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Subject: ARCAS's Hawaii (Guatemala) Project

HAWAII SEA TURTLE CONSERVATION PROGRAM
(Hawaii, Guatemala)

About ARCAS

ARCAS is a Guatemalan nongovernmental, nonprofit organization committed to preserving Guatemalan wildlife and habitat. It was formed in 1989 by a group of Guatemalan citizens who became concerned as they saw their precious natural heritage rapidly disappearing before their eyes. ARCAS was originally created to rescue wild animals confiscated from smugglers on the black market and came about as a result of a very real need: the Guatemalan government didn't know what to do with the animals it was confiscating from smugglers under CITES regulations.

While its animal rescue and rehabilitation activities - including its world-recognized Rescue and Rehabilitation Center in Flores - remain one of its main activities, ARCAS has also branched out into other very necessary activities including environmental education, ecotourism, information-dissemination, reforestation and habitat preservation. In 1993, ARCAS initiated its conservation activities in the Hawaii area.

SETTING

The Hawaii Program is based on the Hawaii Reserve, a protected area established by the Guatemalan government in the early 1970s consisting of roughly 20 square kms of mangrove wetlands, dry tropical forest and beaches. Hawaii lies in the Department of Santa Rosa, near Taxisco on Guatemala's southern Pacific coast some 160 kms (100 miles) from Guatemala City. The coastal plain is comprised of rich volcanic soil and is home to some of Guatemala's most productive agricultural lands and largest farms. It is drained from the highlands to the north by 32 rivers which when they near the coast form a series of mangrove-lined canals, lagoons and lakes rich in marine and bird life. In order to reach Hawaii, it is necessary to travel to La Avellana and take a boat 45 minutes along the Chiquimulilla Canal to the Hawaii Reserve. It is also possible to travel to Papaturro via Chiquimulilla (though this road is unpaved) and take a boat to the Reserve. Hawaii is 7 kilometers east of the popular resort of Monterrico. Eaches are of the "high-energy" type characteristic of the Pacific coast: relatively steep and narrow with strong waves and tides and no reefs.

The climate in the Hawaii area is hot with a rainy season between June and October. The olive ridley nesting season corresponds with this rainy season, with a peak in the month of September although stray turtles arrive to nest throughout the year. There are no "arribadas" at Hawaii, but the olive ridleys prefer high winds and will even nest during the daytime on a windy day. They also prefer dark nights and a setting or rising moon. Along the roughly 15kms of coastline that ARCAS monitors, frequency of nesting is 10-15 nests per night during the peak of nesting season. Leatherbacks are much rarer than olive ridleys and nest in November and December when only 2-3 turtles arrive to nest per night on the same stretch of beach.

Turtle eggs are prized by local populations as a supplement to their

income and diets. On nights that the turtles come to lay their eggs, competition for nests is intense and it is extremely rare that a nest escapes plunder. Turtle eggs are sold to local buyers who transport them to ceviche (a pickled seafood cocktail) restaurants in the capital. Turtle eggs are popular in Guatemala as an aphrodisiac. (Clearly not a basic need given a population growth rate of nearly 3%!). Prices for olive ridley eggs vary from 12 quetzals (\$2) per dozen during the height of the nesting season, to over 36 quetzals (\$6) in the off-season. Leatherback eggs range from 16 quetzals (\$2.60) to 40 quetzals (\$6.60) per dozen. An average nest can therefore bring in roughly 140 quetzals; roughly one fifth of monthly income for an agricultural worker or local fisherman, for example.

According to local villagers, the number of turtles that nest on area beaches is rapidly declining. Many report that even just 15 years ago, one could expect to encounter 2-3 nesting turtles a night during the nesting season. Now, due to fewer turtles and more competition for nests, collectors often find only 2-3 nests per season. Many fear that if present trends continue, the turtles will stop returning to the beaches altogether.

