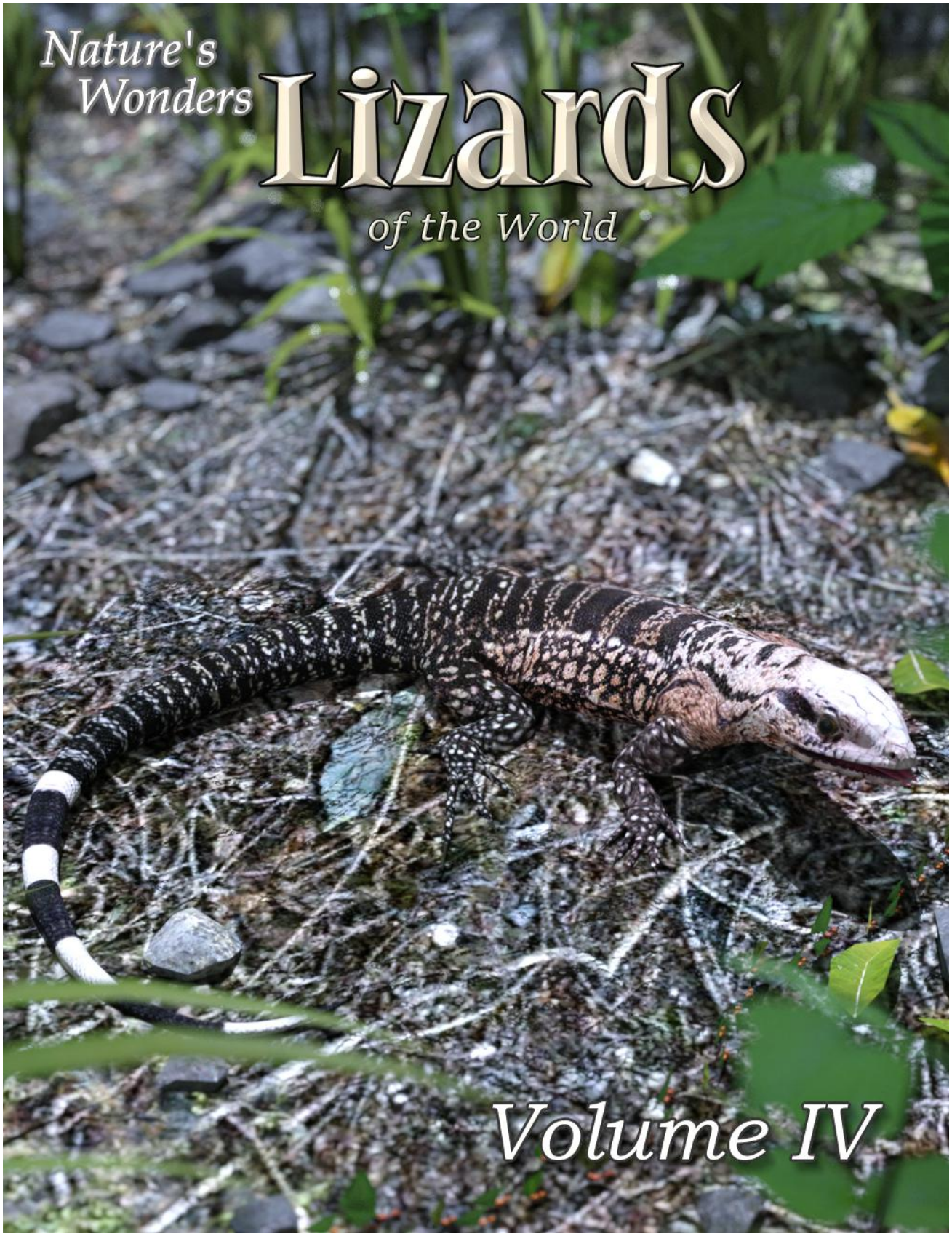

3D model set by Ken Gilliland

Nature's Wonders

Lizards of the World

Volume IV

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Introduction

Lizards are a widespread group of reptiles with over 6,000 species. They are found on all continents, with the exception of Antarctica. Lizards differ from snakes in that most have feet and exterior ears. There are four infraorders in the lizard family (*Lacertilia*); Iguanas and Chamelons *(Iguania),* Geckos and Snake Lizards *(Gekkota)*, Old World arboreal lizards *(Amphisbaenia)* and Skinks, Anguimorphs, and Venomous Lizards *(Autarchoglossa).*

Vision, including color vision, is particularly well developed in most lizards, and most communicate with body language or bright colors on their bodies, as well as with pheromones. Lizards are the most diverse species among extant non-avian reptiles. They can range from several centimeters in length (chameleons and geckos) to nearly three meters (Komodo dragon).

