make burrows and holes under trees in the highlands of eastern Jamaica.



Mongooses, which were introduced to the island in 1872, severely hurt the Jamaica petrel population.

Did you know?

During the late 1870s, the forests of Blue Mountains were cleared for cinchona plantation. In November and December 1879, 22 petrels were taken into captivity from the area – the last ever.



Underground life

Have you seen birds that build nests underground? Well, I do! Our mating season is between October and December which is the time we are most vocal. I am a hardworking bird and sleep for only a few hours a day. I hunt for food near the ocean during the night, and return to my burrow to rest during the day.

Natural competition

Human activities have affected my survival. Till the middle of the nineteenth century, I was hunted for food. After that, a major cause of our extinction has been rats, mongooses, and pigs, which were introduced by humans. These animals prey on us and eat our younger ones. Several species of lice also survive on us as parasites, which make us ill.

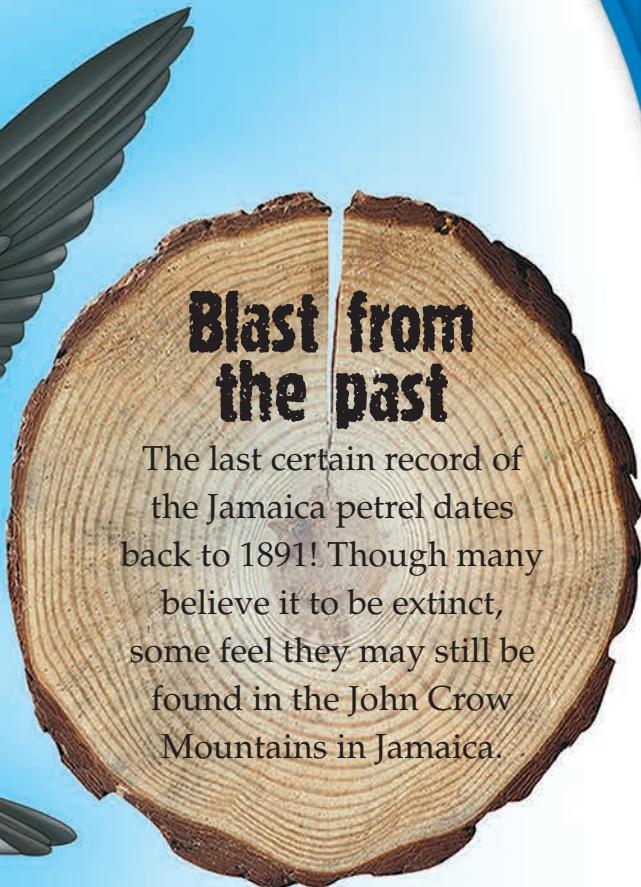
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We have bands

The Jamaica Petrel Research Group was set up in 1996 to help protect our habitat and reduce our predators. Though it has not been very successful, there is still hope!

Characteristics

Non-migratory; Nocturnal/



The last certain record of the Jamaica petrel dates back to 1891! Though many believe it to be extinct, some feel they may still be found in the John Crow Mountains in Jamaica.

Do you know where the Land of Springs is? It's the Jamaican islands in the Caribbean Sea. It's where I live. I am the Jamaica petrel.

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Kakapo

Blast from the past

Between 1860 and 1870, several gold miners developed a taste for the kakapo, and they became a delicacy of the time!

You know that owls are nocturnal birds. Have you ever seen parrots active at night too? I am! I live in New Zealand, and my name, kakapo, means “owl-like parrot” or “night parrot” in the local language.

