

An overview on Herping Diversity in Caribbean Costa Rica

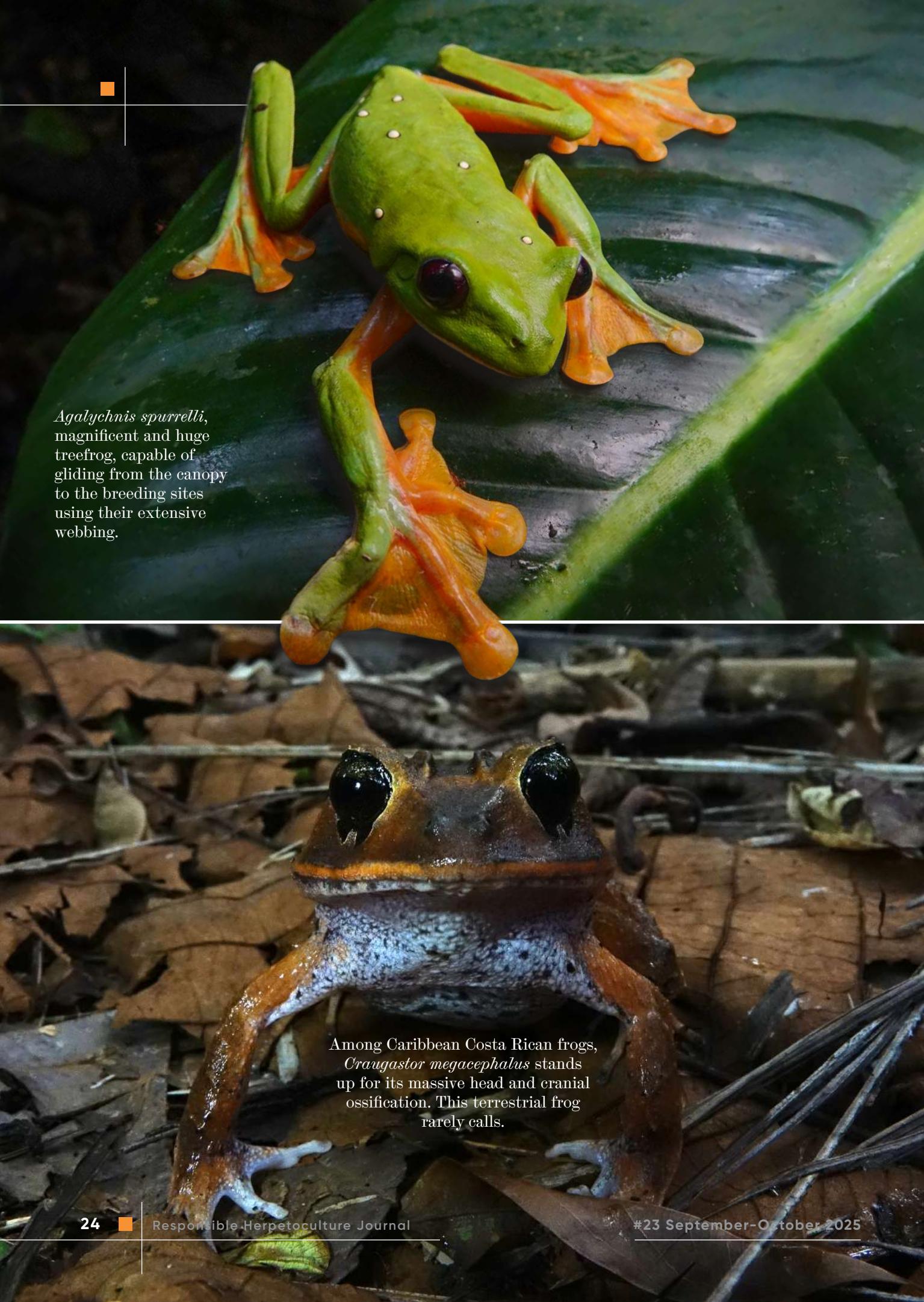
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Photos by the author

When you think about tropical American herps, most of them are well known from posters, books, and captive exhibitions, and probably come from one of the best-known countries for herping, Costa Rica.



When you think about Costa Rica, one typically imagine iconic species like the blue jeans poison frog (*Oophaga pumilio* (Schmidt, 1857)), the emerald basilisk (*Basiliscus plumifrons* Cope, 1875), the yellow eyelash viper (*Bothriechis nigroadspersus* (Steindachner, 1870)) or the red-eyed treefrog (*Agalychnis callidryas* (Cope, 1862)).