Many lizard species (including geckos, skinks, and others) are capable of shedding part of their tails through a process called “autotomy”. This is an example of the “*pars pro toto”* principle which means sacrificing "a part for the whole". This tactic is employed by lizards to allow them to escape when a predator captures them by the tail. Lizard tails are often a different and dramatically more vivid color than the rest of the body so as to encourage potential predators to strike for the tail first. The detached tail writhes and wiggles, creating a deceptive sense of continued struggle, distracting the predator's attention from the fleeing prey animal.

The lizard will partially regenerate its lost tail over a period of several weeks.

Lizards are predominantly insectivorous, but some eat fruit, or vegetables. The crested gecko can feed entirely on fruit.

Most lizard species are harmless to humans. Only the largest lizard species, the Komodo dragon, has been known to stalk, attack, and, on occasion, kill humans. The venoms of the Gila monster and beaded lizard are not usually deadly, but they can inflict extremely painful bites due to powerful jaws. However the chief impact lizards have on humans is positive, as they are significant predators of pest species and numerous species of lizards are also prominent in the pet trade.

In some cultures lizard symbolism plays an important, though rarely predominant role:

- In Aboriginal Australia, the Lizard Tarrotarro is considered a cultural hero.
- The Moche people of ancient Peru worshiped animals and often depicted lizards in their art.
- According to a popular legend in Maharashtra, in the Battle of Sinhagad, domesticated Indian monitor lizards, with ropes attached, were used to scale the walls of the Sinhagad fort; with the aide of the ropes, men were then able to climb the fort walls.

Overview and Use

This set uses a common model to recreate digitally the lizard species included in this volume. Each species uses specific morphs from the generic model to single-out its unique features.

Creating a Lizard using Poser

1. For this example, we'll create the Rainbow Whiptail.
2. Load Poser, select the FIGURES library and go to the Nature's Wonders Reptiles folder.
3. To create a Rainbow Whiptail, use the "Nature's Wonders Lizard" base model.
4. Go to the POSES library, then to the Nature's Wonders Reptiles / Lizards of the World folder and the Firefly or Superfly sub-folder.
5. Select the Rainbow Whiptail (or a Lizard of your choice) and load/apply it to the Lizard base model by clicking the mouse. This species pose contains both the morph and texture settings to turn the generic model into the selected Lizard.

Creating a Lizard using DAZ Studio

1. For this example, we'll create the Rainbow Whiptail.
2. Load DAZ Studio and go to the "Animals" "Nature's Wonders" "Reptiles" folder.
3. To create a Rainbow Whiptail, use the "Nature's Wonders Lizard" base model.
4. Go to the Nature's Wonders Reptiles / Lizards of the World folder and select the sub-folder of which renderer you want to use, 3Delight or Iray.
5. Select the Rainbow Whiptail (or a Lizard of your choice) and load/apply it to the Lizard base model by clicking the mouse. This species pose contains both the morph and texture settings to turn the generic model into the selected Lizard.

Using the Lizard Tail

The Lizard Tail model is used to represent a behavior common in many lizard species in which they drop their tails to confuse predators. The tail model should be used in conjunction with the "LostTail" morph for the Lizard Base Model. See instructions below:

1. Load the Lizard Base and Lizard Tail Models.
2. Apply the specific Lizard species you want to use to both the Lizard Base and the Lizard Tail Model.
3. Apply the "LostTail1" preset to the Lizard Base Model. This will automatically set the "LostTail" morph to "1" and load the Lost Tail Material.

4. Apply the "LostTail2" preset to the Lizard Tail Model to apply the Lost Tail Material.

In cases where you might want to return the Lizard to its original state (before the tail loss), simply reapply the lizard species to the model. **Note:** The Lost Tail morph is not supported in Poser 9 or earlier versions.

Inflating the Anole's Throat

Male Carolina Anoles inflate their throats in mating displays. The control for inflating the throat is found in **Creation Controls** under the **General Shaping** folder. Use the **ExpandThroatSac** morph.

