

# The Philmont Way

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Because of the risk of bears at Philmont, the rangers teach many techniques to minimize the risk to people. To understand this we will first learn about bears, then look at the camping techniques we can use to minimize the risk. We will then learn some of the many techniques the ranger taught us to deal with the environment. Finally, there are some observations from personal experience.

## **Bears**

Bears are not that smart. They have poor eyesight, but a very good sense of smell. They are active mainly at night. They eat almost anything they come across that smells interesting. Thus the object is to minimize the amount of smells around your campsite. By doing this not only will bears not be attracted to your campsite, but all other forms of varmints like raccoons, skunks, ... won't come to visit.

Always stay in groups and hike during the day. If a bear approaches you, make yourself look big by holding hands and jacket over your head. Make loud noises and shout. Don't run, kneel down, bend over, throw rocks, or take flash photographs.

If you awaken with a bear near you, do not play dead and do not strike the bear. Talk in a calm tone of voice to alert other members of your crew. Back away slowly.

If a black bear or mountain lion attacks you do not play dead, but rather fight with everything you have using rocks, sticks, or anything else at hand. Their noses are quite sensitive and thus make good targets for sticks.

A fed bear is a dead bear. Once a bear associates human scent with food he will become a problem bear that is very dangerous to humans and will probably have to be killed.

## **Smellables**

A smellable is anything that has an odor that might interest a bear. Bears are not attracted by human scent. A list of smellables includes food, candy, garbage, drink mixes, toothpaste (and toothbrush), soap, medicines, duct tape, batteries, film, deodorant, lotions, sunscreen, lip balm, pens, insect repellent, blood, any bottle that has EVER had anything besides water in it. White gas is not a smellable because it would probably do a bear in if it ate it.

Don't use anything with an odor at least two hours before sunset. Remember bears are most active at night.

## **The Bear-muda Triangle**

There should be four areas in your campsite. The first is where you prepare, cook and eat your food (near a fire ring). The second is where your smellables (anything with an odor that might attract bears) are stored. The third is the sump which is a pipe in the ground where wastewater (notice I said water, not trash) is dumped. The fourth is where your tents are located. If you take the first three areas, they should roughly form a triangle called the Bear-muda triangle. Your tent area should lay 50' to 100' outside of this triangle.

The idea is to isolate all activity with smellables to within the Bear-muda triangle. If a bear is attracted to your campsite, it is more likely to go to the Bear-muda triangle than to your tent.

Keep tents away from water (as it could flood) and trails.

## **Setting up Camp**

When you arrive at a campsite, the first order of business is to locate the fire ring (where cooking is done), the bear cable (where bear bags are hung), and the sump (where wastewater is disposed of).

Set up the dining fly (see below for instructions on how this is done) inside or near the Bear-muda triangle. Packs should also go in or near the Bear-muda triangle. Get out all crew gear (food, stoves, filters, pots, ropes, bear bags, ...) and place under the dining fly. Next set up the tents in clusters, but not in a circle (a bear may get inside the circle and feel trapped). Put your sleeping pad and bag inside the tent. Place your eating paraphernalia at the sump.

If you plan to leave camp or will not be using the smellables right away, then put them up in the bear bags.

### **Dining Fly**

The dining flies issued by Philmont are 12'x12' with 8 grommets and look like an inverted "V" when set up. Set up the dining fly so that the wind will hit the side and not go through it. We used two trekking poles to hold it up. You also need 8 tent stakes and 30' of rope. Use small sticks attached with clove hitches to hold a rope that runs down the middle of the dining fly. Attach the poles as close to the dining fly as you can get using a quick clove hitch (make a loop, make a second loop, put the second loop behind the first and slide over the pole). Stake the trekking poles and pull the rope tight. Stake the corners of one side, then the other. Finally, add a stake between the corner stakes to hold the dining fly more open. Placing a chair or other tall object under the dining fly on the upwind side near where the dining fly touches the ground will help minimize the amount of rainwater that accumulates there.