Indeed, those species are great ambassadors of Costa Rica's herpetological diversity. But, considering Costa Rica's size (of only 51.100 km², the size of Maryland plus Hawaii in the U.S.), it is the most diverse country in the world. It is home to 253 reptiles and 225 amphibians (478 species in total).



Agalychnis spurrelli,
magnificent and huge
treefrog, capable of
gliding from the canopy
to the breeding sites
using their extensive
webbing.

Among Caribbean Costa Rican frogs,
Craugastor megacephalus stands
up for its massive head and cranial
ossification. This terrestrial frog
rarely calls.

Bolitoglossa striatula, one of the most common tropical salamanders, with a beautiful pattern and extensively webbed hands and feet, they move at night slowly through bushes, searching for small insects.



The night lizard *Lepidophyma flavimaculatum* Duméril, 1851 is outstanding in many ways. This is a parthenogenetic species, meaning that all individuals are females. On the other hand, they are the only lizards, along with most geckos, without mobile eyelids, so they use their tongue to clean the eyelids.



Costa Rica has four major bioregions. The most important geographic feature is the central Mountain Chain of Talamanca plus the Volcanic cordillera that divides the country into two main sides; the Caribbean versant, rainforest facing NE towards the Atlantic or Caribbean Sea; the Pacific versant, also divided into the NW, mostly dry tropical forest, and the SW rainforests. In the highlands of the aforementioned mountains, many endemics thrive. Although, there are many species that are widespread and can be found at both sides of the cordilleras.

To talk about the herptile diversity of Costa Rica could take too long, and I intend to do it in a series of articles, mentioning

the most interesting species of each natural region. This present article is devoted to the Caribbean versant of the country.

On that side of Costa Rica many species are widespread, while others are micro-endemics, depending on the characteristics of the habitat and the altitude. Some virgin forests are found on the NE side of the Braulio Carrillo National park, home of *Hyalinobatrachium dianae* Kubicki, Salazar & Puschendorf, 2015, a spectacular recently described glassfrog; the crowned treefrog, *Tripion spinosus* (Steindachner, 1874) one of the most striking species of frogs in the country, and the impressive treefrog *Ecnomiohyla sukia* Savage & Kubicki, 2010 or salamanders like *Bolitoglossa striatula*



Decorated anole, *Dactyloa insignis*, is the largest of the anoles in the country, reaching almost half a meter in the largest males.

Herping group admiring an "oropel" *Bothriechis nigroadspersus*.

*CRWild (www.crwild.com) organizes expeditions to search all these amazing species and more, with unique opportunities to film or photograph them. All pictures used for this article come from CRwild Herping expeditions.



Caribbean central American populations of Green iguanas are now considered *Iguana rhinolopha*. Here sharing a spot with a male *Basiliscus plumifrons*, also showing the differences in size.



Another interesting sight is to see turtles basking like this *Rhinoclemmys funerea*, in some large Caribbean rivers.



(Noble, 1918) or the spectacular *Oedipina carablanca* Brame, 1968.

