WORKING ON ST. CATHERINES ISLAND

St. Catherines Island is a privately owned island, providing a remote research center accessible only by boat.

Because there are no stores on the Island, interns must bring what is needed, including field gear, clothing, toiletries, and prescriptions.

Field Gear: The St. Catherines Sea Turtle Program will provide basic equipment that you will need to perform your work. Other items you might find useful during your stay include (Table 1) a hat, sun glasses, sun screen, old tennis shoes, rain gear, a pocket knife, a hand lens, binoculars, a camera and film for two weeks, a personal journal style notebook, good soft lead pencils, a permanent marker [Marks-a-lot, Sharpie], and sample bags such as Zip Locs. Safety glasses or goggles must be worn in the field.

Table 1. Suggested Field Gear and Clothing.

<table>
<thead>
<tr>
<th>Field Gear</th>
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<tbody>
<tr>
<td>Backpack (Day)</td>
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<tr>
<td>Water Bottle</td>
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<tr>
<td>Sun Screen</td>
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<tr>
<td>Notebook</td>
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<tr>
<td>Pencils/Markers</td>
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<tr>
<td>Pocket Knife</td>
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<tr>
<td>Poncho or rain suit</td>
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<tr>
<td>Binoculars</td>
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<tr>
<td>Hand Lens</td>
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<tr>
<td>Camera and Film (Print and Slides)</td>
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<tr>
<td>Digital Camera (Batteries and Media)</td>
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<tr>
<td>Video Camera and Tapes</td>
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<tr>
<td>Sample Bags (zip locs)</td>
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<tr>
<td>Safety glasses</td>
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<tr>
<td>Sunglasses</td>
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<tr>
<td>First Aid kit</td>
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<tr>
<td>Chapstick with Sunscreen</td>
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<tr>
<td>Flashlight</td>
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<table>
<thead>
<tr>
<th>Clothing</th>
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<tbody>
<tr>
<td>One or two sets of good clothing</td>
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</tr>
<tr>
<td>Two sets of field clothes</td>
<td></td>
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<tr>
<td>Swim Suit/Shorts/Jeans</td>
<td></td>
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<tr>
<td>T Shirts/Long sleeved Shirt</td>
<td></td>
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<tr>
<td>Light Jacket</td>
<td></td>
</tr>
<tr>
<td>Beach Towel</td>
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<tr>
<td>Beach Shoes with good support (wet)</td>
<td></td>
</tr>
<tr>
<td>Cap or Hat</td>
<td></td>
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<tr>
<td>Tennis Shoes</td>
<td></td>
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<tr>
<td>Bandana</td>
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</table>

| Personal Food Items such as | |
| Snacks | |
| Sodas | |

| Toiletries | |
| Nail Clippers | |
| Tweezer | |
| Saline or Eye Drops | |

| Medicine | |
| Pain Relievers | |
| Allergy | |

| Sleeping Bag ??? | |

Housing: Housing on St. Catherines is provided as an “in” kind contribution of the St. Catherines Island Foundation, Inc. Interns and staff will share the housing facilities, which have modern facilities including a spacious kitchen/dining area, living room, and a washer and dryer. Most Interns will live in individual modern cabins. Linens are provided. Interns are matched with one another as closely as possible to allow efficient use of the housing. It is necessary for each of us to keep our own belongings picked up and help clean common spaces on a regular schedule. A schedule of duties is posted to clearly define daily duties such as sweeping the floors, cooking, doing dishes, etc. Each person is responsible for cleaning up after him or herself and helping to maintain a pleasant living environment. Because of the work schedule and closeness of living quarters, we like to maintain as quiet an environment as is possible while remaining flexible in social activities. Interns wanting to listen to music, provide themselves headphones to keep from sharing with the rest of us. Television with a VCR and DVD are available but will generally have to be played quietly and be turned off fairly early in the night. Detergent and bleach will be provided. Each pair of interns is responsible for cleaning their living space and having linens washed and folded at the end of their tenure in preparation for the incoming interns. All living and working spaces are smoke free facilities; if you smoke, please plan to do so outside.

