



# Hidden Gems of the Mahaica River



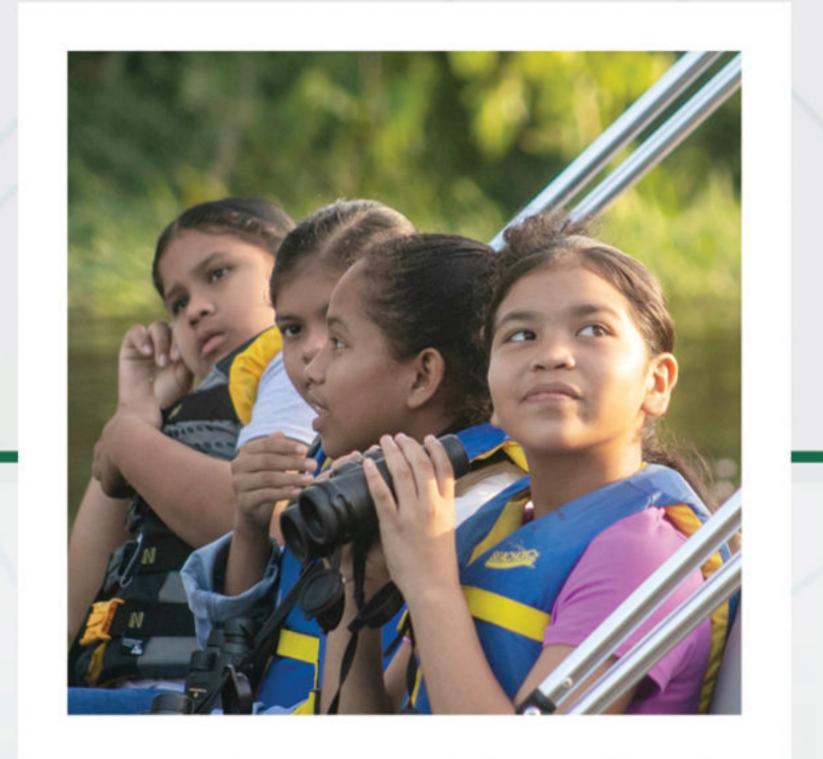




The EMC Foundation was established in 2022 by Mr. Shyam Nokta to support environmental awareness and education in Guyana, with focus on youths. The drive for this initiative was influenced by the evolution of environmental issues over the last three decades and their importance in today's national and global context.

#### OUR MISSION

Motivating action through greater environmental awareness and education in Guyana.



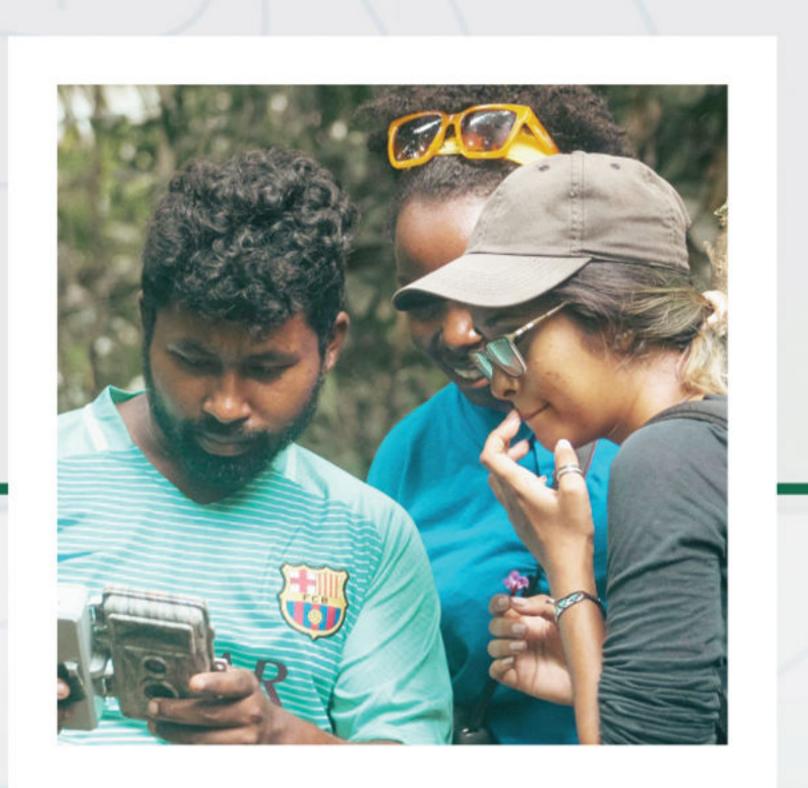
### Experience

Promote and facilitate activities to encourage a better understanding about the environment.



