Galapagos National Park, Field and Camp Protocols in the Galapagos Islands





Global Environment Facility









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The opinions expressed here belong to the authors and do not necessarily reflect the opinions of GEF/UNDP.

MANUAL OF PROTOCOLS FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE GALAPAGOS NATIONAL PARK AND GALAPAGOS MARINE RESERVE

General Introduction

The constant demand for information and the need to increase the research efforts applied to managing the Galapagos National Park (GNP) and the Galapagos Marine Reserve (GMR), have made it essential to develop a Field Protocol to conserve and restore the integrity and biodiversity of the archipelago. This will be achieved by:

- preventing the transportation of species from one island to the other, especially toward uninhabited islands and strictly protected areas (i.e. which have few introduced species or have experienced few other man-caused impacts or ecological degradation), and
- acting in a way that minimizes the impact of the activities carried out in protected areas.

Galapagos' population centers endure constant human influence, causing, among other problems, the introduction of foreign species which have put the islands' biodiversity in danger. Cargo and passenger transportation is done from the population centers to other islands of the archipelago, and thus they become the main focal points for the dispersion of introduced species into inhabited islands, and from those to uninhabited ones. At the same time, there is more traffic and activity between the islands, which increases the risk of the spread of both introduced and native species. Some aggressive species that were introduced into Galapagos have already reached the uninhabited islands, for example it has been proven that many invading species have been accidentally transported to uninhabited islands, as in the case of the fire ant, an aggressive insect that was accidentally introduced into Marchena. Eliminating these organisms takes years of effort and significant amounts of economic and technological resources. All people who travel from one island to another, or to different areas within the same island, represent a potential risk for the spread of pests, weeds and potential harmful diseases. This could happen in a number of ways, including:

- seeds of weed species clinging to clothing or imbedded in the mud or dirt on shoes;
- · through the intestines;
- ants transported accidentally by hiding in suitcases or other equipment, or picked up by helicopter landing gear.

Table 1 shows the possible carriers of introduced species.

In addition, with the increased research and administrative activities in Galapagos, there is an increased possibility that the local ecosystems will be affected, and so it is essential to have rules of conduct for all field work to minimize impacts on the area(s) being visited.

FROM THE PERSPECTIVE OF THE GNP MANAGEMENT PLAN

In Galapagos, as with all other archipelagos on the planet, the introduction of foreign species and especially those that cause significant changes in the structure and functioning of the ecosystems (invasive species), is without a doubt the most important factor threatening the biological integrity of those ecosystems, especially land-based ones.

As a result, the Galapagos National Park, in its management plan, states that the problem of controlling invasive species is very complex scientifically, technically and above all socially, and as a result it accepts that the total eradication of the more than 1,100 foreign plant and animal species recorded in the islands is today impossible.

Therefore, it establishes that the approach to be used to address this problem will be one of total control (as stated in the Law of the Special Regime for the Conservation and Sustainable Development of the Province of Galapagos, or LOREG); in order to on the one hand stop the introduction of new invasive species, and on the other try to eradicate or minimize the effect of those which have the most impact on local ecosystems and their biodiversity.

At the same time, the Park's management plan also seeks to keep the archipelago's native species isolated geographically. In this context, this protocol is a tool that is intended to prevent the spread of organisms that are introduced, as well as the movement of those which are native or endemic, from one island to another or even within different areas of the same island.

These protocols must be followed by all persons and entities who are carrying out administrative or research activities in the Galapagos National Park and the Marine Reserve.

The protocols are available at the following websites:

www.galapagospark.org www.darwinfoundation.org www.sesa-sicgal.org

REGULATIONS AND PENALTIES

The failure to comply with the rules established in this Protocol will result in the immediate suspension of the planned trip and/or work, and could lead to the cancellation or denial of permission for future jobs.

According to LOREG:

As stated in Article 69 of the LOREG, anyone who destroys or alters protected areas, discards waste in the bays, beaches or riverbanks, throws trash or other objects that could harm the ecosystem into the water, or extracts dry or rocky material from protected areas without authorization will be penalized with a prison term of 1 month to a year and a fine of anywhere from 10 to 1000 general minimum monthly salaries and the articles removed will be seized, as the case may be, and provided that this sanction was not applied through administrative proceedings.

LOREG Regulations:

For its part, the General Regulations of the LOREG, in paragraph 8 of Article 102, establishes that carrying out activities that result in the destruction of natural resources constitutes an administrative infraction, provided that these activities do not constitute crimes according to the law. The penalties for these cases are fines of from 10 to 100 minimum monthly salaries.

According to the Forestry, Natural Areas and Wildlife Conservation Act:

Article 75, prohibits polluting the soil, water or air and threatening wildlife, whether it be land-based, aquatic or airborne, existing in the managed area.

Finally, Article 89 of the same Forestry Act sets a fine of from 1 to 10 minimum monthly salaries for anyone who violates one or more of the prohibitions contained in Article 75.

CONDUCT IN THE FIELD

The following protocol is aimed at people who remain for certain periods of time in the field and should therefore demonstrate exemplary behavior, respecting and caring for their surroundings. The Office of the Director of the Galapagos National Park (DGNP), as an administrative authority which governs the activities in the Park and Marine Reserve, insists that this protocol be complied with and enforced in order to minimize the impact of human presence on the study sites.

With the same purpose of protecting and preserving the Galapagos Islands, the DGNP has prepared the following rules, which should be strictly followed during one's entire stay on the islands:

General Instructions

- It is forbidden to take anything from the islands, except for photos. Due to its unique nature, the plants, animals and rocks must remain in place in order to avoid any alteration of any kind.
- Each island of the archipelago is a unique place because of its flora, fauna and landscape; any introduction of foreign organisms like animals, seeds, plants and insects causes serious problems. Your collaboration is very important in order to prevent this happening.
- The animals of Galapagos must not be touched or petted for your own safety, and because they can quickly change from being docile to aggressive or otherwise change their behavior.
- The endemic and native animals of Galapagos have their natural feeding patterns, therefore it is forbidden to give them any kind of food, as it could harm them.
- 5. You may not disturb the biological cycles of sea birds (mating, reproduction, nesting, raising young). The Galapagos sea birds abandon their nests if they are bothered or chased, leaving their eggs or

- chicks to fall to the ground and be exposed to the weather; therefore, you can observe these birds at a distance of no less than 2 meters.
- During your visit to the islands, it is forbidden to enter with pets or any other animal, except where they are being used for park management purposes, since these animals are having serious impacts on the native flora and fauna of Galapagos.
- 7. In order to maintain the islands in their most natural state possible, bringing any live organism from the continent is forbidden, as is moving organisms from one island to another. Plants, seeds, insects, pests and disease are dangerous for the islands' fragile ecosystem.
- Fishing on boats that are registered for tourism activities is not permitted.
- 9. Do not litter in the visiting sites, in the ocean or around the islands as garbage of any kind interferes with natural processes and takes away from the charm of the islands' unique landscape. Also, sea lions pick up the cans/bottles left on the ocean floor and play with them, often injuring their noses, and sea turtles can eat discarded plastic material and die from a blockage of the digestive tract.
- 10. Do not write or carve names or any other words or symbols on rocks, walls, trees, etc.; doing so reveals poor manners and damages the landscape. Remember: Your immortality is not more important than the unique nature of these islands.
- Starting fires or smoking in park areas is prohibited. Remember that a discarded match or not completely extinguished cigarette can start a fire. Carelessness led to huge fires on Isabela Island in 1985 and 1994.

- If you want to camp in authorized campsites, you must ask for permission from the Office of the Director of the Galapagos National Park (DGNP).
- Professional filming requires special authorization from the DGNP.

In the field

- It is important to remember that we must conduct ourselves properly and avoid any kind of conflicts or incidents with other people, whether tourists or guides, on board the boats or on land.
- We must set an example of responsibility and good behavior. This also implies a commitment to refrain from activities that are unrelated to one's primary purpose for visiting the islands.
- 3. In the area or zone designated as a site open to visitors, no monitoring or other work may be carried out when there are guides or tourists present. Bathing is only allowed in the places designated for that purpose.
- 4. If appropriate, it is recommended that you introduce yourself to each nature guide who passes through your worksite, explaining what you are doing and offering to share information about your work with tourists.

On board ships

 The person in charge of the trip should ensure that the established travel plan is followed, verify that there are safety devices on board the ship and review all the material, equipment and cargo being shipped. If at the moment of castoff the

- ship does not fulfill the minimum safety and hygiene conditions, the trip has to be cancelled immediately.
- The person responsible for the journey must introduce themselves to the Captain. In addition, they must ensure that throughout the trip, the Captain and his crew respect the DGNP Protocols.
- When traveling on a tourist vessel, take care not to interfere with the normal activities of the crew and the tourists.
- If they offer you food, you may accept it as long as it is permitted food according to the Protocol for Field Activities in the Galapagos National Park and Marine Reserve.

The following prohibitions are a complement to the GNP Rules, which must be respected and enforced in their totality during your entire stay in the study sites:

It is strictly PROHIBITED:

- to interfere with the process of natural selection, which means that the natural predation of newborns by native or endemic animals is a normal occurrence.
- to consume cigarettes, alcoholic beverages or any other narcotic or psychotropic substance in the study sites.
- to fish or collect animals for consumption and especially to take them as a souvenir or to keep them at the camps as pets, unless they are being used for park management purposes.
- to take speakers, televisions, guitars, etc. to the study sites. Only sound reproduction devices with headphones (Discmans, ipods, etc.) are allowed.

 to be naked or wear inappropriate clothing in sites that are authorized for research purposes. Personnel from the Technical Area of the GNP reserve the right to make unannounced visits to the camps.

PROTECTING THE ISLANDS IS EVERYONE'S RESPONSIBILITY!



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PROTOCOL FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE GALAPAGOS NATIONAL PARK AND MARINE RESERVE INVOLVING OVERNIGHT STAYS ON LAND



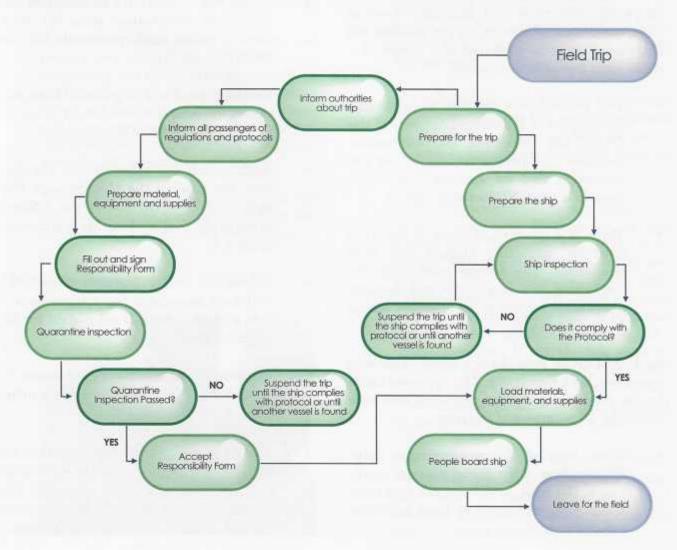
PROTOCOL FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE GALAPAGOS NATIONAL PARK AND MARINE RESERVE INVOLVING OVERNIGHT STAYS ON LAND

Applies to:

Employees of the office of the Director of the Galapagos National Park (DGNP) and the Charles Darwin Foundation (FCD), visiting scientists, students and field assistants, who are carrying out park management and research activities based out of campsites within the Galapagos National Park. In addition, ship crews and logistical and administrative staff and/or anyone with authorization to visit other islands, like contractors and builders.

1. PREPARATION

In order to facilitate the planning of the trip, a summary of the steps to follow appears in the following flow chart:



All of the activities that are carried out in the protected areas of Galapagos require permission from the DGNP. A detailed work plan must be submitted to the person responsible for park management from the DGNP for approval.

The DGNP has a Biosafety Coordinator who will assist and guide personnel on these procedures and the facilities available to carry them out. This person will also ensure that you are following the rules by inspecting your equipment and ensuring that the Responsibility Form (Annex 2) and the Inspection Form (see Annex 5) have been filled out. In addition, the coordinator must be responsible for training and accrediting employees to conduct inspections.

Each institution must designate inspection and quarantine facilities exclusively meant for preparing field trips and maintain them in clean conditions. Where this is not possible, all equipment must be prepared and stored in a clean room free of invertebrates.

- The Department for the Control and Eradication of Introduced Animals of the DGNP has inspection and quarantine facilities. The person responsible for the inspection and for keeping quarantine records is the GNP biosafety officer.
- There is a quarantine room at the FCD used for inspecting luggage and local equipment. The person responsible for conducting the inspection and keeping quarantine records is the biosafety officer of the Foundation.

Each field group must have a coordinator who is responsible for each trip. The decisions made by the coordinator will be respected and supported by all members of the team.

Time needed for preparing a trip:
 All members of the group who are traveling to the field must be at the port from which they will leave at least two days before the trip.

Preparing the equipment, food and inspection and quarantine activities necessary will take at least five days prior to the trip.

In the event of an emergency situation: It is essential that the inspection of supplies, materials and equipment be conducted in the quarantine room before leaving the port. Follow the instructions indicated for revision to prevent the transportation of foreign organisms outside of the visit sites.

1.1. Responsibilities of the trip coordinator

The trip coordinator is responsible for the following:

- Notifying authorities in advance and ensuring compliance with the standards, rules and protocols of the DGNP:
- Complete the Field Trip Notice Form contained in Annex 1; and send it to the DGNP Head of Park Management.
- Ensure that the planned trip complies with the rules of the Management Plan with respect to the use of the different areas of the GNP and the Marine Reserve (Annex 3)
- Inform the DGNP biosafety officer. He will help to enforce the requirement of this protocol and will set a date for the quarantine.
- Communicating the regulations to be followed in the field and other protocols:
- Ensure that all of the participants in the field trip are familiar with the rules of the field protocol and other protocols (for sample collection, etc.). This will be done through a training session and/or tests.



- Ensure that all participants sign the Responsibility Form, included in Annex 2, agreeing to comply with the protocol and to respect the decisions of the trip coordinator. A copy of this agreement must be submitted to the biosafety officer.
- If the trip involves collecting samples or moving animals or plants within the islands, the coordinator and relevant personnel will be up to date with all appropriate protocols.

3. Trip preparation

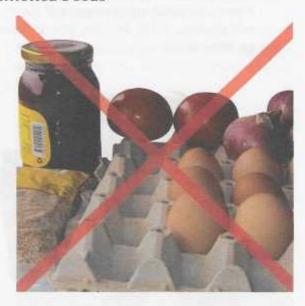
The trip coordinator must:

- Ensure that the personnel are present with enough time to prepare the trip.
 All personnel must be present for the inspection.
- Review all of the sanitation rules and procedures issued by the Galapagos Inspection and Quarantine System (SIC-GAL) so that personnel are well-informed about any quarantine emergency or special temporary regulations. This information is available on the SESA – SICGAL website: www.sesa-sicgal.org.
- Review and enforce compliance with the list of authorized food products that can be taken on field trips (see Table 2 and 3)

Permitted Foods



Prohibited Foods



- Before departing, ensure that the group's luggage and equipment have been inspected by inspection staff under the supervision of the biosafety coordinator or their replacement.
- If the trip is going to be for a long period of time, ensure that the persons responsible for sending additional food are aware of and comply with the field protocol rules.
- If the transportation is via ship, only those vessels are authorized by the DGNP may be used, and they must comply with the standards listed in section on the Responsibility of Ship Captains (Annex 4.) The group can only travel if the ship has a valid fumigation and inspection certificate issued by SIC-GAL inspectors. If not, the trip must be cancelled and the name of the ship and captain must be reported to the DGNP, SESA-Galapagos must also be informed as the provincial quarantine authority.
- Ensure that the group has enough material (insecticide, disinfectant, etc.) to properly treat all camping, personal, and research equipment before leaving for another island or to return to port.

 Ensure that the group has a first aid kit, communication equipment, a UHF radio, cell phones, GPS devices, etc. in case of an emergency.



 Report anyone violating the field protocols established by the Office of the Director of the GNP to the Management Office at 2526 511/189 Ext. 227.

4. Travel itinerary

The trip coordinator's responsibilities also include the following:

- Plan the itinerary in such a way as to avoid going to places that are invaded by aggressive species before visiting more pristine areas. Ask the DGNP about places where the group should camp, since in most of the islands there are already established campgrounds.
- Do not camp in pristine islands unless it is in possible to stay on a boat and DGNP has granted authorization.
- Trip planning will be done according to the DGNP Zoning System, in this order:
 1) Absolute Protection Zones;
 2) Ecosystem Conservation and Restoration Zones;
 and finally,
 3) Impact Reduction Zones. Field trips or visits planned otherwise will not be authorized.

1.2. Everyone's responsibilities

All members of the groups participating in field trips are responsible for ensuring the following:

1. Water and food preparation:

- Use plastic containers for water.
- Take only permitted foods as listed in table 2 and follow the recommended rules. It is preferable to take processed foods that are packed in plastic rather than in cans or glass.
- The use of cardboard boxes is not allowed (the products must be taken without the cardboard packaging).
- Only take the amount of food products that is strictly necessary.
- Meticulously check the foods which may contain invertebrates, seeds, or pathogenic symptoms. Discard any items that contain the remains of invertebrates or pathogens.





- Wash all fruits and vegetables permitted to take on board, individually, and remove any unnecessary leaves. Do this in advance.
- Ensure that all dried foods (wheat, noodles, rice, popcorn, etc.) and their packaging are free of holes or invertebrates and freeze them for at least three days or as long as recommended by the biosafety coordinator to kill weevils and other organisms.



 Store and transport all food in hermetically sealed plastic or aluminum containers.



- Wash the containers with bleach before placing food within them,
- Seal the containers with packing tape and fumigate the outside of each container.



- Do not use cardboard boxes or plastic bags to transport products. Biohazard bags are the most recommendable. If biohazard bags are not available, use double-strength trash bags that do not break or puncture easily.
- Ensure that the containers to be transported onto the ships are directly taken to the dock and not set down on dirty areas.

Do NOT eat tomatoes, passion fruit, grenadines, guava, raspberries or other fruits and vegetables or processed products that may contain viable seeds for at least 72 hours before your trip.

2. Preparing materials and equipment

- Prepare all things that will be inspected ahead of time.
- Closely check all of your equipment and personal objects in order to avoid transporting invertebrates or other animals, seeds and soil. Carefully clean everything that will be taken to the field. Pay special attention to the products and objects listed in table 1. Shake out and review every article (especially any place





- where seeds or tiny animals could be hiding) and dispose of any organism that you find.
- Before the trip, take all of the materials to be used in the field to the quarantine room so that they can be submitted to a meticulous review by inspectors.



