

QUERREDA

COLOMBIA,

By Guadalupe A.

By Sara H.



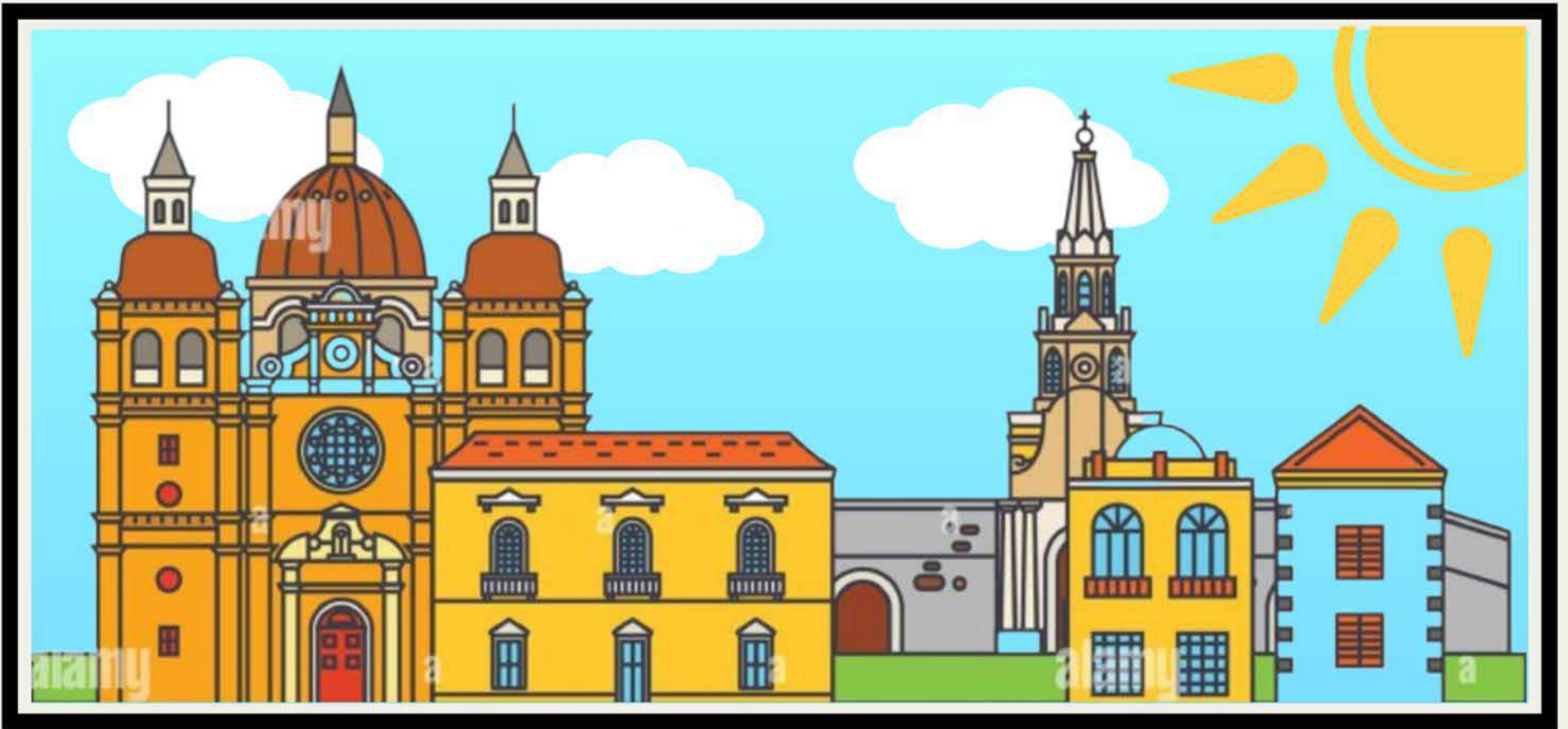


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By Luciana and Valeria

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QUERIDA COLOMBIA



INTRODUCTION

In this magazine, the sixth graders explored the rich biodiversity of Colombia. Here, you'll find all of their hard work, research, and discoveries compiled to showcase the incredible variety of life in our country.

Biodiversity in the Andean Region

The region is located in the center of the country. Some of the ecosystems in the region are dry forests, Andean forest, Andean rainforest and 50% of the world's paramos.



The Andean region covers over 25 % of the country. The region is the most populated region in Colombia with 70.1% of the population in the country. The temperature in the region is between 10 and 20° C. It has a lot of mountain ranges and more than 60% of the water we drink is from paramos. All the flora is able to capture water. All water bodies are born in the paramos.

Thanks to the varied altitudes it can have a lot of animals, plants species and ecosystems living there. The biggest mountain range in the world is one of Los Andes, which passes through the Andean Region in Colombian.



The Andean region is home to the spectacled bear, mountain tapir, culpeo fox, Andean condor, puma, Andean cock of the rock and many more wonderful animals.



Biodiversity in the Amazon Rainforest

The Colombian Amazon rainforest comprises 41.7% of the national continental territory. This region is home to the departments of the Amazon, Putumayo, Vaupés, Guainía, Guaviare, Meta, Vichada, Caquetá, Nariño and Cauca.



Due to its location in the equator, its temperature is warm with an essentially unimodal rainfall regime and an average rainfall of 3,307 mm. In terms of biodiversity, this region is very rich. For example, in terms of flora, more than 6,200 species of vascular plants have been fully identified and for fauna 1,992 of vertebrates have been reported.

By. Jeronimo Pareja

It belongs to two of the largest basins in the world: the Amazon and Orinoco rivers, drained by many rivers that originate in the Andes mountain range and generally flow in a west-east direction.



Fauna & Flora

By Emilio Mejía



Andean Condor

The Andean condor is important because it is the national bird of Colombia. It is big and strong and represents freedom. It also plays an important role as a scavenger by maintaining the ecosystem's balance. Something bad is that it is in extinction because of hunting and deforestation.



Wax palm

The wax palm is important because it is the national tree of Colombia. It is extremely tall. It is important because it provides food and shelter for many species, like nesting for birds. It also prevents erosion in the mountains where it grows. Unfortunately, they are in danger because of deforestation.

Fauna & Flora

By Emilio Mejía



Jaguar

The jaguar is the largest wild cat in America and one of most powerful predators in the tropical rainforest. He symbolizes strength and power of Colombia. He is crucial to maintain balance where he inhabits. Even though it is endangered, it remains like an iconic specie of Colombia.



