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SNAKES & LIZARDS: THE SUMMER OF SLITHER

The California Academy of Sciences welcomes more than 60 new legged and legless lizards from May 7 – September 5, 2011

SAN FRANCISCO (December 2, 2010) — Home to more than 38,000 live animals from around the world, San Francisco's California Academy of Sciences is already hopping, crawling, climbing and slithering with dozens of lizards and snakes from around the world. But beginning May 7, 2011, squamates (the group that includes both legged and legless lizards, including snakes) will enjoy an even larger share of the spotlight at the museum—over 60 new scaled reptiles will take up residence at the Academy this summer as part of the museum's newest exhibit, ***Snakes & Lizards: The Summer of Slither***. Showcasing a variety of amazing squamate adaptations, including projectile tongues, deadly venom, remarkable camouflage, and sometimes surprising modes of locomotion, the exhibit will run through September 5, 2011.

"Snakes and lizards are some of the most successful vertebrates on Earth," says Dr. Chris Andrews, Chief of Public Engagement at the California Academy of Sciences and lifelong snake aficionado. "They have survived for over 200 million years, diversifying to occupy important biological niches on every continent except Antarctica—they can even be found inside the Arctic Circle. Along the way, they have evolved a number of remarkable survival strategies and have become crucial cogs in the wheels of their ecosystems. These animals have a tremendous amount to teach us about the evolutionary history and sustainability of life on Earth."

Over 300 Feet of Snake…

Prepare to be charmed—during the ***Snakes & Lizards*** exhibit, the California Academy of Sciences will be filled with exotic snakes from around the world that boast a cumulative length of over 300 feet. That's enough footage to stretch the entire length of a football field. The two largest snakes in the building, reticulated pythons that measure 15 feet and 20 feet long, will be stationed at the ground-floor entrance to the exhibit, welcoming visitors into the remarkable world of scaled reptiles. One of these pythons, a bright yellow beauty named Lemondrop, is an albino—he lacks the dark pigments that normally help pythons blend into the background while draped across tree branches. Lemondrop would

have a hard time sneaking up on prey in the wild, but he stays well fed with the help of Academy biologists.

It's all relative…

Upon entering the exhibit, guests will explore the evolutionary relationships between lizards, snakes, and the rest of life on Earth. With nearly 8,000 known species in their ranks, the squamates are more diverse than mammals and have evolved to fill a wide range of niches, but they all share a few common features, including scales. (The word "squamate" comes from the Latin *squama*, meaning "scale.") Another adaptation that sets squamates apart from other reptiles is a highly specialized hinge in their jaw. Rather than hinging on a single point like the jaws of their primitive ancestors, the flexible jaws of squamates hinge from multiple points to allow for greater manipulation of prey and a faster, more powerful bite. This evolutionary marvel allows a gecko to efficiently chomp insects and a python to swallow a pig whole. While scientists have determined much of the squamate family tree, they still aren't entirely sure where snakes fit into the picture. They know that snakes are simply lizards that lost their legs (a strategy for squeezing into small burrows and other tight spaces), but there is still debate about when and where this first happened. Are snakes most closely related to gila monsters and their relatives, or skinks and their relatives? More research is needed to answer these questions.

Sight Hounds vs. Nose Hounds

Throughout the exhibit, visitors will learn about the diverse array of adaptations that have made squamates such a successful group, meeting live animals along the way that exemplify these traits. In order to communicate, hunt, and find a mate, some squamates rely primarily on their vision, while others turn to their sense of smell. Sight is supreme for the iguanas and their relatives, a group of about 1,400 species that some experts call the "sight hounds" of the squamate world. Like humans, these animals rely mostly on vision, not smell, to find their dinners and their mates—and to figure out what other members of their species are telling them. Other than the occasional hiss, squamates tend to be silent, but the sight hounds can definitely communicate. For these animals, movement and color change are a kind of language. Lashing tails or hisses can mean "Back off!" as can head bobs and push-ups. A change in skin color may mean "I'm asleep" or "I'm looking for a mate." Chameleons—which contrary to popular belief do not change color as a camouflage tactic, but rather to send messages to one another—are among the most talented color communicators. For other squamates, including monitors, skinks and snakes, the world is alive with chemical cues. These "nose hounds" use their long, forked tongues as part of an amazing chemoreceptive system, collecting odor molecules and delivering them to special

sense organs in the roof of the mouth. They use their tongues for everything from detecting the location of their prey to finding mates.

Real Monsters and Dragons

Think monsters and dragons are just the stuff of fairytales? Think again. ***Snakes & Lizards*** features two fascinating animals that take their name from these mythical beasts—the gila monster and the eastern water dragon. One of the world's only venomous lizards, the gila monster delivers a potent toxin through grooves in its lower teeth. While this venom causes excruciating pain and dizziness to the recipients of a gila monster bite, it has also improved many human lives—a peptide in the venom is used to treat type-2 diabetes and has shown great potential as a treatment for Alzheimer's disease. Unlike their namesakes, eastern water dragons can't fly, but they are excellent swimmers. These lizards dive into the water when disturbed and can stay submerged for up to half an hour.

A Fossil Record

In addition to over 60 live animals, the exhibit also features a variety of fossil specimens and fossil casts. Among the highlights is a fossil cast of *Megalania*, the largest-known terrestrial squamate, which attained lengths up to 9.5 meters (30 feet). This ancient relative of today's monitor lizards lived in
Australia during the Pleistocene (from 1.6 million to 40,000 years ago).

Touching Moments

Snakes & Lizards also offers numerous interactive stations, inviting museum-goers to listen to recorded squamate sounds, test their knowledge about these scaled reptiles, explore the inner workings of a rattlesnake on the hunt, and view videos of amazing squamate adaptations. An activity center for children encourages youngsters to engage in a variety of hands-on activities, including matching lizards to their habitats, assembling squamate skeletons, touching skin casts, piecing together puzzles, and playing science-related games. Additionally, special programs throughout the day will offer visitors the chance to touch live snakes and lizards and talk to Academy biologists about what it takes to care for these creatures.

Exhibition Organization

Snakes & Lizards: The Summer of Slither includes both new exhibit elements designed by the California Academy of Sciences and the traveling exhibit, ***Lizards & Snakes: Alive!***, which was organized by the

American Museum of Natural History, New York (www.amnh.org), in collaboration with Fernbank Museum of Natural History, Atlanta, and the San Diego Natural History Museum, with appreciation to Clyde Peeling's Reptiland.

The California Academy of Sciences is home to Steinhart Aquarium, Morrison Planetarium, Kimball Natural History Museum, and world-class research and education programs—all under one living roof. Admission to the Academy is: $29.95 for adults; $24.95 for youth ages 12 to 17, Seniors ages 65+ and students with valid ID; $19.95 for children ages 4 to 11; and free for children ages 3 and younger. Admission fees include all exhibits and shows. Hours are 9:30 am - 5:00 pm Monday - Saturday, and 11:00 am - 5:00 pm on Sunday. During peak periods, including some holiday weekends, an admission surcharge and extended hours may apply. Visit www.calacademy.org or call (415) 379-8000 for more.

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