Using the Poses

The poses were designed for the default model. Since different individual species may use torso, neck, leg and tail scaling, it may alter the expected ground level of the species model. Some adjusting may be necessary (e.g. the "ytran" dial may need to be used to raise or lower the model).

Poser Camera Tips

The Yellow-headed Gecko is a very, very small lizard. In order to focus a camera on him, you'll need to get the camera very close. It's best to change the **hither** setting on the Camera to "0".

Also, in some versions of Poser, small characters render darker with square shadows. The easiest work-around is to place a normal sized object off camera, which corrects this issue

Giant (or Black and White) Tegu *Salvator merianae*

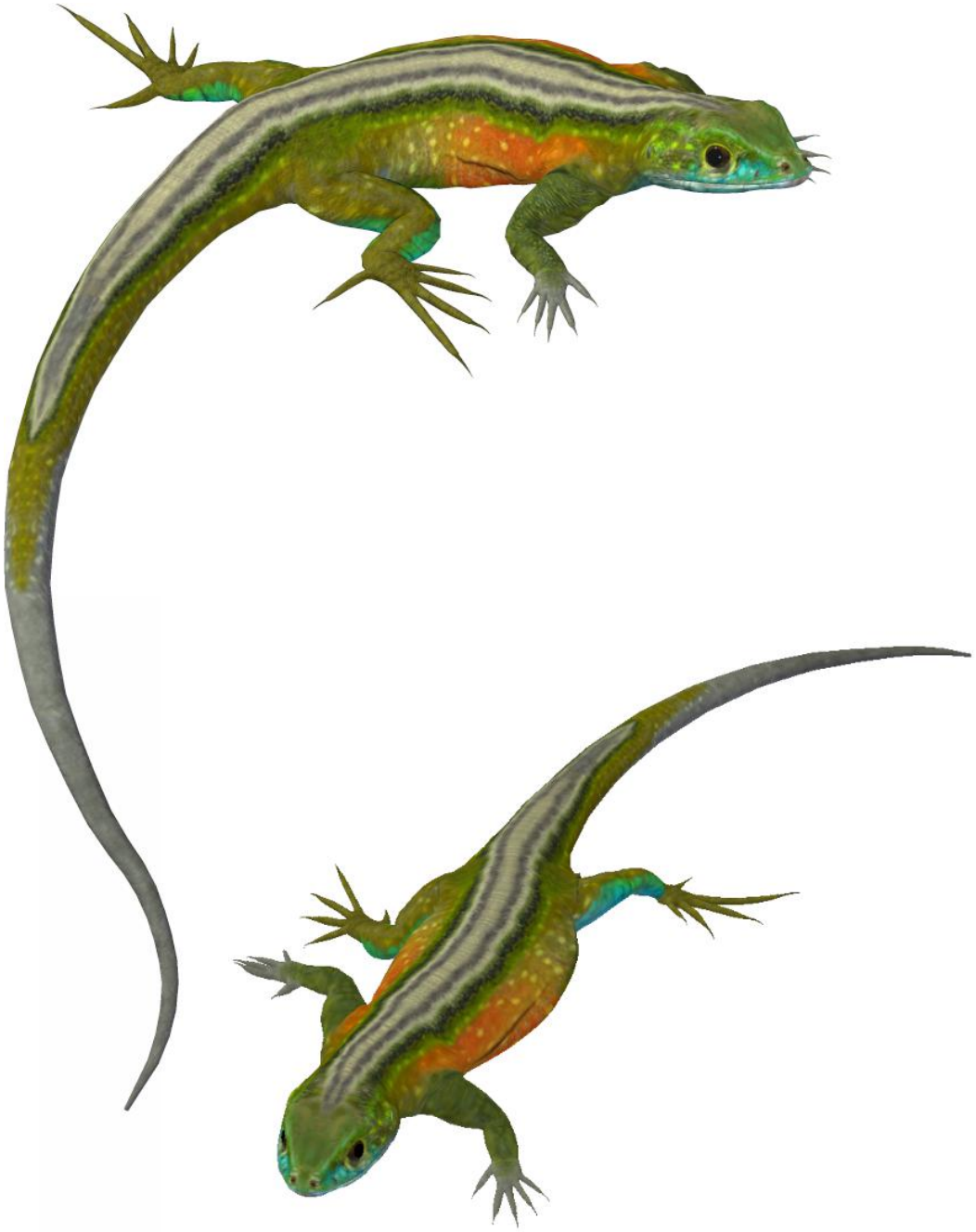
This lizard is found in dry, open regions of Brazil (Amazonas, Rio Grande do Sul, Goias, Minas Gerais, Espírito Santo, Ceará, Bahia, Rio de Janeiro, Sergipe, Piauí, São Paulo, Rio Grande do Norte, Pernambuco, Paraíba), Uruguay, Bolivia (Santa Cruz), Paraguay, Argentina (Formosa, Corrientes) USA (introduced to Florida). Adult males are much larger than the females and can reach 3 ft (92 cm) in length at maturity. It can reach 55 inches (140 cm) in length.

