

The Brotherhood of the Green Turtle

An American Concept Rings the Globe

By Peg Robinson

Two young men collecting small objects from the sand attracted natives by their strange actions. The scene is the 5-mile Tortuguero Beach in Costa Rica in midsummer; the spectators, mixed-blood Spanish Indians and Creoles, moving closer, found the white strangers were picking up inch-long baby turtles.

In wonder, one observer exclaimed, "Mon, fo' why dem gemmen cotch de baby turkle? Him no got meat, him too bitsy fo' soup; w'at you t'ink, Mon?"

The small anecdote of puzzlement is part of a 4-column article in the **TICE TIMES** of San Jose, Costa Rica, by Rex H. Benson, July 10, 1959, which began:

"Among the sun-drenched sands of Tortuguero Beach in northwestern Costa Rica, two American college students, Larry Ogren and Harry Hirth, are the cause of much speculating and head-scratching . . ."

The article brought out the planning by Dr. Archie Carr, graduate research professor, Dept. of Zoology, University of Florida, and Joshua B. Powers, prominent publishers' representative, the previous formation of the Brotherhood of the Green Turtle. Headlined: "Can Sea Turtle Species Be Saved From Extinction?" here, in short, was an early forecast of the success of the Caribbean Conservation Corporation, which exists to answer YES!

Headquartered in Tallahassee, Florida, this non-profit group has won full and enthusiastic support from peoples of the Caribbean area. It is to assuage hunger that CCC performs the difficult task of preserving the sparse green turtle for the immense protein value that originally nourished the settlers around the Caribbean littoral.

The earnest little CCC has won the aid of the International Union of Conservation of Nature and Natural Resources (I.U.C.N.) and of the World Wildlife fund. It is operated by volunteer unpaid workers. Although membership includes other nationalities, the movement was started by Americans and its membership is mostly American.



Measuring a big green turtle the morning after nesting. Harold Hirth with caliper; Dr. Carr with pad; Larry Ogren at right.

Book Starts Movement

It was Archie Carr's book **The Windward Road** that sparked it all. Powers sent copies to 20 friends. Then came the Brotherhood, the CCC, annual pledges — and action.

The group took over five miles of a 24-mile black sand beach — since become a national refuge — and when turtles lay their eggs there, Carr and two graduate assistants are ready. They scoop up the eggs, hatch them at their own hatchery, then fly them to turtle-depleted islands throughout the Caribbean, where local fisheries' officers place them gently into the surf or keep them for a year to grow larger.

As early as 1960 there were 27,000 eggs in the CCC hatchery. That summer they saw thirteen 300-pound mamas along the protected beach, belly-up, waiting to be tagged.

The gentle lumbering sea species got the spotlight in Dr. Archie Carr's conscience-calling book, **The Windward Road**. Carr tells of his search into the habits and migrations of the beast along miles of remote tropical

beaches. The tale unfolds like a mystery, of people and places and animals — of jaguars, mangroves, and the forest — the keynote adventure: "a state of mind," Carr calls it.

He takes the reader back to 1503 and Columbus' discovery of two low islands separated by a channel where great numbers of turtles dotted the shore and cluttered the seaway "like little rocks." Of course, he named them Las Tortugas. We now know them as the Cayman Islands, thanks to Ponce de Leon, who didn't know where he was either.

Then for 300 years these vast flotats — fleets of breeding green turtles — were a prime factor in the growth of the Caribbean. Turtle schools came from hundreds of leagues around — from Hispanola and the Lucayas, from the Yucatan Channel and the shores of the Main, to mate in the Cayman Sea and lay their eggs on the sand.

At the hunger of growing settlements, ships of a half dozen flags — 40 sloops at once — converged from Jamaica, taking all the turtles that their holds and decks could carry.

The American Fish Farmer



Dr. Archie Carr

The turtle flotas looked to them, wrongly, as infinite as herring schools. No other source from which to restock ship's stores compared to the turtle for quality, abundance and certainty. It was the one edible creature that could be captured and kept alive so long.

Turtle was a specific for scurvy. The shipwrecked survived on it for years. It fed the seaboard poor when salted or dried. A staple, it was a slave ration. A luxury in soups and curries, it was served proudly in the spacious plantation homes. Declares Carr: "More than any other dietary factor, the green turtle supported the opening up of the Caribbean."

