

# She Fell Nearly 2 Miles, and Walked Away

At 17, biologist Juliane Diller was the sole survivor of a plane crash in the Amazon. Fifty years later she still runs Panguana, a research station founded by her parents in Peru.



Juliane Diller recently retired as deputy director of the Bavarian State Collection of Zoology in Munich. “The next thing I knew, I was no longer inside the cabin,” she recalled. “I hadn’t left the plane; the plane had left me.” Credit...Laetitia Vancon for The New York Times

**By Franz Lidz**

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On the morning after Juliane Diller fell to earth, she awoke in the deep jungle of the Peruvian rainforest dazed with incomprehension. Just before noon on the previous day — Christmas Eve, 1971 — Juliane, then 17, and her mother had boarded a flight in Lima bound for Pucallpa, a rough-and-tumble port city along the Ucayali River. Her final destination was Panguana, a biological research station in the belly of the Amazon, where for three years she had lived, on and off, with her mother, Maria, and her father, Hans-Wilhelm Koepcke, both zoologists.

The flight was supposed to last less than an hour. About 25 minutes after takeoff, the plane, an 86-passenger Lockheed L-188A Electra turboprop, flew into a thunderstorm and began to shake. Overhead storage bins popped open, showering passengers and crew with luggage and Christmas presents.

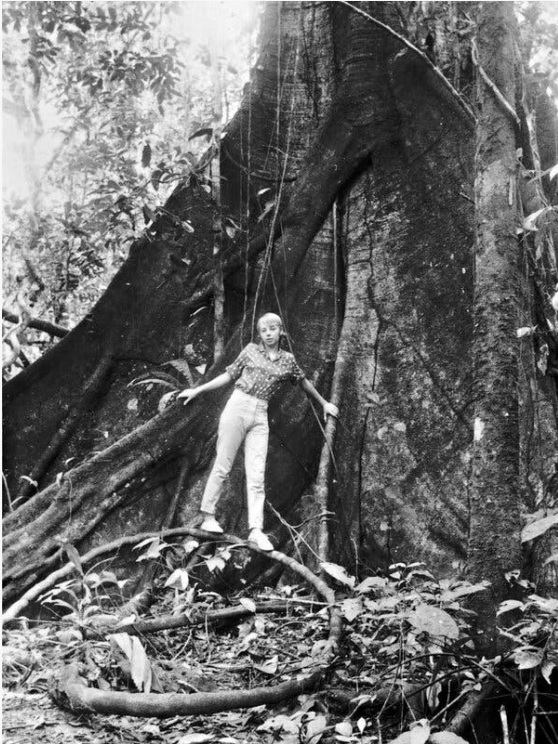
“My mother, who was sitting beside me, said, ‘Hopefully, this goes all right,’ recalled Dr. Diller, who spoke by video from her home outside Munich, where she recently retired as deputy director of the Bavarian State Collection of Zoology. “Though I could sense her nervousness, I managed to stay calm.”

From a window seat in a back row, the teenager watched a bolt of lightning strike the plane’s right wing. She remembers the aircraft nose-diving and her mother saying, evenly, “Now it’s all over.” She remembers people weeping and screaming. And she remembers the thundering silence that followed. The aircraft had broken apart, separating her from everyone else onboard. “The next



thing I knew, I was no longer inside the cabin,” Dr. Diller said. “I was outside, in the open air. I hadn’t left the plane; the plane had left me.”

As she plunged, the three-seat bench into which she was belted spun like the winged seed of a maple tree toward the jungle canopy. “From above, the treetops resembled heads of broccoli,” Dr. Diller recalled. She then blacked out, only to regain consciousness — alone, under the bench, in a torn minidress — on Christmas morning. She had fallen some 10,000 feet, nearly two miles. Her row of seats is thought to have landed in dense foliage, cushioning the impact. Julianne was the sole survivor of the crash.



