

The long-term goal is to restore the ecological integrity of Floreana and Pinta



TORTOISE RESURRECTION

by Washington Tapia

The Lonesome George-like tortoise on the slopes of Wolf Volcano.

Top Right: The helicopter airlifts giant tortoises onto the waiting *Sierra Negra*.

Bottom Right: Tortoises arriving at the Fausto Llerena Tortoise Center on Santa Cruz.



I was ascending the craggy, rugged slopes of the volcano, alongside a canyon. In the distance, I could see the distinct shape of a tortoise neck at full stretch. It had to be a saddleback, but it was not just any saddleback. As I got closer, I realised I had come face to face with Lonesome George's twin. It was 24 November last year, my birthday. I could not have wished for a better present.

Several days earlier, the Galapagos National Park vessel, the *Sierra Negra*, had dropped anchor off the northeast coast of Isabela. We were there to search for giant tortoises on Wolf Volcano, the highest in Galapagos, its capricious topography made more unpredictable by several days of intense rain. Thanks to genetic analyses carried out by researchers at Yale University over the last two decades, we knew that Wolf is home to many hybrid tortoises, some with genes of the long-lost tortoises of Floreana and others with genes of the Pinta lineage, a species that went extinct with the death of Lonesome George in 2012. These revelations gave us hope. The expedition's goal was to search for, locate and remove as many of these hybrid animals as possible, bringing them into captivity to participate in a carefully planned breeding programme.



The *Sierra Negra's* onboard helicopter began to transport expedition gear, food and water onto the volcano and small field teams of rangers and scientists set off on foot, each group heading for one of ten different sites covering a combined area of over 70 km². The next morning, at 5.30am, each team began its daily routine, crawling out of tents, preparing breakfast and then heading off in search of tortoises.

It was almost one week into the expedition that I came across the Lonesome George-like saddleback. As I took measurements from him, I became even more excited. His carapace was the same size as George's. It was a great moment that provided an injection of encouragement to push on and find still more hybrids.

At 3pm every day, each team would radio in to the *Sierra Negra* to report the GPS location

of any tortoises of interest. The helicopter would then travel back and forth, ferrying tortoises from the island to the vessel in a hanging net. By the end of the two week-long expedition, we had recovered 32 hybrid tortoises from Wolf, two with Pinta ancestry, five of Floreana descent and the rest with saddleback shells, a good indication that they may be animals of conservation value.

The *Sierra Negra* shipped all these tortoises to Santa Cruz, where they were airlifted into the Fausto Llerena Tortoise Center near the headquarters of the Galapagos National Park. The geneticists at Yale will run detailed genetic analyses of all these animals, information that will inform the captive breeding. The long-term goal is to restore the ecological integrity of Floreana and Pinta by repopulating these islands with tortoises that carry the same genes as their long-dead ancestors.

Each day, as I review these hybrids as part of the quarantine procedure, I take some moments to contemplate the male twin of Lonesome George. Watching him strengthens my conviction that we are on the right road to recover not only Lonesome George's lineage but the ecosystem of his native island.