### Connect

Create a network to connect people on environmental issues.



### Act

Provide opportunities to experience Guyana's natural environment.



### A beautiful Adventure Awaits

The Mahaica River is a biologically significant river basin with diverse aquatic and terrestrial plants and animals. It is one of Guyana's principal coastal ecosystems and flows from the upper and lower watersheds of the Demerara and Berbice rivers to its confluence with the Atlantic Ocean.

The Mahaica River is part of the Mahaica-Mahaicony-Abary (MMA) wetlands located in Guyana's coastal zone. These semi-natural wetlands include an artificial conservancy between the Abary and Berbice Rivers. Although the Conservancy was constructed to serve as a water reservoir for the irrigation of agricultural land, its ecosystems provide a conducive environment for animals, plants, birds, and fish species to thrive.

The wetlands contain seasonally flooded savannahs with a mixture of grassland, shrubs, and intact mangrove forests. They are home to several fish species, such as Lukanani, Piranha, and Tarpon, and wildlife, such as Giant River Otters and Howler Monkeys. The wetlands are rich in avian biodiversity and are well-known for birdwatching. Guyana's national bird, the Canje Pheasant, and approximately 150 other bird species are abundant in the area.

The river and its tributaries also provide important economic, social, and cultural benefits to the region, including rich biodiversity, artisanal fishing, tourism, recreation, and associated economic inputs.



The mangroves in Mahaica are an important ecological feature of the region, providing various benefits to the river and the local community. Mangroves are dense forests of salt-tolerant trees and shrubs that grow along tropical and subtropical coastlines and play a crucial role in protecting the Mahaica River and its surrounding areas.

Their extensive root systems act as natural filters, trapping sediment and pollutants from runoff, thereby improving water quality and reducing erosion along the riverbanks. They also serve as a buffer against storm surges and protect against coastal flooding, safeguarding the local community and their livelihoods. The mangroves in Mahaica are used by the community for various purposes.

They provide timber for construction, firewood, and non-timber forest products such as medicinal plants and craft materials. These mangroves also serve as vital habitats for a diverse range of fish and wildlife. Many fish species, such as snappers, mullets, and catfish, utilize the mangroves as nurseries, where they lay their eggs and find refuge among the intricate root systems. Mangroves also

provide refuge for other marine and terrestrial species, making them important for biodiversity conservation. Like many mangroves around the world, those in Mahaica face threats from human activities such as deforestation, pollution, and climate change. Protection and sustainable management of this forest is therefore essential for the well-being of the local community and the ecological health of the region.

