



living laboratory

by Sandra Bessudo

Ours is an ocean planet: 70 per cent of it is covered by the seas, and it is in them that all life originated. Yet we have done far less to protect the marine environment than the far smaller part of the planet that is dry land. While almost 13 per cent of the Earth's land surface is covered by officially designated protected areas, less than 0.6 per cent of the oceans are similarly safeguarded, even on paper. And WWF estimates that less than ten per cent of these marine protected areas achieve their management goals and objectives in practice. The leaders attending the 2002 World Summit on Sustainable Development in Johannesburg resolved to address this, promising to increase the numbers of marine protected areas, and to establish networks of them.

For the past twelve years, Colombia has protected and managed its extraordinary Malpelo Island and the waters around it. The summit of a submerged mountain range, rearing up from 4,000 metres below the surface off the Pacific Ocean — some 490 kilometres west of the port of Buenaventura — the rocky mass of the island rises to 300 feet above sea level. It was declared a Fauna and Flora Sanctuary by the Colombian National Park System in 1995 and six miles of ocean around it were added the next year. Finally in 2005 the marine protected area was expanded to 25 nautical miles around the island, becoming the world's ninth largest "No Take" area with a total area of 8.575 square kilometres.

It has achieved a high degree of international recognition. In 2002, the International Maritime Organization declared the marine protected area as "Special Sensitive Zone". The Sanctuary was declared an Important Bird Area by BirdLife and the Alexander Von Humboldt Institute, and recognized as a World Heritage Site by UNESCO in July 2006.

Malpelo is a natural living laboratory, as several international and national surveys have proved. Since 1998, the Colombian National Park System — with the direct support of the Colombian Navy and the Malpelo Foundation — have conducted annual expeditions to study and monitor species and ecosystems of local, regional and global importance. Since 1985, when the Colombian Navy placed an outpost in the island for surveillance and sovereignty purposes, the government has had a permanent presence there.

At first glance, the island may look barren, but it is home to a very special fauna well adapted to its rocky substrate. The land ecosystem depends on nutrients from the sea, on the guano produced by sea birds and on its scarce vegetation. At least four land species are endemic: one crab, a gecko and two lizards. It is also home to the world's largest breeding colony of Nazca Booby — containing a third of the seabird's total population — and to other species of boobies, frigates, tropical birds, petrels and seagulls. Some of

the species are migrants, endangered by habitat destruction, over fishing and pollution.

The seas around the island contain at least seventeen hard corals: though their formations are not very extensive, they are very well preserved and, with the rock walls, are home to a profuse marine fauna. Several species of sharks — such as Hammerhead sharks and Galapagos sharks — gather around the island during the day both to feed and to be cleansed of skin parasites by butterfly, labrid and angel fish at so-called "cleaning stations". Great aggregations of over 1,000 Silky sharks have been observed around the island, though the reason for them remains a mystery. Malpelo is also one of the only places worldwide where the Smalltooth Sandtiger shark — which visits during the first months of the year, when the water is colder — can be observed in its natural environment. Divers often see whale sharks, giant manta rays and several species of sea turtles — and they and photographers consider Malpelo to be one of their top destinations worldwide.

Unfortunately, the Sanctuary is faced with several threats. The most important — and hardest to control — is illegal fishing. Colombian and overseas vessels patrol the area and enter the Sanctuary, causing great damage by taking hundreds of sharks and tunas, irresponsibly threatening the species during very sensitive life cycles. There is also uncontrolled, industrial fishing around the area, which is greatly affecting the communities of sharks, marlins, tunas and dolphins. Ecotourism, when not managed correctly, can also affect the ecosystems, which are often of high biological importance and highly vulnerable.

The Colombian National Park Unit, the Colombian Navy, Conservation International and the Malpelo/ MarViva Foundation have joined to develop projects for conserving the Sanctuary. One of the most important and effective is refitting a boat, which has already contributed greatly by patrolling and surveilling the area. The Foundation is also working on a cutting edge satellite and acoustic telemetry project to determine movements of sharks, which has already produced very promising results showing the movements of hammerhead sharks in the Eastern Tropical Pacific (ETP) region.

Three years ago, the four countries of the ETP signed up to a regional initiative linking six marine protected areas: Costa Rica's Cocod and Baulas National Parks; Panama's Coiba National Park; Ecuador's Galapagos National Park; and the Gorgona National Park, as well as Malpelo in Colombia. It aims primarily to conserve ecological processes, both locally and regionally, as well as generating effective political management to guarantee the sustainability of the fishing resource and the protection of species, especially endangered ones. 