



To help prevent the theft of eggs, armed federal agents patrol Mexico's Escobilla Beach during the olive Ridley nesting period. © ADRIANA ZEBRAUSKAS / THE NEW YORK TIMES

## Simple, Yet Effective: Protection at the Nesting Beach

**W**hat is the simplest way to destroy a sea turtle nesting population? The answer is easy: by over-exploiting its females or their eggs at the nesting beach.

And the most effective way to rehabilitate that over-exploited sea turtle population? This should also be a simple solution: protect its nesting females, along with their eggs and hatchlings, at the beach.

The Republic of Seychelles, comprising some 130 islands in the western Indian Ocean, had a long history of sea turtle exploitation going back three centuries, which led to a serious decline in all the country's sea turtle populations. Responding to that decline, the government of Seychelles took action almost four decades ago that made the nation a global pioneer in sea turtle conservation, setting aside several islands as nature reserves in the 1970s. Meanwhile, however, exploitation continued at varying degrees at most of the other islands in the republic—until 1994, when national legislation was implemented to protect all sea turtles in the country.

Because many of these nesting sites have been repeatedly surveyed since 1981, Seychelles provides a unique natural laboratory in which to compare the success of a variety of management regimes at nesting beaches. Analysis of data collected for nesting hawksbills in the inner islands of Seychelles between 1981 and 2003 demonstrates that, overall, the number of female hawksbills nesting in the inner islands declined by approximately 24 percent—from an estimated 820 annual nesters in the early 1980s, to some 625 in the early 2000s.

However, correlation was found between the level of protection at different sites and the rise or decline of turtle populations. For the

two islands that had been well protected since the early 1970s, nesting hawksbills increased by approximately 490 percent. At seven islands that had received intermediate levels of protection between 1979 and 2002, turtle populations declined by approximately 21 percent. And the remaining 13 islands whose turtles received no protection prior to 1994 declined by approximately 59 percent. These data provide clear evidence: protection at the beach is an effective conservation scheme for nesting turtles.

For green turtles at Tortuguero in Costa Rica, in the Archie Carr Refuge in Florida, on the beaches of Hawaii, and at Aldabra atoll in Seychelles, nesting beach protection has produced similar positive results—showing significant increases in numbers of nesting females during the past three to four decades. Likewise, leatherback turtles nesting at protected beaches in St. Croix, U.S. Virgin Islands, are on the rise.

As always, while nesting beach protection is a critical component of any sea turtle conservation program, it is sometimes not enough. “In-water” issues, such as accidental capture in fisheries and intense levels of harvest at sea, must also be addressed—protecting the sea turtles in their ocean environment granting them opportunities to find their way safely onto protected nesting beaches.

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