- All electronic equipment must be carefully checked, especially the battery compartments, and cases, in search of insects.
- DO NOT TAKE ANYTHING FROM YOUR HOME DIRECTLY TO THE SHIP WITHOUT HAVING CONDUC-TED THE REQUIRED INSPECTION.
- Store all equipment and materials in hermetically sealed aluminum or plastic containers, and if possible, take them to the field that way. Do not use cardboard boxes or plastic bags to transport articles, unless they are biohazard bags or double-strength garbage bags.
- Before being closed or sealed, all equipment (except for computers, cameras, GPS devices and radios) and materials must be sprayed with low-toxicity insecticide whose active ingredient is any



synthetic pyretroid. Aerosols are preferable. This equipment and these objects must be left with the spray applied for at least 24 hours before leaving in order to kill insects or spiders which could be inside and to prevent any possible contamination before the trip. Electronic equipment must be closely checked for insects. Remove the battery compartments and look for bugs, especially ants.

 Tightly seal all containers or bags with tape and ensure that there is no way that any invertebrate can enter.



- Store equipment in the quarantine room until it is ready to be transported on board the ship.
- When moving equipment in containers to the inspection rooms, make sure that the cart used to move them is clean and free of insects.

3. Preparing personal articles

 Before the trip, take ALL of your personal items that will you will use in the field to the quarantine room to be inspected thoroughly.

- DO NOT TAKE MATERIALS FROM YOUR HOUSE DIRECTLY TO THE SHIP WITHOUT HAVING GONE THROUGH THE REQUIRED INS-PECTION
- Take along the minimum number of articles necessary to do the job at hand.
- Carefully review, wash and clean all of the articles. Pay special attention to the products and objects mentioned in table 1, including the pockets within clothing, the insides of shoes and any other place where seeds or invertebrates could be hidden, and get rid of any organism that you may find. All clothes, shoes and other personal items, after being inspected, should be packed within backpacks or suitcases which have also been thoroughly checked and found not to contain invertebrates or seeds, and these backpacks or suitcases must be placed inside of biohazard bags or strong plastic bags that are tightly sealed.
- All clothes and shoes to be used on the day of departure must be clean and free of seeds or invertebrates.

If you are planning to disembark on different islands, take along changes of clothing for each island in separate or independent sealed packs.

2. DURING THE TRIP

2.1. Responsibilities of the trip coordinator

The trip coordinator and primary researcher will be responsible for all activities of the members of the group.

Upon boarding and upon arriving, there are procedures that must be followed:

 Before boarding the vessel or disembarking at any place, check to make sure that all equipment, clothes and shoes are clean.

- Ensure that all of the rules in the Field Protocol Manual are being observed.
- Make sure that the people who are authorized to collect samples are transporting them under the appropriate protocol.
- Delegate responsibilities if the group is to be divided up into smaller groups.
- Appoint one person to be responsible for the camp in the event that a group is staying overnight on land; this person will be responsible for keeping the camp in good shape.
- Make sure that the captain of the ship is following established rules and procedures. (Annex 4).

2.2. Everyone's Responsibilities

1. While on board the boat

- Do not dispose of seeds or fruits with seeds in areas close to the coastline.
- If you find any invertebrates, small insects, seeds or any other organism that has been transported from the port of origin, keep them in a closed container and consult with the trip coordinator on how to proceed.

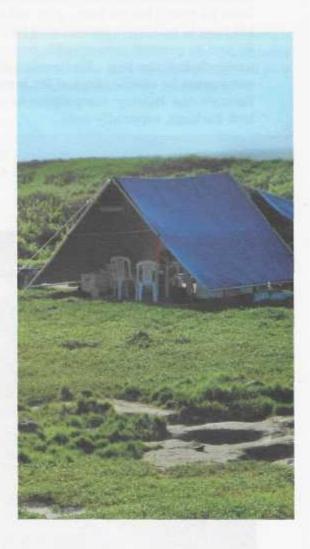
2. Before disembarking

- Check to make sure that all equipment, shoes, and clothes are clean and free of seeds or soil.
- Only use clothes, shoes and equipment that have been in quarantine in hermetic containers.

3. The Camp

Where possible, the camps should be located in a place where they are not visible to tourists or other people visiting the islands.

 Make sure that the camp is always clean and orderly.



- Fishing is prohibited, except when being done for park management purposes or for the collection of protected species.
- At the end of the trip, do not leave any trace of your presence at the site.

4. Material and equipment

- In order to prevent food and equipment from being infested during your stay on the boats or in the islands, store everything in hermetically sealed containers.
- All equipment must be inspected before leaving the island or a campsite before returning to the port of origin.



5. Food

- If more provisions are sent to you at the campsite, always examine them before unloading them.
- Do not purchase or accept fruits or vegetables from other ships.

6. Latrines

Temporary camps

- Use the ocean when possible, or the beach below the high tide mark. In other areas, you will need to dig holes and not leave any evidence behind.
- Try to locate the latrine far from the campsite and always use the same place or area, and avoid leaving signs like paths etc.
- Dispose of toilet paper in a plastic trash bag or in the hole, if the terrain permits, and do not leave any traces at the campsite.

Permanent campsites (Alcedo, etc.)

Use the existing latrines.

Disposing of trash

Garbage is one of the main ways that organisms get transported from island to island. All waste can cause serious damage if not disposed of properly. Due to the distinctive characteristics of each place, as of now, there is no one single method for removing or disposing garbage from the different types of camps existing in Galapagos. For this reason, it is up to each trip coordinator to choose an alternative from among the following choices that best fits the situation:

Organic waste:

 Dig a deep hole of at least 1 m in depth, terrain permitting, and bury organic waste (without seeds nor roots) every day. Always cover the hole at the end of the trip before leaving. If this is not possible, keep organic waste in a closed plastic bag and hang it out of the reach of animals or within a closed container, and later take it with you to the port of origin.

 If you should have to return with organic waste to the port, spray the bags with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid to kill any insects or spiders that could be inside when they fill up and again at the end of the trip.

Non-organic waste

This applies to paper, plastic, bottles, cans and other non-organic trash.

 Store the trash in plastic bags; spray them with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid in order to kill any insects or spiders that may be inside. Aerosol spray is preferred. Close the bag and take it to the port in a hermetically sealed container.



- Separate organic waste from other waste and keep it sealed in a plastic bag, hung out of the reach of animals.
- Place the bags in a hermetically sealed container.
- Once you have reached the port of origin all garbage must be kept in the containers until it is delivered to the SESA - SICGAL, who will burn it in an incinerator.
- The trash should be burnt with diesel fuel, without taking it out of the bag, in a sealed 50-gallon drum; or handed over to a SICGAL inspector who will burn it in an incinerator.
- All equipment must be inspected before leaving the island or the camp site and



returning to port. Make sure that there is enough time to inspect all equipment before boarding the ship.

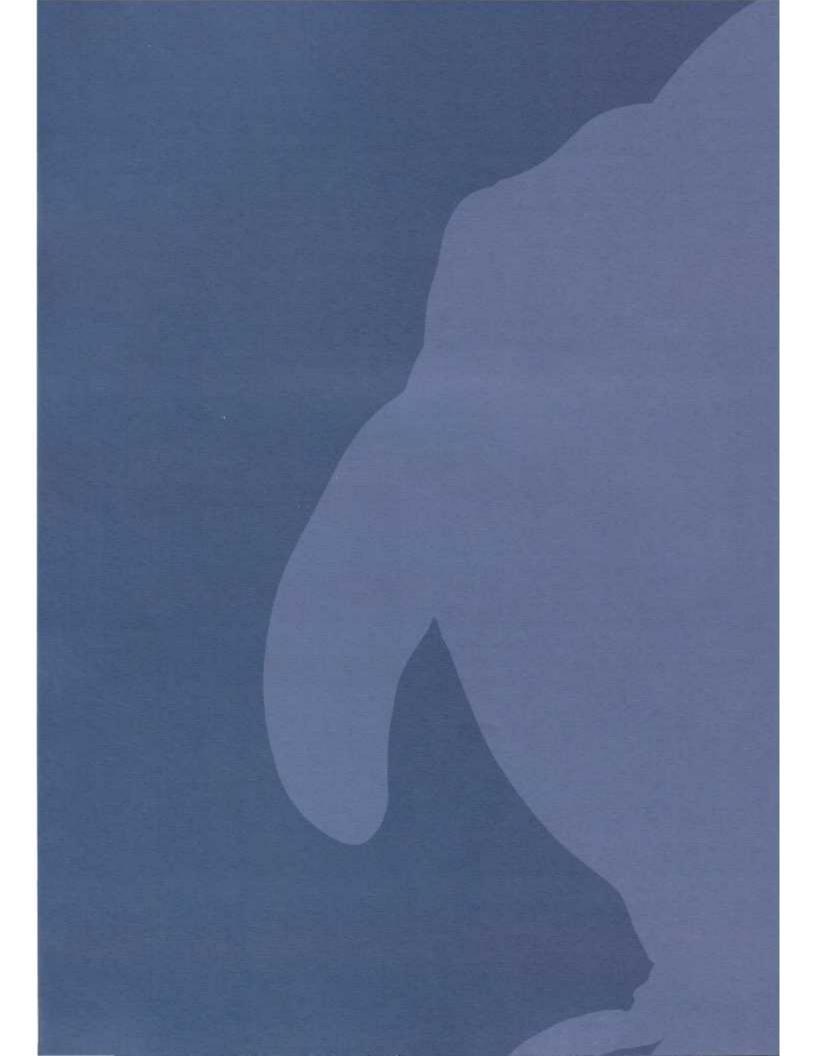
8. Before boarding the ship

Conduct a process of inspection and quarantine of clothing and equipment before leaving the work site, making sure that there is enough time to properly follow the appropriate protocols.

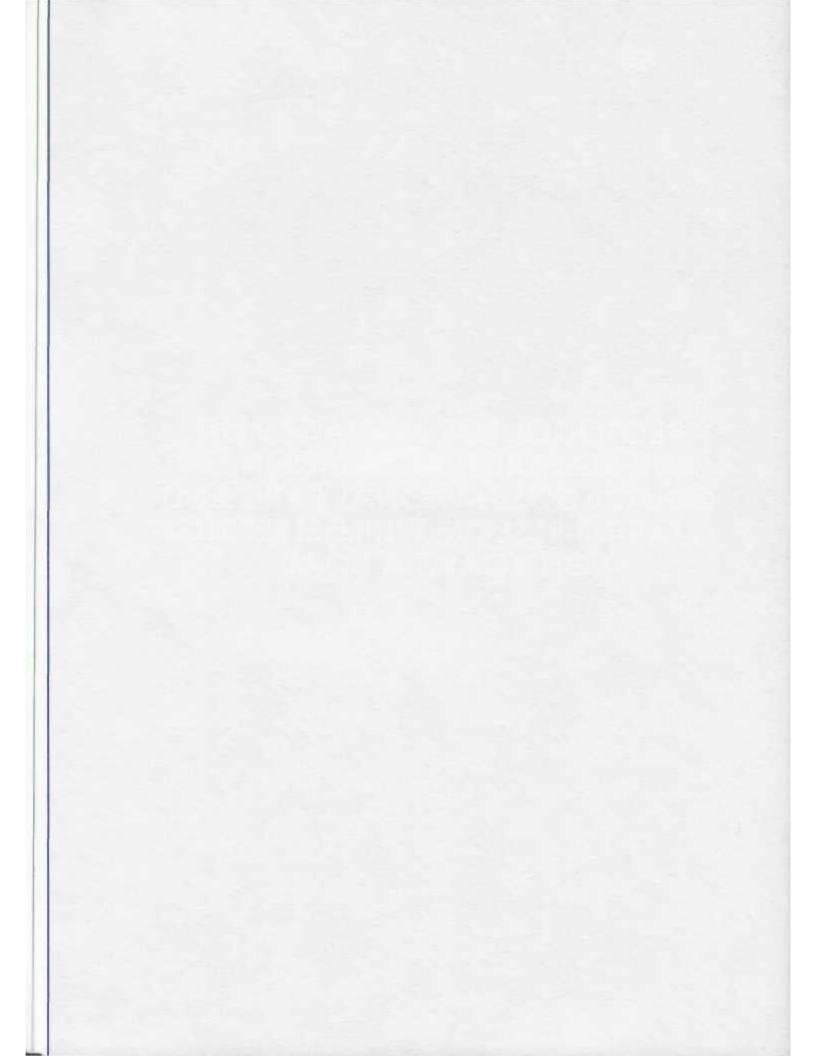
If the trip involves moving from one site/island to another without returning to port, all equipment must be respected and treated according to the Protocol.

Final comments

You are responsible for observing all rules regarding safety and conservation in the Galapagos National Park. Ignoring these rules could affect the progress or developments of your project or work, and even be subject to criminal prosecution. DGNP or SICGAL may, at any time, inspect equipment, food or camps to make sure that all of the safety rules are being followed.



PROTOCOL FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE GALAPAGOS NATIONAL PARK AND MARINE RESERVE WHILE SLEEPING ON BOARD A BOAT





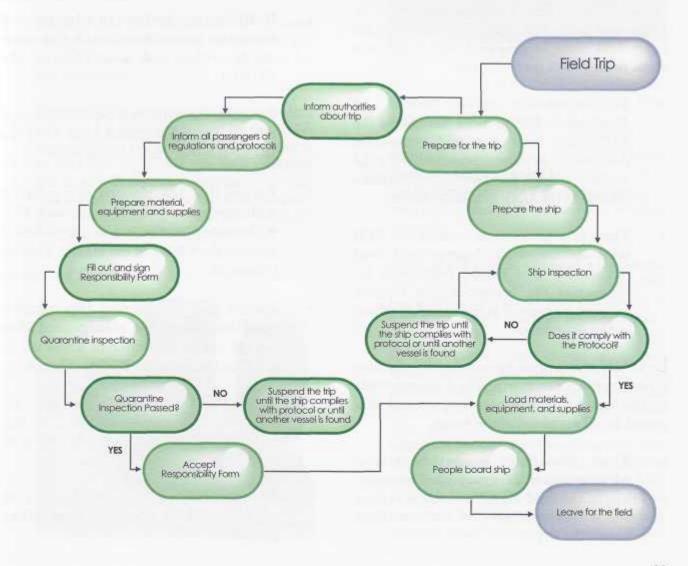
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- The Department for the Control and Eradication of Introduced Animals of the DGNP has inspection and quarantine facilities. The person responsible for the inspection and for keeping quarantine records is the GNP biosafety officer.
- There is a quarantine room at the FCD used for inspecting luggage and local equipment. The person responsible for conducting the inspection and keeping quarantine records is the biosafety officer of the Foundation.

Each field group must have a coordinator who is responsible for each trip. The decisions made by the coordinator will be respected and supported by all members of the team.

Time needed for preparing a trip:
 All members of the group who are traveling to the field must be at the port from which they will leave at least two days before the trip.

Preparing the equipment, food and inspection and quarantine activities necessary will take at least five days prior to the trip.

In the event of an emergency situation: Conduct the inspection of supplies, materials and equipment in the quarantine room before leaving the port. Follow the instructions indicated to review these items to prevent the transportation of foreign organisms outside of the visit sites.

1.1. Responsibilities of the trip coordinator

The trip coordinator is responsible for the following:

- Notifying authorities in advance and ensuring compliance with the standards, rules and protocols of the DGNP:
- Complete the Field Trip Notice Form contained in Annex 1; and send it to the DGNP Head of Park Management.
- Ensure that the planned trip complies with the rules of the Management Plan with respect to the use of the different areas of the GNP and the Marine Reserve (Annex 3).
- Ensure that the planned trip complies with the rules of the Management Plan for the use of the different areas of the GNP and the Marine Reserve (Annex 3).
- Inform the DGNP biosafety officer. He will help to enforce compliance of this protocol and will set a date for the quarantine inspection.
- Communicating the regulations to be followed in the field and other protocols:



- Ensure that all of the participants in the field trip are familiar with the rules of the Field Protocol and other Protocols (for sample collection, etc.). This will be done through a training session and/or tests.
- Ensure that all participants sign the Responsibility Form, included in Annex 2, agreeing to comply with the Protocol and to respect the decisions of the trip coordinator. A copy of this document must be submitted to the biosafety officer.
- If the trip involves collecting samples or moving animals or plants within the islands, the coordinator and relevant personnel will be up to date with all appropriate Protocols.

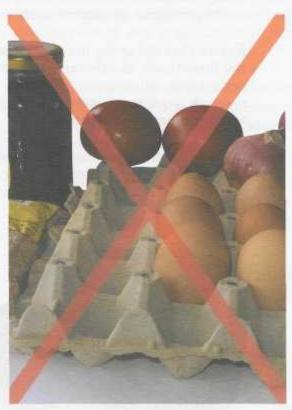
3. Trip preparation

- Ensure that the personnel are present enough time beforehand to prepare the trip. All personnel must be present for the inspection.
- Review all of the sanitation and health rules and procedures issued by the Galapagos inspection and quarantine system so that the personnel are well-informed about any quarantine emergency or special temporary regulations. This information is available on the SESA – SICGAL website: www.sesa-sicgal.org.

Permitted Foods



Prohibited Foods



- Review and abide by the list of authorized food products that can be taken on field trips (see Tables 2 and 3)
- Before departing, ensure that the group's luggage and equipment have been inspected by inspection staff under the supervision of the biosafety coordinator or their delegate.
- If the trip is planned to be of a long duration, ensure that the persons responsible for sending additional food are aware of and comply with the field protocol rules.
- If the transportation is via ship, only those vessels are authorized by the DGNP may be used, and they must comply with the standards listed in section on the Responsibility of Ship Captains (Annex 4.) The group can only travel if the ship has a valid fumigation and inspection certificate issued by SIC-GAL inspectors. If not, the trip must be cancelled and the name of the ship and captain must be reported to the DGNP.

SESA-Galapagos must also be informed as the provincial quarantine authority.

- Ensure that the group has enough material (insecticide, disinfectant, etc.) to properly treat all camping, personal, and research equipment before leaving for another island or to return to port.
- Ensure that the group has a first aid kit, communication equipment, a UHF radio, cell phones, GPS devices, etc. in case of an emergency.



 Report anyone violating the field protocols established by the Office of the Director of the GNP to the Management Office at (05) 2526 511/189 Ext. 227, in Puerto Ayora.

4. Travel itinerary

- Plan the itinerary in such a way as to avoid going to places that are invaded by aggressive species before visiting more pristine areas. Ask the DGNP about places where the group should camp, since in most of the islands there are already established campgrounds.
- Do not camp in pristine islands unless it is in possible to stay on the boat. Camping in these areas requires DGNP authorization.

- Trip planning will be done according to the DGNP Zoning System, in this order:
 - 1) Absolute Protection Zones;
 - Ecosystem Conservation and Restoration Zones; and
 - 3) Impact Reduction Zones.

Field trips or visits planned otherwise will not be authorized.

1.2. Everyone's responsibilities

All members of the groups participating in field trips are responsible for ensuring the following:

1. Water and food preparation:

- Make sure that those who are responsible for supplying the boat are aware of the Protocol and the list of permitted foods.
- · Use plastic containers for water.
- Take only permitted foods as listed in table 2 and follow the recommended rules. It is preferable to take processed foods that are packed in plastic rather than in cans or glass.
- The use of cardboard boxes is not allowed (the products must be taken without the cardboard packaging).
- Only take the amount of food products that is strictly necessary.
- Meticulously check the foods which may contain invertebrates, seeds, or pathogenic symptoms. Discard any items that contain the remains of invertebrates or pathogens.
- Wash all fruits and vegetables permitted to take on board, individually, and remove any unnecessary leaves. Do this in advance.