Meals: Because of the nature of turtle monitoring, we will necessarily be up early to patrol beaches. Normal food items and eating equipment will be provided by the Turtle Program. Such staples as milk, chips, meats, cereals, fruits, vegetables, etc. will be purchased by the staff. If you have questions or special dietary needs, please let us know at the introductory session. We attempt to accommodate requests for specific items whenever possible.
Unusual food needs, snacks or “munchies” (including soft drinks or other beverages) are supplied by the individual interns and not be used by others without permission. You do not need to bring popcorn or popcorn poppers, coffee pots, or any other normal cooking or eating utensils. All of these are provided in the kitchen by the program. Breakfasts are taken on an individual basis, unless prior arrangements are made to trade off duties. Lunches are often carried into the field and consist of sandwiches, drinks, fruit, and other nutritious foods [like cookies, chips, etc.] Because they may often be shared between field partners, you might want to plan a common lunch. We eat a common, sit down meal at dinner in Cabin 4. Each turtle intern will share cooking duties on an assigned basis and will wash dishes and clean the kitchen (Fig. 16) on an assigned evening. If you use the kitchen, you must clean up after yourself.

We want to continue and enhance collegial relationships with the professional WSC staff. During the interval of nesting and hatching season we expect that we will have many opportunities to share meals and some evening activities with WSC personnel. Therefore, we expect all of the interns to conduct themselves with professional demeanor at all times during their tenure on the island. The key to getting along in an environment like St. Catherines is to maintain a positive and, flexible attitude toward each other, our idiosyncrasies and problems.

Research Programs:  The St. Catherines Island Research Program supports many natural history programs allowing visiting scientists to study aspects of the geology, ecology, and history of St. Catherines Island. Some of the Island programs have included:

Archeology of St. Catherines Spanish Mission and Associated Indians
David Hurst Thomas - Am Museum Natural History

Reproduction of hard shell clams (Mercenaria)
Bud Rollins, et al. - University of Pittsburgh

Entomology of St. Catherines
Jerry Rozen & Eric Quinter-Am Mus. Nat. History

Ghost Shrimp and Evolution of St. Catherines
Gale Bishop - Georgia Southern University

Sea Turtle Conservation and Monitoring
Gale Bishop, Kelly Vance, & Marti Schriever - Ga. DNR

University of the South Island Ecology Program
Tim Keith - Lucas et al. University of the South

Annual Christmas Bird Count
Jennifer Hilburn, Royce Hayes & Emil Urban-Augusta College

Migratory Bird Surveys
Jennifer Hilburn and Royce Hayes, St. Catherines Island.

TRANSPORTATION

Getting to the Mainland Dock:  St. Catherines Island operates a small ferry system with boats leaving the mainland dock (Fig. 2) 7:30 a.m. and returning at approximately 4:00 p.m. All interns should take the specially scheduled boat for accessing the Island. Other scheduling is possible, but only in

Figure 16 -- Communal meals are cooked in the modern kitchen provided in Cabin 4.

Wildlife Survival Center:  The St. Catherines Survival Center is a collaborative operation maintained by the St. Catherines Island Foundation. This operation is dedicated to the maintenance and reproduction of threatened and endangered species from around the world. The exotic reptiles, birds, and mammals are mostly kept in enclosures but free ranging troops of Ring-Tailed Lemurs and gopher tortises are present on the Island.

The enclosures are intended to keep the animals in and the people out. Do NOT enter or approach any enclosure unless accompanied by WSC personnel. The animals are easily spooked by human presence, particularly at critical times such as breeding, birthing, or other times of stress. Please be extremely considerate of the animals, checking with WSC staff before walking near cages or observing animals, particularly the birds in the aviary, or before photographing the animals.
emergency or unusual circumstances, and after checking with Sea Turtle Staff.

The St. Catherines Dock is located near Half Moon Marina. From Interstate 95 (north or south) take Exit 76 (Sunbury/Midway) and proceed approximately 8 miles east to a large white sign [Half Moon Marina] on right (south) side of road, turn right onto Kings Road toward marina, proceed approximately one mile to junction with Camellia Road, turn right onto Camellia Road, proceed approximately 1 city block to fourth(?) driveway on left marked by Box 182 [St. Catherines Sticker on box] just before white fence, (Fig. 17) turn left into driveway, proceed approximately one block to parking area and park (please don't block access onto dock). Small cabin at head of dock has bathroom, AC/heat, and a telephone. If you are late call (912.884.5002) or (912.884.5009) to let us know. Lock car while on Island.

Figure 17 - Entrance to the St. Catherines dock at white fence and “log cabin” mailbox.

