



NEWS | APRIL 2024

ROLEX AND NATIONAL GEOGRAPHIC PERPETUAL PLANET AMAZON EXPEDITION: IN THE CLOUD FOREST

HOW THE ANDEAN BEAR COULD SAVE THE CLOUD FOREST



National Geographic Explorer and Peruvian Quechua biologist Ruthmery Pillco Huarcaya at the top of the highlands of Peru's Manú National Park with her dog, Ukuku.

© Florence Goupil/National Geographic



The view across the landscape of Manú National Park in Peru, showing how the clouds engulf the forest below. In Peruvian Spanish, the Andean cloud forest is known as ceja de selva, "the eyebrow of the rainforest", as it captures and holds this elevated moisture.

© Pablo Durana/National Geographic



A trail camera strapped to the trunk of a tree in the hopes of capturing imagery of wildlife in Manú National Park, in particular the Andean Bear. They are finding that the bear could potentially be the answer to keeping the cloud forest alive as the climate warms.

© Pablo Durana/National Geographic

A camera trap, installed in a remote location high in the Peruvian Andes, records the moment when an Andean bear stumbles into focus while digging up a bromeliad root. For National Geographic Explorer Ruthmery Pillco Huarcaya, seeing one of only a few thousand Andean bears left in the wild in action is a moment of joy. Pillco Huarcaya has done pioneering work with the Rolex and National Geographic Perpetual Planet Amazon Expedition to help understand how the Andean bear can play a significant role in protecting the cloud forests of this mountain region from the ravages of climate change.

"I'M VERY LUCKY TO GET TO SEE THE FOREST AS IT IS NOW. I WOULD LIKE FOR FUTURE GENERATIONS TO ALSO BE ABLE TO SEE BEARS ROAMING THE FOREST, TO HEAR THE BIRDS SINGING IN THE MORNINGS, TO SEE AN ORCHID FLOWERING. WE NEED TO LOOK AFTER IT IF WE WANT THAT TO HAPPEN."

Ruthmery Pillco Huarcaya, wildlife biologist and National Geographic Explorer

On the steep, humid slopes of an Andean cloud forest, National Geographic Explorer Ruthmery Pillco Huarcaya is hard at work. As a member of the Rolex and National Geographic Perpetual Planet Amazon Expedition, the wildlife biologist is looking for traces of the Andean bear, South America's only native bear, in some of the most rugged and challenging landscapes on earth.



ROLEX AND NATIONAL GEOGRAPHIC PERPETUAL PLANET AMAZON EXPEDITION: IN THE CLOUD FOREST

Pillco Huarcaya has been here before, many times. Raised in an indigenous Quechua community, in which familiarity with plants and animals was part of the culture, she would often accompany her father, a botanist, on seed prospecting trips. After becoming the first of her family to attend University, Pillco Huarcaya embarked on a scientific career that began with the study of plants and insects. She then shifted her focus towards mammals and their role within high-mountain ecosystems, encouraged by academic mentor and fellow National Geographic Explorer Andrew Whitworth, who describes her as “an extremely tough field biologist”.

The overarching focus of the Rolex and National Geographic Perpetual Planet Amazon Expedition is on the interconnected waterways that make up the Amazon River Basin. A lot of those waterways have their beginnings in the Andean cloud forests: areas of incredibly dense mountain jungle that catch and release so much moisture from the atmosphere they are almost constantly shrouded in a thick fog. According to Whitworth, “A lot of the rain that pushes through the whole Amazon River Basin is generated by the cloud forest. If that system is ever lost or breaks down, then you break down the whole of the Amazonian system.”

Pillco Huarcaya and her team, including key members such as biologists Norma Mamani, Elias Condori and Mark Thomas, veterinarian Diego Rolim and local assistant Narciso Llacta, have singled out one species, the Andean bear, for its importance in the conservation of this vast aquatic system. Pillco Huarcaya describes the bears as “forest gardeners”, their dispersal of seeds over a wide area helping to maintain the cloud forests’ ecological health.

The Andean bear, also known as the “spectacled bear” for its characteristic facial markings, is an emblematic species in traditional Quechua culture. As a child, Ruthmery loved to listen to her grandmother’s stories of the *ukukus*, mythical beings with a bear-like aspect who were regarded as “guardians of the glaciers”.

Animals and plants in the Andean region need to move to higher altitudes to escape rising global temperatures and deforestation further down the mountain, and the Andean bears could play a key role in helping them do that. The bears inhabit a wide range of altitudes, including the grasslands above the cloud forests, and have been shown to feed on as many as 150 different tree species. By dispersing seeds in nutrient-rich scat across such broad territories, they help the cloud forests to adapt to climate change.

However, the bears’ population is shrinking as a result of climate change and deforestation. A single adult bear needs as much as 80–100 square kilometres to feed and reproduce, rendering the species highly vulnerable to habitat loss. Pillco Huarcaya points to the increasingly frequent and virulent wildfires, which are dramatically reducing its habitat. According to the International Union for the Conservation of Nature (IUCN), fewer than 10,000 mature bears live across the region.



ROLEX AND NATIONAL GEOGRAPHIC PERPETUAL PLANET AMAZON EXPEDITION: IN THE CLOUD FOREST

In addition, the bears are shy by nature and difficult to observe. Pillco Huarcaya and Whitworth work with local conservation organization Conservación Amazónica (ACCA) and use cutting-edge technology to track the animals and calibrate their ecological presence: from satellite collars and camera traps to eDNA analysis of water in streams and rivers. The team also managed to place a National Geographic crittercam on the collar of a bear, giving them a new level of understanding of the animals' behaviour, such as the ability of younger bears to climb incredibly thin branches to reach fruit. Researchers had previously thought the bears had to wait for the fruit to fall to the forest floor to eat it.

But the research is not all dependent on new technology; with the help of their scent-detection dog Ukuku, the team track down the bears' scat for analysis. Shockingly, they have found plastics in the scat, showing the degree to which human activity is impacting even the Andes' vast wilderness.

What is particularly exciting about the Rolex and National Geographic Perpetual Planet Amazon Expedition, says Pillco Huarcaya, is the breadth of its scope. For her, belonging to a team with such a large diversity of disciplines, with expertise covering the Amazon River Basin from its mountain glaciers to its coastal mangroves, is a uniquely enriching experience. "Being part of the project is such a great opportunity to meet other researchers and exchange knowledge," she says. "Rolex plays a key role in all of this, because the brand trusts science and research and can help us work towards better conservation strategies."

FOR MORE INFORMATION

rolex.org
newsroom.rolex.com
youtube.com/rolex

#Rolex
#PerpetualPlanet