Julianne Diller in 1972, after the accident.  
Credit...Hans-Wilhelm Koepcke



Dr. Diller’s story in a Peruvian magazine.  
Early, sensational and unflattering portrayals prompted her to avoid media for many years.



An illustration of a tinamou  
by Dr. Diller’s mother, Maria Koepcke.  
Credit...Maria Koepcke



Dr. Koepcke at the ornithological collection  
of the Museum of Natural History in Lima.  
Credit...Hans-Wilhelm Koepcke



Miraculously, her injuries were relatively minor: a broken collarbone, a sprained knee and gashes on her right shoulder and left calf, one eye swollen shut and her field of vision in the other narrowed to a slit. Most unbearable among the discomforts was the disappearance of her eyeglasses — she was nearsighted — and one of her open-back sandals. “I lay there, almost like an embryo for the rest of the day and a whole night, until the next morning,” she wrote in her memoir, “When I Fell From the Sky,” published in Germany in 2011. “I am completely soaked, covered with mud and dirt, for it must have been pouring rain for a day and a night.”

She listened to the calls of birds, the croaks of frogs and the buzzing of insects. “I recognized the sounds of wildlife from Panguana and realized I was in the same jungle and had survived the crash,” Dr. Diller said. “What I experienced was not fear but a boundless feeling of abandonment.” In shock, befogged by a concussion and with only a small bag of candy to sustain her, she soldiered on through the fearsome Amazon: eight-foot speckled caimans, poisonous snakes and spiders, stingless bees that clumped to her face, ever-present swarms of mosquitoes, riverbed stingrays that, when stepped on, instinctively lash out with their barbed, venomous tails.

It was the middle of the wet season, so there was no fruit within reach to pick and no dry kindling with which to make a fire. River water provided what little nourishment Julianne received. For 11 days, despite the staggering humidity and blast-furnace heat, she walked and waded and swam.

## A haven for ants and bats



Lowland rainforest in the Panguana Reserve in Peru. Credit...Konrad Wothe

This year is the 50th anniversary of LANSA Flight 508, the deadliest lightning-strike disaster in aviation history. During the intervening years, Julianne moved to Germany, earned a Ph.D. in biology and became an eminent zoologist. In 1989, she married Erich Diller, an entomologist and an authority on parasitic wasps. Despite an understandable unease about air travel, she has been continually drawn back to Panguana, the remote conservation outpost established by her parents in 1968. “The jungle caught me and saved me,” said Dr. Diller, who hasn’t spoken publicly about the accident in many years. “It was not its fault that I landed there.”

In 1981, she spent 18 months in residence at the station while researching her graduate thesis on diurnal butterflies and her doctoral dissertation on bats. Nineteen years later, after the death of her father, Dr. Diller took over as director of Panguana and primary organizer of international expeditions to the refuge. “On my lonely 11-day hike back to civilization, I made myself a promise,”

Dr. Diller said. “I vowed that if I stayed alive, I would devote my life to a meaningful cause that served nature and humanity.”

That cause would become Panguana, the oldest biological research station in Peru. Starting in the 1970s, Dr. Diller and her father lobbied the government to protect the area from clearing, hunting and colonization. Finally, in 2011, the newly minted Ministry of Environment declared Panguana a private conservation area. To help acquire adjacent plots of land, Dr. Diller enlisted sponsors from abroad. Largely through the largess of Hopfisterei, a bakery chain based in Munich, the property has expanded from its original 445 acres to 4,000.

“Juliane is an outstanding ambassador for how much private philanthropy can achieve,” said Stefan Stolte, an executive board member of Stifterverband, a German nonprofit that promotes education, science and innovation.

Over the past half-century, Panguana has been an engine of scientific discovery. To date, the flora and fauna have provided the fodder for 315 published papers on such exotic topics as the biology of the Neotropical orchid genus *Catasetum* and the protrusile pheromone glands of the luring mantid.

