

## REPTILE & AMPHIBIAN ECOLOGY INTERNATIONAL

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## Rain Frogs and a Slug-Sucking Snake New to Science but Nearly Extinct

Scientists Discover Snake and 30 New Frog Species Already Threatened by Climate Change

QUITO, ECUADOR—A team of American and Ecuadorian scientists working for Reptile & Amphibian Ecology International have discovered a treasure trove of previously undiscovered biodiversity in a rare and dwindling ecosystem in coastal Ecuador. The apparently new species include a blunt-snouted, slug-sucking snake and 30 species of rain frog.

The snake belongs to a small group of serpents that specialize in eating gastropods – snails and slugs – and the closest relative of this intriguing snake is found nearly 350 miles away in Peru. Another snake, a snail-sucker, just discovered by the researchers, was previously found only as close as Panama, more than 600 miles away, and may also be a new species. The snail-sucker was first encountered by a 15-year-old volunteer working with the scientists.

The new frogs have an extraordinary life-cycle. Instead of laying eggs in water which hatch into tadpoles, later to metamorphose into the adult form, they lay eggs in trees. The eggs then hatch out into miniature versions of the adults, some barely larger than a pinhead.

Other animals found on the expedition include a gecko so small that it can perch with ample room to spare on the top of a pencil; three species of lungless salamanders; and a bushmaster, which is the longest viper in the world, yet is rarely recorded, having been hunted almost to extinction in many parts of its range.

A majority of the new species were found in Cerro Pata de Pájaro, a small mountain just a few minutes from the Pacific Ocean and sitting right atop the Equator. Pata de Pájaro is surrounded by a type of rainforest and capped in cloud forest. The extent of cloud forest on the site is only a couple miles wide, yet houses at least 14 of the 30 new species known nowhere else on Earth. "There is obviously a great concern that these species will disappear as soon as, or even before, they are formally described by science", said expedition leader Dr. Paul S. Hamilton of RAEI.

Indeed, sites like Pata de Pájaro are under siege from countless ecological disturbances, from widespread deforestation for cattle grazing to timber harvesting and hunting. Climate change models actually predict that many of these mountaintop cloud forests – along with the animals that depend on them – will disappear altogether from global warming if something is not done to save them. The rain frogs just discovered are particularly susceptible to climate change since they rely on moist trees to lay their eggs which may dry up with temperature increases.

Previous work by the scientists in the area yielded an amazing diversity of reptiles and amphibians, over 140 species in number. Incidentally, the team has found four new species of stick insect (casually known as stick bugs), just from taking photos of these fascinating creatures in the course of research on reptiles and amphibians. "There are countless gaps in our knowledge about the status and distribution of tropical animals; this study just scratches the surface of what we know about this region alone, much less what is happening to global patterns of extinction", said Dr. Hamilton, adding "But to stem the pattern of current extinction rates, we all need to do our part, whether that be driving less, eating less meat, or simply educating ourselves and spreading the word."

"The good news is, the animals are still there and alive, so there is still time to save them from extinction," said Dr. Kerry Kriger, Executive Director of the nonprofit advocacy organization Save the Frogs. "But we need to take action now to make it happen.