- Ensure that all dried foods (wheat, noodles, rice, popcorn, etc.) and their packaging are free of holes or invertebrates.
- Ensure that the containers to be transported onto the ships are directly taken to the dock and not set down on dirty areas.

Do NOT eat tomatoes, passion fruit, grenadines, guava, raspberries or other fruits and vegetables or processed products that may contain viable seeds for at least 72 hours before your trip.

- 2. Preparing materials and equipment
- Prepare all things that will be inspected ahead of time.
- Closely check all of your equipment and personal objects in order to avoid transporting invertebrates or other animals, seeds or soil. Carefully clean everything that will be taken to the field. Pay special attention to the products and objects listed in Table 1. Shake out and review

every article (especially any place where seeds or tiny animals could be hiding) and dispose of any organism that you find.

- Before the trip, take all of the materials to be used in the field to the quarantine room so that they can be submitted to a meticulous examination by inspectors.
- All electronic equipment must be carefully checked for insects, especially the battery compartments, and cases where ants can hide.
- DO NOT TAKE ANYTHING FROM YOUR HOME DIRECTLY TO THE SHIP WITHOUT HAVING CONDUC-TED THE REQUIRED INSPECTION.
- Store all equipment and materials in hermetically sealed aluminum or plastic containers, and if possible, take them to the field that way.



- Do not use cardboard boxes or plastic bags to transport articles, unless they are biohazard bags or double-strength garbage bags that do not tear easily.
- Before being closed or sealed, all equipment (except for computers, cameras, GPS devices and radios) and materials must be sprayed with low-toxicity insecticide whose active ingredient is any synthetic pyrethroid. Aerosols are preferable. This equipment and these objects must be left with the spray applied for at least 24 hours before leaving in order to kill insects or spiders which could be inside and to prevent any possible contamination before the trip.
- Tightly seal all containers or bags with tape and ensure that there is no way that any invertebrate can enter.
- Store equipment in the quarantine room until it is ready to be transported on board the ship.
- When moving equipment in containers to the inspection rooms, make sure that the cart used to move them is clean and free of insects.

3. Preparing personal articles

- Before the trip, take all of your personal items that will you will use in the field to the quarantine room to be inspected thoroughly.
- DO NOT TAKE MATERIALS FROM YOUR HOUSE DIRECTLY TO THE SHIP WITHOUT HAVING GONE THROUGH THE REQUIRED INS-PECTION.
- Take along the minimum number of articles necessary to do the planned work.
- Carefully review, wash and clean all of the articles. Pay special attention to the products and objects mentioned in

Table 1, including the pockets within clothing, the insides of shoes and any other place where seeds or invertebrates could be hidden, and get rid of any organism that you may find. All clothes, shoes and other personal items, after being inspected, should be packed within backpacks or suitcases which have also been thoroughly checked and found not to contain invertebrates or seeds, and these backpacks or suitcases must be placed inside of biohazard bags or strong plastic bags that are tightly sealed.

- The clothes and shoes that are to be worn on the day of departure must be clean and free of seeds or invertebrates.
- If you are planning to disembark on different islands, take along changes of clothing for each island in separate or independent sealed packs.

2. DURING THE TRIP

2.1. Responsibilities of the trip coordinator

The trip coordinator and primary researcher will be responsible for all activities of the members of the group.

Upon boarding and upon arriving, there are procedures that must be followed:

- Before boarding the vessel or disembarking on land at any place, check to make sure that all equipment, clothes and shoes are clean.
- Ensure that all of the rules in the Field Protocol Manual are being observed.
- Make sure that the people who are authorized to collect samples are transporting them under the appropriate protocol.
- Delegate responsibilities if the group is to be divided up into smaller groups.



- Appoint one person to be responsible for the camp in the event that a group is staying overnight on land; this person will be responsible for keeping the camp in good shape.
- Make sure that the captain of the ship is following established rules and procedures. (Annex 4).

2.2. Everyone's Responsibilities

While on board the boat

- Do not dispose of seeds or fruits with seeds in areas close to the coastline.
- If you find any invertebrates, small insects, seeds or any other organism that has been transported from the port of origin, keep them in a closed container and consult with the trip coordinator on how to proceed.

2. Before disembarking

- Check to make sure that all equipment, shoes, and clothes are clean and free of seeds or soil.
- ONLY USE CLOTHES, SHOES AND EQUIPMENT THAT HAVE BEEN IN QUARANTINE IN HERMETIC CON-TAINERS.

On land

- Fishing is prohibited, except when being done for park management purposes or for the collection of protected species.
- At the end of the trip, do not leave any trace of your presence at the site.

4. Material and equipment

 In order to prevent food and equipment from being infested during your stay on the boats or in the islands, store everything in hermetically sealed containers. All equipment must be inspected before leaving the island or a campsite and returning to the port of origin.

5. Food

 If more provisions are sent to you, always examine them. Do not purchase or accept fruits or vegetables from other ships.

6. Latrines

Temporary camps

- · Use the ship's bathroom.
- When it is not possible to use the ship's bathroom, use the ocean or the beach below the high tide mark. In other areas, you will need to dig holes and not leave any evidence behind.
- Dispose of toilet paper in a plastic trash bag or in the hole, if the terrain permits.
 Do not leave any traces in the field.

7. Disposing of trash

Garbage is one of the main ways that organisms get transported from island to island. All waste can cause serious damage if not disposed of properly. Due to the distinctive characteristics of each place, as of now, there is no one single method for removing or disposing garbage from the different types of camps existing in Galapagos. For this reason, it is up to each trip coordinator to choose an alternative from among the following choices that best fits the situation:

Organic waste:

If you should have to return with organic waste to the port, spray the bags with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid to kill any insects or spiders that could be inside, once they are full. Repeat the procedure at the end of the trip.

Non-organic waste

This applies to paper, plastic, bottles, cans and other non-organic trash.

- Store the trash in plastic bags; spray them with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid in order to kill any insects or spiders that may be inside. Aerosol spray is preferred. Close the bags and take them to the port in a hermetically sealed container.
- Spray the bags with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid to kill any insects or spiders that could be inside, once they are full. Repeat the procedure at the end of the trip.



8. Before boarding the ship

Conduct a process of inspection and quarantine of clothing and equipment before leaving the work site, making sure that there is enough time to properly follow the appropriate protocols.

If the trip involves moving from one site/island to another without returning to port, all equipment must be respected and treated according to the Protocol.

Final comments

You are responsible for observing all rules regarding safety and conservation in the Galapagos National Park. Ignoring these rules could affect the progress or developments of your project or work, and even be subject to criminal prosecution. DGNP or SICGAL may, at any time, inspect equipment, food or camps to make sure that all of the safety rules are being followed.



PROTOCOL FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE GALAPAGOS MARINE RESERVE



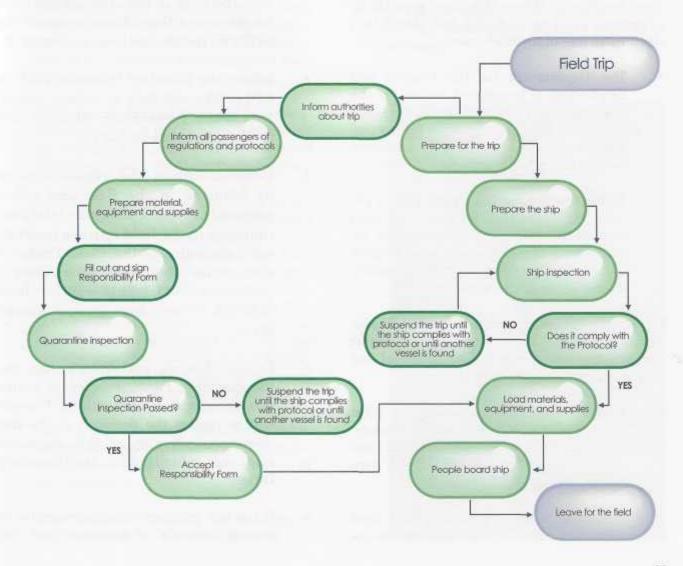
PROTOCOL FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE GALAPAGOS MARINE RESERVE

Applies to:

Employees of the Galapagos National Park (GNP) and the Charles Darwin Foundation (CDF), visiting scientists, students and field assistants, who are carrying out management and research activities in the Galapagos Marine Reserve.

1. PREPARATION

In order to facilitate the planning of the trip, a summary of the steps to follow appears in the following flow chart:



All of the activities that are carried out in the protected areas of Galapagos require permission from the GNP. A detailed work plan must be submitted to the person responsible for park management from the GNP for approval.

The DGNP and the CDF each have a Biosafety Coordinator who will assist and guide personnel on these procedures and the facilities available to carry them out. This person will also ensure that you are following the rules by inspecting your equipment and checking to see that the Responsibility Form (Annex 2) and the Inspection Form (see Annex 5) have been filled out. In addition, the coordinator must be responsible for training and accrediting employees to conduct inspections.

Each institution must designate inspection and quarantine facilities exclusively meant for preparing field trips and maintain them in clean conditions. Where this is not possible all equipment must be prepared and stored in a clean room free of invertebrates.

- The Department for the Control and Eradication of Introduced Animals of the GNP has inspection and quarantine facilities. The person responsible for the inspection and for keeping quarantine records is the GNP Biosafety Officer.
- There is a quarantine room at the CDF used for inspecting luggage and local equipment. The person responsible for conducting the inspection and keeping quarantine records is the Biosafety Officer of the Foundation.

Each group traveling must have a coordinator who is responsible for each trip. The decisions made by the coordinator will be respected and supported by all members of the team.

Time needed for preparing a trip:
 All members of the group who are traveling to the field must be at the port from which they will leave at least two days before casting off.

Preparing the equipment, food and inspection and quarantine activities necessary will take at least five days prior to the trip.

1.1. Responsibilities of the trip coordinator

The trip coordinator is responsible for the following:

- Notifying authorities in advance and ensuring compliance with the standards, rules and protocols of the GNP.
- Complete the Field Trip Notice Form contained in Annex 1 and send it to the GNP Head of Park Management.
- Ensure that the planned trip complies with the rules of the Management Plan for the use of the different areas of the GNP and the Marine Reserve (Annex 3).
- Inform the Biosafety Officer of GNP or CDF. S/he will help to enforce compliance of this protocol and will set a date for the quarantine inspection.
- Communicating the regulations to be followed in the field and other protocols. Ensure that all of the participants in the field trip are familiar with the rules of the Field Protocol and other Protocols (for sample collection, etc.). This will be done through a training session and/or tests.
- Ensure that all participants sign the Responsibility Form, included in Annex two, agreeing to comply with the Protocol and to respect the decisions of the trip coordinator. A copy of this document must be submitted to the Biosafety Officer.
- If the trip involves collecting samples or moving animals or plants within the



islands, the coordinator and relevant personnel will be up to date with all appropriate Protocols.

3. Trip preparation

- Ensure that the personnel are present enough time beforehand to prepare the trip. All personnel must be present for the inspection.
- Review all of the sanitation and health rules and procedures issued by the Galapagos inspection and quarantine system (SICGAL) so that you are well-informed about any quarantine emergency or special temporary regulations. This information is available on the SESA - SICGAL website: www.sesa-sicgal.org.
- Before departing, ensure that the group's luggage and equipment have been inspected by inspection staff under the supervision of the Biosafety Coordinator or their delegate.
- If the trip is planned to be of a long duration, ensure that the persons responsible for sending additional food are aware of and comply with the Field Protocol rules.
- Only those vessels are authorized by the DGNP may be used, and they must comply with the standards listed in section on the Responsibility of Ship Captains (Annex 4.) The group can only travel if the ship has a valid fumigation and inspection certificate issued by SIC-GAL inspectors. If not, the trip must be cancelled and the name of the ship and captain must be reported to the DGNP. SESA-Galapagos must also be informed as the provincial quarantine authority.
- Ensure that the group has a first aid kit, communication equipment, a UHF radio, cell phones, GPS devices, etc. in case of an emergency.
- Report anyone violating the field protocols established by the Office of the

Director of the GNP to the Management Office at (05) 2526 511/189 Ext. 227, in Puerto Ayora.

1.2. Everyone's responsibilities

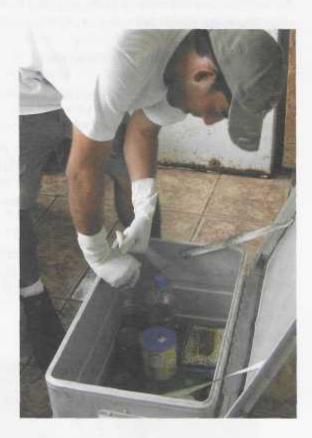
All members of the groups participating in field trips are responsible for ensuring the following:

1. Water and food preparation:

- Only take the minimum necessary amount of food.
- Meticulously check the foods which may contain invertebrates, seeds, or pathogenic symptoms. Discard any items that contain the remains of invertebrates or pathogens.
- Wash all fruits and vegetables permitted to take on board, individually, and remove any unnecessary leaves. Do this in advance.



- Ensure that all dried foods (wheat, noodles, rice, popcorn, etc.) and their packaging are free of holes or invertebrates.
- Store and transport food items in hermetic plastic or aluminum containers.



- Wash the containers with bleach before placing food within them.
- Do not use cardboard boxes or thin plastic bags to transport products. Biohazard bags are acceptable.
- Make sure that the containers to be transported onto the ships are directly taken to the dock and not set down on dirty areas.

2. Preparing materials and equipment

- Prepare all things to be inspected ahead of time.
- Closely check all of your equipment and personal objects in order to avoid transporting invertebrates or other animals,

seeds or soil. Carefully clean everything that will be taken to the field. Pay special attention to the products and objects listed in Table 1. Shake out and review every article (especially any place where seeds or tiny animals could be hiding) and dispose of any organism that you find.

- Before the trip, take all of the materials to be used in the field to the quarantine room so that they can be submitted to a meticulous examination by inspectors.
- Diving equipment like wetsuits, hoods and boots made of neoprene should be dry for inspection since if there is sand or other organisms, they can be eliminated more easily. In order to prevent the diving suits from becoming contaminated with the insecticides, it is recommendable to inspect them in a separate room that also complies with the required sanitary conditions.



 The weight belt should also be inspected thoroughly, since for the most part it is left on the floor when not in use, in a corner with other equipment. Pay special attention to cloth belts which have pockets for the weights.



- Remember that when masks and snorkels are stored when still wet, it is easier for sand and dirt to stick to them, and therefore they should be very thoroughly inspected.
- The vests have pockets and always have accessories like whistles or flares that must be checked.
- All electronic equipment must be carefully checked for insects, especially the battery compartments, and in cases where ants can hide.
- DO NOT TAKE ANYTHING FROM YOUR HOME DIRECTLY TO THE SHIP WITHOUT HAVING CONDUC-TED THE REQUIRED INSPECTION.
- Store all equipment and materials in hermetically sealed aluminum or plastic containers.
- Do not use cardboard boxes or plastic bags to transport articles, unless they are biohazard bags or double-strength garbage bags that do not tear easily.
- Before being closed or sealed, all equipment (except for computers, cameras, GPS devices and radios) and materials must be sprayed with low-toxicity insecticide whose active ingredient is any synthetic pyrethroid. Non-CFC aerosols are preferable. This equipment and these objects should be sprayed at least 24 hours before leaving in order to ensure both the immediate and residual effect of the pesticide. Closely inspect electronic equipment for insects. Remove the battery compartments and check for bugs, especially ants.
- Tightly seal all containers or bags with tape to guarantee isolation and prevent the invasion of invertebrates.
- Store equipment in the quarantine room until it is ready to be transported on board the ship.

 When moving equipment in containers to the inspection rooms, make sure that the cart used to move them is clean and free of insects.

3. Preparing personal articles

- Before the trip, take all of your personal items that will you will use in the field to the quarantine room to be inspected thoroughly.
- DO NOT TAKE MATERIALS FROM YOUR HOUSE DIRECTLY TO THE SHIP WITHOUT HAVING GONE THROUGH THE REQUIRED INS-PECTION.
- Take along the minimum number of articles necessary to do the planned work.
- Carefully review, wash and clean all of the articles. Pay special attention to the pockets within clothing, the insides of shoes and any other place where seeds or invertebrates could be hidden, and get rid of any organism that you may find. All clothes, shoes and other personal items, after being inspected, should be packed within backpacks or suitcases which have also been thoroughly checked and found not to contain invertebrates or seeds.
- The clothes and shoes that are to be worn on the day of departure must be clean and free of seeds or invertebrates.

2. DURING THE TRIP

2.1. Responsibilities of the trip coordinator

The trip coordinator and primary researcher will be responsible for all activities of the members of the group.

1. During boarding and upon arrival

 Ensure that all of the rules in the Field Protocol Manual are being observed.

- Make sure that the people who are authorized to collect samples are transporting them under the appropriate protocol.
- Make sure that the captain of the ship is following established rules and procedures (Annex 4).

2.2. Everyone's Responsibilities

1. While on board the boat

- Never dispose of seeds or fruits with seeds at the water's edge near the islands.
- If you find any small invertebrates, insects, seeds or any other organism that has been transported from the port of origin, keep them in a closed container and consult with the trip coordinator on how to proceed.

2. Material and equipment

 In order to prevent food and equipment from being infested during your stay on the boats or in the islands, store everything in hermetically sealed containers.

Food

- If more provisions are sent to you, always examine them.
- Do not purchase or accept fruits or vegetables from other ships.

4. Disposing of trash

Garbage is one of the main ways that organisms get transported from island to island. All waste can cause serious damage if not disposed of properly.

Organic waste:

 If you should have to return with organic waste to the port, spray the bags with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid to kill any insects or spiders that could be inside, once they are full. Repeat the procedure at the end of the trip.

Non-organic waste

(This applies to paper, plastic, bottles, cans and other non-organic trash).

