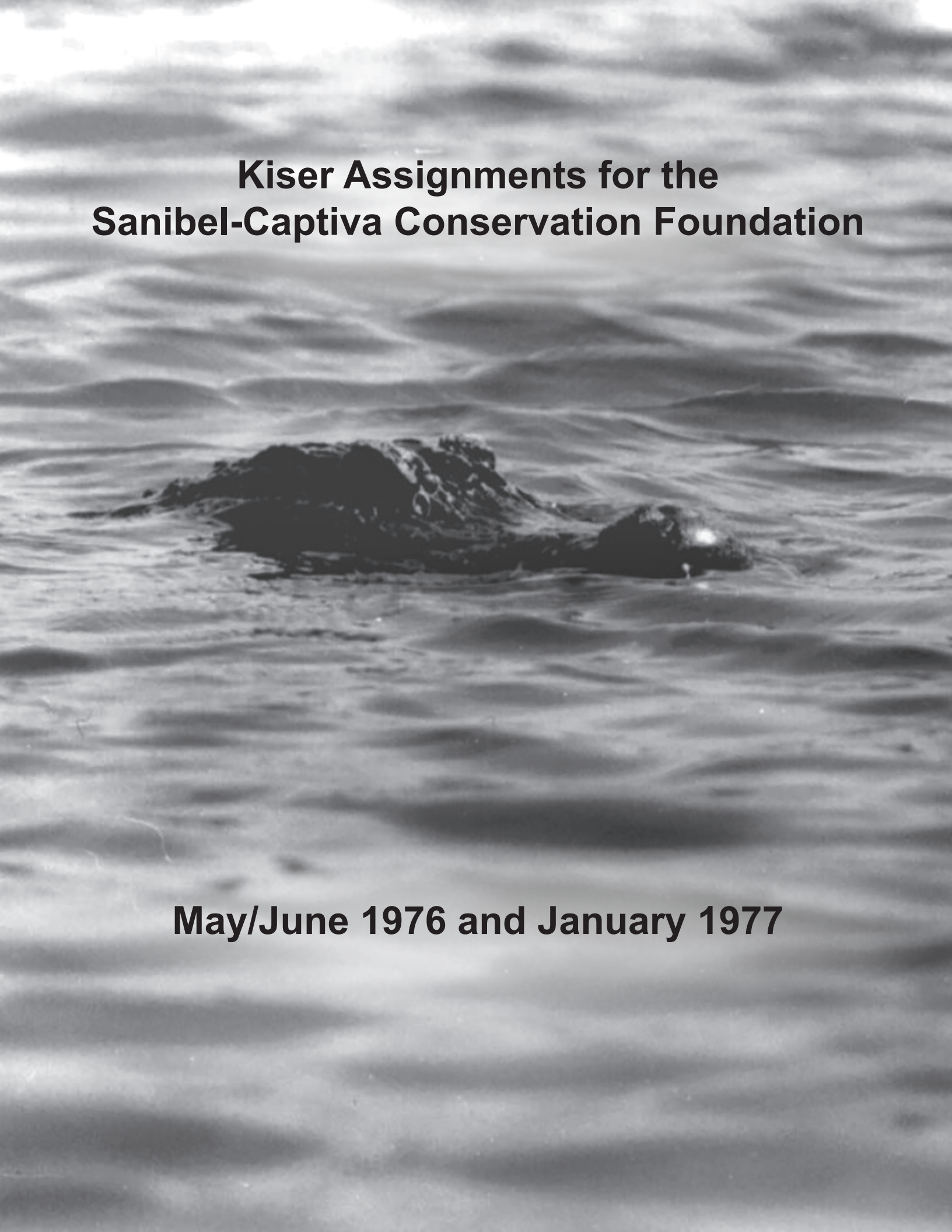
Kiser Assignments for the Sanibel-Captiva Conservation Foundation



May/June 1976 and January 1977

Kiser Assignments for the Sanibel-Captiva Conservation Foundation

May/June 1976 and January 1977

Kiser Environmental Publications, New Market, Virginia
Email: kecgreen@aol.com
Web: www.kecgreen.com

On the front cover: American alligator on Sanibel Island, Florida in 1974, © Jonathan V. L. Kiser.

On the back cover: Bowman's Beach on Sanibel with invasive Australian pine trees in January 1978, © Jonathan V. L. Kiser.

Kiser Assignments for the Sanibel-Captiva Conservation Foundation - May/June 1976 & January 1977

Table of Contents

Overview/Background

These reports trace the early history of Jonathan Kiser's involvement with the Sanibel-Captiva Conservation Foundation (SCCF). Mr. Kiser's first intern assignment started in May 1976 as part of the Shaker Heights High School Senior Project program. This volunteer effort lasted several weeks and entailed a variety of important activities, including:

- Helping with outreach efforts, such as mailing SCCF promotional literature to people across the United States.
- Wildlife observation excursions along hiking trails and by canoe.
- Tagging loggerhead sea turtles with the Caretta Research Project,
- Nighttime alligator tagging with naturalist George Weymouth on the Sanibel River.
- Researching and observing ancient Calusa Indian shell mounds.

The following January 1977, Jonathan completed his second internship with the SCCF. He was joined by his brother, Bill Kiser, and Bill's girlfriend Cindy Conover from Franklin Pierce College in New Hampshire. The threesome's primary assignment was to investigate the impact of Brazilian pepper trees on mammals in a wetland area. Many other activities were accomplished during the same period, including:

- Clearing problem trees with naturalist George Cooley to make way for the new SCCF headquarters.
- Animal and plant observation hiking trips.
- Targeting and removing non-native Melaleuca trees.
- Flora and fauna and trail clearing canoe trips along the Sanibel River.
- Assisting an Oberlin College group with Brazilian pepper tree eradication.
- Photographing erosion patterns on Sanibel and Captiva Islands.

Most of the photographs taken by Jonathan during 1976 and 1977, including those relating to the coastal erosion patterns along the northern end of Sanibel

and along Captiva Drive near Tween Waters Inn were delivered (at that time) to the SCCF and the Island Reporter. Copies were, therefore, unfortunately not available for this report. Additional Kiser photos taken on Sanibel during the same general time period are included in this report, supplemented with images from the public domain. To further strengthen the material, scientific names of plants and animals encountered during these adventures, along with a few insight notes, have also been added to the original reports.

These 1970s efforts on behalf of SCCF marked the beginning the Jonathan Kiser's environmental career which has now spanned nearly 40 years. Over the ensuing decades, Jonathan has completed a multitude of environmental assignments on behalf of public and private sector organizations, the federal government, state agencies, regional entities, local municipalities, and others, on an international level. Projects have ranged from wildlife conservation instruction and renewable energy research, to energy conservation audits and full cost accounting of recycling and waste management programs, to field litter surveys and field investigations addressing environmental issues faced by our National Parks, to zero waste benchmark studies and National Environmental Policy Act (NEPA) regulatory compliance reviews in the wake of Superstorm Sandy.

More information regarding Mr. Kiser's environmental consulting activities may be found at: www.kecgreen.com. Jonathan may also be contacted by email at: kecgreen@aol.com, and by telephone at 703-431-1106.

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Report #1

My Conservation Experience On Sanibel Island, Florida

By

Jon Kiser

June 4, 1976

My Conservation Experience on Sanibel Island, Florida - By Jon Kiser

Daily Log/Field Observations: May 19, 1976 through June 1, 1976

Wednesday, May 19, 1976

I arrived in Fort Myers, Florida at 12 noon, rented a car and then drove 20 miles to Sanibel Island, Florida. At 2:00 p.m. I met with my sponsor, Dick Workman, Director of the Sanibel – Captiva Conservation Foundation (SCCF). He briefed me on the options I had for the internship and gave me some literature to read. I spent the remainder of the afternoon familiarizing myself with the literature which dealt with the barrier islands and the ecological situation of Sanibel Island.

Thursday, May 20, 1976

Arrived at the SCCF at 9:00 a.m. and discussed the reading material with Mr. Workman. At 9:30, my sponsor and I journeyed to one of Sanibel's beautiful and undisturbed beach sections. I observed many different species of birds that reside near the waterfront. The white sand beach was covered with shells, and two sand bars could be seen off-shore in the Gulf of Mexico.

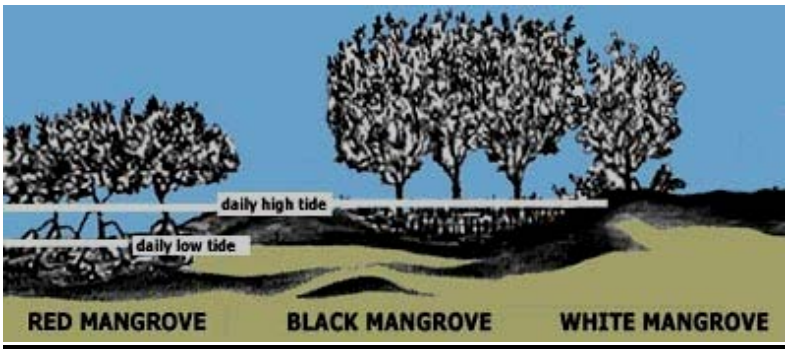
Sanibel seashore near East Gulf Drive, January 1980, © Jonathan V. L. Kiser.

After lunch, we journeyed to the neighboring island, Captiva. I noticed a sharp contrast in the beach there as the waves covered what little sand there was. Mr. Workman added many helpful facts about the different birds we saw and why the two barrier island shorelines varied so differently. Arrived home at 5:15 p.m.

Friday, May 21, 1976

At Mr. Workman's suggestion, my mother and I journeyed to Corkscrew Swamp Sanctuary in Naples, Florida. We left at 8:00 a.m. and made the 30 mile journey to the refuge, arriving at 9:16 a.m. We walked on a boardwalk which wound its way three miles through the spectacular marshlands in the refuge. I observed many interesting trees and plants, particularly the bald-cypress (*Taxodium distichum*) and mangroves. The bald-cypress trees are conifers that shed their needles around November.