HAWAII SEA TURTLE CONSERVATION PROGRAM

Under its Hawaii Marine Turtle Conservation Program, ARCAS solicits donations of 1 dozen eggs per nest (6-9 dozen eggs) from local collectors and then reburies the eggs in protected hatcheries. Egg collectors who donate are given receipts which gives them the right to "legally" sell the rest of the nest. (According to formal Guatemalan law, sea turtles are endangered species and no amount of egg collection or trafficking should be allowed, but...) Over 5000 hatchlings in 1993, 7000 in 1994 and 10,000 in 1995 were released from ARCAS's Hawaii hatchery.

As an experimental pilot project and as an attempt to gather more turtle eggs, ARCAS in 1995 built a small "Food-for-Eggs Exchange" where corn (donated by the World Food Program) was exchanged for turtle eggs.

Hatcheries in Guatemala are typically enclosed with corrugated tin or fiberboard and lightly roofed with palm. Predation by cats, possums, jays and ghost crabs, on newborn hatchlings is a problem and is controlled by the use of scarecrows and weighted nest cages.

Dead turtle strandings on the south coast of Guatemala occur due to shrimp trawling by Guatemalan and foreign boats offshore. In 1995, there were numerous strandings (perhaps 3-5 per week on the 15kms monitored by ARCAS) during the beginning of the nesting season in June and July. As a response, ARCAS wrote several articles for the Guatemalan press on this "turtle massacre". Whether due to the publicity caused by these articles or to several patrols conducted by the Guatemalan navy, the shrimp trawlers moved further off shore and no more strandings were seen for the rest of the season.

In conjunction with its turtle conservation activities, ARCAS also conducts environmental education activities in area schools and manages three school hatcheries where students collect and bury their own eggs and then release the hatchlings when they are born. It also has a crocodile and iguana captive breeding program and conducts mangrove reforestation.

FACILITIES

The central facilities for the Hawaii Program lies on a 1 1/2 hectare reforested plot on the Pacific coast 1 km north of the village of Hawaii. It includes a 11M x 15M central, palm-thatched "rancho" with a kitchen, dormitory and large, open common area. The rancho is used

for workshops and meetings with local women's groups, egg collectors and students and for hosting the various visitors and volunteers that come to the center. Toilet and shower facilities are nearby as are a well, iguana and caiman breeding pits and a tree nursery. A solar electric system provides lighting. Just behind the coastal dunes, 20 meters away, is the main turtle hatchery and holding tank.

VOLUNTEER PROGRAM

Since 1992, the Hawaii Program has hosted over 60 international and Guatemalan volunteers including veterinary students, researchers, biologists, environmentalists and international travelers.

Activities typically carried out by volunteers include:

1. Turtle Conservation

During the nesting season volunteers spend nights walking the beach in search of turtles that have come to lay their eggs. Once the turtle is sighted and claimed, volunteers wait until it has finished laying, then collect the eggs and bring them to the hatchery. Volunteers also receive donations from local egg collectors and carry them to the hatchery. Once the eggs have been collected, they are then reburied in the hatchery and the nest is marked and recorded in a log.

Basic research in turtle biology is also conducted at the Hawaii Center including determining the sex and overall health of turtle hatchlings and the monitoring of local environmental conditions.

2. Construction

The Hawaii Center is still young and ARCAS plans to expand its activities as a center of conservation in the south coast region. Volunteers assist in the construction of additional turtle hatcheries, including hatcheries in nearby schools, and the construction of volunteer and research facilities.

3. Environmental education

Volunteers assist in conducting environmental education activities in area schools, including teaching classes, developing curriculum, conducting beach clean ups and operating school hatcheries.

4. Mangrove reforestation

The mangrove stands lining the Chiquimulilla Canal are under constant threat from illegal loggers and fires caused by the clearing of pasture for cattle. Volunteers assist in mangrove reforestation activities.

5. Iguana and crocodile breeding

Iguanas, crocodiles and other animals were once abundant in the south coast, but are rapidly disappearing due to hunting and loss of habitat. Volunteers assist in the feeding, care and breeding of such animals in the Hawaii breeding program.