GETTING AROUND ON THE ISLAND

Roads: St. Catherines Island is traversed by 85 miles of one lane dirt roads which are unmarked in the field but are named on an Island map. Drivers should use caution and not assume they are alone, but remain alert to other road traffic. Please do not drive off the roads. When fallen limbs or branches are encountered on the roads, they should be removed from the road by the intern, not driven over or around. If very large limbs are encountered on the road, radio them in to SCI staff for removal. If roads are very wet, use them only as necessary; keeping on the trackways wherever possible. When conditions are bad on a road, or when wildlife demands serenity, roads will be marked with saw horses which say “Vehicles Prohibited”. DO NOT violate these markers without first receiving permission from the Island Superintendent or his agent. In order to maintain a quiet and safe environment, please refrain from driving through the scientist’s compound.

Vehicles: Vehicles which are provided should be used with care and concern and not be abused by driving too fast, colliding with trees, or driving off marked roads. All vehicles are assigned by the Island Superintendent, check with him or his agent before using any vehicle not specifically assigned to you. Varying conditions dictate different vehicle usage. We will generally have several ATV’s to use on the beach (Fig.18). Occasionally we may use larger vehicles for specific purposes. If you are not familiar with a specific vehicle, please let us know so you can be properly trained.

Figure 18 - ATVs are used for sea turtle transportation on the Island; stuff happens -- be sure you have your charged radio with you at all times!

It will be necessary for us to drive on the beaches in order to monitor daily turtle activity. Before driving on the beach, be certain you have your radio and it is operable and securely attached to yourself or the Mule and that you have a shovel. Before entering the beach, check the beach entrance for erosion or deposition to be certain the slopes are not too steep for your vehicle. As you monitor the beach, try to drive as high on the wet sand portion of the beach as is possible to provide more rescue time before inundation by flood tide in case of a problem. Driving just below the high tide line is recommended whenever possible as this will eliminate running over nesting shorebirds and evidence of vehicular traffic with subsequent tides. If you have a problem, DO NOT PANIC - assess the situation, determine your location, then call for assistance using your radio. If you are on the beach, you may have to climb to top of
the dunes or bluff and protect the transmitter microphone from the wind before successful transmission can occur. Be aware of possible nesting shore birds and give them lots of room, delaying movement along the beach, if necessary, to accommodate them. Upon return to the compound, wash your machine to rid it of salt, fill the tank with gas for the next planned (or unplanned) excursion, and check the oil. Immediately call any mechanical problems to the attention or to St. Catherines Island mechanics.

COMMUNICATIONS

Mail: Mail can be received on the Island after being picked up by St. Catherines personell at the mainland dock mail box which is 182 Camellia Road, Midway, GA, 31320. Because of the shortness of your stay, I would not recommend receiving mail on the island.

Internet: Broadband Internet access is provided by the island in several locations, but generally computers are not. The Sea Turtle program owns and maintains a Toshiba Satellite Pro Laptop that is available for GaDNR Interns to use in Program documentation. Teacher-Interns are invited to bring their laptop with a wireless card.

Telephones: A telephone is available in the Turtle House and can be used to receive calls or to call out to the mainland. Only business related calls can be charged to this number; however, you may use your telephone charge card to make personal calls. The telephone number at the Biology Lab is (912) 884-9910 and will require a phone card. An answering machine will be in place for the summer program (912) 884-3802.

Table 2. Commonly used telephone numbers on St. Catherines Island:

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Dock</td>
<td>884-5122</td>
</tr>
<tr>
<td>Ecology Laboratory</td>
<td>884-9910</td>
</tr>
<tr>
<td>Turtle House</td>
<td>884-5038</td>
</tr>
<tr>
<td>FAX Number</td>
<td>884-5021</td>
</tr>
<tr>
<td>SCIF Staff Firehouse</td>
<td>884-5009</td>
</tr>
<tr>
<td>SCIF Staff House</td>
<td>884-5010</td>
</tr>
<tr>
<td>Emergency</td>
<td>911</td>
</tr>
<tr>
<td>LifeStar Evacuation</td>
<td>Call SCIF</td>
</tr>
<tr>
<td>StaffGaDNR Strandings</td>
<td>912-269-4019</td>
</tr>
</tbody>
</table>

Radios: St. Catherines Island communications are supported by transmitter boosted Motorola hand-held radios. Each field party will be provided a radio and expected to have the charged radio with them at all times when outside of the compound. Your radio will have a “unit number” painted on it which will also be your call number. **Only emergency radio calls before 6:30 am and after 9:00 pm, please.**

Always have your radio safely clipped to your body or to your vehicle. **DO NOT lay it down on the ground or on a vehicle hood or tailgate.** If you must cross water with your radio or work in the rain, seal the radio into a large gallon size zip-lock bag to protect it from submersion in water or other types of moisture. It is a good habit to check to be sure your radio is with you before you move from one place to another.