The dining fly is handy to store equipment or packs out of the rain. It can also be used to sit under during a rainstorm. You can even cook under it in an emergency if you are VERY careful. If you need to set up camp in the rain have four people hold the dining fly over folks putting up a tent. This will keep the tent from getting soaked on the inside.

### **Bear Bags**

Two ropes are needed for the bear bags. The ropes should be 1/4" x 150'. You will also need a carabiner and bags in which to store smellables. Philmont uses a woven plastic bag like the ones used by construction workers to hold sand.

The ropes should have a loop tied in the middle of them using an overhand knot.

Loop one of the ropes and toss the loop (middle of the rope) over the bear cable or a tree limb about twenty feet in the air. Use the same technique as throwing a rescue line to a swimmer. You may need to add some weight to the rope to get it to slide over a limb more easily. This can be done by tying a bandana full of dirt to the end of the rope. Pull the rope over the cable/limb until the loop in the middle is on the ground. Put the carabiner in the loop. Take the bear bags, twist the open end shut and attach to the rope as close to the loop as you can using a lark's head knot. Divide the bear bags so about the same amount of weight is on both sides of the loop. Leave one bag down for now. We will call this the "Oops" bag.

Slide the loop of the second rope through the carabiner. Pull about twenty feet of rope on through the carabiner. This is for the "Oops" bag.

Now the bear bags can be pulled up. It helps to have one person lifting/pushing the bags up as far as he can and the rest of the people pulling on the two ends of the first rope. When the bear bags have been pulled all the way up to the cable (or at least high enough that you cannot jump and touch them), separate the two ends of the rope and wrap them around different trees. You will need to wrap them around 4 or five times so they will hold. Loop any excess rope and slide it under the first loop to hold it in place.

Finally, tie the "Oops" bag near the loop of the second rope using a lark's head knot. Pull the "Oops" bag up to the carabiner and tie the two ends of the rope to different trees just like you did with the first rope.

The reason you use different trees for the ropes is that if a bear happens to break one rope the other rope will still hold the bags up out of reach.

The “Oops” bag should contain the first aid kit, medicine, and anything else that you forgot to put in the other bags. So right before you go to bed and you happen to find a candy wrapper in your pocket, you can properly place it in the “Oops” bag by yourself. The “Oops” bag should be light enough that one person can lower and raise it, where it takes a team to raise the main bags.

### **Food Ideas**

The menus tend to be high in calories and low in fiber.

Breakfast – granola bar, energy bar, pop tart, oatmeal, cream of wheat, dried fruit, powered drink

Lunch - peanut butter, jelly, cheese, crackers, tuna, jerky, raisins, gorp, power bar, cookies, powered drink

Dinner – rice, pasta, Ramon noodle soup, hot chocolate, apple cider, potatoes, chicken, peas, corn, pudding, crackers, macaroni and cheese, beans, dehydrated meal

Snack (treat) – hard candy. Don’t do chewing gum, it is too messy and more liable to be spit out.

### **Eating**

Before eating, clean your hands with waterless soap. Try not to touch your food, but instead use the wrappers or a sterilized bowl and spoon. You don’t need a cup – they are harder to clean than a bowl.

Be very careful not to spill anything or let crumbs fall. Pick up any crumbs and eat them or put them in the trash. Anything you spill food or drink on becomes a smellable and goes in the bear bag.

If you spill a lot of food or drink, clean it up as best you can and urinate on the spot. The odor of the urine will help cover up the smell of the food.

If you are having soup and crackers, add the crackers to the soup so you don’t have any crumbs and you don’t have to touch the crackers with your hands. Oatmeal can be made in its own bag, just be careful because it will be hot. Squeeze tubes of peanut butter and jelly are handy and neat.

After eating, fold up the wrappers (trash) and compress into the smallest container possible so they don’t take up a lot of room in your pack. NEVER burn, bury or hide trash under rocks, ... wildlife will find it.

