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INCREDIBLE FROG HOTEL

HOW RESCUERS SET UP A FROG HOTEL TO SAVE DOZENS OF SPECIES FROM DISEASE

BY RUTH A. MUSGRAVE

THIS NEWLY DISCOVERED SPECIES HAS NOT YET BEEN NAMED.

Looking for frogs and their eggs in the Panamanian rain forest, biologist Edgardo Griffith carefully makes his way upstream. An alarming change worries him. Just a few miles away, vibrantly colored frogs decorate rocks and plants. Their chorus of chirping and croaking fills the forest. Here he sees no flashes of color. The only sound is the rhythm of rushing water. A deadly threat has silenced the amphibians.

For decades, habitat loss, pollution, and the illegal pet trade have threatened frogs. Now a new, silent killer has moved in for the kill. A fungus called chytrid is wiping out almost all the amphibians in its path.

A frog has a better chance of dodging trucks on a highway than avoiding chytrid. That's because it spreads through rivers and streams—favored amphibian hangouts. By attacking the amphibian's delicate skin, the fungus suffocates its victim. Scientists estimate that when chytrid invades an area, 80 percent of the amphibians become infected.

RESCUED FROGS STAY AT THE "FROG HOTEL," WHERE CARE IS FIRST CLASS.

BIOLOGISTS COLLECT THREATENED FROGS.

GLOVED HANDS KEEP FUNGUS OFF A NEWLY CLEANED FROG.

THE GOAL IS TO COLLECT AND PROTECT AS MANY SPECIES AS POSSIBLE.


CORONATED TREE FROG


LEMUR LEAF FROG


GREEN-AND-BLACK POISON FROG (BLUE VARIANT)


PANAMANIAN GOLDEN FROG

The good news is that chytrid is easily cured. A simple soak in an antifungal bath—ten minutes a day for ten days—clears it right up. Where do scientists treat hundreds of sick frogs? In a frog hotel, of course!

ONE HOP AHEAD OF EXTINCTION

As chytrid cut a path of destruction—and extinction—through Central America, experts feared that Panama's 200 amphibian species would be devastated. To save them, scientists from United States zoos enlisted Griffith's help to create the El Valle Amphibian Conservation Center at the El Nispero Zoo in El Valle de Antón. "The goal is to collect and protect as many Panamanian species as possible," says Bill Konstant of the Houston Zoo in Texas, which helped launch this rescue mission.

Unfortunately, the fungus swept through Panama faster than expected. When biologists realized it was taking months rather than years to spread, they raced to save


LA LOMA ROBBER FROG


TABASARA RAIN FROG

HORNED MARSUPIAL FROGS

as many species as possible.

Scientists had rescued nearly 300 frogs but had no place to keep them. The zoo facilities weren't ready yet. That's when a local hotel opened its doors. With biologists at their beck and call, the frogs enjoyed first-class accommodations that included maid and room service. Keepers cleaned aquariums daily and replaced plants every other day. New arrivals relaxed in the special rejuvenating baths to get rid of the fungus. Meals were deliciously fresh. So fresh, in fact, the food could hop right off a plate. (Frogs eat only live food.) After a full day of caring for the animals, the biologists spent hours searching for grasshoppers, crickets, termites, ants, and katydids to feed them.

DIGGIN' THE NEW PAD

The rescued frogs couldn't be released because the fungus remained in the forests and the antifungal bath provided no immunity. So the frogs finally moved from the hotel into their new home at the zoo. They still receive VIP treatment, but it's easier for the keepers. The state-of-the-art facility now has about 500 residents. Special aquariums and filtration systems keep the animals safe from the fungus, so daily cleaning isn't required. Instead of nightly grasshopper hunts, keepers raise insects. Now, ready-to-eat crickets, fruit flies, and mealworms are within reach at dinnertime.

BABIES MAKE THE FUTURE HOPEFUL

Since the fungus wiped out many of Panama's frog populations, it is vital they breed at the zoo. Enclosures include lush plants, ponds, and accommodations. "As soon as we put the males and females of some species together they started breeding," says Griffith. Though scientists haven't figured out all the details for how to breed all the species, they've already had a number of successes. The endangered lemur leaf frog, for example, is reproducing well.

There are still many challenges. "We've only found female harlequin frogs," says Griffith. Because females stay in the plants, they avoid the fungus. Unfortunately, males spend most of their time in streams. "Males were basically sitting in fungus soup," says Konstant. Biologists are still hopeful they'll find males in unaffected areas of Panama.

MYSTERIOUS SURVIVORS

Some frogs, such as the marine toad and red-eyed tree frog, seem unaffected by the fungus. These species give scientists hope—and raise many questions: Why are these species resistant? Is it possible to breed amphibians immune to chytrid? Is it possible to create a vaccine? The fungus may disappear or slow down on its own, but scientists—and the frogs—can't count on that. Finding natural ways to stop the fungus or protect amphibians in the wild is the priority.

THANKS FOR VISITING, NOW GO HOME!

The ultimate goal is to eventually release the frogs. "Our success isn't just in breeding and caring for them," says Konstant. "It's our hope to be able to return them to the wild to fill the rain forests with their vibrant colors and voices once again."

LA HONDURA ROBBER FROG

LIMOSA HARLEQUIN FROG

Did you know?

There are more than 6,000 species of amphibians. 5,500 of them are frogs and toads.