Bald cypress. Source: Public domain.



Mangrove species (Left to Right): ***Rhizophora mangle, Avicennia germinans, & Laguncularia racemosa.*** **Source: Public domain.**

The mangroves were medium height and dark green. They are continually growing, closing off swamps and lagoons. I saw such birds as great egrets (*Ardea alba*), snowy egrets (*Egretta thula*), great blue heron (*Ardea herodias*), brown pelican (*Pelecanus occidentalis*), and roseate spoonbill (*Platalea ajaja*) resting in the trees and searching for food in the water.

From Left to Right: Great egret; snowy egret; great blue heron; roseate spoonbill. Source: Public domain.

The highlight of the day was when we came upon a hatchery of baby stork (*Ciconiidae*).They made a loud and unpleasant noise, but were quite fascinating to see. Mr. Workman had given me some pamphlets that described many of the birds and plants in the refuge, and I was able to appreciate more sights because of this information. Arrived back at Sanibel at 5:30 p.m.

Stork chick. Source: Public domain.

<u>Saturday, May 22, 1976</u>

Arrived at the Conservation Foundation at 9:15 a.m. I received a nature trail map from Mr. Workman, complete with a list of things to look for out on the trail. Then journeyed to the newly developed nature trail located in the J.N. Ding Darling National Wildlife Refuge on Sanibel. On the footpath, I noticed many different kinds of tropical vegetation. Huge cacti (*Cactaceae*) and bamboo trees (*Bambuseae*) were abundant as well as a variety of palm trees (*Arecaceae*).

I was quite intrigued by the vast number of small lizards (*Lacertilia*) scurrying about and by the colorful Florida tree snails (*Liguus fasciatus aurantius)*. The path was lengthy and the mosquitoes (*Culicidae*) were bad, but the trip was well worth it.

Florida tree snail. Source: Public domain.

At the end of the trail was an alligator (*Alligator mississippiensis*) hole with two visible three-foot long gators. While it was exciting to see these alligators, the fact that they were "tame," due to people feeding them, took some of the thrill out of the sighting. They were still very dangerous! I finally made it back to my car by 3:15 p.m.

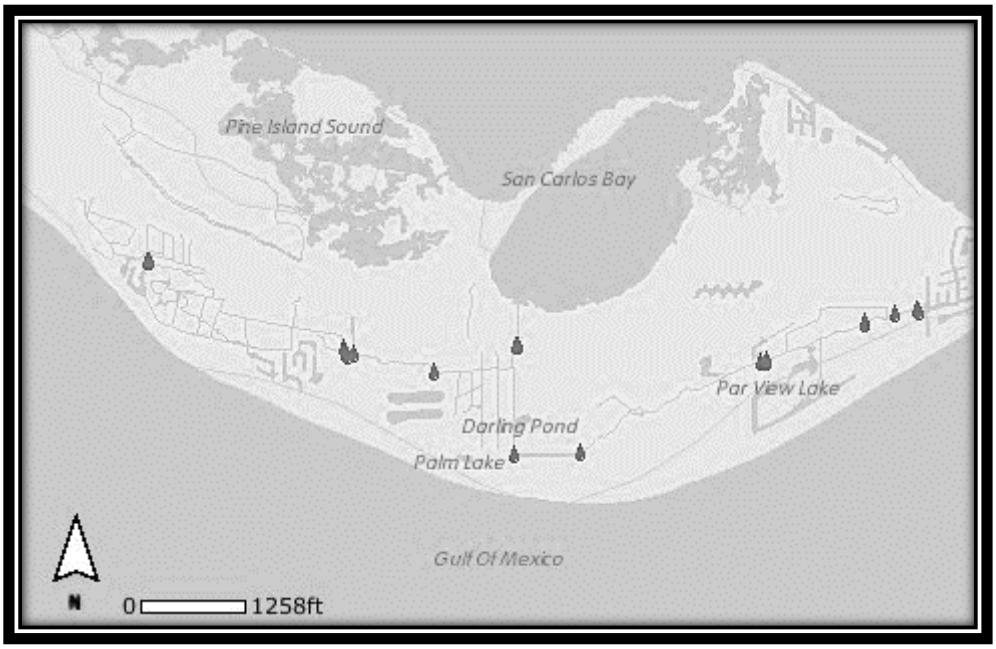
Monday, May 24, 1976

The rain poured down the entire day, so I spent my day at the SCCF. This was the home base for all of my internship exploits. I assisted Mr. Workman's secretary with a mailing (e.g., addressing, stamping, etc.) of SCCF literature to people in various states. While doing that, I also learned much about the Foundation. Mr. Workman and his fellow workers face many problems on the island. Some include: 1) The ever increasing number of people wanting to develop on Sanibel and those who do this without a permit; 2) Trying to control this problem; 3) Invasive trees and plants that are so out of control that they are overcrowding native vegetation; and 4) Determining a way to stop pollutants from

further entering the fresh water Sanibel River (that is so important to the island wildlife). The workday ended at 5:00 p.m.

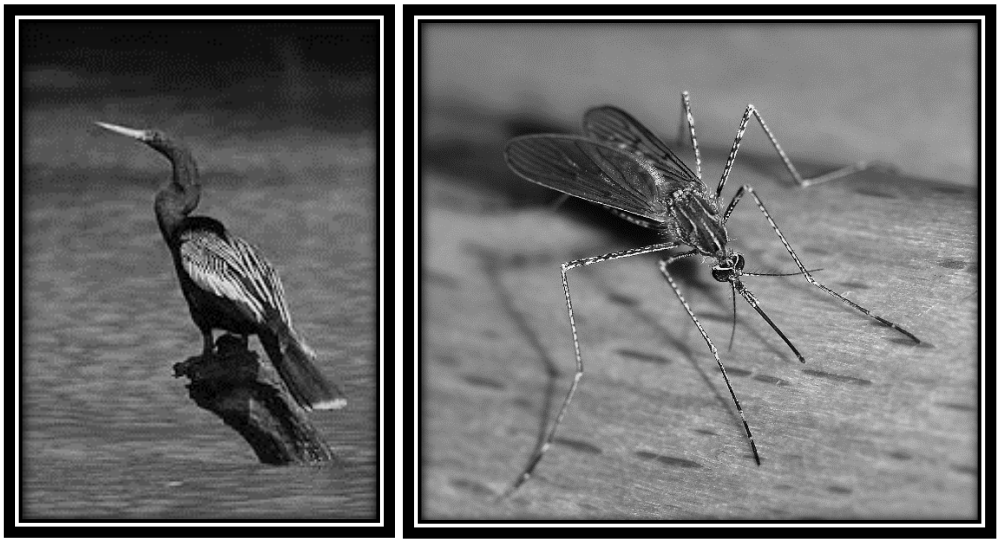
Tuesday, May 25, 1976

Getting up at 6:30 a.m., I met three other naturalists at the Sanibel River near Tarpon Bay Road. (Note: The Sanibel River is actually not a river, but a low area that collects rainwater between ridges on Pine Island Sound and the Gulf of Mexico. It's also often called a meandering slough – marsh.) We all got in one canoe and slowly started down the river. Because the water level was so low, in many spots we struggled to continue on. We also encountered numerous portages.



Sanibel River Image. Source: Public domain.

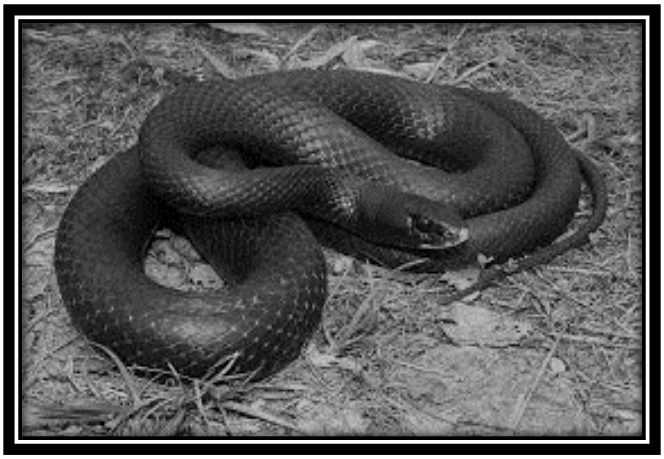
Birds were everywhere, many of them in their nests. At one point, we rescued two baby anhinga birds (*Anhinga anhinga)* which had fallen in the river from their nest. We were able to put them back in their home.



Anhinga (Left) and Mosquito (Right). Source: Public domain.

In the denser areas, the mosquitoes were unbearable, but we managed to survive. At another point in the river, we saw two wild alligators which was really a thrill. A wild gator is one that has not been constantly fed by humans, and therefore they are a much rarer sight. We stopped awhile near the gators and on the nearby bank I found part of an alligator's jaw with some teeth still intact. I was extremely pleased with this find.

As we continued, we saw many nesting spots of the great blue heron, and the great egret. The day's activity was topped off when an 18-inch black racer snake (*Coluber constrictor priapus)* dropped into our canoe! No one panicked, and soon the snake was safely on its way swimming in the water.



Black Racer. Source: Public domain.

As our journey neared the end of river, we passed through manmade canals near Beach Road. The contrast between the two parts of “the river” was amazing and provided an excellent way to end an absolutely breathtaking journey. Before the trip, Mr. Workman had given me a news article that he had written about the Sanibel River. It proved to be very helpful as I knew what to look for and expect. At 3:00 p.m. the trip was over, but not the day’s activities.