When using the radio, it is important to position yourself outside of metal vehicles, as high as possible [climb a dune or the bluff, or position yourself as far out on the forebeach as is possible], protect the microphone from wind, depress the transmit button wait two seconds, then speak slowly and enunciate carefully keeping wording concise. Do not break into other Island transmissions unless you have an emergency or can add significant information to the conversation. Proper radio protocol involves the statement of your radio call number and the person to whom you are directing the communication. **Also, your radio must be charged daily as the last action of the day (it is important to let the batteries completely drain, DO NOT PLUNK THE RADIO in its charger before the battery is run down at night.**

Radio Call Example:

[Unit 20 to Unit 1, Royce.]  
{Come in, Gale.}

[Please call Mike Harris to report a stranded whale at McQueen’s Inlet.]  
{Is the whale alive or dead?}

[Dead, located at McQueens dunes]  
{Can you secure the corpse?}

[Affirmative Royce: 10-4 and out.]  
{Thanks.}

A list of radio call numbers will be provided for your notebook.

ISLAND HAZARDS

Some hazards unique to Island living need be called to your attention. Among these are the likelihood of encountering venomous snakes inhabiting back dune
areas shared with small mammals such as rabbits. Rattlesnakes are present and have been seen over the last several years behind both South Beach, at North Beach, and in the compound. When walking in the dunes behind the beach, or in the forest, you need to watch for these beautiful reptiles. If you see a rattlesnake, give it plenty of room and always watch where you are putting your feet. **DO NOT ATTACK** any organisms (except gnats, flies, and ticks!) on St. Catharines Island. Rattlesnakes are good Island citizens helping hold populations of small mammals in check (Fig. 19).

![Figure 19 - Timber rattlesnakes are present on all parts of the Island, they have the right of way unless you are bitten!](image1)

**St. Catharines Snake Bite Protocol:** If you are bitten by a venomous snake on St. Catharines Island, kill the snake for a positive ID, if possible, and **report the bite immediately over the radio.** **Remain calm** and as quiet as possible, try to keep the bite as high as is possible relative to the upper torso and as cool as is possible to slow circulation. **Do not cut yourself** or another person in treating a snake bite. Anti-venom is stored in the Island Office. In case of snake bite you will be assisted from your location to the compound or anti-venom will be brought to your location and after it is administered you will be evacuated to a nearby medical facility by LifeStar helicopter or other appropriate means.

**Alligators:** You will often encounter American Alligators (Fig. 20) on the roads, along waterways, and occasionally on the beach. Generally alligators will not bother you unless you are bothering them. The recommended alligator procedure is to remain on your vehicle, if possible, give the alligator as much space as possible, and use extreme caution, especially if the alligator has babies or food it might try to protect. Remember, Alligators are wild animals and behave instinctively ... and have big teeth and powerful jaws.

![Figure 20 - Alligators are common on the Island and should be given the right of way.](image2)

**Pigs:** The pigs on St. Catharines Island are feral. These feral hogs are wild animals (Fig. 21) and can be expected to act defensively if attacked, cornered, or protecting young. The best counter measure for pig avoidance probably is to walk away.

![Figure 21 - The Hogs on St. Catharines are wild animals, be cautious around them.](image3)

**Exposure:** One of the most likely and significant hazards you will encounter will be exposure to the sun. Protect yourself by wearing clothing to cover your skin or by wearing a sun screen. The wearing of a sun lotion is highly recommended. We suggest Clinique Oil-Free Sun Screen as it is non-oily and doesn’t clog the pores. Always carry a long sleeved shirt, long pants, and a cap to cover yourself in case of emergency. You should remember that ultraviolet radiation will be reflected off the water as well as hit you from above. Nothing is quite like a severe sunburn, so please take precautions to control this hazard.

**Dehydration:** Each intern should be sure to carry plenty of water, juice, or soda and keep their fluid level high throughout the day. Dehydration is a problem that can rapidly affect one. A drink of water
every hour or so would be a wise habit to acquire. Interns should plan to drink at least a half gallon to a gallon of water every day.