Frailejón

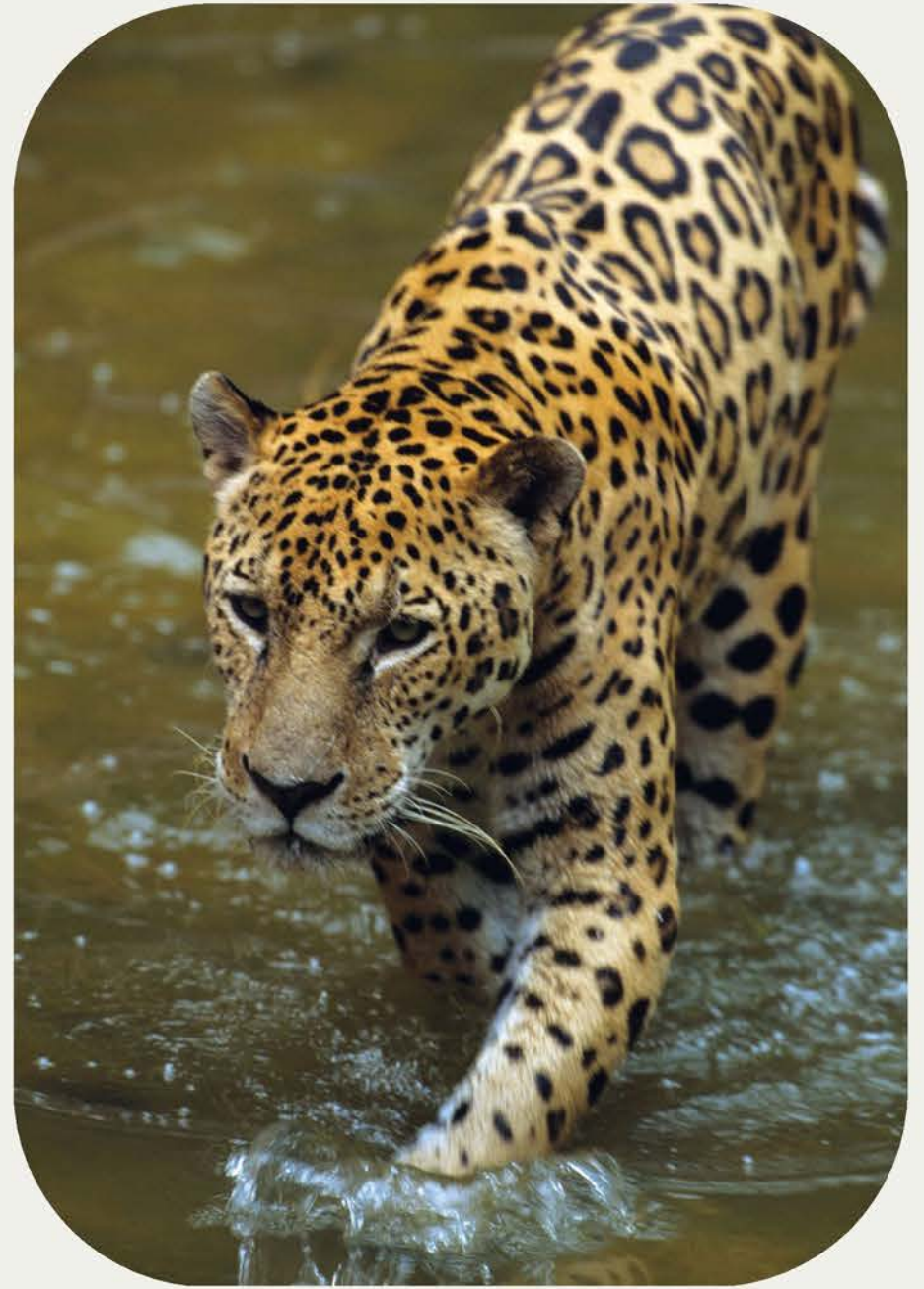
The Frailejón is a plant that grows in high altitude paramo ecosystems in the Andes. It is a symbol of the Andean region and it is known for storing water; it is vital for mountainous ecosystems. The Frailejón is crucial for water conservation in Colombia; sadly, it is endangered due to climate change, fire, and habitat loss.



ANIMALS IN DANGER OF EXTINCTION IN COLOMBIA

Jaguars are one of the animals in danger of extinction. Their population has decreased from 20% to 25% since 1992 due to deforestation and climate change.

(Ideas taken from CHAT GPT 2024)



Titi Monkeys have lost 80% of their population since 2002 due to illegal deforestation which affects them a lot because they live in trees. Deforestation has affected the number of Titi monkeys in their natural habitat. That is why the most common places to see them are zoos. (Ideas taken and adapted from CHATGPT 2024)

The loro orejiamarillo has lost 30% to 50% of its population since 1999 due to deforestation that is taking place in forests. This affects parrots a lot because they are losing their natural habitat and protection.

(Ideas taken and adapted from CHAT GPT 2024)



Colombia's Main Cities

Barranquilla: Barranquilla, a port city on the Caribbean coast, is known for its lively Carnival with parades, music, and colorful costumes. It is a big, welcoming city by the sea.

Bogota: Bogotá is Colombia's capital, located high in the Andes Mountains with a cool climate. It is famous for the Gold Museum and Monserrate, a mountain with great city views.

Medellin: Known as the "City of Eternal Spring" because of its warm, year-round climate, Medellín is surrounded by mountains. It is famous for its colorful murals in Comuna 13 and Parque Explora science museum.

Cali: Cali is the salsa capital of the world, where everyone loves to dance. Highlights include the Cali Zoo and Cristo Rey, a huge statue overlooking the city.

Cartagena: Cartagena is a beautiful, historic city with old colonial buildings and forts like Castillo de San Felipe. It is popular with tourists for its beaches and charming walled city.

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Colombia's National Parks

National Park	Location	Specialty
Tayrona National Park	Caribbean Coast	Known for its pristine beaches, lush jungles, and ancient ruins of the Tairona civilization, this park is a paradise for nature lovers and archaeologists alike.
Los Nevados National Park	Central Andes	Famous for its snow-capped volcanoes, hot springs, and diverse ecosystems, this park offers spectacular trekking opportunities and views of high-altitude paramo.
Chingaza National Park	Eastern Andes	A biodiverse park that is home to the source of the Bogotá River, featuring Andean forests, páramo ecosystems, and abundant wildlife including spectacled bears.
Sierra de la Macarena	Eastern Llanos	Known for the colorful Caño Cristales River, often called the "River of Five Colors," and for its diverse flora and fauna in the Amazonian region.
Puracé National Park	Southern Andes	A sanctuary for the Andean condor, with volcanic landscapes, hot springs, and thermal pools, along with stunning views of the Puracé Volcano.
Amacayacu National Park	Amazon Basin	Located in the heart of the Amazon, it offers rich biodiversity, indigenous cultures, and river-based excursions, making it a prime eco-tourism destination.
Tatacoa Desert	Upper Magdalena Valley	A unique semi-arid region with striking red and gray landscapes, offering impressive rock formations, star-gazing, and fossil hunting opportunities.
Los Katíos National Park	Pacific Coast	A UNESCO World Heritage Site with a rare tropical rainforest ecosystem, it is home to endangered species like the jaguar and several types of monkeys.
El Cocuy National Park	Eastern Andes	Famous for its spectacular glacial peaks, rugged landscapes, and the majestic El Cocuy mountain, this park is ideal for mountaineering and hiking.
La Macarena National Park	Eastern Llanos	Home to the stunning Caño Cristales and a rich mosaic of tropical forests, rivers, and wetlands, making it one of the most biodiverse parks in Colombia.

by: Veronica Acosta

from: Chat gpt

THE ANIMAL OF THE WEEK

WHITE HEADED CAPUCHIN MONKEY

The white-headed capuchin monkey (*Cebus capucinus*) is one of the most recognizable primates in Central and South America. With its striking white fur around the head and shoulders, it is easy to spot in the tropical forests of Colombia. These monkeys are small, agile, and highly social, often seen moving through the canopy in tight-knit groups. Their intelligence and ability to use tools, such as sticks to extract insects or crack nuts, make them one of the most resourceful primates in the region.

Despite its adaptability, the white-headed capuchin is facing significant challenges in the wild. Habitat loss due to deforestation and illegal logging, as well as the pet trade, have caused a rapid decline in its population



This species is now classified as "Vulnerable" on the IUCN Red List. Their numbers are decreasing, and their habitats continue to shrink, making their survival increasingly difficult.

Conservation efforts are crucial to protect the white-headed capuchin and its environment. The preservation of their forest habitats and tackling illegal trade are essential steps in ensuring that these intelligent and charismatic monkeys continue to thrive in the wild for future generations.

(IUCN Red List: The International Union of Conservation of Nature Red List of Threatened Species)

FUN FACT

By: Gabriela Rodriguez

White-headed capuchins are known for their ability to use tools, like cracking nuts or fishing for insects with sticks.

They communicate through a range of vocalizations, including grunts, whistles, and even "yells" to warn others of predators.

These monkeys have been trained in some research settings and were even featured in popular films like "Night at the Museum".

Poem to the Jaguars that are Endangered

By: Jeronimo Pareja



The jaguar was a star until the habitat was attacked.
Now they're endangered because of us.
Agriculture, logging and more are the reasons for the
Jaguars endangerment.

Logs are because of us.
The jaguar community is bloodily being destroyed.
The habitat is starting to crack because of our human act.

Because of agriculture, jaguars culture is being destroyed
because of our bloody acts.

Endagered now its path grows thin, a noble life, fading dim.
Each paw print marks the heartache deep of promises we
have failed to keep.

Now the act has been done.
No more going back.
We can't retract. Jaguars have almost fallen.
Each log cut is a jaguar's life.

