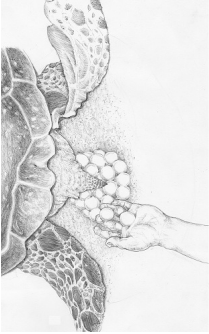


Soccer and Sea Turtles: Community Conservation in Guatemala

Written by Sarah Lucas and Matt Schwartz
Wednesday, 19 December 2012 12:18



In the Guatemalan Pacific coastal village of La Barrona, an estimated 700 inhabitants make their living through small scale fishing, and sea turtle egg harvesting, and build their houses and fires from the local Mangrove forests. These are all resources that will dry up if not cared for, particularly the eggs of the endangered olive ridley turtle. Community member and former turtle egg collector Melvin Monterroso runs a soccer and environmental education program to preserve the community's resources.

It is well after midnight and *Tito*, a local fisherman, uses a combination of paddling and long poling to navigate his narrow wooden boat to a choice spot inside the labyrinth of mangroves.

He casts his homemade net into the water, slowly pulls it up and repeats. He has waited for high tide and with some luck he'll catch a few pounds of shrimp- enough to feed his family and sell for around 50 quetzales (~6 dollars). Almost every male over seven years old in La Barrona, a coastal town at the mouth of the *Rio Paz* (Peace River), is skilled at this trade. La Barrona is considered a typical Guatemalan Pacific coastal village with the majority of local families living in economic deprivation. The estimated 700 inhabitants of La Barrona survive off of small scale fishing, shrimping and sea turtle egg harvesting. Mangrove forests provide wood for thatched palm houses and firewood for cooking. The village lives off of resources that will dry up if not cared for.

La Barrona is an important nesting site for olive ridley sea turtles and infrequent nesting leatherbacks. Akazul runs the local turtle hatchery (*alongside a staff member from the government department CONAP* (Consejo Nacional de Areas Protegidas) and envisions "healthy and thriving coastal eco-systems sustainably managed and protected by local communities." In 2011, Akazul initiated a project called 'Saving Sea Turtles through Football.' Its objective is to combine the town's pastime passion for football (soccer) with a structured environmental awareness program for children in an important sea turtle nesting area sorely lacking in any official environmental education.

WHERE LAND MEETS SEA

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For more than 110 million years gentle, armored beasts have waddled their way out of the deep blue, up the black sandy shores of the Pacific coast of Central America. These ancient reptiles have long practiced the following nesting ritual:

...the scene is nighttime and there is likely a stiff wind blowing. The coast is clear for the pregnant female olive ridley (*Lepidochelys olivacea*) to scuttle her way out of the water once she can blend into the darkness, hidden from the eyes of potential predators. She prefers breezy nights, likely to throw off her scent from predators' noses as well. She wriggles up the beach and begins the laborious process of digging out an egg chamber with her hind flippers, finally depositing a "clutch" of between 40 to 130 leathery, ping pong ball-sized eggs. Approximately 50 days later, a mass of baby turtles bubble up to the surface as they crawl and flutter their way on a two day journey up the forty centimeters of sand. These hatchlings have waited for the safety of nighttime to break the surface and exit the nest. They greet the world explosively, utilizing a programmed burst of energy, dubbed the "hatchling frenzy," to scurry down the beach and march into the sea. The infant turtles can sense out the vibrations of the waves as well as the downward slope of the beach, but their strongest instinct is to head towards "the light." At night, the moon and stars cast a glow over the ocean and the baby turtles follow this visual cue to find the water's edge. Once in the surf, they will swim constantly for two days, navigating strong ocean currents, avoiding predacious fish and birds until they find safe foraging grounds further offshore. Although the males will never revisit their birthplace, 8-14 years later the females will repeat the labor of their mothers, often returning to the exact same beach. Thus is the story of the loveable and valiantly pokey olive ridley sea turtle.

Ideally

. However, the rise of modern man has lengthened this story considerably.

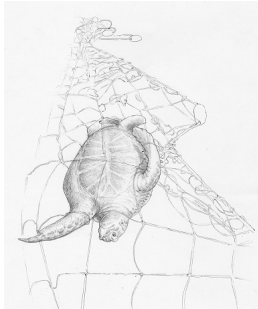
MEET THE TURTLES

Sea turtles are what biologists call a 'keystone' species- they play an integral role in the health, structure and complex functioning of marine and coastal habitats. They are chief indicators to the state of the oceans and are at the brink of extinction. Populations of the monstrous pacific leatherback have dropped a staggering 99% in the last 20 years alone, mostly attributed to long line fishing. The olive ridley is the most common sea turtle in Central America and in fact the world, but it is also in precipitous decline, dropping over 90% in many areas. There are seven

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sea turtle species worldwide and five of them are found in Central American and Caribbean waters, all of which feature in the International Union for Conservation of Nature's (IUCN) Red List of threatened species: olive ridley (vulnerable), leatherback (critically endangered), hawksbill (critically endangered), green (endangered) and loggerhead (endangered). Due to the severity of the threat, the vast majority of countries across the globe have outlawed and made punishable by heavy fines and imprisonment the hunting of turtles and the commercialization of turtle products (e.g. eggs, shell, meat and oil).



