

Protocol for FIELD TRIPS



AND CAMP SITES
in the Galapagos islands

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WHY IS THIS MANUAL NECESSARY?

A Field Protocol is necessary because it is important to prevent species being transported from one island to another, especially to uninhabited islands and areas that are in pristine condition (i.e., have few introduced species or have experienced little ecological degradation). In this way we can preserve the natural state of the archipelago.

The threats and risks of transporting organisms between islands increase daily, for the simple reason that there are more and more pests and other organisms in the inhabited islands. At the same time, there is more traffic and activity between islands, which increases the risk of dispersing both introduced species and native species. Already, some aggressive introduced species have arrived on uninhabited islands e.g. the fire ant on Marchena. Eliminating these organisms takes years of effort and a lot of money. There is a risk of permanent staff, volunteers or temporarily hired personnel, of the Galapagos National Park Service (GNPS) and the Charles Darwin Research Station (CDRS), or visiting scientists transporting such organisms, as they also work on different islands throughout the archipelago.

These factors highlight the need to establish a long-term control and quarantine system, as well as a guide of procedures and rules that should be observed when traveling between islands and campsites

WHO IS THIS PROTOCOL FOR?

This protocol should be used by GNPS and CDRS employees, visiting scientists working in the field, students and field assistants, fishermen, hunters, builders, logistical and administration personnel who help prepare field trips, boat crews, and anyone authorized to visit another island.

This protocol was written to inform and train everyone making trips between islands about the procedures necessary to prevent the transport and introduction of organisms to other islands.

WHAT WILL HAPPEN IF YOU DO NOT OBSERVE THE RULES OF THIS MANUAL?

Ignoring the rules established in this Protocol will result in the immediate suspension of your trip and/or contract, and could lead to the cancellation or refusal of permission for future work.

PROTECTING THE ISLANDS IS EVERYONE'S RESPONSIBILITY!

FIRST PROTOCOL:

PLANNING THE TRIP

Once the field trip has been approved, the first step is to select a coordinator or someone responsible for the trip. All the team must respect his or her decisions. To ensure this, all the group participants should sign a Declaration of Responsibility (see Annex) that has to be handed to the technical department of the GNPS.

Responsibilities of the trip coordinator

1. Notify authorities in advance

- Complete a Field Trip Notification form and send it to the technical department in the GNPS.
- For scientific studies, fill in a sample collection form.

2. Training personnel

- Hold a workshop with the participants to ensure that everyone knows the rules of the Field Protocol Manual.
- Ensure that all participants sign the agreement to abide by the Protocol (see Annex).

3. Trip preparation

- Review all the food and animal health rules and procedures issued by the System for Inspection and Quarantine for Galapagos (SICGAL), so that you are fully informed of any temporary special regulations.
- Review and comply with the list of food items authorized to be taken on field trips (see Table 1 and 3).
- Before departure, randomly inspect the team's luggage and equipment to check that all the Protocol rules have been observed.
- If the trip is going to be long, ensure that those responsible for sending extra food will follow the Field Protocol rules.
- If the boat's state of hygiene is unacceptable, suspend the trip.

REMEMBER

- Review the SICGAL rules.
- Comply with the list of authorized food.
- Inspect the luggage.
- Make sure everyone is familiar with the protocol.

4. Trip Itinerary

- Do not camp on pristine islands, unless it is impossible to stay on the boat.
- Plan the itinerary to avoid going to sites invaded by aggressive species before visiting pristine sites.
- Consult with the GNPS and CDRS about where you should camp, because on the majority of islands there is already an established camp site.
- Make sure that there will be enough time to inspect all the equipment before boarding the boat, when leaving any island.

Table 1

PRODUCTS THAT CAN NOT BE SERVED ON BOARD OF THE BOATS	
FRUITS	VEGETABLES
Citrus	Avocado
Passion fruit	Tomato
Naranjilla	Cucumber
Pineapple	Pepper
Water melon	
Blackberry	
Guava	

REMEMBER

- The boat captain and the crew should be familiar with the protocol.
- Fumigate the boat before departing.
- Only carry authorized food.
- Boat inspection by SIGGAL.

Responsibilities of boat captains and those in charge of logistics

- Make sure that the boat captain is fully informed of the Field Protocol's rules and that all the participants have signed an agreement to abide by the rules.

- Check that the boat has been inspected and fumigated, and that it contains no garbage or organisms.
- Check that the boat is not carrying non-permitted food items (see Table 1 and 3).
- Request and coordinate a SICGAL inspection of the vessel, equipment and food.
- Ensure that crew members do not throw garbage containing seeds into the sea when they are close to an island, and that they carry all garbage to the port of origin.
- The external lights of a boat should be turned off before leaving an island, and boats should use yellow light bulbs.
- If the trip will be long, check that those responsible for sending extra food follow the Field Protocol, and that the food has been inspected by SICGAL.
- Each year hold a workshop on the Field Protocol for logistics and human resources personnel.