Colors Beneath the Waves

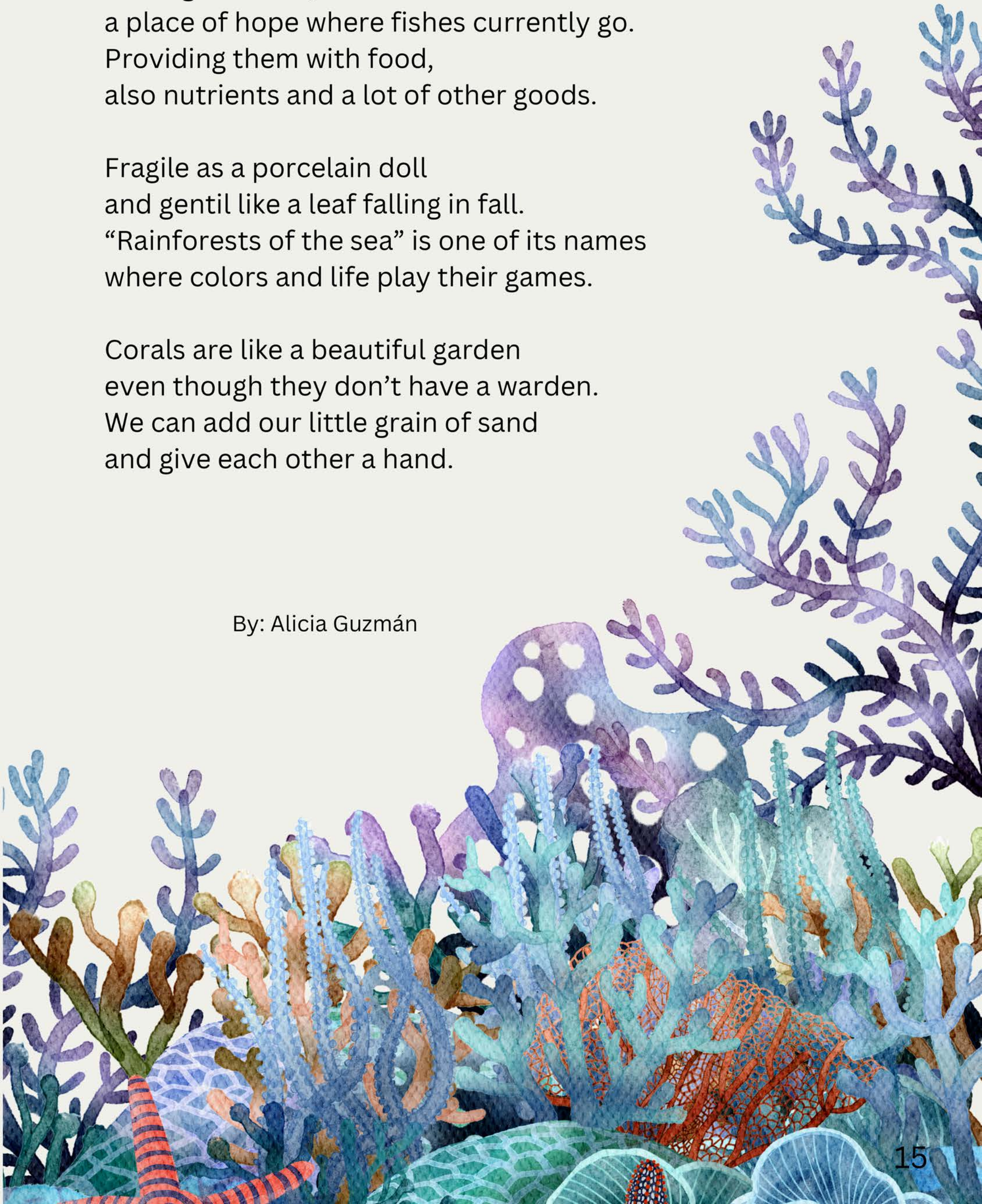
Under the clear waves,
in the ocean's deep
is where the corals sleep.
Bright colors in their branches wide,
they spread their arms that help them survive.

A refuge for fish, a world in flow
a place of hope where fishes currently go.
Providing them with food,
also nutrients and a lot of other goods.

Fragile as a porcelain doll
and gentil like a leaf falling in fall.
“Rainforests of the sea” is one of its names
where colors and life play their games.

Corals are like a beautiful garden
even though they don't have a warden.
We can add our little grain of sand
and give each other a hand.

By: Alicia Guzmán



What Is COP16?

Governments, indigenous leaders, the business community, and civil society discuss the challenges and opportunities we face to reverse habitat loss. It protects endangered species and preserve the ecosystem on which all life depends.



Goals

1. Creation of peace with nature coalition
2. Unify the climate and biodiversity agendas.
3. System for sharing the benefits of genetic resources.
4. Promote the need to reach agreements financing of biodiversity conservation by 2030.

Why is it important?



COP16 is important because the future of nature and the world will be decided. Also the actions that are needed will be discussed. All the conference will focus on maintaining global balance. In the conference, they will explore themes like energy transmissions, decarbonization of economy, recovery of nature, among other things.

By: Alicia Guzmán

LOCATION



Every two years, the COP meets and discuss different issues. This year COP16 is going to be take place in Cali, Colombia. This will be important to Colombia because it will leave a legacy after the meeting. Also, it is the creation of peace with nature coalition where members of the CBD will seek the integration of countries to promote the regeneration of life and reverse climate crisis.

COP 16: A STEP FORWARD IN CLIMATE ACTION- 2024

What is cop 16? In 2024, Colombia will focus on combating climate change by conserving biodiversity, reducing deforestation, promoting renewable energy, and enhancing climate resilience, all while fulfilling its commitments under the Paris Agreement.

LOCATION

COP 19 will be held in Bogotá, Colombia, in 2024. It will focus on climate change mitigation and international cooperation.



WHY IT MATTERS THE COP 16

COP 16 is crucial for shaping global climate policy, launching the Green Climate Fund, and reinforcing the goal of limiting temperature rise, emphasizing the need for international cooperation in climate action.

GLOBAL IMPACT

Decisions at climate conferences can lower greenhouse gas emissions, promote renewable energy, and improve land use, helping to stabilize global temperatures, manage sea-level rise, and mitigate extreme weather.



GOALS

With less than 40 days until COP16, Colombia reveals key issues in its Biodiversity Action Plan for 2030, to be presented on October 21 during country assessments.



COLOMBIA'S INVOLVEMENT

Colombia's participation in COP16 emphasizes its commitment to climate action and biodiversity, presenting its 2030 Biodiversity Action Plan to reduce emissions and promote sustainable development.



FUN FACTS

Biodiversity Hotspot: Colombia is one of the most biodiverse countries globally, ranking second after Brazil in the number of bird species and third in overall biodiversity.



COP 16: a step forward in climate action - 2024!

WHAT IS COP ABOUT?

The conference of the parties (COP), is the governing body of the convention on biological diversity (CBD). It is an international treaty adopted at the earth's summit in Rio de Janeiro, 1992.



WHAT IS COP'S MAIN OBJECTIVE?

COP's main objective is to establish agendas, commitments and frameworks for action to conserve biological diversity and put it to sustainable use. Not only that, but also to ensure the fair and equitable sharing of the benefits arising from the utilization of genetic resources.

WHERE AND WHEN IS THIS CONFERENCE HELD?

This conference is held every 2 years, and takes place all around the world. However, for the first time ever in the whole history, Colombia will host the 2024 16th Edition Biannual Conference On Biodiversity!

WHY IS THIS SIGNIFICANT TO OUR COUNTRY?

This is significant to Colombia because our country is the one of the world's most diverse countries in the world, holding more than thousands species and because of the flora and fauna. Not only because of that, but also because it's going to take place in here.

WHY DOES IT MATTER?

This is important because people want to overthink new economic models that will take into account the relevance of nature, this without causing over exploitation and pollution.

COLOMBIA'S MAIN ROLE IN COP 16:

Colombia plays a very important and special role in COP 16. What does it do? It mainly develops countries, specifically in areas with climates like finance and adaptation. Not only that, it created "strong international climate agreements and supporting initiatives aimed at protecting biodiversity and promoting sustainable development."

KEY THEMES OF COP16:

COP 16 has very interesting key themes: These are the main:

1. Reducing greenhouse gas emissions
2. Renewable energy initiatives
3. Climate adaptation and resilience

FUN FACTS!