Characteristics

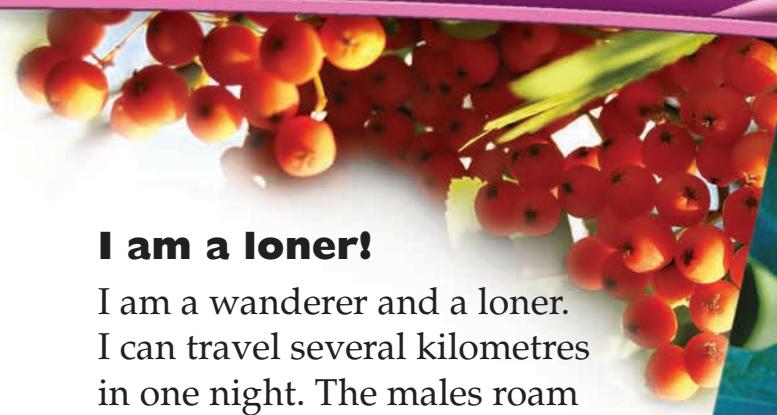
Non-migratory; Nocturnal; Flightless



Owl parrot

I am the world's heaviest parrot – the males can weigh as much as 2.2 kg, while the females are 1.4 kg. I am also the only parrot that cannot fly! I have sturdy legs, and I walk a lot. I have soft moss coloured feathers with black spots. My belly has yellowish-green feathers. Females are less colourful than males. My face is owl-like, with whiskers and an ivory-white beak.

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I am a loner!

I am a wanderer and a loner. I can travel several kilometres in one night. The males roam an area of 150–300 square kilometres, and the females range in an area of 350–500 square kilometres, in search of food for the chicks. Like parrots, I am also known to make a variety of interesting sounds and calls.



Kakapos eat roots, seeds, bulbs, fruits, flowers, and leaves. They have a special beak that allows them to grind their food.

Land grabbing

There are only 91 of my species left today. The problem started many years ago, when humans moved into my area and introduced dogs, cats, and rats. Most birds live on trees and are not affected by this. But, since I can't fly, my life is heavily threatened by these animals. I am also an important game animal and food for the local people. All these reasons pose a threat to my life.



The kakapo has a strong scent which makes it easy for predators like cats to spot it. The bird's tendency to freeze when threatened doesn't help it get away either.

Cheer pheasants come to the rescue

The Kakapo Recovery Plan was launched in 1989 and is an important method of conservation. In 1992, we began being bred in captivity, allowing for safe reproduction and growth of younger ones.

Did you know?

The kakapo has the longest lifespan among parrots. The parrots of most species live for 15–50 years, but the kakapo lives for about 90 years!



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Saker falcon

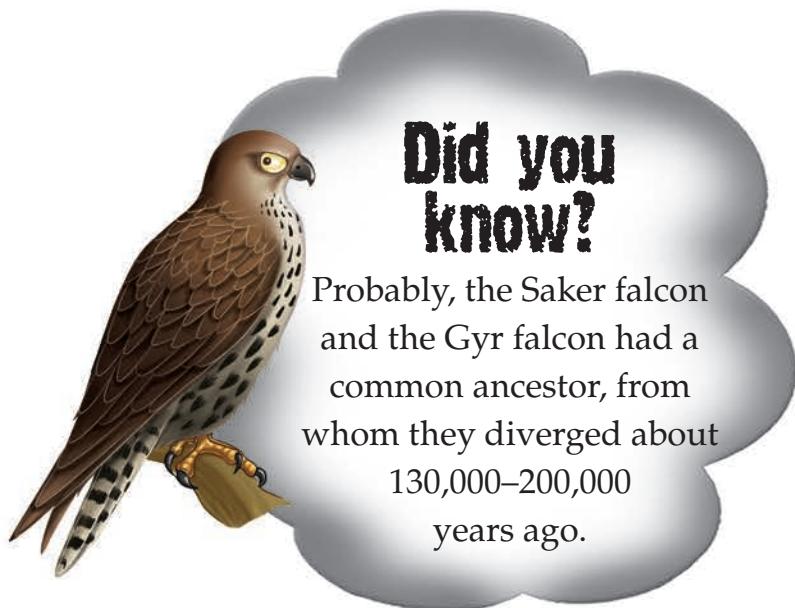
Plain or stripes

I am a big, powerful, and ferocious bird of prey. In the falcon family, only the Gyr falcon is larger than me! We sakers come in different colours and patterns. Some of us are chocolate-brown, others cream with brown bars or streaks; while a few are almost pure white! I have white or pale spots on my tail.



