

# Bio Terror Bible

## EXPOSING THE COMING BIO-TERROR PANDEMIC

**BIOTERRORBIBLE.COM:** In the aftermath of man-made bio-terror generated pandemic, the government and media may attempt to scapegoat monkeys just as they did in the 1994 book [The Hot Zone](#) and the 1995 blockbuster movie entitled [Outbreak](#). Since 9/11, there have been unprecedented reports of monkey [attacks](#), monkey [escapes](#), monkey [thefts](#) and monkey [smuggling](#) which may suggest that the monkey scapegoat option is being primed for prime-time.

**Title:** Monkey Deficit Crimps Laboratories As Scientists Scramble For Alternatives

**Date:** May 14, 2002

**Source:** [UCLA](#)

**Abstract:** Scientists have infected rhesus monkeys with polio, coaxed them into cocaine addiction, shot them into space and cloned them. Researchers like working with them for a simple reason: their great similarity to people.

Now, though, rhesus monkeys have become so scarce and expensive that scientists are forced to look for alternatives. That's a sharp turnaround from decades ago, when the animals were imported from India by the thousands for as little as \$80 apiece. Drug companies came to depend on them to test new products, and their low cost and easy access made them the standard for research that ethically couldn't be done in humans.

These days, rhesus monkeys often cost more than \$5,000 each, with a healthy female commanding anywhere from \$6,000 to \$14,000 per animal. And even researchers who can afford them spend months waiting, as monkey brokers and breeding centers scramble to locate enough animals.

When University of Pittsburgh virologist Michael Murphey-Corb tried to buy 32 rhesus monkeys for an experiment last year, they were so expensive -- as much as \$6,000 each -- she had to scale back her research into an AIDS vaccine. Forced to settle for 24 animals, Dr. Murphey-Corb had to defer investigating whether the vaccine would work as an early treatment for the disease. Fed up with spending a third of her time trying to find rhesus monkeys, Dr. Murphey-Corb says she is switching to a closely related species, the cynomolgus monkey, which costs about half as much as the rhesus and is readily available. "I have to get on with my research," she says.

The FDA doesn't have rules requiring rhesus monkeys to be used for research, but because the rhesus was typically used in past experiments, corporate researchers are reluctant to conduct studies for product approval if their results might be questioned on the basis of what type of animal is used.

In the 1970s, researchers bought as many as 12,000 rhesus monkeys annually from India, the main source for the animals, also known as rhesus macaques or *Macaca mulata*. The export of the monkeys was already controversial and sensitive in India, as Hindus consider them a sacred incarnation of a god. Then, in 1978, India banned the exports after news reports that the U.S. was using them in radiological weapons experiments. The price per monkey jumped from about \$100 to about \$4,000.

"It was just like OPEC cutting off the oil supply," says David Robinson of Battelle Memorial Institute, a nonprofit research and development corporation with headquarters in Columbus, Ohio.

The species became even more coveted in the 1990s, when it became the primate model in AIDS studies. The animals develop a disease much like the human version when infected with HIV. The recent focus on bioterrorism research has further strained the supply.

Before last fall's anthrax outbreak, testing of an anthrax vaccine stalled for two years because federal researchers couldn't get enough rhesus monkeys. Out of urgency, they decided to use Chinese instead of Indian rhesus. But making that switch presents its own problems. Anthrax research done in the 1950s relied on Indian rhesus, and scientists have disagreed about whether the Chinese animals are similar enough to use in new studies.

Programs aimed at breeding more rhesus monkeys for medical research haven't eased the shortage, although eight federally funded primate centers are working to increase the domestic supply. In fiscal year 2000, 57,218 primates were used in research, according to the Department of Agriculture, but no one keeps a comprehensive count of how many rhesus monkeys are actually needed.

At Tulane University, outside New Orleans, about 3,000 rhesus macaques ramble inside 22 half-acre outdoor corrals. Tulane struggles to balance the number of monkeys it keeps for breeding with the number it makes available for research.

Getting rhesus monkeys to reproduce isn't like breeding rabbits. "You can't speed up the production line for an anthrax scare or anything else," says Andrew Lackner, director of the Tulane center. Females give birth once a year, after about five months' gestation. Healthy females usually mate successfully with one of the males in their breeding corral, says Richard Harrison, a Tulane reproductive biologist. But not all males are fertile, and some females resist mating, he says.

A scientific committee at the Pharmaceutical Research and Manufacturers Association, a drug-industry trade group, is discussing what studies are necessary to persuade the Food and Drug Administration that experiments with other primates and even other animals, such as rats, might be applicable to humans. Michael Friedman, PhRMA's chief medical officer for biomedical preparedness and senior vice president at Pharmacia Corp., hopes that the shift of bioterrorism research away from rhesus monkeys whenever possible will help ease the supply crunch for other fields.

Officials at the National Institutes of Health hope a National Academies of Science workshop held in April will prompt researchers to use primates other than the Indian rhesus macaque.

But those who oppose animal experimentation say researchers, in focusing on accumulating enough rhesus macaques for their work, are ignoring the possibility of moving away entirely from such research ([UCLA, 2002](#)).

**Title:** Monkey Feared Extinct Rediscovered In Jungles Of Borneo

**Date:** January 20, 2012

**Source:** [Fox News](#)

**Abstract:** An elusive monkey feared [extinct](#) has shown up in the remote forests of Borneo, posing for the first good pictures of the animal ever taken.