Did you know that as mentioned before, "Colombia is one of the most biodiverse countries in the world, ranking second after Brazil in terms of species diversity"? "It has over 1,800 species of birds, more than any other country."

LINKS:

ChatGPT. (s/f). Chatgpt.com. Recuperado el 23 de octubre de 2024, de <https://chatgpt.com/> (That's where I got the quotes too).

COP. (2024, julio 14). COP16. Conferencia de Las Partes COP16 Colombia



COP 16

Making action!

WHAT IS COP 16

Cop 16 is a space created by the un that in that space they discuss and make decisions of urgent problems like climate change. This takes place in Cali in the stadium Pascuala Guerrero with 196 countries the 20 of October of 2024



WHY IT MATTERS

Cop 16 is crucial because it establishes commitments and actions to conserve biodiversity and stop massive extinction. This makes an impact on conservation and climate change, the protection of many biodiversity depends on every country.



KEY THEMES OF COP 16

- the snow on cap peaks they estimate that in 2100 it will die
- in 2030 they estimate that glaciers are gone in Colombia
- the glaciers lose 5% of snow each year.
- the glacier of sierra nevada is affected on climate change.



COLOMBIANS ROLE, FUN FACTS AND CALL TO ACTION

Colombia is host of cop 16 and also home of 67,000 species of plants and animals also aims to biodiversity protection. Fun fact: Colombia is home of 67,000 species of plants and animals. Call to action: We need to don't have contamination by don't throwing trash and to protect planet.



Cop 16

The UN conference for climate change or COP will be held on Colombia. The conference will be located in Cali, Valle del Cauca and will talk about climate change, pollution, deforestation and resources. its goal is to achieve peace with nature by 2050. The COP 16 was created after the COP 15 failure in Copenhagen. It will be one of the most important conferences since it will decide for the future of the world.



Zona verde

The conference will be in two zones, zona verde and zona azul. Zona verde will be located in Bulevar del río. It is a space where the participation between civilians, governments and organizations dedicated to protecting nature will be encouraged. Zona verde will search for opportunities to save the biodiversity in the planet.

Zona azul

Zona azul will be located on the Centro de Eventos Valle del Pacífico near autopista Cali which has a strategic location since it is close to the airport and the Santiago de cali hotel zone. This is where the official sessions will take place. The zona azul is a formal space that can host up to 12,000 people and easily host all the conferences and meetings that will take place.

Why it matters

The conference is one of the most important event taking place this year. President of the COP 16 in Colombia, Susana Muhamad Gonzalez said how proud she was that Colombia was chosen for this. The conference will address the problems the world is facing and will propose solutions to the problems. It will negotiate with conservative groups and try to solve the deforestation in the Amazon. This conference will also talk with different governments to try to achieve peace with nature. Biodiversity loss in the Amazon and other habitats will also be talked about and ecological solutions for countries will be proposed.

Key themes

The main areas that will be focused on the COP 16 are very important to preserve nature. Reducing greenhouse gas emissions is crucial to help the atmosphere get cleaner and stop pollution and complete destruction of the atmosphere. Renewable energy initiatives will help preserve earth's natural resources and use clean and renewable machines to power homes and factories. Climate adaptation and resilience refers to changes for clean energy sources and less emissions.

References

<https://www.cop16colombia.com/es/>
<https://unfccc.int/es>



COP16
COLOMBIA
Paz con la Naturaleza



Deforestation in the Amazon Rainforest

Industrial deforestation in the Amazon is happening in many places of the forest. This happens because of the high demand of wood for coal factories nearby. But illegal mining and farming is also taking up thousands of hectares of forest per month. The armed conflict in Colombia also has a big impact on the forest. Because of the repeated gunfire that happened, most of the trees were cut down to separate territories.



Governments

The Brazilian government has spread awareness to other leaders about forest loss. The Colombian government has negotiated with armed groups owning territories in the Amazon and talked about the permanent damage that this can have in the country.

Colombian Orchids

By: Gabriela Rodríguez

Colombia, with its rich biodiversity, is home to more than 4,000 orchid species, representing a significant portion of the global orchid diversity. These beautiful and intricate flowers, like *Cattleya trianae* — Colombia's national flower — are not only symbols of the country's natural beauty and cultural heritage, but they also play a critical role in the ecological balance of the region. However, Colombia's orchids are increasingly endangered due to a combination of habitat destruction, illegal collection, deforestation, and the impacts of climate change (Peoplenotpoaching.org, 2024). Orchids contribute to the local economy through ecotourism and the ornamental flower trade, making their conservation a matter of both environmental and economic importance.

Orchids are known for their complex biological traits, which allow them to thrive in diverse environments. They have unique flowers that exhibit bilateral symmetry, with three colorful petals and a specialized lip (labellum) that attracts pollinators such as bees, butterflies, and even hummingbirds. These flowers have evolved special adaptations to mimic the appearance or scent of other creatures, ensuring that pollinators can efficiently distribute their pollen, thus supporting the orchids' reproduction and the broader health of the ecosystem. (WildFlower. Retrieved on October 16, 2024). Orchids' role as ecological indicators is vital; their presence or absence reflects the overall health of their habitats. They also enrich the soil through decomposition and foster relationships with fungi that aid in nutrient absorption, benefiting the entire plant community.

The diverse orchid species in Colombia primarily grow in the Andes and Amazon regions, which are known for their high levels of biodiversity. However, these areas are also hotspots for deforestation, which poses a direct threat to the orchids' survival. Habitat loss, driven by logging, agriculture, and urban expansion, is one of the most significant factors contributing to the decline of orchid populations. (Akin, C. (2020, agosto 26). Orchids, particularly epiphytes that grow on trees, depend on specific environmental conditions and host plants, making them highly vulnerable to changes in land use and climate.

The reproduction of orchids is complex with two main categories: monopodial and sympodial. The latter, which is more common in Colombia, produces horizontal rhizomes from which new flowers emerge. Orchids reproduce through both sexual and asexual means. Sexual reproduction occurs when pollinators transfer pollen from one flower to another, facilitating the dispersal of seeds. Some species of orchids have evolved to attract specific pollinators by mimicking female insects or offering nectar, while others rely on wind or animals to disperse their seeds. Asexual reproduction, on the other hand, is common in cultivated orchids, where vegetative propagation methods like division and offshoots are used. - (How are orchids propagated? - American orchid society. (s/f). Aos.org. Recuperado el 16 de octubre de 2024)

Despite their reproductive versatility, orchids face many challenges to their survival. The small size of their seeds and their reliance on specific pollinators make them highly susceptible to declines in insect populations. In addition, orchids' dependence on host trees means that habitat destruction through deforestation is especially detrimental. According to experts, deforestation has caused a ten-fold reduction in orchid species richness, with 3,000 species at risk of extinction (Fay, 2018). This loss of habitat, compounded by the illegal collection of orchids, has put immense pressure on their populations.

Fortunately, conservation efforts are being made to protect Colombia's orchid species. One of the most notable initiatives is the work of the Colombian Orchid Society (SCO), founded in 1964. The SCO has been instrumental in protecting orchid habitats by purchasing land for conservation and raising awareness about the importance of orchids. Through its educational programs and partnerships with local communities, the SCO encourages sustainable practices, including the legal cultivation of orchids. For example, in 2017, the SCO partnered with the Center of Biological Research to protect Andean orchids, fostering community involvement in orchid preservation. The society has also worked tirelessly to fight the illegal trade of orchids, a major threat to their survival (Peoplenotpoaching.org, 2024).

Another key figure in the conservation of Colombian orchids is Daniel Piedrahita, a passionate orchid grower and conservationist. Piedrahita has developed an innovative approach to saving endangered orchids through cloning. At his "Soul of the Forest" reserve, he has successfully cloned over 25,000 native and exotic orchids, including species like *Cattleya trianae*. His reserve provides a sanctuary for endangered orchids, offering a safe space for them to grow and reproduce. Through his work, Piedrahita not only protects these flowers but also educates the public about the importance of preserving Colombia's natural heritage (Salamanca, 2024).