Saker falcons grasp their prey with their sharp, curved talons before tearing them apart with their powerful, hooked beak.

Like other falcons, I do not build my own nest, but use old, abandoned nests of ravens, eagles, and buzzards. I feed on small mammals like ground squirrels, hamsters, pikas, and hares. Sometimes, I also eat birds, like quails, pheasants, ducks, and herons.



Did you know?

Probably, the Saker falcon and the Gyr falcon had a common ancestor, from whom they diverged about 130,000–200,000 years ago.

Traveling hunter

You can find me from Eastern Europe to Central Asia. I like open landscapes – from agricultural land, forest steppes, and deserts to mountains, foothills, and plateaus. After the breeding season, I migrate to as far as Africa, and even Germany! We are partial migrants. It means only some of us migrate, while others don't.



Saker falcon is much used for falconry, as its sharp, curved talons help it to easily grasp its prey.

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Going, going...almost gone

Our numbers are rapidly declining, so much so that we might become extinct in the near future. Our homes and hunting grounds are being used for agriculture. Logging is snatching away our nesting places. People illegally trap our young ones for the falconry trade. Many of us, who build nests on electric poles, die from electrocution.

Helping hand

EAD is supporting our conservation by various means; supporting ecological studies is one of them. In 1999, EAD prepared a Global Strategy Plan to save me and my friends. EAD is funding construction of 5,000 artificial nests in Mongolia. By the year 2015, up to 500 Saker pairs are expected to use these as safe nesting sites. In 2002, the UAE banned Saker trade. By breeding us in captivity, many countries have brought down the demand for Sakers caught in the wild.

Passport for us

To put an end to illegal trapping of our kind from the wild, the UAE has issued passports for those falcons, who have an owner. This clearly identifies us as the ones who have not been taken illegally from the wild.

Characteristics

Migratory; Diurnal



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Blast from the past

In 1833–34, the British zoologist John Edward Gray was the first to identify the Saker falcon.

Nihoa millerbird

Blast from the past

Millerbirds had two subspecies – the Laysan millerbird became extinct between 1916 and 1923, and about 380 individuals of the Nihoa millerbird survive today.

Characteristics

Small and few

I am a small bird, about five inches in length. I am brown in colour and have a white underbelly. My crown is dark-brown, often black. My voice is a rapid metallic sound.

Have you seen small islands dotting the Pacific Ocean off the western coast of the United States? One of these, the Nihoa Island, is my home.

Migratory; Diurnal



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Yummy insects!

I am named after miller moths, which I love to eat. I build my nest near the ground, in dense shrubs, usually ilima and goosefoot. I weave my nest out of grasses and roots. There, the females in my family lay about two eggs every year.

Fighting foreigners

One of the biggest threats to my life are the new animal and plant species that have accidentally or purposefully been introduced on the island. They compete with me for food, destroy my habitat, and even prey on me. The shortage of insects – my staple diet – and the predation of my eggs by the Nihoa finch also worries me.

Captive breeding

We are a part of the Hawaiian Islands National Wildlife Refuge, which restricts human activity in our environment. Only biologists and other researchers are allowed to enter our habitat. An important effort has been made to ensure no seed, pollen or alien animal enters our habitat. Visiting scientists are also required to ensure this. Recently, scientists have begun finding alternative habitats where we could live in protected areas.



Nihoa millerbird feeds on insects, specially moths and caterpillars.



In Nihoa Island, climatic conditions are a big threat to the millerbird. Heavy rainfalls, droughts, storms, and hurricanes devastate its home.

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Did you know?

Millerbirds form long-term pairs and friendships. They defend their territories for years.



Siau scops-owl

Blast from the past

The Siau scops-owl is known from just one specimen, which was collected in Siau in 1866.