At 9:30 p.m. my mother and I were picked up on the beach in front of our house by a member of the Caretta Research (CR). CR was a hands on research, conservation, and education project with a mission of protecting loggerhead sea turtles (*Caretta caretta*) survive. (Historical note: This sea turtle monitoring program was transferred to the SCCF when CR on Sanibel disbanded in 1992.)

The loggerhead is rarely seen, but tonight we were in for a real treat. After riding down the beach in the dark for a few miles in our jeep, we came across what looked like tractor marks emerging from the Gulf of Mexico. Upon closer inspection, we realized they were the marks of the female loggerhead sea turtle which was still on the beach laying her eggs. I was truly excited! After digging a two-foot hole, the turtle laid about 100 eggs, during which time she remained in a trance-like state. When she had finished, our guide turned her away from her eggs so she wouldn’t cover them over. This was done so he could remove the eggs and transport them to a safer location where they could be hatched away from people and predators.

Loggerhead Sea Turtle Tracks. Source: Public domain.

Next, the turtle was flipped on its back so she could be tagged and weighed. She weighed a solid 250 pounds! The turtle was then directed back into the water. After traveling down the remainder of the beach (8 miles), we started back. When we were about halfway back we came across another turtle! This time I helped with the standard tagging and weighing process and it was quite an experience. Most people don't get to see any turtles, yet we were fortunate enough to see two that night. We arrived back at our place by 1:30 a.m. and I went to sleep immediately after a day that I will never forget.

Wednesday, May 26, 1976

Arrived at the Conservation Foundation at 10:00 a.m. I shared my previous day's activities with Mr. Workman who seemed to be very interested. He then gave me a detailed article dealing with reptiles found on the island. I was able to learn not only the types of Sanibel reptiles, but where they can typically be found and whether or not their population is the increasing, decreasing, or staying the same. Mr. Workman then reached out to Mr. George Campbell, local naturalist and author, to see if he was available to have me help him with a study of alligators and snakes on the island. I next traveled to the Sanibel Lighthouse and talked with an authority from the CR Program.

Sanibel Island Lighthouse. Source: Public domain.

I was able to learn a great deal more about the loggerhead turtle, adding to the experience from the previous night. The authority gave me some literature and directed me to a display outside of the lighthouse. The display was done very well, explaining the entire egg laying process with pictures of each step. The remainder of the afternoon was plagued by rain. Quitting time was 3:00 p.m.

Thursday, May 27, 1976

Arrived at the Conservation Foundation by 10:00 a.m. Read some of Mr. Workman's articles dealing with a new type of waste disposal unit for the home which would save a lot of money, requires no water and appeared to be very practical on an island such as Sanibel.

Later we traveled to a nature trail which has been on the island for some time. Mr. Workman pointed out a Brazilian pepper tree (*Schinus terebinthifolius*) stump which was sprouting new branches. This showed how quickly this problem tree grows. One of the ways to stop it from growing is through the use of poison. Walking further down the path, I noticed wild cotton *(Gossypium hirsutum)* growing abundantly. Soon I picked up the scent of a skunk, but Mr. Workman informed that it was not skunk, but a White Stopper shrub (*Eugenia axillaris*) that had the aroma of one. This really fascinated me. I also observed a beehive covered with bees, and a wood pecker's nest that had newborn babies chirping away inside. There were many lizards, as well as various butterflies and birds.

I was interested to learn from Mr. Workman that the black coating on some of the sabal palm trees (*Sabal palmetto*) was caused by a fire that swept through the area five years before. I took many pictures which I hoped would be printed in the Island Reporter, Sanibel's newspaper. This was a reasonable hope, since the Reporter had provided me the film for with my camera.

Next we traveled to the home of Mr. George Weymouth who, along with George Campbell, heads up the tagging and observing of alligators on Sanibel. We made arrangements for me to observe the alligator tagging process with Mr. Weymouth. I arrived home at 5:00 p.m.

Friday, May 28, 1976

Up by 8:30 a.m., and on my way to Captiva Island by 9:00 a.m. to take some pictures. My objective was to capture some shots showing the extremely eroded beaches and compare them to the wide beaches on Sanibel, which I later photographed. I next drove through the Ding Darling Wildlife Sanctuary and took quite a few pictures of wildlife, especially birds. A tremendous thunderstorm limited the outside activities for the remainder of the day, but there was still something to do. I stopped by the island newspaper office with Mr. Workman and picked up an electric flash system for my camera so I would be able to take night pictures. I had to buy some accessories for my camera so the flash would work properly with my system. There wasn't too much else for me to do for the rest of the day because of the rain. I could only sit and hope that the weather would clear up since I was supposed to tag alligators later in the evening.

To my delight, the weather did clear, just in time for a beautiful sunset. Mr. Weymouth picked me up in his truck at 8:30 p.m. and we drove to the same spot where I started my Sanibel River canoe trip. He furnished all of the supplies including a canoe, two headlights, a long pole with a noose, and a net. Tagging alligators requires, first of all, that you get the alligator in the canoe! Next you measure it, determine the sex, and tag it by cutting off particular scales on the top of its back. Since alligators feed at night, tagging them is best done after dark. As we approached our first alligator, I must admit that I was shaking quite a bit. I leaned far over the front of the canoe extending the pole with the noose as far as possible.

George Weymouth Measuring Gator, Sanibel Island, May 1976, © Jonathan V. L. Kiser.

I was able to get the noose around a big gator's head and then Mr. Weymouth splashed the water which sent the gator in motion. I held on for dear life as the reptile thrashed about for nearly five minutes. Finally, Mr. Weymouth was able to grab hold of the gator's now closed mouth and pulled her into the canoe. It was a sight I will always remember. Next, I put a large rubber band around the gator's mouth to hold it closed and then we went through the measuring and tagging process. She turned out to be over six feet long! We then caught a male that was six and one-half feet long. We could see the alligators very well at night since their eyes could be seen as a bright red color when the head lamp light was shown in their direction. In all, we tagged eleven alligators, including a few baby gators no more than 20 inches long. The time flew by quickly and soon it was 1:15 a.m. and we decided to go home. I had so much fun tagging gators, after getting over the initial fright, that I plan to do it again. I got home at 1:30 a.m. and was very tired.

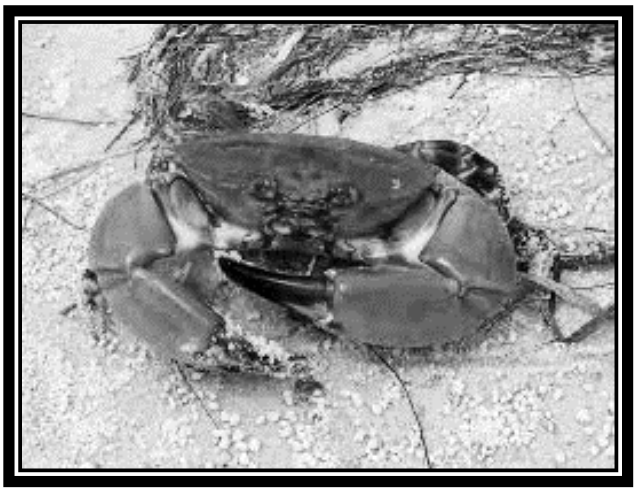
Gator Underbelly, Sanibel Island, May 1976, © Jonathan V.L. Kiser.

Saturday, May 29, 1976

Up by 10:00 a.m. and soon on my way to Tarpon Bay Marina where I met Mr. Workman. We launched his canoe and paddled toward a canoe path on the other side of the bay. As we passed the moorings supporting the boat dock, I noticed brown pelicans resting on the top of each mooring. It was a beautiful sight! As we entered the canoe path, I observed that the red mangrove vegetation surrounding the water was much denser than that on the Sanibel River. The trees had grown in such a way that we were literally paddling through a tunnel.

Red Mangrove Forest. Source: Public domain.

Soon we emerged into a larger open body of water, surrounded primarily by red mangroves. There were many birds to be seen as well as quite a few colorful shells on the bottom of the crystal clear water. On very close inspection, I observed Florida stone crabs (*Menippe mercenari*) crawling along the sandy bottom. We then passed a man who was crabbing by himself for his dinner. He was the only person we encountered which was one too many as far as I was concerned.



Florida stone crab. Source: Public domain.

On our journey we also saw many anhinga nests as well as other birds in their nests. We didn't see any alligators however. After the trip, I traveled along the San Carlos Bay side of the island. I observed that this side was largely controlled by mangroves. In some spots, there was a small beach, but nothing that could compare to the much wider and longer beach on the Gulf of Mexico side of Sanibel. Arrived home by 3:30 p.m.

Monday, May 31, 1976

Being that this was the Memorial Day holiday, the SCCF was closed and I did not have any other assignment.

Tuesday, June 1, 1976

I was up by 8:00 a.m., arrived at the Conservation Foundation by 9:00 a.m. and Mr. Workman filled out my evaluation sheet. He also gave me some ideas about writing my report, which I spent most of the morning writing. I next went to the Island Reporter office to see if my pictures had turned out. They were not yet ready, but a man who worked there gave me some helpful hints about developing film while the pictures were being processed. I was quite pleased with my shots as was Dick when he saw them.

Later, I went out to the half-finished golf course on the island at Mr. Workman's suggestion. It was an excellent example of man's desire to destroy the beauty of this quickly diminishing paradise, and then deciding not to use it, making the entire effort a total waste. Although many of the problem plants and trees had been removed during this unfinished project, a number of valuable ones went with them. This really made me angry. The rest of the afternoon I spent talking to an archeologist who was examining some ancient Indian mounds on the island. I hadn't known about such mounds, and I was intrigued by his knowledge and experience with them.

This was a good way to end my Sanibel experience, but I was truly sorry to find it to be over so soon. I learned many new things that I will be able to share with others. Hopefully, in the near future, I will be able to return to this lovely island and continue to help to preserve its natural beauty.