Cleaved by the Yuyapichis River, the preserve is home to more than 500 species of trees (16 of them palms), 160 types of reptiles and amphibians, 100 different kinds of fish, seven varieties of monkey and 380 bird species. Panguana’s name comes from the local word for the undulated tinamou, a species of ground bird common to the Amazon basin. Dr. Diller’s favorite childhood pet was a panguana that she named Polsterchen — or Little Pillow — because of its soft plumage.

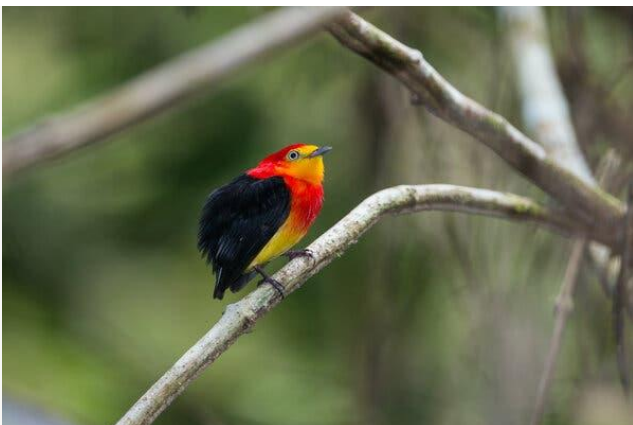
“Panguana offers outstanding conditions for biodiversity researchers, serving both as a home base with excellent infrastructure, and as a starting point into the primary rainforest just a few yards away,” said Andreas Segerer, deputy director of the Bavarian State Collection for Zoology, Munich. “Its extraordinary biodiversity is a ‘Garden of Eden’ for scientists, and a source of yielding successful research projects.”



Black-capped squirrel monkeys, *Saimiri boliviensis*. Credit...Robert Retzko



Nymphalid butterfly, *Agrias sardanapalus*. Credit...Juliane Diller



Band-tailed manakin, *Pipra fasciata*. Credit...Konrad Wothe



Amazonian horned frog, *Ceratophrys cornuta*. Credit...Robert Retzko



Entomologists have cataloged a teeming array of insects on the ground and in the treetops of Panguana, including butterflies (more than 600 species), orchard bees (26 species) and moths (some 15,000). Manfred Verhaagh of the Natural History Museum in Karlsruhe, Germany, identified 520 species of ants. (So much for picnics at Panguana.)

While working on her dissertation, Dr. Diller documented 52 species of bats at the reserve. “We now know of 56,” she said. “By contrast, there are only 27 species in the entire continent of Europe.” The preserve has been colonized by all three species of vampires. Although they seldom attack humans, one dined on Dr. Diller’s big toe. “Vampire bats lap with their tongues, rather than suck,” she said. “After they make a small incision with their teeth, protein in their saliva called Draculin acts as an anticoagulant, which keeps the blood flowing while they feed.”