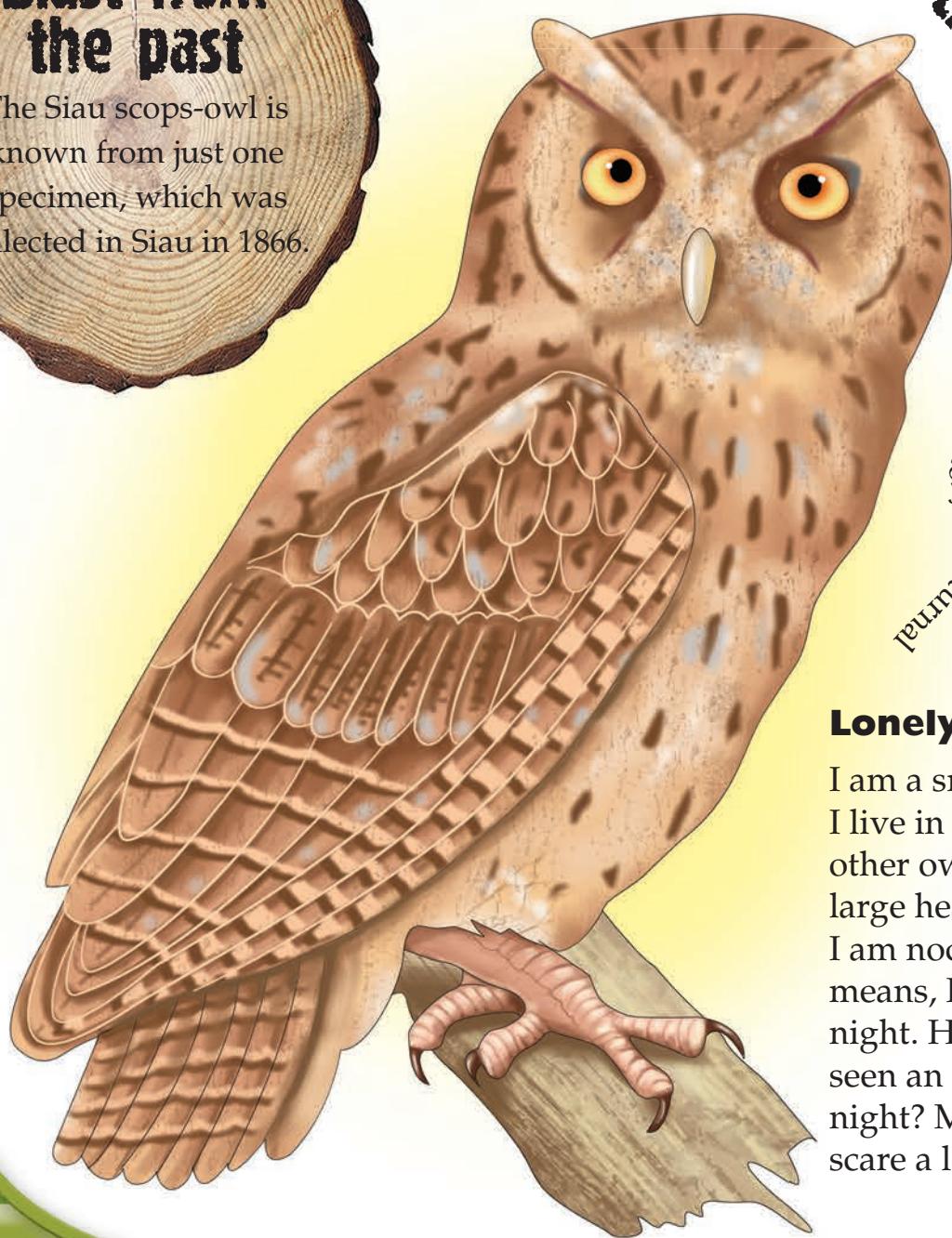
I live in Siau, an island in north Sulawesi, Indonesia. I am the Siau scops-owl.

Characteristics

Nocturnal,
Non-migratory,
Nocturnal

Lonely owl

I am a small owl, and I live in forests. Like other owls, I have a large head and big feet. I am nocturnal, that means, I stay awake at night. Have you ever seen an owl's eyes at night? My yellow eyes scare a lot of people!



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Night hunters

Like other owls, I am a nocturnal hunter, which means that I search for food at night. I hunt in the open grasslands by sitting on trees and attacking from above. I am a solitary bird, and like to hunt alone. Our breeding season is in late winter. Males make nests, and females choose their partners depending on which nest they like best!

