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## With Help, Sea Turtles Rally to Escape Oblivion

By JAMES C. MCKINLEY JR.

**L**A ESCOBILLA BEACH, Mexico, Oct. 9 - Fernando Herrera is 78 years old and a fisherman by trade. He can remember a time in the 1980's when he and other fishermen of Oaxaca hunted the sea turtles that nest here for their skins, killing them with machetes and rifles. They slaughtered tens of thousands a year, nearly driving the animals into extinction.

Yet he acknowledged tearing up when he arrived at the misty beach on a recent afternoon with his wife and son to witness one of nature's most mysterious and prehistoric rites: thousands of female turtles emerging from the grayish blue water of the Pacific, dragging themselves up beyond the high-tide mark and laying their eggs.

"It used to be that no one took care of them," Mr. Herrera's wife, Lucía Cervantes, said. "Yes," said Mr. Herrera, somewhat wistfully, "in the 80's, there were so few."

The recent history of the sea turtle is one of constant setbacks, as most of the seven species that return to Mexico each year to reproduce have either steadily dwindled in number or hovered near extinction. The construction of hotels and other human encroachments have squeezed the turtles' ancestral nesting places, while poachers sell their eggs and meat in city markets as a delicacy and an aphrodisiac.

But one species is making a comeback, largely because the Mexican government has devoted more armed men and environmental agents to guarding its nesting grounds during the critical seven days after the females lay eggs. That period, before the embryos develop, is when the eggs are most edible, and when poachers raid.

The turtles - olive ridleys, or golfinas in Spanish - come in waves, hitting the beach about every 28 days between June and December. About 311,000 of them arrived over three days this month to nest on La Escobilla Beach, as they have for centuries, in one of the largest landings in recent memory.

Experts say they expect the female olive ridleys to create about one million nests, each with about 100 eggs, at La Escobilla by the end of the egg-laying season. The female can lay eggs up to three times in that period. For every four females there is one adult male at sea, experts say.

The number of nests suggests the population of olive ridley turtles is at least four times larger than it was in 1990, when hunting sea turtles was officially banned in Mexico, biologists say. After flirting with oblivion, the species has in the last two years reached a point where it will likely survive, at least for now, if nothing changes, they said. "Technically, I consider it out of danger," said Cuauhtémoc Peñaflores Salazar, a biologist and director of the Mexican Center for the Turtle in Oaxaca.

One reason for the turnaround has been a shift in tactics by Mexican environmental officials. Rather than trying to police all 120 beaches where the turtles lay eggs, they are vigorously protecting two beaches where the majority of them nest. Well-armed federal agents and marines patrol the beaches, chasing poachers off.

"The objective of the operation is to stop the looting of the nests," said Antonio Fuentes Montalvo, a federal environmental inspector who oversees the effort to guard La Escobilla Beach and the second turtle haven, at Morro Ayuta. "The strategy is to keep the eggs out of the market in the first place."

Poachers still do some damage, officials acknowledge. Earlier this year several hundred sea turtles were slaughtered on a beach in Guerrero State, and in September authorities stopped poachers carrying 2,000 stolen eggs. Last year, inspectors seized 159,000 turtle eggs and 175 turtles traffickers in turtle products.

But on the two protected havens, the marines and federal agents have scared off dozens of poachers. Agents say the egg-stealers are seldom armed with more than a machete or equipped with more than a scrawny horse.

On a recent Saturday, six federal agents carrying automatic rifles and sidearms patrolled La Escobilla, a government

wildlife sanctuary. They said they had surprised several poachers in recent months who were trying to dig up eggs. All had fled at the sight of the guns.

Up and down the beach, thousands of turtles were emerging from the water, and dragging their heavy shells through the sand until they found a place to dig a round hole with their hind flippers. Each laid more than a hundred eggs, then appeared to rest before laboring back to the water. A great fishy, visceral smell suffused the wet air, primal and raw, harkening back 200 million years to the appearance of the first turtles.

"The sea turtle is like a mythical creature," said Homero Aridjis, a poet and environmentalist who was instrumental in Mexico's banning the commercial use of the turtle in 1990. "It is like a cipher of mother earth."

It is also a clumsy animal on land. The agents from the Federal Agency of Investigation, an elite corps formed to fight drug trafficking and other major crimes, found themselves wading into the waves to right turtles overturned in the surf. They spent nearly an hour helping a veterinarian extract a fishhook from the mouth of one. Two other agents told some local children not to play with eggs turtles had unearthed while making their own nests. The children buried the eggs in a new hole.

As soon as the eggs fall into their sandy nests, they become prey to birds, dogs, crabs, and, of course, humans. After 45 days, tiny babies, inky black and less than two inches long, hatch from the golf-ball-sized eggs and make a mad dash for the water, while predators try to pick them off. Once in the ocean, they become hors d'oeuvres for big fish and sharks. Fewer than one percent of them make it to sexual maturity, which takes about eight years.

But, as with many such vulnerable animals, nature balances the predation with fecundity. It was the hunting, Mr. Peñaflores said, that devastated the population, because so few females lived long enough to reproduce. Many females never laid eggs at all or only managed to lay eggs for one or two years before they were killed and sent to a local slaughterhouse in Mazunte.

After the hunting ban was put in place in May 1990, however, more and more olive ridley turtles reached maturity, he said. By the late 90's, the population had exploded. The number of females laying eggs on La Escobilla Beach shot up to a high of 1.1 million in 2000, from 123,000 in 1989, and then leveled off at about 850,000 last year.

Tougher laws have helped, environmentalists say. In 1997, lawmakers made poaching turtles and turtle eggs a federal crime, and in 2002, they greatly increased fines and sentences for poachers, with the maximum penalty going up to nine years in prison.

And attitudes are shifting. Though turtle eggs can still be found in the small-town markets of Oaxaca, a generation of children has grown up without the idea of turtles as fair game.

"This generation has never seen the massacre of turtles," Mr. Peñaflores said. "They don't have the habit of eating turtles."

In the long term, most biologists believe the only way to save the turtle is to build a tourist industry around the spectacles of the nesting ritual and the emergence of the young. Mr. Fuentes said the sight of the little turtles scurrying toward the sea filled most people with awe, and if more tourists and schoolchildren witnessed the event, they might be motivated to protect the animals.

Still, poaching continues, officials say. In some parts of Mexico, it is fashionable to eat turtle meat during Lent, on the theory turtles are fish and thus allowed by the Catholic Church. Some environmentalists have petitioned the pope to classify the turtle as meat.

The belief that turtle eggs increase male sexual vitality has also grown in recent years, posing problems for the government. It has resorted to posters showing an attractive woman with the caption, "My man doesn't eat turtle eggs."