The [mug shots](#) reveal a furry Count Dracula of sorts, with the monkey's black head, face tipped with white whiskers and a pointy collar made of fluffy white fur.

The Miller's grizzled langur, an extremely rare primate that has suffered from [habitat loss](#) over the last 30 years, popped up unexpectedly in the protected Wehea Forest in east Kalimantan, Borneo.

"We knew we had found this primate that some people had speculated was [potentially extinct](#)," said study researcher Stephanie Spehar, a primatologist at the University of Wisconsin Oshkosh. "It was really exciting."

But the animal is still in grave danger, Spehar told LiveScience, and no one knows how many of these langurs are left. The researchers observed only two small groups of them.

### **Vanishing Act**

The shy monkey (*Presbytis hosei canicrus*) was seen in the 1970s in Kutai National Park in Borneo, about 50 miles (80 kilometers) from where the new population lives. But as the years passed, fires and [illegal logging](#) devastated Kutai. By 2008, the Miller's grizzled langur seems to have vanished from the park. A survey that year found just five langurs living on the Sangkulirang Peninsula in East Kalimantan, also about 50 miles (80 km) away from the newly discovered langur habitat. But by 2010, that group of primates had also disappeared.

"At this point, we didn't know if this animal still existed or whether it was still hiding out in little pockets," Spehar said.

Spehar has been working in the Wehea Forest of Borneo for four years, but she'd never seen a Miller's grizzled langur there. Last summer, however, one of her undergraduate students camped out by a mineral lick area for 10 days, a spot where animals come to get nutrients from mineral-rich soil and water. The student, Eric Fell, was conducting his own research project on animals' use of these licks, and was photographing the creatures that dropped by. [[Gallery: Elusive Wildlife Photos](#)]

Upon returning from his stakeout, Fell showed Spehar his photographs. Among them were images of long-tailed, black-headed langurs.

"I knew this was something special," Spehar said. "I knew that it was something that was unexpected and we hadn't seen before."

### **Monkey Reborn**

Spehar, who credits the find to the work of local communities and governments that protect the forest and support her research, showed the photos to another researcher working in the woods, the director of the [conservation organization](#) Ethical Expeditions Brent Loken. The revelation surprised both parties: It turned out that Loken's group had also been staking out a mineral lick 5 miles (8 km) away from Fell's with a motion-triggered camera. They'd captured an image of the same type of [primate](#).

"We realized that we had basically rediscovered this animal," Spehar said. Taxonomists confirmed the find as a Miller's grizzled langur. The researchers reported their find today (Jan. 20) in the American Journal of Primatology.

The simultaneous discovery suggests that there is a decent-size population of the langurs in Wehea, but Spehar cautioned that incredibly little is known about the species. No one knows how wide the langurs' range is, she said, how many there are, or their population density. That lack of knowledge isn't uncommon for many threatened species, according to Loken.

"This monkey represents a lot of species on the planet that we know very little about," Loken told LiveScience. "We don't know how many there are, we don't know where they live, what ecological requirements they need to live, and unless we get some of that information quickly, some of these species could slip into extinction before we know anything about them, or even realize that they're gone."

While Wehea itself is a more than 98,000-acre (40,000-hectare) oasis of protection, it is surrounded by forest used for logging, palm oil plantations and mining — the same sort of human uses that presumably [drove the langurs out](#) of the habitats where they once thrived. Additionally, the forest is only protected by the local community, Loken said, not the central government.

That makes the future of the Miller's grizzled langur very uncertain, Spehar said. She and her colleagues plan to conduct further research into the monkey's range and behavior to understand how best to [save it from extinction](#). Meanwhile, Loken's group and others are working to secure extra protection for the forest.

"What we hope to do is to work with companies and concessions and with local governments to ensure this animal's protection," Spehar said. "That's the only way we will ensure that it doesn't disappear" ([Fox News, 2012](#)).

**Title:** US Research Monkey Importer Facing Cruelty Charges

**Date:** March 26, 2012

**Source:** [Fox News](#)

**Abstract:** A U.S. importer of research monkeys was set to stand trial Monday on cruelty charges after 15 primates died during an international flight.

Robert Matson Conyers, a Florida animal broker, faces 10 counts involving a 2008 plane trip from [Guyana](#). Officials say Conyers was shipping 25 monkeys to a buyer in Bangkok, but the shipment was refused transit in [China](#) and returned to Los Angeles.

The monkeys wound up on a circuitous trip across thousands of miles with stops in Bangkok, Miami and twice in Los Angeles. They suffered from neglect, starvation and hypothermia in transit, authorities say, and 15 eventually died.

Fourteen marmosets, five white-fronted capuchins and six squirrel monkeys were turned back in China over paperwork issues such as irregularities in the shipping documents.

Officials in Los Angeles found 14 of the 25 monkeys packed into crates were dead.

Los Angeles Zoo veterinarians administered emergency care to the survivors, but a capuchin had to be euthanized. The rest are recovering at the San Diego Zoo's Wild Animal Park.

The advocacy group Stop Animal Cruelty Now said the monkeys were dehydrated and resorted to cannibalism during their long journey.

Once the story of the monkeys' flight was reported, monkey imports to Los Angeles were halted.

The advocacy group said the [United States](#) is the largest importer of monkeys coming from the [Philippines](#), [Indonesia](#), Guyana and [Kenya](#). Most are destined for laboratory experiments.

Conyers could face up to six months in jail and a \$20,000 fine if convicted ([Fox News, 2012](#)).