

# ALEUTIAN ISLAND USER'S MANUAL

To be read and understood by everyone visiting the Aleutian island seabird field camps

Version 4.04

Prepared by Ian L. Jones and numerous experienced editors and contributors

Last updated April 22, 2014 at St. John's NL

## **Safety first is no accident**

Buldir, Gareloi and other Aleutian seabird islands should be reasonably safe and pleasant places to work, as long as everyone clearly understands the routine, what the hazards are, and how to call for outside assistance in case of an emergency. The purpose of this document is to familiarize all researchers and visitors with the basic work and living procedures for Aleutian Island field camps, and with the natural and human-made hazards of these remote islands. Everything herein is important and should be fully understood – if something isn't clear, ask us.

## Getting around

Hiking around the islands during fieldwork activities poses several challenges since the terrain is steep and often unstable (loose rocks large and small) or slippery. Special care needs to be taken while walking on rocky beaches, close to steep cliff edges, on steep grassy slopes, and on lichen covered talus slopes, especially when these areas are wet (which can be assumed to be most of the time). Sturdy non-slip footwear must be worn; tennis shoes, sandals and rubber boots without treads are not acceptable. Walk slowly and carefully and do not jump or make uncontrolled moves, particularly when crossing wet vegetation or lichen covered rocks, and when ascending or descending. Use your hands as well as feet and carry a walking stick if necessary. Be aware of tidal conditions during the time when you are out, especially when walking along beaches. Whenever you leave camp alone be sure to leave a note, or tell someone, exactly and clearly where you are going and when you will return. Aleutian fieldwork is only for those in good physical shape and without chronic medical conditions – report any medical conditions to us before you decide to work with us and proceed into the field. If you suffer from a recurring medical condition that requires expert medical attention, you should consider another form of work not on remote wilderness islands. Remember that evacuation of a sick or injured person from the Aleutians to a hospital could take several days to a week and cost \$30-40K.

Some the islands we work on are volcanic and eroding quickly with numerous active slide areas. Always be aware of the possibility of falling rock, especially when hiking near a slide area. Do not cross a slide area if you can see or hear debris falling. At Buldir, Memorial University students are not authorized to proceed on foot on the beach on the north side of the island beyond the base of Main Talus (e.g., to Kittiwake Lane) unless authorized in writing by Ian Jones. Rolling or loose rocks in slide areas are especially a problem after a heavy rain and seismic activity (earthquakes - which are frequent in the Aleutian Islands), LOOK and LISTEN for falling rock, be aware of and

ready to use the closest large boulder or overhang for protection. When an earthquake occurs, you must look for and take action to avoid falling rock and immediately leave areas near cliffs and talus slopes. Because of rapid erosion, cliff edges are often unstable and should not be approached closely - beware of overhanging vegetation near cliff edges. Particular attention must be given to these guidelines in relation to recovery of injured personnel – first priority is to responder’s individual safety (i.e., do not proceed into a dangerous area to attempt a rescue).

There are ticks (*Ixodes uriae*) on seabird islands that you can pick up when checking crevices or handling birds, especially auklets – tick bites might cause disease and should be avoided by treating trousers and socks with permethrin spray (we will provide). The Cow Parsnip (*Heracleum lanatum*) is a common tall plant at lower elevations and can cause a poison-ivy like rash — learn how to recognize this plant and avoid skin contact, especially on warm sunny days. Hay fever may be a problem for some people during July and August, so if you suffer from allergic reactions be sure to bring medications and make other people aware of your condition. Also, if you know you are prone to physical ailments be sure to bring proper supplies (e.g. ankle wraps are good if you tend to get sore ankles, medicated ointment for sore muscles or medication for conditions like yeast infections). If a medical condition arises, we have access to medical consultation via satphone if required.

When working near the ground in grassy areas, watch out for the pointed tips of the grass *Elymus arenarius*, these can cause serious eye injuries. On Buldir watch out for old wires from stake flags, they are hard to see amid the dense ground vegetation on storm petrel plots and could cause eye injuries. Bend down the top of a new wire flag before you put it in the ground and be cautious about where you place the flag (i.e. avoid putting the wire through storm petrel burrow chambers and their occupants). When hiking, keep in mind that there are storm petrel burrows (very hard to see) on most of Buldir that can be destroyed by a single footstep. Avoid hiking through high density storm-petrel areas unless absolutely necessary. When walking watch out for old re-bar stakes and rusty metal WWII debris. Hypothermia is a concern, because a weather change can rapidly turn a nice day into a cold, wet and windy situation — always carry spare waterproof and warm clothing in a day pack when hiking away from camp.