The CCC, outgrowth of the Brotherhood, is the response to this moving book.

Force For Survival

The aims, purposes and results of the CCC have become more than favorably known to governments all over the world. The CCC has been the strongest force in activating the general awakening of concern for the survival status of sea turtles everywhere.

In a dozen years more than 175,000 turtle hatchlings have been manually added to the sea waters of the world and more than 8,000 eggs distributed for local hatching. The U.S. Government sanctioned the services of Navy planes for seven consecutive years (until the service had to be curtailed because of the Vietnam War) in the seeding, thus nourishing Western Hemispheric goodwill to a degree.

Navy and helicopter flights delivered hatchlings, eggs or both to Costa Rica, Nicaragua, Anguilla, Puerto Rico, Florida, Barbados, Ascension, Mexico, Bahamas, St. Vincent, Gren-

ada, Cayman Islands, Texas, St. Kitts, Surinam, Venezuela, Guiana, Jamaica, Virgin Islands, British Honduras, Bimini, Colombia, Panama, French Guiana, Bermuda and St. Lucia.

The CCC supplies hatching beaches at Avis Island and Bermuda as well as Tortuguero.

The long-range aim is not only to halt the decimation of the gentle *Chelonia mydas mydas*, but also to handle the situation so that humanity could see the light — by following the CCC's example we would be working for our own preservation.

In his report a few years ago, the technical director, Carr, said that 600 turtles were tagged on Tortuguero, and "a great deal of new information on reproductive cycles, growth and site tenacity was derived from tag recoveries."



Joshua B. Powers

Five men handled the beach work. Dr. and Mrs. Carr were in residence at the station throughout, with a series of visiting scientists and others, both local and foreign. Does what man has here done for the turtle foreshadow the day when again the turtle will do for mankind?

Best of all, since the human population upsurge is completely dependent on a continued and reliable source of nutritious food, the CCC is already playing a vital role by ensuring one source of valuable protein for the generations ahead. This is the product of a non-profit group of men and women who know the meaning of work.



John H. (Ben) Phipps

Life Cycle

The marine reptile they conserve is a tiny hatchling, carnivorous its first year. The animal is gathered in great numbers on Tortuguero, fed, protected and cared for instead of risking its tender new life to predators in a dangerous run to the sea. Plainly visible in shallow waters, the inchlings make tasty morsels for raccoons, birds and fish, providing they survive earlier raccoon raids on the unhatched eggs.

By the time the youngsters are a year old and the size of a 10-inch dinner plate, their foster parents place them gently into the sea where the now herbivorous creatures help to control the abounding "turtle grass."

Their migratory powers can take them 1,400 miles in an arrow-straight line to Brazil for grazing, and bring them back the same way for mating and laying. A female lays around 200 eggs and may do so for two or three consecutive seasons, her eggs being fertile from a single mating. Turtle courtship is quite impressive, and they can even make sounds in their impassioned state.

Commercial Projects Dim?

Carr is outspoken in his views on commercial turtle farming. He said: "I have yet to see or hear of a work plan for any reptile ranch that shows in realistic detail how it expects to achieve a volume of production so great that it will do anything other than increase both demand and prices.

"If the enterprise is a commercial one, it will obviously do everything possible to create new markets. Just as obviously, it will not be able to satisfy

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Florida children view a large nesting turtle as part of their learning about wildlife and its meaning.

Turtles,

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these, and so will exacerbate, rather than relieve, the predicament of the natural populations."

Before we proceed to other turtle-conservation work in Florida, here is a run-down of the three CCC leaders:

John H. (Ben) Phipps, president, a conservationist and owner of broadcasting stations, handles administration.

Joshua B. Powers, influential publishers' agent, boosts organization, incentive and growth.

Dr. Archie Carr, CCC technology director, an expert in ecology, is probably the world's foremost authority on turtles. With lengthy honors listed in *Who's Who*, he now is Honorary Consultant for the World Wildlife Fund.

