

## A NEW YEAR'S LETTER FROM THE PRESIDENT OF THE CHARLES DARWIN FOUNDATION

Dear Friends of the Galapagos,

Last year I spent from July to September in Ecuador, mostly in the Galapagos. I discussed current activities with our scientific staff and we drew up the plans for 1984. In August I took the chair at the 43rd CDF Council Meeting, held on Santa Cruz Island.

Beyond all doubt the most important event of 1983 was neither planned nor expected: the warm, rainy season was not merely warmer and wetter but it lasted from November to July instead of from December to April. It is always warmer and wetter when the archipelago comes under the influence of the ocean current known as *El Niño*. The effect varies enormously but in 1982-83 it was more extreme than at any time since records were kept. Rainfall at the Darwin Station was ten times the average and twenty times the level of dry years. The temperature of the sea rose to 30°C and warm surface water has an important characteristic: it is poor in nutrients.



Neither the Masked Booby nor the Swallow-tailed Gull bred successfully in 1983.

*Photo by Fritz Pölking*

The abnormal warmth and the nutrient-poor seawater had a powerful influence on Galapagos plant and animal communities. All animals which depend directly or indirectly on marine vegetation suffered heavily. Not only sea-lions, fur seals, marine iguanas, penguins, flightless cormorants but corals, sea-urchins and many other marine animals also died in large numbers or, if they could, wandered away in search of food. The sea-birds, particularly swallow-tailed gulls, albatrosses and boobies, disappeared completely until July-August, when they returned in smaller numbers.

On land, where lack of water usually restricts growth, the picture was quite different: plants flourished, the vegetation grew extraordinarily lush and the animals profited from the plenty. The finches multiplied and the land iguanas sat well-nourished amid the rich greenery.

A catastrophe for some, a lotus-land for others, one might think. But these events have a different meaning when we see evidence that such Niño years have occurred in the past, even though scattered at long intervals in the islands' history. It is simply that we have never experienced them in our time. For proof, look for instance at the deep gullies eroded by floods on the normally arid island of Santa Fe. But the Galapagos animal and plant species have survived thanks to the way they have adapted. This they will surely do again, except where man has reduced their numbers to the point where they cannot survive such crises. If such a disastrous *El Niño* year had occurred in the 1940's, the Galapagos Fur Seal might well have become extinct. Because of human persecution, its numbers had been drastically reduced at that time but fortunately years of conservation have successfully restored the size of the population.

For us visitors, who have almost always known the islands to be arid, this was an overwhelming experience: endless rainstorms, huge fresh-water lakes on the plains and rushing rivers on the slopes of the volcanoes, which often lasted for weeks and ended as waterfalls as they tumbled into the sea.

In many ways, the extraordinary weather conditions have made conservation more difficult but that makes last year's achievements even more significant. On Floreana, for the first time it proved possible to protect the threatened Hawaiian Petrels from the introduced Black Rats. This was done by using poisoned baits contained in plastic tubes to keep them from the rain and from other animals. The persistent rain caused the collapse of many nesting burrows and many adults could not find enough food for their young in the impoverished sea but for the first time the rats killed no young. The work goes on and, if the funds are forthcoming, it will be extended to other petrel colonies and other islands.

Another important success was with the Land Iguanas: some of the captive-bred young of the almost exterminated populations of southern Isabela and Santa Cruz were released on their native islands. Several months later, some of these youngsters were observed again. They were very lively (perhaps the abundant vegetation had helped them) so we know that at least a proportion of them had escaped the feral cats.

These are only two of a great many conservation projects which your contributions to our funds made possible last year and I thank you cordially on behalf of our Foundation. Please continue to support this work in the coming year. In case you have overlooked your subscription for 1983 you can still send it to any of the addresses given on the inside front cover.

I take this opportunity of offering you my very best wishes for 1984.

Peter Kramer  
President, Charles Darwin Foundation