In conclusion, orchids are an irreplaceable part of Colombia's biodiversity and cultural identity. Their decline due to habitat loss, illegal collection, and climate change poses a serious threat to both the ecosystem and the local economy. However, conservation efforts led by organizations like the SCO and individuals like Piedrahita demonstrate that it is possible to protect these unique flowers and ensure their survival for future generations. To safeguard Colombia's orchid diversity, it is essential to continue supporting sustainable practices, promoting awareness, and strengthening conservation partnerships.



Scarlet Macaws

By: Guadalupe A

Colombia is one of the 17 more diverse countries in the world, especially for its incredible biodiversity, particularly in animals and plants. It is home for over 1,900 bird species, including many macaw and parrot species like the scarlet macaw or the blue macaw, which are integrantes of the ecosystem as seed dispersers. This report is being written to make the status of the scarlet macaw and other birds in Colombia public emphasizing their ecological importance. This report is meant to help their habitats leading to increased competition for resources and ultimately threatening animals survival. In this context, we pose a critical research question: How are habitat alterations and environmental degradation affecting bird species, specifically macaws in Colombia? Addressing this question is crucial for understanding the ecological consequences of human activities. The findings will contribute to the development of targeted conservation strategies pointed at anulating these impacts. Ultimately, this report emphasizes the need for immediate action to protect Colombia's unique nature and the ecosystems they inhabit. By increasing awareness of these challenges, we aim to foster greater support for conservation initiatives. The preservation of Colombia's bird species is essential not only for biodiversity but also for the overall health of the environment. the deep impacts of habitat loss du to deforestation and environmental degradation. These facts have serious implications for their species, as natural homes continue to disappear.

Macaws play a crucial role in their habitats by moving seeds throughout their homes. As they eat a variety of fruits and seeds, they accidentally process these seeds along with their foods. After digestion, these seeds are excreted (pooped) in different places making it possible for natural planting as they fly from tree to tree. This behavior not only helps in the growth of new plants but also generates genetic diversity within the forest. In fact, most of trees found in macaw sites exist due to these colorful birds. Their diverse flight patterns help place seeds over extense areas, ensuring a healthy and thriving environment. This inclusive relationship shows the importance of macaws in maintaining forest biomes. By caring for the following generation of trees, they help to habitat stability for many other species. In addition, as these trees grow they give food and shelter, generating an affordable life cycle of life. without macaws and parrots many of these trees would be unable to evolve in growing, or even surviving, taking us to decreased variety of species. As demonstrated these organisms are not just pretty and beautiful, but also are amazing and very important architects of their habitats. Their seed dispersal activities bring out the connectivity between nature and the vital role that each organism plays in sustaining ecological balance.

The red macaw, scientifically conoced as *Ara Macao*, is a vibrant, colorful bird counted within the family *Psittacidae*, which joins various species of parrots. This animal is a vertebrate, meaning it has a backbone which is the cause of its ability in flying skills. as a earth bird, the scarlet macaw lives principally in the tropical rainforests of both central and south america, where it lives in the lush canopies. With its striking red, yellow and blue plumage colors, the scarlet macaw not only attracts birdwatchers but also plays a crucial role in its homes. These birds are herbivores, almost always feeding on fruits, nuts, and seeds, which helps move seeds and produce healthy habitats. Scarlet macaws are social creatures, often saw in pairs or even small flocks, (groups) talking through various vocalizations that sound through the forests. Their hard curvy beaks are perfectly shaped for cracking seeds and nuts, showing their specialized feeding habits. Reproduction almost always happens in the rainy season, and these species is known for their monogamous pair bonds, often raising their young offspring in tree holes. Unfortunately, environmental degradation and illegal pet trade have led to a decrease in their specie , making conservation efforts vital for their survival. Organizations worldwide are working to preserve their natural habitats and raise awareness about the importance of preserving these magnificent birds. The scarlet macaw serves as a symbol of biodiversity and a reminder of the beauty that exists in our natural world.

Macaws represent the continuity of life through the typical life cycle, including reproduction. Wich highlights the cyclical nature of existence. Each macaw seen today is the offspring of previous generations, illustrating the endless life cycle. As individual macaws age and die, new ones are born, ensuring that their species continues to prosper. The successful reproduction of macaws helps to stabilize populations in different regions in South and Central America. This amazing cycle of life and death shows nature's flexibility, where life persists despite individual loss. In addition to their reproductive success, macaws have adapted physically over time to enhance their survival. Their triangular feet with three toes and sharp claws, allow them to grasp branches safely and navigate their environment effectively. These physical adaptations allow them to find food and evade predators. Historically, macaws may have looked different due to changes in their ecological conditions, showcasing their ability to evolve. Beyond physical traits, these animals have also adapted in matters of behavioral traits, enabling them to blossom in various environments. These changes show their flexibility and ability to adapt to challenging environments. Overall, the life cycle and adaptations of macaws illustrate the complex balance of life in nature.

Macaws are majestic and incredible animals. And they are very important for biodiversity conservation and habitat restoration planting trees even though it is not on purpose. This is very important for humans because trees give oxygen for us to breathe and survive. It is also classified in many different groups as well as all organisms. It is really important to save them not only for conservation but also for the overall health of our planet earth. It is amazing how and animal is so important to protect our environment and the ecosystems. This specie is a colorful, vibrant animal that not only attracts tourists but also plays a vital role in Colombia. Answering this research question makes it easier to understand how our actions are affecting our biodiversity and our planet.



PINK DOLPHIN

By: Luciana Velez

Colombia is an amazing country full of biodiversity. Actually, it is the second most biodiversity-rich country in the world. (WWF, 2017). It is home to a lot of the most diverse animals in the world, including the pink dolphin. Pink dolphins are one of the most well-known animals of Colombia. Most of them live in areas like rivers or streams mostly in the Amazon or the Orinoco rivers (WWF, n.d). They have smooth, gray or pink skin and slim bodies that help them swim fast through the water. They also have a blowhole on the top of their heads, which they use to breathe when they come up to the surface. A unique characteristic that only pink dolphins have is that since they do not have a neck bone, they can turn their head almost all the way around. Apart from that, pink dolphins are the smartest dolphins out of the five freshwater species (Aqua Expeditions, 2024). Pink dolphins just like every type of dolphins need oxygen to survive (2seewhales, n.d). Even though they can hold their breath for a long time, the amount of oxygen in the water affects the amount of time they can be underwater to find their food. Fish and other aquatic animals need oxygen in water to survive and stay healthy throughout their lives. However, when oxygen levels in water are low, the fish or other animals in rivers might get sick or die, which makes it much harder for pink dolphins to find their food (Socratic Q&A, Nam D., 2018). Today, the oxygen levels in water are decreasing due to things like pollution, climate change, etc.. (DCCEEW, n.d) If the oxygen levels in water are too low, it can harm dolphins and other marine life. (ifaw, 2024) This is why it is important to learn about how oxygen affects dolphins, so we can protect their ecosystems and help keep the rivers clean. This report is written to explain why oxygen levels in water are important for dolphins. Understanding this can help us realize why keeping our rivers clean and healthy is important for dolphins and the entire aquatic ecosystem.

There are several things that affect the amount of oxygen in water, and one of the main factors is temperature. Warm water holds less oxygen than cold water (cyfoed naturiol cymru natural resources wales, n.d) As the temperature rises, especially in the summer, lakes and rivers heat up, which causes oxygen levels to drop (usgs, 2018). This can be dangerous for fish and other aquatic animals. For example, the Amazon River Dolphin, also known as the pink dolphin, depends on oxygen-rich water to survive (WWF,n.d). When the water gets too warm, it's harder for them to find food because their oxygen supply decreases (scienceDirect, 2024). Research shows that even a 1°C increase in water temperature can lower oxygen levels a lot, affecting not just dolphins but the whole ecosystem (ScienceDaily, 2024). Another big reason oxygen levels drop is because of nutrients, decomposition, and ammonia (EPA, 2024) When there are too many nutrients in the water, plants can grow too much and use up all the oxygen (EPA, n.d). Even though plants can produce oxygen during the day, at night they take it away, leaving less oxygen for animals (Britannica, n.d). Also, when plants and animals die, they need to decompose, which uses a lot of oxygen (Britannica, n.d). This takes even more oxygen away from the water. The decomposition process also creates ammonia, which can be harmful to fish (fdacs, n.d). If oxygen levels are already low, ammonia builds up faster, making the water even more toxic for aquatic life (pubs, n.d). Keeping the temperature stable and limiting pollution are important to protect these ecosystems and ensure that animals like dolphins can survive. This shows why it's so important to keep our water clean and healthy.