The scene changes. Frank Lund, 23, observes and tags marine turtles on a 13-mile eastern beach at Jupiter Island, Florida, the fifth summer for the Jupiter native. With three college

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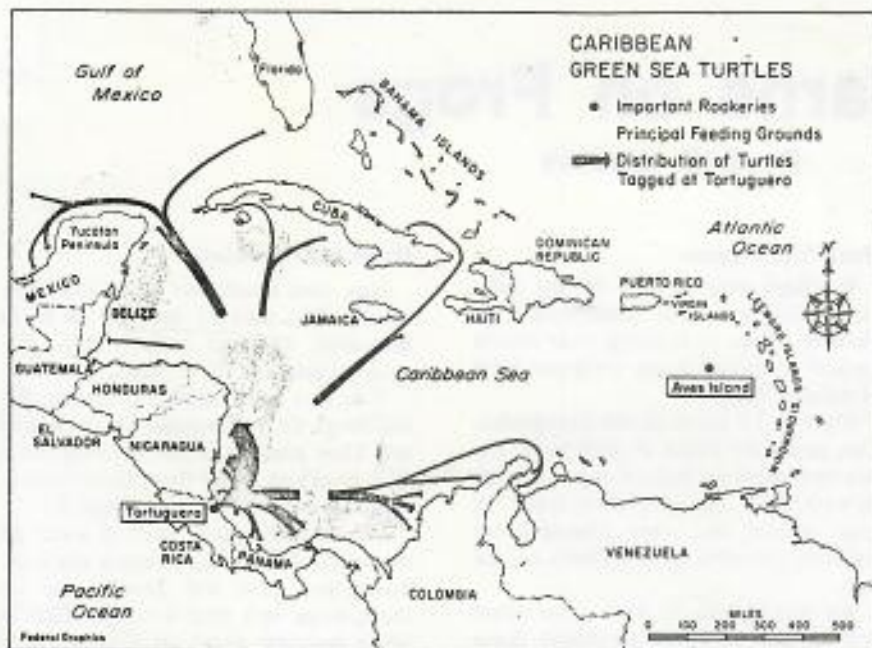
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Reporting the status of the green turtle as one of the world's endangered species, Dr. Carr illustrated his report in *National Parks and Conservation Magazine* (April 1970) with this map showing locations where tagged turtles had been recovered.

student assistants, he is employed by the town not only to research, but also move turtle nests from dangerous areas, with financing from local foundations and individuals.

With a freshly-earned degree in wildlife ecology, Lund has been a devotee of the sea turtle since childhood. He said that much research is still needed. While amassing pictures and notes, Lund keeps an eye on poachers, ("more than ever this year"); blasts commercial fishing interests for "butchering" the 1969 Florida law he helped write, closing the season on turtles during nesting, and has set a goal of pinpointing the exact status of Florida's turtle population plus finding means to protect the turtles.

The new law is not easily enforced, according to Ron Purdom, Florida Marine Patrol supervisor for the Palm Beach County area, whose 12 men are responsible for the coast throughout the counties of Palm Beach, Martin, St. Lucie and Okeechobee.

Lund's equipment includes, besides tags from Archie Carr, a secretary, tee shirts emblazoned with **Turtle Research**, printed research cards and five vehicles. Sunbleached, horny-handed and direct of eye, Lund is successfully serving his lifetime home.

Out of the Stuart (Florida) Field Laboratory, the Florida Department of Natural Resources has worked for several years, rearing for one year, then tagging and releasing green turtles.

A tagged yearling released April 13, 1972, near Delray Beach, was

caught 1,300 miles away, May 6, 1973, at Avis Island, Venezuela. Meanwhile it had nearly doubled its length and more than tripled its weight. This is not unusual.

Ed Joyce, chief of the Bureau of Marine Science and Technology, cites such examples as proof of the need and value of recent legislation requesting a conference of Caribbean countries to discuss the protection and management of marine turtles.

Ross Witham of the FDNR, who has worked since 1956 to enhance the survival chances of turtles, said: "I hope some day soon we'll have all our captive-breeding turtles in one facility. We're working with Florida Power & Light Company toward this



Hatchlings for seeding are collected from protective fence around nesting site. At height of nesting season as many as 300 protect young turtles from predators. Larry Ogren is doing the collecting on Tortuguero Beach.

end and anticipate provision of such facilities at their nuclear plant on Hutchison Island between Stuart and Ft. Pierce."

To a question about turtle food, he answered: "One aspect of my work has been seeking economical food sources. In Florida, large quantities of crab wastes are available, and these could be one economic source of food. In cooperation with Miami Seaquarium, I have shown that young turtles can live on nothing more than jellyfish. One species of jellyfish is very common in the Florida Keys, and preliminary work suggests that it might be possible to cultivate this animal in captivity. For their herbivorous diet after age one, there are a number of terrestrial plants that are suitable for food."