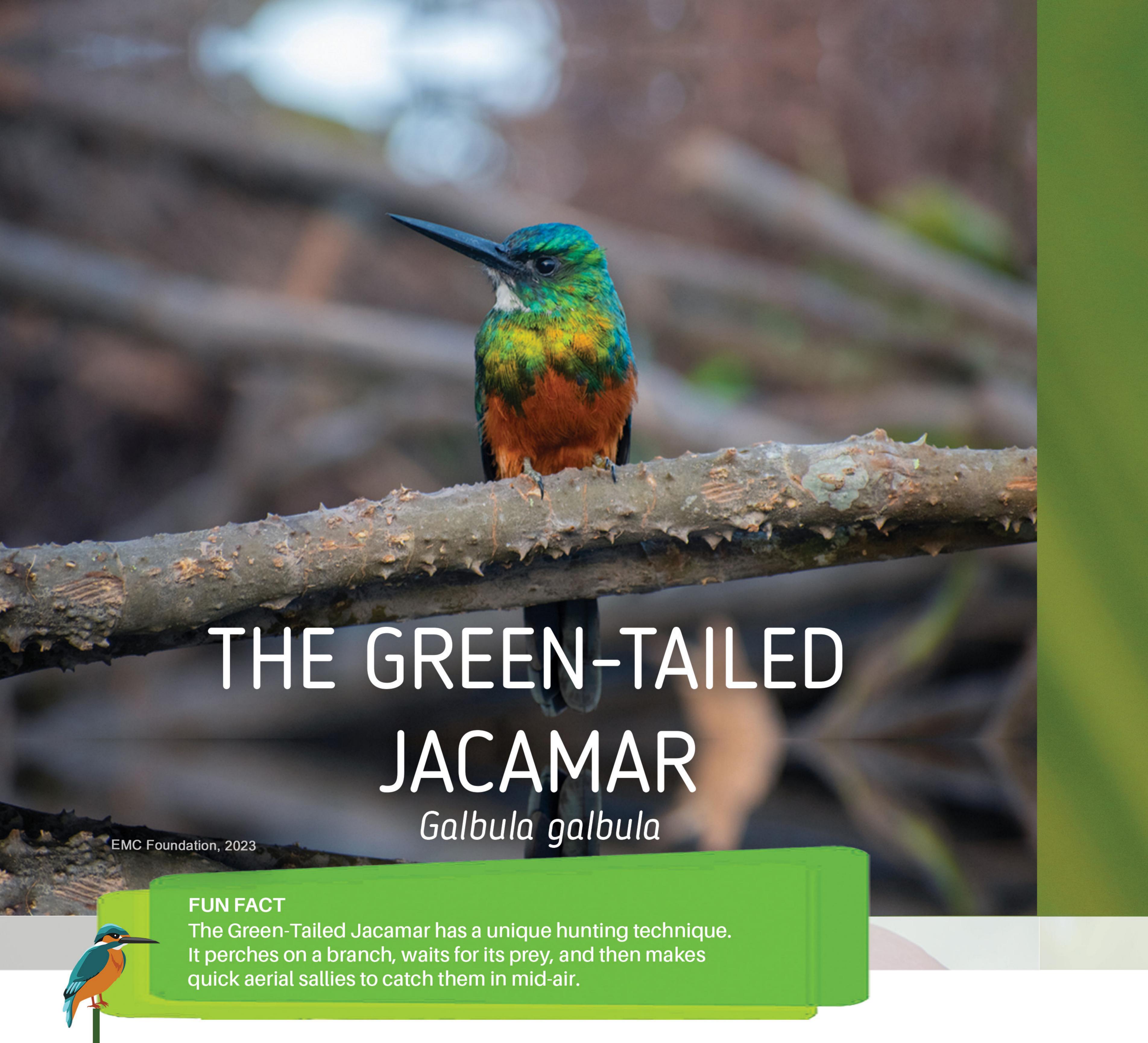


Hoatzin, is a unique bird species found in the tropical forests of South America, including Guyana. It is known for its distinctive appearance, with a spiky crest, bright blue face, and red eyes. The Hoatzin has an unusual diet and digestion process, relying heavily on fermenting leaves for nutrition,

nickname of "Stinkbird." The Hoatzin also has interesting behavioral traits, including a prehensile claw on its wings that helps it navigate through trees. It is considered a fascinating and iconic bird species in the region.

woodpecker species found in the forests of South America, including Guyana. It is striking in appearance, with a red head, black and white body, and intricate patterns on its wings and tail. The Blood Colored Woodpecker has a specialised bill to search for insects and create nesting

in ecosystems by controlling insect populations and contributing to tree health through foraging and nesting activities.



THE POINT-TAILED PALMCREPER Berlepschia rikeri

#### **FUN FACT**

The Point-Tailed Palmcreeper has unique nesting behavior; it excavates burrows in live palm trees

The Green-Tailed Jacamar is a small green body, a long, pointed bill, and distinct iridescent blue-green tail. It is an insectivorous bird and plays an important role in forest ecosystems by controlling insect populations.

inhabits Green-Tailed bird with a vibrant plumage, bright lowland tropical forests, where it perches motionless for extended periods and flies out to catch flying insects in mid-air with its sharp bill. Its stunning appearance and unique hunting behavior make it a fascinating bird to encounter in the wild.