THE RAVAGING

On paper, sea turtles in Guatemala are officially protected under the Law of Protected Areas (decreto 4-89) with penalties of 5-10 years in prison and fines of up to \$3000 for their commercialization. In 1979, Guatemala ratified the Convention on International Trade in Endangered Species (CITES) and is also a registered party of the Inter-American Convention for the Conservation and Protection of Sea Turtles, both of which prohibit the intentional capture of and international trade of sea turtles and their derivatives.

The reality however, is somewhat different. Every night from July to December, across the 254 km of Pacific coastline, the beaches come alive with emerging '*parlamas*' (olive ridley turtles), and thousands of hopeful '*parlameros*'

(egg collectors). Due to the sheer extent of the egg harvest

, it is estimated that nearly all nests are taken from Guatemala's nesting beaches. Eggs are sold to '*compradores*'

(buyers) at varying prices throughout the season and can reach as little as 5 quetzales a dozen (~60 cents). This means that an endangered sea turtle egg can cost about half the price of a standard chicken egg! The

compradores

transport the eggs from small coastal communities to busy city markets where they are sold raw with a shot of orange juice often spiced with

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chile

. Sea turtle eggs are prized in Guatemala as a luxury food item and are also enjoyed by some men for their alleged aphrodisiacal qualities.

How did we arrive at this paradox? In the mid 1980's, the government department CONAP (Consejo Nacional de Areas Protegidas) found itself struggling to control the illegal egg harvest. In this case, as in most wildlife crimes, poachers are from economically deprived areas. In order to increase conservation collaboration, CONAP initiated an informal 'egg donation' system, whereby local egg collectors are permitted to harvest unlimited quantities of turtle eggs, providing that 20% of the nest is donated to a local hatchery for conservation purposes. There are 18-26 hatcheries in operation along the Pacific coast, managed by various government institutions, NGOs and private investors, whose role is to provide a secure area to receive donated eggs in order to safely incubate and hatch them. However, this 'collaboration' system has been flawed. Since its introduction there has been a general lack of acceptance of the 20% donation rule, lack of enforcement on the beaches and in the markets, and critically understaffed and underfunded hatcheries.

Other threats to marine life loom dangerously in the background. Beach development plays havoc with turtles; artificial lighting confuses nesting females and disorients hatchlings, hotel walls and fences block access to nesting areas, beach traffic can scare and injure turtles. An all too tragic fate occurs when turtles, misled by the lighting of beachside hotels will march into swimming pools, possibly mistaking them for the ocean.

Commercial fishing claims extreme ratios of '*by-catch*'- incidental catching of non-target species. Once caught, non-target species are most commonly discarded back into the sea dead or dying. The Food and Agricultural Organization of the United Nations (FAO) has quoted up to 20:1 ratios of by-catch for shrimp trawlers, meaning that for every 1 lb. of shrimp caught, 20 lbs. of turtles, dolphins, sharks, and fish are caught and discarded. Long line fishing is guilty as well for extraordinarily high numbers of 'by-catch', especially turtles and seabirds, such as albatross.

Water toxicity and pollution are dangers as well. Floating plastic bags mistaken for jellyfish are commonly found in sea turtle intestinal tracts during autopsies. Nylon rope, candy wrappers, balloons and plastic wrap all turn up inside dead sea turtles as well.

SOCCER AND SEA TURTLES

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In La Barrona, the village school in town runs a variable 6-8 months a year, and in 2011 was closed for 9 months due to nationwide teacher strikes. When the school is open, school days are only 4 hours long, offering little structure for the children in the town.

Local community member and former egg collector Melvin Monterroso is co-founder and coach of the soccer team. “The most important work that we can do is with the children because , if we work with turtle eggs, yes, we are saving the turtles but , if we work with the children too, we are teaching them to take care of, not just the turtles, but themselves. When we started the football program, it was crazy, a disaster. The children had always grown up around the turtles but they had no idea about conserving them, just like they had always grown up playing football but had no idea how to play like a team. They were always screaming and fighting and couldn’t follow any of the rules. Now, they get it. There are still a few fights here or there, but now they work together. It is not just about winning, it’s about working together.”



Akazul provides the jerseys, shorts, cleats and soccer balls. Children in the program attend one to two weekly soccer practices to develop their football skills and teamwork and one weekly sea turtle education class. The children also conduct beach cleanups, as well as participating in hatchling releases and nest excavations. This project is a simple way to change the perception these children have of their nesting sea turtle population. Since most players on the team have family members who are currently sea turtle egg collectors, it is extremely important to provide sea turtle education for the future of this community. Akazul also provides free English classes to the community as well as a Kids Club of structured games and activities for children ages 5-10.

Community backing is essential for conservation to ‘work.’ Hatcheries are the conservation epicenter, but they must gain the trust of community members, help to address their economic

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needs and educate about the importance of a healthy coastal eco-system. Raising alarm about pollution, beach development and destructive overfishing are all basic steps in protecting the coasts from further ravaging. Education, however, has truly been the key in La Barrona. It is a similar story for many coastal villages in Central America. Conservation of these precious resources is in the interest of all of its inhabitants: human and turtle alike.

Sarah Lucas is co-director of Akazul-Community, Conservation and Ecology, a Grassroots initiative focused on preserving Guatemala's Marine and Coastal Habitats. To find out more about the work of Akazul and volunteer opportunities, visit Akazul.org

Matt Schwartz collaborates with Akazul and Upside Down World. He likes to draw, and created the illustrations for this article.