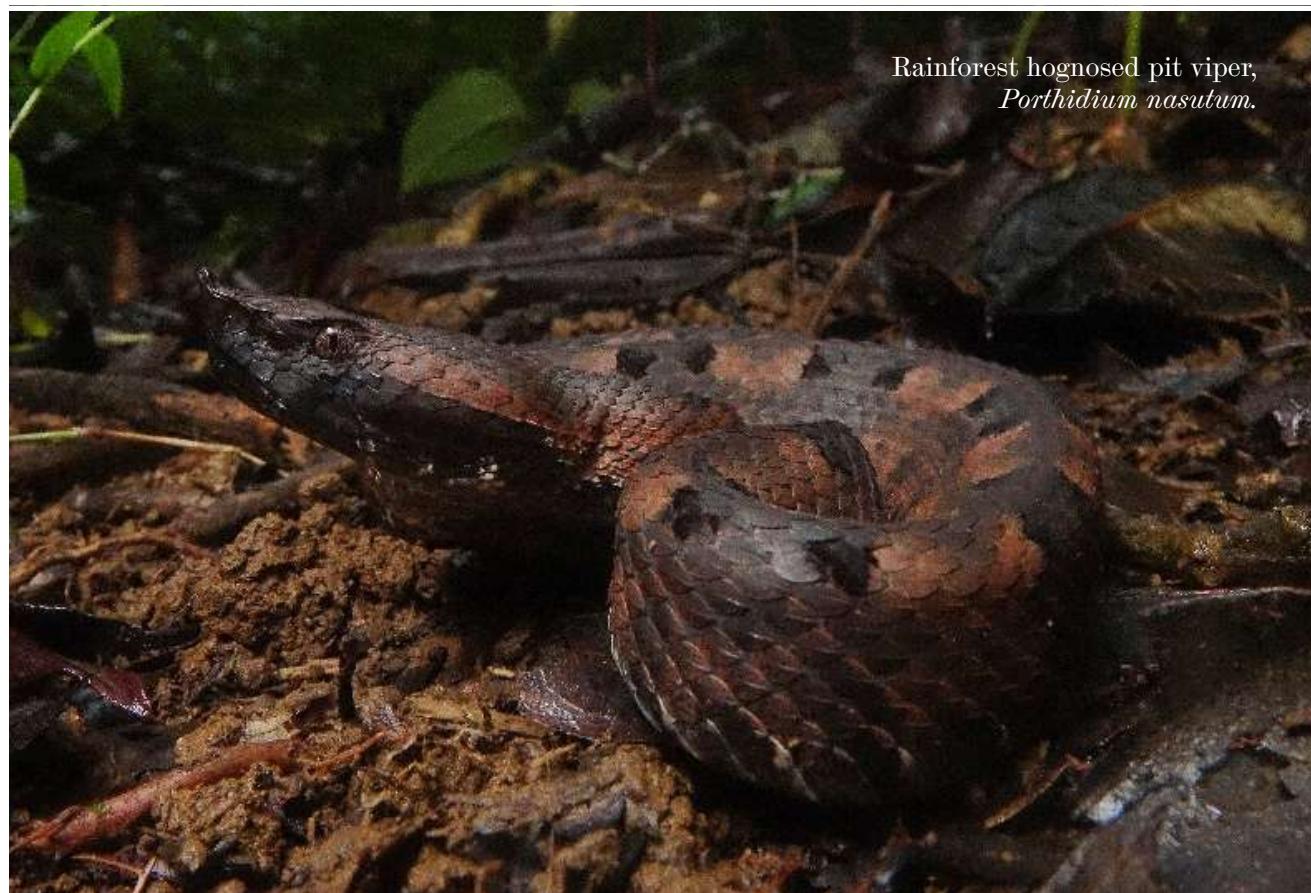
Some beautiful and relatively common snakes include the ringed glasstail (*Pliocercus euryzonus* Cope, 1862), the false tree coral (*Rhinobothryum bovallii* Andersson, 1916), the tiger rat snake (*Spilotes pullatus* Linnaeus, 1758) and appealing snail eaters like *Dipsas articulata* (Cope, 1868) and *Sibon lamari* Solórzano, 2001. Rare vipers are also found here, like *Atropoides picadoi* (Dunn, 1939) and *Lachesis stenophrys* Cope, 1875; lizards as spectacular as the Decorated giant canopy anole (*Dactyloa insignis*, Cope, 1871); crocodiles (*Crocodylus acutus* Cuvier 1807) and dark caimans (*Caiman fuscus* Cope, 1868).

Other species are more focused in the central Caribbean plains or uplands, frogs like *Agalychnis spurrelli* Boulenger, 1913, *A. lemur* (Boulenger, 1882), *Sachatamia ilex* (Savage, 1967), *Craugastor megacephalus* (Cope, 1875) or *Pristimantis altae* (Dunn,

1942); lizards like the emerald basilisk (*Basiliscus plumifrons* Cope, 1875), the galliwasps (*Diploglossus monotropis* Kuhl, 1820), the great Iguana (*Iguana rhinolopha* Duméril & Bibron, 1837) or snakes like *Sibon argus* (Cope, 1875), *Oxybelis brevirostris* (Cope, 1861) or *Porthidium nasutum* (Bocourt, 1868); or the Mosquitia coral snake *Micrurus mosquitensis* Schmidt, 1933; and finally, the most appealing of turtles *Rhinoclemmys annulata* (Gray, 1860), *R. funerea* (Cope, 1875) and *Kinosternon (Cryptochelys) angustipons* Legler, 1965 inhabit the Caribbean swamps.

