

THE TAMPA TRIBUNE

Metro Edition

Tampa, Florida, Wednesday, December 2, 1987

156 Pages — 25 Cents



ribune photograph by JIM REED.
: observation at the Clear-
: veloping tumors.

Green sea turtles battle disease

By MICHAEL D. DUNN
Tribune Staff Writer

CLEARWATER — Marine biologists are baffled because endangered green sea turtles in Florida waters are developing skin tumors.

The tumors, called "papillomas," have been found only on green sea turtles, although similar growths have been found on some loggerhead turtles, said marine biologist Alan Huff of the state Department of Natural Resources.

"It's a large wart-like growth. It's pretty gross looking," Huff said. "It's a surface growth that can cover the animal, restricting its movement, and it can cover their eyes."

Researchers are about to begin a study at the Clearwater Marine Science Center to determine why

the turtles are developing the tumors. Scientists think the growths are caused by a viral infection, but they don't know what is causing the infection, Huff said.

"It's getting more frequent," Huff said. "Most people out there taking samples believe there is an increase in the number of incidences, but there are no hard numbers to say whether it's a trend."

A veterinarian at the marine science center has started studying skin samples from a 50-pound green sea turtle suffering from the disease, said Director Dennis Kellenberger.

"It's really a nasty thing. Some are so tumored-out, they can't move their flippers," he said. "Some of the papillomas seem to be reducing, but then they get new ones. It's an

ongoing battle."

The disease has been seen in green sea turtles on both coasts of Florida and in Hawaii and the Cayman Islands, scientists say.

"You see it in the Keys and the Indian River, but in the reefs off West Palm Beach, the green sea turtles don't have any papillomas," Conley said.

Biologists hope to find out why sea turtles in that area are free of the disease, Huff said.

"It seems to happen more often to small turtles, although the large turtles can get it, too," Huff said. "Now we're seeing it in the Crystal River area, too."

The growths first were identified in the 1930s and were called "box warts," said marine biologist

Wait Conley. Papillomas are life threatening because they can blind a turtle or become snagged on fishing line, leaving the animal trapped, he said. They tend to grow on soft areas around the flippers, tail, head and eyes.

Conley, although not involved in the tumor research, is conducting a Sea Turtle Systematic Survey from north Clearwater Beach to Marco Island to determine how many sea turtles become stranded on west coast beaches. Another researcher is conducting the survey along Florida's east coast, he said.

Green sea turtles once were abundant along the Florida coastline, but today they are classified as an endangered species. They lay their eggs on Florida beaches from May through August.

Bill, I thought you'd be interested in this if you
think it's a good idea before we
publish it.

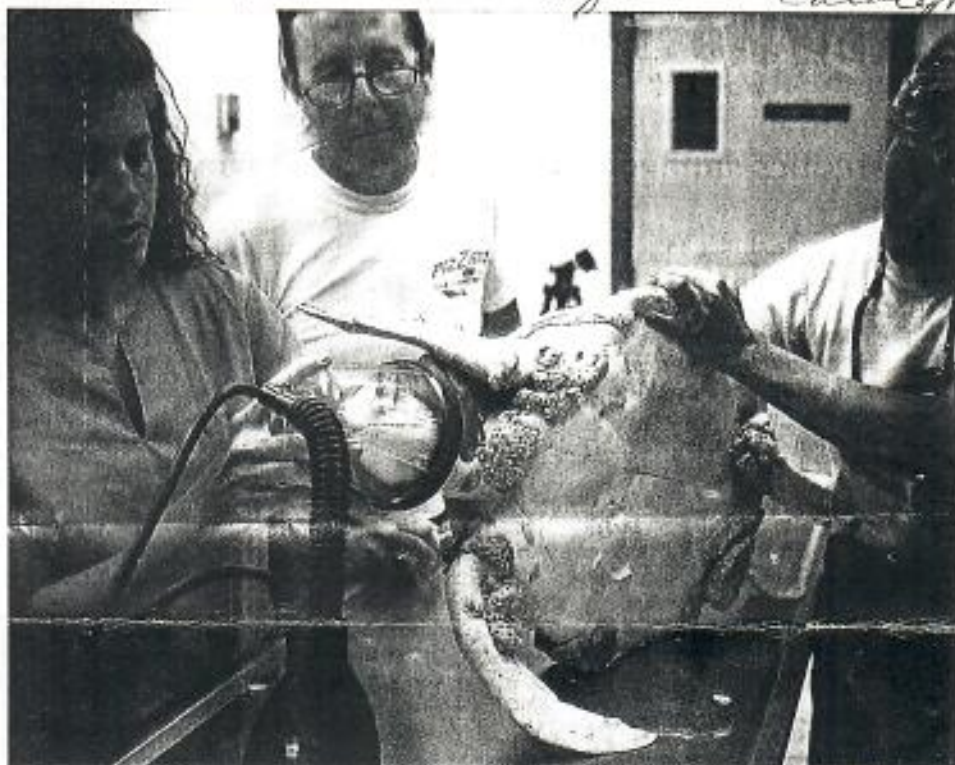
What's Killing the Green Sea Turtles?