In Colombia, pink dolphins have some different ways to find food. (NOOA FISHERIES, 2024) One method they use is called herding, where they swim around groups of fish to keep them together. This teamwork is really important because it makes it easier for the dolphins to catch their food. They take turns swimming through the group to prevent the fish from escaping. By working together like this, dolphins can trap a lot of fish at once. Another strategy they use is called corralling. In this technique, dolphins chase fish into shallow water where the fish have less space to swim away. Once the fish are trapped in the shallow area it becomes much easier for the dolphins to catch them. They work as a team, taking turns to trap and catch fish near the shore. This way, the dolphins can ensure they have enough food to eat. Their hunting methods show how smart and intelligent they are. It is impressive to think that these dolphins can work together to solve problems like finding food. This teamwork not only helps them survive but also shows the intelligence of these animals. The pink dolphins in Colombia are truly unique and have adapted to their environment in really amazing ways. Understanding their hunting methods helps us appreciate the biodiversity in Colombia and why it is important to protect these habitats (Wilderness Classroom, n.d).

Oxygen is essential for pink dolphins, especially because of their prey (Ifaw, March 7, 2024). Fish, which are a key part of their diet, need oxygen-rich water to survive. If the oxygen levels in the water drop, many fish could die, leaving the dolphins without enough food to eat. Maintaining a healthy level of oxygen in the water helps that the food chain stays good and healthy, which means dolphins can find their prey (Marine bio, n.d). Additionally, oxygen affects a lot in the dolphins' health (phys org, 2020). Though dolphins breathe air, they rely on oxygen in the water to support their activities, like hunting (ifaw, 2024). When oxygen levels in the water decrease, the water can become more dangerous for them, leading to increased stress or even sickness. Also, sufficient oxygen levels help keep the water clean, which contributes to a safe and healthy environment for dolphins. Without proper oxygen levels, the ecosystem supporting the dolphins would suffer, impacting both their food and well-being.

In conclusion, pink dolphins need oxygen for some really important reasons. First of all, water full of oxygen is essential for their prey to survive. If the oxygen levels in water drop, fish may die, leaving dolphins with less food to eat. Apart from that, maintaining healthy and good oxygen levels keeps the food chain balanced, allowing dolphins to find their prey. Secondly, oxygen is vital for dolphins' health. Even though dolphins breathe air, they still require oxygen in the water to stay healthy while they're hunting. Low oxygen levels can make the water dangerous, illness for dolphins. It can also affect water cleanliness, leading to an unhealthy environment for dolphins to live in. If pollution or climate change reduces oxygen levels in water, it could have a enormous impact on dolphins and other aquatic animals, making it harder for them to survive and find food. So, protecting water quality and stopping climate change is important for maintaining dolphin habitats and the rest of the aquatic ecosystems .



Spectacled bears

By: Laura Martínez

Have you ever wondered if there is a species of bear living in South America? The spectacled bear is the only species of bear that lives in South America (animalia.bio), but it is in danger of extinction. The spectacled bear is in conservation status. Paddington, the famous London bear belongs to the same species as the spectacled bear. It is a vulnerable species because of many factors. How does habitat loss and human activity affect the spectacled bear? The spectacled bear is a bear with great strength. Their fur on their face has the shape of spectacles (WWF n.d). They play an important role in the ecosystem, spreading the seeds in the forest. They have an incredible ability to adapt. These bears are shy, hard to find, and prefer to stay away from humans (National Geographic 12 Mar 2010) In this text you will find a lot of information about the spectacled bear.

The spectacled bear is a big mammal. It is strong and loves to climb trees. Males are usually 50% bigger than females (WWF n.d). Spectacled bears weigh from 140 to 175 kg (WWF n.d). Their height is 1.5 to 2 meters depending on the gender (WWF n.d). The name they have is because of the shape of the fur on their face. Their fur is black, but sometimes dark red-brown. Spectacled bears have pale yellow fur around the neck, chest and eyes, which it seems to be spectacles. Spectacled bears are omnivores (San Diego zoo n.d).The spectacled bear is very shy and good at climbing. It prefers to live in the forest of the Andes mountains. They like living in areas of 14,000 feet but they go to lower areas to find food (National Geographic 12 Mar 2010).

The spectacled bear is an omnivore, which means that it eats meat and plants. It eats 20 different kinds of animals and eat over 300 different types of plants (San Diego zoo, n.d). Its favorite food is the berries (a-z animals n.d). It especially prefers eating plants, but it also preys on mice and birds (a-z animals n.d). It does not eat big animals. The spectacled bear also eats fruit which is very important because when it excretes the fruit, the seeds spread around the forest. That makes new trees and plants grow (San Diego zoo, n.d). It likes to eat flowers like bromeliads. With its powerful claws, it opens the bromeliads and eats what is inside (National zoo 2016). Its main predators are humans, jaguar, pumas, and mountain lion. Spectacled bear cubs are attacked by pumas and jaguars. Hunting causes one of the major reduction of spectacled bear population(WWF, n.d).

The spectacled bear can adapt easily(Machupicchu amazon peru, 2024). They usually live in the mountains of the Andes in South America, but it can also be found in many different habitats in South America. Spectacled bears can also live in cloud forests, grasslands, and dry scrublands. Their ability to adapt is because of their size and agility (Machupicchu amazon peru, 2024). They can easily climb trees and navigate steep mountainous terrain, and that allows them to access food and escape predators. It is are a unique species of bears but they are in danger of extinction. The spectacled bear is a vulnerable species. The population has decreased because of deforestation, fragmentation, agricultural expansion, human wildlife conflicts, habitat destruction and many more reasons (Colombia One, 2024). The spectacled bear is an important species for South America and Colombia. Conservation initiatives have been implemented to protect and conserve the species. Colombia has National parks, and protected areas to protect the species (Colombia One, 2024). To teach people about the conservation of spectacled bears local communities, environmental organizations, and government agencies are helping.

Habitat loss and human activity affect the spectacled bear in many ways. The Colombian Spectacled Bear symbolizes the fantastic diversity of Colombia's wildlife(Colombia One 2024). These bears usually live in forests of the Andes mountains in high altitudes of 14,00 feet(National Geographic 12 Mar 2010). They are forced to go to lower areas to search for food because of deforestation. Deforestation happens because of agricultural expansion and human wildlife conflicts, which reduces the amount of forest where the bears can live. The spectacled bears eat 20 different kinds of animals and eat over 300 different types of plants (San Diego zoo, n.d). Habitat destruction reduces their access to food. Habitat fragmentation separates the bears which makes for them harder to reproduce(Colombia One, 2024). This shows how habitat loss and human activity affect the bear and decrease the population. There are 8,000 bears in the world. As said before the spectacled bear is a fascinating, unique and interesting species in danger of extinction. The spectacled play an important role in the ecosystem and it is Colombians and South America's symbol of biodiversity that is why we need to protect the spectacled bear(Colombia One, 2024).