The Point-Tailed Palmcreeper is a small bird with a pointed tail and a curved beak. It is found in the rainforests of South America and is known for its acrobatic abilities, which it uses to forage for insects and small invertebrates in the canopy.

The Point-Tailed Palmcreeper plays an important role in the ecosystem by helping to control the insect populations and by serving as prey for larger birds and mammals.

pinterest.com



The Moriche Oriole inhabits tropical forests and marshy areas in South America. The male has a striking yellow and black plumage, while the female is olive-green in color. Its distinctive woven nests can be observed hanging from the fronds of the moriche palm tree.

These birds are omnivores and play an important role in pollinating and dispersing the seeds of many plant species in their ecosystem.



### THE GREAT BLACK HAWK

Buteogallus urubitinga

#### **FUN FACT**

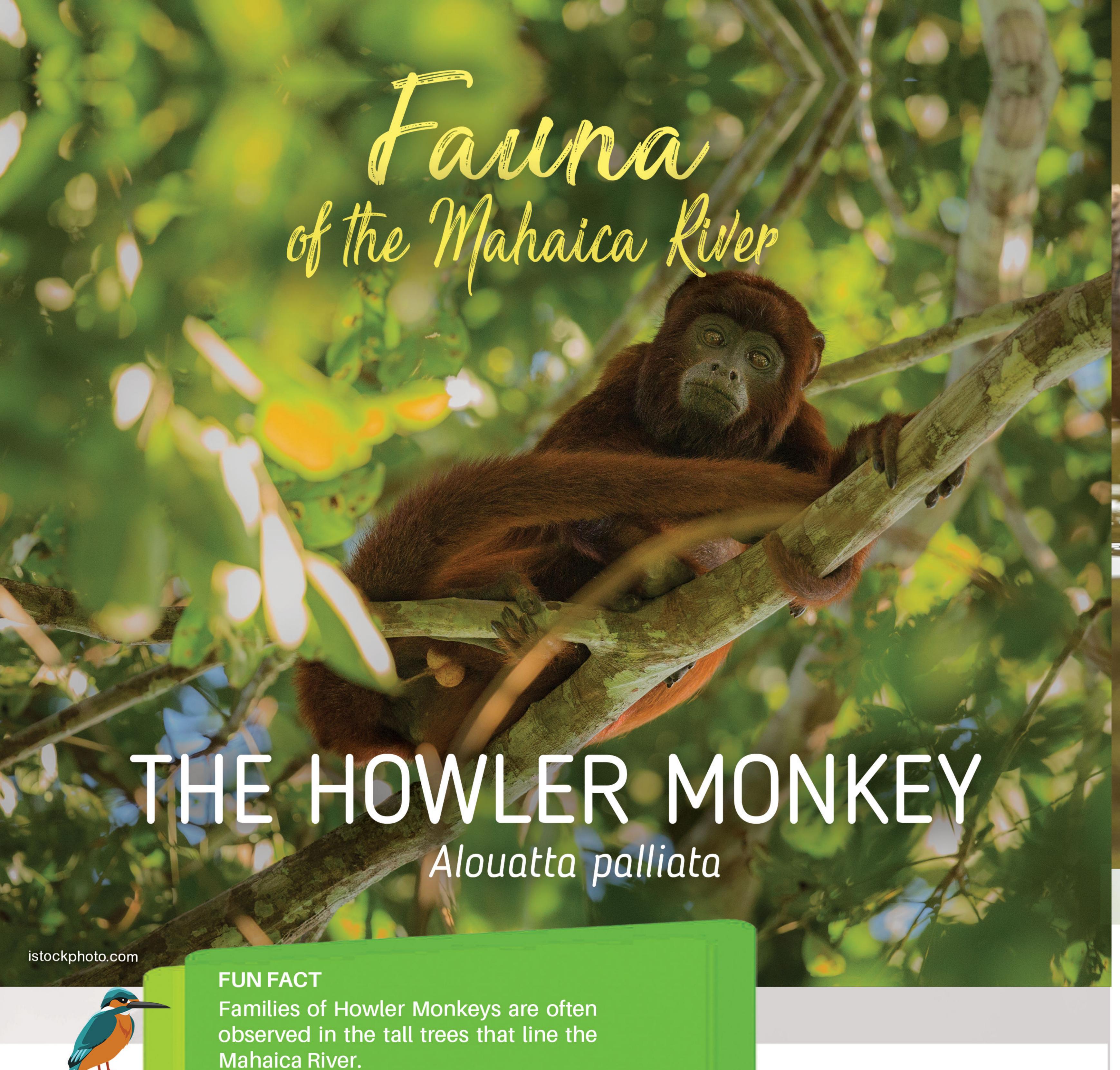
This Hawk has been observed using tools to extract prey from tight spaces, Including using sticks to extract eggs from a tree cavity. This behavior is not commonly observed in raptors and highlights the intelligence of this species.