Sanibel sunset, May 1976, © Jonathan V.L. Kiser.

Summary

My Senior Project on Sanibel Island, Florida was an extremely educational and worthwhile experience; one I will never forget. Each work day offered a variety of challenges ranging from the tagging of six-foot alligators and 250 pound sea turtles, to observing the differences relating to multiple barrier islands and beaches. The great abundance of wildlife and vegetation on Sanibel also provided a number of fascinating moments.

Each day usually lasted from 5 to 8 hours expect when rain interrupted. Because the work that I was involved with was so fascinating, time seemed to fly by, and the work day was over before I realized it. I worked with professional naturalists, biologists, and others. Since I was guided by such authorities, I was able to learn much more about everything that I was involved with than if I were working alone. SCCF Director Dick Workman guided and aided me in many ways. His variety of articles helped me obtain the background information that I needed to understand the projects that I was involved in with. He shared his knowledge with me on many occasions by pointing out interesting plants and trees and wildlife that I was unable to readily identify. He also set up projects for me with other authorities in different fields which I truly appreciated.

For all of my life I have been attracted to wildlife and the beauties of nature. During my Senior Project I was exposed to many new things that I had not previously encountered. The SCCF works to conserve the natural beauty of Sanibel and Captiva Islands, and my experiences have made me realize how important this organization is. With so much of our country's natural beauty being destroyed by development, I heartily support what the Foundation is doing. The people involved with this organization face a great amount of opposition by thoughtless people who seem to care little, if any, for the wonders of nature. This is why I honestly admire such persons as my sponsor, Dick Workman.

I experienced no problems during my Senior Project and also saw no weaknesses that were associated with my Senior Project. The people who I encountered and worked with represented a united effort to preserve the natural beauty of Sanibel Island.

I am truly grateful for the opportunity I have had to participate in the Shaker High School Senior Project Program. Based on my experience, I believe that the "50-mile radius" (i.e., restricting students to projects that are within 50 miles of the school) ruling is good only if the project is not worthwhile. Each project should be evaluated individually and the 50 mile restriction ruling should be relaxed for worthwhile assignments. The extension of the project for another week would allow students the chance to become more deeply involved with his or her project. I know this to be true with my project, as time seemed to fly by before I realized what happened to it. Still, I am really grateful to be given this worthwhile opportunity and I hope, for the sake of future students, that this program is continued.

Appendix 1

SHAKER HEIGHTS HIGH SCHOOL
SENIOR PROJECT PROGRAM

Enclosed materials include:

1. Sample format of Daily Log
   A Daily Log must be kept by each senior during the Senior Project. When turned in at the end of the Project time in June it will be read by the Senior Project Committee and will become the property of Shaker Heights High School. Personal copies may be made for the student to keep.
2. Sample Format of Senior Project Report
   A short written report of your project must be submitted in June, describing your Project experience.
3. Sponsor's Evaluation Sheet
   All students are required to have their sponsors fill out the evaluation sheet and return it to the High School at the end of the Project, Thursday, June 3. Those students who are working out of town must have their sponsors mail the report to the Committee so it is received by the above date.

Reminders and Things to do

1. Students who are currently taking AP courses and who will take AP examinations are reminded that they are required to attend their AP classes until after they take the AP test. You are excused from your other classes starting on May 13.
2. Before leaving school, turn in textbooks and settle all library accounts. This should be done by Tuesday, May 11. Mrs. Heidemen, Textbook Secretary who is located in Room 016, Textbook Office, will sign and stamp the checklist which already has been given to you.
3. Advise your sponsor that he or she will be contacted by telephone, letter, or visit sometime after the first week of the Senior Project period for an informal appraisal of your work.
4. All end-of-Project materials (Log, Report, Sponsor's Evaluation) must delivered to the main office of the High School not later than the end of the school day of Thursday, June 3.
5. The address for all Senior Project communication by mail is:

   Senior Project
   Shaker Heights High School
   15911 Aldersyde Drive
   Shaker Heights, Ohio 44120

Appendix 2

SHAKER HEIGHTS HIGH SCHOOL

SENIOR PROJECT REPORT AND DAILY LOG INFORMATION SHEET

A written report on your Senior Project must be turned in, along with a daily log, for evaluation upon completion of the Project period (Thursday, June 3). You may use the suggested format which follows. In any case, provide similar information in your written report.

1. Describe the general nature of your Senior Project
    a. Time spent on job
    b. Scope of learning experience
    c. Quality of learning experience
2. Summarize your reactions to the Senior Project experience, considering the following questions:
    a. Did the experience provide you with any new career directional ideas?
    b. Did the experience add anything of significance to your knowledge of, or interest in the subject of your project?
3. Describe the weaknesses in your Senior Project or the problems you encountered during the experience.
4. Give your evaluation of the Shaker Heights High School Senior Project program, including your recommendation regarding perpetuation of the program.

DAILY LOG FORMAT

Write a brief, informative summary of each day's activities during the dates of your Senior Project. Some suggestions to include in the log might be:

1. Time involved each day
2. Brief statement of day's activities
3. Any "highlights" – things of highly significant value
4. Sponsor's role, helpfulness
5. Any reflections of personal thoughts on the day's activities

Appendix 3
Sponsor's Evaluation

SHAKER HEIGHTS HIGH SCHOOL
SENIOR PROJECT PROGRAM

SPONSOR'S EVALUATION

Senior Project evaluation for John Kaser
Use the rating system below to indicate your appraisal of the student's personal qualities.

	Poor	Fair	Good	Excellent
Dependability				
Seriousness of purpose				
Cooperation				
Initiative				
Contribution				
Motivation				
Punctuality				
Receptiveness to new ideas				
Ability to work with others				
Appearance and manner				

In what ways and to what extent do you feel the student benefited from his experience? The wildlife experiences here were absolutely unique and extraordinary for John - extremely motivating. On the other hand he saw the frustrations of trying to protect these resources

To what extent did the student's involvement help you and your organization? The change in program from 3 to 1 students minimized the benefits of the program to SCCF directly. John did help with some administrative work which was great. His help on alligator tagging was also.

What are his/her strengths? John is bright + personable but probably his strength is in his interest + devotion to his work. He is well motivated.

What are his/her weaknesses? Assuming John is not perfect I sure weaknesses occur but in this short program + limited time none surfaced as significant.

Do you have any suggestions for improving the program? I would prefer better communications prior knowledge of program expectations so that our very flexible program here can best be adapted to benefit the student(s).

Signed: [signature]
Title: Director

Report #2

The Brazilian Pepper Tree – Its Effect on Wildlife Within a Dense Pepper Tree Area – A Population Study Taken

by

Jon Kiser, Bill Kiser, and Cindy Conover

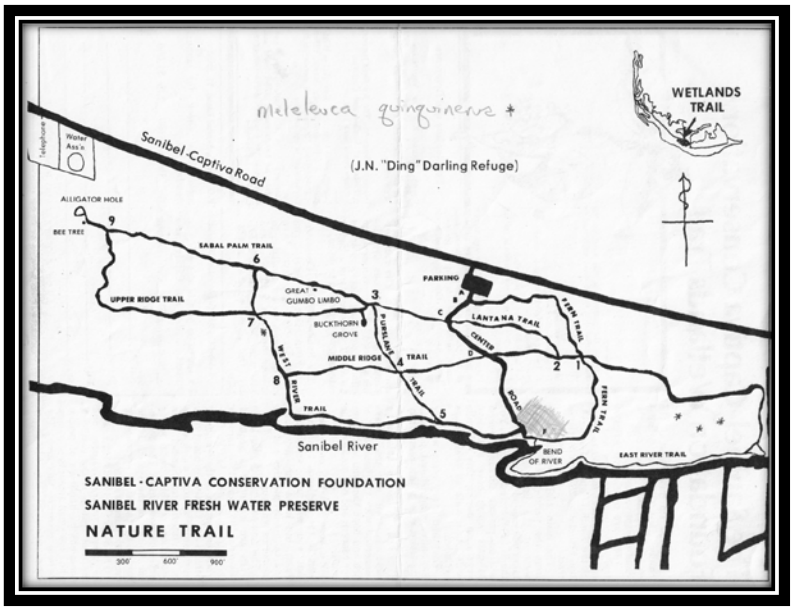
January 1977

(A Daily Account of Our Activities and Observations by Jon Kiser)

The Brazilian Pepper tree – Its Effect on Wildlife
Within a Dense Pepper Tree Area – A Population Study
(A Daily Account of Our Activities and Observations by Jon Kiser)

Study Area

Our study area was the Sanibel – Captiva Conservation Foundation (SCCF) Wetland Trails, covering the dense area of Brazilian pepper trees (*Schinus terebinthifolius*) at the intersection of Fern Trail and Center Road, near the bend of the Sanibel River. Aside from the abundance of Pepper trees in the area, there is also a great deal of marsh grass (*Schinus terebinthifolius*), milkweed (*Asclepias syriaca*), and fern plants (*Pteridophyta*). This spot is quite low, sea level wise, and most of the year it is wet. Since the dry season comes during the winter months, we anticipated good success with our trapping.



Daily Log/Field Observations: January 7, 1977 through January 21, 1977

Friday, January 7, 1977

I went to the Sanibel Lighthouse, SCCF, to meet with Director Dick Workman. He informed me of the Foundation's plans to build the new headquarter complex and also briefed me about the animal population study he wanted us to undertake. Dick gave me a book, Manuel of Field Biology and Ecology, to assist us with the

study. With the weather being nice, I decided to walk the two mile journey down the beach to our condominium. As I walked, I noticed more debris like pop cans and candy wrappers than I had ever seen before. Seeing this confirmed my belief that when man takes over a beautiful place in nature, he most often ruins it.