Cutting trees

My population was never very strong to begin with. This is because Siau has an active volcano, Karangetang, on it. Due to this volcano, vegetation is rare on the upper reaches of the island, reducing my habitat. Today, because of deforestation, only low trees survive on my island, while most of the area is covered with shrubs and plantations. This has hurt my family and me, resulting in our population going down.

PALS with owls

The Wildlife Conservation Society has begun providing money and scientific help to preserve my habitat and reduce the cutting of trees. A local group called PALS is also working to ensure that our homes are not destroyed by human activity.



Siau scops-owls love eating insects, earthworms, bats, mice, fish, and even other small birds.



Logging has destroyed the habitat of the Siau scops-owl.



Did you know?

Scientists believe that all species of scops-owls evolved from a tropical North American species, which has been dated to 5 to 1.8 million years ago.

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Socotra cormorant

Living in water

I have huge colonies of my family and friends breeding on various islands in the UAE. I am truly a marine species and almost never seen inland. I am a local resident of the Arabian Gulf and the Gulf of Oman. You can say that I am a distinct Arabian species.



Black beauty

I am almost entirely black. I have black feathers, a black bill, and black legs. We are quite social. So we live together and tens of thousands of us often forage together. A flock of us flying in the sky makes for a spectacular sight. It resembles a single moving organism, enveloping the sandy bays on which we live.



The Great Cormorant, which is also black, shares a striking resemblance with the Socotra cormorant. -

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Water, water everywhere!

You must have heard about us foraging in flocks. Large assemblies of us roam far in search of huge shoals of fish. Once found, some of us settle on the water's surface and dive for fish from there. The Siniya Island in Umm Al Quwain, UAE, was once the largest breeding area for us.

Threats to us

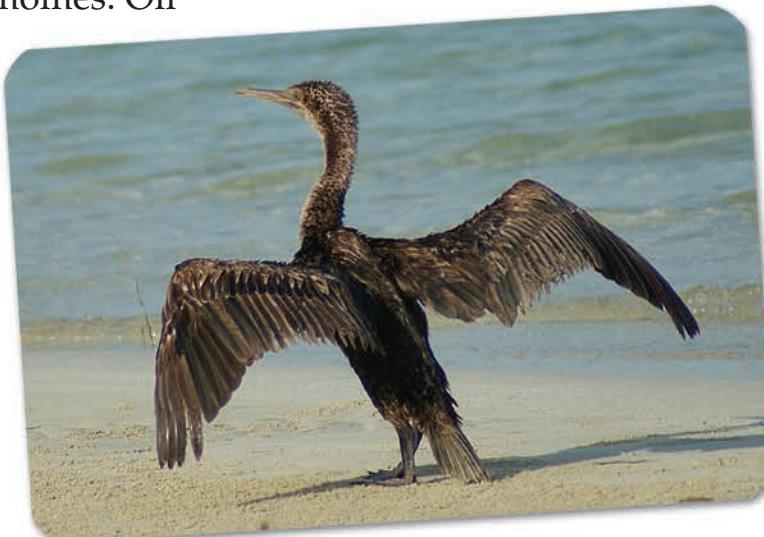
Our breeding islands are being turned into residential and tourist places in the name of coastal development. This is a big threat to our extremely restricted population. It has disturbed and displaced many of our colonies, our homes. Oil spills in the seas and oceans has caused the deaths of many of us.

Conservation efforts

We are regarded as one of the treasures of the beautiful desert islands off the Arabian Peninsula. However, we have earned the "Vulnerable" status because of the threats that we face. We are surely worthy of international recognition and greater protection, though not much has been done in this regard.

Blast from the past

In 2004, Dubai Zoo was the first institution in the world to successfully breed this rare bird in captivity.



Socotra cormorants have quite a wide wingspan, ranging between 120cm and 150cm.



Did you know?

At some stage of growth, parents leave their chicks in "crèches" while they go out to forage.