Some researchers say pollution, others blame a virus

Until three years ago, the ramshackle building nestled among the pine trees along U.S. 1 was the only topless-dancer bar in Marathon Key, Florida. But now anyone who steps inside expecting flashing lights, alcoholic drinks and the thump of strip-joint jazz will find something considerably different: medical offices—including an X-ray room, a necropsy lab and a surgical theater—for turtles. Starting this summer, the abandoned Fanny's topless bar became the Hidden Harbor Marine Environmental Project and Turtle Hospital, dedicated to treating green sea turtles suffering from a mysterious and deadly epidemic.

What is afflicting the turtles is a virulent form of cutaneous fibropapilloma, a condition characterized by ugly external tumors. First discovered about 60 years ago, the ailment was considered relatively harmless; until the late 1980s few turtles had severe symptoms and even fewer died. Now researchers believe that as many as 90 percent of the turtles in the waters off the Florida Keys may have cutaneous fibropapilloma. In increasing numbers, "patients" arrive at the hospital in Marathon Key with the cauliflowerlike tumors, some as large as baseballs, growing on their fleshy parts—between the scales, in the mouth and on the eyes. The growths nowadays can become so large that the animals have trouble eating, seeing or swimming. No one knows what really causes the tumors, so veterinarians can take action only by treating the symptoms of a condition they know very little about. "One thing we do know," says Tina Brown, cofounder of the hospital, "is that these turtles will die without our help."

Glued shut: In these environmentally conscious times, many people are tempted to blame pollution for the epidemic. Veterinarians examining the turtles often find evidence of ingested pollutants: on the hospital's opening day this past June, a turtle was admitted suffering from malnutrition because its mouth had been glued shut by



Surgery is the best treatment: Bramson (left) anesthetizes a turtle with visible lesions

tar. But some experts shy away from blaming pollution. "If it is toxins or pollutants, we can say for certain that it is not the type of cancer-causing agents that we normally think of in fish that have liver or mouth tumors," says George Balazs of the National Marine Fisheries Service in Honolulu. Others favor a biological explanation. "We believe the disease to be caused by a viral agent," says Elliot Jacobson, a reptile expert from Florida State University's School of Veterinary Medicine. "But there are parasites in these turtles which could also contribute."

For now, the best treatment is surgery. The origins of the hospital go back to 1984, when Brown and Richie Moretti bought the Hidden Harbor Motel and fixed up a saltwater pool to display marine life. Soon they had tarpon, grouper, stingrays and other fish swimming in their 100,000-gallon backyard. Brown thought turtles would nicely round out their menagerie and applied to the state to become a turtle-rehabilitation center—the only way to legally keep the animals. Local anglers, many of whom compete with Brown's charter-fishing operation, began to bring in turtles, some of which had been caught in fishing nets. "We started seeing turtles with a wartlike growth," says Brown. "They needed much more than to be looked at, they needed to be looked after." Brown treated the tumors by

gradually tightening fishing line around them, effectively cutting them off. But soon the disease outstripped the technology. "We began to receive turtles with tumors on the eyes and in the mouth," she says. "Obviously our rudimentary surgical procedure was no longer practical." She contacted Dr. Jacobson. "I advised against tying off the tumors," he says. "Instead I went to Marathon and performed surgery."