The Great Black Hawk is a large bird of prey found in Central and South America. It has a distinctive dark plumage with white bands on its tail and wings. This Hawk is a skilled hunter, feeding on a variety of prey including reptiles, small mammals, and birds.

It plays an important role in controlling populations of prey species and maintaining ecosystem balance.

ebird.com

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The Howler Monkey is a large arboreal primate found in the rainforests of Central and South America, including Guyana. 'It is one of the loudest animals in the world and has a distinct loud, deep, guttural growls or "howls" that can be heard for miles. Howler Monkeys feed primarily on herbivorous,

feeding on leaves, fruits and flowers, and are known for their prehensile tails that help them move effortlessly through the canopies. They play a crucial role in the ecosystem as seed dispersers, contributing to forest regeneration.



#### **FUN FACT**

Giant River Otters use a variety of vocalizations, including loud barks, screams, and whistles, to communicate within their social groups. These vocalizations are not only used for communication but also for coordinating group activities such as hunting, playing, and defending their territories.

Pteronura brasiliensis

Giant River Otters are highly social and charismatic mammals, native to the rivers and lakes of South America, including the Mahaica River in Guyana. They are large in size, with adults reaching up to six feet in length, and unique appearance, with dense fur, webbed feet, and a long tail. Giant River Otters are skilled hunters, feeding primarily on fish, and are known for their cooperative hunting behavior, vocalizations, and playful interactions within their groups. Giant River Otters are

keystone species for South America river systems. They influence the balance of their ecosystems and play a crucial role in maintaining biodiversity. Unfortunately, they are listed as endangered due to habitat loss and hunting, making their conservation a priority for protecting the biodiversity of rivers like the Mahaica.

freepik.com



# THE WEST INDIAN MANAIEE

Trichechus manatus

fineartamerica.com

**FUN FACT** 

West Indian Manatees have no natural predators. Their closest living relatives are elephants.

The West Indian Manatee, also known as the sea cow, is a large marine mammal that travelling. They have no natural can reach up to 13 feet in length and weigh up to 1,300 pounds. They are herbivores and feed on a variety of aquatic plants. West Indian Manatees are gentle and slow-moving animals that spend

most of their time eating, resting, and predators but are vulnerable to human activities and equipment, such as fishing and boats. They are a keystone species that help to maintain the health and productivity of seagrass beds and other coastal habitats.



robust monkeys with distinctive tufted hair on their heads. They are highly intelligent and social animals that live in large troops. Capuchin's have been observed using tools such as stick and rocks to crack open nuts and shells, and

branches are makeshift brooms to sweep away debris. Capuchins plan an important pollinator role in their ecosystems by dispersing seeds and contributing to forest diversity.