#### Food poisoning

There is no freezer or fridge in any of our camps, therefore special care must be taken to avoid food poisoning. Cooks need to check food items carefully for signs of spoilage, and dispose of anything that looks suspicious. Mold on fruit and vegetable is not a major concern, but open cans and bottles of vegetables, meats, spices and condiments will spoil quickly and cause food poisoning. **If in doubt – throw it out.** Perishable foods need to be stored outside of the cabin or weatherport and out of direct sunlight where it is cooler. Do not eat local shellfish, this may lead to fatal paralytic shellfish poisoning. The water in streams is contaminated with goose, gull, auklet, and petrel feces and needs to be purified by boiling or filtering before use. Drinking unfiltered water can lead to diarrhea. Goose feces in particular contain coccidia that cause diarrhea; frequent hand washing and good hygiene minimize the chances of acquiring this annoying situation. Cooks need to take special care to wash hands carefully, keep the food preparation area clean and use only uncontaminated water during food preparation. Dishes will be washed in hot soapy water, rinsed with boiling water every

day, and handled with clean hands. Under no circumstances should dishwashing tubs be used for laundry or body washing, dedicated containers should be available for these.

### Cabin/Weather-port Safety

There are a number of things everyone should know about safety around the cabin and weatherports. Be careful with fire and do not put flammable materials near the kerosene heaters. Never leave a heater unattended and dry clothing over heaters only with extreme care. Be careful when using the propane stove, items placed on it will melt or catch fire if placed near the burners. All heaters and stoves consume oxygen and emit carbon dioxide and possibly carbon monoxide, so a door or window should be open at all times when using these. Be vigilant for the presence of leaking propane or kerosene. If a leak is suspected, immediately turn off the valves on the propane tanks outside or shut off heaters. Do not store fuel anywhere near to the cabin or weatherport (the exceptions being an active kerosene container for heater refills and a propane cylinder hooked up to the stove) — there is a fuel storage area away from camp. Be sure to have someone demonstrate the proper way to light and extinguish a kerosene heater. Remember that the stove and heater consume oxygen, so ensure adequate ventilation, especially in Weatherports. Always fill heaters outside away from the cabin and be sure any excess fuel is not tracked into the cabin. Know how to distinguish the containers holding gasoline from those holding kerosene. Kerosene heaters use kerosene only. **Failure to heed the advice of the above sentences will likely result in death or serious injury.** Open flame candle use is strictly prohibited. Remember that the radio battery contains acid. Be aware of the location of the fire extinguisher and first aid kit. A lot of gear and supplies may be stored overhead in the cabin/weatherport. It is everyone's responsibility to ensure that this is stored securely and will not fall on anyone. Check the guy ropes and tie-downs on Weatherports regularly to ensure they are secure for windy days. If a storm is predicted, make a check around camp to make sure everything is secured and can't blow away.

### Common courtesy

Fieldwork means living together in cramped conditions with other people. As much as possible keep your personal stuff out of other people's way in the cabin/weatherport. Let wet clothing drip dry outside before hanging up inside near the heater. Do not hang your smelly socks, underwear et c. in public areas – use your tent. Be conscientious about camp chores (filling water containers and heaters, keeping living areas clean and well-organized). When it is your turn to cook (do your fair share please), make an effort to satisfy your camp mates' needs.

### Boating

Because of the exposed location of the islands boating safety is an extremely important issue. Boat operation is to be the responsibility of the Tiglax crew, camp leader or only to those persons who have been certified and trained by the USFWS in boat handling, however use of the boat should ALWAYS include the knowledge and permission of the camp leader. A detailed manual on boating safety is available and should be read by everyone going out in the boat. To summarize, general boating safety requires the following:

1. Passengers will wear Mustang float coats at all times when in the boat on the ocean - NO EXCEPTIONS.

2. The Personal Locator Beacon (PLB), the VHF hand-held radio, and marine signals (flare gun and rockets) are to be carried on all ocean boat trips.
3. The marine weather forecast will be consulted before departing for any boat trip. A travel plan will be given (orally or in writing) to those staying onshore, specifying where to and how long the boat will be going.

### Emergency Procedure

This is summarized in detail in AMNWR's safety plan – everyone should read carefully and be familiar with this. Everyone should know what to do in case of a medical or other emergency that requires evacuation. Our first line of communication is the satphone. Second line is to use the SSB HF radio to contact the USFWS Adak office – everyone should know how to operate the radio. There are several channels which are pre-programmed on the HF radio for USFWS communication: 4620 (preferred), 5907 and 3215. Adak USFWS staff monitor the radio during office hours. There are also two designated time periods one in the morning (0900h) and one in the evening (2100h) in which daily contact is made. If for some reason you cannot reach the Adak office, you can switch to the fishing channel (4125) and try to contact the Coast Guard or a fishing vessel. Explain the nature of the injury and that you need assistance, have them try to contact the USFWS office for you. If and only if someone's life is immediately threatened and there is imminent danger to life, you may use "MAYDAY MAYDAY" on the fishing channel. The Coast Guard regularly monitors this channel. In case of non-life threatening emergency, say "PAN PAN PAN".