All aboard for the deep. Tender is carrying cases of hatchlings to the Navy plane. On the dock, styrene containers are filled with turtle eggs packed in beach sand.

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Don Kincaid inspects a green sea turtle near Sand Key Reef. Peg Robinson describes the efforts of the Caribbean Conservation Corporation to save this species from extinction in an article beginning on page 4.

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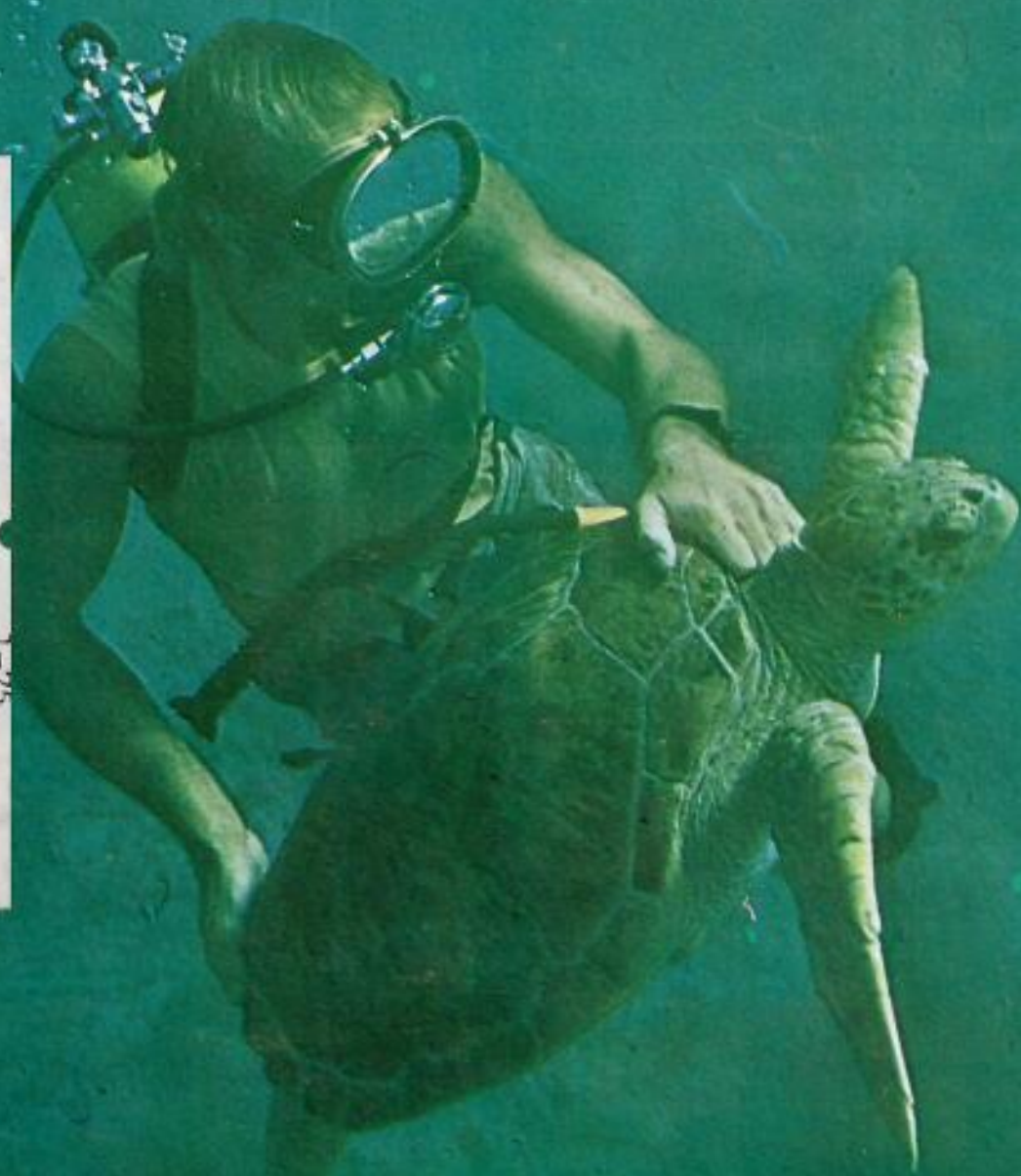
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