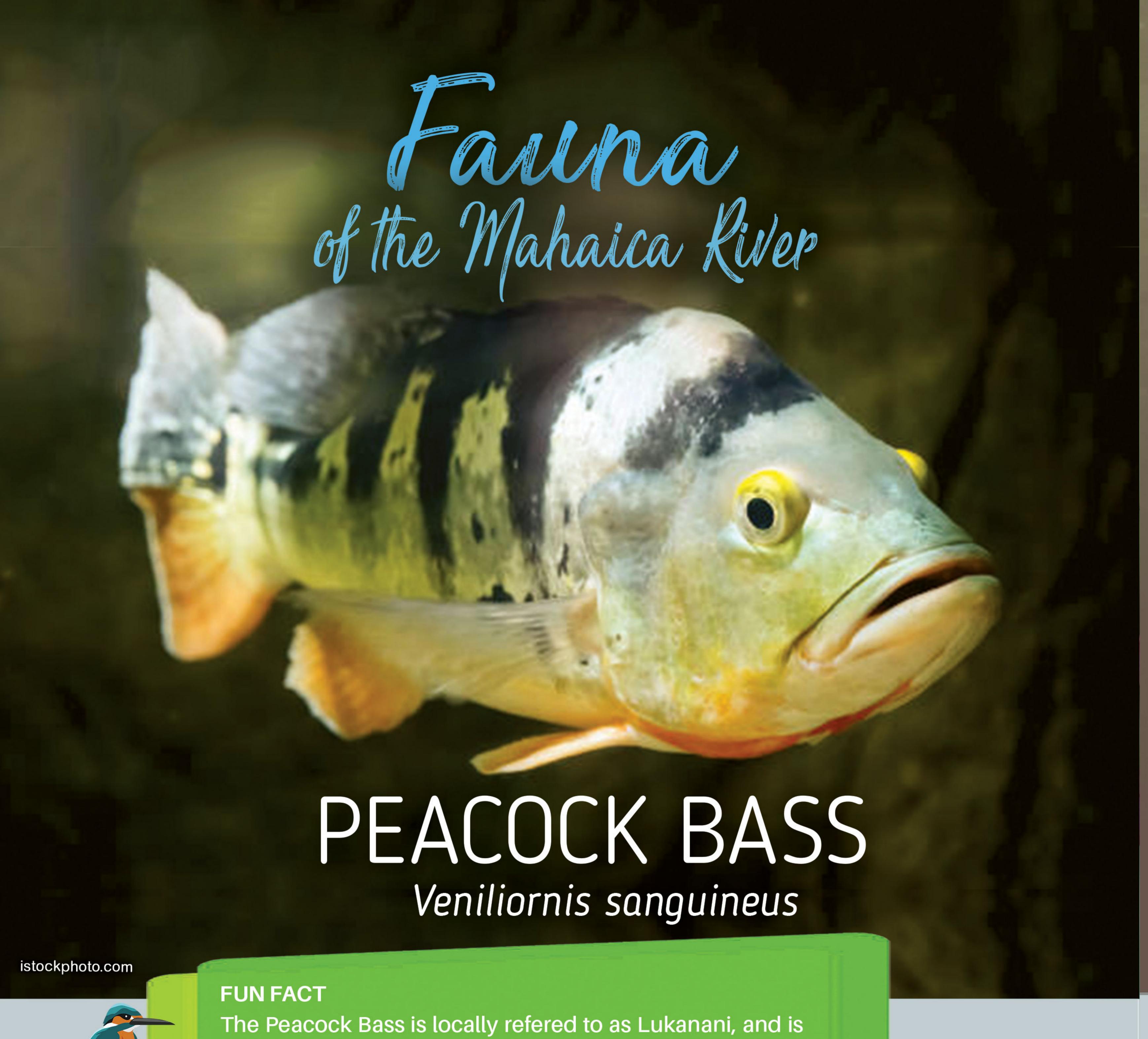


The Spectacled Caiman is a mediumsized crocodilian species with a robust and muscular body, armored skin, and These reptiles are broad snout. semi-aquatic and inhabit freshwater, rivers, lakes, and wetlands in Central and South America. Spectacled Caiman play an essential role in their ecosystem by controlling populations of prey species

and helping to maintain the balance of the aquatic food chain. They are one of the few reptiles that care for their young. The female will build a nest and guard it until the eggs hatch, and then stay with the offspring for several weeks to protecti them from predators.