### **Cooking**

The first order of business is to boil water. This does not have to be purified water as the boiling will kill all germs. Once the water is boiling, sterilize your dishes and spoons by dipping them in the water. A pair of pliers or a multitool comes in handy for this. Now you are ready to prepare your meal. Most meals will have several courses like soup or potatoes followed by a main dish and dessert. Use some of the boiling water to make the first course. Then make the main dish in the pot. Let the main dish cook as you eat your first course. As you are consuming the main dish another pot of water can be boiled for making dessert.

It is better to make too little food and have to make more than to make too much food and have to carry it as garbage out in your pack.

Clothes you wear while cooking should go in the bear bag or at the very least inside a trash bag or ziplock bag in your tent.

### **Cleanup**

For most cases you will need two pots and one lid.

After you have finished eating, lick your dishes clean. Clean out any pots as best as you can. Add a little water or other liquid to the dish, swirl it around, and drink it to get out the last particles.

Put some water (about 2 liters) in the first pot and bring it to a boil. Take it off the fire and add about a half-teaspoon of camp suds (you don't want enough soap to make bubbles). Now boil about 2 liters of water in the second pot. Wash all dishes and utensils in the soapy water with a small scrub pad (1"x2") and rinse them well in the second pot. Make sure you rinse well as eating camp suds will cause diarrhea.

Place clean dishes near the sump. Clean out the soapy pot.

Now you must dispose of the water in the sump. First clean out the Frisbee with holes by tapping it while it is inside it's doubled ziplock bag. Place the Frisbee on the sump. Dump the wash water through the Frisbee with holes into sump. As the holes clog, you can tap gently on the Frisbee to make the water drain faster. Rinse the pot with the rinse water making sure all food particles are removed. Use a plastic spatula to scrap the sump screen. Dump excess water into sump to clean it.

Wash hands well to remove any food odor. Finally, brush your teeth and spit into sump.

### **Laundry**

Start with a 1-gallon ziplock bag. Put your clothes in the bag, but don't try to do too much at one time. A couple pairs of socks and liners or a T-shirt are about the limit. Add enough water to cover the clothes. You don't need sterile water. Add a small squirt of camp suds. You don't want to have very many bubbles, as this will take longer to rinse. Knead the clothes until they are clean. Empty the water into the sump and ring out the clothes. Rinse the clothes by adding clean water and kneading. Empty the water into the sump and ring out the clothes. Repeat the rinse again. Ring out the clothes as best you can and hang to dry. Safety pins make good clothespins. For larger garments, you might want to ring them out a second time after they have been hanging for a while and the water has accumulated at the bottom.

Don't leave clothes hanging out over night, as they may get wetter with the dew. If clothes are still damp the next morning use the safety pins to attach the clothes to your pack.

If you must dump water on the ground do so at least 50 paces from any pond or stream.

Bonus: Washing your clothes will get your hands nice and clean!

### **Personal Hygiene**

Keeping clean in the outdoors can be a challenge, but there are few things that make you feel as good as a sponge bath!

Wash early in the day so that any scent will dissipate before night. Use a self-standing (flat bottom) 1-gallon ziplock bag or the bottom of a milk jug to hold about a liter of non-sterile water. A bandana can be used to wash with, but you can scrub off a lot more dirt with a washcloth. You don't need to use any soap. Any soap left on your skin would irritate it. Rinsing would waste too much water.

Wet the washcloth with purified water and wash your face. Use the non-sterile water to wash the rest of your body. Pay special attention to arm pits, crotch, and feet. Use a camp towel to dry off.

Hang your washcloth and towel up to dry.

Brush your teeth in the morning and a couple hours before dark.

### **Bathroom**

Water the rocks not trees. The salt in urine will harm plants. Do not urinate in the latrines. The dry climate at Philmont keeps the latrines from smelling too bad. If you add extra water (urine) to the feces, it will just make it smell worse.