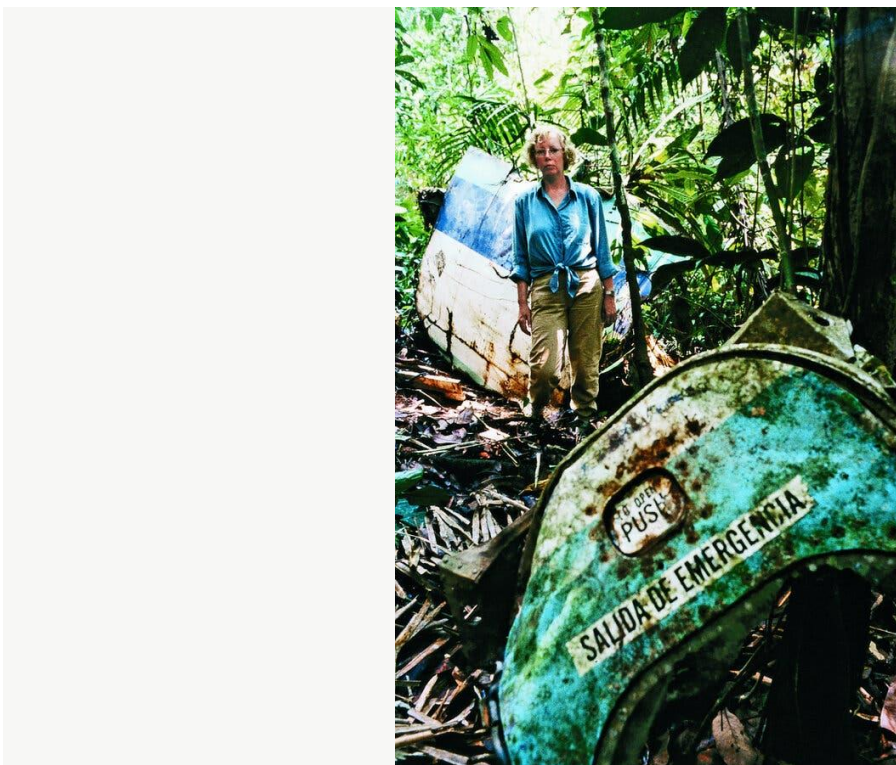
## Return to the crash site

Dr. Diller described her youth in Peru with enthusiasm and affection. She was born in Lima, where her parents worked at the national history museum. Earthquakes were common.

“I grew up knowing that nothing is really safe, not even the solid ground I walked on,” Dr. Diller said. “The memories have helped me again and again to keep a cool head even in difficult situations.”

Dr. Diller said she was still haunted by the midair separation from her mother. Her voice lowered when she recounted certain moments of the experience. “Above all, of course, the moment when I had to accept that really only I had survived and that my mother had indeed died,” she said. “Then there was the moment when I realized that I no longer heard any search planes and was convinced that I would surely die, and the feeling of dying without ever having done anything of significance in my young life.”

She achieved a reluctant fame from the air disaster, thanks to a cheesy Italian biopic in 1974, “Miracles Still Happen,” in which the teenage Dr. Diller is portrayed as a hysterical dingbat. She avoided the news media for many years after, and is still stung by the early reportage, which was sometimes wildly inaccurate. According to an account in Life magazine in 1972, she made her getaway by building a raft of vines and branches. The German weekly Stern had her feasting on a cake she found in the wreckage and implied, from an interview conducted during her recovery, that she was arrogant and unfeeling.



Dr. Diller revisited the site of the crash with filmmaker Werner Herzog in 1998.  
Credit...Werner Herzog Film/Deutsche-Kinemathek

Dr. Diller laid low until 1998, when she was approached by the movie director Werner Herzog, who hoped to turn her survivor's story into a documentary for German TV. He had narrowly missed taking the same Christmas Eve flight while scouting locations for his historical drama "Aguirre, the Wrath of God." He told her, "For all I know, we may have bumped elbows in the airport."

Intrigued, Dr. Diller traveled to Peru and was flown by helicopter to the crash site, where she recounted the harrowing details to Mr. Herzog amid the plane's still scattered remains. The most gruesome moment in the film was her recollection of the fourth day in the jungle, when she came upon a row of seats. Still strapped in were a woman and two men who had landed headfirst, with such force that they were buried three feet into the ground, legs jutting grotesquely upward.

"It was horrifying," she told me. "I didn't want to touch them, but I wanted to make sure that the woman wasn't my mother. I grabbed a stick and turned one of her feet carefully so I could see the toenails. They were polished, and I took a deep breath. My mother never used polish on her nails."

The result of Dr. Diller's [collaboration](#) with Mr. Herzog was "[Wings of Hope](#)," an unsettling film that, filtered through Mr. Herzog's gruff humanism, demonstrated the strange and terrible beauty of nature. "Making the documentary was therapeutic," Dr. Diller said. "At the time of the crash, no one offered me any formal counseling or psychological help. I had no idea that it was possible to even get help."