Tegus have unusually high intelligence and can also be house-broken. Like other reptiles, tegus go into brumation (a form of hibernation) in autumn when the temperature drops. They exhibit a high level of activity during their wakeful period of the year.

Salvator merianae has recently been shown to be one of the few partially warm-blooded lizards, having a temperature up to 10 °C (18 °F) higher than the ambient temperature at night time.

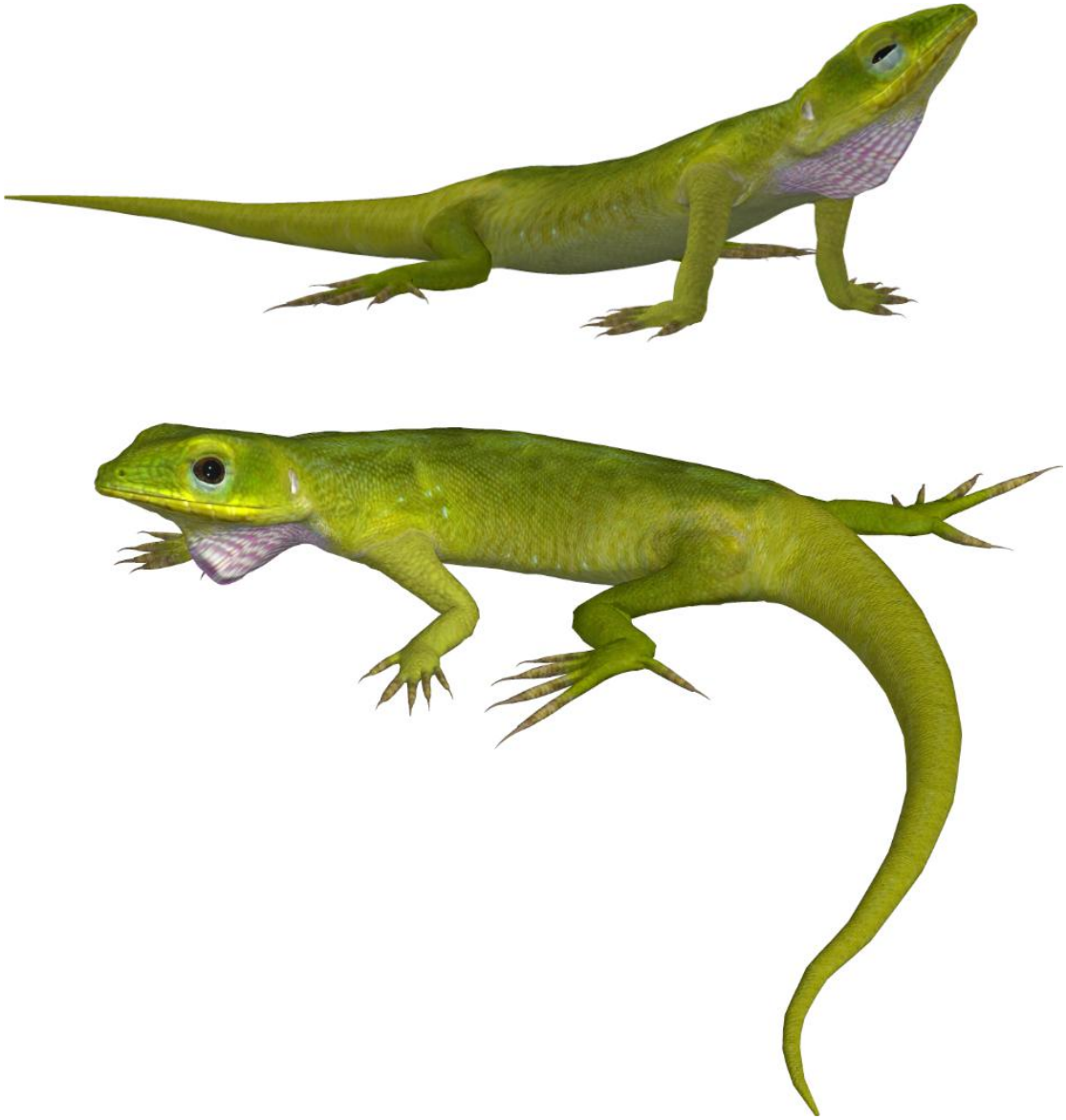
Rainbow Whiptail *Cnemidophorus lemniscatus*