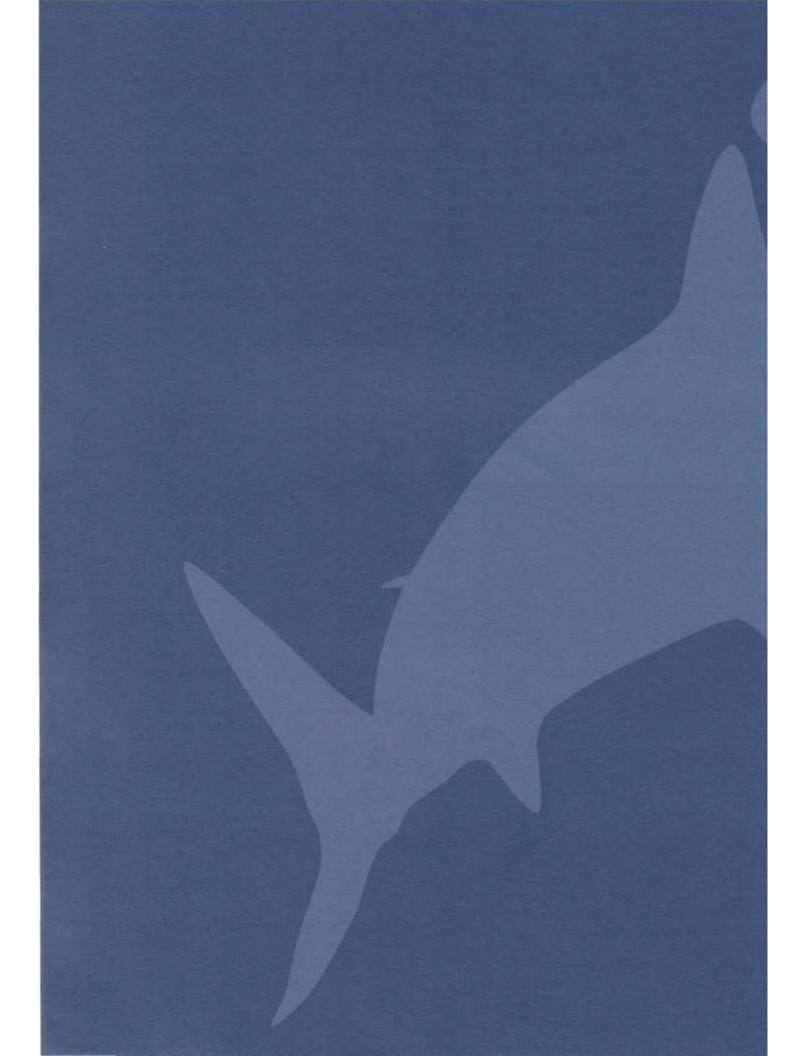
- Store the trash in plastic bags; spray them with a low toxicity insecticide with active ingredients made of any synthetic pyrethroid in order to kill any insects or spiders that may be inside. Aerosol spray is preferred. Close the bags and take them to the port in a hermetically sealed container.
- Separate the organic from the non-organic trash into different bags and keep them closed.



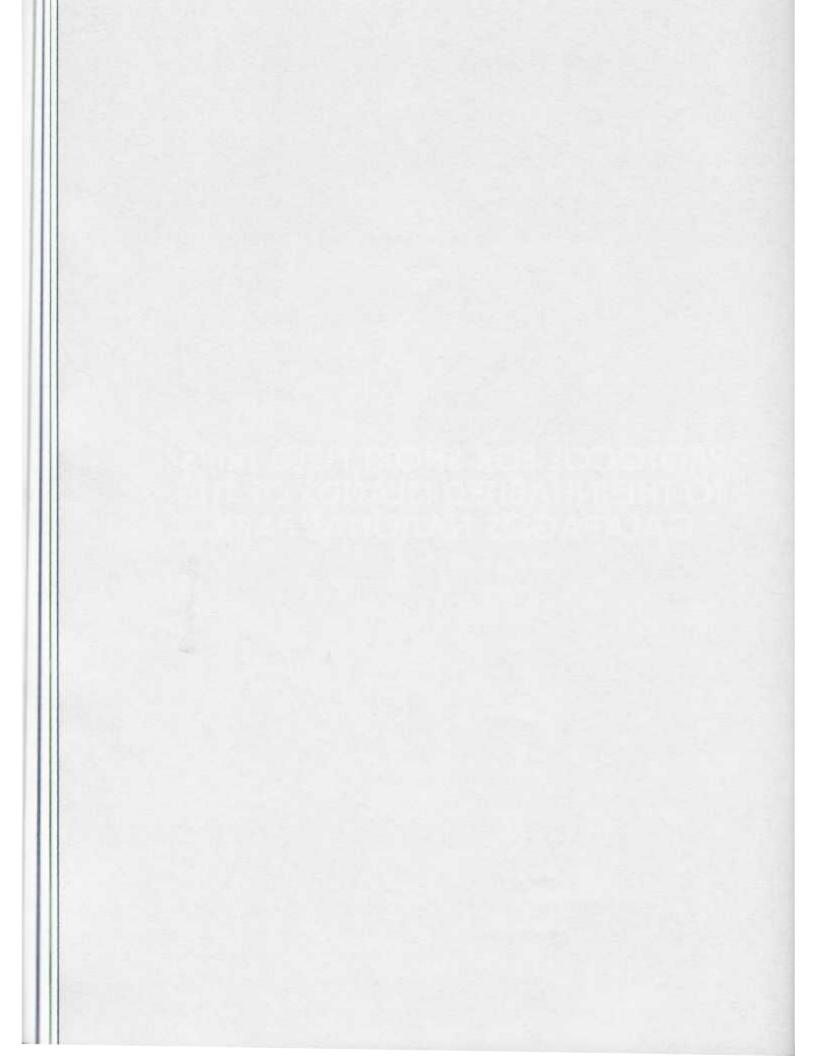
Place the bags in a hermetically sealed container.

Final comments

Each group member is responsible for observing all rules regarding safety and conservation in the Galapagos National Park. Ignoring these rules could affect the progress or developments of your project or work, and even be subject to criminal prosecution. DGNP or SICGAL may, at any time, inspect equipment, food or camps to make sure that all of the safety rules are being followed.



PROTOCOL FOR SHORT FIELD TRIPS TO THE INHABITED ISLANDS OF THE GALAPAGOS NATIONAL PARK



PROTOCOL FOR SHORT FIELD TRIPS TO THE INHABITED ISLANDS OF THE GALAPAGOS NATIONAL PARK

Applies to:

Employees of the GNP, NGOs, foundations, visiting scientists, students and field assistants, who are carrying out park management and research activities in areas within the Galapagos National Park. Logistical and administrative staff and anyone with authorization to visit other islands, like contractors, builders, visitors to GNP visitor sites* (one day trips to sites and picnic areas), climbers and surfers.

Note: * Visits to GNP areas outside of these specific areas generally require the accompaniment of a certified nature guide and a permit from the DGNP. Please check with this entity if the visit site requires a permit and/or a guide and follow instructions in accordance with the field trip protocols.

There is a risk of carrying invertebrates and the seeds of introduced species hidden in the clothing and equipment of visitors to the GNP during day trips. Both plants and invertebrates that are introduced can cause serious problems for the ecosystems of the protected areas of Galapagos.

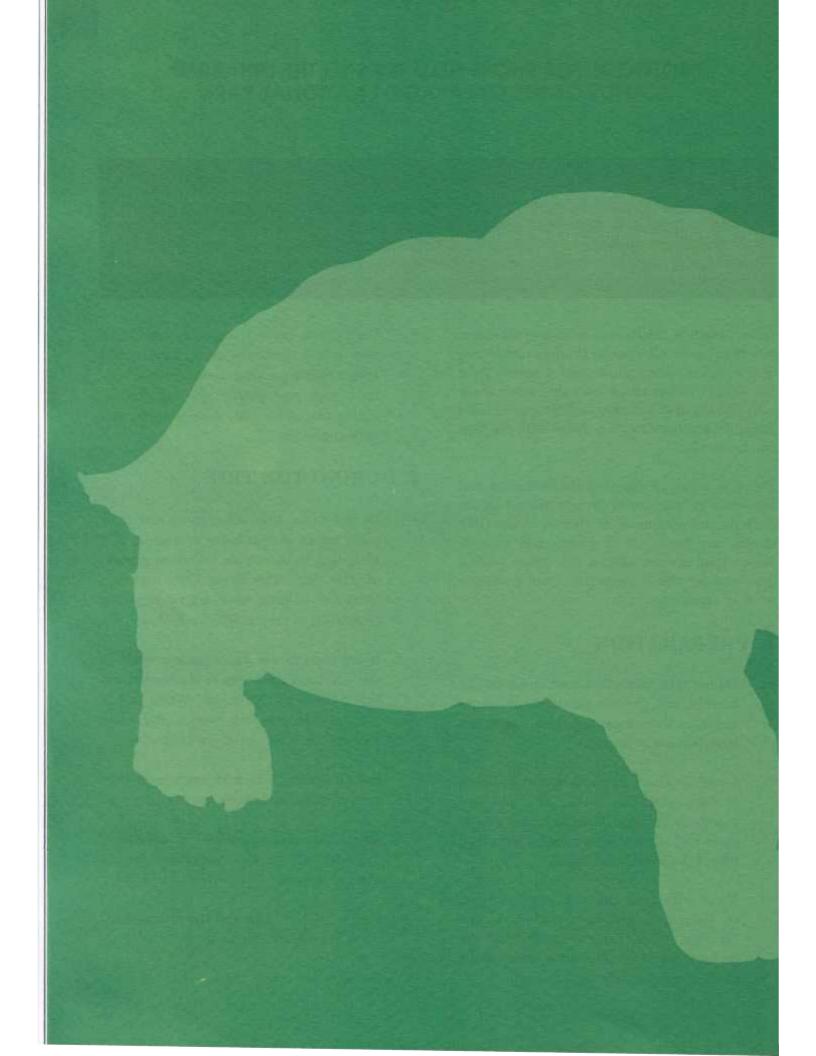
1. PREPARATION

- Do not take fruits that contain seeds like blackberries, guavas, passion fruit (maracuya), strawberries, tomatoes, watermelons, lemons or oranges.
- Carefully check any article that you plan to take along for seeds, dirt and live insects or spiders. Chairs, baskets, suitcases and other objects must be clean and free of pests, soil and seeds.
- Make sure your shoes do not have dirt on them and that your clothing is not carrying seeds. Review pant cuffs and pockets, as they tend to harbor seeds. Clean shoes and all clothing well.

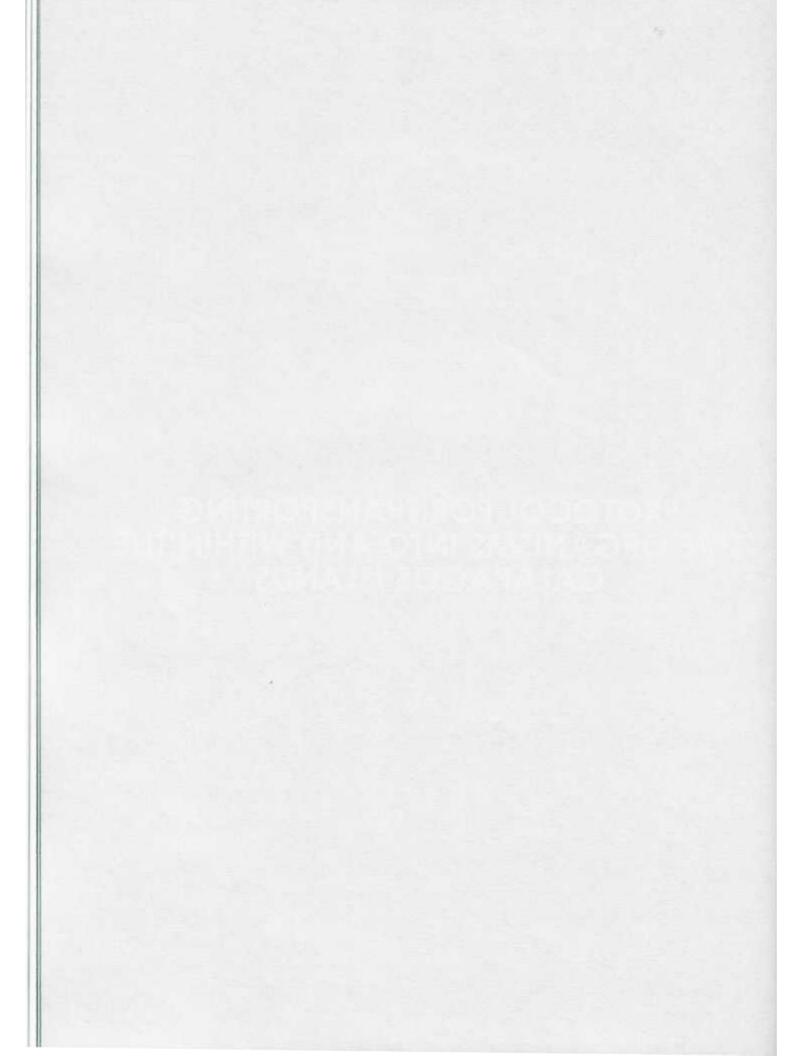
 Unfold and inspect the tents (including tent poles), mattress pads, sheets and covers before packing them. Folded mattress pads and plastic are well known hiding places for rats, mice, insects, spiders and seeds.

2. DURING THE TRIP

- Do not litter, take all organic and inorganic waste to your home to dispose of it according to the waste collection system of your city. The Santa Cruz and San Cristobal islands have active recycling programs, so recycle when possible.
- If you need to use the bathroom while at the GNP, use the ocean or the beach area below the high tide mark. When this is not possible, you will need to dig holes and not leave any evidence behind.
- Before leaving, check to make sure that your clothing and shoes are free of seeds.
- Do not take plants, animals or rocks from any site within the National Park or Marine Reserve.
- Follow DGNP rules and the ethical field rules already established.
- Do not leave traces of your visit behind.



PROTOCOL FOR TRANSPORTING
LIVE ORGANISMS INTO AND WITHIN THE
GALAPAGOS ISLANDS





PROTOCOL FOR TRANSPORTING LIVE ORGANISMS INTO AND WITHIN THE GALAPAGOS ISLANDS

Protocol Objectives

In order to comply with restoration programs, ecological studies and efforts to eradicate or control introduced species authorized by the Office of the Director of the Galapagos National Park, it is necessary on occasion to transport animal or plant species between islands. Live animals can contribute to spreading seeds that are stuck to their hides, hidden in the mud around their hooves, horns, etc., or inside their stomach or intestines. The internal and external diseases or parasites (which can also carry diseases) can be specific to different islands, and not present on others. Live plants can carry with them diseases or pests like insects, mites or nematodes and transmit them to other plants on other islands.

The introduction of foreign species can present a risk to native ones, which goes against the goals of restoration and eradication programs. It is for this reason that the rules of this Protocol are intended to reduce the risk involved in transporting live organisms between the islands.

This Protocol must be used together with the Protocol for Park Management and Research Activities in the Galapagos National Park and Marine Reserve.

General Rules

The number of live organisms transported between islands will be the fewest possible needed to achieve the objective of the program/project. For this reason, the following guidelines must be followed:

- Do not repeatedly transport animals, for example work animals will remain in the field for the duration of any activity.
- · The welfare of the animals being trans-

ported will always be taken into consideration in the procedures.

- Live animal or plant species that do not comply with the procedures described in this Protocol may be removed from the project/program.
- It must be demonstrated that the animals or plants are free of foreign species and diseases.
- All organisms must be maintained in quarantine in isolated, secure and sterile buildings before being transported to another island. There must be strict procedures for building entry and exits, and access must be limited. Staff must wear appropriate protective clothing.

Table A summarizes some of the reasons why live organisms are transported between islands.

There are four principles to minimize the quarantine risk associated with the transportation of live plants and animals:

- Reduce to zero or almost zero the risk of transporting seeds, insects, and parasites present externally on the animal or plant;
- Reduce to zero or almost zero the risk of transporting internal parasites and possible pathogens within the animal or plan, by carrying out internal and external deparasitation;
- Reduce to zero or almost zero the risk of transporting seeds within animals:
 - a. Submit the animal to captivity for a period of time sufficient to allow seeds to

Table A

	Species (example)	Justification
Vertebrates	Galapagos turtles, iguana, birds, native rats	Restoration, repatriation and raising in captivity
	Horses, mules	Work animals, beasts of burden
	Dogs	Working or hunting animal
	Goats, pigs	"Judas" animal
Invertebrates	Various	Identification, research
	Biological control agents, for example Rodolia cardinalis	Biological Control
Plants	Vericus	Restoration, research
	Biological control agents (for example, fungi)	Biological control

be eliminated from the digestive tract; ensure that their feed is free from seeds.

- b. Dedicate a clean area, free from sources of seeds and parasites, during the period of captivity before and during the transportation of the animals;
- 4. Do a health checkup on the animals in order to determine the state of each individual and to prevent infections and the possible transmission of diseases within and between species. This is especially important in repatriation programs or when raising animals in captivity.

For each new transportation event, a request must be made for authorization from the DGNP. The form is included here as Annex 6 and includes the following:

- Organism(s) to be transported.
- Estimated number of individuals that will be transported.
- Islands and sites involved.

- Treatment / encasing / transport protocol for live organisms.
- Means of transportation.
- Justification for inter-island transportation.
- In the case of biological control agents, this must include the evaluation and approval reports from the stages of the research project on the agent according to the Procedure for introducing, raising, and liberating foreign agents for biological control in the Province of Galapagos Protocol, resolution 00 of CSA-SICGAL: Area / Department and person responsible for the job.
- Schedule of activities.

To whom does this Protocol apply?

The rules apply to all people involved in the research, restoration or eradication or control programs, including:



- DGNP and CDF personnel carrying out the activities described in the Annual Plan of Action;
- Visiting scientists working with DGNP authorization.
- Personnel involved in emergency situations.

Transport Document

Each movement of animals and plants must be accompanied by a Transportation Document authorized by SESA Galapagos.

Procedure 1: Transporting live invertebrates

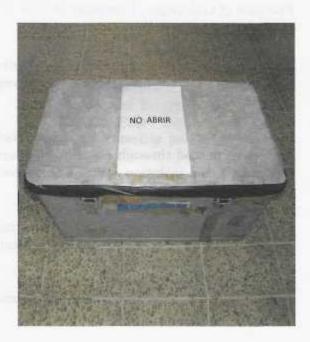
1.1 Live invertebrates for identification and/or research

When collecting live invertebrates that need to be raised in captivity, generally, at the same time, it is necessary to collect their food. Invertebrates must always be transported within the CDF Isolation Center (quarantine unit). In order to minimize the risk of contamination, the samples should be packed with three layers of security (see below). The packing will include the following:

 Each receptacle contains specimens collected from a single source, with a minimum quantity of food necessary to



- ensure their survival during the trip (plants or prey);
- They must be packed in secure containers (plastic bottles, tubes or boxes), closed and sealed with moisture-resistant tape;
- In order to allow for the flow of air, a small square or holes can be cut into the container and replaced with mesh or a screen that prevents the invertebrate from escaping, and this screen must be attached to the container.
- Each container must be marked with the scientific name of the species collected, and the date and place of collection (farm/zone and island);
- Additional food should be inside secure containers, for example in Ziploc or biohazard bags, sealed with tape, with the neck of the bag folded 3-4 times before closing.



 Finally, in order to comply with the three layers of security, the containers housing the invertebrates and the food will be packed in a closed bag (this could be a cotton bag) and then a plastic or aluminum box, sealed with tape.

- In order to prevent the accidental escape of live invertebrates, the box must be marked with large letters in a prominent place: "LIVE INVERTEBRATES: DO NOT OPEN."
- Transport the organisms at a low temperature, if possible, to prevent the rapid development of growth stages and minimize the movement of the invertebrates. For this, climate-controlled, battery-operated coolers can be used.

For additional details, read Procedure 16 of the SICGAL Manual of Procedures: Sample Collection Procedure.

The box must remain closed with tape until reaching the CDF isolation center. The treatment and care of live invertebrates will be done under the supervision of the Chief of the Invertebrate Area, and will comply with the general objectives of the Regulations on the Total Control of Introduced Species in the Province of Galapagos, Executive Decree 3399, March 31, 2003, Art. 3.

Invertebrate biological control agents or invertebrates to be repatriated.