Use a latrine (for number 2) whenever possible. Take a stick with you to the latrine and run it around the underneath of the seat. This is to make sure that nothing is waiting to bite you when you sit down. The ranger mentioned black widow spiders.

If a latrine is not available, then locate a spot at least 50 paces from water sources and trails. Dig a hole about 6 inches deep and squat. When you are finished, wipe with biodegradable non-scented (Philmont issued) toilet paper. Put the paper in the hole also. Cover the hole with the dirt you took out of it and stand a stick straight up in it to mark it for others.

## **Water**

Potable water is available in many staff camps at Philmont. Never drink water that has not been purified. The consequences can be severe. Giardia is one of the most common and one of the worst with symptoms of severe diarrhea and cramping and worse a week or two after infection. There is no cure for it. It will stay in your system the rest of your life and flair up in times of stress.

There are three ways to purify water. First you can boil it, but that takes extra fuel. This is a good method to use however if you want to get the water hot anyway as when cooking.

Next, there is iodine, which is available in commercial products like Polar Pure. This is a very light weight solution and the iodine doesn't taste too bad. Follow the instructions because treatment (amount of iodine and time) is based on the amount of nasties in the water and the temperature of the water. Philmont recommends two capfuls of iodine per liter and let it set for one hour. Get the water from the cleanest source. A bandana or coffee filter can be used to filter out some of the floaties. Once you have filled your water bottle, add the iodine, close the lid and shake well. But, you can bet that some of those nasties are holding tight to the screw lid of your bottle. To get rid of them use a technique called "bleeding the threads". Turn the bottle upside down. Slowly unscrew the lid until a little iodine treated water seeps out and cleans the threads and lid. Tighten the lid and let it sit for at least an hour before drinking or adding a drink mix.

Be very careful with iodine and do not drop it into the water, as it would kill a lot of plants and animals. Refill (recharge) the iodine with fresh (not iodine treated or flavored) water.

The third way to purify water is to use a filter. Get one that filters out to at least 0.5 microns. Read and carefully follow the manufacturer's directions. Always use the cleanest water source. You can use a bandana or coffee filter to filter out the biggest floaties and thus save your filter some. Keep the dirty intake hose away from the clean output hose. The filter we used recommended chlorine drops to kill any viruses that could pass through the filter.

Get a filter that is field repairable and cleanable. Take any repair parts and tools on the trail with you. It wouldn't be a bad idea to carry the instructions also. Know how to use, clean, and repair your filter. Iodine is a great backup to have along just in case your filter should break.

Each of us carried at least 4 liters/quarts of water. It is normally recommended to carry 2 to 3 liters. Because each of us carried an extra liter, one person did not have to carry the heavy 2-gallon water container that Philmont recommends.

This was enough water even when we had a dry camp (although we ate a dry lunch instead of supper there).

We also had a two-gallon sack (similar to the plastic sacks that boxed wine comes in) for carrying water to camp. This came in handy a couple times.

If it looks like rain and you need water, stop and get the water before it rains. Rain stirs up a lot of silt that will clog a filter or make you use more iodine.

### **Sleeping**

A good night's sleep is important to giving you the energy and mental toughness you will need for tomorrow's activities. Choosing the right site for your tent can go a long way in helping you sleep well. Choose a site with few bumps or sharp points and no overhanging dead branches. If your tent is on a slope, your head should be uphill.

Now get in your tent and change out of your day clothes into your sleeping clothes. Your sleeping clothes should be stored in your sleeping bag and not worn at any other time. To make sure no interesting odors are in your tent, place your day clothes in a plastic garbage bag and twist the top good or place them in a ziplock bag.

If you have to have something like medicine in your tent, place it in your boot and put a dirty sock over it.

### **Spare time**

The most popular past times are cards, dominoes, hacky sack, Frisbee (ultimate, golf, H-O-R-S-E – use a bush or tree branch for a basket), journal, and writing post cards to loved ones.