This species of lizard found in Central America, the Caribbean, and northern South America. It has also been introduced in Florida and has established populations there. A rainbow whiptail grows up to approximately 12 inches (30.5 cm).



Carolina Anole *Anolis carolinensis*

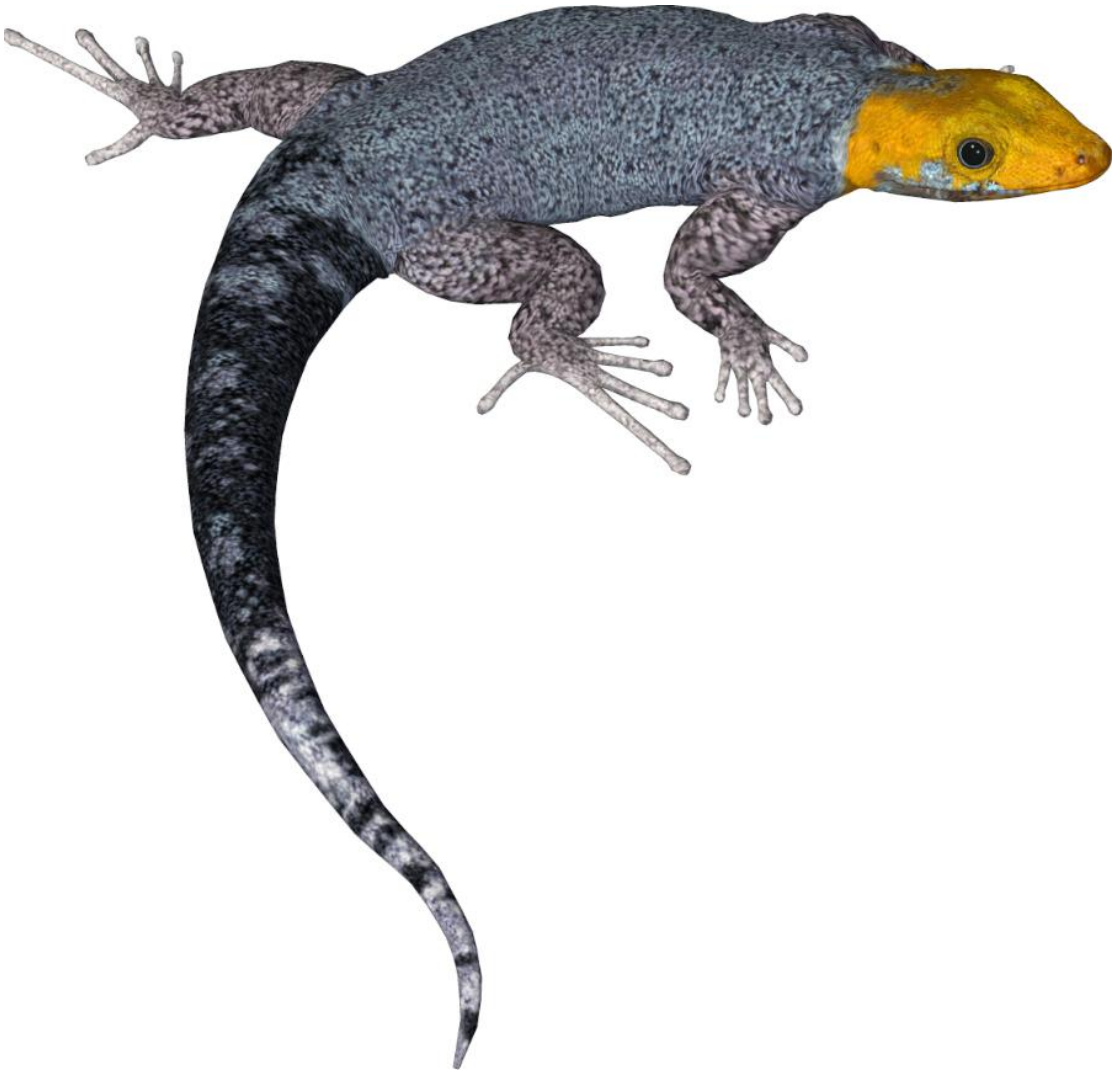
This arboreal anole lizard native to the southeastern United States (west to Texas) and introduced elsewhere. It is also sometimes referred to as the American chameleon due to its ability to change color from several brown hues to bright green, and its somewhat similar appearance and diet preferences. However it is not a true chameleon and the nickname is misleading although it can camouflage. Adult males are usually 4.9–8.0 inches (12.5–20.3 cm) long,