Live invertebrates can only be transported if they have passed through a period of quarantine within the isolation unit. The following procedures must be followed:

- Grow individuals in captivity for a minimum of three generations, as a quarantine period before being released.
- Follow the handling protocols for control agents.

Individuals have to be healthy and clear of pathogens, parasites, parasitoids and hyperparasitoids according to the Procedure to introduce, raise and release foreign agents for biological control in the Province of Galapagos.

· Transport them in secure containers, like

- plastic bottles, tubes or boxes, closed and sealed with moisture-resistant tape;
- Transport individuals in sterile containers without any plants or organic material;
- Provide artificial shelters, for example, made of paper or cardboard, when feasible or necessary;
- Avoid as much as possible the transportation of invertebrates in active stages, like adults, but rather pupas or larvae;
- Transport the containers in a strong plastic or aluminum boxes or electric cooler;
- Label the box with large letters in a prominent place with the words start "LIVE INVERTEBRATES: DO NOT OPEN."
- Transport the organisms at a low temperature, if possible, to prevent the rapid development of growth stages and minimize the movement of the invertebrates.

Procedure 2: Transporting live plants

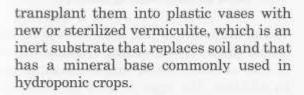
2.1 For research

Plants must always be taken to the CDF Isolation Center (quarantine unit). In order to minimize the risk of contamination, they should be packed with three layers of security (see below). The packing will have the following characteristics:

- The plants must be methodically checked to ensure that they are healthy and free of invertebrates.
- Wash all plantlets with sterilized water and if possible, treat with an insecticide in order to reduce the risks of carrying insects associated with the plant.
- Transport the plants with the roots exposed, or when this is not possible because it will threaten their health or survival,







- Each container must contain specimens collected from a single source.
- The plants should be packed into secure containers, closed and sealed with moisture-resistant tape.
- In order to comply with the principle of three layers of security, the containers will be placed into a closed bag or plastic box and then into a plastic or aluminum case and sealed with tape.
- The box should be marked with large letters in a prominent place with the words: "LIVE PLANTS: DO NOT OPEN".
- Transport the organisms at a low temperature in order to conserve them in good condition.

2.2 For restoration programs

For restoration programs, at times it is necessary to transport whole live plants or live parts



of them from one island to another. This is done under the supervision of the Head of the Botany Area, as well as the responsible technicians from the DGNP, according to the following criteria:

- During cultivation, maintain the plants within a safe laboratory or greenhouse (in accordance with international standards), where they will be isolated from other plants and invertebrates or other contaminants. There should be strict procedures for entering and exiting those places.
- Grow the plants in sterilized vermiculite.

The procedures that are carried out prior to transport are described below:

- Carefully review each plantlet, in order to verify that they do not have any kind of invertebrates, pests or signs of pathogens.
- Wash all plantlets with sterilized water and if possible, treat with an insecticide in order to reduce the risks of carrying insects associated with the plant.
- If possible, prune the stalk and roots and leave a minimal amount of leaves on the

plant in order to promote its adaptation to the new environment and reduce the risk of transporting pests.

- Transport the plants with the roots exposed, or when this is not possible because
 it will threaten their health or survival,
 transplant them into plastic vases with
 new or sterilized vermiculite.
- Pack the plants in a cotton bag and close.
- Place in plastic boxes that have been washed with bleached water.
- Finally, seal the boxes with adhesive tape and label them "LIVE PLANTS: DO NOT OPEN".

Procedures upon arrival at the destination

Transfer the plants. Place the vermiculite that was used to transport them into Ziploc or bio-hazard bags (depending on the quantity of material) and put it in another bag, seal it and place into a metal box, and close that for return to Santa Cruz. Label the box "DO NOT OPEN". Upon arrival, deliver the box to SESA-SICGAL for incineration.

Procedure 3: Transporting Live Vertebrates

General Rule:

Never use work equipment, materials or clothing (including shoes) used by the workers and technical personnel from the animal raising centers or surrounding isolated areas or in the field. If you do not have various sets of work equipment and garments, they must be washed and cleaned and if possible sterilized before being used in other areas.

All of the organisms must be kept in quarantine in isolated, secure and sterile buildings before being transported to another island. There must be strict building entry and exit procedures and access to them should be limited. Personnel must wear appropriate protective clothing¹.

All of the animals must be examined by an authorized veterinarian before being transported to another island, and must have a certificate from the Fabricio Valverde Epidemiology, Pathology and Genetic Laboratory that certifies that they are free of diseases that have been identified as risks for the GNP².

3.1 Repatriating land turtles and iguanas

Young land turtles and iguanas will be transferred from the breeding centers to other islands or other places within the same island. In addition, the eggs of land iguanas will be transported from other islands to the breeding center in Santa Cruz.

Repatriation of juveniles

The repatriation of juvenile individuals (land turtles or iguanas) raised in captivity other islands must be done under the following conditions:

- The animals must be separated in isolated and clean conditions.
- Each juvenile individual in captivity must have a clinical history that demonstrates a record of good health, freedom

¹ A quarantine building must be built in order to comply with the biosafety measures for transporting animals between islands.

² At this time, the use of vaccines is not permitted, however a risk assessment is being carried out to identify vaccines that do not pose a risk to Galapagos. Thus, in the future there may be a need to vaccinate animals before transporting them from one island to another.



from viral (i.e. herpes), bacterial (i.e. Mycoplasmas) or fungal diseases through diagnostic tests;

- Ensure that they are free of external parasites.
- Put juvenile turtles in quarantine for a sufficient length of time (a minimum of 40 days) which will allow them to eliminate seeds from their digestive tract, and provide them a diet of succulent leaves and stalks free of seeds and insects. Land iguanas should be maintained with a seedless diet normally of stalks and bland items.
- Check the animal carefully immediately after the transfer in order to make sure that it is not carrying any kind of insect, skin lesions or seeds attached to its body, and that it is clean.
- Transport the animals in clean, strong and closed cages or boxes.

Transporting turtle eggs to the breeding centers

- Visually inspect each egg for signs of fungi, deformities, etc. Only visually healthy eggs will be accepted (use sterile gloves to handle the eggs).
- Clean the eggs and remove dirt, sand and/or dust attached to them
- Transport them packed in sterile vermiculite (which has been taken to the island in accordance with the field protocol rules, closed in a strong, clean and sealed cooler-type box. This must be placed within another container, sealed (but NOT hermetically) and labeled "LIVE ORGANISMS DO NOT OPEN".
- Clean all containers after use.

The disposal of all organic remains brought from another island will be done by placing them in strong plastic bags. These bags must be sealed and kept in a container and delivered to SESA-SICGAL for incineration.

3.2 Relocating birds

Eggs

- · Keep them in a clean, isolated place.
- The eggs must be handled using clean, disposable gloves.
- Visually inspect each egg for signs of fungi, deformities, etc. This should be done in a dark place by shining light from a flashlight or candle onto the egg to observe deformities and to ensure that the egg is fertile. Only visually healthy and fertile eggs will be accepted;
- Clean the eggs and remove dirt, sand and/or dust attached to them. Transport them packed in sterile vermiculite (which has been taken to the island in accordance with the field protocol rules, closed in a strong, clean and sealed cooler-type box. This must be placed within another container, sealed (but NOT hermetically) and labeled "LIVE ORGANISMS DO NOT OPEN"
- Clean and sterilize all containers after use.
- Inspect juveniles for signs of disease.
- When transporting eggs from an inhabited island, make sure that they are from birds raised in isolated conditions and free from disease.

The disposal of all organic remains brought from another island will be done by placing them in strong plastic bags. These bags must be sealed and kept in a container and delivered to SESA-SICGAL for incineration.

Juveniles or adults

 The animals must be separated and kept in isolated, clean conditions;

- Each juvenile individual in captivity should have a clinical history that demonstrates that they are in good health and free of diseases, whether viral (like Marek, Pox and Newcastle), bacterial (like Salmonella spp.) or fungal (list Aspergillus spp.) through diagnostic tests.
- Ensure that they are free of external parasites and that they have been deparasited regularly against internal parasites;
- Place them in quarantine for a time period sufficient to allow them to eliminate seeds from their digestive tract (48 hours as a miminum depending on the species) and feed them with a diet free of seeds and insects.
- Immediately before transport, wash the feet and beak of each animal with a nontoxic disinfectant, and check them thoroughly, in order to make sure that they are not carrying insects, that they do not have any skin lesions or seeds stuck to their bodies, and that they are clean:
- Transport the animals in cleaned and locked cages or boxes.

3.3 Work animals

There are three kinds of work animals:

- · Hunting dogs,
- · Equine animals (horses and mules),
- "Judas" animals³.

The quarantine regimen for the three categories is detailed in annexes 7, 8 and 9.

General rules

- Work animals taken between islands must be sterilized before taking part in the program or project. They can be excused from this reproductive control if they are part of a breeding or species reproduction program.
- All work animals must have a radio-telemetry collar, the batteries of which should be changed regularly.
- It is preferable to keep the animal on the island where they are going to work and to avoid moving them from island to island.
- The animals must go through quarantine before being moved to another island.
- Care must be taken to ensure that the quarantine and working conditions do not harm the animals in any way.
- 3.4 Transporting introduced, unregistered vertebrates into Galapagos.

From time to time it is possible that unregistered animals will be found in Galapagos, including wild animals that are protected under the CITES.

If you should encounter an unregistered vertebrate in the islands, follow the steps described in Procedure 16.3 of the SIGCAL Procedure Manual: Sample Collection Procedure.

IT IS IMPORTANT IN THESE CASES TO ENSURE THAT THE ANIMALS ARE IMMEDIATELY ISOLATED IN ORDER TO PREVENT THE PROPAGATION OF DISEASES NOT PRESENT IN GALAPAGOS.

^{3 &}quot;Judas" animals are used in programs to eradicate and control their own species, when the population is very low. Generally it is necessary to obtain the "Judas" individuals from other populations on other islands and transport them to the island where the program is taking place. Up to now, the experience in Galapagos has been with Judas goats.



Procedure 4: Transporting animals in emergency situations

An emergency is only recognized when the DGNP declares an emergency. Emergency situations may include:

- Animals and plants in danger for some reason, for example mudslides or volcanic eruptions, who need to be moved to another island.
- Animals and plants who have been injured or damaged for some reason, for example mudslides or volcanic eruptions, who need to be moved to another island.
- The detection of the introduction of a new species into the Province or island.

In case of emergency, the organization responsible for the activity must present a proposal to the SESA-SICGAL to transport the animals. The proposal must include:

- Justification;
- Species and numbers involved (be as accurate as possible);
- Conditions under which the animals will be transported, detailing the procedures taken to prevent escape and contamination;
- The quarantine activities should specify the isolated conditions where they will be kept, the cleaning regimen, deparasitation, the use of protective clothing for workers and researchers who come into contact with the animals, and restricted access.
- A planned schedule of activities.

IN THE EVENT OF AN EPIDEMIC, ANIMALS MAY NOT BE TRANS-PORTED BETWEEN ISLANDS.

SESA-SICGAL commits to respond to the requesting party within 24 hours. Ideally, the

quarantine includes a period of isolation and deparasitation before leaving an island, but they recognize that this will not be possible under emergency conditions.

Procedure 5: Transporting other biocontrol agents (microorganisms)

All personnel must follow the Procedure for the introduction, breeding and liberation of foreign agents for biological control in the Province of Galapagos.

- Apply the three-layers-of-security rule.
- Transport the agents in secure containers, like plastic tubes, bottles or boxes, closed and sealed with moisture-resistant tape;
- Transport the containers inside plastic bags or boxes sealed in a strong plastic or aluminum box or electric cooler;
- Label the box with large letters in a prominent place with the words "LIVING ORGANISMS: DO NOT OPEN"
- Transport the organisms at low temperatures to prevent their rapid multiplication.

Procedure 6: Transporting dirt and soil

All personnel must follow the Procedure for the introduction, breeding and liberation of foreign agents for biological control in the Province of Galapagos.

- Apply the three-security-levels rule.
- Transport material in secure containers, like tubes, bottles, ziplock bags or plastic boxes, closed and sealed with waterproof tape.
- Place in plastic containers or biohazard bags and seal with waterproof tape;

- Transport the containers in a strong plastic or aluminum box or electric cooler;
- Label the box with large letters in a prominent place with the words: "LIVING ORGANISMS: DO NOT OPEN".
- Transport the organisms at a low temperature in order to prevent the rapid growth of microorganisms.
- Only open the containers in a quarantine building that guarantees the necessary biosafety conditions.

Treatment of equipment and materials used in the transport of live animals and plants

The equipment used to collect the samples can become contaminated with seeds, live invertebrates or pathogens, and must be cleaned and disinfected before being moved to other islands.

Traps for rats, cats and other vertebrates

Before moving them to another island:

- The traps must be clean, without the remains of bait or trapped animals.
- After the overall cleaning, they should be disinfected with bleached water or with any equivalent general disinfectant.
- The same treatment should be followed before returning to the island of origin, or traveling between islands.

Entomological nets, bird nets

Before going to another island:

- Nets must be thoroughly cleaned, and free of seeds or animal remains (for example, feathers)
- After the general cleaning, the nets must be disinfected with chlorinated water or some similar general disinfectant.

 Upon returning to camp, keep them frozen for 5 days.

General collection equipment

All collection equipment must be clean, without soil or remains, and disinfected with some kind of general disinfectant or chlorinated water. The clean and sterilized equipment must then be packed in closed and sealed containers to prevent contamination.

General packing rules:

- Pireton and other pyrethroids should be used for fumigation. Always remember to use a mask and gloves.
- Where possible, the samples must be kept always in a plastic or aluminum case in order to prevent any perforation and to preserve the organisms in good condition;
- All of the bags and plastic or aluminum boxes must be new or previously cleaned and washed;
- The bags must be sealed, with the bag opening folded over 3-4 times before sealing.
- Use waterproof tape.
- Minimize the movement of the organisms inside the containers, in order to prevent the breakage of the bottles, tubes, or other secure containers.
- If the organism to be shipped has to be transferred to another container, the sample cannot be removed from the second layer of protection;
- Keep containers, bags and boxes in protected places;
- Label the container (indicating its contents) with a permanent marker on the outside packaging, in a clear and legible fashion.

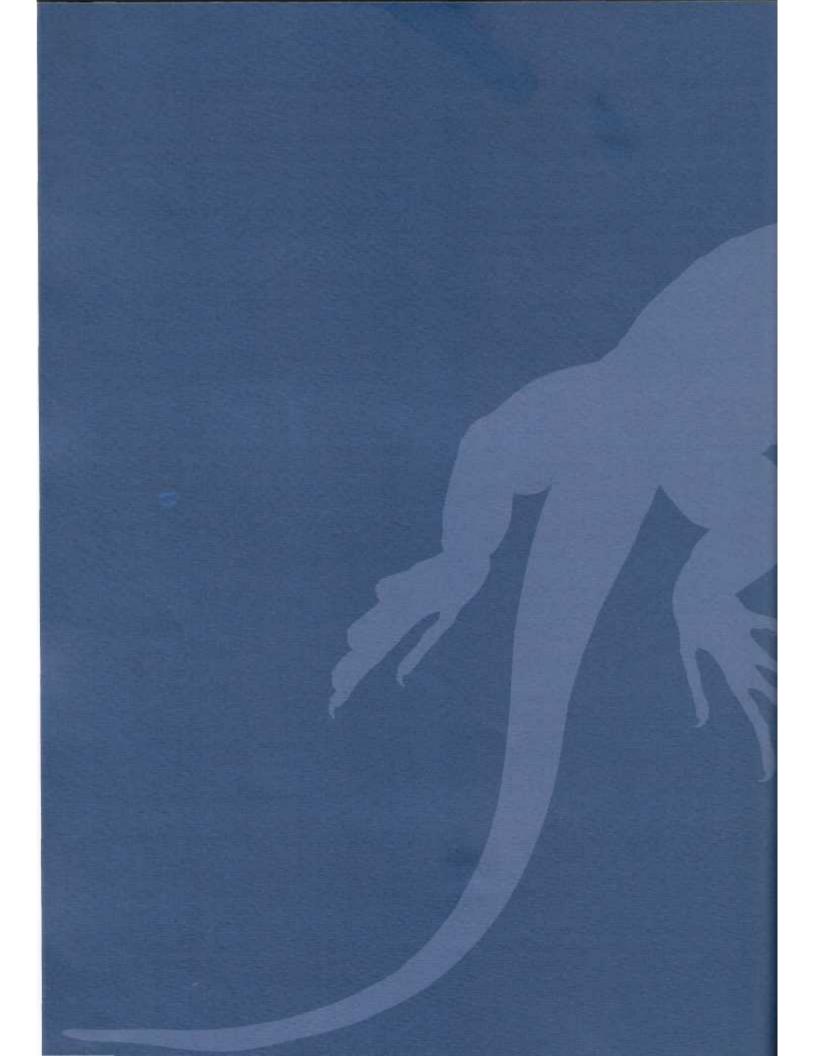


WHEN NECESSARY, ALL PLANTS AND ANIMALS MUST BE PACKED IN 3 LAYERS OF PROTECTION BEFORE LEAVING THE ISLAND.

Appropriate waste disposal

 Waste must be frozen for one week in a sealed bag, labeled with the date, and then incinerated, or must be handed over immediately to a SICGAL inspector for incineration.

 Recyclable recipients like coolers should be fumigated or washed with bleach in the preparation room.



PROTOCOL FOR THE HANDLING AND TRANSPORT OF SCIENTIFIC SAMPLES BETWEEN THE GALAPAGOS ISLANDS



PROTOCOL FOR THE HANDLING AND TRANSPORT OF SCIENTIFIC SAMPLES BETWEEN THE GALAPAGOS ISLANDS

Protocol Objectives

The transportation of samples between islands is one of the main mechanisms by which species or their reproductive parts are introduced, for example seeds, invertebrate eggs, and microorganisms. With the increase in scientific and management activities in Galapagos, it is essential to create protocols to minimize these risks.

This Protocol is intended to provide clear instructions on how to pack samples before leaving the island and how to treat them upon return to the port of origin. These are not meant to replace the special methods used to collect and preserve the samples; that is the researcher's responsibility.

General Rules

Sample selection

The transportation of samples between islands is risky, since there is always the possibility of unintentionally transporting other species with the sample. Therefore, keep the following in mind:

- Take samples only when absolutely necessary.
- Collect data or take photos at the site of the sample.
- If the sample is necessary, collect as few samples as possible, and only collect those parts of the organism that are pertinent.
- If it is necessary to take an entire plant or animal as a sample, it is better to take a

dead organism rather than a live one.

 Take samples of live plants or animals only in special cases.

ALWAYS LET THE PERSON RESPONSI-BLE FOR THE TRIP KNOW WHEN TRANSPORTING A SAMPLE FROM ONE ISLAND TO ANOTHER.

IN THE EVENT THAT THE MANUAL DOES NOT CONTAIN INDICATIONS ON HOW TO COLLECT THE SAMPLE, CONSULT THE TRIP COORDINATOR.

Who does this apply to?

These rules apply to everyone who collects samples, including:

- DGNP and CDF scientists and staff engaged in activities included in the current year's Plan of Action (POA);
- Visiting scientists working with DGNP authorization;
- SESA-SICGAL personnel carrying out activities described in the current year's POA and authorized by the SESA-SICGAL.