Richie and Brown have yet to pay a veterinarian for treating the turtles. Instead, by offering free fishing and diving trips, the two lured a dozen south Florida veterinarians to the Keys to perform more than 75 operations. Now the facility boasts its own staff vet, Dr. Lisa Bramson, who performs surgery in exchange for a rent-free room. Richie estimates that, with upkeep and medical supplies, running the hospital will cost \$100,000 a year, a budget he can handle with proceeds from the motel and a video store he owns. "I tell people who want to donate money to give to the Florida State University research fund to find a cure for the disease," he says. "We can keep up with our end." As for research, Jacobson says he can afford only "one Ph.D. student working on this with a budget of \$50,000 a year." But he may soon be able to call far more attention to the plight of the sea turtles: the strange tumors have also begun showing up in Barbados—and 5,000 miles away in Hawaii.

VERNON CHURCH with J. D. DOOLEY
in Marathon Key



MEDICAL AND SCIENTIFIC NEWS

In the Florida Keys, Saviors for the Sea Turtles

The effort to rescue a species gripped by a mysterious plague has become a costly obsession for one couple — but a rewarding one.

Mike Clary

MARATHON, Fla. — The patient arrived in a panel truck, agitated, bewildered and using her flippers to whack the sides of the plastic swimming pool that held her. She looked terrible. At least 25 bulbous tumors stuck up around her eyes, mouth and the leathery skin around her shell.

"Actually," said Richie Moretti, flipping the 60 pound green sea turtle over on her back, "this one is pretty healthy. I think she might be in the 15% we can save."

Moretti, 48 is a former Volkswagen mechanic who moved to the Florida Keys nine years ago after buying a motel next door to a topless lounge. Moretti still runs the Hidden Harbor Motel, but the lounge, called Fanny's, has been converted into what is believed to be the world's only veterinary clinic devoted exclusively to treating engendered sea turtles plagued by a mysterious and debilitating disease.

The disease, called fibropapilloma causes grotesque tumor masses that are not malignant but usually prove fatal when they grow over the animal's eyes and mouth and hinder feeding. "They literally starve to death," Moretti said.

Up to 60% of some green turtle populations found in the Florida Keys and areas of the Caribbean are believed



What is believed to be the world's only veterinary clinic devoted exclusively to treating endangered sea turtles plagued by a mysterious and debilitating disease has opened in the Florida Keys. Up to 60% of some green turtle populations found in the Florida Keys and Caribbean areas are believed to be affected by fibropapilloma. The disease causes grotesque tumor masses that can prove fatal when they grow over the animal's eyes and mouth and hinder feeding.

to be affected, according to Elliott Jacobson, a professor of zoological medicine at the University of Florida who is working with Moretti and his partner, Tina Brown.

years it has "increased in prevalence and distribution, and we don't know why", Jacobson said. His studies found that papilloma is related to the herpes virus.

"Brown and Moretti have been effective in calling attention to a little-noticed plague"

Turtles in Hawaii have also been affected, and the disease is beginning to show up the warm waters of Central America and Australia.

The disease was reported in 1938, but in the last few

"It is a devastating, life-threatening problem which could knock out whole populations," he added. "We're seeing it primarily in juveniles, and when they become breeding

adults at 15 to 20 years old, they could pass it on through the egg."

For Moretti and Brown, who moved to Middle Keys from Orlando seven years ago, the turtles have become a costly obsession. "Our plan was to compete in fishing tournaments and take it easy," Moretti said.

Instead, the two have poured the proceeds from the 21-unit motel and a couple of video rental stores into the nonprofit turtle project. Moretti figures he has spent about \$250,000 to buy the former lounge, remodel it and install operating tables, lights, a sterilizer and an anesthesia machine.