Saturday, January 8, 1977

Met Dick at the Wetland Trails, where we immediately headed into the bush. He first showed me the location that he had selected for the population study, an area where huge Brazilian pepper trees were. We moved onward, clearing trees in the way of the path as we went. As we followed the Sanibel River, I saw many birds. Ducks (*Anas platyrhynchos*) were everywhere, but there were also a few hawks, great egrets (*Ardea alba*), and great blue herons (*Ardea herodias*) along the river.

Brazilian pepper tree. Source: Public domain.

When we climbed up a large hill, Dick pointed out a tall Melaleuca tree (*Melaleuca quinquenervia*) in the distance. The Melaleuca is a very problematic tree, as it spreads quickly like the Brazilian pepper tree and crowds out native vegetation. Dick told me to cut down the tree at a later time, to prevent it from

spreading. We walked a few miles on the trails before returning to the car. Afterwards, we drove back to the Lighthouse so I could pick up two traps for the population survey.

Melaleuca trees. Source: Public domain.

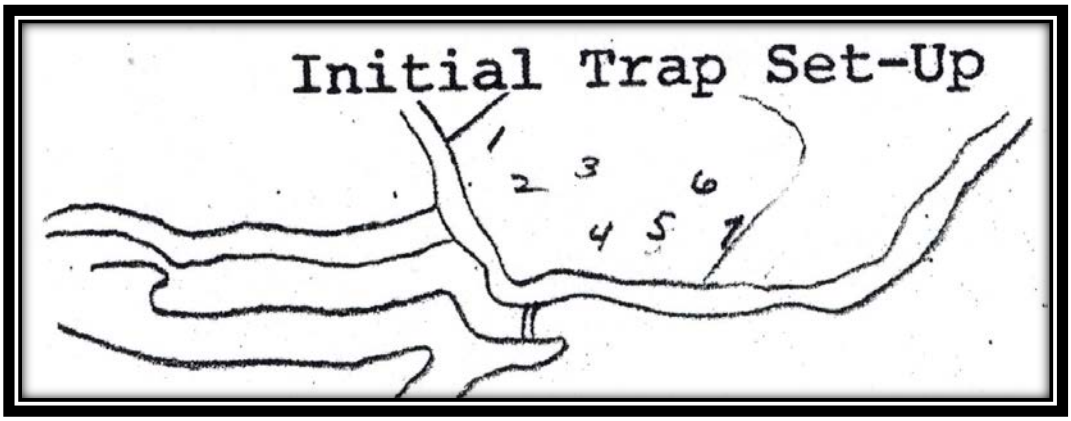
Sunday, January 9, 1977

Journeyed to George Campbell's home, a local naturalist and biologist, to pick up five more traps. I took them home to show my brother Bill and Cindy Conover since they would be assisting me with the study. Later that day, the three of us went to the trails so I could show them the chosen spot. While hiking around, we saw many interesting sights including a huge beehive, numerous exotic trees, and several colorful birds. After showing them the population survey area, we took a canoe trip down the Sanibel River. We took a lot of fascinating camera shots before returning to the car by sunset.

Monday, January 10, 1997

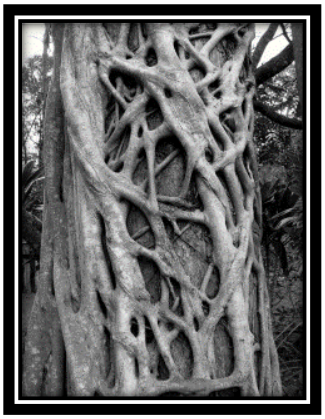
Arrived at the Wetland Trails at 11:30 a.m. The skies were cloudy and temperature was cool with variable winds. We were equipped with seven havahart traps, which harmlessly catch animals for observation and allow for ready release. The traps varied in size, and included two small traps for mice (#3 and #5), one for small mammals (#2), two for larger mammals (#1 and #4), one for medium sized mammals (#6), and one long and narrow snake trap (#7). We

surveyed our trapping area for logical spots to set up the traps. Because of the dense vegetation, we encountered some difficulty placing a few of the traps.



We walked through thick milkweed plants and marsh grass and set up trap #1 near some fairly large animal droppings. This appeared to be a good spot as the droppings indicated animals used this area as a pathway. Trying to cover as much of the survey area as possible, we pushed our way through dense marsh grass and fern plants to set up traps #2 and #3.

When we came close to a large pepper tree, the small mammal trap (#2) was placed under the Pepper tree branch, with grass and ferns surrounding the trap on the ground. We moved into the bush a bit more until we came upon a strangler fig tree (*Ficus*).



Strangler fig. Source: Public domain.

The mouse trap (#3) was set near the tree, an area that was dominated by marsh grass on the ground. We then placed the other large mammal trap (#4) amongst tall and thick Brazilian pepper trees. Sparse ferns and marsh grass were also in

the area. We placed trap #4 there to see if any large mammals would venture into a heavily populated pepper area. We moved down Fern Trail looking for possible animal side trails and decided to place the other mouse trap (#5) and the medium mammal trap (#6) behind an ant hill among fern plans and pepper trees. The snake trap (#7) was placed in a logical spot on the outer edge of the large pepper trees, on an apparent animal path near Fern Trail. We noticed animal droppings nearby. All of the traps were baited with peanuts and peanut butter.

Tuesday, January 11, 1977

Arrived at the trails by 10:10 a.m. under a clear but cool sky. The first three traps were not disturbed. Trap #4 was sprung and had caught a baby possum. It was a male with pink nose, toes and feet. He had a black and grey fur coating with a white furry stomach, round ears with white tips, a white face, and black eyes. He was twelve inches from head to tail, and quite nervous and cautious when leaving the cage. We made sure to take his picture before releasing him. By doing this, our report would be that much more complete. The rest of the traps were empty. Perhaps the cold weather the previous night caused the mammals in the area to be inactive.

Returned to the trails at 4:15 p.m., with the sun shining, clear skies, and cold air. All of the traps were empty. Our first day of trapping was not as good as we hoped.

Wednesday, January 12, 1977

At 10:30 a.m. we arrived at the trails. The skies were partly cloudy and the temperature was mild. Trap #1 had no luck so we decided to move it about twenty feet to a location with similar surroundings. Hoping for better success. Trap #2 was also empty. In trap #3 captured a small grey field mouse, a female with black eyes and pink nose and feet. She was six inches from head to tail and scared to death. In trap #5 was another female field mouse approximately the

same size. She had matted grey fur and constantly scurried around in the trap. Both mice hastily ran into the bush when the doors were opened. Traps #4, #6, and #7 were empty. Perhaps cold weather the previous night was why we did not catch a larger mammal. Whatever the reason, we decided to put some fish heads in the larger traps.

Bill Kiser inspecting trapped field mouse, January 1977, © Jonathan V. L. Kiser.

Returned to the trails at 5:15 p.m. It was warm and partly cloudy. We put fish heads in traps #1, #2, #4, and #7, hoping to catch a raccoon or another type of animal. At this point we realized that we would probably be catching only nocturnal animals, so it would be generally sufficient to check the traps once a day.

Thursday, January 13, 1977

Reached the trails at 10:45 a.m., the skies were partly cloudy and the air was warm. Something stole the fish head from trap #1 and managed to get away. Bushes had prevented the doors from completely closing, enabling whatever was in the trap to escape. Such a mistake is not the type of thing to make a habit of!

Trap #2's bait was gone but the doors were not closed, no explanation. The rest of the traps were also empty. We did notice a few raccoon tracks near trap #2, so we assume it was a racoon that stole the bait. We left the area disappointed and drowned our sorrows with a good lunch.

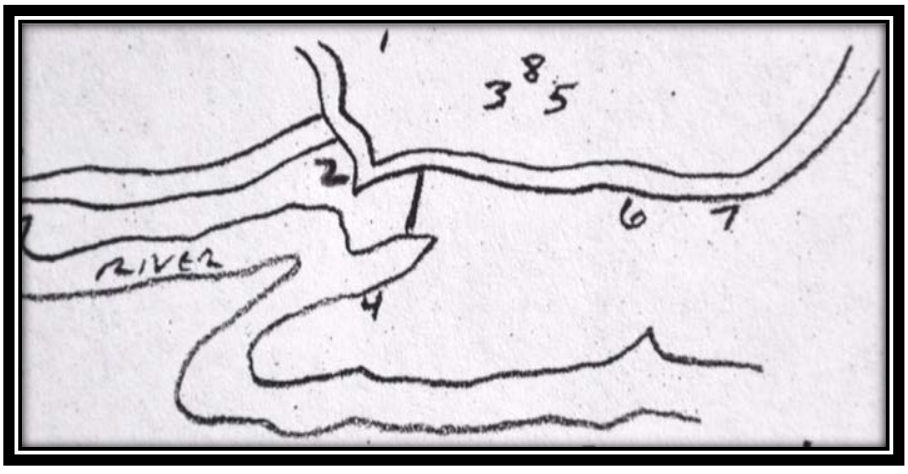
Met Dick Workman at the trails around 2:00 p.m. where he gave us another mouse trap (#8) and a mammal identification book. Showing him our trap set-up, Dick suggested more logical positions for some of the traps. He felt that by putting the mouse traps in one area and moving a few traps by the river and along open paths would improve our chances of catching mammals. Afterwards, we went to the Tarpon Bay Marina to get some more fish heads. When we were not able to get any, we decided to leave the traps in the original location for one more night.