Transport document

Each scientific simple must be accompanied by a Transport Document (*Guía de Movilización*) authorized by SESA Galapagos.

Treatment of equipment and materials used for collecting samples

The equipment used to collect samples can become contaminated with seeds, live invertebrates or pathogens, and must be cleaned and disinfected before being taken between islands.

Traps for rats, cats and other vertebrates

Before moving them to another island:

- The traps must be clean, without the remains of bait or trapped animals.
- After the overall cleaning, they should be disinfected with bleach, alcohol, or any equivalent general disinfectant.
- The same treatment should be followed before returning to the island of origin,

Entomological nets, bird nets

Before going to another island:

- Nets must be thoroughly cleaned, and free of seeds or animal remains (for example, feathers).
- After the general cleaning, the nets must be disinfected with chlorinated water or some similar general disinfectant.
- Upon returning to camp, keep them frozen for 5 days.

General collection equipment

All collection equipment must be clean, without soil or remains, and disinfected with some kind of general disinfectant or alcohol at 75%. The clean and sterilized equipment must then be packed in closed and sealed containers to prevent contamination.

Treatment of equipment, materials and baits used on more than one island during the same trip

Follow the instructions mentioned above, and in addition:

- Use new equipment when possible, or disinfect equipment with bleach or insecticide before going on the island.
- Always use new bait.
- The bait used should be taken to the port to be incinerated. It should be taken in a sealed biohazard bag within a plastic or aluminum box.
- Any sharp equipment (knives, needles, metal sheets, etc.) must be disinfected and always stored in a sealed container (Sharps) during the trip.

Handling and packing the samples

All types of samples must be packed with three layers of security in order to prevent any risk of quarantine, except in the case of samples preserved in alcohol or other preservative, which do not represent any risk.

The first level of packing depends on the type of sample, and the second and third layers consist of plastic biohazard bags or plastic or aluminum cases. The requirements for each layer for each taxonomical group are described below.

General rules for packing:

 Avoid the use of formalin due to its high level of toxicity and the difficulty in handling this kind of residue in Galapagos.
 For fumigation, use Piretron and other pyrethroids.



- Always use a mask and gloves.
- When possible, the samples should be always kept in a plastic or aluminum case to prevent perforations and to preserve the sample in good condition.
- All of the bags and cases should be new or previously washed and cleaned.
- Bags must be sealed with the bag opening folded over 3-4 times before sealing.
- Use waterproof tape
- Minimize the movement of the samples inside the containers, in order to prevent the breakage of the bottles, tubes, or other secure containers.
- If the sample to be shipped has to be transferred to another container, the sample cannot be removed from the second layer of protection.
- When possible, keep containers, bags and cases containing samples at low temperatures, or in the freezer.
- Label the container (indicating its contents) with a permanent marker on the outside packaging, in a clear and legible fashion.

ALL SAMPLES MUST BE PACKED WITH THREE PROTECTIVE LAYERS BEFORE LEAVING THE ISLAND.

Dead invertebrates

Invertebrates should be preserved in the following manner:

 In a preservative like formalin at a concentration of between 10% and 37% (optimal), or alcohol at a concentration of 75% or 95% (samples for genetic analysis).

- In mounting cases.
- In the case of Lepidoptera or other unmounted and unpreserved insects, place them in closed and sealed glass tubs after killing them (by freezing, ethyl acetate, CO2, etc.)
- Insects trapped inside bait that cannot be separated from the bait before departure must be frozen or treated with an insecticide like Pireton.

The containers with samples in a preservative must be well closed and packed in such a way so that they cannot break during the trip, so that the sample is not spoiled. They should be kept in sealed cases. Samples in alcohol or formalin do not represent any quarantine risk.

Samples in mounting cases or samples with bait will be wrapped in a plastic biohazard bag, and closed with adhesive tape. The opening of the bag should be folded over 3-4 times before closing. In turn, the mounting case in its bag will be packed in a plastic or aluminum case, and sealed with adhesive tape.

Upon arrival at the port, the samples must be admitted to the isolation laboratory. Samples not preserved in alcohol or formalin must be frozen for a period of one week.

Dry or semi-dry plants

Samples of dry or semi-dry plants will be collected primarily for identification, and this may include biochemical tests. When conducting those tests, it is important to avoid damaging the tissues of the samples, or contaminating them with chemicals. Below is a description of a process to minimize the quarantine risk.

The samples should be pressed on the island before departure, when possible.

Generally, one needs a whole plant, or parts that include leaves, fruits, seeds or roots. Following are some guidelines for the transportation of dry and semi-dry plants:

- The sample should be clean and free of dust, mud, invertebrates or other foreign materials and organisms, especially in the roots.
- The sample must be pressed between new sheets of paper and placed in new paper bags.
- Apply insecticide directly on the plants, spraying some around the press and the bag, and seal it.
- All of the seeds must be kept in paper bags or envelopes to prevent the seeds from being loose and dispersing.
- Upon arriving on board the boat, open the bag and leave the pressed sample in the open air in order to avoid the buildup of moisture.
- Before arriving at the destination port, put the press in a biohazard bag, fumigated it inside and out and seal it well with waterproof tape.
- If plants have to be pressed on board the ship, place the plants in a bag, fumigate the bag inside and out and seal it well. When pressing the plants, make sure that all of the seeds, root remnants and other remains of the sample are collected and kept in a bag; fumigate the bag with insecticide and follow the protocols for trash disposal.
- Botanic presses should be enclosed in a new or cleaned plastic biohazard bag, and closed with adhesive tape. The opening of the bag should be folded over 3-4 times before closing.
- Finally, pack the biohazard bags in a plastic or aluminum case, sealed with adhesive tape.

- Sharp plant samples, like trunks of wood, cactus, etc., should be well protected with biohazard bags, plastic or aluminum cases, and sealed with adhesive tape, depending on their size and the sharpness of the needles.
- The plastic or aluminum case must be kept closed with adhesive tape until it arrives at the laboratory. Due to the difficulty in cleaning the sample completely without damaging it, the final treatment of samples in the lab will be the following:
- Heat to 40 60° C for a period of between two days and two weeks, depending on the type of material and the temperature of the dryer, under the supervision of the Area Chief.
- Then, freeze the sample for a period of three days to two weeks, depending on the type of material; pieces of wood and fruits may need up to two weeks.

Samples of plants for biochemical studies

Some samples, most of the time plant leaves, collected for biochemical studies should be undamaged and completely clean.

- The leaves are to be placed in porous paper, closed in Ziploc bags, with silicon gel.
- The Ziploc bags are then put inside another Ziploc or biohazard bag, closed with adhesive tape, with the bag opening folded 3-4 times before closing.

Seeds

Seeds must be collected following these guidelines:

- The seeds must be clean.
- If possible, they should be dry.
- They should be stored in secure containers, bottles, Ziploc bags, etc., depending on the type or size of the seeds. The containers must be closed with adhesive tape.
- Finally, the containers are packed in a plastic or aluminum case, or a second Ziploc or biohazard bag, and sealed with adhesive tape, with the bag opening folded over 3-4 times before closing.
- The plastic or aluminum case must be kept closed with adhesive tape until reaching the laboratory, where the same procedures for the final treatment of samples will be followed.

Dead vertebrates

The equipment has to be disinfected with bleach, alcohol or some similar general disinfectant for all kinds of vertebrate sample collection, before and after each trip or visit to an island.

Dead vertebrate samples can be transported in various forms, as described below.

Preserved in liquid: Samples with stomach content, feces, and/or entire or partial bodies, should be kept in a preservative like formalin at a 10% concentration, or alcohol at 75% concentration.

Make sure that the containers are hermetically closed and that they cannot break during the trip, so that the sample is not lost.

In the event of signs of diseases or suspected diseases: Samples to be diagnosed must be placed in 10% formalin for 24 hours, and then transferred to another tube of formalin at 10%. Remember that formalin is highly carcinogenic

and therefore use gloves and do not inhale the fumes.

Samples on slides: These should be transported in sealed slide cases. It is preferable to prepare the slides with dyes or fire them at the collection site. Make sure that the containers are hermetically sealed and that they cannot be broken during the trip, so that the sample is not lost.

<u>Dry samples:</u> Some samples, like bones, skin, feces, etc.

- The samples should be very dry, clean (without tissue, dust, dirt or living ectoparasites), and treated with a pyrethroidbased insecticide to kill any ectoparasites or other insects.
- The first layer of security will be a Ziploc or biohazard bag, or a plastic box, depending on the type and size of the sample.
- The second security layer consists of encasing the package in a plastic biohazard bag, sealed with adhesive tape, with the opening of the bag folded over 3-4 times before closing.
- The third layer of security will be a plastic or aluminum case, closed and sealed with adhesive tape.

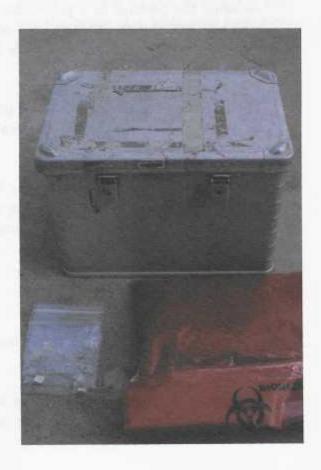
Due to the potential pathological risk, the box (third security level) will be opened only in the laboratory, under appropriate safety conditions.

Frozen and fresh specimens

(Refers to entire or partial bodies, skins, feces, bonds, tissues)

 The first layer of security: a Ziploc or biohazard bag, depending on the type and size of the sample.

- The second security layer: plastic biohazard bags sealed with adhesive tape, with the opening of the bag folded over 3-4 times before closing.
- The third layer of security will be a plastic or aluminum case, closed and sealed with adhesive tape.
- Frozen material must be packed into a cooler-type container so that it maintains its temperature. Makes sure that the transport arrives the same day. Due to the potential pathological risk, the case (third security level) will be opened only in the laboratory, under appropriate safety conditions.
- Large samples, like turtle shells, or whale bones, should be clean and free of tissue, fumigated with a pyrethroidbased insecticide, encased in plastic and sealed. See Table 5 for the layers of packing required to transport scientific samples.



Algae, invertebrates and small fish

- Samples should be preserved in alcohol (70%) or formalin or frozen, depending on the objectives of the study.
- Samples in alcohol must be kept in bottles/ tubes with a cap sealed with duct tape.
- Samples for freezing must be kept in a bag sealed with waterproof tape.

Collecting soil and non-organic samples

- To collect soil, consult the Protocols for the Transportation of Live Animals and Plants between Islands
- For non-organic samples like rocks, lava etc. refer to the general sample packing methods.

Treatment of samples upon arrival at the destination port.

Provided that there is special infrastructure for field trips (isolation rooms), all samples brought from other islands must pass through those areas. Until this procedure is completed, all samples that remain on the islands must be handed over the Department responsible for curing the specimens (for example, insects must be given to the Department of Invertebrates). The specimens that are not in alcohol or formalin should be frozen for 7 days, or follow indicated freezing instructions, if they are different.

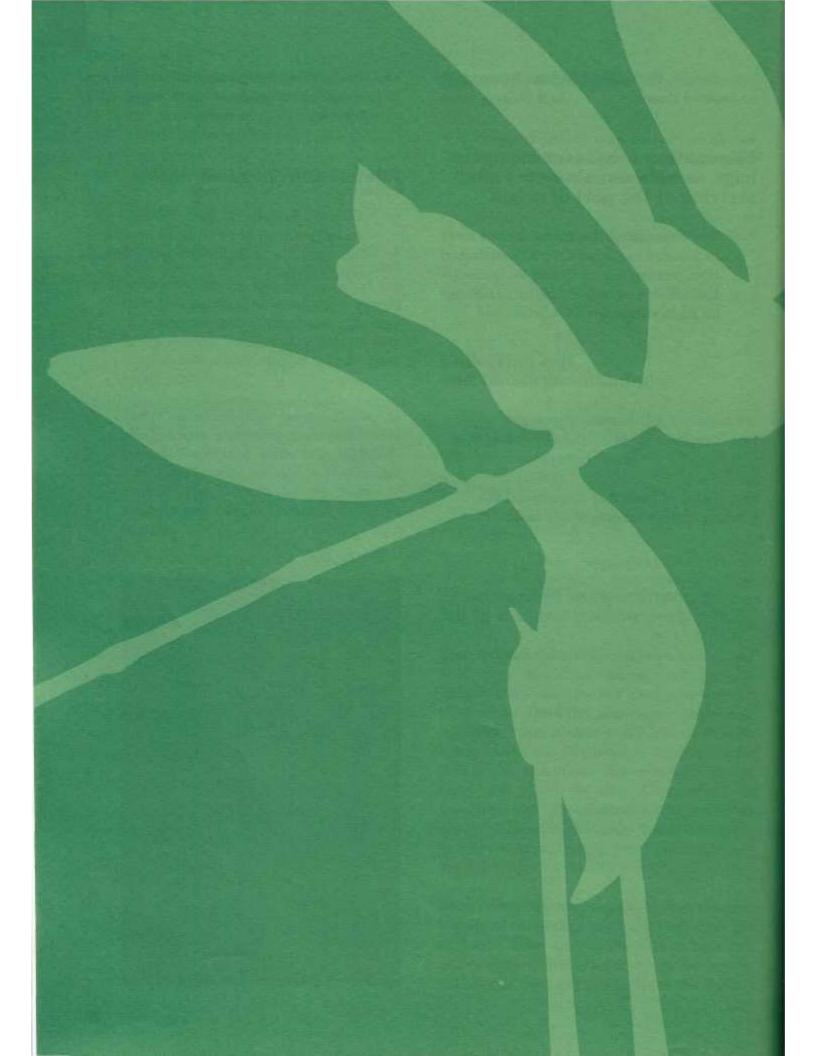
Researchers who are conducting their research outside of the Galapagos should not open the packages until they leave the archipelago, unless they are requested to do so by the DGNP. If they are not to leave the islands immediately, they should be kept frozen or in an isolated place.

Eliminating wastes (newspapers, bags, sample remains, etc.) after arriving at the port of origin

 The waste should be frozen for one week in a sealed bag labeled with the date and then incinerated, or should be immediately handed over to a SICGAL inspector for incineration. Recyclable containers like iceboxes should be fumigated or washed with bleach in the preparation room.

Eliminating chemical wastes

 Ethanol, formalin or other chemical preservatives must be given to the municipality which has a chemical waste elimination program.



PROTOCOL FOR TRANSPORTING SCIENTIFIC SAMPLES TO THE GALAPAGOS ISLANDS



PROTOCOL FOR TRANSPORTING SCIENTIFIC SAMPLES TO THE GALAPAGOS ISLANDS

Threats for Galapagos

There is a lot of variation in each type of specimen and the risk associated with them. Some can be a risk in and of themselves, for example plant specimens with viable seeds like grass and fruits. Other specimens, if they are not treated properly, can be associated with invertebrates or pathogens.

Most organisms that attack samples in the reference collections are not a threat for Galapagos. Other specimens, if not treated properly, are a threat to the reference collections which are worth thousands of dollars and are the result of years of work, therefore it is very important to prevent their entry into Galapagos.

Scientific samples are transported to Galapagos for two reasons:

- Returning samples that came from the islands and that were sent for analysis or identification; or
- To complement the reference collections (new samples, which are entering the province for the first time. This can include samples of species that are normally on the list of products prohibited entry into Galapagos.

Samples originating in the Province

- The interested party requests a permit for the exportation of the scientific samples from Galapagos from the Provincial Chief of SESA Galapagos, specifying the place where they will be analyzed and the corresponding justification.
- A copy of the request is sent to the Provincial Chief of SESA Galapagos, for

- their knowledge before the sample reimportation procedure.
- The DGNP commits to responding to the interested party within a period of three business days.
- The interested party will request permission from the Provincial Chief of SESA
 Galapagos for the re-importation of the scientific samples, with the corresponding justification.
- The requests must include details of the species to be exported and re-imported, including:
 - common and scientific names (as detailed as possible),
 - number of samples and form of packaging,
 - name of the person who will receive the samples when exported and upon their return to Galapagos, and
 - the details of the treatment and packing that they will receive in order to minimize the risk of bringing harmful organisms to Galapagos.
- SESA Galapagos commits to respond to the interested party within a period of eight business days, specifying the conditions to be fulfilled before their return, which must be verified by SICGAL inspectors on the continent;
- The person responsible for shipping the samples to Galapagos must be advised of the procedures required for sending specimens to Galapagos.

- The packing and treatment of the specimens upon arrival at Galapagos must comply with the rules described below for "new samples".
- The interested party presents the authorized permit from SESA Galapagos at the moment of inspection in the port of departure on the continent, and upon arriving in the Province with the repatriated samples, depending on the means of transport used (carry-on luggage, checked luggage, cargo, etc.);
- The person responsible for receiving the samples must ensure that the post-shipping treatment specified below is carried out.
- 11. The failure to comply with this protocol can lead to the seizure of the samples. The samples will be kept in quarantine and treated in order to mitigate any risk associated with them. Then they will be handed over to the person responsible for receiving the samples.

New samples

- The interested party requests a permit for the importation of scientific samples from the Provincial Chief of SESA Galapagos, specifying their origin and the corresponding justification.
- The request must include details of the species to be exported and re-imported, including:
 - common and scientific names (as detailed as possible),
 - · number of samples, form of packaging,
 - name of the person who will receive the samples in Galapagos, and
 - the details of the treatment and packing that they will receive in order to minimize the risk of bringing harmful organisms to Galapagos.

- SESA Galapagos commits to responding to the interested party within a period of eight business days, specifying the conditions to be fulfilled before their return, which must be verified by SICGAL inspectors on the continent.
- The interested party must inform the person responsible for shipping the samples to Galapagos of the procedures required for sending specimens to Galapagos.
- The packing and treatment of the specimens upon arrival at Galapagos must comply with the rules described in the next section.
- 6. The interested party presents the authorized permit from SESA Galapagos at the moment of inspection in the port of departure on the continent, and upon arriving in the Province with the repatriated samples, depending on the means of transport used (carry-on luggage, checked luggage, cargo, etc.).
- The person responsible for receiving the samples must ensure that the post-shipping treatment specified below is carried out.
- 8. The failure to comply with this protocol can lead to the seizure of the samples. The samples will be kept in quarantine and treated in order to mitigate any risk associated with them. Then they will be handed over to the person responsible for receiving the samples.

Treatment and packing of the samples

Treatment abroad

 Any samples not preserved in alcohol must be frozen for a period of one week before being sent to Galapagos.

Packing

 All types of samples must be packed with three layers of security in order to prevent any health or sanitary risk, except



for the case of samples preserved in alcohol or other preservative which do not represent any risk.