Responsibilities of the coordinator of building projects

The coordinator should be a GNPS employee. This person's responsibilities are the same as those of the trip coordinator, plus the following:

- Ensure that an environmental impact assessment has been carried out and that all papers are in order.
- Check that all personnel hired are aware of the Field Protocol.
- Make sure that the materials being taken have been inspected by SICGAL and are free of organisms.
- Minimize the use of organic materials.
- Only use treated wood that has no bark.
- Minimize impact on the surrounding environment.

REMEMBER

- Coordinator signs a declaration of responsibility form.
- Equipment and clothes do not contain any organisms.

Responsibilities of everyone

1. Preparation of materials and equipment

- When possible, a room should be designated exclusively for the preparation

of field trips. Where this is not available, all equipment should be prepared and packed in a clean room, free of invertebrates.

- Thoroughly inspect ALL equipment. Wash and clean your field equipment carefully. Pay special attention to products and objects mentioned in Table 2. Shake everything and remove any organisms.
- Do not carry materials from your house to the boat. Before the trip, bring all equipment and personal items to the packing room for meticulous revision.

- Set aside field clothing and shoes that have been washed and have no seeds or soil on them, keep them in the packing room.



- Before closing a container, spray it with a low toxicity insecticide such as “Piretron”.

- Where possible, store and carry all equipment in aluminum or plastic airtight containers.



- Do not use cardboard boxes or plastic bags to transport items, unless they are Biohazard bags or, if you do not have them, double thickness bags that do not break easily.
- All equipment (apart from computers, cameras, GPS and radios), materials, personnel objects, and food should be placed in containers in the packing room. They should be packed at least 12 hours before departure to avoid their possible contamination before the trip.
- Transport equipment and boxes directly from the preparation room to the boat. Do not leave them anywhere where they might be contaminated.

Table 2

POSSIBLE CARRIERS OF INTRODUCED SPECIES	
CARRIERS	SPECIES TRANSPORTED
Fruits and vegetables	Invertebrates, seeds, fungi and bacteria
Packages, boxes, field equipment, tents and backpacks	Invertebrates, rats, reptiles, amphibians, seeds and soil
Human and animal feces	Seeds and bacteria
Shoes and clothing	Seeds and soil containing microorganisms
Soil	Microorganisms and nematodes
Garbage	EVERY type of organism

2. Preparation of food and water

- Plastic water containers must be used (5 gallons).
- Only take permitted food (see Table 1 and 3).
- Discard food that contains traces of invertebrates or pathogens.
- Bunches of bananas should be submerged in salt water for at least an hour.



- Onion and garlic should be peeled beforehand.

- All fruit and vegetables should be thoroughly washed and any leaves removed.



- Store and transport all food in airtight aluminum or plastic containers.



- Before the trip, freeze any dry food (flour, noodles, rice, popcorn, etc) for three days to kill weevils and other organisms.

- Wash containers in chlorine before placing food inside them.
- Do not use cardboard boxes or plastic bags to transport items.
- Ensure that containers that will be transported on the boat are taken directly to the dinghy and not set down in dirty areas

Table 3

MATERIAL PROHIBITED AND PERMITTED TO TRANSPORT TO OTHER ISLANDS			
PROHIBITED			PERMITTED
			Only if they are washed and free of insects and diseases
FRUITS	VEGETABLES	OTHERS	
Citrus Fruits	Avocado	Untreated wood or wood with bark	Dry Vegetables
Passion Fruit	Cauliflower	Cardboard	Dry Fruit and nuts
Naranjilla	Lettuce	Garbage	Cabbage with the outer leaves removed
Pineapple	Tomato	Soil, Rocks	Cassava and potato
Watermelon	Cucumber	Material of animal or plant origin	Peeled onion
Blackberry	Green Pepper	Medicinal Herbs	Peeled garlic
Guava	Seeds	Nuts in their shells	Apple
			Carrot
			Beetroot
			Radish
			Bananas/plantains
			Bamboo submerged in salt water for 12 hours.
			Wood treated by submerging it in Maderol or its equivalent for a day.
			Canned and processed food

Avoid eating tomato, passion fruit, guava and blackberry and other fruits that could contain viable seeds, for at least 72 hours before the trip

SECOND PROTOCOL:

DURING THE TRIP

Responsibilities of the trip's coordinator

1. Boarding and landing

- Before boarding or landing at any site, check that ALL the equipment, clothing and shoes are clean.
- Make sure that all the rules from the Field Protocol Manual are being observed.
- Check that people authorized to collect samples are transporting them according to the protocol outlined in the sample collection manual.
- Allocate people to be responsible if the group is divided.