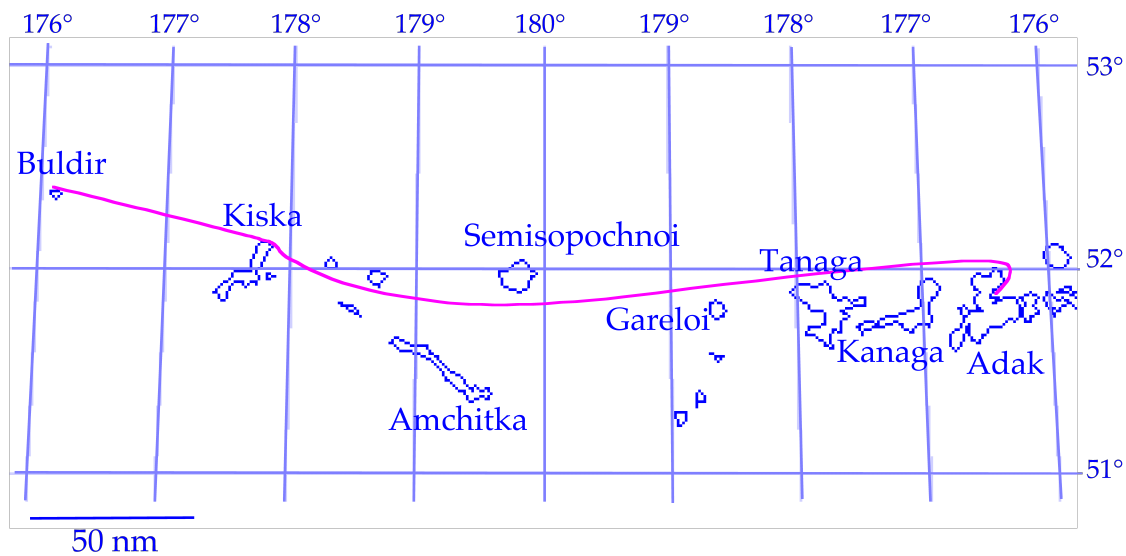
If a serious injury occurs away from camp, and if there are more than 2 uninjured people, one person should go for help while the other person (the one with the most knowledge about first aid) stays with the injured person. If there is only one person available to help the injured person (depending on the seriousness of the injury), DO NOT move them unless absolutely necessary (e.g. a rock is going to fall on them or the tide will come in), check their airway, breathing and circulation according to the principles of first aid, reassure them and make sure they are warm and comfortable, tell them not to move or leave a note telling them not to move if they are unconscious. Take notes before leaving the person on how they were injured, the type of injury, the time of the injury, the state of the person when you left them and if possible or necessary pulse, color et c. All of this information will be extremely important when medical contact is made over the radio. Go find other people to help you deal with the situation. If it is possible to get the injured party back to camp without leaving them (i.e. they are conscious and can move) do so. Apply principals of Wilderness First Aid as learned in the course taken before fieldwork begins.

### Health Insurance

You will need to check with your insurer (e.g., Blue Cross) to make sure that you have coverage for a medical emergency evacuation (air ambulance) and for any other medical costs incurred while doing fieldwork in the USA. **Any medical evacuation will be paid for by you or your insurer only – Memorial University, the Biology Department and others (e.g., Alaska Maritime NWR) will assume no responsibility for any medical costs including evacuation (which is likely to cost a minimum of \$30 - 40K US).** Canadian Provincial health insurance will cover little or nothing for health issues that may arise in the USA. It is each person's individual responsibility to make sure they have proper health insurance.

### Getting to, and on and off the islands

Travel to Alaska USA will require a valid passport and (for residents of certain countries) a visitor's visa. The legal drinking age in Alaska (strictly enforced) is 21. Keep in mind that when you fly into Adak, you are entering an Aleut community with unique culture and values that must be respected. Transportation to Buldir Island normally involves a trip from Adak to Buldir aboard the USFWS vessel *Tîglax*. The skipper and crew of the *Tîglax* are as experienced as they come in getting people on and off Aleutian islands and are intimately familiar with local conditions. You must pay attention and follow their instructions at all times while on the vessel and when riding in inflatable skiffs. If you wish to fish from the *Tîglax* (opportunities may arise when the vessel is at anchor) you must purchase an Alaska state fishing license (\$150 US for a year) in Anchorage before you get on the vessel. If you feel ill while on board, the best place to be is lying down in your bunk with the stateroom lights out. Riding aboard the *Tîglax* out to an Aleutian wilderness island is an opportunity of a lifetime and is sure to be a highlight of your Alaskan experience.