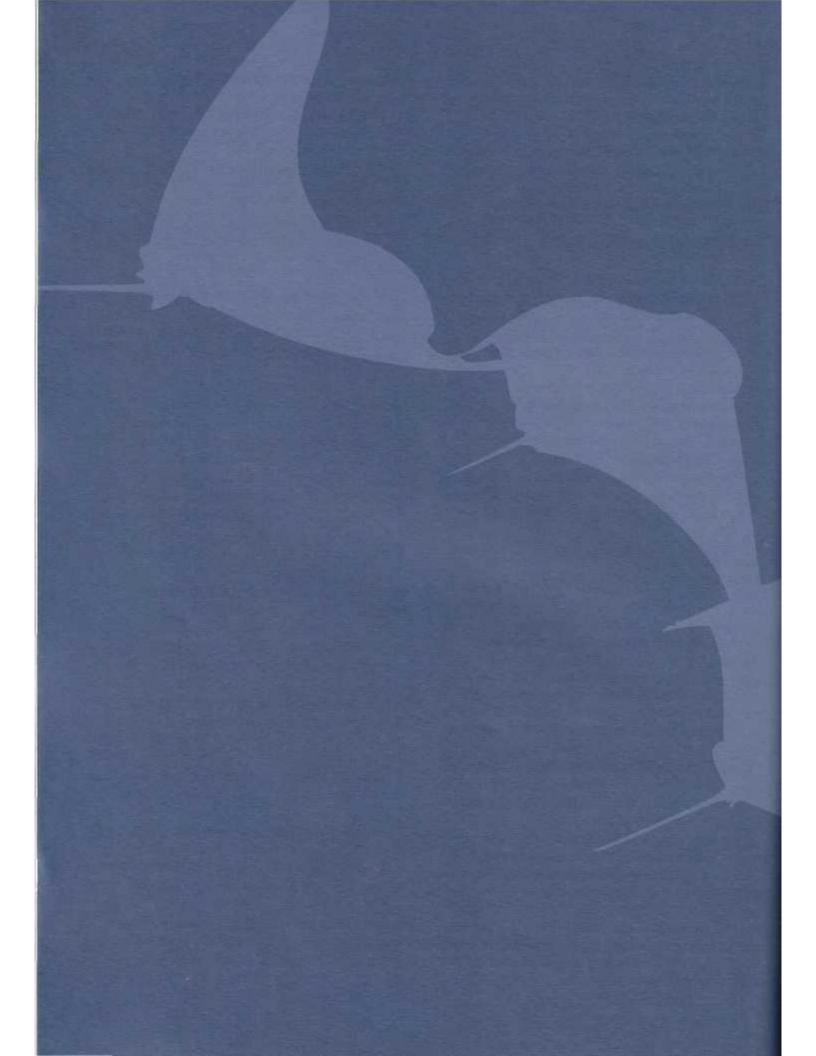
 The first layer of packing depends on the type of sample, and the second and third levels consist of strong plastic bags (like biohazard bags) or plastic cases.

General rules for packing:

- Avoid the use of formalin due to its high level of toxicity and the difficulty in handling this kind of residue in Galapagos.
- For fumigation, use Piretron and other pyrethroids.
- Remember to always use mask and gloves.
- When possible, the samples should be always kept in a plastic or aluminum case to prevent perforations and to preserve the sample in good condition;
- All of the bags and cases should be new.
- Bags must be sealed with the bag opening folded over 3-4 times before sealing.
- Use waterproof tape.
- Minimize the movement of the samples inside the containers, in order to prevent the breakage of the bottles, tubes, or other secure containers.
- If the sample to be shipped has to be transferred to another container, the sample cannot be removed from the second layer of protection;
- When possible, keep containers, bags and cases containing samples at low temperatures, or in the freezer;
- Label the container (indicating its contents) with a permanent marker on the outside packaging, in a clear and legible fashion.

Treatment upon arrival in Galápagos

- In no case should the specimen cases be opened.
- All specimens must be entered into an isolation lab
- Any samples not preserved in alcohol or formalin must be frozen for the period of one week
- Immediately place the cases in a freezer (at a temperature of -18°C for at least one week). Large simples like pieces of wood and fruits may need up to two weeks.



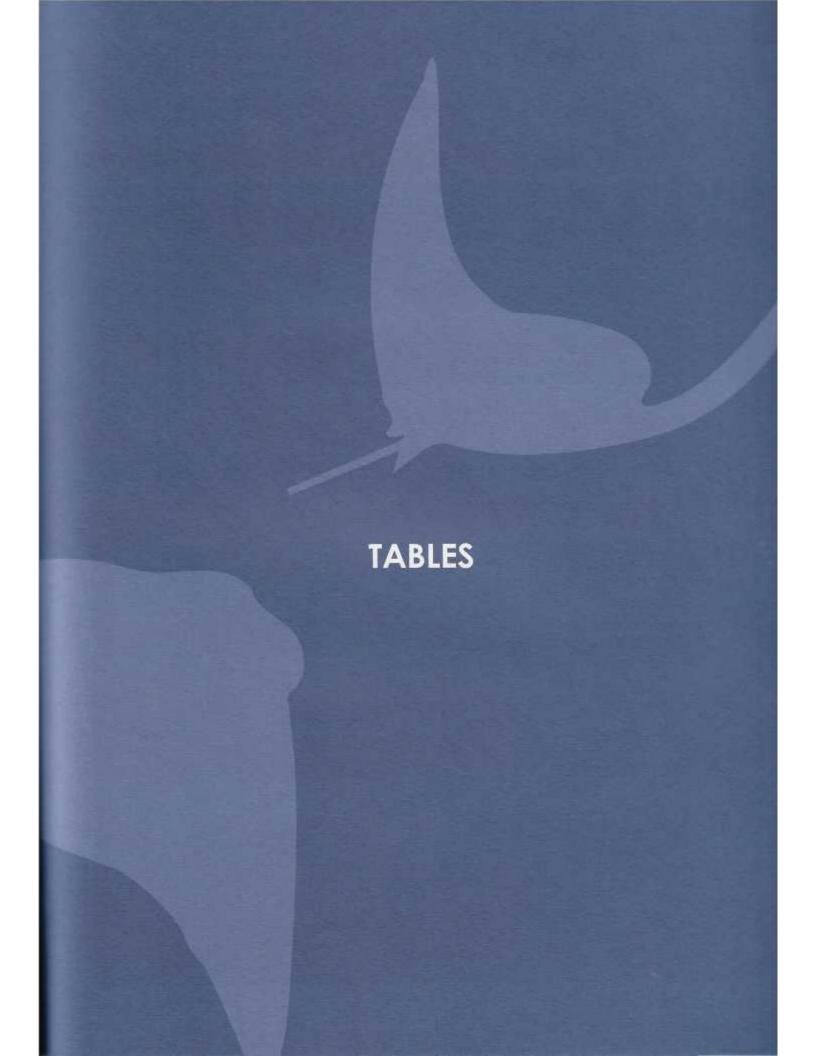




Table 1 POSSIBLE CARRIERS OF INTRODUCED SPECIES

Carriers	Species transported	
Fruits and vegetables	Invertebrates, seeds, fungi and bacteria	
Packages, cases, field equipment, tents and backpacks	Invertebrates, rats. Reptiles, amphibians, seeds and land	
Animal and human feces	Seeds and bacteria	
Clothing and shoes	Seeds and sail containing microorganisms	
Dirt	Microorganisms and nematodes	
Garbage	ALL types of organisms	

Table 2 PRODUCTS AND MATERIALS ALLOWED FOR FIELD TRIPS

	PERMITTED Articles
Whi	te rice and popcorn
Onk	ons and peeled gartic
Car	ned and processed food
Dry	fruits and nuts without peels or shells
Cer	eals without seeds, for example sunflowers, sesames or flax
Fruit	marmalades free of seeds (any brand)
Whi	te or wheat bread, without seeds
	anas and plantains – with the fruits separated and clean, out spots or cracks, and with no sign of the attack of pests and diseases.
Dry	vegetables
Yog	urt without seeds
	ca, potatoes, carrot, beets, radishes and green beans but clean and free of cirt, eccessary plant material and without marks of attack from pests and diseases.
Woo	od – without bark, treated by submersion in a chemical -termites protector (like maderal) for 24 hours
Plas	tic for packing

Table 3 PRODUCTS AND MATERIALS NOT PERMITTED FOR FIELD TRIPS

PROHIBITED Items

Food / Product	Justification
Whole grain rice	Due to the presence of seeds.
Unpeeled onlons and garlic	The outer skins have nematodes, fungi, bacteria and/or seeds attached to them.
Products with edible seeds like sunflower, sesame, flax or similar	It has been proven that the seeds of some products have a high germinating potential
Any plant with leaves	Inside the leaves, insects, spiders, slugs, etc. may hide.
Any fruit or vegetable with dirt or filth attached	The soil is home to riematodes, fungi, bacteria, seeds, etc.
Fruits and vegetables with seeds	It has been proven that the seeds of some products have a high potential for germination (Bassante and Jaramillo, 2005).
Eggs	Can carry internally or externally (on the shell) the Salmonella bacteria which can cause food paisoning (diarrhea, fever, and abdominal pain) in animals and humans.
Jelly/marmalade with seeds	Blackberry and strawberry seeds of some commercial brands germinated in the laboratory.
Bread with sesame or other seeds	It has been proven that the seeds of some products have a high potential for germination (Bassante et al. 2005).
	Invertebrates, spiders, ants, etc. may hide between the layers of cardboard.
Corrugated cardboard	Food packaging (i.e. for crackers, cereal, etc.) must be clean, closed and free from dust or the signs of pests.
Cardboard boxes	Food packaging (i.e. for crackers, cereal, etc.)
Untreated wood, wood with bark, bamboo	The wood may contain termites or beetles.

Table 4 PRODUCTS THAT MAY NOT BE SERVED ON BOARD SHIPS TRANSPORTING PEOPLE WHO WILL DISEMBARK ON LAND

Products which MAY NOT BE SERVED ON BOARD SHIPS

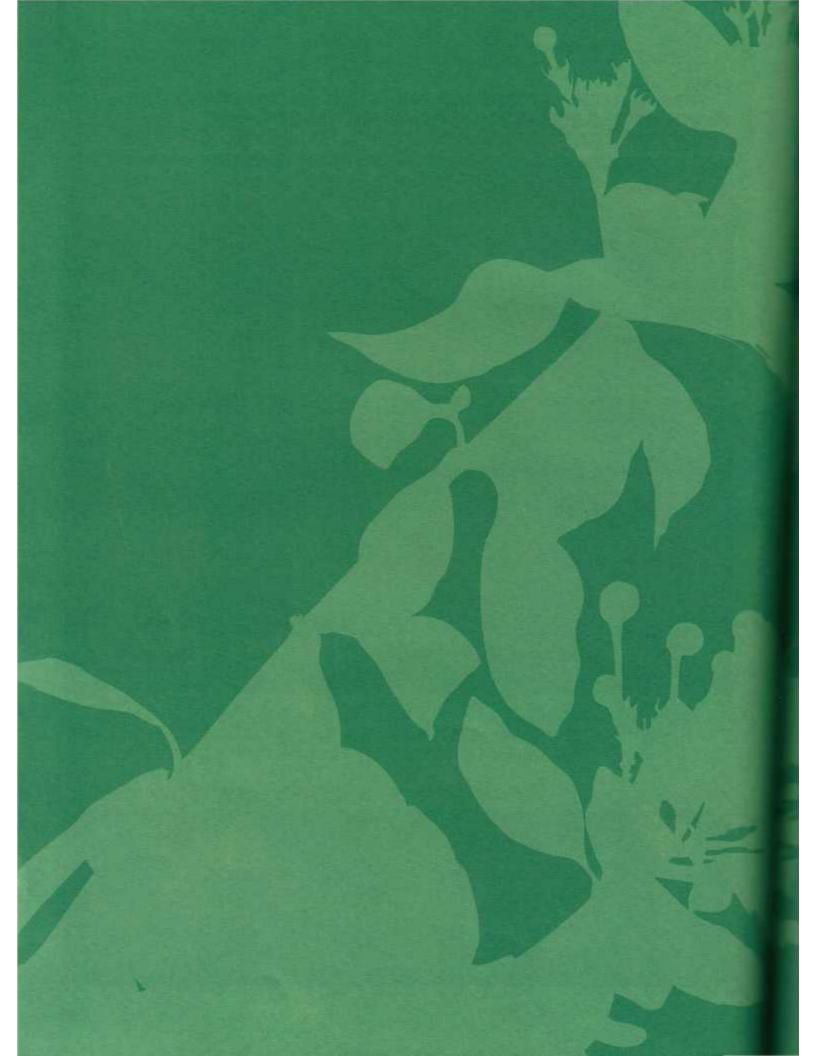
Maracuyá (passion fruit)	Tomato		
Naranjilla	Cucumbers		
Grapes	Green peppers		
Watermelon	Products with edible seeds like sunflower, sesame, flax, etc.		
Blackberry	Other fruits and vegetables with seeds		
Guava	Seedless fruit pulp is accepted		



Table 5 LAYERS OF PACKING REQUIRED FOR TRANSPORTING SCIENTIFIC SAMPLES BETWEEN ISLANDS

This table should be used together with the special procedures for each type of sample.

Sample	First layer of protection	Second layer of protection	Third layer of protection
Liquid, fragile, plates and pathogens	Tube / bottle / petri-sealed case, preferably plastic	Sealed plastic case	Biohazard bag, or sealed plastic or aluminum case
Sharp material (branches/bones/ rocks etc.)	Sealed plastic bag (tumigated in the case of rocks and bones)	Sealed biohazard bag	Sealed plastic or aluminum case
Animals, parts of dead animals and soft tissue/material (skin, feces, etc)	Sealed plastic/ Ziploc bag	Sealed blohazard bag	Biohazard bag, or sealed plastic or aluminum case
Plants and plant parts, remains and waste	Plastic bag (for pressed samples) or fumigated paper bag	Sealed biohazard bag	Biohazard bag, or sealed plastic or aluminum case
Samples kept in liquid nitrogen	Cryo tube or vial	Nitrogen container	N/A



ANNEXES





Ministerio del Ambiente



Parque Nacional GALÁPAGOS Ecuador



FIELD TRAVEL NOTICE No.

Project:	
Person Responsible for the Project:	
Institution:	
Person Responsible for the Trip:	
Duration: From:	To:
Participants:	
Galapagos National Park (GNP) Personnel:	Charles Darwin Foundation
	Visiting Scientists:
Name	I.D./Passport
	-
Island (*):	
Study site(s)	
Campsite (coordinates and name):	
Objetives:	
Place of Arrival:	_ Place of Departure: (for return trip):
Means of Transportation:	
Radio Communication: Days:	Time:

(S) Person Responsible for the Trip

^{*}Remember that it is prohibited to carry out research activities combined with tourism: e.g., camping on more than one island during the same trip.

			DECLARATION OF RESPONSIBILITY	Y
	Place of origin:		Date:	
			1	
I, Scientist		of	Head	Person Responsible
			Group/Area/University/Institute	
	supervising and ens- and Camping Proto		um members read, understand and comply with	th everything stipulated in the Galapagos Islands
It is expre	sely understood that	if these obligations	are not fulfilled, the Galapagos National Park	shall take corresponding legal action.
To ensure collective	legal certification, al	l participants in the	trip shall sign their names and I.D. or Passpo	ort number, with the understanding that they all have
			10.	
Piace's for	eamping/visiting:			Laland
nature of t	he person responsible	e for the trip. A	res	Institution:
			Name of the Aren Boss:	
4000			Signature of the Area Boss:	
abers of the	travel group			
	Name		LD. or Passport Number	Signature
gnature of t	hv Person Responsib	le for the trip Are	Name of the Area Boss:	Institution

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Name	I.D. or Passport Number	Signature
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LAND ZONING UNDER THE MANAGEMENT PLAN ABSOLUTE ECOSYSTEM PROTECTION AREAS

The Absolute Ecosystem Protection Area includes all the territory of the following islands:

- · Darwin
- · Daphne Mayor
- · Española
- · Fernandina
- Genovesa
- Pinta
- · Santa Fe

- · Wolf and
- · All the islets of the archipelago.

The humid areas in the southern part of Isabela Island are not included because they have been declared as internationally important wetlands (RAMSAR sites). They comprise 358 hectares of land constantly visited by the local population for recreational purposes. Even small scale fishing is permitted, which is not compatible with the idea of Absolute Protection Areas.

Uses and Rules applicable to the Absolute Ecosystem Protection areas

Uses	Rules of use	Control standards
Scientific Investigation and Monitoring. The activities for generating Information for managing the GNP (Galapages National Park) and for science in general.	 The research carried out will be fundamentally based on observation. Collecting samples is only permitted in exceptional cases when duly justified. Monitoring activities will be carried out by the DGNP (Galapagos National Park Director's office) or the research group designated by the DGNP as part of the Management Plan (2.1) on Eco-regional Monitoring). All research must have the DGNP's approval and be part of a research Project which follows the regulations established in the GNP administrative by-laws and in the current Research Program (5.1). Only research which cannot be done in other areas of the GNP is allowed. Only small groups, of no more than five people, are admitted. Anyone who visits this zone for any reason or use must comply with the applicable field protocol (GNP, 2001) and the Strict Quarantine Rules which must be carried with an understanding of that area's particular requirements. A field report for the DPNG has to be produced for each visit, detailing the site(s) visited and their condition(s). 	1. Each research project and visit has to be approved by the DGNP. 2. The DGNP must always verify the groups' dates of entrance and exit. 3. The DGNP requires a final report of each visit in Spanish.



Uses and Rules applicable to the Absolute Ecosystem Protection areas

Uses	Rules of use	Control standards
Filming and Photography Communication activities which promote consciousness, valuation, understanding and specialized knowledge of	 All educational visits must have DGNP approval. Filming/photography will only be permitted in special cases when they cannot be done in other areas of the GNP. Only small groups of no more than five people are allowed to enter. Anyone who visits this zone for any reason or use must comply with the applicable field 	1. Each visit has to be approved by the DGNP in accordance with the programs 1.1 and 4.1 defined in the current Management Plan of the DGNP.
the Galapagos Ecosystems and their conservation and general ecology.	protocol (GNP, 2001) and the Strict Quarantine Rules which must be carried with an understanding of the area's particular requirements. 5. Only a maximum of one group per island, per year are allowed to enter	The DGNP must always verify the groups' dates of entrance and exit.
	6. A field report must be produced for the DPNG for each visit, detailing the site(s) visited and their condition(s). 7. In order to film, the visitor has to make a	3. For filming, the DGNP must define whether the film is considered.
	formal request which includes the film's nature, its objectives, general script and any other details[2]. 8. For commercial filming, the producers have to pay the rights and guarantees according to the established rules.	commercial in nature or not and if so, it will charge the amount for the guaranteed rights.

CONSERVATION AND ECOSYSTEM RESTORATION AREAS

The following are considered to be conservation and ecosystem restoration areas and make up a large part of the surface area of the populated islands:

- · Santa Cruz
- · San Cristóbal
- Isabela
- · Floreana, and
- · Parts of Baltra

The following islands are also included and are considered uninhabited, but they host stable communities of invasive species.

- Marchena
- · Pinzón
- · Rábida and
- · Santiago.