Friday, January 14, 1977

It was 11:00 a.m. when we reached the trails under warm, partly cloudy skies. In trap #1 was a fairly large possum, approximately two feet long. The male possum had his mouth open when we approached. He was mad and a bit frightened as he apprehensively ran into the bush upon release. The bait tray in his trap was torn to shreds. In trap #2 we found a cotton rat, approximately seven inches long including tail. The rat was a male and had brownish-black hair. He wasted no time at all racing to freedom when the door was opened. Traps #3, #4, and #7 were empty. Trap #5 had a female cotton rat in it. She was a bit lighter in color but about the same size as the male rat. She was very inactive in the trap and waited twenty seconds after the door had been opened before leaving. In trap #6 we found a young male possum about one and one half feet long including his tail. He had darker fur than the possum in trap #1, but also showed his teeth as we came upon him. He also kept his head turned away from the sun and darted away quickly when the door was opened. The warm night before could have been a reason for our trapping success. We were very pleased that the large and

medium traps (#1 and #6) had captured mammals. These particular havaharts had previously not been disturbed.

After picking up some fish heads, we returned to the trails at 5:00 p.m. The air was warm, the skies were hazy. We left trap #1 in the same spot, but moved the small rodent trap (#2) close to the river bank. It was placed behind a clump of ferns, a few small pepper trees, and some marsh grass. We next moved the large havahart trap (#4) across the river and situated it on a small peninsula. The area was primarily covered with thick marsh grass, on all sides of the trap. Dead grass padded the ground like a straw blanket. We placed more dry vegetation on top of the trap to make sure it was well hidden. We next moved traps #6 and #7 down fern path a bit and hid them well among marsh grass just off the path. Finally, we gathered the three mice traps (#3, #5, and #8) and placed them in an area where there were big Brazilian pepper trees. A dense fern path led to this spot that also had some dead vegetation near the traps. Before leaving, we checked the water level in the Sanibel River. It was 8.2. With all of our traps in good locations, we anticipated trapping success.



Saturday, January 15, 1977

Our expectations for good trapping were drenched by heavy rains all night. It was still drizzling as we headed for the trails. We arrived at 10:00 a.m. under warm but overcast skies. The entire area was badly flooded and the traps that we could

get to were empty. We could only spot two of the three mice traps, the other being submerged in water somewhere under the Pepper trees. Since there was at least one half foot of water on Fern Trail, we decided not to check traps six and seven. The river level was about 8.7. At this point, we were all a bit dejected, if the water did not drain quickly, we would have to move our traps again.

Sunday, January 16, 1977

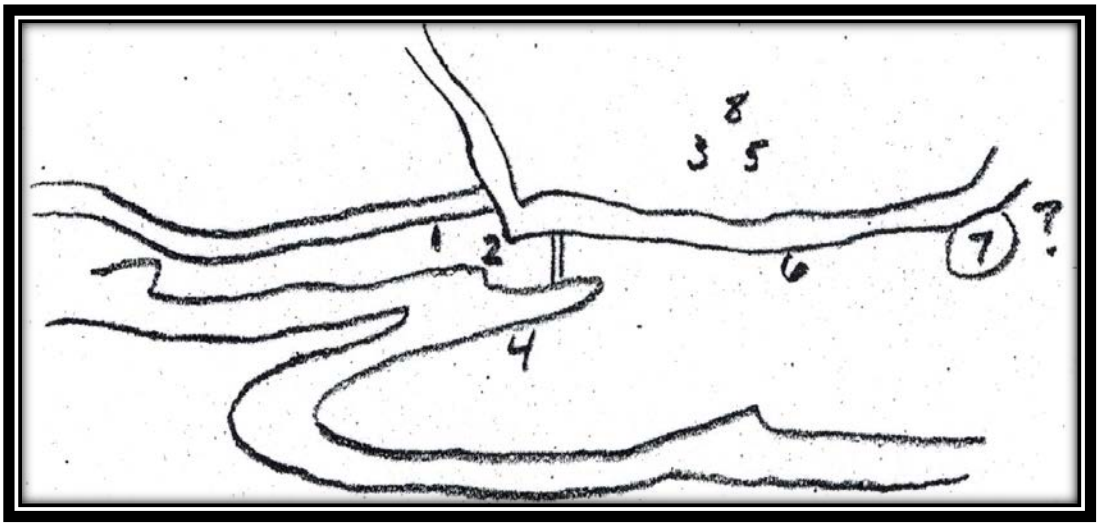
After more rain last night, we did not expect much better results. Waited for the sun to come out then went to the trails at 1:30 p.m. As anticipated, there was not much luck in any of the traps. Trap #2's fish head bait was missing but the doors were not closed. We then ran across the bridge to check trap #4 and sunk a foot underwater. There was nothing in the trap. Not much wildlife stirring around at all this day. The Sanibel River level increased to 8.75.

Monday, January 17, 1977

After a cool but clear night, we arrived at the trails by 12:00. The air remained cool but the sun shined brightly. Trap #1 was half filled with water, and caught nothing. The pathway leading to it could have been mistaken for a canoe path through the weeds, the water was that deep. We decided to move it down by the river bank behind a large mound of shells, dirt, and dead trees. The trap was set in a small clearing surrounded by marsh grass. Trap #2's bait was missing but the trap did not go off. We believed this was either because the trap had not been set properly, or a very clever mammal stole the bait (perhaps a raccoon?).

The mice traps (#3, #5, and #8) had nothing. We decided that we had to check the other traps today, so we trudged through a half foot of cold, mucky water along Fern Trail to get to them. Much to our dismay, trap #6 was half filled with water and had a drowned baby possum in it. This trap had been set up close to Fern Trail among the ferns and marsh grass, a good spot. Unfortunately, it was at the same level that the water reached. We felt it likely that the possum drowned the night of the big rain. When we went to check out trap #7 (snake

trap) it was nowhere to be found. This was a real puzzler since it had been carefully placed among the marsh grass, two feet from the path and above the path's level. It was better hidden than trap #6. Our first thoughts were that someone had stolen it, but why would anyone want to wade down a flooded path? We did not think it was possible for an animal or the water to carry it off. After briefly searching the swampy area, we decided to leave. We moved trap #6 down the path a bit, toward Center Trail. Keeping it on the same side of the trail, we found a good dry spot among some ferns, marsh grass, and dead vegetation. The rains had certainly disrupted our trapping set-up. Today the Sanibel River's level was up to 8.9.



Tuesday, January 18, 1977

Traveled to the Sanibel Lighthouse to talk with Dick about how our trapping was doing. After getting more things to do from Mr. Workman, we went to the trails arriving at 1:00 p.m. The temperature was cool and the skies were overcast, with a slight drizzle. The traps by the river had nothing. In the densely populated Brazilian pepper area two of the three mice traps (#3 and 38) caught mice. One was a male and the other a female. Both were small and grey with black eyes and pink noses and feet. Each was approximately five to six inches long. In trap #6 we found a young male possum, about one foot from head to tail. The bait for

the successful traps had been peanuts and peanut butter. Trap #4 across the river had no luck. The river's level was still 8.9.

Wednesday, January 19, 1977

After a freezing night, we journeyed to the trials. Arriving at 10:30 a.m., the skies were clear and the temperature was still cold. The first two traps were sprung but nothing was in them except for the untouched bait. The mice traps were also empty and we found one upside down and one sideways, very strange. The other traps were also empty. We checked the water level and saw that it was up to 8.95, the highest yet. While checking the river's water level, we saw there were many ducks a good distance down-stream. We had seen them practically every day. As we headed back to the car, we heard one of our traps go off. Because of the strong gusty winds, we were sure that it was self sprung, but when we approached the first trap, we were amazed to see a bird flapping around inside. It was black with white lines on its feathers, had a black beak and an orange and white belly. This bird was identified as a Rufous Sided Towhee (*Pipilo erythrophthalmus*), and it wasted no time flying away once the doors were opened.

Today we concluded that the strong winds the night before had caused two traps to go off and the other two to be turned over. As far as catching the bird was concerned, it must have been a mistake on its behalf. It seems very unlikely that a bird would be so low to the ground just to get the small piece of filet in the cage.

Thursday, January 20, 1977

Another quite cold overnight was not exactly what we hoped for but got anyway. We arrived at the trails by 12:15 p.m. under cloudy and cool skies. As we walked down center trail to our trapping area, recently cut down Brazilian pepper trees covered the trail. We wondered if all the disturbance with the clearing and rustling of trees would have driven mammals out of the area. We could only check our

traps to find out the answer. The first two traps had closed properly, but the bait was missing. We immediately assumed that a clever mammal like the raccoon was responsible. One mouse trap (#3) had caught a cotton rat which constantly moved from one end of the trap to the other. It was a female about six inches long with brownish-black fur, pink feet and nose, and a short trail. The rest of the traps had nothing in them.

We decided for the last night of our study to relocate the large trap (#4) across the river along Fern Trail. Not wishing to get our feet wet, we got in a canoe and paddled across. The Sanibel River level had dropped slightly to 8.925.

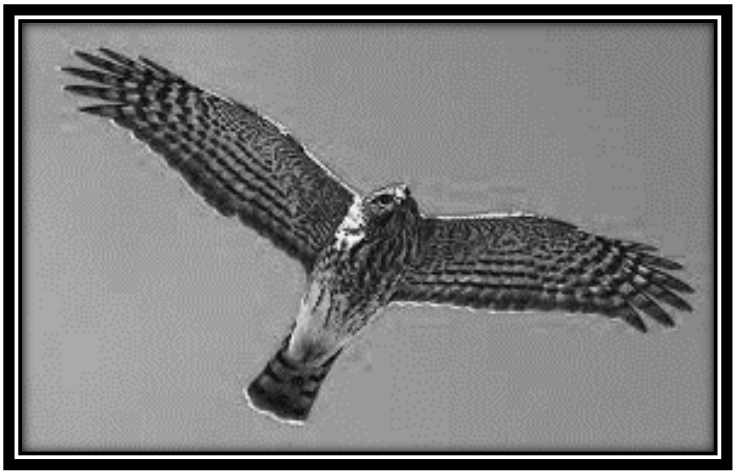
We positioned the trap right next to the Fern Trail in a cleared space between some marsh grass. This spot looked like it may have been used as an animal path since we found fairly large round animal droppings nearby. Our next stop was at Tarpon Bay Marina to get more fish. We then returned to the trails and baited three traps (#1, #4, and #6). We hoped to catch a raccoon on our last trapping night.