The clinic officially opened in June, but Moretti and Brown say they have treated more than 350 diseased or damaged animals since 1985, when a fisherman

brought the first injured turtle to them.

Of the dozens with papilloma, most have died, so underweight when found that no amount of tube fed Gatorade and Nutri-Cal could save them.

The one arriving in the panel truck could be an exception. Brown turned on the garden hose near the marina and scraped from the animal's shell masses of yellow eggs laid by marine leeches. Moretti readied a shot of antibiotic. Days later, when the turtle is accustomed to her new surroundings in a salt-water swimming pool, a veterinarian will come by to surgically remove the



tumors.

This turtle faces at least six months of rehabilitation, Brown said.

Fibropapilloma isn't all sea turtles have to contend with. Collisions with boats and propellers are also frequent.

Moretti and Brown have learned to use fiberglass to make repairs to cracked shells and how to sew up flesh wounds vulnerable to infection.

"This is a global disease, a forcaster of other problems in the marine environment."

This turtle also had a deep gash on one flipper and cracks and a dash of blue paint on its shell, evidence of a run-in with a boat hull.

Brown and Moretti have been lauded for their work by the National Marine Fisheries Service, and they were mentioned in a recent issue of National Geographic magazine.

Their work with the turtles has led them to environmental activism; they have gone to sea to protest the military's use of the Atlantic as a practice bombing range and have sued the Commerce Department to halt the harvesting of sea grass-prime turtle habitat-in the Sargasso Sea. Some seaweed is used as protein in animal food.

Jacobson, the marine biologist, said that while battling long odds in trying to

save individual turtles, Brown and Moretti have been effective in calling attention to a little-noticed plague.

"Government agencies have avoided these kinds of problems, and so it's left to the private sector to provide humane care of these animals," he said. "This is a global disease, a forcaster of other problems in the marine environment. People concerned with the quality of life should be concerned about what's happening with green turtles."

For Brown, a former hairdresser, working with troubled turtles now seems inevitable. "Living here in the Keys, it is impossible to ignore nature, and turtles are a part of it," she said. "Nobody else was doing anything so we did."

Moretti recalls winning the first two deep-sea fishing tournaments the couple entered in 1984. "That was satisfying but light-weight compared to fixing sick animals and returning them to the wild," he said.

"I like being needed and these animals need us. If I could think of any way to enjoy life more, I'd do it."

Reprinted courtesy of Mike Clary and with permission of the Los Angeles Times. Mike Clary is a free-lance writer and Florida correspondent for the Los Angeles Times. ♣

Two people were fighting over a piece of land. To resolve their differences, they agreed to put the case before a rabbi. The rabbi listened but could not come to a decision because both seemed right. Finally the rabbi said, "Since I cannot decide to whom this land belongs, let us ask the land." He put his ear to the land and after a moment he straightened up. "My friends, the land says that it belongs to neither of you - but that you belong to it."

... *The Talmud*

Sioux prayer

A Sioux Prayer for the Earth
Grandfather Great Spirit
Fill us with the Light.
Give us the strength to understand,
and the eyes to see.
Teach us to walk the soft Earth
as brothers and sisters of all that lives.

Human-Champion Animal Bond News

Dogs Make the Dentist OK

Myrna Chandler Goldstein

The dentist doesn't seem so bad with a dog in your lap.



Each morning Dr. Neale Eckstein, a pediatric dentist in Sudbury, Massachusetts, leaves for work accompanied by his four-legged dental assistants: Nikki, a Toy Poodle, and Niblets, Silky and Callie, his three Maltese. The dogs have become an integral—indeed, sometimes essential—part of the state-of-the-art dental practice Eckstein shares with his partner, Dr. Norman Goldberg.

According to Dr. Eckstein, the dogs provide an instant means of communication with his

young patients. "They sit on the children's laps and are directly involved with them," he said. "Sometimes we have children who are really scared of being at the dentist's. They come in, see the dogs and begin to relax. Then they want to come back to see the dogs."

On those rare occasions when Dr. Eckstein is unable to bring the dogs to the office, he is very careful to schedule an appointment for a child for whom the dogs are "absolutely essential."