GUIDELINES

It has been ARCAS's experience, both in Peten and in Hawaii, that the best way to avoid misunderstanding and ensure that the volunteer experience is rewarding for both parties is to adhere to several general guidelines. The following apply to participation in the Hawaii Program:

Participation The minimum stay at the Hawaii project is 2 weeks, unless the volunteer has already worked at the Rescue Center in Peten, in which case it is one week.

Cost Volunteers are asked to pay \$25.00/week to cover lodging and other expenses. ARCAS will provide lodging in its volunteer quarters at its main turtle hatchery, including bed, mosquito net, shower, kitchen and toilet. ARCAS can also arrange for home stays with area families

Food Volunteers are responsible for their own food. They can either prepare it for themselves in the kitchen or ARCAS can make arrangements to eat with local families

Transportation ARCAS will provide one free round-trip boat ride from La Avellana to the project site. All other non-project travel must be covered by the volunteer.

Language Spanish language ability is not required, but is obviously an asset

Prior Experience No prior experience is required but ARCAS will put priority on accepting volunteers with a background in marine biology, ecology, environmental education or prior work experience in environmental or development work.

Seasons Although the turtle egg-laying and hatching season from June to November is the most active time at the center, volunteers are needed at all times. For those interested in environmental education, the Guatemalan school year lasts from January to November.

Other Helpful Information

Climate The south coast climate is drier than that of Peten but equally hot. It is also characterized by a more sharply defined rainy/dry season. During the dry season - November to April - it rarely rains. The rainy season on the south coast is also not as heavy as in other parts of Guatemala with daily precipitation falling primarily between 4 and 7PM. The turtle laying and hatching season is during the rainy season, with the heaviest activity between July and October. The hot months are March-April, the cooler months, December-January.

Insects Insects can be a problem in Hawaii, so come prepared. You will be provided with mosquito coils and mosquito nets to sleep under, but you should bring your own supply of repellent.

Health There is malaria and dengi fever in the Hawaii area, but with reasonable precautions, you shouldn't expect to be infected and prophylactics are generally not needed. There is a health clinic in Hawaii. The water supply is good in the Hawaii area, but you may want to bring treatment tablets for other parts of the country.

How to get to Hawaii

Take the Chiquimulla-Taxisco ("Cubanita or other lines) at Trebol, Zona 11 or La Terminal De Buses, Zona 4 in Guatemala City Taxisco. Change to the bus for La Avellana on the Chiquimulilla Estuary.

Travel time about 3 1/2 hours. Cost Q15.00. Make arrangements with ARCAS in Guatemala City to have Hawaii staffmembers pick you up at La Avellana and take you 45 minutes down the estuary . Otherwise, the trip can cost as much as 150 Quetzals, which will not be covered by ARCAS. It is a wonderful ride though, especially at sundown, as the canal is lined with mangroves and is home to a variety of animal life, including egrets, rosy spoonbills, fish bats and four-eyed fish.

OR Take a boat from La Avellana to Monterrico, a popular resort 1 1/2hours walk north of Hawaii. Cost on regular boat, Q2.00. Boats leave about once an hour.

OR Take the bus to Chiquimulilla and then take a local bus to El Papaturro. The road to Papaturro is very slow and bumpy and takes about 1 1/4 hours. Cost: Q5.00. Take the boat from Papaturro to Hawaii. There are three boats a day. Cost: Q3.00.

If you would like to volunteer on ARCAS's Hawaii Sea Turtle Conservation Project contact Ricardo Juarez or Colum Muccio at ARCAS, Section 717, POB 52-7270, Miami, FL 33152-7270, Ph/FAX: (502)2-535329, E-Mail:GU002AIU@itinet.net. Before March 15, 1996, you can also contact: LZYC89A@PRODIGY.COM ARCAS also has a volunteer program at its Animal Rescue and Rehabilitation Center near Flores in Peten. Remember to send us some details about your background and your expectations. For a copy of our volunteer guidelines, please send \$10 to the address above.