Uses and Rules applicable to the conservation and ecosystem restoration areas

Usos	Normas de uso	Normas de control
Scientific Investigation and Monitoring. The activities for generating information for managing the GNP (Galapagos National Park) and for science in general.	 The research must have the DGNP's approval and be part of a research project which complies with the rules established in the GNP Administrative Statute and the current Research Program (5.1). Monitoring activities will be carried out by the DGNP (Galapagos National Park Directorate) or the research group designated by the DGNP as part of the Management Plan (2.1) on Eco-regional Monitoring). Anyone who visits this zone for any reason or use must comply with the applicable field protocol (GNP, 2001) and the Strict Quarantine Rules which must be carried with an understanding of the zone's particular requirements. A field report for the DPNG has to be carried out on each tour, detailing the site(s) visited and their condition(s). 	1. Each research project and visit has to be approved by the DGNP. 2. The DGNP must always verify the groups' dates of entrance and exit. 3. The DGNP requires a final report of each visit in Spanish.



Geographic location

These are considered to be natural areas which tend to be bands of variable sizes, and that represent the borders between the GNP and agricultural/livestock and urban zones of the inhabited islands.

Similarly, these areas also include both sides of the highways which enter or pass through the Conservation and Restoration Zone. Therefore, a peripheral protection belt is established for the restricted visiting areas located in the Absolute Protection Zone. The Impact Reduction Zone is defined in the Conservation and Restoration Program (1.1), using hydro geomorphologic, biological, ecological and social criteria.

Uses and Rules applicable to the impact reduction zone.

Uses	Rules of use	Control standards
Scientific Investigation and Monitoring. The activities for generating information for managing the GNP (Galapagos National Park) and for science in general.	 The research must have the DGNP's approval and be part of a research project which complies with the rules established in the GNP Administrative Statute and the current Research Program (5.1). Monitoring activities will be carried out by the DGNP (Galapagos National Park Directorate) or the research group designated by the DGNP as part of the Management Plan (1.2) on Eco-regional Monitoring). Anyone who visits this zone for any reason or use must comply with the applicable field protocol (GNP, 2001) and the Strict Quarantine Rules which must be carried with an understanding of the zone's particular requirements. A field report for the DPNG has to be carried out on each tour, detailing the site(s) visited and their condition(s). 	1. Each research project and visit has to be approved by the DGNP. 2. The DGNP must always verily the groups' dates of entrance and exit. 3. The DGNP requires a final report of each visit in Spanish.

RESTRICTED ECOTOURISM VISITATION SITES

Geographic Location

There are 22 restricted visiting sites located on 12 islands:

Site		Island
l- la	Bahía Gardner	• Española
2.	Punta Suárez	
3.	Cerro Brujo	
4.:	La Galapaguera	San Cristobal
5.	Punta Pitt	
6.	Bahia Ballena	Santa Cruz
7.	Cerro Dragán	
8.	Mosquera	Seymour
9.	Santa Fe	• Santa Fe
10.	Daphne Mayor	Daphne Mayor
	Sullivan	Santiago
12.	Playa Espumilla:	
13.	Sombrero Chino	Sombrero Chino
14.	Punta Moreno	
15.	Punta Albemarie	• Isabela
16.	Punta Tortuga Negra	
17.	Volcán Alcedo Volcano	
18,	Punta Cormorán	Floreana
19.	Corro Alleri	
20.	Bahia Darwin	Genovesa
21,	El Barranco	
22.	Punta Espinoza	Fernandina

Permitted Uses

- Scientific Monitoring and Research, aimed especially at evaluating the actual or potential impact of visitors.
- 2. Filming and photography.
- The protection and conservation of ecosystems and their biodiversity.
- Ecosystem recovery (eliminating introduced species and monitoring the recovery of ecosystems).

Specific Rules for Use

Setting up campsites is prohibited.



INTENSIVE ECOTOURISM VISITATION SITES

Geographic Location

There are 15 intensive ecotourism visitation sites on 10 islands:

Si	te	Island
1.	Playa Ochoa	San Cristóbal
2.	Las Bachas	• Santa Cruz
3.	Caleta Tortuga	
4.	Isla Lobas	• Lobos
5.	Rábida	Rábida
6.	Seymour Norte	Seymour Norte
7.	Salt Mine	• Santiago
8.	Puerto Egas Port	
9.	Caleta Tagus	• Isabeia
10	. Bahia Urbina	
11	, Post Office	Floreana
12	. Mirador de la Baronesa	
13	. Plaza Sur	*• Plaza
14	. La playa	Bartolomé
15	. Escalera	

Permitted Uses

- Scientific Monitoring and Research, aimed especially at evaluating the actual or potential impact of visitors.
- Filming and photography.
- The protection and conservation of ecosystems and their biodiversity.

 Ecosystem recovery (eliminating introduced species and monitoring the recovery of ecosystems).

Specific Rules for Use

Unauthorized campsites are prohibited. Campsites are only permitted under special conditions, in indicated sites and under strict quarantine regulations.

RECREATIONAL ECOTOURISM VISITATION SITES

There are 33 recreational tourism sites for public use and they are located on 4 populated islands.

Site	Island	Site	Island
1. Asilo de la Paz 2. La Lobería	• Floreana	19. Playa de los Perros 20. Breeding center Fausto Llerena	• Santa Cruz
3. Puerto Chino 4. Puerto Grande		21. El Mirador 22. La Reserva/Chato	
5. Punta Carola6. Cerro Tijeretas7. El Junco8. Galapaguera de Cerro Colorado	• San Cristóbal	23. Las Tintoreras 24. Minas de Azufre 25. Muro de las Lágrimas	
9. Interpretation center		26. Concha y Perla 27. Breeding center Arnaldo Tupiza	•Isabela
10. La Loberia 11. Bahia Tortuga		28. Laguna del Cementerio 29. La Playa del Amor	
12. Garrapatero 13. Las Grietas 14. Los Gemelos	• Santa Cruz	30. El Mirador del Mango 31. Cerro Calzoncillo	
15. Media Luna 16. Cerro Crocker 17. Puntudo		32. Volcán Chico 33. Laguna Salinas	
18. Playa de la FCD			

Permitted Uses

- Scientific Monitoring and Research, aimed especially at evaluating the actual or potential impact of visitors.
- Filming and photography
- The protection and conservation of ecosystems and their biodiversity.
- Ecosystem recovery (eliminating introduced species and monitoring the recovery of ecosystems).

Specific Rules for Use

- The use of motorized vehicles is not permitted during the visit.
- Unauthorized campsites are prohibited.
 Campsites are only permitted under special conditions, in indicated sites and under strict quarantine regulations.



Port of origin:		Date:			
	"				
I,		Captain		and Vessel owner	
vessel description		Name of the boat			
Commit to ensuring that all of my te	sam members read, understa	and and comply with everything stip	milated in the Galay	sagos Islands Campsites.	Trips and
Campsites Protocol.	ENGENING NEEDS OF				
tygiene inspection by the SESA-SIC lood is neither transported nor serve	GAL (Ecuadorian Agricultured, in accordance with the a	and rodents, and is covered by the ap re and Livestock Sanitation Service- attached document, if they passenge re in order to avoid transporting ins	Quarantine System rs are visiting prote	for the Galapagos). And, octed areas. Also, lights	prohibited
understand that if I do not fulfill the	his obligation, the Galapago	e National Park Directorate may tal	ke the correspondin	g legal action.	
Fo ensure legal validity, all particips responsibility.	ants of the trip shall sign the	rir names and L.D. or Passport numb	er, with the underst	anding that they all have	e collective
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Places to be visited:			Islan	ads	
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PROTOCOL FOR MANAGEMENT AND RESEARCH ACTIVITIES IN THE NATIONAL PARK AND GALAPAGOS MARINE RESERVE Purpose of the Trip Date (Inspection) Person Responsible Return Date Means of Transport Persons Involved Departure **Total Days** Dept. or Area Inspectors' Notes: Names Date Signature _ Office/area Office/area Signature ... Area -Office/area Office/area Signature __ Write any new findings from the inspection here:



1. Template for the request to relocate living organisms in Galapagos

Project Title	Must include the proposal, name of the species, date and place to where it will be transported.
Project Summary	Describe the project's main objectives.
Person Responsible for the Project	Name and position.
Institution Responsible for the Project	Name of the institution responsible for leading the project.
Other institutions involved	
Team Members	List the team members and their relevant experience to the Project.
Emergency Relocation	Justify reasons for the emergency. If it is not an emergency, put N/A:
Temporary Relocation	Indicate why it is temporary.
Species to be transferred	Include: • Scientific name • Common Name • Status in Galapagos (i.e. endangered)
Origin or source of the species	Indicate the specie's origin.
Place of Release	Indicate the specific place where it will be released.

2. Justification

Need	Indicate the project's purpose and why the species must be transported.
Context	Briefly indicate the context of this proposal

3. Results and Indicators

Results	Indicate this Project's final expected outcome.
Indicators	They must be specific, measurable and indicate ending dates.
Research or control objetives	Only for research or control projects.

4. Source of the Population

Source

Indicate if the species were raised/cultivated in captivity
or if they are wild and indicate each individual's place of origin.
If wild, indicate why this source has been selected (eg: it is
the only source, the closest genetic relationship, etc.).

5. Place of Release

Ecological Requirements	 If in the GNP, indicate how the place fulfills the species' ecological needs. If in captivity, indicate how the place fulfills the ecological needs
Distribution Species	indicate if the location is within its natural range or not. If not, the justification must include acceptable reasons for relocating it outside its natural range.

6. Threats

Managing threats	List the threats which could affect the project's success and indicate how they could be avoided.
Managing the introduction site	Indicate if the management of the introduction site is likely to guarantee the project's success.

7. Ecological Impacts

Related Species	 Indicate if there are any phylogenetically related species near the place of release. If there are, state whether they share habitats in other places and list those places. If they do not share habitats, indicate the possible consequences of the introduction (i.e. hybridization and competition) If there are negative interactions-include the reasons why it is necessary.
Interactions and Impacts	Indicate other possible interactions with: • Endemic and native species. • Populations of the same species (i.e. genetic contamination, etc.)



8. Relocation

Relocation has previously been carried out	 Indicate if the species has been relocated in the past and briefly explain whether it was successful or not. Indicate the number of relocations carried out with the number of individuals, their ages and sexes. Indicate the degree of success that the relocations had.
Success Threshold	If more than one relocation will be carried out, indicate any expected milestones.
Possibility of spread /escape	Indicate the possibility of this happening and the implications if it does.

9. Biosafety Measures

Evidence proving non-existence of pathogens	Indicate pathogens associated with the species and measures to be taken in order to ensure that they are free of pathogens.
Existence of pathogens in the place of release and the species' environment of origin	 Indicate if pathogens are present at the place of release or the species' environment of origin. Refer to any censuses carried out which show this.
The capacity for pathogen dispersion	Indicate the measures to be taken for reducing the dissemination of pathogens.
Introduction of plants, invertebrates and other microorganisms	Indicate measures to be taken for preventing the transport of other species.

10. Transfer Methods

Methods	Describe: • Collection Method • Transportation Method • Release Method
	Make sure that the methods minimize stress on the organism.
Contingency Plan	Indicate steps to be taken if the species escapes.

11. Monitoring and Post-Introduction Management

Monitoring	Brief summary of the monitoring methodology which includes: How With what frequency Duration
Post-introduction Management	Indicate if management actions will be necessary and what they are.

12. Budget

Required Resources	List the necessary resources.
Budget	Indicate sources of funding.

Note: All authorizations must be obtained prior to Relocation.

13. Technical Consultancy

Specialists involved	List the specialists and institutions.	
	Approved / Rejected	
Name:		
Signature:		
Date:		

References

For example, references cited in the text like scientific publications.



PROCEDURES FOR THE QUARANTINE PERIOD FOR DOGS

The DGNP will authorize the list of dogs to be relocated to another island. The animals will receive treatment their entire lives and before traveling they must follow the procedure below:

- No food (fasting) for 24 hours.
- Bathe with an external anti-parasite wash, which is effective against mites, fleas and ticks. Follow all the instructions on the product and professional recommendations for use. This must be done 24

- hours before the trip.
- The animal must remain in a cement cage and isolated from other canines which are not going on the trip.
- Before the trip, make sure that the animal is not transporting seeds or insects within its fur or extremities.

In the event that the DGNP must move a dog which has not been exposed to constant and strict control, the following must be completed:

Day	Treatment
	 Oral deparasitation, Pyrantel Pamoato and Prazicuantel, according to the instructions for use. Bath with an external deparasitation wash, containing amitraz, and with an active agent against skin mites. Administer a preventative anti-biotic with a wide spectrum of prevention, following the instructions for use.
2-3	 Administer a broad spectrum antibiotic in preventative doses following the instructions for use. Administer dry bath with N methyl-alpha naphthyl-aminoformate 5%, following the instructions for use.
4	 Oral administration of an anti-parasitic ivermectin-based agent, following the instructions for use. A B-Complex vitamin, according to the instructions for use.
5-6	A B-Complex vitamin, according to the instructions for use.
8	Oral anti-parasitic agent, Pyrantel Pamoato and Prazicuantel, according to the instructions for use.
16	 Oral anti-parasitic agent, Pyrantel Pamoato and Prazicuantel, according to the instructions for use. Bathe with an external deparasitation wash, with an active agent against ticks.
18	 Administer dry bath with anti-parasitic agent N methyl-alfa naphthyl-aminoformate 5%, following the instructions for use. A B-Complex vitamin, according to the instructions for use.

Day	Treatment
	 A B-Complex vitamin, according to the instructions for use. In order to eliminate any seeds stuck in the fur and external parasites, each dog must be bathes with a disinfectant and then brushed and visually inspected before embarking, paying special attention to the paws. The fur must be cut if it is very long, in order to facilitate the inspection and minimize the risk of hidden seeds.
19 - 20	General Inspection: Inspect the fur to make sure there are no external parasites. Inspect the muccus to make sure it is normal. Check and clean the eyes and ears. Check the temperature to ensure that it is in the normal range. Be sure that the animal has not shown any symptoms which may indicate any contagious illness during the days prior to the trip. For example: canine parvavirus disease, distemper, etc.)
	 The animal's check-ups must be done by a professional veterinarian. In order to eliminate any seeds in the digestive system, the dogs must be put in a place with a cement, sand or gravel floor, where there is no access to plants or fruit with seeds for at least 24 hours (not including the time of the boat trip). In case of emergency, this period of time may be reduced, provided laxatives are administered. A 24-hour fast.
21 (day of transport)	 Before transport, place an electronic tracking collar on the dog until its return, if it will be picked up. The animals to be left on the uninhabited islands or areas outside of urban or agricultural zones must have an electronic tracking collar during the entire time they are there. The canine must be ready for transport if it has had all of the above and been seen by a veterinarian.

For dogs that are not regularly under a strict veterinary regimen, the treatment must be administered by a DGNP approved veterinarian.



PROCEDURES FOR THE QUARANTINE PERIOD FOR HORSES

Zoological management practice for this species indicates that it takes 28 days for the food to be completed digested and pass through the digestive system. Therefore, they must be kept in conditions in which they do not have access to seeds, not including the time they spend in transport on the boat. They must kept be in a place which is easy to clean, with a cement, sand or gravel floor, shaded and ventilated. The place must be free of any fresh or dry vegetation accessible to the animal under surveillance, and the shade trees must not have any fruit or seeds that may fall in the corrals.

The horses' diet must not include any whole grains or seeds for 28 days. Crushed rice is recommended.

Note: If there is processed food for the horses that will be transported to other islands, it must be frozen for three days in order to kill any organisms, according to the Galapagos National Park Protocol for field activities and the Galapagos Archipelago Marine Reserve.

The regimen must last 28 days and include the following steps:

Day	Treatment
	 The animals must be kept in corrals with a cement, sand or gravel floor, where they do not have access to plants or any fruits with seeds. The minimum size is 3m² per animal. The area must be shaded and provide access to water whenever the animal desires. Before putting the animal in the corral, its entire body must be washed with soap and water using a brush to eliminate and seeds stuck to the fur or external parasites. Its hair must be cut when it's very long to facilitate inspection and minimize the risk of hidden seeds. Additionally, the horse must be inspected and brushed, and the hooves must be trimmed so that dirt does not enter. Oral deparasitation with Fenbendazol 10%, according to the instructions for use. From the first day, the animal must have a special diet based on crushed corn and abundant water.
8	Oral deparasitation with Fenbendazol 10%, according to the instructions for use.
16	 Oral deparasitation with Fenbendazol 10%, according to the instructions for use. Bathe using soap, water, and a brush. Thoroughly check and clean the ears to eliminate any possible external parasites.
21	A bath using and anti-external parasite product for horses. Check and clean the animal's hooves with a lot of water.
27	 To eliminate any seeds stuck to the fur and external parasites, each animal must be bathed with a disinfectant, brushed and visually inspected, paying special attention to the hooves, before embarking
28 (day of transport)	Visually check for seeds, parasites or dirt.

PROCEDURES FOR THE QUARANTINE PERIOD FOR "JUDAS" ANIMALS (GOATS)

Zoological management practice for this species indicates that it takes 7 days to digest food and pass it completely through the digestive system. Therefore, they must be kept in conditions in which they do not have access to seeds, not including the time they spend in transport on the boat.

The animals must kept be in a place which is easy to clean, with a cement, sand or gravel floor, shaded and ventilated. The place must be free of any fresh or dry vegetation accessible to the animal under surveillance, and the shade trees must not have any fruit or seeds that may fall in the corrals.

The Goats' food must not include whole grains or seeds for the entire 7-day period. Grass is not recommended because it can contain parasite eggs, like worms. The following table show recommended and prohibited foods:

Approved Foods	Prohibited Foods
Otoy leaves (Xanthosoma sagittifolium)	All grasses
Taro leaves (Colocasia esculenta)	
Coral Tree leaves (Erethrina smithlana)	Plants with seeds
Green Bean leaves (Erethrina poeppigiana)	FIGHTS WITH SEEds
Processed food, without whole grains	Blackberry (Rubus spp.)
Crushed corn	

A goat needs between 1kg (processed food) and 4 kg (fresh) of food each day.

Note: If there is processed goat food that will be transported to other islands, it must be frozen for three days in order to kill any organisms, according to the Galapagos National Park Protocol for field activities and the Galapagos Marine Reserve.



The treatment lasts seven days and includes the following steps.

Day	Treatment
	 Bathe and brush the animal's body before putting it in the corral, using abundant water, soap and a brush. Additionally, the goat must be inspected and brushed, and the hooves must be trimmed so that dirt does not enter. The animals must be placed in corrals with cement, sand or gravel floors and they must not have access to plants or fruit with seeds. Administer an internal anti-parasitic agent, like one with the active ingredient Levamisol, following the instructions for use.
2	Bathe the animal using a product with an amitraz-based active ingredient, following the instructions for use.
3	Administer and internal and external anti-parasitic agent, with an ivermectin base, following the instructions for use.
4, 5 - 6	If the animal seems weak, give it a B-complex, following the instructions for use.
7 (day of transport)	 Bathe the animal using an external amitraz-based anti-parasitic agent, following the instructions for use. Brush the fur using a fine, rough brush in order to remove any seeds. Visually inspect the goat for external parasites and seeds before transporting the animal, Part of the methodology is to place an electric tracking collar on the goat in order to find them before their relocation. Each collar is previously identified. The animals are to be sterilized (epidymectomy and tubal) before being relocated. Ensure that the established rules have been carried out before transporting the animal.

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