Friday, January 21, 1977

Went to the Island Reporter at 10:15 am for an interview. We filled in the reporter Mark Twombly about our activities then headed for the trails with Dick and Mark. The skies were clear and the temperature was mild. Trap #1 had nothing, but trap #2 had a small possum about one and a half feet long. It was a male who showed his teeth as we observed him. When the door was opened, the possum

waited a good sixty seconds before he left the trap. He actually had to be coaxed from the trap. Perhaps he was hesitant or apprehensive because of our presence. The other traps had nothing in them. Today the water level was 8.92 compared to an 8.2 reading before the heavy rains.

When Dick, Bill, and I headed down Fern Trail to look for the lost trap, we saw a Sharp Shinned Hawk (*Accipiter striatus*) soar into close view, chasing another bird. It was a fascinating sight. As we moved down Fern Trail, it was quite apparent that the water level on the trail had dropped at least two to three inches. When we arrived at the original spot of the trap, we all moved inward away from the trail, toward the river. About ten feet behind where the trap was, Dick found it. The trap was among thick underbrush, primarily ferns and marsh grass. The most logical explanation for the trap's movement, at Dick's insistence, was that an animal dragged it from its first location. The bait (peanuts and peanut butter) was missing.



Sharp Shinned Hawk. Source: Public domain.

We gathered all the traps up and headed for the parking lot with them. In the green-grassed swampy marsh area near the parking lot, we spotted a great white egret gracefully flying. After putting the traps in the car, we took them back to George Campbell's home on the island.

Summary

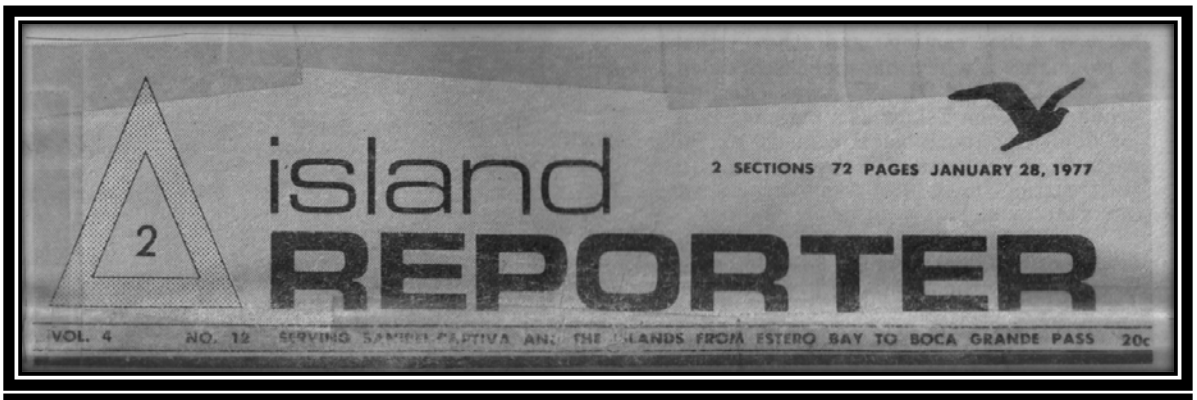
Because of the short period of time that we had to run our population study, we could only get a vague understanding of how the Brazilian pepper trees effect wildlife in the SCCF Wetland Trails area. The interruption of bad luck, mismanagement, and crummy weather conditions during our study were at least partially responsible for our limited catch. Still, we were able to see some patterns beginning to take shape. For example, most of the possums caught (the only large mammal trapped) were captured away from the thick Brazilian pepper trees and closer to the river banks and well-traveled paths. We did catch some possums under the Pepper trees, but this could be attributed to the fact that larger mammals are more apt to move from one area to another. The smaller mammals, like the field mice and cotton rats, would be more apt to remain in a particular area and that could explain why we trapped so many of them in the Pepper tree area. It became obvious during our study that we were primarily trapping nocturnal mammals and we therefore attempted to set the traps accordingly.

We set the traps up in the most logical places and, as a result, we noticed more disturbances in and around the traps. Being inexperienced with this type of activity, we made mistakes that definitely could have been avoided. As the days passed by, we became more knowledgeable of the many aspect involved with this type of study. For example, what type of bait to use, where the traps should be set, and how to combine logic and instinct to achieve the best trapping results.

In total, 13 mammals were trapped during our ten day survey, including: six possums, four mice, three cotton rats, and one bird. Should we have the opportunity to complete another population study, the results would hopefully be more prosperous and varied. We anxiously await another chance to continue a similar wildlife study to prove this point.

Appendix 1

Island Reporter Article



island REPORTER

2 SECTIONS 72 PAGES JANUARY 28, 1977

VOL. 4 NO. 12 SERVING SANIBEL-CAPTIVA AND THE ISLANDS FROM ESTERO BAY TO BOCA GRANDE PASS 20c

A14 *January 28, 1977* Island Reporter

Students gather animal data

Those bright red berries on a Brazilian pepper may provide a splash of Christmas color to the islands during the holidays, but anyone who has taken a stroll through the wilds of Sanibel knows the damage the fast-growing exotic is capable of inflicting on native vegetation.

The gnarled branches and dense foliage of the pepper can quickly choke out practically all other forms of plant life growing underneath it.

The pepper can certainly prove devastating to native plants, but what of its effect on animal movements and populations? Do animals avoid the barren ground beneath the peppers?

Three college students working in cooperation with the Sanibel-Captiva Conservation Foundation (SCCF) have spent the last few weeks taking the first steps toward answering those questions.

Bill Kiser and Cindy Conover, students at Franklin Pierce College in New Hampshire, and John Kiser, a student at Denison College in Columbus, Ohio have just concluded a two week study of animal populations and movements in the SCCF Nature Trails.

The students placed a variety of harmless wire traps in strategic locations throughout the trails to determine what animals frequent the area. Using peanut butter and fish heads as bait, the students managed to capture, study and release possums, cotton rats, and house mice, and one hapless bird.

Several of the traps were found sprung, baitless and empty.

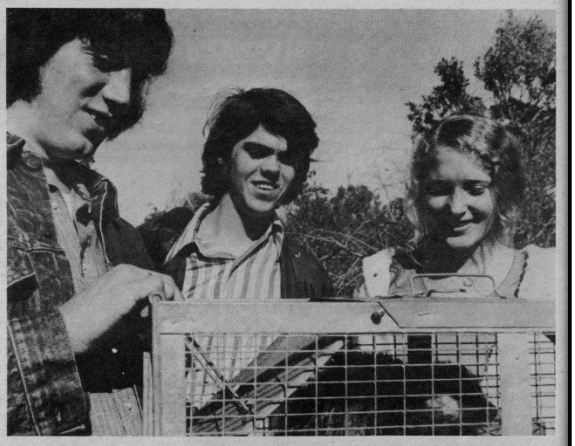
The students had hoped to lure an otter to a trap placed close to the Sanibel River, but the effort proved futile.

Most of the trapping was conducted during the record rain and cold temperatures that afflicted the islands, and SCCF Director Dick Workman speculated that the weather may have curtailed animal movements.

"We will have to continue the study for a long time before we make any definite conclusions," noted Workman. "We've done limited trapping in there before, but nothing as concentrated as this. We'll keep their data and add to it with future studies."

Workman sees the students' project, done as part of their schools' independent study requirements, as the sort of activity the Foundation can more readily sponsor in the future.

"It's the kind of project we can do with local people and visitors at the Conservation Center -- if we get the money to build it."



Bill and John Kiser and Cindy Conover inspect a possum caught in one of the traps on the SCCF Nature Trails.

Conservation Center will be the new SCCF headquarters located on the Nature Trails site. Groundbreaking for the building has already taken place.

Source: Island Reporter. Used with permission.

Report #3

My Other January 1977

Projects for the SCCF

by Jon Kiser

January 1977

My Other January 1977 Projects for the SCCF by Jon Kiser

Daily Log/Field Observations: January 4, 1977 through January 22, 1977

Tuesday, January 4, 1977

I met with Dr. George Cooley, an authoritative botanist and naturalist, and journeyed with him to SCCF's 250-acre Wetland Trails area. Our objective for the day was to clear vegetation in the spot where the new conservation headquarter building was to be built. As we walked along the tropical trails, Dr. Cooley pointed out numerous interesting plants. These ranged from wild cotton *(Gossypium hirsutum)* and coffee *(Psychotria nervosa)* to poison ivy *(Toxicodendron radicans)* and the white stopper plant (*Eugenia axillaris*) that smells like a skunk.

Sanibel wetlands, January 1977, © Jonathan V.L. Kiser.