The Green Iguana is a large lizard species with a striking green coloration that helps them blend into the forest. Green Iguanas are herbivorous reptiles, primarily feeding on leaves, flowers, and fruits.

Adult Green Iguanas will achieve a length between four and six feet, making them one of the largest lizard species in the Americas.



commonly used in local cuisine.

Peacock Bass are a species of cichlid fish that are native to the rivers and lakes of South America, including the Mahaica River in Guyana. They have a stunning coloration, with vibrant patterns resembling the plumage of a peacock, hence their name. highly prized by Peacock Bass are their aggressive nature, anglers for

making them a popular target for recreational and sport fishing in the region. They are also important for the local ecosystems as top playing role in predators, a maintaining the balance of fish populations in their habitats.



### THE TARPON

Megalops atlanticus

#### **FUN FACT**

Tarpons are sometimes referred to as "silver kings" due to their large size, strength, and flashy appearance when jumping out of the water. They are also able to gulp air at the surface of the water, which allows them to extract oxygen from the air and survive in low-oxygen environments.

The Tarpon are a large, silver-colored fish with streamlined bodies and distinctive forked tails. They can grow up to eight feet long and weigh over 280 pounds. Tarpons have an incredible jumping ability, often leaping up to 10 feet out of the water to escape

predators or catch prey. They play a vital role in the ecosystem as a key predator, feeding on a variety of fish and crustaceans while also serving as a food source for larger predators such as sharks and alligators.

gettyimages.co.jp



pinterest.com **FUN FACT** 



The Dwarf Tetra are small freshwater fish found in the Amazon basin of South America. They are typically around 2 centimetres long and have a silver body with a red tail. Dwarf Tetra are peaceful fish and feed on small insects and

zooplankton. They play a role in the food chain as prey for larger fish and birds.



Sciades herzbergii

#### **FUN FACT**

The Cuirass makes a croaking sound by grinding its teeth together, believed to be a form of communication with other individuals.

Cuirass are a freshwater fish species. They have a dark brown or black body, metallic sheen, and flat white head. They can grow up to 100 centimetres in length and weigh over 44 pounds. Cuirass are bottom dwellers and primarily feed on

smaller fish, crustaceans, and insects. They plan an important role in the aquatic food web as both predator and prey.



uk.inaturalist.org



The Black Piranha is a carnivorous fish found in the Amazon and Orinoco basins. It has a dark, almost black colouration and a large, powerful jaw with sharp teeth.

Black Piranhas display aggressive behavior and will attack anything that enters their territory. They help to control the populations of smaller fish and scavenge on dead animals.

Hassa can produce sounds by grinding their teeth or rubbing their pectoral spines against their bony plates, which may be used for communication or as a defense mechanism against predators. Hassa, also known as the armoured catfish, are a freshwater fish found in the rivers and streams of Guyana. They have flattened bodies covered in bony plates and barbels around their mouth. Hassa are hardy

**FUN FACT** 

and can survive in a wide range of water conditions. They are nocturnal feeders, mainly consuming small aquatic animals such as crustaceans and insects.

HASSA

Hoplosternum Littorale





Pontederia crassipes

#### **FUN FACT**

Water Hyacinths are used in constructed wetlands and floating islands to help improve water quality in polluted areas due to their ability to absorb pollutants from water.

The Indian Lotus is a beautiful aquatic plant with large round leaves and striking pink or white flowers. It holds cultural significance in many countries and is often considered a symbol of

purity, enlightenment, and rebirth.

Lotus seeds can remain dormant for

**FUN FACT** 

hundreds of years.

The Lotus is also known for its medicinal properties and is traditionally used to treat various ailments. It is commonly used in Mahaica for religious rituals.

The Water Hyacinth is a free-floating aquatic plant with lush green leaves and beautiful lavender flowers. it grows rapidly and has the ability to form dense mats on the water surface, which can have both positive and negative impacts on aquatic ecosystems. While it provides habitat for

some species, it can also disrupt native plants and animals, and cause issues with water flow and oxygen levels in water bodies. Proper management is essential to control its spread and mitigate potential negative effects.

pexels.com

pinterest.com





# CROWN FLOWER

Calotropis gigantea

vecteezy.com

The Turkey Berry can be fried, eaten raw, or dried to make tea.