Word Search

N C A I E C F I D A G P
O A N V Z G O J X T Z H
X R M R T H I A L E J T
R I I A J N U I D X C G
F B O N Z C Z G X U F W
S B D D V O A V T C N D
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O A L A G O R I N O C O
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A O D I Z N J U D D K O

1. CARIBBEAN

2. PACIFIC

3. COLOMBIA

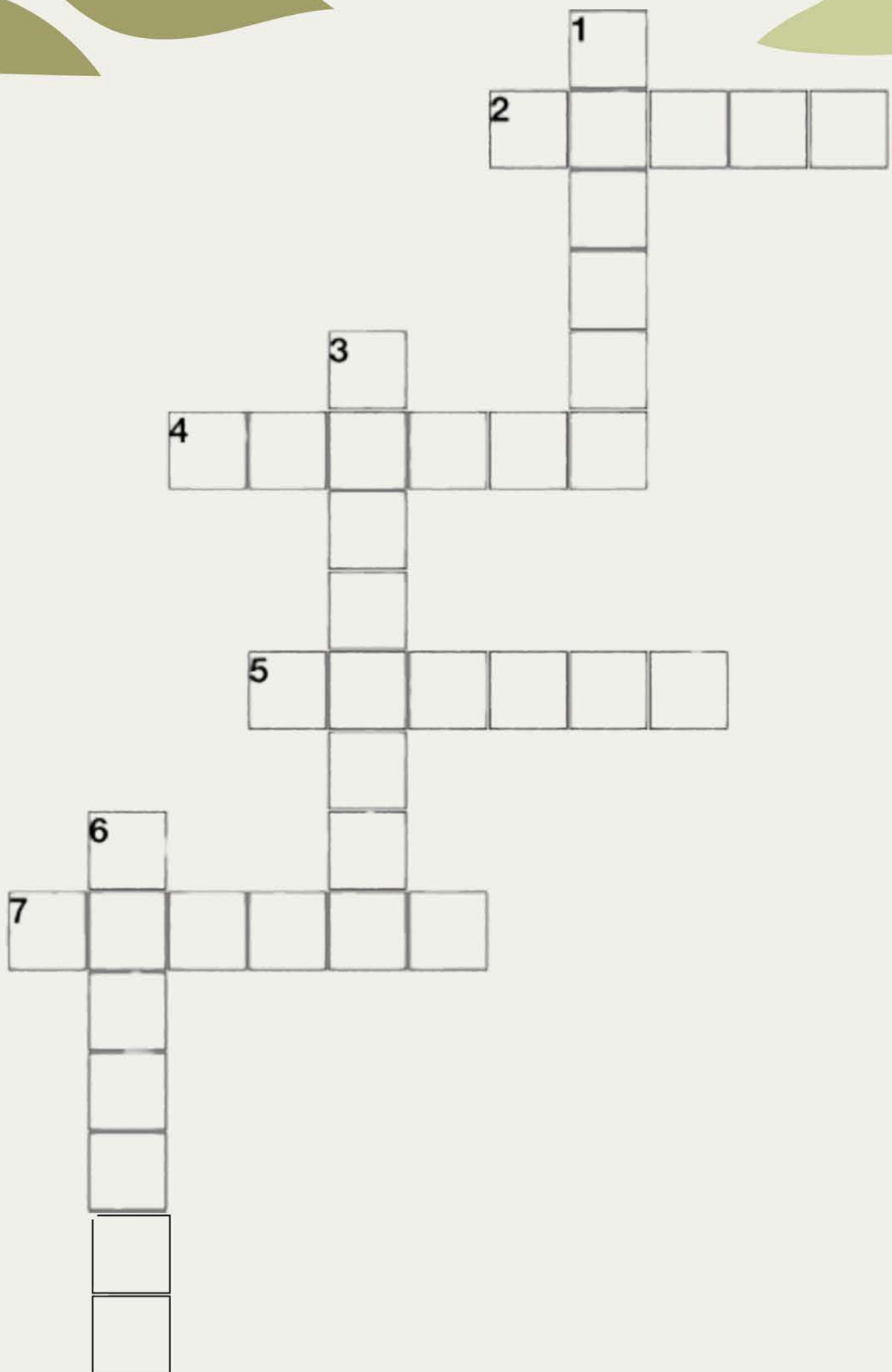
4. ANDEAN

5. ORINOCO

6. AMAZON

7. INSULAR

Crossword Game



Horizontal

2. A large, colorful parrot native to Central and South American rainforests, famous for its vibrant red, blue, and yellow feathers.

4. A massive bird of prey, found in the Andes, with black and white plumage and a wingspan among the largest of any flying bird.

5. A primate with a long tail, known for its agility and intelligence, commonly found in tropical forests.

7. A tropical bird with a large, colorful beak, often found in rainforests; it has vibrant plumage and is known for its loud calls. It is also known for its playful nature and communication skills.

Vertical

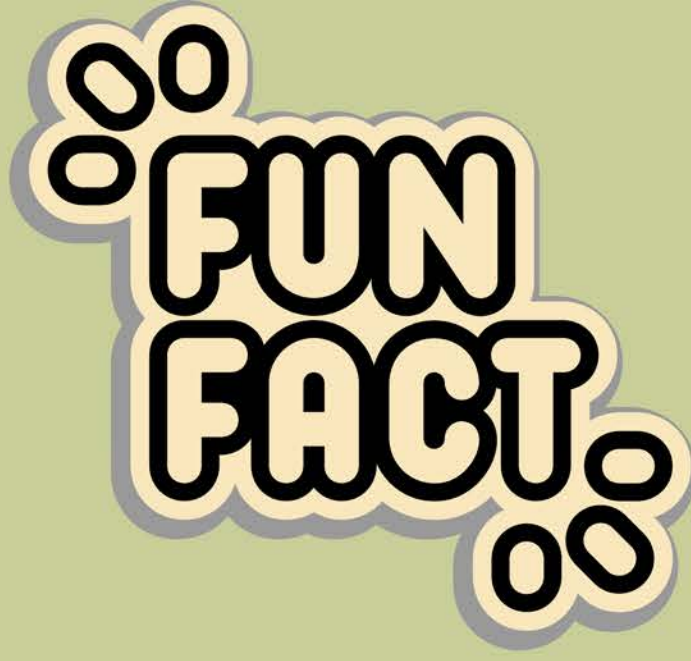
1. A large, powerful wild cat with a yellow coat and distinctive black spots, native to the Americas and known for its strength and stealth.

3. A large, powerful snake found in South America, especially in the Amazon basin, known for being one of the longest and heaviest.

6. A highly intelligent marine mammal with a sleek, gray body and a distinctive dorsal fin.

Sudoku

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6			1	9	5			
	9	8					6	
8				6				3
4			8		3			1
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			4	1	9			5
				8			7	9



Colombia boasts diverse ecosystems, including tropical rainforests, Andes mountain ranges, savannas, deserts, wetlands, and both Pacific and Caribbean coastlines.

Colombia ranks first globally in biodiversity per square kilometer, with over 59,000 known species of plants, animals, and fungi. It is estimated that there are over 100,000 species in total in the country.

Colombia is the country with the largest number of bird species in the world, with over 1,900 species recorded, many of which are migratory or have small, specific populations.

Colombia has the highest butterfly diversity in the world, with over 3,500 species.

The Amazon region in Colombia, while less extensive than in Brazil, is incredibly rich in biodiversity, home to species like jaguars, pink river dolphins, and sloths. Indigenous communities play a vital role in conserving this area's ecological richness.

With over 800 species of amphibians, Colombia has the greatest variety of amphibians on Earth. These include colorful, endangered species like the poison dart frogs, known for their vibrant hues and toxic secretions.

MEMES



Los países desarrollados buscando la vacuna contra el Covid-19



Los países desarrollados buscando una solución contra el cambio climático y la pérdida de la biodiversidad para evitar futuras pandemias



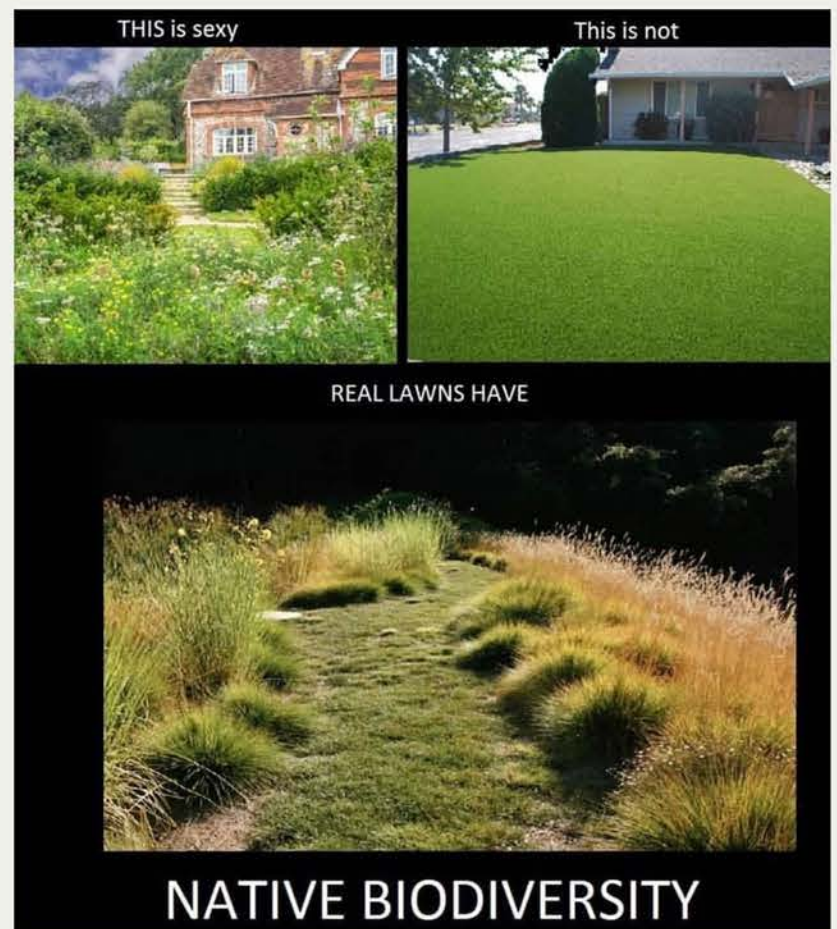
Un millón de especies amenazadas por la actividad industrial