Ticks: St. Catherines Island carries a robust population of ticks. Ticks are present as adults large enough for even Bishop to see and as juveniles [seed ticks (larva or nymphs)] so small as to be barely visible. This tick population carries Lyme Disease which, if untreated, can be serious and lead to future complications such as arthritis. Check your body closely for ticks each night, especially small seed ticks. Should you find a tick embedded, it can be removed by steady slow tension with a tweezier. In order to transmit Lyme disease, a tick needs to be embedded for some time (some sources say 72 hours). Such transmittance is usually, but not always, indicated by an angry red rash, swelling, and a bullseye coloration at the bite site due to a spreading of the rash from the bite outward. If you see any of these indications, contact the staff immediately. Prompt treatment with antibiotics during initial stages of infection is usually effective and rapid. Being bitten by a tick in the Southeast does not automatically lead to Lyme disease because only about 1% of our ticks carry the spirochetes.

Precautions include wearing light colored clothing, application of insect or tick repellents, and the tucking of pantlegs into socks and taping them with masking tape. Periodic personal tick hunts during the day and after undressing are advisable (Southeastern Wildlife Disease Study Cooperative brochure).

Night Driving: Some of our work may be done at night. It is extremely important to drive with extreme caution, especially on beaches with tree bone yards or other hazards such as exposed relict march muds, storm scarps, or man-made hazards like nails in boards, broken glass, etc. We will attempt to keep vehicles off the beaches whenever possible at night, and will use minimal light at all times on the beach.

Storms: Stormy conditions present a plethora of hazards which include poor visibility, reduced tides, rapidly changing scarps, flooding, and lightening. Depending upon the storm conditions, seek shelter if possible. If not, try to remain insulated by staying in your vehicle with rubber tires. Shelter may be afforded by simply lying down behind the first dune.

Emergencies: From time to time emergencies arise.

If you are in trouble, or think you are in trouble, radio for help!

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**Always carry your charged radio! It is your best insurance of assistance in case of emergency.**

You should also always keep it turned on to channel 1.

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**FACILITIES and EQUIPMENT**

**St. Catherines Island:** The principle facility to be used will be the beaches of St. Catherines Island, a linear stretch of 22 kilometers of sandy nesting habitat (Fig.22). St. Catherines provides housing, cooking facilities, and logistical support, including radios to use for communication, vehicle maintenance, emergency back-up, and shop facilities.

![Figure 22 - Aerial view looking south along South Beach St. Catherines Island at low tide.](image)

**Vehicles:** Transportation to and from St. Catherines Island is provided by St. Catherines Island Foundation boats, which maintain a daily schedule on and off the island. Transportation on the beaches will utilize island-maintained “all terrain vehicles” (ATV’s called Gators) that have large, low pressure tires with low impact on beaches and dunes.

Vehicles taken onto the beach need to be washed with fresh water upon returning to the Compound, rinsing all salt and sand off the vehicle will extend its useful life. A hose is located on the Main Dock.

**Library:** Library materials are located in the Georgia Southern University and Skidaway Institute...
of Oceanography libraries. These primary sources will be supplemented by lectures before, during, and after the internship. A small library is maintained in the Sea Turtle Program during the project season. A small library is also available in the Ecology Laboratory. You are welcome to use these materials, but PLEASE do not remove them from the Island.

**Data Collection:** Tape measures, a measuring wheel, GPS units, and Jacob staves are provided by the Sea Turtle Program. Maps and data forms will be available from Georgia Department of Natural Resources (DNR), St. Catherines Island, or Georgia Southern University. Flags, flagging, and a beach survey may be provided by the program. Screen, stakes, and rebar are provided by St. Catherines Island, DNR, and by this grant. Data analysis will be done on a Toshiba microcomputer.

**Classroom/Laboratory Space:** Teaching space for pre-internship and post-internship activities is furnished by Georgia Southern University in Statesboro. Teaching space for activities during the internships is provided by St. Catherines Island.

**Natural History Collecting:** The Sea Turtle Conservation program provides some rudimentary collecting gear for faculty and student use. We provide a dip net, spreading boards, a Yabby Bait Pump, and a series of field guidebooks. Formalin and alcohol may be available in limited quantities. We are able to generate tray labels and some rudimentary graphics on the computer.

**Visitations:** St. Catherines Island is a working island. It will generally be impossible for guests to be invited onto the Island during the busy residential interval and inappropriate during the rest of the year. For personnel on the island for extended periods of time, requests for guest visitations originating from Sea Turtle Program must be presented to Gale Bishop and fully justified in terms of project goals. Bishop will decide if circumstances warrant special consideration and; if so, **Bishop will carry the request with his recommendation in each case to the Island Superintendent, Royce Hayes.** Sea turtle interns are not to directly approach the Island Superintendent with these requests directly before or during their internship. PLEASE follow the chain-of-command.