### What (and what not) to Bring?

Try to pack light because everything must go ashore through the surf in a small inflatable boat from *Tîglax*. Aleutian islands can be very cold damp places even in the middle of summer, so you need to bring plenty of warm clothes that are water resistant and can dry quickly. Cotton clothing such as jeans or lightweight trousers, shirts and socks are to be avoided. Cotton absorbs moisture from the damp air, makes you feel cold and damp, and once it gets wet it is very hard to dry. It also absorbs and holds dirt very tenaciously and is hard to clean. Just imagine putting on a dirty pair of wet jeans every morning if you're tempted — you have been warned! Workwear blends of cotton and synthetic fibers are OK, but nylon, synthetic fleece (pile), wool and polypropylene are the most comfortable; go for the layering effect. The best outdoor wear on cold windy days is a waterproof or water resistant shell over pile over long underwear. Some people like to wear rain gear right over their long underwear during July and August. There will be the occasional warm sunny day, so bring a T-shirt, sunglasses, sunscreen and a pair of shorts, but don't count on using them often!

## General List of Items to Bring:

### Clothing

#### Outer wear

- lightweight nylon waterproof jacket/ anorak (breathable Gore-Tex preferred)
- lightweight nylon waterproof rain pants (breathable Gore-Tex preferred)
- long sleeved synthetic fleece top
- a warm wool cap and lightweight hat of some sort (e.g., comfortable cap with a brim, ball cap or Tilley hat)
- synthetic neck cowl (highly recommended)
- wool fingerless or lightweight synthetic full fingered gloves

#### Inner wear

- nylon or polyester shirts and pants
- polypropylene, silk, or other synthetic long underwear (e.g., Patagonia Capilene or MEC mid-weight; at least 2 sets) – note: some people find that synthetic underwear causes skin irritation, this avoided by having a silk or cotton innermost layer
- heavyweight or ‘expedition weight’ polypropylene or synthetic long underwear (for May-June; 1 set, optional)
- heavy wool blend socks and light inner socks (lots, at least 8 pairs of each type)
- regular underwear (lots)

Footwear – *dry feet are essential – you need to bring enough socks and footwear so you can change-out frequently, and you need a pair of well-ventilated sandals (or equivalent) to let your feet dry out when you are in camp – failure to heed these precautions will lead to **trenchfoot**.*

- Gore-Tex lined waterproof leather hiking boots (1 pair for Buldir, 2 pairs if you are going to a camp with regular inland hiking)
- 1 pair rubber boots (e.g., Extratuffs) with a good ankle fit and wool inserts that can be taken out and dried
- 1 pair synthetic sandals (e.g., Tevas or Crocs, good for hanging around camp)
- 1 pair flip-flops for wearing in the bunkhouse and Tiglax showers
- 1 pair nylon gaiters (if you are doing a lot of hiking – these keep water, dirt and plant debris out of your boots, keeping them and you socks drier and cleaner)

#### required odds and ends

- electronic alarm clock that will wake you up for work activities (important!)
- watch (important!)
- sunglasses and sunscreen (hope springs eternal)
- synthetic camp towel and toiletries (toothbrush and toothpaste)
- small flashlight/headlamp

#### optional personal items

- coffee – check in advance to see if this has been purchased for your field camp – if not you will need to bring
- facial cleansing wipes
- binoculars – important if you are a ‘birder’ (work binocs will be provided as required)
- compact digital camera and memory cards
- favorite recipes
- MP3 player

- paperback novels

Do not try to bring any recreational drugs with you. All persons and luggage arriving at Adak are carefully checked at the airport terminal (including by well trained Military police and sniffer dogs). Alcohol is prohibited on Tīglax.

### Working on Buldir Island

This section is intended to explain some of the requirements and opportunities for those who will be working on Buldir Island, with applications to other islands. Much of this will be common sense to most people, but this document is intended to cover a wide variety of things that could come up. This field camp provides opportunities for field research in a remote and challenging environment. Buldir Island is part of the Alaska Maritime National Wildlife Refuge system and all regulations governing federal wildlife refuges must be followed. To work on Buldir you must be in good physical condition, able to work in a cold, wet, dirty environment, able to scramble up steep slopes and walk along rocky and slippery beaches (this is not the place for people with bad knees or arthritis brought on by damp). You must be able to live and work closely with others whose world views differ from your own. You must be able to work odd hours.

