THE GIANT TORTOISES AND THE GREAT FIRE ON ISABELA

by

Cruz Marquez

Charles Darwin Research Station

The forest fire on southern Isabela Island in 1985 began when farmers were burning off the brush. Owing to the prolonged drought the vegetation was like tinder and the wind quickly carried the flames beyond the farms and into the National Park. The worst consequences were prevented by the combined efforts of local volunteers, the Ecuadorian armed and civil defence forces, water-carrying planes from Canada, the U.S. Forestry Service and the Charles Darwin Research Station. After heroic exertions in almost unbearable heat the fires were gradually brought under control but it was only after 75 days that nature, in the form of heavy rain, finally ended the conflagration which had by then covered some 20,000 hectares (50,000 acres).

There are two distinct races of tortoises on southern Isabela, each confined to its own volcano, *Geochelone elephantopus guntheri* on Sierra Negra and *G.e. vicina* on Cerro Azul. The populations of both have been sadly diminished by man, dogs and pigs and, until the Darwin Foundation was organized, their survival was in serious doubt. To compensate for inadequate breeding in the wild, their numbers are now supplemented by captive breeding at the Darwin Station. The fire was centred between the two volcanoes so neither subspecies was safe.

As the huge fire reached closer and closer to the areas where the tortoises were located, the National Park Service decided to evacuate a selection of both races, including males, females, sub-adults and juveniles, to places of refuge on the coast where the terrain was almost devoid of combustible vegetation, but within reach of supplies of water and food. A corral was built for each race with walls of lava 1 meter high. At San Pedro Cove, where the Cerro Azul tortoises were to be held, an old corral was found and improved. We can only speculate about who built it long ago to house tortoises before loading them on to their ships — naval vessels? whalers? settlers? Twelve tortoises were brought there while sixteen from Sierra Negra were taken to an improvised corral further up the coast.

Transporting these heavy animals to the coast under the equatorial sun was a major problem. There was no suitable equipment to meet such an emergency. They were carried on the shoulders of two or four Park Wardens (depending on their weight) suspended by ropes, ventral side up, from freshly cut tree trunks. Unfortunately two sub-adult tortoises died from the heat during the slow trek. In the event, owing to the combined exertions of all the various gallant fire-fighters, the flames never reached the tortoise areas; but the evacuation of a number of each sub-species to a safe place provided a nucleus to guarantee their survival if the worst happened. Once the fires had been extinguished the tortoises were returned to their usual habitat.

The other reptiles of southern Isabela seem to have escaped with relatively little damage. The snakes (*Alsophis*), lava lizards (*Tropidurus*) and geckos (*Phyllodactylus*) are more commonly found on the lower slopes of the volcanoes while the fires raged most fiercely at the higher elevations and even inside the caldera of Sierra Negra. The great Land Iguanas (*Conolophus subcristatus*) were never in real danger as the present habitat of the tiny population, which is all that remains of the once numerous colonies, was separated from the fire by the huge lava flow formed by the 1925 eruption. The threat to the iguanas comes from the dogs, pigs and cats introduced by man. But for the dedicated intervention of the herpetologist, Dr Dagmar Werner, and the captive breeding and repatriation programs of the Darwin Station and the National Park Service, there would probably be no Land Iguanas at all in southern Isabela. Even with the success of the captive breeding project, the outlook is still full of difficulty and uncertainty.

But let us at least be thankful that the reptiles suffered as little as they did from the devastating fires. As for the rest of the flora and fauna, only time will show the extent of the damage. The fires aroused an unprecedented amount of world-wide concern for Galapagos wildlife. If only this undoubted sympathy could be paralleled by a comparable volume of financial support!