Arriving at the clearing spot, we immediately started placing loose vegetation into piles. Our main concern was to cut down as many Brazilian pepper trees (*Schinus terebinthifolius*) as possible. This fast spreading tree is an intruder to the area and poses a threat to native vegetation. During the course of the day,

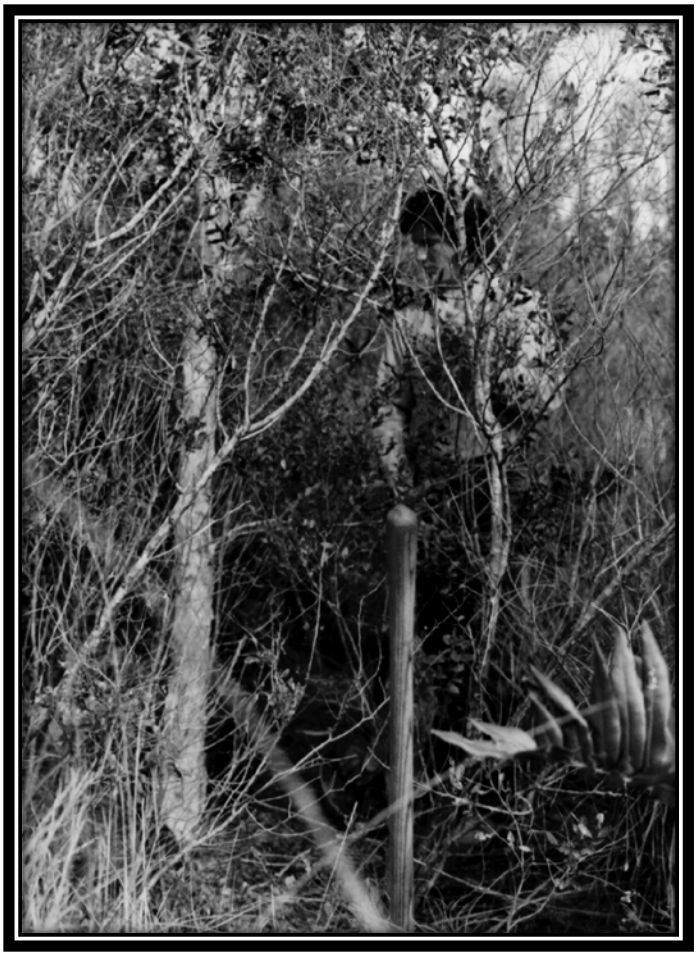
we managed to clear quite a bit of Brazilian pepper as well as other trees and bushes. I was quite tired come quitting time.

Wednesday, January 5, and Thursday, January 6, 1977

I continued my tree and brush clearing job with Dr. Cooley. We accomplished a good deal and at the same time, I learned many interesting things about the plants and wildlife in the area. Because there was no convenient way to carry the cut down vegetation to the parking lot, we created piles. A big tree mulcher would later be taken to the clearing spot to grind up the trees and plants. The next number of days were spent getting the animal wetland population study underway.

Wednesday, January 12, 1977

My brother Bill and I went to the Sanibel Lighthouse and picked up two shovels. We then headed for the Wetland Trails determined to dig up any invasive Melaleuca trees (*Melaleuca quinquenervia*) that we came upon. We followed a path along the Sanibel River to locate one of the targeted Melaleuca trees and got as close as we could. We then had to trail blaze some 400 yards through the thick vegetation to actually reach the tree. Upon digging it up, we hit a red ant colony. They swarmed all over and we quickly moved out of the area until they settled down a bit.



Bill Kiser with Melaleuca tree, January 1977, © Jonathan V. L. Kiser.

After dealing with the same Melaleuca tree for over two hours, pulling as many seedlings off as we could and putting them in a bag, we decide to quit. It was important that we try to capture as many seedlings as possible since each one was capable of stating a new tree. After transporting our bag of seeds out of the area, we disposed of them properly, making sure that they would not be able to grow.

Bill Kiser with cleared Melaleuca space, January 1977, © Jonathan V. L. Kiser.

Friday, January 14, 1977

We journeyed to the Lighthouse at 10:15 a.m. to get some clippers from Dick. He suggested that we clear some waterway paths flowing perpendicular to the Sanibel River. We canoed down the river searching for any blocked side path we could find. During this three hour expedition, we cleared quite a few trails. We were amazed by the abundant number of ducks (*Anas platyrhynchos*) we encountered as the canoe rounded each new turn. Some of the paths we cleared this day would later become temporarily impassable again, due to heavy rains.

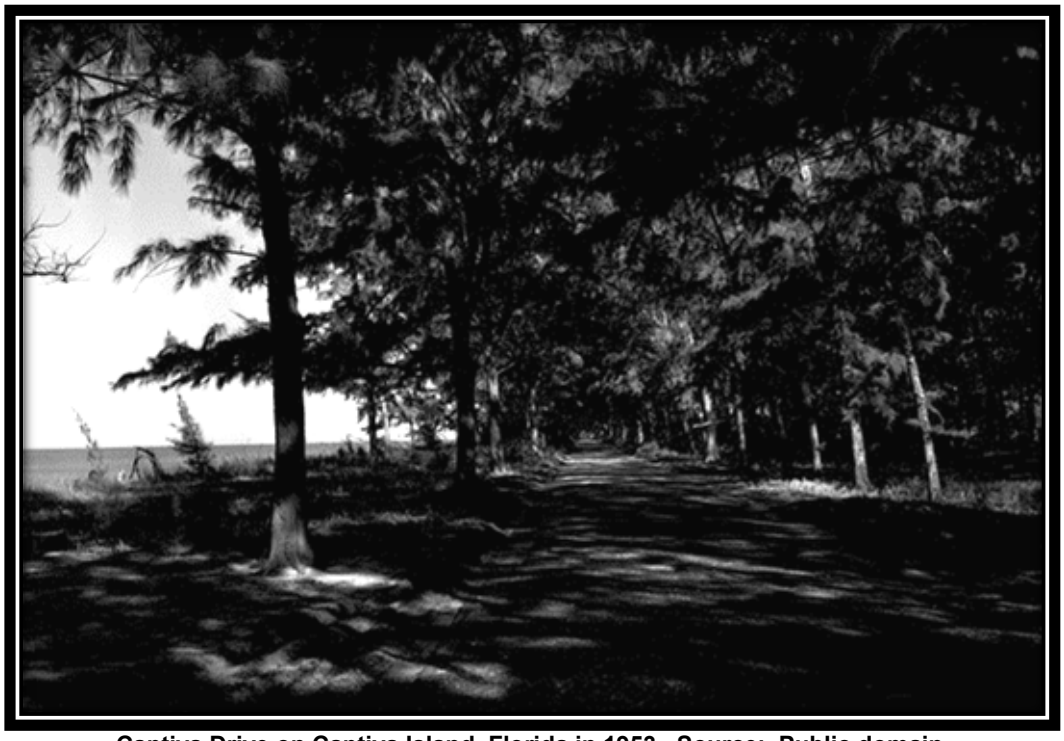
Tuesday, January 18, 1977

Met with Dick at the Sanibel Lighthouse in the morning. He told us that he had some other projects for us. Dick suggested that we help a group from Oberlin, Ohio clear more Brazilian pepper trees and to also get some photographs of the eroding beach on the northern tip of Sanibel Island. We went to the trails and

helped the Oberlin people for a few hours, then returned to the Lighthouse to help do some SCCF paperwork.

Wednesday, January 19, 1977

During the morning until lunch time, we helped the Oberlin group clear vegetation. We then traveled up to Captiva Island, the island that is adjacent to Sanibel to the north, to take pictures of its shoreline.



Captiva Drive on Captiva Island, Florida in 1953. Source: Public domain.

Captiva faces a serious erosion problem, much worse than anywhere on Sanibel Island. We managed to take some very interesting pictures of Australian Pine trees leaning on a forty-five degree angle. These trees were located along the most eroded spot on the island. Huge blocks of cement have been placed along the shoreline there to try to protect the nearby Captiva Drive. Once we finished taking pictures there, we went to see some ancient Calusa Indian shell mounds. I was absolutely amazed as we came upon the mounds as there was three circular ditches completely filled with large conch and welk shells. Carefully examining but not disturbing the mounds, we found perfectly formed shells

closely situated next to one other. It must have taken many years to fill those ditches. Next, we drove back to the Wetland Trails on Sanibel where we helped the Oberlin group feed cleared bushes and trees into a large mulcher machine. That took a good two hours.

Friday, January 21, 1977

Dick asked us to cut down a big Melaleuca tree about one half a mile from the parking lot. As we walked down the path toward the tree, we could not help but get out feet wet. The entire area was still unusually wet from the heavy rainfall drenching. We managed to reach the tree and proceeded to chop it down with an ax. Instead of spending a few hours stripping each branch of seedlings, we decide to carry the over forty-foot tree to the parking lot. After quite a struggle, we reached the lot, where we left the tree for Dick Workman to pick up later.

Saturday, January 22, 1977

This being our last day before having to leave, we decided to do a bit more clearing. Going back to the Wetland Trails to the spot where we uprooted the first Melaleuca tree, we searched around for more. Because the vegetation was so thick, we did not explore too much. Still, we did manage to find two more Melaleuca trees and we made sure that they were properly disposed of. Next, we went on a final canoe trip. It was really amazing to see how much the rains had changed the shape of the river. On our first canoe trip, we had trouble moving on in some places, due to the water being so shallow. This day, we did not have to worry about shallow water. As usual, there were ducks everywhere along the river.

Summary

Due to unexpected bad weather, I was not able to get involved with quite as many activities as I had hoped to. Still, the activities that I did do were all worthwhile. The clearing of troublesome trees and plants helped make a better environment for the native vegetation and island wildlife. Although it may not

have been the most pleasant work at times, I did not mind, realizing how important the project was. Clearing side paths along the Sanibel River was also rewarding. The reason for doing this was to make more canoe paths available for others to enjoy.

In addition, observing the natural erosion problem, primarily on Captiva, was indeed quite intriguing. Sanibel and Captiva, being barrier islands, are naturally creating and destroying themselves. The sand that is washed away from the Captiva shoreline is being deposited along Sanibel's shoreline, especially near the lighthouse. Although man has struggled to protect the Captiva shore, nature may ultimately prove to be the victor. I guess it is only fair for nature to strike back, in light of all the destruction man has been responsible for in the once pristine spots around the world.

Brother Steve Kiser riding beneath the Periwinke Way canopy on Sanibel Island, 1974, © Jonathan. V. L. Kiser.