The USFWS has several projects involving monitoring of seabird ledge-, crevice- and burrow nesters throughout the breeding season to calculate reproductive success and estimate numbers, capturing and banding kittiwakes for survival studies, and related research on seabirds and geese. The auklet research led by Ian Jones and crew includes finding and marking auklet crevices, capturing and handling auklets from crevices, capturing auklets using mistnets and carpet nooses, banding auklets, and conducting behavioral observations from a blind. Work is done during both day and night periods.

The purpose of the field camp at Buldir Island is intensive seabird research related work and this should be your main motivation for coming to work there. Other factors or knowledge needed include:

- ability to listen to, read and understand safety guidelines
- ability to work with others in a cramped isolated setting
- ability to work under the direction of a camp leader
- ability to follow detailed instructions without supervision
- ability to exercise sound judgment in all matters pertaining to safety
- ability to be happy through long periods of bad weather in an isolated place

### Accommodations/Living Conditions

At Buldir the field station consists of two cabins with a kitchen area and sleeping and working quarters. There are two Weatherports (12' by 20' temporary structures with plywood floors and double-layered synthetic covers supported by a steel frame; one the Jones crew's sleeping quarters). A 4-burner propane stove with oven is used for cooking and portable kerosene heaters for drying clothing. There is a small shower stall near the cabin that can be used with a solar shower bag. Fresh water for drinking, washing, and cooking is obtained from rain runoff from the roof into a 150 gallon cistern and there is also a stream nearby from snow runoff that can be utilized. As a

rule, everyone shares equally in cooking dinner and camp chores. At other island camps there is typically a Weatherport and 8' by 8' bombshelter tents for sleeping

**Recreation:**

There are opportunities for walks on the beach, photography, beach-combing, birdwatching, intertidal investigations and other aspects of natural history study.

**Contact with the Outside World:**

Iridium satphones are available for emergency and work-related telephone calls. If you want to make personal phone calls with the sat phone you will need to purchase a SIM card with pre-paid minutes or a calling plan. The best place to purchase Iridium minutes (e.g., pre-paid SIM card) is in Anchorage.

For safety and operation effectiveness purposes we communicate on a daily basis (9 am and 9 pm Aleutian time = Anchorage time minus one hour, Newfoundland time minus 6.5 hours) via single side band high frequency radio with the USFWS office in Adak. Messages that are urgent, simple, concise, and brief can be phoned in to the Adak office (907 592-2406) relayed during the radio check. This is for family messages of an emergency nature only.

Tiglax usually drops an island crew off in early June and picks them up more than two months later, so there is usually no opportunity for re-supply during the summer and mail will arrive only when the ship comes to pick up the crew.

**Mailing address in Adak:**

*Your name, island*  
c/o US Fish and Wildlife Service  
Box 5251, Adak, Alaska, 99546, USA



# RATS

Many of the world's richest seabird colonies on islands have been destroyed by introduced rats. Buldir has no rodents of any kind and we plan to keep it that way! The introduction of rats to Buldir would devastate one of the premiere seabird colonies in the world within a few decades. Removal of rats from the island once they become established would be difficult, irreparably damaging to the fauna of the island and extremely expensive.

We must do everything in our power to make sure we do not introduce rats (or any other exotic fauna or flora) to the island. This is the responsibility of everyone working with the field crew.

The two most likely sources of rat introduction to Buldir are: 1) shipwrecks, and 2) accidental transport to the island in boxes of equipment and supplies for our station. We can do little about source # 1. Some guidelines for preventing source # 2 follow:

- Remember that rats are common at Adak, Shemya, Dutch Harbour and at other places of origin of gear and supplies destined for Buldir, Gareloi and other rat-free islands.
- All gear and supplies destined for Buldir and Gareloi will be transported in boxes completely sealed with tape at the time of packing on Adak or at the place of packing.
- A special rat free room is available on Adak for packing.
- The boxes must be sealed in such a way that if a rat has entered the box after sealing, its entry will be obvious from a hole chewed in the box.
- During all stages of transport boxes must not be left in any area accessible to rats.
- Boxes must be inspected immediately before loading onto the Tîglax. Furthermore boxes must be carefully inspected again on the ship before being brought ashore. ANY box that looks suspicious must be checked, repacked and sealed.
- Large equipment items that cannot be boxed must be carefully checked at each stage of transportation to ensure they do not contain a rat. Rats have been known to enter outboard motors at Adak!