The southern Caribbean is also spectacular for having a huge extension of lowland and upland rainforest with a vast diversity of species, but also with cloud forests and mountain forests still unexplored. Some of the most peculiar species we can find in the region are the frogs *Pristimantis gaigei* (Dunn, 1931),

Rainforest hognosed pit viper,
Porthidium nasutum.



Oxyrhopus petolarius is a beautiful and widespread species inhabiting all kind of rainforest in the Neotropics. Here a representative of Caribbean Costa Rica.



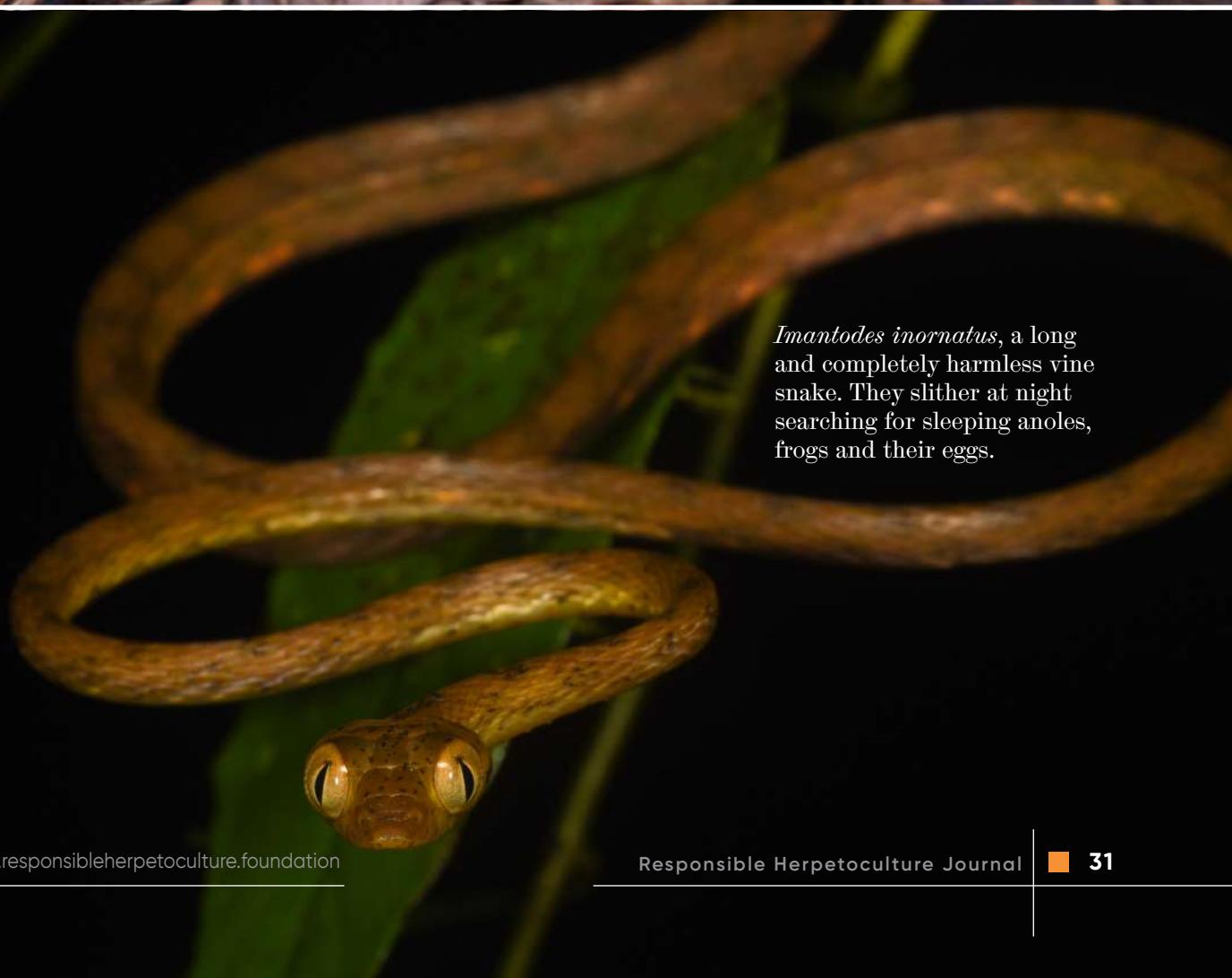
A snail eater, quite rare and only present in a few spots in the region, is *Sibon argus*.