### **Hiking**

On every uphill step, lock your downhill leg. This rests the muscles and puts weight on the bones. Rest stops of 5 minutes are good. Over 5 minutes, lactic acid builds up and takes 15 more minutes to dissipate. So stop for either 5 minutes or 20 minutes.

### **Health Problems**

The most common problems are cuts and scrapes. The more serious problems that you are likely to encounter include dehydration, hypothermia, knee and ankle sprains, diarrhea, and vomiting. These are serious because they hamper your ability to get to help. Upper respiratory problems may be encountered.

One very irritating problem is chaffing. If you have a problem with chaffing, take along whatever you find works best for you – powder, Vaseline, ... Wear comfortable fitting underwear – too loose is bad.

### **Map reading**

Set your compass to 350 degrees at Philmont to account for the difference between magnetic and true North. At all trail crossings, stream crossings, ... place the compass on the map and align it with the grid lines on the map. Turn the map and compass together until the red point of the compass needle is inside the North arrow (red in the shed, Clifford in his doghouse). Now determine which way to go.

If you are confused, send people ahead without packs to see where the trail goes and if there are any landmarks. You can be fooled by a trail that takes a sharp turn or loops back.

### **Preparation**

Conditioning and teaming are the two most important areas to emphasize. Play teaming games to get the group working as one. Take day hikes to get into shape. Be sure to include LOTS of climbing and hiking on rocky trails, up and down steep hills. It helps to practice with more weight than you expect to carry at Philmont. Practice the techniques set out in this paper, get to know the equipment and gear, and eat foods you are likely to have on the trail.

**Extra food and equipment**

Some members of our crew carried some extra power bars, candy, and equipment. These should be discouraged because they added to the personal weight they were carrying and reduced the amount of crew gear they could carry.

**Stream crossing**

Most streams are very shallow and rocks have been placed in them so it is easy to cross with boots on. Larger streams have log bridges to let you cross (unbuckle your pack hip and sternum belts before crossing). Water that is above your knee should not be crossed.

**Camp shoes**

They tell you to take along sandals, tennis shoes or moccasins to wear in camp. The reasoning is that these shoes are much less damaging to the soil, grass, ... than heavy lugged boots. However, it seems that about the time you get camp set up and get ready to change into other shoes, it starts raining. We only wore camp shoes a few times during the trek.

**Hazards - Insects, Poison Ivy**

Only saw a couple mosquitoes. Flies were a nuisance at a couple camps, but were not bad enough to need repellent. Didn't see any ticks.

Flies and mosquitoes were easy to swat because they didn't move as fast in the thinner air.

Only found poison ivy in one spot. Individuals highly allergic to it did not have a problem.

**Sun**

Be careful because the sun is a lot stronger at altitudes above 6,000 feet.

Not a lot of sunscreen was needed. Generally you would put sunscreen on around 10AM. We found that if we could avoid the sun between 11 and 1 by being under trees, that it was generally cloudy and/or rainy the rest of the afternoon. We only used sunscreen a few times.

If you don't normally wear sunglasses, you probably won't need them on the trail.

**Weather**

The coldest it got was about 40 degrees. The hottest was about 85. Normally you hike in shorts and a coolmax T-shirt. Convertible pants worked real well because the temperature can change dramatically in a few minutes when it rains. The most clothes I wore was long pants, rain pants, coolmax underwear and T-shirt, wool shirt, raincoat, balaclava, socks, liners, and boots.

Thunderstorms are common. In case of a thunderstorm, you don't want to be near the tallest tree or out in a field, or on top of a ridge or peak. Get into a grove of uniform height trees. Spread people out about 100' apart so that if something should happen everyone doesn't get it at once. Squat with your heels touching. Lightning will sometimes strike a tree and then run along the ground. If your heels are together, the electricity will go up one foot and down the other causing minimal damage. If your heels are not touching the electricity will go through your chest cavity causing major problems.

**Consumables for 10 people for 11 days:**

½ roll of TP per day

120 oz white gas

1 bottle of Purell per person

1 bottle Camp Suds