REMEMBER

- Equipment and clothes do not contain organisms.
- Campsite clean and tidy.
- Food and equipment stored in airtight containers.

Responsibilities of everyone

1. Boarding and landing

- Check that ALL equipment, clothing and shoes are clean and have no seeds or dirt on them.



- Never throw seeds found on clothing into the sea when you are close to an island.
- Carry the minimum items necessary to do your work.
- If you have found small vertebrates, insects, seeds or any other organism that has been transported from the port of origin, store it in a closed container and consult the trip coordinator about how to kill it.

2. Campsite

- The campsite should be clean and tidy.



- Shake all seeds, invertebrates and soil from the tents and other equipment.

- At the end of the trip leave no evidence of your presence at the site.

3. Material and equipment

- To avoid food and equipment becoming infested during your stay on the boat or islands, store everything in closed airtight containers.

4. Food

- If more provisions are sent to you at the campsite, always examine them before unloading them.
- While you are camping, do not buy fruit or vegetables from boats.

5. Latrines

Temporary campsites

- Use the sea whenever possible, if not, dig a deep hole in the ground and cover every trace.
- Try to place the latrine far from the campsite and always use the same place or area, and avoid leaving too many signs such as paths, etc.
- Dispose toilet paper in a garbage bag and do not leave any traces in the field.

Permanent campsite (Alcedo, etc).

- Use the existing latrine.

6. Getting rid of garbage

Garbage is one of the main means of carrying organisms between islands. Serious harm can be caused by not getting rid of garbage appropriately. So far, there is no single method for removing the garbage from the various types of campsite in Galapagos, because of the distinct characteristics of each site. For this reason, it is up to each trip coordinator to choose the alternative from the following list that will best suit the situation.

Organic Waste

- Dig a hole and bury organic waste (without seeds or roots) each day. Always fill the hole in.

Paper, plastic

- The trip coordinator should decide where to burn waste.
- Make sure that you only burn things at a site approved by the GNPS.
- Only start fires in areas isolated from dry vegetation and other inflammable materials, where there is no danger of spread to vegetation or harm to animals.
- Always start fires in the same place to minimize impact.



- Dig a shallow hole in the soil or on the beach (at low tide), or look for a place on the rocks to start a fire.

- Burn ONLY small quantities of garbage and watch the fire until it goes out.
- Fill in the hole and make sure the remains have been destroyed before leaving the area. Any plastic remains should be collected and removed from the island.

Cans and bottles

- Remove the labels.
- Flatten the cans by removing both ends and squashing them.



- Burn them or leave them in the sun until the end of the trip. .
- There are two alternatives to eliminate cans and bottles:
 - a) Store the cans and bottles in a bag; fumigate it and close it, then carry it to the port in an airtight container.
 - b) Fill them with water and, once they are full, throw them in the open ocean (at more than 80m depth).

It is best to avoid bringing garbage back to port; however, when there is no other option:

- Separate organic waste from the other garbage and keep it in a closed plastic bag, hanging out of the reach of animals.
- Fumigate bags when they are full and, once again, at the end of trip.
- Put the bags in closed airtight containers.
- Once you have arrived in the port of origin, all the garbage should be kept in the containers until it is burned.
- Burn the garbage with diesel, without removing it from the bag, in a sealed 50-gallon drum; or give it to a SICGAL inspector who will burn it in an incinerator.

FINAL COMMENTS

You are responsible for observing the security and conservation regulations of the Galapagos National Park Service. Ignoring these regulations will affect, and could compromise, the progress of your project or work. If there is a serious breach of these regulations, your relationship with the GNPS and the CDRS could be damaged, reducing future opportunities for study or work.

GNPS or CDRS personnel can, at any time, inspect equipment, food or campsites to check that all security rules are being observed. Your work or study may be slowed down, interrupted or canceled if any problems are encountered.

Ignoring regulations could lead to the immediate suspension of the trip, contract, your stay in the islands, or any future trips.

GALAPAGOS IS UNIQUE. HELP US CONSERVE IT FOR THIS AND FUTURE GENERATIONS!

Annex

DECLARATION OF RESPONSIBILITY

I,

Head

Responsible

Scientist

from

Group/Area/University/Institute

agree to supervise and check that all the members of my team/group, adhere to the protocol stipulated for field trips. I understand that if this obligation is not fulfilled, the Galapagos National Park could initiate appropriate legal actions.

For legal authentication, all the participants of the trip must sign their name and list their national identification number or passport number, being aware that each member of the group is mutually responsible.

Responsible for the trip:

Head of Unit/Area/Department

PARTICIPANTS