with about 60-70% of which is made up of its tail, with a body length up to 3 inches (7.5 cm). They exhibit sexual dimorphism, the males being fifteen percent larger. The male dewlap (throat fan) is three times the size of the female's and bright red, whereas that of the female is lighter in color, ranging from white to pale pink.

Yellow-headed Gecko *Gonatodes albogularis*

This species of gecko found in warm parts of Central and South America, Cuba, Hispaniola, Jamaica and as an introduced species, in Florida. It can grow up to between 2.7–3.5 inches (6.9–9.0 cm). Males have yellowish heads and blue-blue bodies unlike the female yellow-headed geckos which have white-gray heads and bodies. Yellow-headed geckos feed on insects. They are mainly diurnal.



Mexican Alligator Lizard *Abronia graminea*

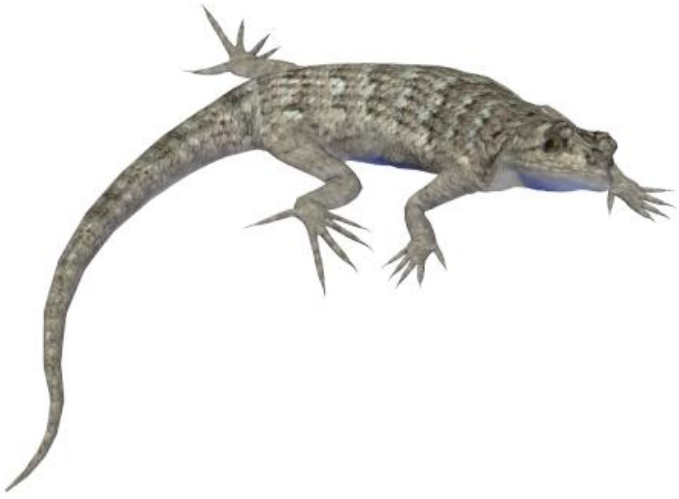
This species is endemic to the highlands of the states of Veracruz and adjacent Puebla, Mexico. It is considered to be moderately common and is regularly recorded, but its abundance is decreasing and considered "Endangered". The species is threatened by illegal collection for the pet trade, deforestation and degradation of habitat, largely through the conversion of land to agricultural use. These lizards inhabit bromeliads in the canopy of montane pine-oak and cloud forest. It seems unlikely that this species can be found in degraded habitat. The coloration can be quite variable, from green to brownish on dorsal side with a lighter under-body, usually a creamy color. It is 6.3 inches (16 cm) from head to tail.

Species Accuracy and Reference Materials

The author-artist has tried to make these species as accurate to their real life counterparts as possible. Lizards of the same species vary considerably, as do all other animals in nature. These Lizards were created using the correct field markings and the most common similarities.

With the use of one generic model to create dozens of unique lizard species, some give and take is bound to occur. In addition, 3D-models have many technical challenges, which make exact representations difficult, if not impossible. It's best to think of these Lizards represented as resembling the particular species, and they may not, in some cases, be 100% scientifically accurate.

The model and morphs were created using Luxology's Modo. The texture maps were created in Corel's Painter. The model was rigged and materials were created in Smith-Micro's Poser and DAZ's DAZ Studio.

Internet Sources:

- **Wikipedia** (http://www.wikipedia.com)
- **San Diego Zoo** (http://animals.sandiegozoo.org/animals/lizard)