Turkey Berry, also known as "Bitter Apple," is a small, egg-shaped fruit that is commonly found in tropical regions. It has a bitter taste and is used in traditional medicine in some cultures. Turkey Berry is also used as a culinary ingredient in some cuisines, where it is cooked

or pickled for its unique Caution is required, however, as the unripe fruit and other parts of the plant can be toxic if consumed in large amounts.

#### **FUN FACT**

This thick-stemmed sweet-scented shrub was favoured by the last queen of Hawaii, Queen Liliuokalani.

The Crown Flower is a tall perennial ornamental beauty. The Crown Flower shrub with striking star-shaped purple or white flowers. It is native to tropical and sub-tropical regions and is known for its

is also considered a poisonous plant as its sap and other parts contain toxic compounds.



the "ringworm bush" due to its traditional use in some cultures to treat skin conditions, including ringworm.

The Emperor's Candlestick grows in tropical and sub-tropical regions. In some traditional practices, extracts from the plant's leaves and seeds are used for medicinal purposes.

Proper caution and guidance are necessary as some parts of the plant can be toxic if ingested in large amounts.

Moko-moko is a large aquatic plant with heart-shaped leaves and distinct arrow-shaped flowers. It is native to tropical regions and grows along the banks of most waterways in Guyana.

Moko-moko has cultural significance in some indigenous communities and is used for various purposes, including food, medicine and as raw material for handicrafts.

Canje Pheasants that inhabit the Mahaica

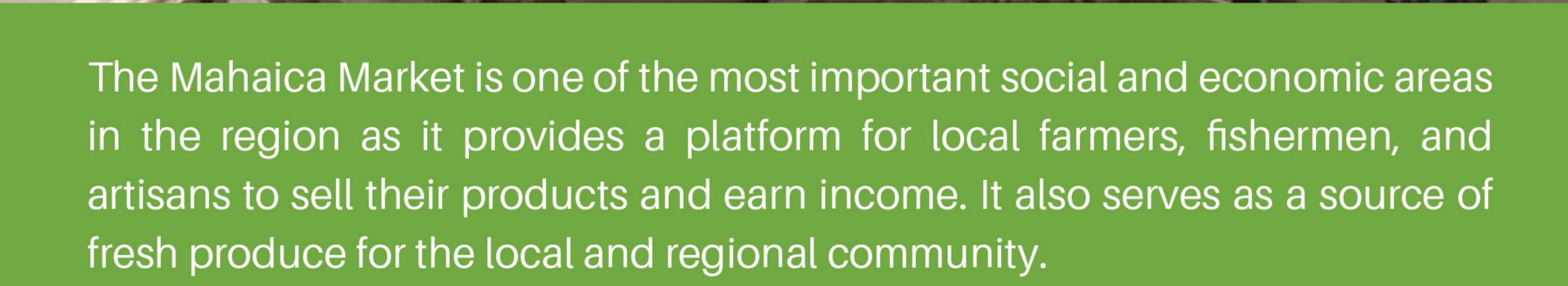
River.

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Mahaica comprises several villages with a combined population of over 300,000 persons and is a melting pot of culture. Celebrations such as Phagwah, Eid-ul-Fitr, and Easter, among others, are met with music, dance, and festivals reflecting the diverse heritage of its people.

Social life in Mahaica revolves around community gatherings, cultural events, and recreational activities. Friends and family participate in sports such as cricket and football and celebrate local customs, religions, and traditions, all important elements of the region's social fabric.



The market is not only an economic center, but also a cultural hub and gathering place where people from different ethnicities and cultural backgrounds come together, interact, and exchange goods, ideas, and stories, contributing to the rich cultural tapestry of the region.

Mahaica's social environment is shaped by its diverse history, cultural richness, religious practices, emphasis on education and health, social life, and economy. The region's people and their way of life make Mahaica a unique and vibrant part of Guyana.