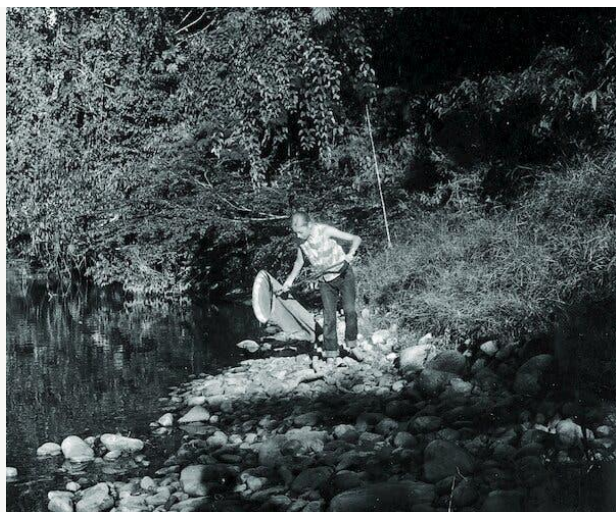
## Lima or bust

Dr. Diller attributes her tenacity to her father, Hans-Wilhelm Koepcke, a single-minded ecologist. He met his wife, Maria von Mikulicz-Radecki, in 1947 at the University of Kiel, where both were biology students. (Her Ph.D thesis dealt with the coloration of wild and domestic doves; his, woodlice). Late in 1948, Koepcke was offered a job at the natural history museum in Lima.

Getting there was not easy. Postwar travel in Europe was difficult enough, but particularly problematic for Germans. There were no passports, and visas were hard to come by.

To reach Peru, Dr. Koepcke had to first get to a port and inveigle his way onto a trans-Atlantic freighter. Setting off on foot, he trekked over several mountain ranges, was arrested and served time in an Italian prison camp, and finally stowed away in the hold of a cargo ship bound for Uruguay by burrowing into a pile of rock salt. When he showed up at the office of the museum director, two years after accepting the job offer, he was told the position had already been filled.

He persevered, and wound up managing the museum's ichthyology collection. His fiancée followed him in a South Pacific steamer in 1950 and was hired at the museum, too, eventually running the ornithology department. An expert on Neotropical birds, she has since been memorialized in the scientific names of four Peruvian species.



Juliane, age 14, searching for butterflies along the Yuyapichis River.  
Credit...Hans-Wilhelm Koepcke

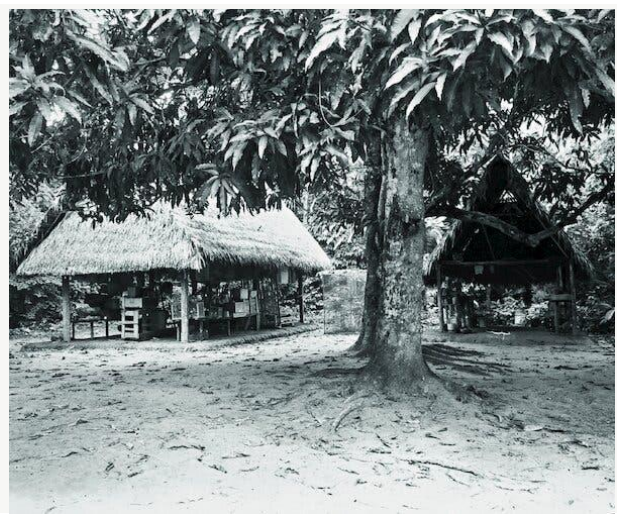


Maria and Hans-Wilhelm Koepcke at the Natural History Museum in Lima in 1960.  
Credit...via Juliane Diller





Juliane and her mother on a first foray into the rainforest in 1959.  
Credit...Hans-Wilhelm Koepcke



The Panguana field station in 1969.  
Credit...Hans-Wilhelm Koepcke

He is remembered for a 1,684-page, two-volume opus, “Life Forms: The basis for a universally valid biological theory.” In 1956, a species of lava lizard endemic to Peru, *Microlophus koepckeorum*, was named in honor of the couple.