Las industrias dispuestas a terminar con las especies necesarias para hacer crecer sus ganancias



Los gobiernos del mundo

Las medidas para "proteger" el medio ambiente





HOROSCOPE

By: Gabriela Rodriguez

ARIES

The jaguar symbolizes strength and bravery. Like Aries, it faces challenges head-on, embodying courage in protecting ecosystems and wildlife.

TAURUS

Colombian coffee represents resilience and stability. Taurus, known for its practicality, aligns with coffee's need for sustainable, careful cultivation.

GEMINI

The Andean butterfly reflects Gemini's adaptability and changeability. It is a bioindicator of ecosystem health and highlights the effects of climate change.

CANCER

The macaw symbolizes family and protection. Cancer, a nurturing sign, mirrors the macaw's need to protect its home and natural environment from threats.

LEO

The Andean condor embodies leadership and courage. Leo, driven by vision and power, resonates with the condor's fight for survival in a changing world.

VIRGO

The orchid symbolizes precision and care, much like Virgo. It thrives in delicate ecosystems, reminding us of the importance of conservation and attention to detail.

LIBRA

Corals represent balance and cooperation. Libra, the sign of harmony, reflects the need for global collaboration to protect our oceans and marine life.

SCORPIO

The anaconda symbolizes transformation and resilience. Scorpio, with its deep determination, mirrors this animal's ability to adapt and thrive in challenging conditions.

SAGITTARIUS

The llama, a symbol of resilience in the Andes, matches Sagittarius' adventurous spirit and drive for exploring sustainable solutions to environmental problems.

CAPRICORN

Highland coffee represents hard work and discipline. Capricorn, the determined and practical sign, resonates with the effort needed to sustainably cultivate this crop.

ACUARIUS

The toucan is innovative and unique, much like Aquarius. It symbolizes the need for creative, forward-thinking solutions to environmental challenges.

PISCIS

The pink dolphin embodies intuition and empathy. Pisces, the most sensitive sign, connects with this animal's connection to water and the need to protect aquatic ecosystems.

Taken and redacted from Chat GPT

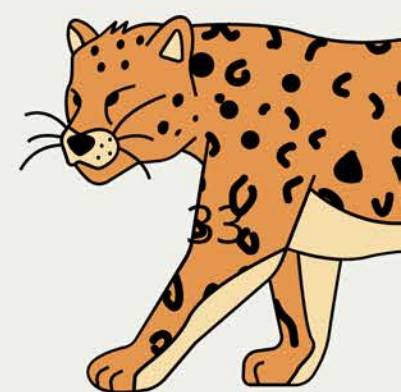




CONCLUSION

Colombia is an amazing country with a rich variety of plants, animals, and natural landscapes. From beautiful orchids to unique animals, Colombia's biodiversity is truly special. However, some of these species and ecosystems are at risk because of issues like deforestation and pollution. By learning about Colombia's biodiversity, we understand why it is so important to protect it. Taking care of our natural environment is essential to make sure that future generations can enjoy and benefit from these incredible resources. It is our responsibility to help preserve Colombia's nature for the future.

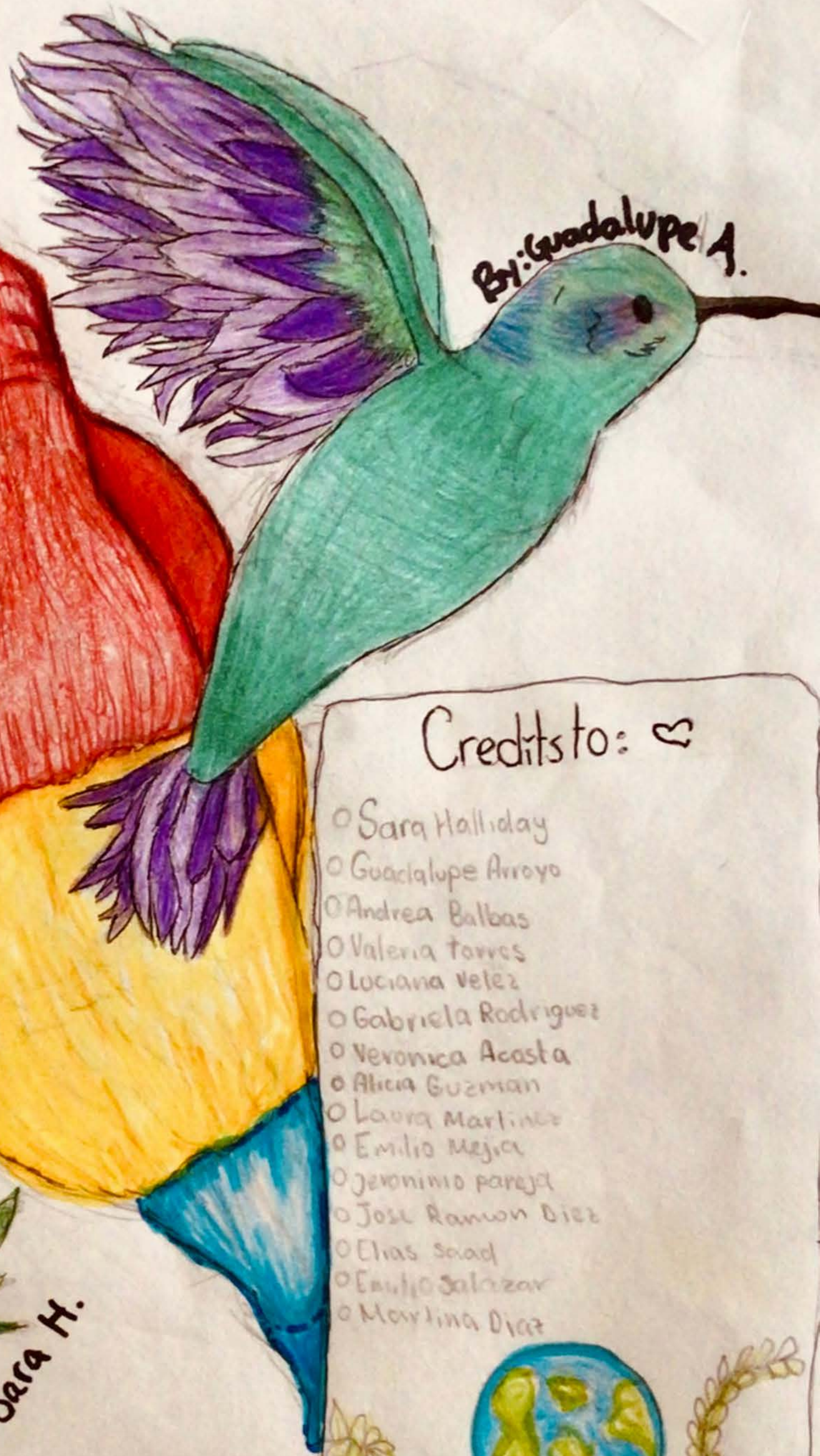
By Luciana Velez





By: Sara H.

By: Sara H.



By: Guadalupe A.

Credits to: ♡

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- Guadalupe Arroyo
- Andrea Balbas
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