VULNERABLE

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Fighting for the wings

The World Conservation Union, or the IUCN as it is popularly known, is the world's largest organization that works for the protection of nature and natural resources. The headquarters of the IUCN are in Switzerland. The IUCN prepares lists of threatened plants and animals every year. Scientists at the IUCN study the current population of the species as well as where it is found. The organization then tries to help countries develop ways and means to conserve these dying creatures. The IUCN categorizes species as follows.

Extinct: If the last individual of a species is believed to have died, the species is considered extinct. The Yangtze River dolphin, or Baiji, was officially declared extinct in 2007.

Extinct in the Wild: A species is thought to be extinct in the wild if it can no longer reproduce on its own. Cuttings of such plant species have to be used to produce them, and animals have to be bred in zoos or sanctuaries.

Critically Endangered: Any species is thought to be critically endangered if data suggests that it might become extinct in the wild in the next 10 years. This means that its population has reduced significantly, and it will no longer be found in the regions where it used to be. Animals like the gorilla, gharial, rattlesnake, shark, flying fox bat, fox, a large number of trees, and a few species of fish, frogs, parrots, toads as well as corals have been declared as critically endangered.

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Endangered: Animals like the gazelle, Egyptian vulture, parakeet, blunt-nosed leopard lizard, the Hawaiian finch, green sphinx moth, sawfish, a few species of owls, frogs like the African reed frog, and the Slender Loris are listed as endangered. The survival of these animals is in extreme threat in the next 10 years.

Vulnerable: The IUCN groups the animals that face a threat but can be conserved in the near future as vulnerable. This group includes the white-headed vulture, the alligator lizard, the lemur, the shark ray, the butterflyfish, the common hippopotamus, the giant gecko, and a few crocodile species. These animals might soon be included in the endangered or critically endangered categories if steps are not taken immediately to protect them.

Near Threatened: Species that are not vulnerable, endangered or critically endangered but might fall into any of those categories soon are classified as near threatened.

Least Concern: Species that are widely found in plentiful numbers are classified under least concern.

Note: *The conservation status provided in this book are not solely based on the IUCN Red List. For some creatures, national and local data have been used.*



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Glossary

diurnal: the behaviour of an animal that is active in the daytime

feral cat: wild, undomesticated cat

game animal: an animal that is widely hunted for sport

habitat: an ecological or environmental area that is inhabited by a particular species

monogamous: an exclusive relationship, especially in a marriage or union

montane forest: tropical moist forest

mudslides: it is the most rapid form of fluid downhill mass wasting

naturalist: a person interested in natural history

nectarivorous: mammals, notably several species of bats

Peregrine Fund: an organization founded in 1970 to primarily save the peregrine falcon

poacher: someone who engages in poaching, that is, the theft or illegal killing of animals and plants

scavenger: predators, which consume corpses, or carrion that were killed to be eaten by the predator or others of its species

terrestrial: refers to things having to do with the land or the Earth

tidal mudflats: mudflats (also tidal flats, tide flats, and so on) are coastal wetlands that form when mud is deposited by tides or rivers

vocal organs: organs of the body involved in speaking

ENDANGERED

THIS IS A GREEN BOOK



About the Environment Agency – Abu Dhabi (EAD)

Established in 1996, the Environment Agency – Abu Dhabi (EAD) is committed to protecting and enhancing air quality, groundwater as well as the biodiversity of our desert and marine ecosystem. By partnering with other government entities, the private sector, NGOs and global environmental agencies, we embrace international best practice, innovation and hard work to institute effective policy measures. We seek to raise environmental awareness, facilitate sustainable development and ensure environmental issues remain one of the top priorities of our national agenda.

For more details, please visit:

<http://www.ead.ae>

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Life in the SKY

There are about ten thousand species of birds in this world. Of these, nearly one thousand species are threatened with extinction. Habitat loss, predation, introduction of new animal and plant species, and pet trade are some of the reasons for their decline. Get to know these creatures better and learn the causes of their endangerment.

Other titles in this series

- Life on Land
- Life in the Water
- Life in the Amphibian World
- Life in the Reptilian Realm
- Life in the Plant Kingdom



هيئة البيئة - أبوظبي
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