In 1968, the Koepckes moved from Lima to an abandoned patch of primary forest in the middle of the jungle. Their plan was to conduct field studies on its plants and animals for five years, exploring the rainforest without exploiting it. “I wasn’t exactly thrilled by the prospect of being there,” Dr. Diller said. “I was 14, and I didn’t want to leave my schoolmates to sit in what I imagined would be the gloom under tall trees, whose canopy of leaves didn’t permit even a glimmer of sunlight.”

To Juliane’s surprise, her new home wasn’t dreary at all. “It was gorgeous, an idyll on the river with trees that bloomed blazing red,” she recalled in her memoir. “There were mango, guava and citrus fruits, and over everything a glorious 150-foot-tall lupuna tree, also known as a kapok.”

The family lived in Panguana full-time with a German shepherd, Lobo, and a parakeet, Florian, in a wooden hut propped on stilts, with a roof of palm thatch. Juliane was home-schooled for two years, receiving her textbooks and homework by mail, until the educational authorities demanded that she return to Lima to finish high school.

## ‘A place of peace and harmony’

Dr. Diller’s parents instilled in their only child not only a love of the Amazon wilderness, but the knowledge of the inner workings of its volatile ecosystem. If you ever get lost in the rainforest, they counseled, find moving water and follow its course to a river, where human settlements are likely to be.

Their advice proved prescient. In 1971 Juliane, hiking away from the crash site, came upon a creek, which became a stream, which eventually became a river. On Day 11 of her ordeal she stumbled into the camp of a group of forest workers. They fed her cassava and poured gasoline into her open wounds to flush out the maggots that protruded “like asparagus tips,” she said. The next morning the workers took her to a village, from which she was flown to safety.

“For my parents, the rainforest station was a sanctuary, a place of peace and harmony, isolated and sublimely beautiful,” Dr. Diller said. “I feel the same way. The jungle was my real teacher. I learned to use old Indian trails as shortcuts and lay out a system of paths with a compass and folding ruler to orient myself in the thick bush. The jungle is as much a part of me as my love for my husband, the music of the people who live along the Amazon and its tributaries, and the scars that remain from the plane crash.”

Before 2020, when the coronavirus pandemic restricted international air travel, Dr. Diller made a point of visiting the nature preserve twice a year on monthlong expeditions. Much of her administrative work involves keeping industrial and agricultural development at bay. She estimates

that as much as 17 percent of Amazonia has been deforested, and laments that vanishing ice, fluctuating rain patterns and global warming — the average temperature at Panguana has risen by 4 degrees Celsius in the past 30 years — are causing its wetlands to shrink. A recent study published in the journal *Science Advances* warned that the rainforest may be nearing a dangerous tipping point.

“After 20 percent, there is no possibility of recovery,” Dr. Diller said, grimly. “You could expect a major forest dieback and a rather sudden evolution to something else, probably a degraded savanna. That would lead to a dramatic increase in greenhouse gas emissions, which is why the preservation of the Peruvian rainforest is so urgent and necessary.”

Under Dr. Diller’s stewardship, Panguana has increased its outreach to neighboring Indigenous communities by providing jobs, bankrolling a new schoolhouse and raising awareness about the short- and long-term effects of human activity on the rainforest’s biodiversity and climate change.

“The key is getting the surrounding population to commit to preserving and protecting its environment,” she said. “Species and climate protection will only work if the locals are integrated into the projects, have a benefit for their already modest living conditions and the cooperation is transparent.” And so she plans to go back, and continue returning, once air travel allows.

Fifty years after Dr. Diller’s traumatic journey through the jungle, she is pleased to look back on her life and know that it has achieved purpose and meaning. “Just to have helped people and to have done something for nature means it was good that I was allowed to survive,” she said with a flicker of a smile. “And for that I am so grateful.”



Credit...Laetitia Vancon for The New York Times

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