Another spectacular lizard is the terrestrial galliwasp, *Diploglossus monotropis*, quite rare or difficult to see. They are fossorial and inhabit deep holes in the forest, appearing sometimes at night.



Imantodes inornatus, a long and completely harmless vine snake. They slither at night searching for sleeping anoles, frogs and their eggs.





Cruziohyla sylviae



The most iconic species in Costa Rica is probably the red eyed treefrog *Agalychnis callidryas*, present and abundant at almost all lowland localities of the Caribbean versant with this particular and spectacular colorful morph.



The spectacular crowned treefrog, *Triprion spinosus*, is a large arboreal frog with a spiny protection on the head against snakes. It calls from shrubs and low trees and uses tree holes to guard their eggs.

A relatively common but absolutely astonishing jewel of the Caribbean Costa Rican nights is the ghost glassfrog *Sachatamia ilex*, with probably the most spectacular eyes in the frog world.





One of the most unexpected and at the same time, glorious species to find is the last centrolenid described in the country, and endemic from the premontane forests, *Hyalinobatrachium dianae*. It is often called the Kermit frog because its evident similarity with the famous muppet. This male is guarding an egg clutch over a small stream.



Masked tree frog, *Smilisca phaeota*, is a common frog in all the country, but only in some Caribbean populations they can show some amount of blue.



Another of the typical but iconic snakes is the snail-eater *Dipsas articulata*, moving slowly at night in search of slugs and snails.



an active imitator of poison dart frogs of the genus *Phylllobates*, like the sympatric *P. lugubris*; or another very typic poison frog, *Oophaga pumilio* (Schmidt, 1857), in its "bribri" variant (burgundy color). Some snakes are quite possible to observe in the southern Caribbean, especially the vast array of colorations in *Bothriechis nigroadspersus*

(Steindachner, 1870), with the yellow ones (oropel) being most common.

Other species are widespread along the Caribbean side (and some even also in the Pacific side). Frogs as the poster red eyed treefrog (*Agalychnis callidryas* Cope, 1862) or the tiger monkey frog (*Cruziohyla sylviae* Gray, 2018); lizards as the helmeted iguana



Picado's pit viper, *Atropoides picadoi*. This thick viper is almost endemic to Costa Rica, where it inhabits cloud forests and upland areas in the Caribbean versant.



The Central American bushmaster, *Lachesis stenophrys*, is the queen of the Caribbean rainforest. Very rare to see, but always present. Normally, they hide inside large burrows during the day and at night can be outside waiting for rodents. It is a real pleasure and honor to see one in the wild.



Mosquito coral snake, *Micrurus mosquitensis*, one of the four species of corals in this region. Quite common, active at night, they search actively for caecilians and other snakes.



Oedipina carablanca, is a very rare and particularly attractive salamander species, living in the leaf litter of the Caribbean rainforests.



Another little viper to found in this region is the little destructor (meaning of the genus *Porthidium*) rainforest hognosed pit viper, *Porthidium nasutum*. It is often seen coiled at night waiting for small frogs and lizards.



In the Caribbean lowlands of Costa Rica, a slender and highly arboreal boa slithers at night, the annulated or ringed treeboa, *Corallus annulatus*; they are easily angry and prone to bite.

(*Corytophanes cristatus* Merrem, 1820), the yellow-headed gecko *Gonatodes a. fuscus* (Hallowell, 1855), the calico or banded snake *Oxyrhopus petolarius* (Linnaeus, 1758), the blunt-headed thin snakes *Imantodes inornatus* (Boulenger, 1896) and *I. cenchoa* (Linnaeus, 1758) or the tree boa *Corallus annulatus* (Cope, 1875) and the emperor boa (*Boa imperator* Daudin, 1803). Another snake that is quite abundant and widespread is the infamous terciopelo *Bothrops asper* (Garman, 1883).

Costa Rica, with such diversity in a very small land mass, is one of the meccas for herping (as well as for birding and general wildlife expeditions), as it has connections with most countries in the

world, it has a great infrastructure of lodging, and many English-speaking well-trained guides. There are some hotspots that can surpass the 100 species to be observed in a week. As you see, if you look for an unforgettable herping adventure, or you really are into finding a great diversity of herptiles, Costa Rica must be in your top destinies.

CRWild (www.crwild.com) is a Costa Rican and American company offering the most incredible tailor-made expeditions for travelers, photographers, families or groups, in order to fit in your necessities and targets of interest.

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